



Central Carolina Soil Consulting, PLLC
1900 South Main Street, Suite 110, Wake Forest, NC 27587
Office Number: 919-569-6704

Acknowledgment of Subsurface wastewater evaluation and septic design by Central Carolina Soil Consulting, PLLC. for Cotton Farms, Lot 10 (PIN: 0643-35-5902), for issuance of an IP and CA.

For Improvement Permit (IP) issuance:

"The LSS/LG evaluation(s) attached to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3)."

For Construction Authorization (CA) issuance:

"The plans or evaluations attached to this application are to be used to issue a Construction Authorization in accordance with G.S. 130A-335(a2), (a5) and (a6)."

The LSS evaluation attached to this application was used to produce and design a subsurface wastewater septic system for permitting to obtain an IP and CA in accordance G.S. 130A-335(a2), (a3), (a5) and (a6).

Owner:

Ken Harrah Homes, LLC

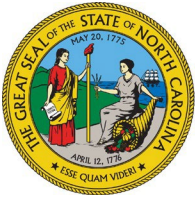
Owner's representative:

Andy Beard

Date:

7-13-23

Permit #: _____



NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • Deputy Secretary for Health
SUSAN KANSAGRA • Assistant Secretary for Public Health
Division of Public Health

Submittal Includes: [] (a2) Improvement Permit [] (a2) Construction Authorization [] Fee \$ _____

IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)

County: _____

PIN/Lot Identifier: _____

Issued To: _____

Property Location: _____

Subdivision (if applicable) _____ Lot #: _____ Block: _____ Section: _____

LSS Report Provided: Yes [] No []

If yes, name and license number of LSS: _____

New [] Expansion [] System Relocation [] Change of Use []

Proposed Structure: _____

Number of bedrooms: _____ Number of Occupants: _____ Other: _____

Design Wastewater Strength: [] domestic [] high strength [] industrial process

Proposed Design Daily Flow: _____ GPD Proposed LTAR (Initial): _____ Proposed LTAR (Repair): _____

Proposed Wastewater System Type*: _____ (Initial) Pump Required: [] Yes [] No [] May be required

Proposed Wastewater System Type*: _____ (Repair) Pump Required: [] Yes [] No [] May be required

*Please include system classification for proposed wastewater system types in accordance with 15A NCAC 18A .1961 Table V(a)

Saprolite System (initial): [] Yes [] No Saprolite System (repair): [] Yes [] No

Fill System (Initial): [] Yes [] No If yes, specify: [] New [] Existing (when adding more than 6 inches of fill to system area provide a fill plan)

Fill System (repair): [] Yes [] No If yes, specify: [] New [] Existing (when adding more than 6 inches of fill to system area provide a fill plan)

Usable Soil Depth (Initial): _____ Usable Soil Depth (Repair): _____

Max. Trench Depth (Initial)*: _____ Max. Trench Depth (Repair)*: _____ * Measured on the downhill side of the trench

Artificial Drainage Required: [] Yes [] No If yes, please specify details: _____

Type of Water Supply: [] Private well [] Public well [] Shared well [] Municipal Supply [] Spring [] Other: _____

Drainfield location meets requirements of Rule .1945: Yes [] No [] Drainfield location meets requirements of Rule .1950: Yes [] No []

Permit valid for: [] Five years [site plan submitted pursuant to GS 130A-334(13a)] [] No expiration [plat submitted pursuant to GS 130A-334(7a)]

Permit conditions:

Licensed Soil Scientist Print Name: _____

Licensed Soil Scientist Signature: _____ Date: _____

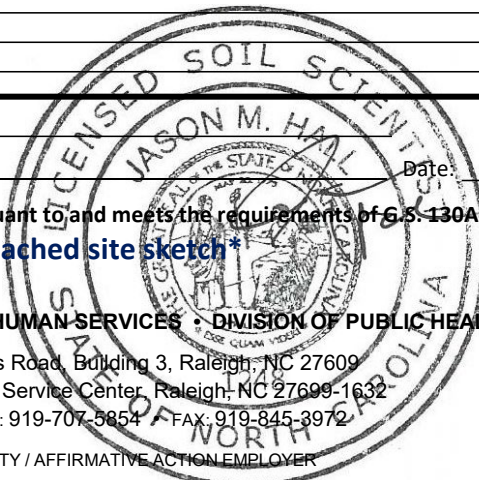
The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2).

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF PUBLIC HEALTH

LOCATION: 5605 Six Forks Road, Building 3, Raleigh, NC 27609
MAILING ADDRESS: 1632 Mail Service Center, Raleigh, NC 27699-1632
www.ncdhhs.gov • TEL: 919-707-5854 • FAX: 919-845-3972

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER



This Section for Local Health Department Use OnlyInitial submittal received: _____ by _____
Date Initials

G.S. 130A-335(a3) states the following:

When an applicant for an Improvement Permit submits to a local health department an Improvement Permit application, the permit fee charged by the local health department, the common form developed by the Department, and a soil evaluation pursuant to subsection (a2) of this section, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Improvement Permit includes all of the required components. If the local health department determines that the Improvement Permit is incomplete, the local health department shall notify the applicant of the components needed to complete the Improvement Permit. The applicant may submit additional information to the local health department to cure the deficiencies in the Improvement Permit. The local health department shall make a final determination as to whether the Improvement Permit is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The Department shall develop a common form for use as the Improvement Permit.

The review for completeness of this Improvement Permit was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

 Incomplete (If box is checked, information in this section is required.)

The following items are missing:

_____Copies of this were sent to the LSS and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

 Complete

State Authorized Agent: _____ Date: _____

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This permit is subject to revocation if the site plan, plat, or the intended use changes. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to evaluations, submittals, or actions from a licensed soil scientist or licensed geologist pursuant to GS 130A-335(a2).

Improvement Permit Expiration Date: _____

See attached site sketch

Re-submittal of Improvement Permit

LHD USE ONLY: This IP resubmittal received: _____ by _____
Date Initials

The following items are being resubmitted pursuant to G.S. 130A-335(a3) for issuance of the Improvement Permit:

I, _____ hereby attest that the information required to be included with this re-submittal
Licensed Soil Scientist (Print Name)
 is accurate and complete to the best of my knowledge and that the proposed Improvement Permit meets all applicable federal, State, and local laws, regulations, rules, and ordinances.

Signature of Licensed Soil Scientist Date

The section below is for Local Health Department use after submittal of items noted as missing above.

LHD Follow-up Completeness Review of Improvement Permit

The review for completeness of this Improvement Permit re-submittal was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

Incomplete (If box is checked, information in this section is required.)

The following items are missing:

Copies of this were sent to the LSS and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

Complete

State Authorized Agent: _____ Date: _____



Central Carolina Soil Consulting, PLLC

1900 South Main Street, Suite 110, Wake Forest, NC 27587

Office Number: 919-569-6704

July 12, 2023

Job #4610

Ken Harvey Homes
Attention: Andy Beard
4909 Unicon Drive, Suite 107
Wake Forest, NC 27587

RE: Preliminary soil/site evaluation for single family wastewater approval at Cotton Farms Subdivision, Lot 10 (4-bedroom) in Harnett County pursuant to and meets the requirements of G.S. 130A-335(a2)."

Dear Mr. Beard:

Central Carolina Soil Consulting, PLLC conducted a preliminary soil evaluation on the aforementioned lot to determine the areas of provisionally suitable soils that are suitable for subsurface wastewater disposal systems (conventional, Accepted & Innovative). **"The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2)."** The soil/site evaluation was performed using a hand auger in June 2023, under 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, CCSC laid out and located the septic layout and gps'd for site plan drawing purposes. Please note that the lot lines must be clearly marked by your surveyor prior to system installation by your installer to verify all setbacks before digging.

The lot is proposed to have a 4-bedroom system for the house, per an Engineered Flow-Reduction. A septic system field layout was completed based on the house location and property lines surveyed in the field.

The proposed Initial system for the house is a Pressure Manifold distribution using lines 3-5 totaling 345 feet of accepted product (EZ-Flow). The repair field is a Pressure Manifold distribution using lines 1-2 & 6-7 totaling 205 feet of T&J Panel Block product (horizontal). The septic and pump tanks for the house should be minimum 1,000 gallons each with risers. The septic and pump tanks should also have pressed in rubber boots on both the inlets and the outlets of the tanks.

Based on the findings during the field evaluation, the area on the attached map has at least 44 inches (initial) and 32 inches (repair) of provisionally suitable soils for a modified conventional septic system. The assigned LTAR for the site is 0.3 gal/day/ft² with a maximum depth of 24 inches for the initial system installation of the drain lines due to slope correction. The assigned LTAR for the site is 0.35 gal/day/ft² with a maximum depth of 16 inches with 6" of additional cover for the repair system installation of the drain lines due to slope correction.

Septic Installation:

The septic system for the lot should be installed during dry soil conditions (no rain events within 72 hours). The septic system should be installed on contour while maintaining all required setbacks.

Setbacks: (see septic design page for locations)

- **Septic and Pump Tanks** (see septic design)
 - 10' minimum from property lines
 - 5' minimum from house
- **Septic Lines** (see septic design)
 - 10' minimum from property lines
 - 5' minimum from house
- **Manifold's and D-Box's** (see septic design)
 - 10' minimum from property lines
- **Supply Lines** (see septic design)
 - 5' minimum from property lines

Grading:

No grading should be completed within the initial and repair septic areas that change the natural grade of the area. There should be no cutting or filling within the septic areas as well. When grading the lot, no cuts of 2' or greater should be within 15' of the septic areas. If a cut is required near the septic area, keep the cut around 6-8 inches in depth.

HOUSE:

- Initial System: Pressure Manifold, lines 3-5 totaling 345' (see layout)
- Repair System: Pressure Manifold, lines 1-2 & 6-7 totaling 205' (see layout)
- 360 gal/day flow rate (4-bedroom)
- 1,000 gallon septic and pump tanks with risers and pressed in rubber boots on both the inlet and outlet ends
- 24" maximum trench depth (Initial)
- 16" maximum trench depth with 6" of additional cover (Repair)
- 0.3 LTAR for Initial, 0.35 LTAR for Repair
- No grading/filling septic areas
- No cuts >2' within 15' of septic areas
- Keep tanks and drain lines 10' from property lines
- Keep supply line >5' property lines
- Install in dry soil conditions (No rain events within 72 hours)
- Maintain natural contours when clearing the lot

This letter discusses the location of provisionally suitable soils for subsurface wastewater disposal systems and does not guarantee the future function of any wastewater system on sites. Central Carolina Soil Consulting, PLLC is a professional consulting firm specializing in soil delineations and design for on-site wastewater disposal systems.

If you have any questions regarding the findings on the attached map or in this report, please feel free to contact me at any time. Thank you for allowing Central Carolina Soil Consulting to perform this site evaluation for you.

Sincerely,



Jason Hall

NC Licensed Soil Scientist #1248
AOWE certification number 10004E



Encl: Soil Map & septic layout

Sheet:
Property ID: 0643-35-5902
Lot #: 10
File #:
AppID:

**CCSC SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM**

Owner: Ken Harvey Homes LLC

Address: 4909 Unicon Drive, Suite 107, Wake Forest, NC 27587

Proposed Facility: 4-Bedroom

Design Flow (.1949): 360 gal/day per engineered flow-red.

Location of Site: Cotton Farms, Lot 10 (218 Hook Drive, Fuquay-Varina, NC)

Applicant:

Date Evaluated: June 2023

Property Size: 0.58 acres

Property Recorded:

Water Supply: Public Individual Well Spring Other
Evaluation Method: Auger Boring Pit Cut
Type of Wastewater: Sewage Industrial Process Mixed

P R O F I L E #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941		b PROFILE FACTORS				Profile Class & LTAR				
			.1941 Texture/ Structure	.1941 Consistence Mineralogy	.1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz					
1	~10%	A, 0-4	SL, GR	VFR, NS, NP									
		Bt1, 4-10	SCL, SBK	FR, SS, SP, SEXP									
		Bt2, 10-36	C, SBK	FI, SS, SP, SEXP						PS			PS, 0.3
		BC, 36-45	CL, SBK	FR, SS, SP, SEXP						PS			PS, 0.3
		C, 45-48	L, GR	FR, NS, NP						UN			UN
2	~5%	A, 0-5	SL, GR	VFR, NS, NP									
		B, 5-22	SL, GR	VFR, NS, NP									
		Bt, 22-45	SCL, SBK	FR, SS, SP, SEXP						PS			PS, 0.4
										PS			PS, 0.35
					auger restrictive @ 45"								
3	~10%	A, 0-9	SL, GR	VFR, NS, NP									
		B, 9-27	SL, GR	VFR, NS, NP									
		Bt1, 27-44	SCL, SBK	FR, SS, SP, SEXP						PS			PS, 0.4
		Bt2, 44-48	SCL, SBK	FR, SS, SP, SEXP						PS			PS, 0.35
					10YR 7/2								
4	~10%	A, 0-9	SL, GR	VFR, NS, NP									
		B, 9-24	SL, GR	FR, NS, NP									
		Bt, 24-30	SCL, SBK	FR, SS, SP, SEXP						PS			PS, 0.4
										PS			PS, 0.35
					auger restrictive @ 30"								

Description	Initial System	Repair System
Available Space (.1945)	Yes	Yes
System Type(s)	Accepted	T&J Panel Block
Site LTAR	0.3	0.3

Other Factors (.1946):
Soil Evaluation By: Jason Hall
Others Present: James Rice
Site Classification (.1948): Provisionally Suitable
Site Evaluation By:
Others Present:

COMMENTS:

<u>Landscape Position</u>	<u>Group</u>	<u>Texture</u>	<u>.1955 LTAR</u>	<u>Structure</u>
R-Ridge	I	S-Sand	1.2 - 0.8	SG-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		M-Massive
LS-Linear Slope	II	SL-Sandy Loam	0.8 - 0.6	CR-Crumb
FS-Foot Slope		L-Loam		GR-Granular
NS-Nose Slope		SI-Silt		SBK-Subangular Blocky
HS-Head Slope	III	SICL-Silty Clay	0.6 - 0.3	ABK-Angular Blocky
CC-Concave Slope		Loam		PL-Platy
CV-Convex Slope		CL-Clay Loam		PR-Prismatic
T-Terrace		SCL-Sandy Clay		
FP-Flood Plain	IV	Loam	0.4 - 0.1	
		SC-Sandy Clay		
		SIC-Silty Clay		
		C-Clay		

Consistence

Moist

VFR-Very Friable
FR-Friable
FI-Firm
VFI-Very Firm
EFI-Extremely Firm

Consistence

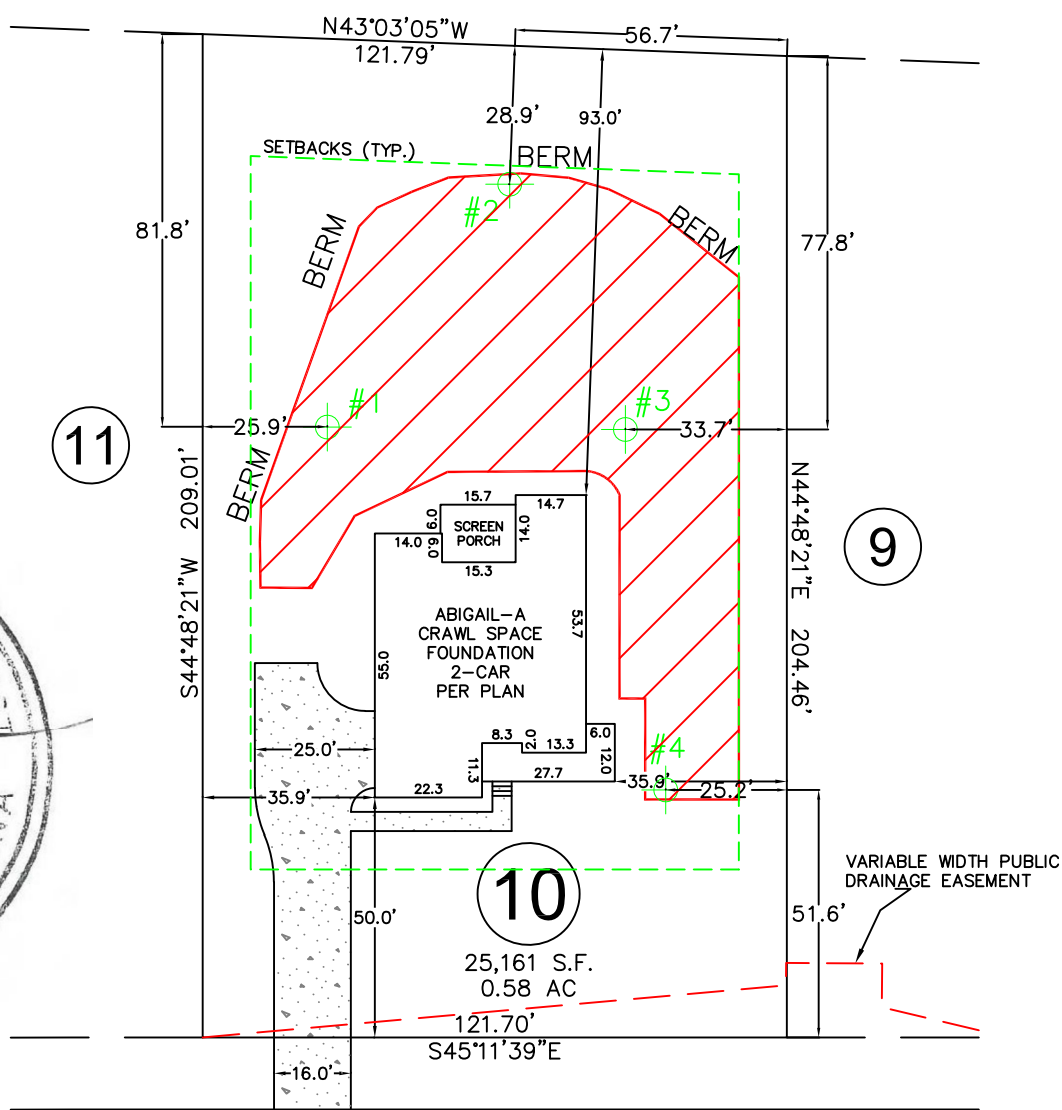
Wet

NS-Non-Sticky
SS-Slightly Sticky
S-Sticky
VS-Very Sticky
NP-Non-Plastic
SP-Slightly Plastic
P-Plastic
VP-Very Plastic

Mineralogy

SEXP-Slightly Expansive
EXP-Expansive

Sketch of Soil Evaluation Locations



HOOK DRIVE

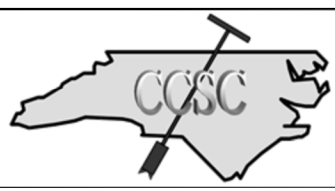
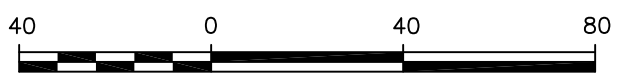
50' PUBLIC R/W & UTILITY

⊕ #1 = profile description locations

- *Keep tanks and drain lines 10' from property lines.
- *Not a survey.
- *Not a guarantee of a septic permit.
- *Keep supply lines >5' from property lines.
- *Some lines are flagged longer in the field than lengths indicate.
- *No grading septic area.
- *No adding soil within septic area
- *No rutting-up septic area
- *No cuts of >2' within 15' of septic areas

- System and Repair Area:
- ~7,000ft²
 - 0.3 soil LTAR
 - 4-bedroom: Accepted Product Primary and T&J Panel Repair (per Engineered Flow-Reduction)

GRAPHIC SCALE
1" = 40'



Central Carolina Soil Consulting, PLLC
1900 South Main Street, Suite 110
Wake Forest, North Carolina 27587
Phone (919)569-6704 Fax (919)569-6703

Soils Map
Lot 10, Cotton Farms Subdivision
Harnett County, North Carolina

Job#: 4609
Drawn By: JR
Date: 06/14/2023
Revision: