



PROPERTY SERVICE CHART

600 W NC 150

Septic Tank GPS Located:  Date: \_\_\_\_\_

ADDRESS (PRINT)

Well GPS Located:  Date: \_\_\_\_\_

Subd: \_\_\_\_\_ Sec: \_\_\_\_\_ Lot: \_\_\_\_\_

SERVICE	COMMENTS	DATE	SANTARIAN
Lumpsum	ok	12/29/15	BGM
CA, WP	Issued released to P&D	12/30/15	BGM
Site Plan	New site plan submitted pushing house back. Changes made + permits updated.	1/19/16	LKH
Grout	Built R/Tc 61' PVC w/c 20' Bentonite	3/29/16	BGM
Septic Final	Overbey set WMS-1000 STB-793 (4/14/16), STC6 w/ polylok filter and WMS-1000 PT-121 (3/17/16), 2' riser on outlet end, Ashland 30 pump + Alderon outdoor control panel. Overbey installed 89' of 2" SCH 40 pump line + 402' of IGHF w/gravel of 440'. (CW)	5/16/16	EGD
Phone call	To Roger Hanks - System is 40 ft short - Need 440 ft - have 400' Permit misread.	5/19/16	LKH
Septic Final	Overbey - 40 ft added to end of system Comp Updated	6/3/16	LKH
P+A ✓	<del>Best. Pump not working.</del> Pass. P+A working	9/13/16	TS
Well Final + State Kit	Wellhead approved. ROC = tags (CW) No Cl. Samples taken @ wellhead	9/13/16	TS
Permits	GPSed well <del>9/14/16</del> 9/14/16 TS P/A letters mailed 9/26/16 TS OP + COC Well Issued	9/26/16	TS
Soil Evaluation	Property approved for a 3 Bedroom/no basement single family residence utilizing a conventional initial and repair system. LTAR= 0.275 Initial and Repair	3/11/21	JLV
Permits	Ip+CA+Well permit issued	3/12/21	JLV
Well Grout	D+Y set 114' of 6.125" SDR-21 PVC casing and pumped bentonite 20' to the surface for a complete seal.	4/12/21	LKH



Guilford County  
 Environmental Health Division  
 Water Quality Section  
 400 W. Market Street  
 Greensboro, NC 27401  
 336.641.7613



**Operation Permit**

**Address:** 600 E. NC Highway 150, GREENSBORO, NC 27455

Permit Number: 15-03-SNHR-01335

Contractor:

T&L GRADING

Terry Lemons

Filter Type	Polylock	Product Name	Gravel
Septic Tank Size	GAL1000	System Type	2a - Conventional
Septic Tank Type	HPPP STB 760	Trench Length	440 FT
		Trench Width	36 IN
		Wastewater Flow	360 GPD

**Comments:**

T&L Grading set 22' off left rear HPPP 1000 Gallon STB 760 5/21/2021w/Polylok filter.

Drainfield Approval:	<u><i>Dillon James, RCHS</i></u>	Date:	<u>8/5/2021</u>
	Environmental Health Specialist		
Tank Approval:	<u><i>Dillon James, RCHS</i></u>	Date:	<u>08/05/2021</u>
	Environmental Health Specialist		
Supply Line Approval:	<u><i>Dillon James, RCHS</i></u>	Date:	<u>8/5/2021</u>
	Environmental Health Specialist		
Pump/Alarm Approval:	_____	Date:	_____
	Environmental Health Specialist		
Operational Permit Approval:	<u><i>Dillon James, RCHS</i></u>	Date:	<u>10/19/2021</u>
	Environmental Health Specialist		

**This System is in compliance with Article 11 of G.S. Chapter 130A .1900 "Sewage Treatment and Disposal Systems" and all conditions prescribed by the Authorization for Wastewater System Construction. This Operation Permit is subject to suspension or revocation if the stated conditions are not met.**



CONDITIONS:

Initial system and designated repair areas must be protected from traffic, construction, destruction, cultivation, landscaping, erosion, or any other circumstances that may alter site conditions and may cause problems with the initial system or the future system as permitted.

Surface and/or subsurface drainage diversion around the system must be maintained as permitted.

Heavy vegetative growth over drainfields and the root system of many shallow-rooted trees are detrimental to the proper operation of subsurface sewage systems and must be controlled periodically.

All subsurface sewage disposal systems must be maintained and operated in a manner that prevents surface discharge or any other potential public health concerns. All public health concerns created by the operation of this system must be addressed immediately (within 48 hours). Required permits to correct the public health concern must be obtained from the Environmental Health Water Quality Unit and corrections to the system are to be completed within 30 days of the date of that permit.

Establish cover over drainlines.

Access to tanks, tank components (pumps, float controls, valves, etc.), drainfields, or other system components must be maintained to allow periodic follow up inspections as required and/or to evaluate system concerns.

To avoid damage to the system, the septic tanks should be pumped out every 3-5 years.

GUILFORD COUNTY DEPARTMENT OF PUBLIC HEALTH  
Division of Environmental Health, Water Quality Unit  
400 W. Market St., Suite 300, Greensboro, NC 27401

### Record of Construction, Repair, or Abandonment of a Well

Address of Well: 600 E NC HWY 150, GSO LATITUDE 3 \_\_\_\_\_

Well Permit Number: 21-03-WNHR-02174 LONGITUDE \_\_\_\_\_

Well Contractor Company: D & Y Well Drilling, Inc. Completion Date: 4/12/21

Total Well Depth: 380 ft. Well Yield: 8 gpm Static Water Level: 30 ft.

Outer Casing Material: SDR21  
Casing Diameter: 6 1/4 in. Casing Depth: 114 ft.

#### Formation Log

Depth	Description
From: <u>0</u> ft. To: <u>30</u> ft.	<u>DIRT</u>
From: <u>30</u> ft. To: <u>100</u> ft.	<u>SANDROCK</u>
From: <u>100</u> ft. To: <u>114</u> ft.	<u>REDROCK</u>
From: <u>114</u> ft. To: <u>380</u> ft.	<u>GRANITE</u>
From: _____ ft. To: _____ ft.	_____
From: _____ ft. To: _____ ft.	_____
From: _____ ft. To: _____ ft.	_____
From: _____ ft. To: _____ ft.	_____
From: _____ ft. To: _____ ft.	_____
From: _____ ft. To: _____ ft.	_____

Inner Casing Material: \_\_\_\_\_  
Casing Diameter: \_\_\_\_\_ in. Casing Depth: \_\_\_\_\_ ft.

#### Grout

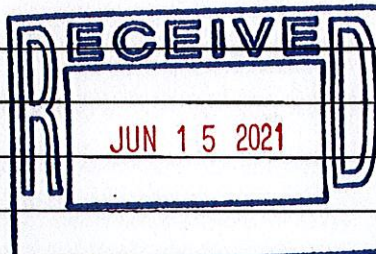
Depth	Material	Method
From: <u>0</u> ft. To: <u>20</u> ft.	<u>BENONITE</u>	<u>PUMP</u>
From: _____ ft. To: _____ ft.	_____	_____
From: _____ ft. To: _____ ft.	_____	_____

#### Water Production Zones

Depth: 260 ft. 355 ft. \_\_\_\_\_ ft. \_\_\_\_\_ ft. \_\_\_\_\_ ft. \_\_\_\_\_ ft. \_\_\_\_\_ ft.  
 Yield: 1 gpm 7 gpm \_\_\_\_\_ gpm \_\_\_\_\_ gpm \_\_\_\_\_ gpm \_\_\_\_\_ gpm \_\_\_\_\_ gpm

Method of Repair: \_\_\_\_\_

Method of Abandonment: \_\_\_\_\_



I hereby certify that this well was constructed, repaired, or abandoned according to the Guilford County Well Rules in effect on this date and that a copy of this record has been provided to the well owner.

Well Contractor: John Lewis Certification #: 4467A Date: 4/12/21

### Record of Pump Installation

Pump Installation Company: D & Y well Drilling Completion Date: 6-3-2020

Pump Depth: 150 ft. Static Water Level: 30 ft.

Pump Brand: Schaefer Pump Size and Rating: 1/2 hp 60 gpm

I hereby certify that this pump was installed and wellhead completed according to the Guilford County Well Rules in effect on this date and that a copy of this record has been provided to the well owner.

Well Contractor: Luke McSwaney Certification #: 4517C Date: 6-3-2020



**Environmental Health Division**  
**Water Quality Section**  
 400 W Market St.  
 Greensboro, NC 27401  
 (336) 641-7613

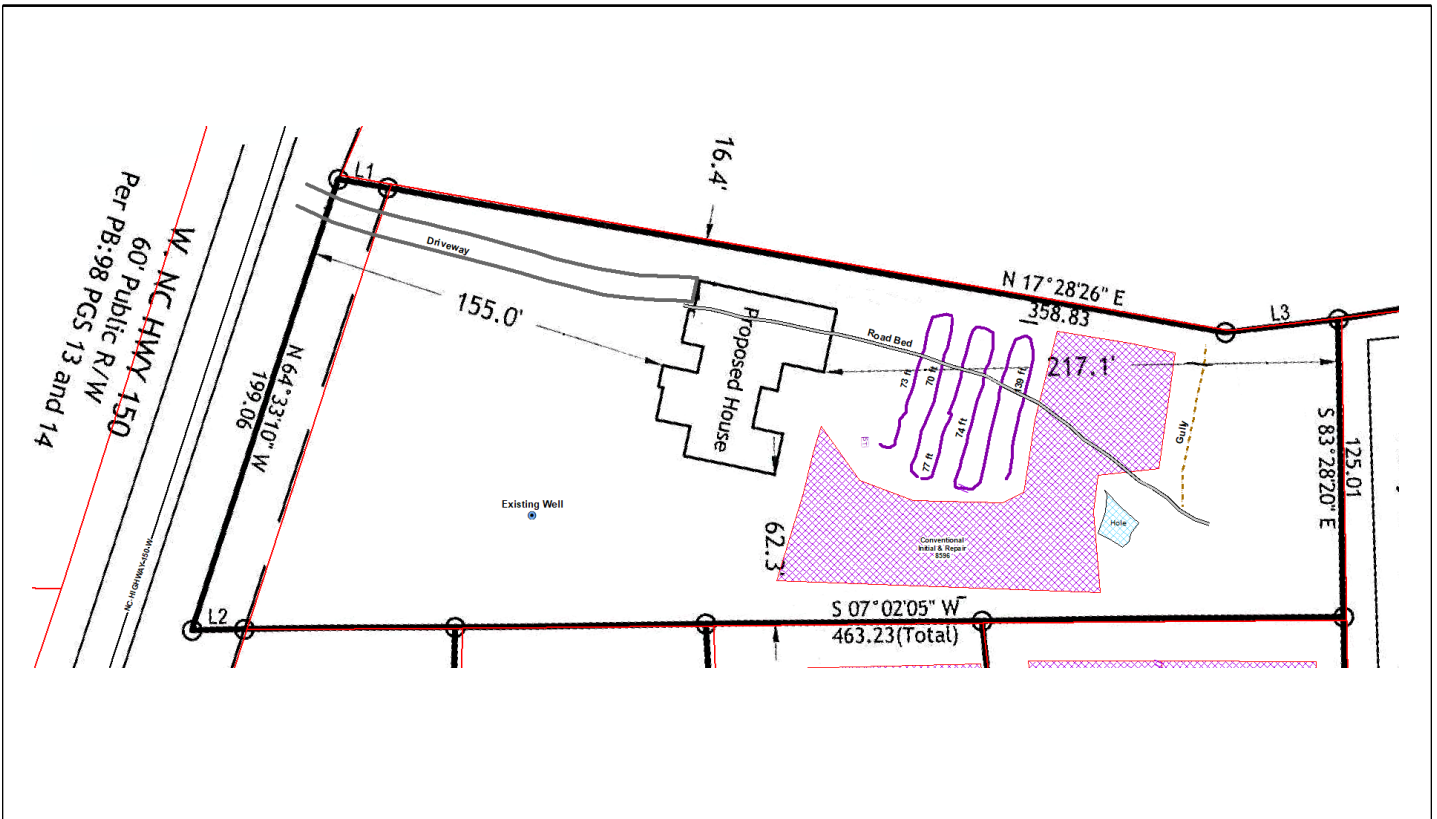
### Water Well Certificate of Completion

Address of Well: 600 E NC Highway 150 X:  
 Well Permit: 21-03-WNHR-02174 Y:  
 Well Contractor: D & Y WELL DRILLING INC

Construction or repair has been completed, a Record of Construction, Repair or Abandonment of a Well has been submitted, and the inspection has been completed in accordance with the Guilford County Well Rules. This Operation Permit is subject to suspension or revocation if the stated conditions are not met.

Certification By: Kenneth C Melder RCHS Date Issued: 10/18/21  
 Environmental Health Specialist

#### Diagram



#### Well Information:

Casing Depth: 114 ft. Total Well Depth: 380 ft. Well Yield: 8 gpm  
 Pump Depth: 150 ft. Pump Size: 00.50 HP hp.

Well Usage: One Single Family Dwelling



**Septic System Installation Inspection Check-List**  
 Guilford County Guilford County Water Quality Unit

Address: 600 E NC Highway 150 Application # \_\_\_\_\_  
 Contractor/Installer: T&L Grading Permit# 15-03-SNHR-01335  
 Soil Conditions:  Dry  Moist  Wet

Septic Tank: N/A  
 22' off  
 left rear

ST Stamp Information:  
 HPPP1000Gallon  
 STB760 5/21/2021

Manifold: N/A  
 Manifold Pipe Diameter \_\_\_\_\_  
 Control Valve \_\_\_\_\_  
 Ball Valve \_\_\_\_\_  
 Manifold Box & Lid \_\_\_\_\_

Sanitary Tee  \_\_\_\_\_  
 Filter  Polylok  
 Outlet Boot  \_\_\_\_\_  
 Tank Integrity  \_\_\_\_\_  
 Tank Sealed  \_\_\_\_\_  
 Riser N/A \_\_\_\_\_

Distribution Box: N/A  
 Level \_\_\_\_\_  
 Equal Distribution \_\_\_\_\_  
 Water Tight \_\_\_\_\_

Pump Tank: N/A

PT Stamp Information

Drainline Material:  
 Conventional Gravel Trench

Nitrification Lines: N/A

Tank Integrity \_\_\_\_\_  
 Tank Sealed \_\_\_\_\_  
 Riser \_\_\_\_\_

Aggregate Depth/Size  
 Trench Depth 20" 32"  
 Trench Width 36"  
 Trench Length 450'  
 Trench Spacing 9'  
 Trench Grade 0

Pump/ Electrical Control: N/A

Pump and Panel Model:

Cover: N/A  
 Soil cap Thickness \_\_\_\_\_  
 5ft extension \_\_\_\_\_  
 Soil Group \_\_\_\_\_

Check Valve \_\_\_\_\_  
 Control Valve \_\_\_\_\_  
 Pressure head set \_\_\_\_\_  
 Rope/chain \_\_\_\_\_  
 NEMA 4X \_\_\_\_\_  
 Alarm \_\_\_\_\_  
 Required Height \_\_\_\_\_

Water Drainage/ Diversion: N/A  
 Set Backs \_\_\_\_\_  
 Surface Drainage \_\_\_\_\_  
 Subsurface Artificial Drainage \_\_\_\_\_  
 Depth of Cover \_\_\_\_\_  
 Finish Grade \_\_\_\_\_

Supply Line: N/A

Other: Design flow, GPD:  
360

Comments: 08/05/2021 Thursday T&L Grading set 22' off left rear HPPP1000Gallon  
STB760 5/21/2021 w Polylok filter.  
Installed 450' Conventional Gravel Trench.



**Guilford County Application  
For Improvement Permit  
and/or Authorization to Construct**

- Scaled site plan submitted - (Valid 60 Months)
- Unscaled site plan submitted - (Valid 60 months)
- Survey plat to scale\* submitted - (Valid without expiration)
- \* scale of 1" = no more than 60'

Building Permit # 21-02-GCRP-01404 Septic Permit # \_\_\_\_\_ Well Permit # \_\_\_\_\_

**PROPERTY INFORMATION**

\* Address 600 Hwy 150, West \* City Greensboro, NC 27455 Parcel REID # \_\_\_\_\_  
 Development Name \_\_\_\_\_ Section/Phase # \_\_\_\_\_ Lot # \_\_\_\_\_ Plat Book # 98 Page # 13 & 14  
 Lot of Record  First Lot Out  Plat Required  >5 acres (5-17-65 to 2-1-74)  >10 acres (2-1-74 to present)  
 Date Lot Originally Deeded & Recorded \_\_\_\_\_

**ZONING INFORMATION**

Zoning: RS-30 Conditional Zoning (Describe): \_\_\_\_\_  
 Watershed: \_\_\_\_\_ Watershed Critical Area: \_\_\_\_\_  
 Building Setbacks (Zoning): Front Street: 40 Side Street: 40 Side Yard: 15 Rear: 30  
 Comments: \_\_\_\_\_

PLANNING DEPARTMENT OFFICIAL: \_\_\_\_\_

**APPLICANT INFORMATION**

\* Applicant Name: Hackett Construction, Inc \* Address: 1497 Kearns-Hackett Rd, Pleasant Garden, NC 27313  
 \* Phone 1: (336) 362-4460 \* Phone 2: \_\_\_\_\_ \* Email: Joe.hackett89@gmail.com  
 \* Owner Name: David Schmidt/Kelly Cole \* Address: 3 Willow Ridge Ct, Summerfield, NC 27455  
 \* Phone 1: (336) 456-1455 \* Phone 2: \_\_\_\_\_ \* Email: dauidschmidtma@gmail.com

**\* DEVELOPMENT INFORMATION**

NEW  ACCESSORY  SWMH  MULTIFAMILY/DUPLEX  ADDITION (TYPE) \_\_\_\_\_  
 HOUSE  MODULAR  DWMH  RENOVATION  OTHER TYPE \_\_\_\_\_  
**Residential Specifications:** Max # of Bedrooms: 3 MAX. # of Occupants: 3 Total # of Rooms: \_\_\_\_\_ Size of Structure (sq ft): 2988  
 Basement:  Yes  No Basement Fixtures:  Yes  No  
**Non-Residential Type:**  Commercial  Industrial  Other \_\_\_\_\_  
**Wastewater Strength:**  Domestic  High Strength  Industrial Process  
 MAX. # of Employees: \_\_\_\_\_ # of Fixtures: \_\_\_\_\_ Plumbing: \_\_\_\_\_ Size of Structure (sq ft): \_\_\_\_\_  
 Description of Facility: \_\_\_\_\_  
 Other Flow Related Info (# Seats (e.g. Restaurant), # Chairs (e.g. Beauty Shop), # Spaces, Etc.): \_\_\_\_\_

\* **Water Supply Proposed:**  New Well  Existing Well  Community Well  Public Water  Spring  
 Are there any existing wells, springs, or waterlines on this property?  Yes  No

\* **Sewage Disposal: Please Indicate Desired System Type (see back)**

Conventional  Accepted  Modified  Alternative  Other \_\_\_\_\_  Any/All

The applicant shall notify the local health department upon submittal of this application if any of the following apply to the property in question. If the answer to any question is "yes", applicant must attach supporting documentation.

- YES  NO Does the site contain any jurisdictional wetlands?
- YES  NO Does the site contain any existing wastewater systems?
- YES  NO Is any wastewater going to be generated on the site other than domestic sewage?
- YES  NO Is the site subject to approval by any other public agency?
- YES  NO Are there any easements or right of ways on this property?

I have read this application and certify that the information provided herein is true, complete and correct and is given in good faith. Authorized County and State Officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners, making the site accessible so that a complete site evaluation can be performed, and compliance with applicable governing regulations.

**IF THE INFORMATION IN THE APPLICATION FOR AN IMPROVEMENT PERMIT IS FALSIFIED, CHANGED, OR THE SITE IS ALTERED, THEN THE IMPROVEMENT PERMIT AND AUTHORIZATION TO CONSTRUCT MAY BECOME INVALID.**

**DROP BOX SUBMITTAL**

Joseph Hackett  
 Property Owner's or Owner's Legal Representative\* Signature (Required)

\* Date 2/15/21  
2/16/21

\* Must provide documentation to support claim as owner's legal representative.

Call



**GUILFORD COUNTY RECEIPT**

**Planning & Development**  
400 West Market Street  
Greensboro, NC 27402  
336-641-3334 - Planning  
336-641-3707 - Permitting

**Environmental Health**  
400 West Market Street  
Greensboro, NC 27402  
336-641-7613

**RECEIPT INFO**

<u>Receipt #</u>	<u>Receipt Date</u>	<u>Payor</u>	<u>Payment Method</u>	<u>Check/CC #</u>	<u>Receipt Amount</u>
153907	03/09/2021	Hackett Construction	Check	4706	\$300.00

Cashier ID: SFLANAG

<u>Fee Item Description</u>	<u>Account Code</u>	<u>Amount</u>
Residential Soil Evaluation	210545 45122	\$300.00
	<b>Total</b>	<b>\$300.00</b>

**APPLICATION INFO**

<u>Application #</u>	<u>Application Type</u>	<u>Application Name</u>
21-03-SNHR-02038	Building/Guilford County/Health Residential/Soil Evaluations New	

**PROPERTY INFO**

<u>Property Address</u>	<u>Property Owner</u>	<u>Parcel #</u>
600 W NC HIGHWAY 150 GREENSBORO, NC 27455	David Schmidt 3 Willow Ridge Ct Summerfield, Nc 27358	138257

**CONTACT INFO**

<u>Contact Name</u>	<u>Contact Type</u>
Joe Hackett 1147 Kearns-Hackett Rd Pleasant Garden, Nc 27313	Applicant

**LICENSED PROFESSIONAL INFO**

<u>Primary</u>	<u>License #</u>	<u>License Type</u>	<u>Licensed Prof</u>	<u>Business Name</u>	<u>Lawson #</u>
----------------	------------------	---------------------	----------------------	----------------------	-----------------



Environmental Health Division  
Water Quality Section  
400 W. Market St.  
Greensboro, NC 27401  
(336) 641-7613



### Improvement Permit

Address: 600 NC Highway 150, GREENSBORO, NC 27455      Permit Number: 15-03-SNHR-01335

This Improvement Permit shall be valid for five years from the date issued upon a satisfactory showing to the health department that the site and soil conditions are unaltered, that the facility, design wastewater flow, and wastewater characteristics are not increased, and that the wastewater system can be installed to meet the following requirements that were in effect on the date the Improvement Permit was issued.

Design Flow: 480

Facility Type: Residence

Bedrooms: 4

Conditions:

- Lot # 23

Do not grade or disturb the approved area. Disturbance of this area, change of site plan, or change of intended use could result in the suspension or revocation of this permit. This is not an authorization to construct a wastewater system. The authorization for wastewater system construction with system specifications must be completed before any building permits or system installation can commence.

Permit Issued:

Environmental Health Specialist

Date Issued: 10.5.15



1 inch = 60 feet



Conventional Initial  
7451 sq ft

PATSY'S TRAIL  
50' PUBLIC R/W

10' X 70' SIGHT ESMT.

25% Reduction Repair  
5791 sq ft

Conventional Initial  
6527 sq ft

TOBACCO BARN

Conventional Initial & Repair  
16675 sq ft

Conventional Initial & Repair  
12817 sq ft

Conventional Initial & Repair  
13627 sq ft

Conventional Initial & Repair  
13132 sq ft

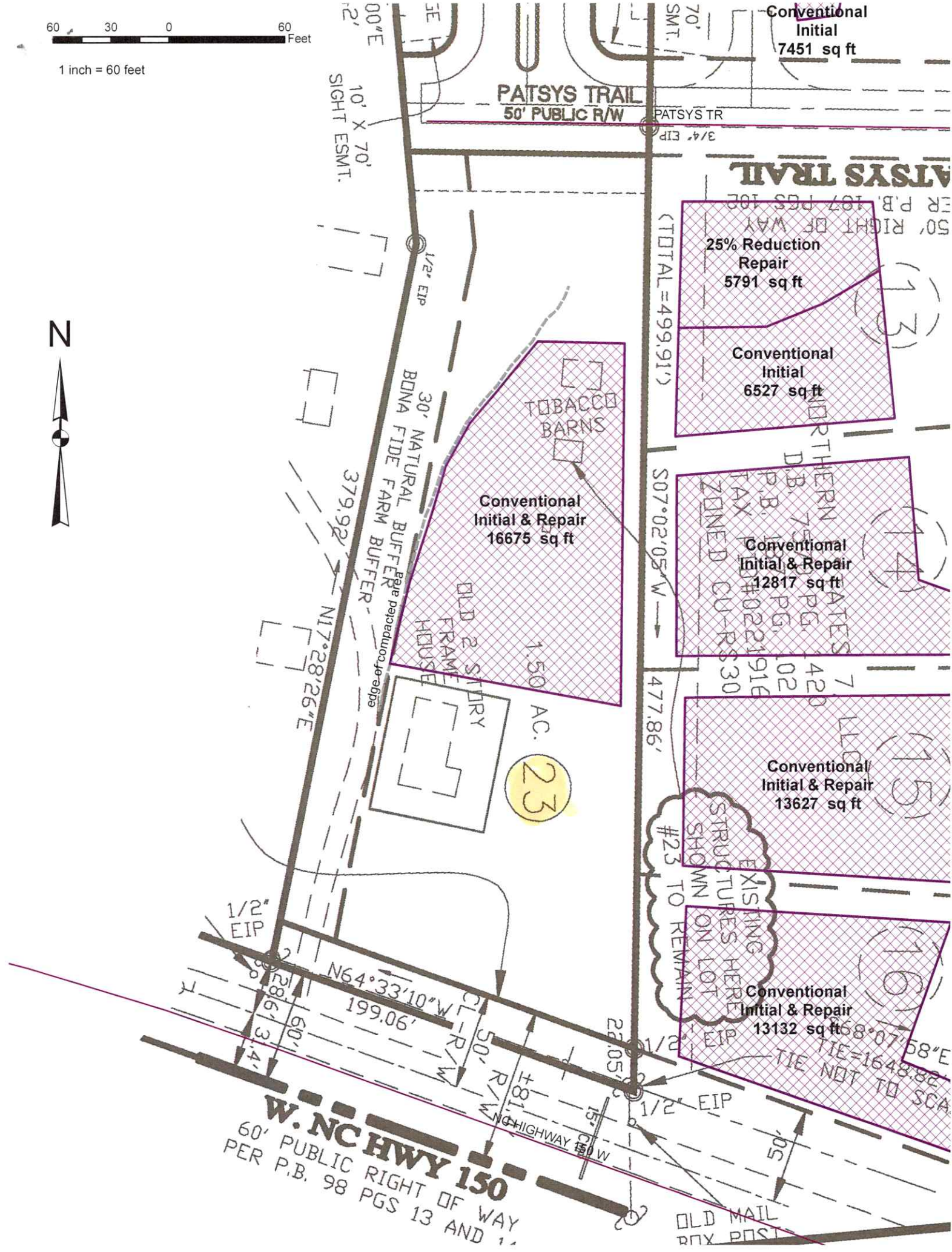
1.50 AC. 23

EXISTING STRUCTURES HERE SHOWN ON LOT #23 TO REMAIN

68°07'58"E  
TIE=1648.82  
TIE NOT TO SCA

W. NC HWY 150  
60' PUBLIC RIGHT OF WAY  
PER P.B. 98 PGS 13 AND 14

OLD MAIL BOX POST



#	1	2	3	4	
landscp	L	L	S	S	
slope	10	9	6	5	
H1_depth	0 - 7	0 - 9	0 - 7	0 - 7	
H1_text	SCL	SCL	SCL	SCL	
H1_consist	Fi	Fi	Fi	Fi	
H1_struct	WBK	WBK	WBK	WBK	
H1_minrl	SEXP	SEXP	SEXP	SEXP	
H2_depth	7 - 33	9 - 40	7 - 48	7 - 41	
H2_text	Clay	Clay	Clay	Clay	
H2_consist	Fi	Fi	Fi	Fi	
H2_struct	SBK	SBK	SBK	SBK	
H2_minrl	SEXP	SEXP	SEXP	SEXP	
H3_depth	33 - 48	40 - 48	0	41 - 48	
H3_text	CL (BC)	CL (BC)		CL (BC)	
H3_consist	Fi	Fi		Fi	
H3_struct	WBK	WBK		WBK	
H3_minrl	SEXP	SEXP		SEXP	
H4_depth	0	0	0	0	
H4_text					
H4_consist					
H4_struct					
H4_minrl				SEXP	
soil_wet					
saprolite	0	0	0	0	
class	PS	PS	PS	PS	
ltar	0.275	0.3	0.3	0.3	
notes					
eval_by	H. Ward	H. Ward	H. Ward	H. Ward	
eval_date	09/10/15	09/10/15	09/10/15	09/10/15	
Initial LTAR	0.3				Initial System Type conventional
Repair LTAR	0.3				Repair System Type conventional
	Buchanan Place Lot #23				Comments



GUILFORD COUNTY
PLANNING AND DEVELOPMENT

Application for
Improvement Permit

15-03-SNHR-01335

Building Permit # Septic # Well #

600 E. NC HWY 150
Gatsby Pl
Property Information
Address City State Zip

Tax Map # Block # Parcel #

Township: Center Grove Development Name: Buchanan Place

Section/Phase: Lot #: 23 Deed Book: Page: Plat Book: Page:

Lot of Record First Lot Out Plat Required > 5 Acres (5-17-65 to 2-1-74) > 10 Acres (2-1-74 to Present)

Located in recorded roadway corridor, do not permit. Contact NCDOT

Zoning Information

Zoning: RS-30 Conditional Use (Describe): 1.50 ac

Overlay (Check): MH SR HD AR FH

Watershed: N/A Watershed Critical Area:

Building Setbacks (Zoning): Front Street: 40/65 FT Side Street: 20/45 FT Side Yard: 10 FT Rear: 30 FT

Comments:

PLANNING DEPARTMENT OFFICIAL:

Applicants Information

Evans Engineering, Inc 4609 Dundas Drive Greensboro, NC 27407 (336) 854-8877

Applicant Name Address Phone

LTD Buchanan Place, LLC 211 W. Lexington Avenue High Point, NC 27262 (336) 671-1858

Owner Name Address Phone

Development Information

NEW ACCESSORY SWMH MULTIFAMILY/DUPLEX ADDITION (TYPE)

HOUSE MODULAR DBMH RENOVATION OTHER TYPE:

Residential Specifications: 4 # of Bedrooms Total # of Rooms # of Occupants

Basement (Y or N) Basement Fixtures # of Stories Size of Structure (sq ft)

Non Residential Type: Commercial Industrial Other

# of Employees # of Fixtures Plumbing # of Stories

Size of Structure (sq ft) Restaurant # of seats: Church w/kitchen

Water Information: New Well Existing Well Public Community Well

Sewage Disposal: Conventional Chamber Trench Polystyrene Aggregate Low Pressure Pipe

Lg. Diameter Pipe PTI Multi-pipe Drip Irrigation PPBPS Pre-Treatment

Other (specify)

Directions:

A plat or site plan (A.K.A. plot plan) must accompany this application. Clearly stake and flag all property lines, corners and the corners of all structures.

I have read this application and certify that the information provided herein is true, complete and correct to the best of my knowledge, and is given in good faith. Authorized County and State Officials are granted right of entry to conduct necessary inspections to determine compliance with applicable rules. The owner/applicant is solely responsible for compliance with the applicable governing regulations.

Clark A. F...

Owner / Applicant Signature

3-6-15

Date

**Alan Clapp  
Licensed Soil Scientist  
389 Clapp Farms Road  
Greensboro, NC 27405**

Phone: 336-202-6808

alanclapp63@gmail.com

Soil/Site Evaluations-Septic Systems Layout and Design-SHWT Stormwater Assessment-Preliminary Evaluations

January 12, 2020

LD Equity Inc.  
3608 W. Friendly Ave. Ste 202  
Greensboro, NC 27410  
Attn.: David Schmidt

RE: LD Equity Inc. Property  
PIN: 7859975677 – 1.502 Acres  
600 NC 150 W  
Guilford County, NC

Mr. Schmidt:

On January 11, 2020, the property referenced above on NC 150 W in Summerfield in Guilford County was evaluated. Soil borings were made and examined to determine soil suitability for on-site sewage disposal systems in accordance with 15A 18A .1900 Rules for Sewage Treatment and Disposal Systems. These borings were made using a hand auger. The property was traversed and numerous borings were made in a transect-type sampling pattern. The property has an existing dwelling with well and septic system and multiple farm outbuildings. Under state regulations, sites for subsurface sewage disposal systems (septic tank systems) are evaluated for landscape position and topography, soil characteristics (structure, mineralogy and texture), soil depth, soil wetness, restrictive horizons, and available space. This property is in the geologic area of the Milton belt with felsic parent materials on the tract.

The property was evaluated for the purposes of determining if a new dwelling would be supported using a septic system on the lot. This report and accompanying soil map will help identify the usable soil areas on the parcel. The water supply is proposed to be a well. Estimated design sewage flow from a house is 120 gallons per bedroom per day. The available space required is a function of trench length, grade and topographic features. I recommend 3,000 to 4,000 square feet per bedroom of area for drain fields in the "A" delineated soils. 3,000 square feet per bedroom is usually sufficient for a level site. 4,000 square feet per bedroom is typically needed for a sloping site, site with large trees and root mass, and sites with large surface boulders to work around. So, for a four-bedroom dwelling, 12,000 to 16,000 square feet of usable soils for the septic system are needed. This will also allow for a repair field of equal size for use in the future.

Job # 120004

## **Typical Septic Systems in Piedmont NC:**

The most common septic systems used in North Carolina are listed with the corresponding minimum usable soil depth required and any trench length reduction if allowed noted in parentheses: conventional (30"), shallow conventional systems (24" with soil cap), chamber systems (24" with soil cap and 25% drain field reduction), polystyrene systems (24" with soil cap and 25% drain field reduction), vertical panel block systems (requires at least 34" of usable soil and allows 50% drain field reduction), horizontal panel block systems (requires at least 26" of usable soil and allows 50% drain field reduction) large diameter pipe (24"), low pressure pipe (24"), low profile chamber (20"), low pressure fill (18") and drip irrigation (18"). A pump can be used to deliver effluent to the usable soil area if gravity flow cannot be achieved. Also, a pump is required on any system with over 750' of drain field. The percent reduction means the amount of drain field trench length reduction allowed for that product as compared to conventional trenches. Certain models of chamber systems and polystyrene bundle systems are considered accepted trench products. Accepted trench products can be substituted in lieu of conventional gravel trenches.

## **Septic System Setbacks:**

The following setbacks must be taken into consideration in identifying a septic system area for flows less than 3000 gallons per day.

Private Water Supply Source: wells or springs:	100'
Private Water Supply Source with site-planning considerations:	50'
Public Water Supply Source:	100'
WS-1 Streams:	100'
SA Coastal waters:	100'
Other coastal waters:	50'
Other streams, canals, marshes or surface waters:	50'
Class I and II reservoirs:	100'
Permanent Storm Water retention ponds:	50'
Building foundation:	5'
Basement:	15'
Property line:	10'
Embankments or vertical cuts > 2' deep:	15'
Any water line:	10'
Drains:	
Interceptor, Foundation, and storm	
Upslope:	10'
Side slope:	15'
Down slope:	25'
Groundwater lowering ditches:	25'
Swimming pool:	15'
Any other nitrification field:	20'

(From 15A NCAC 18A .1950 Location of Sanitary Sewage Systems)

### **Findings:**

Once the soil borings are completed areas are delineated based on the usable soil depths. Soils with depths of 30" or more are considered to be usable for conventional, shallow trench conventional systems, chamber systems (25% drain field reduction), polystyrene systems (25% drain field reduction) and panel block systems (requires at least 36" of usable soil and allows 50% drain field reduction). The borings flagged with red survey ribbon on the property are considered to be usable for a septic field and classified as provisionally suitable. Soils with usable depths between 24-29" would require a soil cap when used for conventional type trenches.

The usable areas are noted on the enclosed map as "A". The soils and underlying saprolite in the "A" areas were typical of the Clifford series (formerly mapped as Cecil series). No soil wetness conditions were found within the first 4' of the surface of either the soils or saprolite. The slopes on this property ranged from 3 – 8% in the "A" soil area. The usable soils occurred primarily on ridge and linear convex slopes. The Clifford series soils are red, clayey and moderately well drained. The saprolites as described above had a pinkish white color with few, fine mica flakes. The Clifford series soils are well suited for septic systems and are one of the better soils in the Piedmont NC physiographic region that can be used for drain fields if sized properly. I would recommend utilizing the septic fields in the "A" soil area and arranging the house sites to maximize these soils. The long-term acceptance rate based on soil texture for the red flagged areas would be in the range of .1 - .4 gpd/ft<sup>2</sup> for clay-textured soils with typical loading rates of .25 - .3 gpd/ft<sup>2</sup>.

The areas denoted as "C" were found to have unsuitable soils or unsuitable topography. Unsuitable topography characteristics can include: gullies, rock outcroppings, streams, pond, flood plains, drainage ways, designated wetlands, steep slopes (> 30 %), setbacks and available space. Unsuitable soils characteristics can include: shallow soil depths to saprolite or parent material, the occurrence of soil wetness conditions, the occurrence of expansive clay mineralogy, the occurrence of unsuitable soil structure and the occurrence of restrictive horizons and organic soils.

Borings with unsuitable soil characteristics were not found during this evaluation. There was an existing driveway network and old home with farm outbuildings on the parcel. The parcel is the remaining tract of Buchanan Place Subdivision (PB: 190 PG: 34). There was an old pit privy behind the existing dwelling. The outbuildings are on rock foundation and could be moved. If left in place a 5' setback to a septic system would be required. The location of all farm outbuildings will be noted on the soil map. Driveway areas also cannot be used for septic systems. No well was found on the parcel. The location of septic systems on adjacent lots will be noted on the soil map.

## **Conclusions:**

This tract has good potential for development of a new dwelling utilizing a septic system. I would recommend maximizing the use of the "A" soil areas for drainfields. The "A" soils would be the premium areas to consider for a septic system when developing the property. House and garage placement should be upslope to allow gravity flow to "A" soils. Keep in mind that homes can be built in the "C" areas and pumped to the "A" area by the use of a septic effluent pump if a gravity flow system cannot be achieved.

The development plans should include at least 3,000 to 4,000 square feet of usable soil per bedroom for the house and allow for the property line setback of 10 feet. Reduced footprint drainfield trench products as described in the Typical Septic Systems in Piedmont NC section could be utilized to lower the linear and square footage needed for drainfield. No grading or land disturbing activities should be allowed in the "A" areas where septic fields are proposed, as it will affect the site suitability. However, I do recommend forestry mulching to make the property accessible in thickly vegetated areas. Tree species to avoid in the drainfield area include maples, willow oaks and sweet gum. A boundary survey was evident at the time of the evaluation. The soil map is based on the 2018 aerial and topographic map available from Guilford County GIS. The local planning and zoning authority prior to approval shall review and approve any proposed site plan to ensure building setbacks are met.

In North Carolina, two primary options for septic system permitting exist. In the traditional option, the local county health department can evaluate and permit any site. A new version for the traditional permit is now allowed by NC Session Law 2018-114. In this version, a NC Licensed Soil Scientist can evaluate a lot and submit soil information on each lot to the Health Department in lieu of the Health Department evaluation. This report does not meet the requirements needed for that type of permitting.

In the traditional permitting model, the local county health department in the form of an Improvement Permit grants site approval. An Authorization to Construct a Wastewater System is issued once building floor plans are reviewed and the Improvement Permit is issued. The county issues an Operation Permit after the system has been installed to meet the specifications of the Authorization to Construct. Septic layouts and system design can be performed as needed. The totally private permitting option is the Engineer Option Permit (EOP). A NC Licensed Engineer, a NC Licensed Soil Scientist and a NC Registered Septic Installer can evaluate, design and install a septic system without Health Department involvement other than record keeping.

This preliminary evaluation was conducted using accepted soil science and environmental health practices. This does not guarantee that the local health department will agree with these findings since soil/site evaluations are an interpretation of the state regulations but all current sampling methods, technologies, and practices were used.

Please feel free to contact me if you have any further questions.

Alan Clapp

Alan Clapp

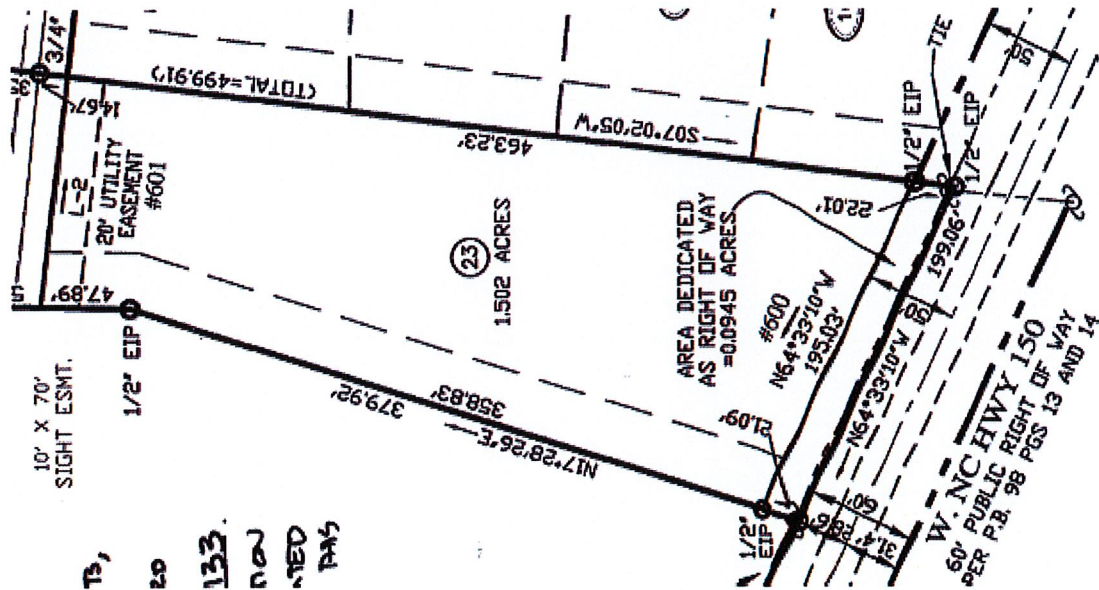
NC Licensed Soil Scientist #1058

NC Registered Environmental Health Specialist #1118

NC Subsurface Wastewater Operator #1009092

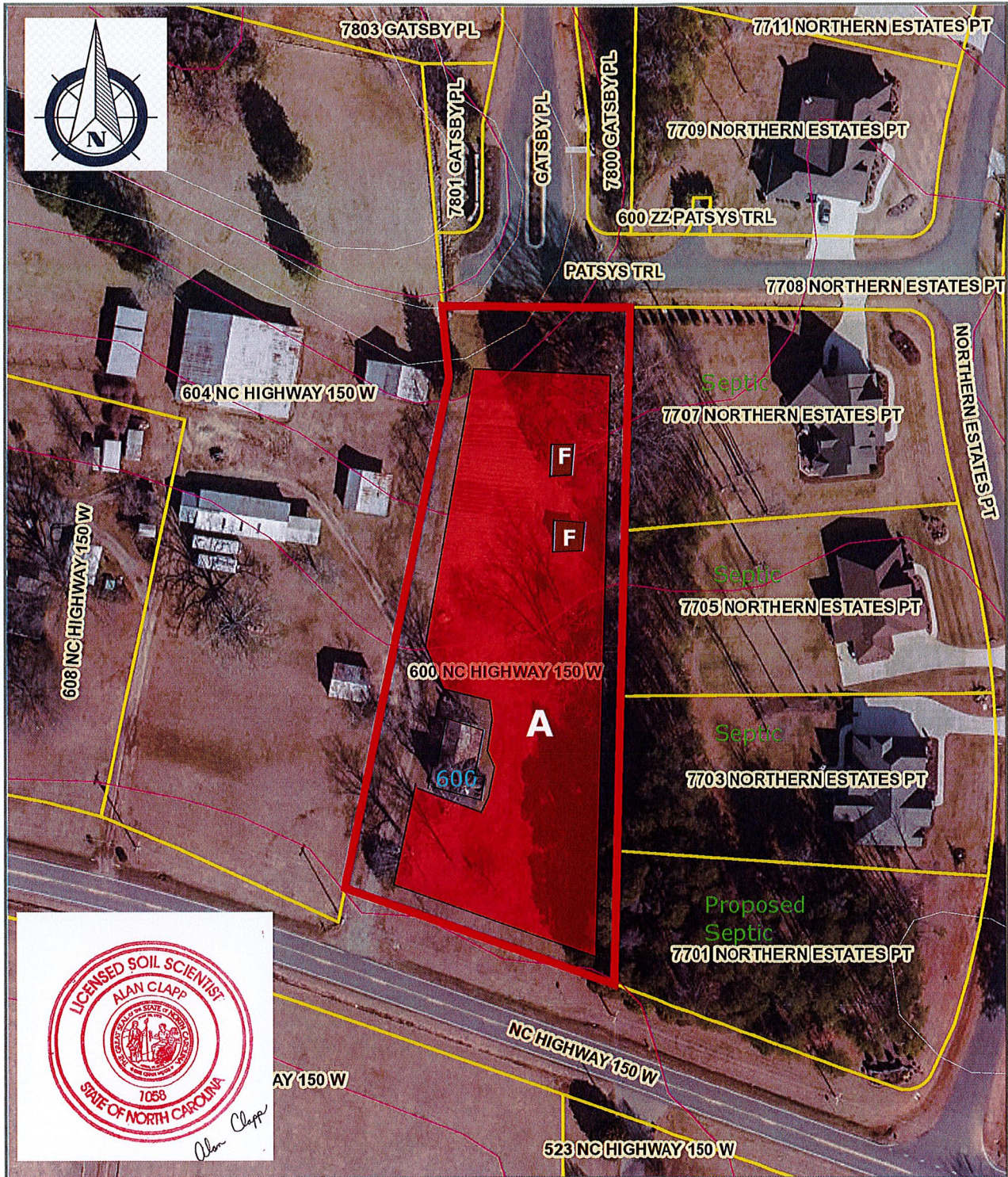


Plat Parcel (PB: 190 PG: 34):



Job # 120004

600 NC 150 W



Disclaimer: While every effort is made to keep information provided over the internet accurate and up-to-date, Guilford County does not certify the authenticity or accuracy of such information. No warranties, express or implied, are provided for the records and/or mapping data herein, or for their use or interpretation by the User.

Map Scale  
1 inch = 100 feet

**A - Usable soil area for conventional type septic trench system.**  
**F - Farm outbuildings.**