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

Application for Services

This application, in conjunction with the common form established in G.S. 130A-335(a3) and (a5), is optional for local health departments to be used for applications submitted in accordance with G.S. 130A-335(a2), (a3), and (a5).
[hereinafter, G.S. 130A-335(a3) and (a5) permits referred to as (a2) Improvement Permit and (a2) Construction Authorization]

Applying for:
☑ (a2) Improvement Permit ☑ (a2) Construction Authorization ☐ (a2) Repair/Construction Authorization

If applying for a Construction Authorization, please indicate desired system type(s):
☑ Accepted ☐ Conventional ☐ Innovative ☐ Other _____ ☐ Any

☑ New Construction ☐ Expansion ☐ System Relocation ☐ Change of Use ☐ Repair
☑ 5-Year Expiration Requested (site plan provided) ☐ Non-Expiring Permit Requested (plat provided, defined in G.S.130A-334(7a)
Requesting DHHS review? (systems >3000 GPD or IPWW) ☐ Yes ☑ No

Applicant: _____
Mailing Address: _____
_____
City: _____
State: _____ Zip: _____
Phone #: _____
Email: _____

Owner: Four Corners of Charlotte LLC
Mailing Address: 1612 Seattle Slew Court
_____
City: Waxhaw
State: NC Zip: 28173
Phone #: 704-713-2602
Email: romelle03@yahoo.com

If the answer to any of the following questions is "yes", applicant must attach supporting documentation.

☐ Yes	☑ No	Does the site contain any jurisdictional wetlands?
☐ 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 understand that the documentation and fees, as required in G.S. 130A-335(a2), (a3), (a5), and (a6), attached to this application are to be used to issue an Improvement Permit and/or Construction Authorization pursuant to G.S. 130A-335(a2),(a3), and (a5). I understand that authorized county and state officials are granted right of entry to the property indicated on this application to conduct necessary inspections to determine compliance with applicable laws and rules. ***I understand that if the information in the application for an Improvements Permit and/or Construction Authorization is falsified, changed, or the site is altered, then the Improvement Permit and Construction Authorization shall become invalid.***

Applicant Signature: _____ Date: _____

Owner's Signature: ramon gonzalez (May 27, 2024 19:26 EDT) Date: May 27, 2024

Permit/File #: _____

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
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Division of Public Health

Submittal Includes: ☑ **(a2) Improvement Permit** ☑ **(a2) Construction Authorization** ☐ **Fee $**_____

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

County: Union

PIN/Lot Identifier: 09125017

Issued To: Four Corners of Charlotte LLC

Property Location: 815 Archie Lane, Monroe, NC 28112

Subdivision (if applicable) Worthwood Lot #: 110 Block: _____ Section: _____

LSS Report Provided: Yes ☑ No ☐

If yes, name and license number of LSS: Larry Thompson, LSS

New ☑ Expansion ☐ System Relocation ☐ Change of Use ☐

Facility Type: Single-Family Residence

Number of bedrooms: 3 Number of Occupants: 6 Other: _____

Design Wastewater Strength: ☑ Domestic ☐ High Strength ☐ Industrial Process Wastewater

Proposed Design Daily Flow: 360 GPD Proposed LTAR (Initial): 0.3 Proposed LTAR (Repair): Exempt

Proposed Wastewater System Type*: Accepted - Type IIIb (Initial) Pump Required: ☑ Yes ☐ No ☐ May be required

Proposed Wastewater System Type*: Exempt (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)[x]: 30 Usable Depth to LC (Repair)[x]: N/A ***[x] Limiting Condition***

Max. Trench Depth (Initial)[‡]: 18 Max. Trench Depth (Repair)[‡]: N/A ***[‡] 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:

_____

_____

_____

_____

_____

Licensed Soil Scientist Print Name: Larry Thompson, LSS

Licensed Soil Scientist Signature: _____ Date: 05-28-24

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

Permit/File #: _____

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

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: _____

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: _____

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: _____

CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)

County: Union **Pre-Construction Conference Required:** Yes ☑ No ☐

PIN/Lot Identifier: 09125017

Issued To: Four Corners of Charlotte LLC

Property Location: 815 Archie Lane, Monroe, NC 28112

AOWE/PE Plans/Evaluations Provided: Yes ☑ No ☐ If yes, name and license number of AOWE/PE: Larry Thompson (AOWE 10016E)

Facility Type: Single-Family Residence

Number of bedrooms: 3 Number of Occupants: 6 Other: _____

☑ New ☐ Expansion ☐ Repair ☐ System Relocation ☐ Change of Use

Basement? ☐ Yes ☑ No Basement Fixtures? ☐ Yes ☑ No

Crawl Space? ☐ Yes ☑ No Slab Foundation? ☑ Yes ☐ No

Type of Wastewater System* Accepted - Type IIIb (Initial) Exempt (Repair)

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

Design Daily Flow: 360 GPD Wastewater Strength: ☑ Domestic ☐ High Strength ☐ Industrial Process WW

Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow Fixtures and Low-flow Technologies? ☐ Yes ☑ No
(if yes, please provide engineering documentation)

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

Type of Water Supply: ☑ Private well ☐ Public well ☐ Shared well ☐ Municipal Supply ☐ Spring ☐ Other: _____

Installation Requirements/Conditions

Septic Tank Size: 1,000 gallons Total Trench/Bed Length: 300 feet Trench/Bed Spacing: 9 feet on center

Trench/Bed Width: 36 inches LTAR: 0.3 gpd/ft² Usable Depth to LC (Initial)ˣ: 30 ˣ***Limiting condition***

Soil Cover: 6 inches Slope Corrected Maximum Trench/Bed Depth‡: 18 inches ‡ ***Measured on the downhill side of the trench***

Pump Tank Size (if applicable): 1,000 gallons Requires more than 1 pump? ☐ Yes ☑ No

Pump Requirements: 16 ft. TDH vs. 25 GPM Grease Trap Size (if applicable): N/A gallons

Distribution Method: ☐ Serial ☑ D-Box or Parallel ☐ Pressure Manifold(s) ☐ LPP ☐ Other: _____

Artificial Drainage Required: Yes ☐ No ☑ If yes, please specify details: _____

Legal Agreements *(If the answer is "Yes" to any type of legal agreements, please attach a copy of the agreement.)*

Multi-party Agreement Required [.0204(g)]: ☐ Yes ☑ No Declaration of Restrictive Covenants: ☐ Yes ☑ No

Easement, Right-of-Way, or Encroachment Agreement Required [.0301(b)]: ☐ Yes ☑ No

Management Entity Required: ☐ Yes ☑ No Minimum O&M Requirements: _____

Permit conditions:

_____

_____

_____

_____

_____

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached site sketch. *This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes.* The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of 15A NCAC 18E, or 15A NCAC 18A .1900, as applicable, and to the conditions of this permit.

AOWE/PE Print Name: Larry Thompson, LSS, AOWE

AOWE/PE Signature: _____ Date: 05-28-24

This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5).

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: _____

This Section for Local Health Department Use Only

Initial submittal received: _____ by _____
Date *Initials*

G.S. 130A-335(a5) states the following:

When an applicant for a Construction Authorization, or an Improvement Permit and Construction Authorization together, submits a Construction Authorization, or an Improvement Permit and Construction Authorization application together, the permit fee charged by the local health department, the common form developed by the Department, and any necessary signed and sealed plans or evaluations conducted by a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator, 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 Construction Authorization or Improvement Permit and Construction Authorization includes all of the required components. If the local health department determines that the Construction Authorization or Improvement Permit and Construction Authorization is incomplete, the local health department shall notify the applicant of the components needed to complete the Construction Authorization or Improvement Permit and Construction Authorization. The applicant may submit additional information to the local health department to cure the deficiencies in the Construction Authorization or Improvement Permit and Construction Authorization. The local health department shall make a final determination as to whether the Construction Authorization or Improvement Permit and Construction Authorization 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 applicant may apply for the building permit for the project upon the decision of completeness of the Construction Authorization or Improvement Permit and Construction Authorization by the local health department or if the local health department fails to act within five business days. The Authorized On-Site Wastewater Evaluator or licensed engineer submitting the evaluation pursuant to this subsection may request that the local health department revoke or suspend the Construction Authorization or Improvement Permit and Construction Authorization for cause. Upon written request of the Authorized On-Site Wastewater Evaluator or licensed engineer, the local health department shall suspend or revoke the Construction Authorization or Improvement Permit and Construction Authorization pursuant to G.S. 130A-23. The Department shall develop a common form for use as the Construction Authorization.

The review for completeness of this Construction Authorization was conducted in accordance with G.S. 130A-335(a5). This Construction Authorization 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 AOWE/PE and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

☐ Complete

State Authorized Agent: _____ Date of Issuance: _____

This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here. This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization 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 plans, evaluations, preconstruction conference findings, submittals, or actions from a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator in GS 130A-335(a2), (a5), and (a7). The Department, the Department's authorized agents, and the local health departments shall be responsible and bear liability for their actions and evaluations and other obligations under State law or rule, including the issuance of the operations permit pursuant to GS 130A-337.

Construction Authorization Expiration Date: _____

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: _____

Re-submittal of Construction Authorization

LHD USE ONLY: This CA resubmittal received: _____ by _____
Date *Initials*

The following items are being resubmitted pursuant to G.S. 130A-335(a5) for issuance of the Construction Authorization:

_____

_____

_____

_____

I, _____hereby attest that the information required to be included with this re-submittal
Authorized Onsite Wastewater Evaluator (Print Name)
is accurate and complete to the best of my knowledge and that the proposed Construction Authorization meets all applicable federal, State, and local laws, regulations, rules, and ordinances.

_____ _____
Signature of Authorized On-Site Wastewater Evaluator *Date*

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

LHD Follow-up Completeness Review of Construction Authorization

The review for completeness of this Construction Authorization re-submittal was conducted in accordance with G.S. 130A-335(a5). This Construction Authorization 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 AOWE/PE and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

☐ Complete

State Authorized Agent: _____ Date: _____

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: _____

ADDENDUM TO G.S. 130A-335(a2) SUBMITTAL

County: _____

PIN/Lot Identifier: _____

Issued To: _____

Additional Improvement Permit Conditions:

_____

_____

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Additional Construction Authorization Conditions:

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UNIONCOUNTY
north carolina

AUTHORIZATION TO ACT AS LEGAL REPRESENATIVE FOR OWNER

Applications for permits require the "signature of the owner or owner's legal representative" (15A NCAC 18A.1937). If the owner does not sign the application himself or herself, they can submit any one of the following documents to designate their legal representative:

1. Power of Attorney
2. Estate executor
3. Bankruptcy trustee
4. Court-ordered guardianship

In the absence of the above documentation, the property owner may sign this form to designate a legal representative to act on their behalf. If there are multiple property owners, then all property owners must sign this form.

By signing this form designating a legal representative for purposes of 15A NCAC 18A.1937, the property owner authorizes the legal representative to act on their behalf in matters pertaining to the application and permitting process, including signing or receiving any application, document or permit. This authorization further allows the representative to make decisions on behalf of the owner pertaining to modifications of permits in the field. The owner retains full responsibility to meet all permit conditions specified by Union County Environmental Health.

I Four Corners of Charlotte LLC, am the legal owner(s) of the property located at 813 and 815 Archie Lane, Monroe, NC 28110, identified as PIN (Parcel Identification Number) 09125016 and 09125017, located in Union County, North Carolina.

I do hereby authorize (print legal representative/company name) Larry Thompson, LSS, to act as an agent on my behalf in applying for/signing/obtaining any documents associated with Union County Environmental Health, including but not limited to, the documents described below:

- Application/Permit for Improvement Permit (IP)/ Construction Authorization (CA)
- Improvement Permit (IP) / Construction Authorization (CA)
- Application/Permit for private drinking water well / well abandonment
- Application for soil-site evaluation (new/repair)
- Application for Water Samples
- Application for Compliance Inspection (inspection of an existing septic system or well)

I agree to abide by all decisions and/or conditions between the legal representative acting on my behalf and Union County Environmental Health, including but not limited to those decision made in the field.

ramon gonzalez (May 27, 2024 19:26 EDT)
Signature of Owner(s)

May 27, 2024
Date

Rev. 2/2022

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).

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).

Environmental Health Division
500 N. Main Street, Suite 47
Monroe, NC 28112
T 704.283.3553
unioncountyeh@unioncountync.gov

Residential Subsurface Wastewater Treatment and Disposal System G.S. 130A-335(a2) Permit

for

Lot 110 - Worthwood
815 Archie Lane
Monroe, NC 28112

Tax Parcel Number: 09125017
May 27, 2024

Prepared for:

Four Corners of Charlotte, LLC
1612 Seattle Slew Court
Waxhaw, NC 28173
704-713-2602

Prepared by:

Larry Thompson, REHS, LSS
Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107-0541
Phone: 704-301-4881
larry@thompsonenv.com

Details

Four Corners of Charlotte, LLC has contracted with Thompson Environmental Consulting, Inc. (TEC) to prepare a G.S. 130A-335(a2) septic permit package for a new 3-bedroom single-family residence to be located on Lot 110 - Worthwood, 815 Archie Lane, Monroe, North Carolina (Union County Parcel Number: 09125017).

Based upon a soil and site evaluation performed by TEC, it was determined that a sufficient amount of "Suitable" Group IV soils are available area for the installation of a **Pump to Accepted System** for a 360 gallon-per-day home at a 0.3 GPD/sq/ft long-term acceptance rate (LTAR). This property appears in a subdivision plat that was recorded with the Union County Register of Deeds Office in September 1958, and is considered to be "repair exempt" per 15A NCAC 18E .0508 AVAILABLE SPACE. The residence will be served by a private well.

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), and 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).

Location

From Monroe, take US-601 S to White Store Road. Turn left onto White Store Road, left onto Eva Way, and right onto Archie Lane. Lot is located on the left.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18E, Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, January 1, 2024.

Accepted Wastewater System No. AWWS-2005-02-R6; North Carolina Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, August 21, 2015.

Primary Investigator's Credentials

NC Registered Sanitarian No. 1208
NC Licensed Soil Scientist No. 1287
NC Authorized Onsite Wastewater Evaluator No. 10016E
SC Certified Professional Soil Classifier No. 111
NC Subsurface Septic System Operator No. 22199
NC Grade IV Wastewater System Installer No. 1762
NC Certified Wastewater System Inspector No. 17621

Plans and Specifications

A. Septic Tank

1. The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and 1,000 gallons in capacity.
2. The septic tank shall be fitted with an approved effluent filter.
3. It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tanks have had time to properly cure and are free of cracks or other structural deficiencies.

B. Pump Tank

1. The pump tank shall be State approved, of one-piece construction, watertight, structurally sound, and 1,000 gallons in capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
2. All pipe penetrations into the tank shall be booted (i.e., C-293 boot with a stainless-steel strap).
3. The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
4. The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, Nema 4x rated control panel. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
5. Panel and control equipment shall include lightning protection, be protected from unauthorized access, and always remain accessible to the system operator.
6. The pump removal system will be via a pump tether made of nylon rope or its equivalent. The tether material should be resistant to mildew and rot.

C. Pipe, Fittings and Supply Line

1. All discharge piping, connectors, and supply lines should be made of SCH 40 PVC and fitted with pressure-rated couplings.
2. All joints must be properly “welded” utilizing the appropriate PVC cement for each application.
3. The supply line will be constructed of 2-inch SCH 40 PVC pipe with pressure fittings.
4. The supply line length is approximately 120 feet.

D. Distribution Method

1. The drainlines will be fed via a distribution box.

2. Distribution box shall be water tested at the time of the final inspection.

E. Drainfield Installation

1. The drainfield has been previously laid out on-site utilizing metal stemmed flags. The property owner/builder should mark this area and isolate it as much as possible from construction traffic
2. Under no circumstances shall any construction take place within the drainfield area while the soil is in a wet condition.
3. The specified system is an accepted wastewater system, specifically the Infiltrator Quick 4 chamber system or any other system with a state-approved 25% reduction in required drainline length.
4. The drainfield consists of **three (3) lateral trenches 3-foot wide by 100-feet long**. **Trench length is 300 feet.**
5. The maximum trench depth for this system shall be **18 inches**.
6. The laterals are to be installed on contour with the land, keeping the individual trench bottoms level from beginning to end.
7. The trenches should be left open for the final inspection by the health department.

F. Final Landscaping

1. The final soil cover over the drainfield shall be a minimum of 6 inches deep.
2. The drainfield shall be shaped to shed rainwater and be free from low spots.
3. The drainfield area should be planted with grass as soon as possible to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized prior to planting. After applying grass seed, the area should be heavily mulched with straw or other suitable material.

Maintenance

G. In General

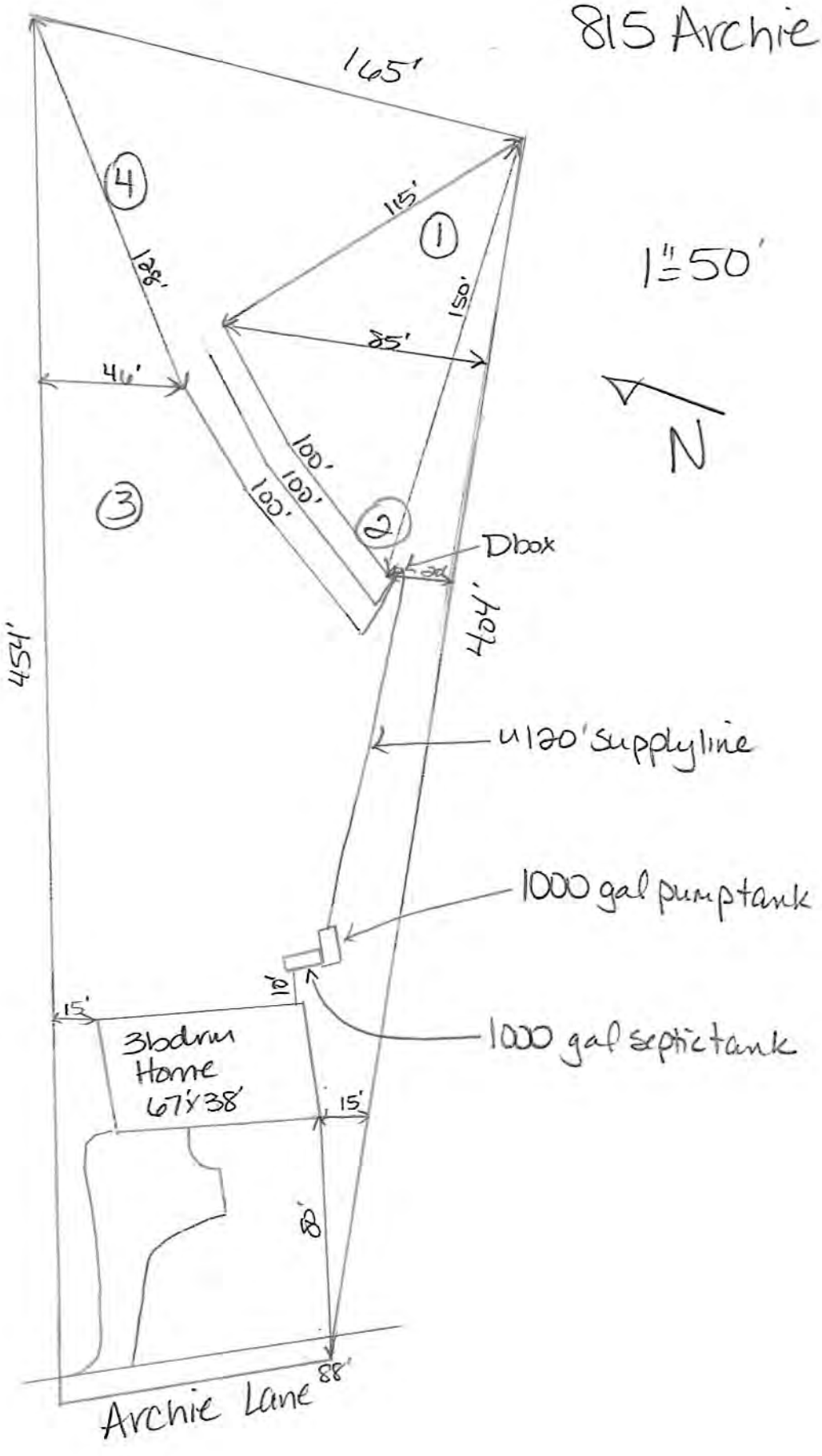
1. The homeowner must maintain the drainfield area through periodic mowing. The drainfield must not be allowed to become overgrown.
2. The septic tank should be pumped every 4 years or when the solids within the septic tank reach an elevation equivalent to 25 percent of the tank's volume. In some situations, the tanks may need to be pumped more frequently. If using a garbage disposal, it is recommended that the homeowner has the septic and pump tanks cleaned out annually.
3. When cleaning the effluent filter, the filter should be removed, and the accumulated debris will be washed back into the septic tank – not onto the lawn.
4. Any damp areas, leakages, or malfunctions in the drainfield area should be addressed immediately.
5. Divert gutter downspouts and surface water runoff away from the septic and pump tanks.

Design Specifics

Daily Design Flow:	360 GPD – 3 Bedroom Home
Septic Tank Size:	1,000 Gallons (minimum)
Pump Tank Size:	1,000 Gallons (minimum)
Pump Requirement:	25 GPM at 16-ft TDH
Recommended Dose Volume:	180 Gallons
Pump Run Time:	7.2 Minutes
Pump Tank Drawdown:	8.57 Minutes
Effluent Loading Rate:	0.3 GPD per sq. ft.
Distribution Method:	Distribution Box
Number of Drainlines	(3) 3-ft Wide x 100-ft Long
Total Trench Length:	300 Linear Feet
Maximum Trench Depth:	18 Inches
Final Soil Cover Requirement:	6 Inches

Northwood Lot 110

815 Archie Lane



Filed for registration on the 19 day of Sept. 19 58 at 4:10 o'clock P. M. and duly recorded in Map Book C of the Records of Deeds for Union County in Book 4 Plats on page 106

Register of Deeds

4-106

SOIL AND SITE EVALUATION

110 Archie Lane
Monroe, NC 28112

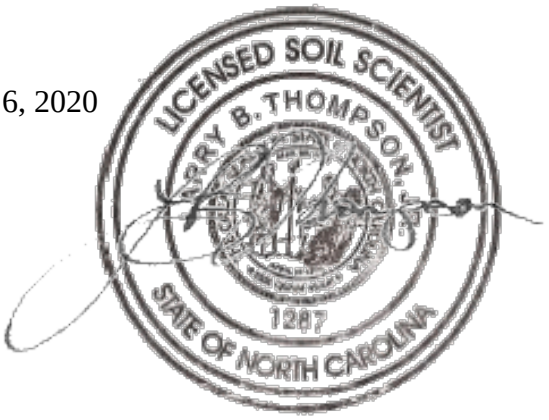
Prepared For:

Erik Eden Ramirez Marquez and Marcelina Contreras Murcia
421 E. Village Drive
Monroe, NC 28112

Prepared By:

Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107

November 6, 2020



INTRODUCTION & SITE DESCRIPTION

This Soil and Site Evaluation was performed on a 1.225-acre lot located at 110 Archie Lane, Monroe, North Carolina (County Tax Parcel: 09125017).

Thompson Environmental Consulting, Inc. (TEC) was retained to determine whether the soils were suitable for the installation of onsite subsurface wastewater treatment and disposal systems. The property was evaluated in accordance with North Carolina statutes for waste disposal ("Laws and Rules for Sewage Treatment and Disposal Systems", amended April 1, 2017).

INVESTIGATION METHODOLOGY & SITE PHYSICAL CHARACTERISTICS

Individual soil profiles were described and soil color determined with a Munsell Soil Color Chart. Observations of the landscape (slope, drainage patterns, etc.) as well as soil properties (depth, texture, structure, seasonal wetness, restrictive horizons, etc.) were recorded.

The project study area is currently undeveloped and vegetated with a mixed deciduous and coniferous forest.

FINDINGS

A field survey was conducted on November 6, 2020 by Larry Thompson, LSS and John Roberts, LSS. Four borings were advanced with a hand-held auger, and their locations noted in the attached Figure 1.

All borings were rated as Provisionally Suitable for onsite wastewater treatment and disposal are denoted in the attached Figure as green points within a green polygon (suitable soil area). Surfaces exhibited friable silty loam textures with weak, medium, granular structure to a depth of 3 to 8 inches. Upper subsurface horizons exhibited friable silty clay loam textures with weak, medium, subangular blocky structure to a depth of 6 to 12 inches. Lower subsurface horizons exhibited firm clay textures with moderate, medium, subangular blocky structure to a depth of 32 to 37 inches. A long-term acceptance rates (LTAR) of 0.3 gal./day/sq. ft. would be recommended for these soils.

DISCUSSION

The soils observed within the green polygon highlighted in Figure 1 will support the installation of Accepted or Pre-Fabricated Permeable Block Panel System at a 0.3 gal./day/sq. ft. It is estimated that approximately 7,000 square feet of suitable soil would need to be allocated and completely available for an Accepted System installation and required repair area for a 4-bedroom residence.

CONCLUSION

The findings presented herein represent TEC's professional opinion based on our Soil and Site Evaluation and knowledge of the current laws and rules governing on-site wastewater systems in North Carolina. Soils naturally change across a landscape and contain many inclusions. As such, attempts to quantify them are not always precise and exact. Due to this inherent variability of soils and the subjectivity when determining limiting factors, there is no guarantee that a regulating authority will agree with the findings of this report.

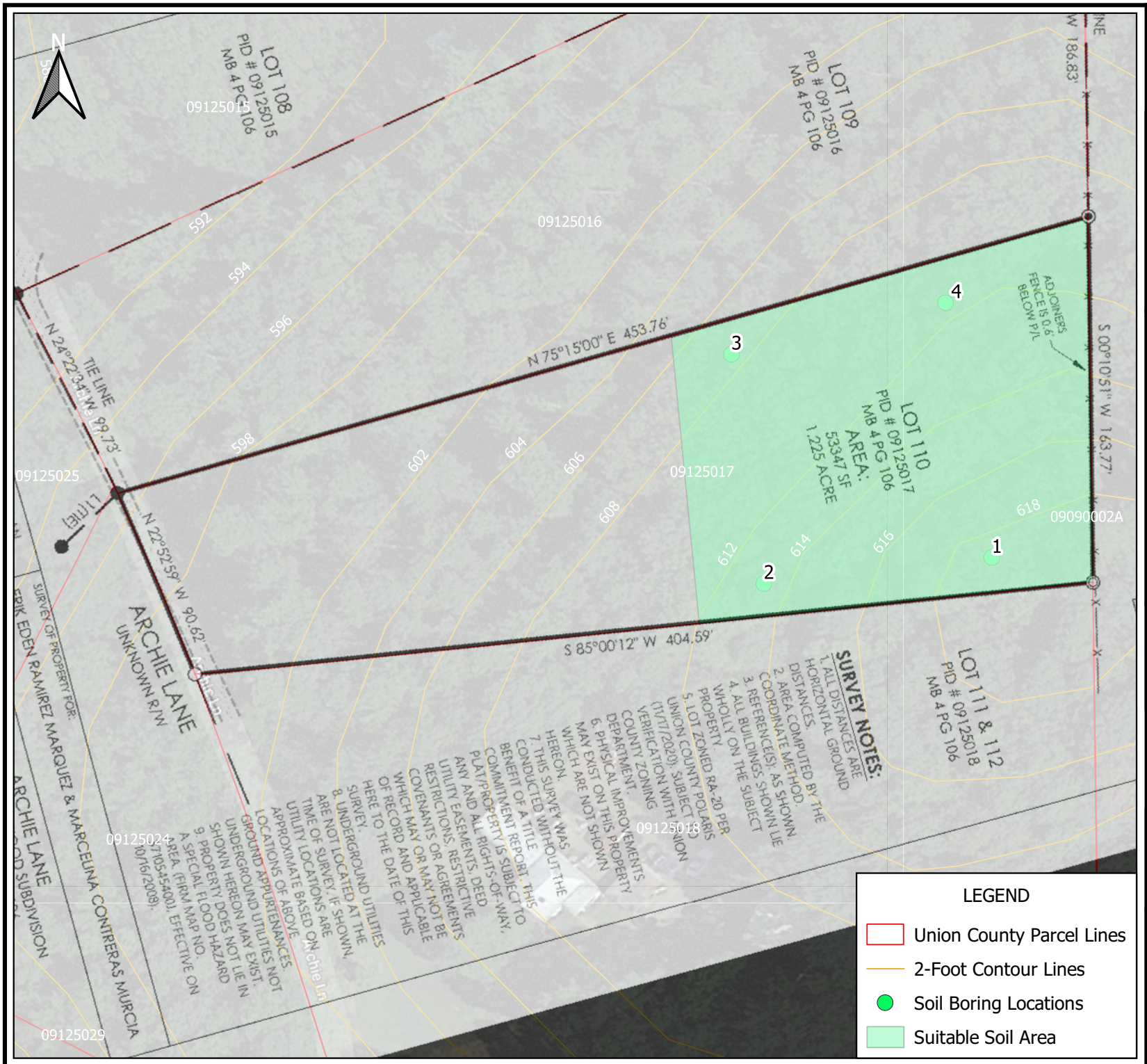


FIGURE 1

Prepared For:

Erik Eden Ramirez Marquez and Marcelina Contreras Murcia

Soil and Site Evaluation

110 Archie Lane
Monroe, NC 28112

Union County

Scale:

0 30 60 ft

TEC Job No.
20-155

Date:
November 2020

Thompson Environmental Consulting
WATER · WASTEWATER · WETLANDS

Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107

PROPERTY ID #: 09125017
COUNTY: Union

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

OWNER: William D. Prince
ADDRESS: 712 Winding Brook Road, Monroe NC 28112
PROPOSED FACILITY: SFD PROPOSED DESIGN FLOW (.1949): 440gpd
LOCATION OF SITE: 110 Archie Lane, Monroe, NC 28112
WATER SUPPLY: ☒ Private ☐ Public ☒ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut

DATE EVALUATED: 11-6-20
PROPERTY SIZE: 1.15 ac
PROPERTY RECORDED:
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	LS 5%	0-3	GR/SIL	FR/NS/NP/NEXP	—	32"	—	—	PS 0.3
		3-8	SBK/SICL	FR/SS/SP/SEXP					
		8-32	SBK/C	FI/S/P/SEXP					
2	LS 5%	0-3	GR/SIL	FR/NS/NP/NEXP	—	32"	—	—	PS
		3-6	SBK/SICL	FR/SS/SP/SEXP					
		6-32	SBK/C	FI/S/P/SEXP					
3	LS 5%	0-6	GR/SIC	FR/NS/NP/NEXP	—	32"	—	—	PS
		6-12	SBK/SICL	FR/SS/SP/SEXP					
		12-32	SBK/C	FI/S/P/SEXP					
4	LS 5%	0-8	GR/SIL	FR/NS/NP/NEXP	—	37"	—	—	PS
		8-12	SBK/SICL	FR/SS/SP/SEXP					
		12-32	SBK/C	FI/S/P/SEXP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	Accepted	Accepted
Site LTAR	0.3	0.3

OTHER FACTORS (.1946): Provisional
SITE CLASSIFICATION (.1948):
EVALUATED BY: Larry Thompson
OTHER(S) PRESENT: John Roberts SOS

LICENSED SOIL SCIENTIST LARRY B. THOMPSON STATE OF NORTH CAROLINA 1585

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

LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	1.2 - 0.8	0.6 - 0.4	SEXP (Slightly Expansive)	G (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)			EXP (Expansive)	M (Massive)
D (Drainage Way)						CR (Crumb)
DS (Debris Slump)	II	SL (Sandy Loam)	0.8 - 0.6	0.4 - 0.3 .		GR (Granular)
FP (Flood Plain)		L (Loam)				SBK (Subangular Blocky)
FS (Foot Slope)						ABK (Angular Blocky)
H (Head Slope)	III	Si (Silt)	0.6 - 0.3	0.3 - 0.15		PL (Platy)
L (Linear Slope)		SiCL (Silty Clay Loam)				PR (Prismatic)
N (Nose Slope)		CL (Clay Loam)				
R (Ridge)		SCL (Sandy Clay Loam)			**MOIST**	**WET**
S (Shoulder Slope)		SiL (Silt Loam)				
T (Terrace)					VFR (Very Friable)	NS (Non-sticky)
	IV	SC (Sandy Clay)	0.4 - 0.1	0.2 - 0.05	FR (Friable)	SS (Slightly Sticky)
		SiC (Silty Clay)			FI (Firm)	S (Sticky)
		C (Clay)			VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
		O (Organic)	None	None	EFI (Extremely Firm)	NP (Non-plastic)
						SP (Slightly Plastic)
						P (Plastic)
						VP (Very Plastic)

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

NOTES

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)
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), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft^2

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