



NC DEPARTMENT OF  
**HEALTH AND  
HUMAN SERVICES**

ROY COOPER • Governor

KODY H. KINSLEY • Secretary

MARK BENTON • Chief 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: Harnett

PIN/Lot Identifier: 0519-69-8634.000

Issued To: LGI Homes NC LLC

Property Location: 110 Teepee Drive, Lillington, NC

Subdivision (if applicable) Boone Trail Village Phase 1 Lot #: 41 Block: \_\_\_\_\_ Section: \_\_\_\_\_

LSS Report Provided: Yes ☒ No ☐

If yes, name and license number of LSS: Scott Mitchell - 1237

New ☒

Expansion ☐

System Relocation ☐

Change of Use ☐

Facility Type: Single-Family Dwelling Unit

Number of bedrooms: 4 Number of Occupants: 8 or less Other: \_\_\_\_\_

Design Wastewater Strength: ☒ Domestic

☐ High Strength

☐ Industrial Process Wastewater

Proposed Design Daily Flow: 480 GPD

Proposed LTAR (Initial): 0.35

Proposed LTAR (Repair): 0.35

Proposed Wastewater System Type\*: IIb (Initial) Pump Required: ☐ Yes ☐ No ☒ May be required

Proposed Wastewater System Type\*: IIb (Repair) Pump Required: ☒ Yes ☐ No ☐ May be required

*\*Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*

Effluent Standard: ☒ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW

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 Depth to LC (Initial)\*: 38"+ Usable Depth to LC (Repair)\*: 38"+ *\* Limiting Condition*

Max. Trench Depth (Initial)\*: 24 inches Max. Trench Depth (Repair)\*: 24 inches *\* 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 .0508: Yes ☒ No ☐ Drainfield location meets requirements of Rule .0601: 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:**

Permit is subject to revocation if the Site Plan or Plat changes, or if the intended use changes, including bedroom count.

No cutting, grading, alterations, or utilities allowed in septic area.

Maintain all required setbacks.

Licensed Soil Scientist Print Name: Scott Mitchell

Licensed Soil Scientist Signature: \_\_\_\_\_ Date: March 10, 2025

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

*\*See attached site sketch\**



## ***This Section for Local Health Department Use Only***

Initial 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 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 15A NCAC 18E 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:

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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:

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Copies of this were sent to the LSS and the Applicant on \_\_\_\_\_  
*Date*

State Authorized Agent: \_\_\_\_\_

Date: \_\_\_\_\_

☐ Complete

State Authorized Agent: \_\_\_\_\_

Date: \_\_\_\_\_





## Harnett County GIS

**PID:** 130519 0103 46

**PIN:** 0519-69-8634.000

**Account Number:** 1500028388

**Owner:** LGI HOMES NC LLC

**Mailing Address:** 1450 LAKE ROBBINS DR STE 430 THE WOODLANDS, TX 77380-3294

**Physical Address:** 110 TEEPEE DR LILLINGTON, NC 27546 ac

**Description:** LOT#41 BOONE TRAIL VILLAGE PH1 MAP#2024-600

**Surveyed/Deeded Acreage:** 0.6

**Calculated Acreage:** 0.6

**Deed Date:**

**Deed Book/Page:** 4144 - 0878

**Plat(Survey) Book/Page:** 2024 - 600

**Last Sale:** 2022 - 4

**Sale Price:** \$2220000

**Qualified Code:** A

**Vacant or Improved:** V

**Transfer of Split:** T

**Actual Year Built:**

**Heated Area :** SqFt

**Building Count :** 0

**Building Value:** \$0

**Parcel Outbuilding Value:** \$0

**Parcel Land Value:** 26460

**Market Value:** \$26460

**Deferred Value:** \$0

**Total Assessed Value:** \$26460

**Zoning:** RA-30 - 0.6 acres (100.0%)

**Zoning Jurisdiction:** Harnett County

**Wetlands:** No

**FEMA Flood:** Minimal Flood Risk

**Within 1mi of Agriculture District:** Yes

**Elementary School:** Boone Trail Elementary

**Middle School:** Western Harnett Middle

**High School:** Western Harnett High

**Fire Department:** Boone Trail

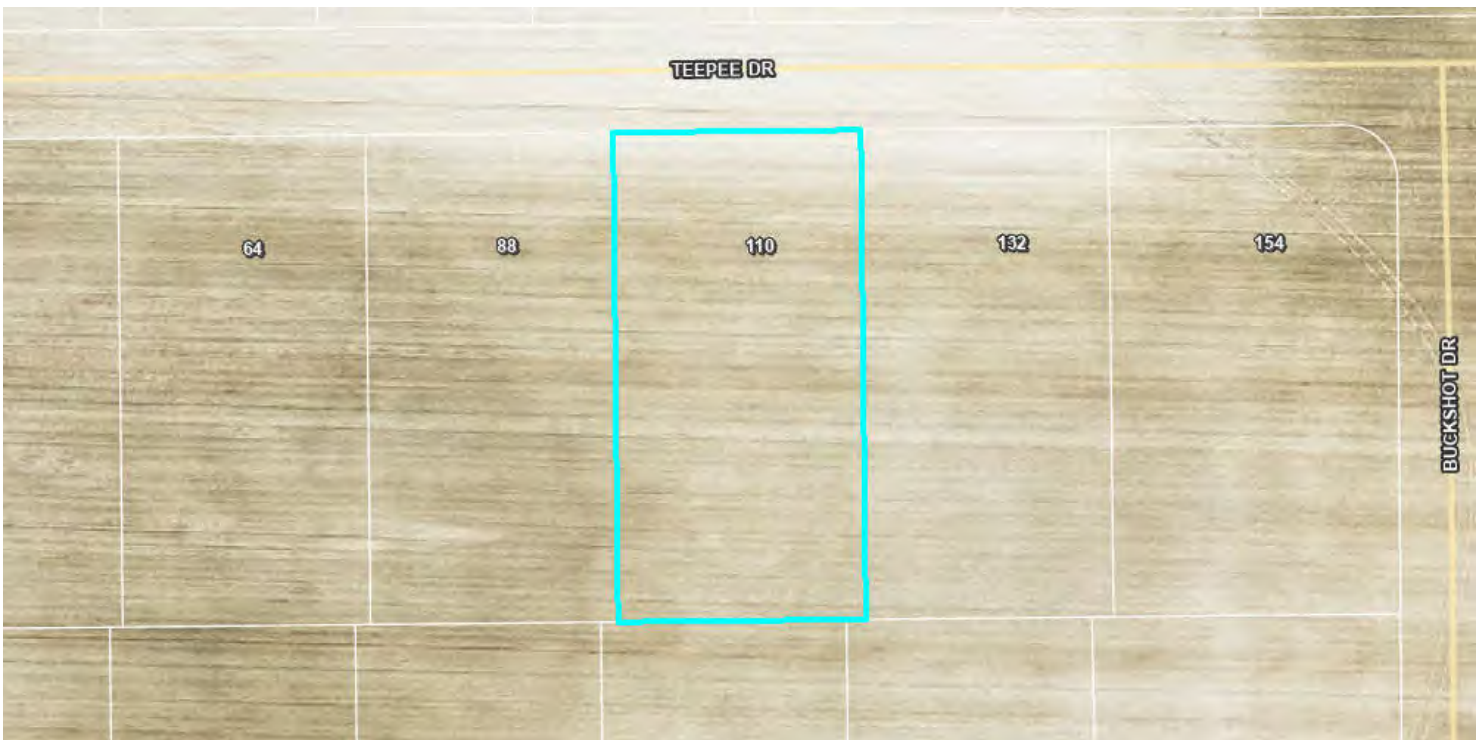
**EMS Department:** Medic 12, D12 EMS

**Law Enforcement:** Harnett County Sheriff

**Voter Precinct:** Boone Trail

**County Commissioner :** Duncan Edward Jagers

**School Board Member:** John Hair



# **Mitchell Environmental, P.A.**

I hereby authorize representatives of Mitchell Environmental, P.A., to provide subsurface wastewater evaluations and septic system designs on my behalf, for the issuance of an IP and CA, for the property identified below.

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 with G.S. 130A-335(a2), (a3), (a5), and (a6).

Lot 41 (110 Teepee Dr), Lot 42 (88 Teepee Dr)  
Lot 39 (154 Teepee Dr), Lot 40 (132 Teepee Dr)

Subject Property (Address, PIN, etc.): Lot 59 (20 Camp Rock Rd), Lot 46 (17 Camp Rock Rd)

Property Owner Name (Print): LGI Homes

Owner Representative (Print): Keith Sears

Owner Representative (Sign): Keith Sears

Date: 3/7/25



MITCENV-01

EMARTY

## CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/16/2025

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<br><b>Alera Group</b><br>4131 Parklake Avenue, Suite 225<br>Raleigh, NC 27612  | CONTACT NAME: <b>Select Business Unit</b>  |              |
|   | PHONE (A/C, No, Ext): <b>(919) 469-2473</b> FAX (A/C, No): <b>(919) 467-4987</b> |              |
|   | E-MAIL ADDRESS: <b>em@trisure.com</b>  |              |
|   | INSURER(S) AFFORDING COVERAGE  | NAIC #       |
|   | INSURER A : <b>Westchester Surplus Lines</b>                                     | <b>10172</b> |
| INSURED<br><br><b>Mitchell Environmental PA</b><br><b>Scott Mitchell</b><br><b>5601 Maggie Run Lane</b><br><b>Fuquay Varina, NC 27526</b> | INSURER B : <b>Sirius America Insurance Company</b>                              | <b>38776</b> |
|   | INSURER C :  |              |
|   | INSURER D :  |              |
|   | INSURER E :  |              |
|   | INSURER F :  |              |

## COVERAGES

## CERTIFICATE NUMBER:

## REVISION NUMBER:

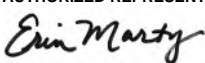
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE 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  |
|----------|--|-----------|----------|------------------|-------------------------|-------------------------|---|
| A        | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY<br><input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR<br><br>GEN'L AGGREGATE LIMIT APPLIES PER:<br><input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC<br>OTHER: |           |          | G28210486009     | 1/27/2025               | 1/27/2026               | EACH OCCURRENCE \$ <b>1,000,000</b>   |
|          |  |           |          |                  |                         |                         | DAMAGE TO RENTED PREMISES (Ea occurrence) \$ <b>50,000</b>                            |
|          |  |           |          |                  |                         |                         | MED EXP (Any one person) \$ <b>10,000</b>   |
|          |  |           |          |                  |                         |                         | PERSONAL & ADV INJURY \$ <b>1,000,000</b>   |
|          |  |           |          |                  |                         |                         | GENERAL AGGREGATE \$ <b>2,000,000</b>   |
|          |  |           |          |                  |                         |                         | PRODUCTS - COMP/OP AGG \$ <b>2,000,000</b>  |
|          |  |           |          |                  |                         |                         | \$  |
|          | AUTOMOBILE LIABILITY<br><input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS<br><input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY   |           |          |                  |                         |                         | COMBINED SINGLE LIMIT (Ea accident) \$  |
|          |  |           |          |                  |                         |                         | BODILY INJURY (Per person) \$   |
|          |  |           |          |                  |                         |                         | BODILY INJURY (Per accident) \$   |
|          |  |           |          |                  |                         |                         | PROPERTY DAMAGE (Per accident) \$   |
|          |  |           |          |                  |                         |                         | \$  |
| A        | UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB <input checked="" type="checkbox"/>  |           |          | G46616182008     | 1/27/2025               | 1/27/2026               | EACH OCCURRENCE \$ <b>1,000,000</b>   |
|          | DED <input type="checkbox"/> RETENTION \$  |           |          |                  |                         |                         | AGGREGATE \$ <b>1,000,000</b>   |
|          |  |           |          |                  |                         |                         | \$  |
| B        | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY<br>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y / N<br>If yes, describe under DESCRIPTION OF OPERATIONS below  |           | N / A    | WC PC 602055-000 | 2/7/2025                | 2/7/2026                | PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> <b>1,000,000</b> |
|          |  |           |          |                  |                         |                         | E.L. EACH ACCIDENT \$ <b>1,000,000</b>  |
|          |  |           |          |                  |                         |                         | E.L. DISEASE - EA EMPLOYEE \$ <b>1,000,000</b>  |
|          |  |           |          |                  |                         |                         | E.L. DISEASE - POLICY LIMIT \$ <b>1,000,000</b>                                       |
| A        | Professional Liabili   |           |          | G28210486009     | 1/27/2025               | 1/27/2026               | Limit <b>1,000,000</b>  |
| A        | Professional Liabili   |           |          | G28210486009     | 1/27/2025               | 1/27/2026               | Limit <b>1,000,000</b>  |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
Operations of the Named Insured covered by the above referenced policies.

## CERTIFICATE HOLDER

## CANCELLATION

|   |  |
|---|--|
| <b>LGI Homes – NC, LLC</b><br>1450 Lake Robbins Drive<br>Suite 430<br>The Woodlands, TX 77380 | 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<br>  |

# **Mitchell Environmental, P.A.**

March 10, 2025

Mr. Robert Putze  
LGI Homes - NC, LLC  
1450 Lake Robbins Drive, Suite 430  
The Woodlands, Texas 77380

**Re: On-Site Sewage Disposal Site and Soils Evaluation Report for:  
Boone Trail Village Subdivision – Lot 41  
110 Teepee Drive, Lillington, Harnett County**

Mr. Putze:

At your request, we have completed a site evaluation for use of on-site sewage disposal systems at Lot 41 of Boone Trail Village Subdivision located at 110 Teepee Drive Road in Lillington, Harnett County. The site evaluation was completed using hand augers on February 25, 2025, under moist soil conditions, based on the criteria found in the State Subsurface Rules, 15A NCAC 18E, "Wastewater Treatment and Dispersal Systems". This report was prepared pursuant to and meets the requirements of G.S. 130A-335(a2).

## **Site Evaluation for Use of On-Site Sewage Disposal Systems:**

The evaluation included all usable areas of the property as limited by state and local laws, rules, and regulations. The purpose of the evaluation was to determine the suitability of the site for on-site waste disposal systems per applicable laws, rules, and regulations. **"The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2)."**

A soil/site evaluation for use of on-site waste disposal systems on any site in North Carolina must include an evaluation of each of the following criteria: 1) topography and landscape position, 2) soil morphology, 3) soil wetness, 4) soil depth, 5) restrictive horizons and 6) available space. Upon field evaluation of the site, the majority of the lot was confirmed to contain sufficient suitable depth for on-site waste disposal systems.

Most septic systems in North Carolina that include a sub-surface waste disposal element require nitrification trenches to distribute effluent for final treatment. Any nitrification trench that has an associated width (*conventional, LPP, LDP, etc.*) must be designed to accommodate slope corrections (*typically 1 to 4 inches*). Slope corrections are based on trench width and cross slope to ensure the minimum separation distance between the trench bottom and an unsuitable soil condition is maintained over the entire trench width. Sloping sites are required to have greater suitable soil depth to accommodate slope correction as opposed to flat sites that require no slope correction. Please note that all proposed lots that utilize sub-surface nitrification fields must have sufficient area for the initial septic system as well as a full repair system. However, the initial and repair systems are not required to be the same type of system, nor are they required to be contiguous. For example, a lot may have a conventional, gravity system installed as the initial septic system and specify an LPP or subsurface drip system for its repair, several hundred feet away from the house or other structure being served.

The number of bedrooms or wastewater design flowrate that any lot will accommodate is entirely dependent upon the usable area of the lot and the long-term acceptance rate (*LTAR*; *LTAR is the*

1501 Lakestone Village Lane, Suite 205  
Fuquay-Varina, North Carolina 27526  
919-669-0329



effluent application rate for a septic system. For conventional systems, the LTAR indicates the number of gallons that can be applied to each square foot of the trench bottom per day. For an LPP or subsurface drip system, the LTAR indicates the number of gallons that can be applied to each square foot of the nitrification field per day. An LTAR of 0.2 gallons per day per ft<sup>2</sup> (gpd/ft<sup>2</sup>) will require a nitrification field that is twice as large as a field that has an LTAR of 0.4 gpd/ft<sup>2</sup>. Assigned LTARs will affect the number of bedrooms or wastewater design flowrate lots will accommodate as illustrated above. LTARs can vary from one location to another on a property. Our observations indicate that the majority of the lot contains sufficient suitable soil depth to accommodate subsurface wastewater systems with an LTAR of 0.35 gpd/ft<sup>2</sup>. Observed suitable soil depths on this site are greater than 38 inches, with LTAR controlling soil textures ranging from sandy clay loam to clay loam.

Topography on this lot can be generally characterized as a gentle side slope that generally sheds to the east, north east. Based on observed site and soil characteristics, in combination with the proposed plot plan, it is my professional opinion that adequate available space exists on this lot for properly designed septic system drainfields (*initial and repair*) sufficient for one, four-bedroom home.

This site evaluation is based upon the conditions of the site at the time of the evaluation. Any alteration of the site, including compaction, clearing, grading, timbering, etc., could negatively affect the suitability for on-site septic systems. Great care should be exercised during site preparation to protect areas that are to be utilized for septic system nitrification fields. No vehicular or construction traffic should be allowed on these areas. Additionally, no sedimentation and erosion control devices or stormwater collection, treatment, diversion, or dispersal devices should be allowed on or near these areas.

Thank you for the opportunity to provide you with this wastewater system soil suitability evaluation. Do not hesitate to call me if you have any questions or concerns about this evaluation or if you need any additional information.

Sincerely,

Scott Mitchell, PE, LSS  
President





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

OWNER: LGI Homes NC LLC DATE EVALUATED: 02/25/2025  
ADDRESS: 1450 Lake Robbins Drive, Suite 430, The Woodlands, TX 77380  
PROPOSED FACILITY: Single-Family Dwelling PROPOSED DESIGN FLOW (.0400): 480 PROPERTY SIZE: 0.60 acres  
LOCATION OF SITE: Boone Trail Village - Lot 41 ; 110 Teepee Drive, Lillington PROPERTY RECORDED: 12/05/2024  
WATER SUPPLY: ☒ Public ☐ Single Family Well ☐ Shared Well ☐ Spring ☐ Other WATER SUPPLY SETBACK:  
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Domestic ☐ High Strength ☐ IPWW

| P<br>R<br>O<br>F<br>I<br>L<br>E<br><br># | .0502<br>LANDSCAPE<br>POSITION/<br>SLOPE % | HORIZON<br>DEPTH<br>(IN.) | SOIL MORPHOLOGY                |                                     | OTHER PROFILE FACTORS              |                        |                         |                         | .0509<br>PROFILE<br>CLASS<br>& LTAR* | .0502(d)<br>SLOPE<br>CORRE<br>CTION |
|--|--|---------------------------|--------------------------------|-------------------------------------|------------------------------------|------------------------|-------------------------|-------------------------|--------------------------------------|-------------------------------------|
|  |  |                           | .0503<br>STRUCTURE/<br>TEXTURE | .0503<br>CONSISTENCE/<br>MINERALOGY | .0504<br>SOIL<br>WETNESS/<br>COLOR | .0505<br>SOIL<br>DEPTH | .0506<br>SAPRO<br>CLASS | .0507<br>RESTR<br>HORIZ |                                      |                                     |
| 1  | L, 2%                                      | Ap, 0-6                   | SL, G                          | VFR, NS, NP, NEXP                   | 10YR 5/2                           | 41+                    |                         |                         | S, 0.40                              | 1"                                  |
|  |  | E, 6-28                   | SL, SBK                        | VFR, NS, NP, NEXP                   | 2.5Y 6/4                           |                        |                         |                         |                                      |                                     |
|  |  | Bt1, 28-41+               | CL, SBK                        | FR, SS, SP, SEXP                    | 10YR 6/6                           |                        |                         |                         |                                      |                                     |
|  |  |                           |                                |                                     |                                    |                        |                         |                         |                                      |                                     |
|  |  |                           |                                |                                     |                                    |                        |                         |                         |                                      |                                     |
| 2  | L, 2%                                      | Ap, 0-6                   | SL, G                          | VFR, NS, NP, NEXP                   | 10YR 5/2                           | 38+                    |                         |                         | S, 0.35                              | 1"                                  |
|  |  | E, 6-28                   | SL, SBK                        | VFR, NS, NP, NEXP                   | 2.5Y 6/4                           |                        |                         |                         |                                      |                                     |
|  |  | Bt1, 28-37                | CL, SBK                        | FR, SS, SP, SEXP                    | 10YR 6/6                           |                        |                         |                         |                                      |                                     |
|  |  | Bt2, 37-38+               | CL, SBK                        | FR, SS, SP, SEXP                    | 10YR 6/6<br>2.5YR 4/8; 15%         |                        |                         |                         |                                      |                                     |
|  |  |                           |                                |                                     |                                    |                        |                         |                         |                                      |                                     |
| 3  | L, 2%                                      | Ap, 0-6                   | SL, G                          | VFR, NS, NP, NEXP                   | 10YR 5/2                           | 42+                    |                         |                         | S, 0.30                              | 1"                                  |
|  |  | E, 6-32                   | SL, SBK                        | VFR, NS, NP, NEXP                   | 2.5Y 6/4                           |                        |                         |                         |                                      |                                     |
|  |  | Bt1, 32-38                | CL, SBK                        | FR, SS, SP, SEXP                    | 10YR 6/6                           |                        |                         |                         |                                      |                                     |
|  |  | Bt2, 38-42+               | CL, SBK                        | FR, SS, SP, SEXP                    | 10YR 6/6<br>2.5YR 4/8; 15%         |                        |                         |                         |                                      |                                     |
|  |  |                           |                                |                                     |                                    |                        |                         |                         |                                      |                                     |
| 4  | L, 2%                                      | Ap, 0-6                   | SL, G                          | VFR, NS, NP, NEXP                   | 10YR 5/2                           | 40+                    |                         |                         | S, 0.35                              | 1"                                  |
|  |  | E, 6-24                   | SL, SBK                        | VFR, NS, NP, NEXP                   | 2.5Y 6/4                           |                        |                         |                         |                                      |                                     |
|  |  | Bt1, 24-32                | CL, SBK                        | FR, SS, SP, SEXP                    | 10YR 6/6                           |                        |                         |                         |                                      |                                     |
|  |  | Bt2, 32-40+               | CL, SBK                        | FR, SS, SP, SEXP                    | 10YR 6/6<br>2.5YR 4/8; 15%         |                        |                         |                         |                                      |                                     |
|  |  |                           |                                |                                     |                                    |                        |                         |                         |                                      |                                     |

| DESCRIPTION             | INITIAL SYSTEM  | REPAIR SYSTEM   | SITE CLASSIFICATION (.0509): Suitable<br>EVALUATED BY: Scott Mitchell / Adam Ayccock<br>OTHER(S) PRESENT: |
|-------------------------|-----------------|-----------------|---|
| Available Space (.0508) | Yes             | Yes             |   |
| System Type(s)          | Ilb             | IIIb            |   |
| Site LTAR               | 0.35            | 0.35            |   |
| Maximum Trench Depth    | 24" on Low Side | 24" on Low Side |   |

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

LEGEND

| LANDSCAPE POSITION | SOIL GROUP       | SOIL TEXTURE           | CONVENTIONAL LTAR (gpd/ft²) | SAPROLITE LTAR (gpd/ft²) | LPP LTAR (gpd/ft²) | MINERALOGY/ CONSISTENCE |                       | STRUCTURE               |
|--------------------|------------------|------------------------|-----------------------------|--------------------------|--------------------|-------------------------|-----------------------|-------------------------|
| CC (Concave slope) | I                | S (Sand)               | 0.8 - 1.2                   | 0.6 - 0.8                | 0.4 -0.6           | MOIST                   | WET                   | SG (Single grain)       |
| CV (Convex Slope)  |                  | LS (Loamy sand)        |                             | 0.5 -0.7                 |                    | Lo (Loose)              | NS (Non-sticky)       | M (Massive)             |
| D (Drainage way)   | II               | SL (Sandy loam)        | 0.6 - 0.8                   | 0.4 -0.6                 | 0.3 - 0.4          | VFR (Very friable)      | SS (Slightly sticky)  | GR (Granular)           |
| FP (Flood plain)   |                  | L (Loam)               |                             | 0.2 - 0.4                |                    | FR (Friable)            | S (Sticky)            | SBK (Subangular blocky) |
| FS (Foot slope)    | III              | SiL (Silt loam)        | 0.3 - 0.6                   | 0.1 - 0.3                | 0.15 - 0.3         | FI (Firm)               | VS (Very sticky)      | ABK (Angular blocky)    |
| H (Head slope)     |                  | SCL (Sandy clay loam)  |                             | 0.05 - 0.15**            |                    | VFI (Very firm)         | NP (Non-plastic)      | PR (Prismatic)          |
| L (Linear Slope)   |                  | CL (Clay loam)         |                             | None                     |                    | EFI (Extremely firm)    | SP (Slightly plastic) | PL (Platy)              |
| N (Nose slope)     |                  | SiCL (Silty clay loam) |                             |                          |                    |                         | P (Plastic)           |                         |
| R (Ridge/summit)   |                  | Si (Silt)              |                             |                          |                    |                         |                       |                         |
| S (Shoulder slope) |                  | IV                     |                             |                          |                    | SC (Sandy clay)         | 0.1 - 0.4             | 0.05 - 0.2              |
| T (Terrace)        | SiC (Silty clay) |                        | EXP (Expansive)             |                          |                    |                         |                       |                         |
| TS (Toe Slope)     | C (Clay)         |                        |                             |                          |                    |                         |                       |                         |
|                    |                  | O (Organic)            | None                        |                          |                    |                         |                       |                         |

\* Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

\*\*Sandy clay loam saprolite can only be used with advanced pretreatment in accordance with 15A NCAC 18E .1200.

HORIZON DEPTH

In inches below natural soil surface

DEPTH OF FILL

In inches from land surface

RESTRICTIVE HORIZON

Thickness and depth from land surface

SAPROLITE

S(suitable) or U(unsuitable); Evaluation of saprolite shall be by pits.

SOIL WETNESS

Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation

CLASSIFICATION

S (Suitable) or U (Unsuitable)

Show profile locations and other site features (dimensions, reference or benchmark, and North).



4-Bedroom  
 LTAR: 0.35 gpd/ft<sup>2</sup>  
 Initial: Gravity-to-Innovative 25%  
 Reduction Status Product utilizing  
 lines 7-9 (345')  
 Repair: Pump-to-Innovative 25%  
 Reduction Status Product utilizing  
 lines 4-6 (345')

TEEPEE DRIVE

115.00'

Water Meter

42

41

40

Soil Boring 3

Soil Boring 2

Soil Boring 4

Soil Boring 1

Repair septic drainfield

Initial septic drainfield

SITE  
 BOUNDARY

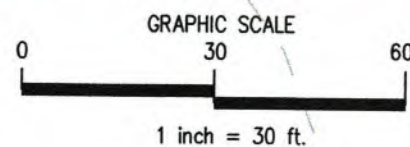
106.00'

226.78'

226.78'

4: L: 115'  
 5: W: 115'  
 6: B: 115'

7: G: 115'  
 8: Y: 115'  
 9: D: 115'



**Notes:**

- No soil cuts within 20 feet of septic trenches.
- No swales within 30 feet of septic trenches unless approved, in writing, by Engineer.



SHEET NUMBER

1 of 5

DATE

March 6, 2025

REVISION NO.

Original Submittal

Revision 1

Revision 2

Revision 3

Master Set

PREPARED FOR : LGI Homes

5511 Capital Center Drive

Suite 560

Raleigh, NC 27612

DATE : March 6, 2025

DESIGNER CONTACT:

ADAM AYCOCK, EI

DRAWN BY:

ADAM AYCOCK, EI

MITCHELL ENVIRONMENTAL, PA  
 C-2911

1501 LAKESTONE VILLAGE LANE  
 SUITE 205  
 FURQUAY VARINA, NC 27526



Boone Trail Village  
 Lot 41  
 Overall Septic