

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NO PERMIT(S) FOR CONSTRUCTION, LOCATION OR RELOCATION ACTIVITY SHALL BE ISSUED UNTIL AN AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION AUTHORIZATION HAS BEEN ISSUED

PERMIT VOID IF NOT IN COMPLIANCE WITH ZONING REGULATIONS AND/OR IF SITE IS ALTERED OR INTENDED USE CHANGED

OPERATIONS PERMIT

PERMIT # WRP-084629-2022

APPLICATION DATE: 07/08/2022

BLDG. PERMIT#: RBPR-089798-2022

PIN: 0720249771

RECORDED: Yes

TOWNSHIP: 03 - Buckhorn

JURISDICTION: Wake County

ZONING: R-30

APPLICANT: William Liles
809 swan hill CT

BUSINESS PHONE:

HOME PHONE:

MOBILE PHONE: (919) 924-5691

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 7032 OAKVILLE LN

SUBDIVISION: OTHO E & SHAREE S LILES RCMB

LOT: 1

ACRES: 6.23

DIRECTIONS: US Hwy 1 South to New Hill / Jordan Lake exit - exit RIGHT go to stop light in downtown New Hill - make a RIGHT on Old US #1 - go about 1/2 a mile - turn RIGHT on Mason Road - as soon as you cross railroad tracks make an immediate LEFT down Oakville Lane - Property is on left hand side about half way down - house will go past the red roofed building on the bend of the road.

Systems defined as either type III-b, III-g with a pump, IV, V or VI, in accordance with the North Carolina administrative code 15A NCAC 18a .1961, table V as adopted by reference in the "Regulations Governing Wastewater Treatment Dispersal Systems in Wake County", requires Wake County Environmental Services to conduct periodic inspections of the system type pursuant to 15A NCAC 18a. 1961 (j). Fees for these inspections will be charged as per the approved Fee Schedule. In addition, all systems are to be operated and maintained as specified in 15A NCAC 18A .1961. This permit is based in part on information provided by the homeowner and/or his/her representative in the application submitted for this permit. The Environmental Health Specialist is not responsible for false or misleading information contained in the application. The environmental health specialist is also not responsible for concealed conditions on the property or for statements in this report that may have resulted from false or misleading statements provided to him/her in the application. Neither Wake County nor the Environmental Health Specialist warrants that the septic tank system will continue to function satisfactorily in the future or that the water supply will remain potable.

OPERATION PERMIT VALID FOR: No Expiration

INSTALLED BY: STEPHENSON, JASON BAYMON - 4643 - IV

PROPRIETARY SYSTEM: IQ4P LP - Infiltrator Quick4 Plus

PRETREATMENT SYSTEM:

Low Profile

SYSTEM TYPE INSTALLED: III G

OPERATION PERMIT: STATUS: Issued

ISSUED BY: Daniel Potts

ISSUED DATE: 09/18/2023

SEPTIC TANK: Other

DATE OF MANUFACTURE: 06/18/2023

FILTER: Polylok - PL-68

GREASE TRAP:

DATE OF MANUFACTURE:

FILTER:

DOSING PUMP TANK:

DATE OF MANUFACTURE:

FILTER:

CC1:

ETM1:

CC2:

ETM2:

RECIRCULATION TANK:

DATE OF MANUFACTURE:

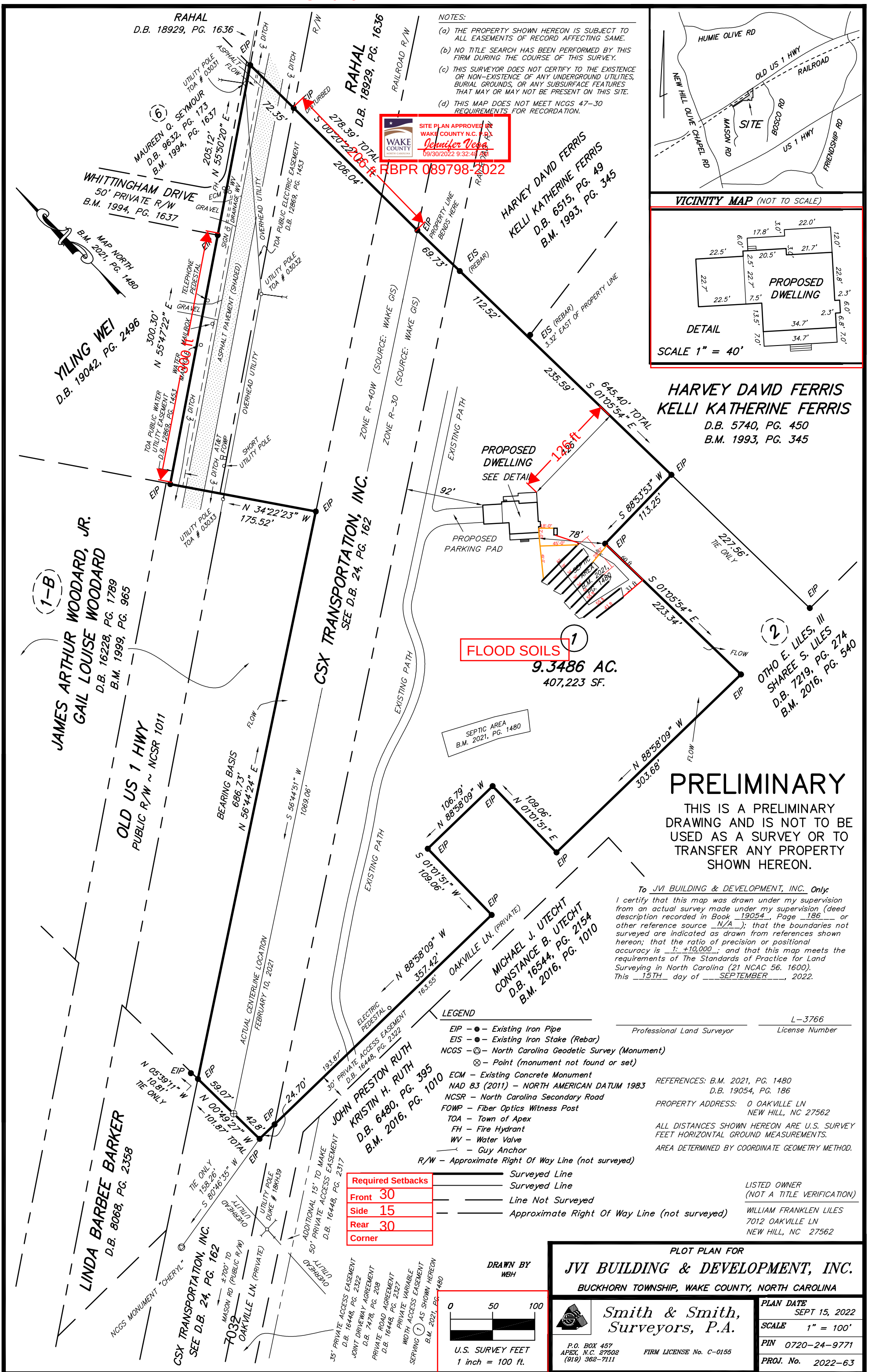
CC1:**ETM1:****CC2:****ETM2:****SEPTIC TANK ELEVATION: 3.58****GREASE TRAP ELEVATION:****DOSING PUMP TANK ELEVATION:****RECIRCULATION TANK ELEVATION:****DISTRIBUTION DEVICE ELEVATION:**

INSTALLED TRENCH DEPTH	INSTALLED AGGREGATE DEPTH	INSTALLED TRENCH LENGTH	INSTALLED TRENCH BOTTOM ELEVATION
8	8	62	6
8	8	58	7.29
8	8	54	8.25
8	8	50	9.29
8	8	54	10.45
8	8	54	11.58
8	8	57	7.5
8	8	57	8.5
8	8	41	9.42

ACTUAL PRESSURE HEAD:**ACTUAL FLOW RATE:****ACTUAL DOSE VOLUME: 0****SPECIFIC OPERATION REQUIREMENTS:**

- System designed for a 3 bedroom home with 360 gals per day
- Site serviced by private well water
- Tank installed: HPPP 1000 STB 156
- Future Repair is a VC type system with a max trench depth of 6" and a 0.15 LTAR
- ASDSMS: Book: 19054 Page: 0186
- Drainlines 1-6 shot on 8/1/23. Lines 7-9 shot on 8/2/23

ISSUED BY:**DATE: 09/18/2023**



After recording mail to:
William Liles
7032 Oakville Lane
New Hill NC 27562

ALTERNATIVE SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE

To Be Recorded In The Register Of Deeds Office In Wake County.

Owner/Grantor William Frankson Liles Deedbook and Page 19054 / 0186PLN No. 0720249771 Date Installed 8/2/23Subdivision Name _____ Lot No. #1System Designed by G. Christopher Murray MS Installer connechindustries.com

AN ALTERNATIVE OR NON-TRADITIONAL SEWAGE DISPOSAL SYSTEM FOR REPAIR HAS BEEN DESIGNED FOR THIS PROPERTY.

The design specifications and locations for alternative sewage disposal systems are specified or authorized in Regulations Governing Wastewater Treatment and Disposal in Wake County effective November 21, 1988, amended effective June 25, 2020.

As A Condition Of Issuance Of This Improvement/Operation Permit, The Property Owner Hereby Grants The Wake County Department Of Environmental Services A Right Of Access To The System During Regular Working Hours For Purposes Of Monitoring Compliance With State And Local Regulations, Recorded Maintenance Agreements And Certified Operator Compliance.

This permit requires the use of pre-treatment and a mode of subsurface wastewater dispersal for the repair system, which will require a contract with a Certified Operator to perform maintenance on the system as described in the above referenced regulations. Due to this requirement, the initial system must be inspected by a certified inspector or operator at a frequency of at least once every five years and a report submitted. Experience and study have shown that pre-treatment systems require routine maintenance in order to function satisfactorily. In as much as each system must be individually designed and sited, special maintenance requirements may apply to a specific installation; however, the following maintenance schedule is applicable to all pre-treatment systems. For additional information, technical assistance or if a malfunction of the system occurs, contact the Wake County Department of Environmental Services, Telephone: (919) 856-7400.

System Component	Frequency	Maintenance
1. Septic Tank	6-12 months	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation.
	1-3 years	Pump seepage.
2. Pump/Dosing Tank	6-12 months	Check riser conditions (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Wash (hose) sludge accumulation from pump housing.
3. Supply lines	6-12 months	Check for settling, pipe exposure and leakage. Includes Manifold(s).
4. Drain Field(s)	1-4 weeks	Maintain vegetative cover (mow grass and remove weeds and brush).
	6-12 months	Check for settling, erosion and surfacing of effluent. Repair any broken lateral turn-ups and make certain they are accessible from ground surface and are filled with screw-on type caps. Check and reset pressure head and flush sludge from lateral lines (any discharge sludge and effluent is to be treated with a chlorine solution). Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.
5. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage (gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce waste water load on system. Do no permit entry or grease and non-domestic waste to system. Use of a garbage disposal is prohibited. Addition of chemical or biological additives has not been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained.
6. Pre-Treatment	6-12 months	Check for settling, erosion and surfacing of effluent. Perform all other inspections and sampling as required in the approval of the pre-treatment device.

Initial system must be inspected by a certified inspector or operator at a frequency of at least once every five years and a report submitted. A certified operator is required for the life of the system, once repair system is installed.

Signature of Property Owner

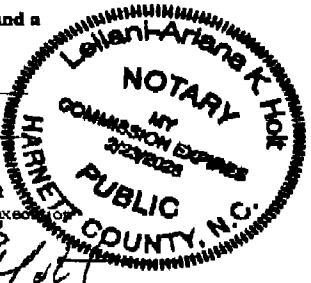
Date

NORTH CAROLINA Harnett
William Liles

County, I, a Notary Public of the County and State aforesaid, certify that

Owner, Personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this 14 day of September 2023My commission expires 2/23/2028
WVDS 7/12/2021

Notary Public





TEL 919 856 7400
FAX 919 856 7407

Environmental Services

Water Quality Division
336 Fayetteville St. • P.O. Box 550 • Raleigh, NC 27602

12/16/2022

REQUIREMENTS TO COMPLETE YOUR WASTEWATER SYSTEM

Dear Sir/Madam:

Enclosed is your approved wastewater system installation plan and the "Alternative Sewage Disposal System Maintenance Schedule".

To complete your permit:

- A contractor **CERTIFIED** by the State of North Carolina and **REGISTERED** in Wake County, must be used to install your system.
- **Alternative Sewage Disposal System Maintenance Schedule** – this document must be signed, notarized and recorded at the Wake County Register of Deeds Office. A copy of the recorded document must be submitted to Wake County before your permit can be finalized.
- A copy of the "Wake County Well and Septic System Owner's Guide", which contain information essential to the long-term performance of this wastewater disposal system, must be forwarded to the owner or user of the system, if other than yourself.

ANY PROPOSED MODIFICATION TO THE APPROVED PLANS MUST BE COORDINATED WITH YOUR SYSTEM DESIGNER

Please call (919) 868-2560 or email at Alan.Alcock@wakegov.com if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Alan Alcock".

Alan Alcock, REHS
Environmental Health Manager

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

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CONSTRUCTION AUTHORIZATION PERMIT

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PIN: 0720249771

RECORDED: Yes

TOWNSHIP: 03 - Buckhorn

JURISDICTION: Wake County

ZONING: R-30

APPLICANT: William Liles

809 swan hill CT

Fuquay varina, NC 27526

BUSINESS PHONE:

HOME PHONE:

MOBILE PHONE: (919) 924-5691

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 7032 OAKVILLE LN

SUBDIVISION: OTHO E & SHAREE S LILES RCMB

LOT: 1

ACRES: 6.23

DIRECTIONS: US Hwy 1 South to New Hill / Jordan Lake exit - exit RIGHT go to stop light in downtown New Hill - make a RIGHT on Old US #1 - go about 1/2 a mile - turn RIGHT on Mason Road - as soon as you cross railroad tracks make an immediate LEFT down Oakville Lane - Property is on left hand side about half way down - house will go past the red roofed building on the bend of the road.

Contractors shall install system on contour. See attached SITE PLAN for wastewater system design and well location. No underground utilities, water lines or sprinklers systems may be located in the original system, or permit areas. A septic tank filter with two risers for access is required. The wastewater system shall not be covered or placed into use until inspected by the Wake County Department of Environmental Services and Operations Permit issued. An Accepted Status System may be used in place of conventional system, if it can be placed in the permitted/authorized trench footprint (except reduction in line length and/or number as allowed for in approval) and the installation in accordance with the accepted system approval, without unauthorized product alteration. If permit required use of an Accepted Status System, substitution with another accepted status system may be made, as long as no changes are necessary in the location of each nitrifications line (including any increase in line length), trench depth or effluent distribution method. If changes are necessary, prior approval by this office is required before system installation. Maximum depth of line is calculated using the downhill side of the trench and includes slope correction.

CONSTRUCTION AUTHORIZATION PERMIT VALID FOR: Five Years

CONSTRUCTION AUTHORIZATION PERMIT: CA STATUS: Issued

BY: Alan Alcock

DATE: 12/16/2022

CA VALID FOR: Five Years

DESIGN FLOW: 360 GALLONS

BASEMENT: Yes

BASEMENT FIXTURES: Yes

SEPTIC TANK: 1000 GALLONS

SEPTIC TANK FILTER: Yes

DOSING PUMP TANK:

DOSING PUMP TANK FILTER:

GREASE TRAP:

GREASE TRAP FILTER:

RECIRCULATION PUMP TANK:

RECIRCULATION PUMP TANK FILTER:

PROPOSED SYSTEM: IQ4P LP - Infiltrator Quick4 Plus Low Profile

EXISTING SYSTEM:

DRAINFIELD SQ. FT: 1,446

AGGREGATE DEPTH: 8

MAX. TRENCH DEPTH: 8 INCHES

DISTRIBUTION DEVICE: GS - Gravity Serial

TRENCH #: 9 **TRENCH LENGTH:** 62,58,54,50,54,54,58,50,42 FEET **TRENCH WIDTH:** 36 INCHES **TOTAL TRENCH LENGTH:** 482 FEET

CENTER SPACING: 9 FEET

MINIMUM SOIL COVER: 6 INCHES

PRETREATMENT:

APPROVAL #:

SUBFIELDS #:

PUMP DESIGN FLOW:

PUMP TDH:

ZONE VALVE: No

ASDMS REQUIRED: Yes

LINE OF CREDIT REQUIRED: No

OPERATOR REQUIRED: No

P.E. SIGN OFF/ASBUILT REQUIRED: No

TRIPARTY AGREEMENT REQUIRED: No

SPECIFIC CONSTRUCTION AUTHORIZATION REQUIREMENTS:

SEE APPROVED DESIGN (PLAN AND SPECIFICATIONS) FOR INSTALLATION INFORMATION FOR THIS 3 BEDROOM DWELLING. INITIAL SYSTEM IS AN UNEQUAL LINE LENGTH LOW PROFILE CHAMBER GRAVITY TO SERIAL DISTRIBUTION SYSTEM WITH 8" AT-GRADE TRENCH DEPTH. 1000 GALLON SEPTIC TANK REQUIRED. FOUNDATION DRAIN ALLOWED.

REPAIR SYSTEM IS TS-II PRETREATMENT AND SUBSURFACE DRIP SYSTEM WITH 6" TRENCH BOTTOM. ADEQUATE SPACE MUST BE RESERVED FOR INSTALLATION OF PRETREATMENT TANKAGE AND COMPONENTS FOR FUTURE REPAIR SYSTEM. WHEN INSTALLING SYSTEM, MAINTAIN ALL REQUIRED SETBACKS.

THE INITIAL SYSTEM IS PERMITTED AS AT-GRADE INSTALLATION, WHICH WILL REQUIRE IMPORTED SOIL COVER AT THE TIME OF INSTALLATION. THIS IMPORTED SOIL MUST COVER THE ENTIRETY OF THE INITIAL SYSTEM AREA AND EXTEND BEYOND THE SYSTEM AREA 5 FEET ON ALL SIDES. A MINIMUM OF 6" OF SOIL COVER IS REQUIRED AFTER SETTLING, SO ADDITIONAL SOIL MATERIAL BEYOND 6" MAY BE REQUIRED. IMPORTED SOIL COVER MUST BE APPROVED BY WAKE COUNTY ES, PRIOR TO PLACEMENT.

THIS SYSTEM IS DESIGNED BY A CONSULTANT AND MUST BE INSTALLED PER THE DESIGN, INCLUDING THE USE OF THE MATERIALS SPECIFIED IN THE DESIGN. ANY DEVIATION MUST BE APPROVED BY THE CONSULTANT AND WAKE COUNTY ENVIRONMENTAL SERVICES PRIOR TO SYSTEM INSTALLATION.

DUE TO PRETREATMENT DEVICE REQUIREMENT FOR THE SYSTEM, WAKE COUNTY REGULATIONS (SECTION IV, E) REQUIRE THAT THE INITIAL SYSTEM BE INSPECTED AT LEAST ONCE EVERY 5 YEARS BY A CERTIFIED OPERATOR.

THE INCLUDED ALTERNATIVE SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE MUST BE SIGNED, NOTARIZED AND RECORDED AT THE WAKE COUNTY REGISTER OF DEEDS OFFICE AND A COPY SUBMITTED TO COUNTY PRIOR TO ISSUANCE OF THE OPERATION PERMIT. ONCE REPAIR SYSTEM IS INSTALLED, THE REQUIREMENTS FOR OPERATION, MAINTENANCE, AND SAMPLING WILL BE IN EFFECT PER REPAIR SYSTEM OPERATION REQUIREMENT. PLEASE CALL ENVIRONMENTAL SERVICES IF ANY QUESTIONS OR PROBLEMS ARISE.

Issued By:



Date: 12/16/2022

HOMEOWNER GUIDE FOR UTILIZATION AND MAINTENANCE OF ON-SITE WASTEWATER DISPOSAL SYSTEMS

What is an On-site Wastewater Disposal System?

There are a number of different types of on-site wastewater disposal systems each designed for a specific set of site conditions. However, there are several system components that are common to most systems. These include the following:

1. A septic tank - a concrete tank that is designed to receive wastewater from the house and to provide a degree of pretreatment for the waste, chiefly through removal of some of the solids in the waste. Note that these solids accumulate over time and necessitate periodic pumping of the septic tank. Currently septic tanks are equipped with two access risers (normally constructed of concrete), which are designed to be at least 6 inches above the ground surface to prevent surface and shallow groundwater from entering the septic tank and to provide access for maintenance. **Care must be taken not to damage or cover these risers so that water inflow / infiltration can be prevented and the tank can be accessed for maintenance.**
2. In some installations, a pump tank - a concrete tank, very similar to the septic tank, which contains a pump along with the associated controls / componentry. The pump tank and pump is designed to receive effluent from the septic tank, and pump the effluent to a disposal field located at a higher elevation and/or to a pressurized distribution network in the disposal field. **The pump tank also has an access riser which must be protected in a similar manner to that indicated for the septic tank.** Servicing of the pump tank components often necessitates the assistance of a professional such as a septic tank installer or Certified Subsurface System Operator. The latter is required for operation and maintenance of certain types of systems.
3. A disposal field - a series of subsurface trenches and lines that are designed to distribute the effluent into the soil and provide for the ultimate treatment and disposal of the effluent. There are numerous variations on the design of the disposal field, related chiefly to the type of system chosen, site constraints, etc. Dependent on the type of disposal system, you may have to maintain a contract with a Certified Subsurface System Operator for operation and maintenance of your wastewater disposal system.

Utilization of Your Wastewater Disposal System

In order to obtain the maximum efficiency and life expectancy from your system, the following simple procedures must be adhered to:

1. **Practice water conservation.** This can include many practical considerations such as not leaving the water running while you brush your teeth, not overfilling the tub, limiting time in the shower, not replacing low flow fixtures with those of higher flows, over rinsing dishes (allow the dishwasher to do its job), immediate repair of any leaking fixtures, running washing machines and dishwashers only when full, etc.

NOTE: Washing machines generate significant volumes of wastewater. As a result, laundry activities should be spread over the week as opposed to accumulating all of laundry until the weekend.

2. **Do not utilize your wastewater disposal system as a trash can by dumping nondegradables down your drains or toilet.** These include cigarette butts, sanitary products, grease, plastics, disposable diapers, etc. Avoid use of garbage disposals. Do not retrofit garbage disposals unless the system is specifically permitted for their use. Also, do not dump harmful chemicals down the drain. These include petroleum products, paint, paint thinner, pesticides, antifreeze, etc.

Maintenance of Your Wastewater Disposal System

Every wastewater disposal system requires maintenance in order to function properly. The specific maintenance required is related to the type of system. The following are general considerations that apply to all systems.

1. **Protect your wastewater disposal system components including the tanks, access risers, disposal field and associated components.** Do not drive or park on any portion of the system. The area over the disposal field should be left undisturbed with the grass cover being maintained as you would your lawn. Location of trees and shrubs on or in close proximity to the disposal field is not recommended since roots may clog or damage your drain lines. Additionally, great care must be exercised when considering the addition of any structure(s) to the site. The location of any appurtenances cannot encroach on the installation or repair areas for your system. It is not recommended that irrigation systems be located in proximity to the disposal system since their construction can cause system damage and/or result in additional hydraulic load on the disposal field.
2. **Protect the system from excess surface and shallow groundwater.** The land surface on and around the wastewater disposal system should be landscaped to shed rainfall and runoff and prevent ponding. Be sure that foundation drains, runoff from roofs and drives, etc. are diverted away from the disposal system.
3. **Regularly have the septic tank / pump tank pumped and cleaned by a permitted septage hauler.** Although the necessary frequency of pumping varies with the household and system, most tanks need **pumping at a frequency of 3-5 years** and at any time solids occupy one-fourth to one-third of the septic tank liquid depth.

Note that all septic tanks being currently installed incorporate an effluent filter within the outlet compartment of the septic tank. This filter is to be cleaned anytime the septic tank is pumped. If plumbing becomes sluggish, this filter should be checked. If filter service is found to be necessary, the tank is to be pumped, the filter cleaned and the filter reinstalled.

4. **Be alert to warning signs that your system may not be functioning properly.**
These include sewage surfacing over the disposal system, sewage backups / slow draining in the house, lush growth over the disposal system, sewage odors, etc.
5. **Do not make or allow repairs to your system unless all necessary permits are obtained from Wake County Department of Environmental Services.**
6. **Commercial additives for septic tank systems** - It has generally not been demonstrated that these additives enhance the function of septic systems or reduce the need for tank pumping and other necessary maintenance.
7. **Special maintenance considerations** - As already alluded to, some of the more complex wastewater disposal systems require that you retain / maintain the services of a Certified Wastewater System Operator in order to comply with Laws and Rules and maintain a valid operation permit for your system. In Wake County this maintenance requirement should be recorded with Register of Deeds if applicable.

Where Do I Obtain Information and Assistance?

If you are purchasing a new home, you should request a copy of your wastewater system permit from the builder / seller along with information regarding any special maintenance requirements. You may also obtain information and assistance from the **Wake County Department of Environmental Services**, 336 Fayetteville Street Mall, Raleigh, NC, Telephone (919) 856-7400. Additional information is also available on Wake County's [Septic and Wastewater Management](#) webpage.

BSM 3/9/21

NOTICE

PROTECTION OF WASTEWATER DISPOSAL AREAS

AREAS DESIGNATED FOR INSTALLATION AND REPAIR OF WASTEWATER DISPOSAL SYSTEMS ON WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES PERMITS MUST BE PROTECTED FROM ALL LAND DISTURBING ACTIVITIES.

PROHIBITED ACTIVITIES (NOT ASSOCIATED WITH THE INSTALLATION OF THE WASTEWATER DISPOSAL SYSTEM) INCLUDE BUT MAY NOT BE LIMITED TO:

- **CLEARING**
- **EXCAVATION**
- **FILLING**
- **GRADING**
- **STORAGE OF BUILDING MATERIALS**
- **VEHICLE OR EQUIPMENT TRAFFIC**

THE PERMITTEE IS ADVISED TO CLEARLY FLAG OR FENCE THESE AREAS DURING CONSTRUCTION TO PREVENT UNAUTHORIZED ACTIVITIES.

FAILURE TO PROTECT WASTEWATER DISPOSAL AREAS WILL LIKELY RESULT IN VOIDING OF PERMITS AND LOSS OF ABILITY TO UTILIZE THE SITE FOR THE DESIRED PURPOSE.

IF YOU HAVE A QUESTION REGARDING ANY OF THE AFOREMENTIONED ACTIVITIES, CALL WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES (856-7400) BEFORE YOU ACT.

ALTERNATIVE SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE
 To Be Recorded In The Register Of Deed’s Office In Wake County.

Owner/Grantor _____ Deedbook and Page _____
 PIN No. _____ Date Installed _____
 Subdivision Name _____ Lot No. _____
 System Designed by _____ Installer _____

AN ALTERNATIVE OR NON-TRADITIONAL SEWAGE DISPOSAL SYSTEM FOR REPAIR HAS BEEN DESIGNED FOR THIS PROPERTY. The design specifications and locations for alternative sewage disposal systems are specified or authorized in Regulations Governing Wasterwater Treatment and Dispersal in Wake County effective November 21, 1988, amended effective June 25, 2020. As A Condition Of Issuance Of This Improvements/Operation Permit, The Property Owner Hereby Grants The Wake County Department Of Environmental Services A Right Of Access To The System During Regular Working Hours For Purposes Of Monitoring Compliance With State And Local Regulations, Recorded Maintenance Agreements And Certified Operator Compliance. This permit requires the use of **pre-treatment and a mode of subsurface wastewater dispersal for the repair system**, which will require a contract with a Certified Operator to perform maintenance on the system as described in the above referenced regulations. **Due to this requirement, the initial system must be inspected by a certified inspector or operator at a frequency of at least once every five years and a report submitted.** Experience and study have shown that pre-treatment systems require routine maintenance in order to function satisfactorily. In as much as each system must be individually designed and sited, special maintenance requirements may apply to a specific installation; however, the following maintenance schedule is applicable to all pre-treatment systems. For additional information, technical assistance or if a malfunction of the system occurs, contact the Wake County Department of Environmental Services, Telephone: (919) 856-7400.

<u>System Component</u>	<u>Frequency</u>	<u>Maintenance</u>
1. Septic Tank	6-12 months	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation.
	1-3 years	Pump septage.
2. Pump/Dosing Tank	6-12 months	Check riser conditions (must be accessible from ground surface),excess in/exfiltration, entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Wash (hose) sludge accumulation from pump housing.
3. Supply lines	6-12 months	Check for settling, pipe exposure and leakage. Includes Manifold(s).
4. Drain Field(s)	1-4 weeks	Maintain vegetative cover (mow grass and remove weeds and brush).
	6-12 months	Check for settling, erosion and surfacing of effluent. Repair any broken lateral turn-ups and make certain they are accessible from ground surface and are filled with screw-on type caps. Check and reset pressure head and flush sludge from lateral lines (any discharge sludge and effluent is to be treated with a chlorine solution). Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.
5. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage (gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce waste water load on system. Do no permit entry or grease and non-domestic waste to system. Use of a garbage disposal is <u>prohibited</u> . Addition of chemical or biological additives has <u>not</u> been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained.
6. Pre-Treatment	6-12 months	Check for settling, erosion and surfacing of effluent. Perform all other inspections and sampling as required in the approval of the pre-treatment device.

Initial system must be inspected by a certified inspector or operator at a frequency of at least once every five years and a report submitted. A certified operator is required for the life of the system, **once repair system is installed.**

 Signature of Property Owner

 Date

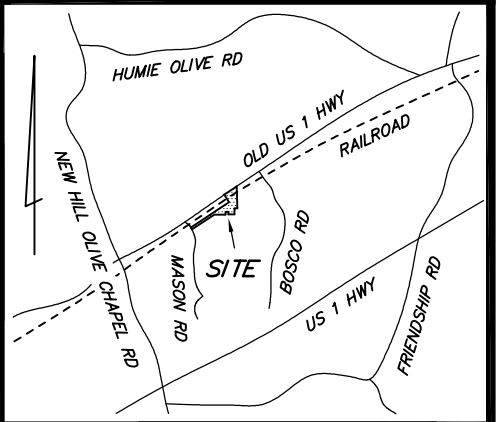
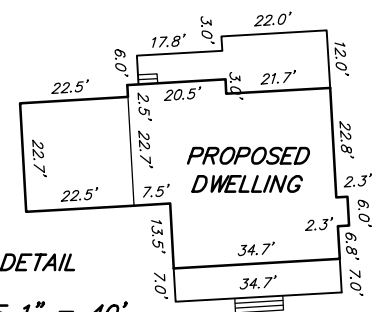
NORTH CAROLINA _____ County. I, a Notary Public of the County and State aforesaid, certify that _____ Owner, Personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this ____ day of _____ 20____.

My commission expires _____ Notary Public _____
 WWDS 7/12/2021

- (a) THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL EASEMENTS OF RECORD AFFECTING SAME.
- (b) NO TITLE SEARCH HAS BEEN PERFORMED BY THIS FIRM DURING THE COURSE OF THIS SURVEY.
- (c) THIS SURVEYOR DOES NOT CERTIFY TO THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITIES, BURIAL GROUNDS, OR ANY SUBSURFACE FEATURES THAT MAY OR MAY NOT BE PRESENT ON THIS SITE.
- (d) THIS MAP DOES NOT MEET NCGS 47-30 REQUIREMENTS FOR RECORDATION.



RBPR 089798-2022

**VICINITY MAP** (NOT TO SCALE)

DETAIL

SCALE 1" = 40'

HARVEY DAVID FERRIS
KELLI KATHERINE FERRIS

D.B. 5740, PG. 450
B.M. 1993, PG. 345

PRELIMINARY

THIS IS A PRELIMINARY
DRAWING AND IS NOT TO BE
USED AS A SURVEY OR TO
TRANSFER ANY PROPERTY
SHOWN HEREON.

To JVI BUILDING & DEVELOPMENT, INC. Only:

I certify that this map was drawn under my supervision from an actual survey made under my supervision (deed description recorded in Book 19054, Page 186 or other reference source N/A); that the boundaries not surveyed are indicated as drawn from references shown hereon; that the ratio of precision or positional accuracy is 1: +10,000; and that this map meets the requirements of The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56. 1600). This 15TH day of SEPTEMBER, 2022.

L-3766

Professional Land Surveyor

License Number

REFERENCES: B.M. 2021, PG. 1480
D.B. 19054, PG. 186

PROPERTY ADDRESS: 0 OAKVILLE LN
NEW HILL, NC 27562

ALL DISTANCES SHOWN HEREON ARE U.S. SURVEY
FEET HORIZONTAL GROUND MEASUREMENTS.

AREA DETERMINED BY COORDINATE GEOMETRY METHOD.

LISTED OWNER
(NOT A TITLE VERIFICATION)

WILLIAM FRANKLEN LILES
7012 OAKVILLE LN
NEW HILL, NC 27562

PLOT PLAN FOR

JVI BUILDING & DEVELOPMENT, INC.

BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA



*Smith & Smith,
Surveyors, P.A.*

P.O. BOX 457
APEX, N.C. 27502
(919) 362-7111

FIRM LICENSE No. C-0155

PLAN DATE
SEPT 15, 2022

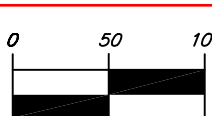
SCALE 1" = 100'

PIN 0720-24-9771

PROJ. No. 2022-63

Required Setbacks	
Front	30
Side	15
Rear	30
Corner	

DRAWN BY
WRH

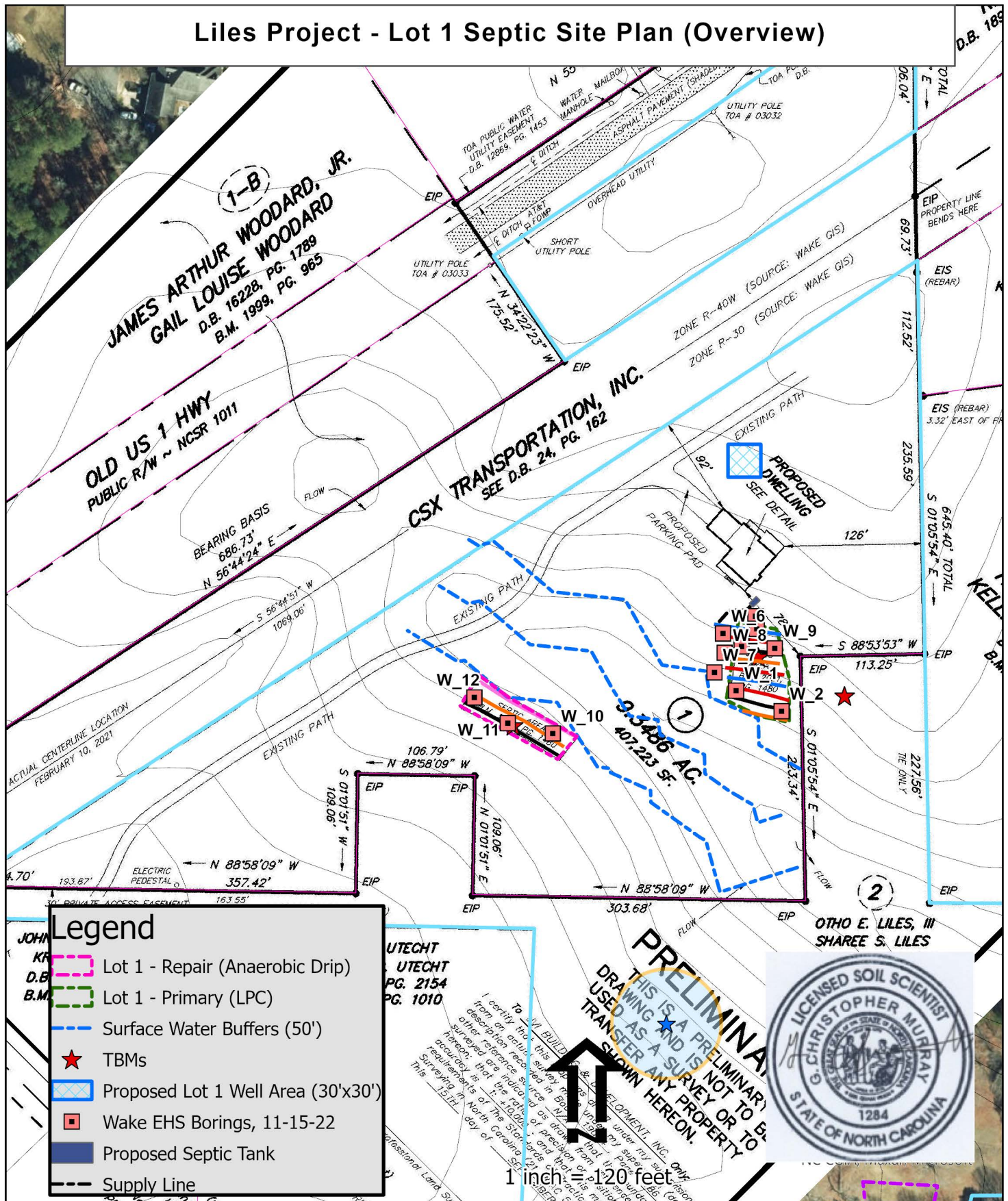


U.S. SURVEY FEET
1 inch = 100 ft.

**216 S Swing Rd, Suite 1
Greensboro, NC 27409
336-662-5487
chris@piedmontsoil.com**

Job #: 1665
Project Manager: GC Murray
Date: 11/28/22
Client: Liles
County: Wake
Road: Oakville Ln.

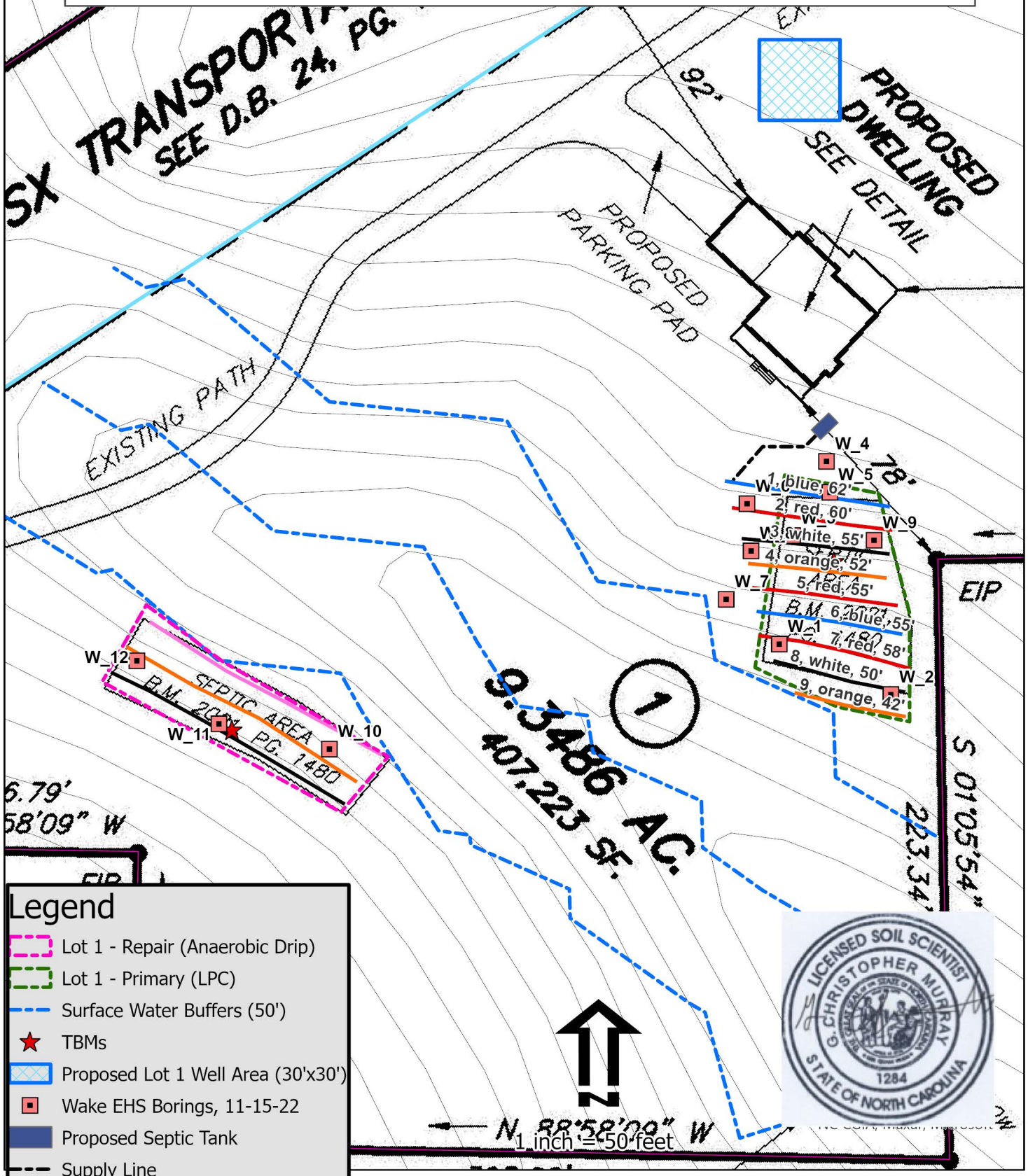
Liles Project - Lot 1 Septic Site Plan (Overview)



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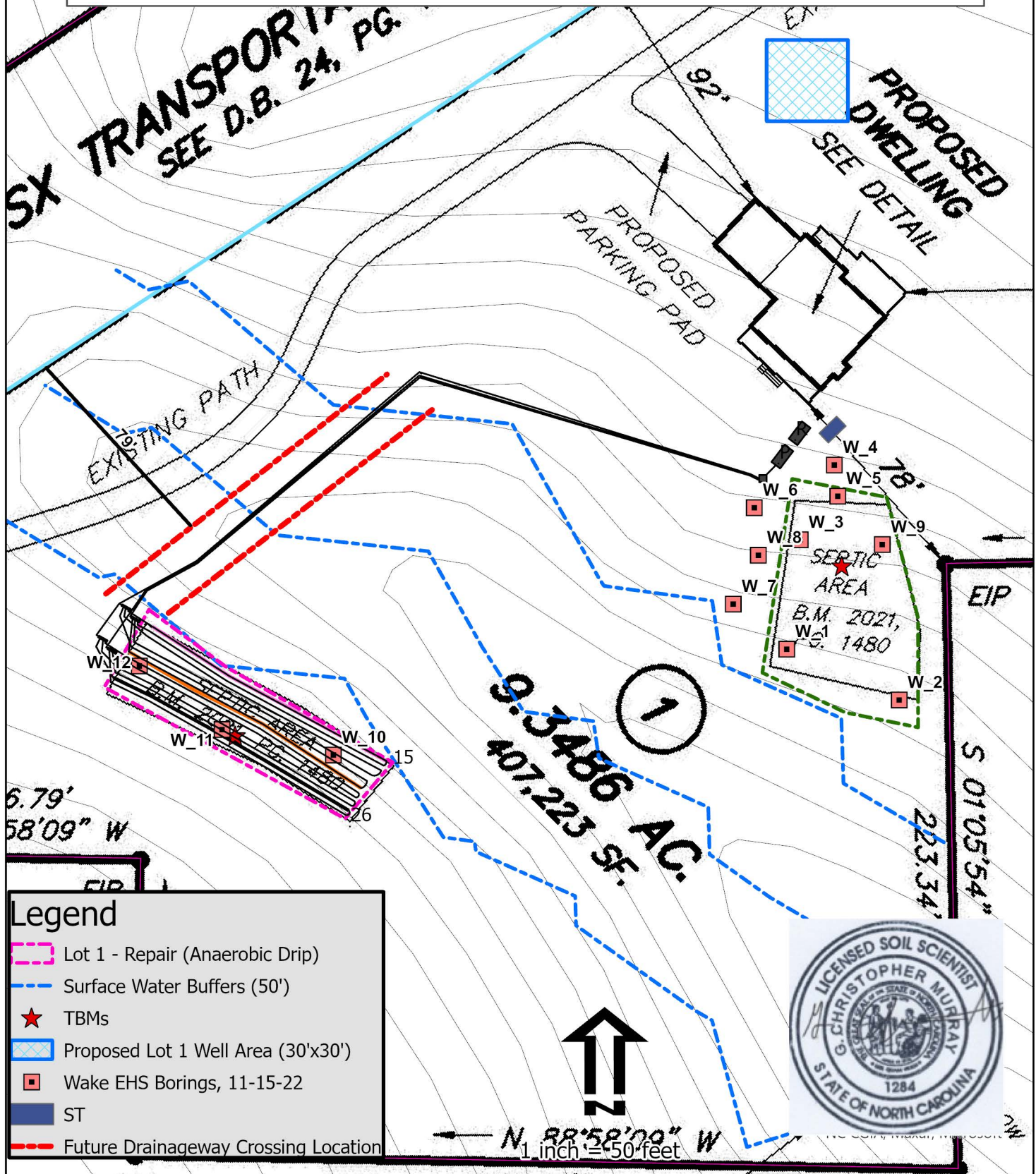
Liles Project - Lot 1 Septic Site Plan (System Detail)



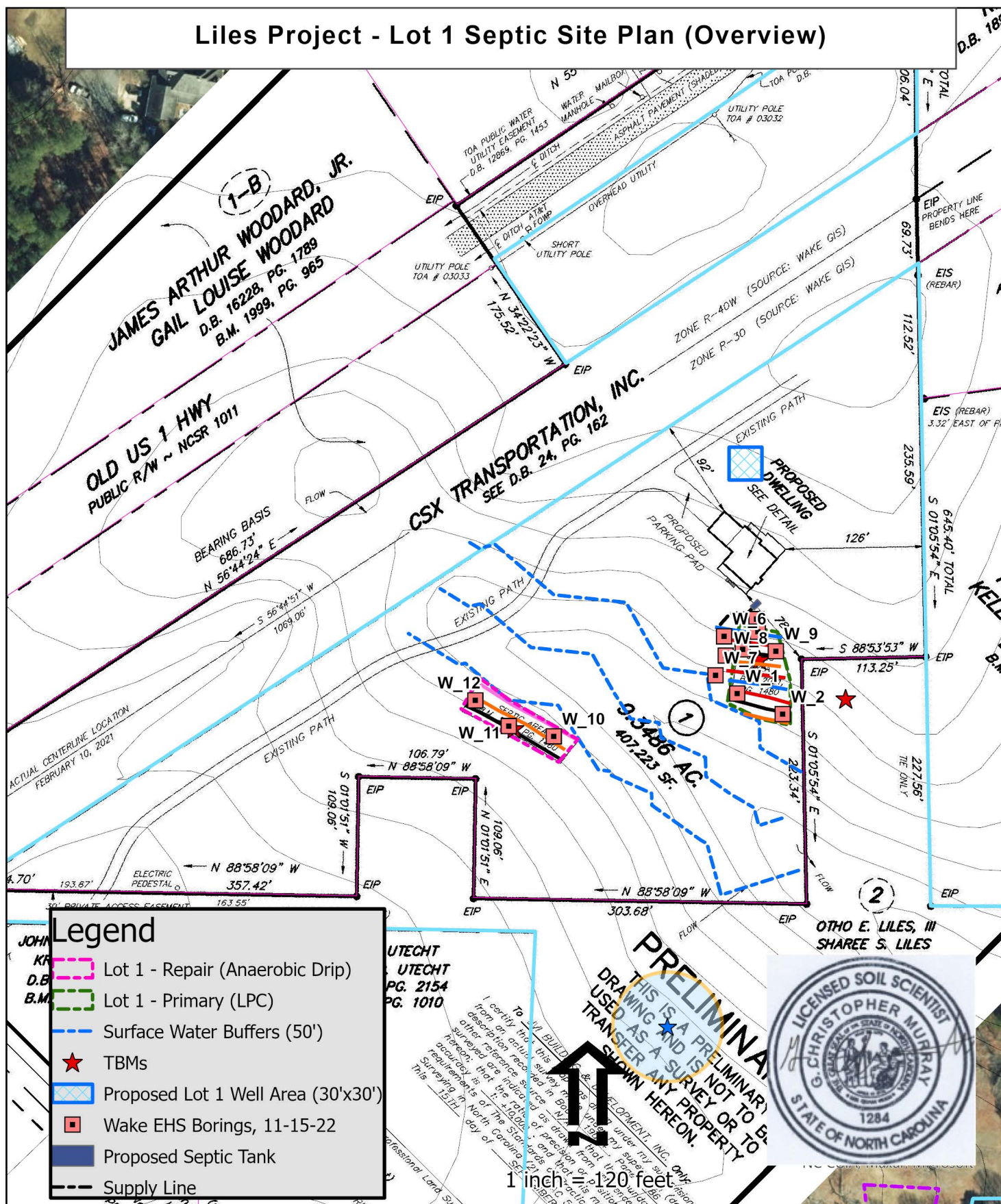
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Job #: 1665
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Date: 11/28/22
Client: Liles
County: Wake
Road: Oakville Ln.

Liles Project - Lot 1 Septic Site Plan (Repair Detail)



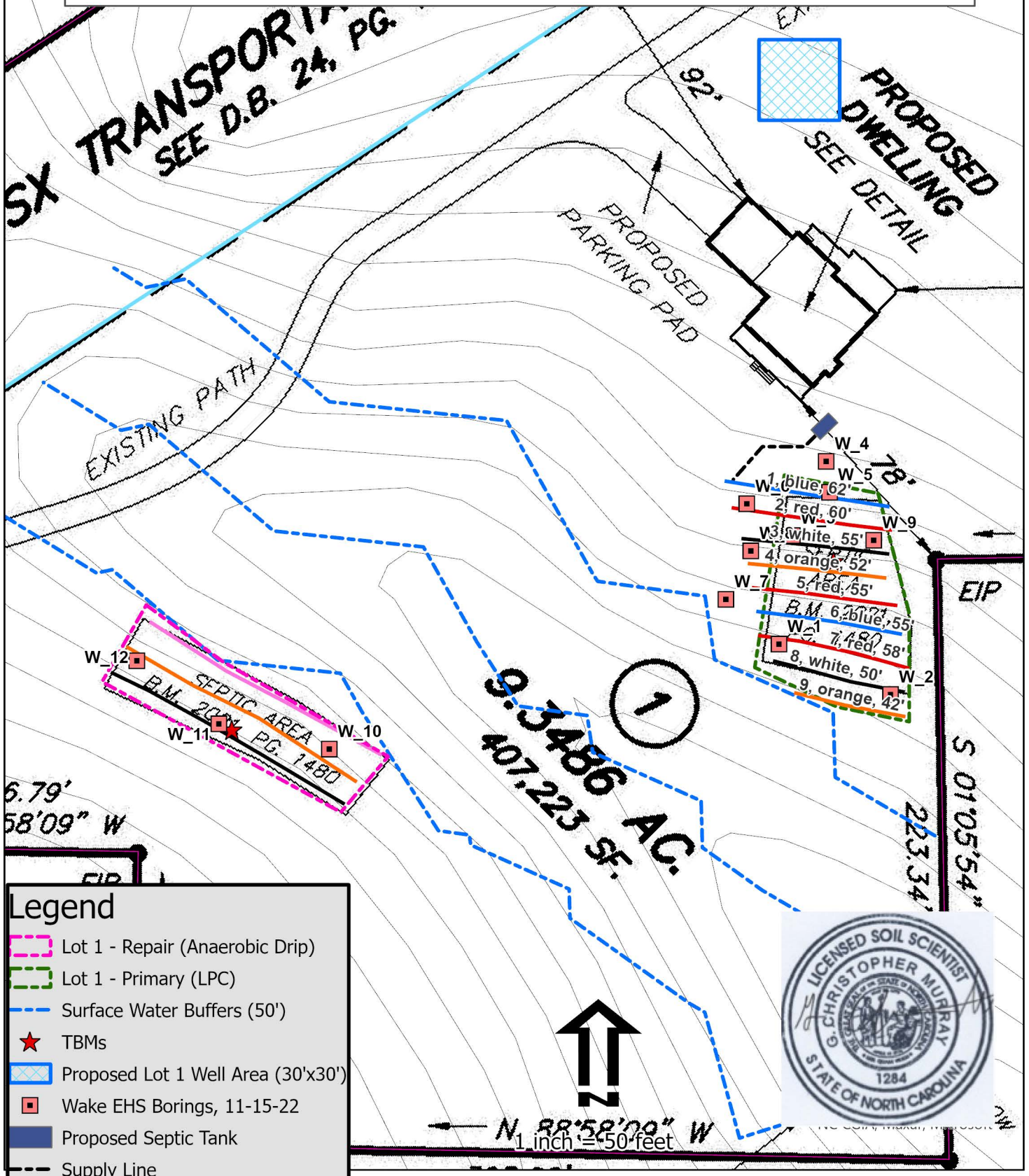
Liles Project - Lot 1 Septic Site Plan (Overview)



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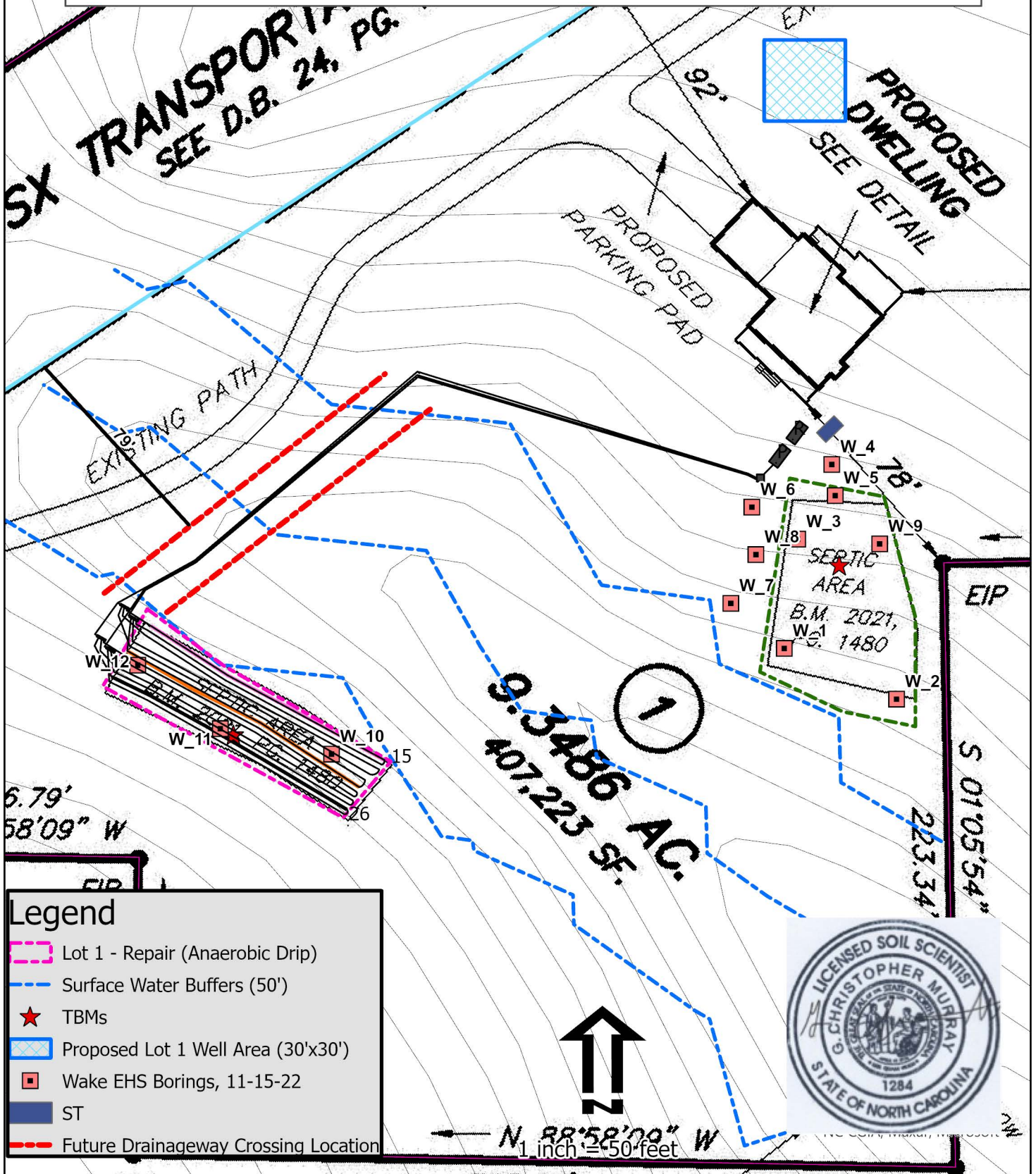
Liles Project - Lot 1 Septic Site Plan (System Detail)



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chris@piedmontsoil.com

Job #: 1665
Project Manager: GC Murray
Date: 11/28/22
Client: Liles
County: Wake
Road: Oakville Ln.

Liles Project - Lot 1 Septic Site Plan (Repair Detail)



Liles Property, Oakville Ln., Wake County, NC - Lot 1 LPC Primary

Piedmont Environmental Associates Job # 1665

<u>LINE #</u>	<u>FLAG COLOR</u>	<u>BS (ft)</u>	<u>HI (ft)</u>	<u>FS (ft)</u>	<u>ELEVATION (ft)</u>	<u>FLAGGED LINE LENGTH (ft)</u>	<u>DESIGN LINE LENGTH (ft)</u>	<u>LPC Chambers Required</u>	<u>End Caps Required</u>
TBM		6.5			100.00				
INSTR. 1			106.50						
1	blue					60	62	15	2
2	red					60	58	14	2
3	white					55	54	13	2
4	orange					52	50	12	2
5	red					55	54	13	2
6	blue					55	54	13	2
7	red					58	58	14	2
8	white					50	50	12	2
9	orange					42	42	10	2
Total						487	482		

	<u>DESIGN LINE LENGTH (ft)</u>	<u>SOIL LTAR GPD/FT²</u>	<u>SYSTEM TYPE</u>	<u>DESIGN LTAR GPD/FT²</u>	<u>DISTRIBUTION MEDIA</u>	<u>DISTRIBUTION METHOD</u>	<u>DESIGN FLOW (GPD)</u>
Initial	482	0.25	LP Chamber	0.25	Gravity to serial	LP Chamber	360

Notes:

**TBM 6.5 at flagged pine tree

**TBM is assumed to be 100.00'.

**All measures in feet.

**Nitrification lines are demonstrated on contour via colored pin flags.

**BS, FS indicate rod readings.

Liles Property, Oakville Ln., Wake County, NC - Lot 1 EZ Treat Drip Repair

Piedmont Environmental Associates Job # 1665

<u>LINE #</u>	<u>FLAG COLOR</u>	<u>BS (ft)</u>	<u>HI (ft)</u>	<u>FS (ft)</u>	<u>ELEVATION (ft)</u>	<u>FLAGGED LINE LENGTH (ft)</u>	<u>DESIGN LINE LENGTH (ft)</u>
TBM		5.6			100.00		
INSTR. 1			105.60				
1	pink				5.4	100	100
2	orange				7.0	100	100
3	white				8.4	100	100
Total						300	300

	<u>DESIGN LINE LENGTH (ft)</u>	<u>SOIL LTAR GPD/FT²</u>	<u>SYSTEM TYPE</u>	<u>DESIGN LTAR GPD/FT²</u>	<u>DISTRIBUTION MEDIA</u>	<u>DISTRIBUTION METHOD</u>	<u>DESIGN FLOW (GPD)</u>
Repair	300	0.15	Drip	0.15	Drip	Drip	360

Notes:

**TBM 5.6 at flagged tree

**TBM is assumed to be 100.00'.

**All measures in feet.

**Nitrification lines are demonstrated on contour via colored pin flags.

**BS, FS indicate rod readings.

LILE'S PROPERTY - LOT 1 REPAIR

Project No. 1655

<u>LINE #</u>	<u>FLAG COLOR</u>	<u>BS (ft)</u>	<u>HI (ft)</u>	<u>FS (ft)</u>	<u>ELEVATION (ft)</u>	<u>FLAGGED LINE LENGTH (ft)</u>	<u>DESIGN LINE LENGTH (ft)</u>
TBM 1		1.7			100.00		
INSTR. 1			101.70				
15	Pink	99.50	104.9	5.40	99.50	100	100
16	-			5.75	99.15	100	100
17	-			6.15	98.75	100	100
18	-			6.60	98.30	100	100
19	-			6.90	98.00	100	100
20	Orange			7.00	97.90	100	100
21	-			7.30	97.60	100	100
22	-			7.60	97.30	100	100
23	-			7.90	97.00	100	100
24	-			8.10	96.80	100	100
25	White			8.40	96.50	100	100
26				8.70	96.20	100	100
Total						1200	1200

Repair	1200	0.150	TS-II Drip	0.150	NA	Subsurface Drip TS-II Pretreatment	360
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- Notes:**
- **TBM on ground at flagged tree.
 - **TBM is assumed to be 100'.
 - **All measures in feet.
 - **Nitrification lines are demonstrated on contour via colored pin flags.
 - **BS, FS indicate rod readings.



NORTH CAROLINA PERC-RITE®

DESIGN SUBMITTAL

Perc-Rite® CalcTool version 3.0

American Manufacturing Company, Inc.

1-800-345-3132 www.americanonsite.com

JOB NAME:

Lile's Property - Lot 1

DATE:

7/19/2021

OWNER:

DESIGNER:

Sarah Menser

SITE ADDRESS:

Liles Property - Lot 1

SIGNATURE:

SELECT ONE

Site Plan Attached:

yes

Zone Detail Attached:

yes

Model Number Specs:

no

SITE DIRECTIONS:

SYSTEM INFORMATION: (Automatically Computed based on Worksheet)

Effluent Quality : **Aerobic: TS-II**

Total LF Tubing Provided : **1200**

Zone Detail : **Z 2 3 2**

Bedrooms x 120 : **360**

ELECTRICAL REQUIREMENTS:

Pump : 1/2 HP, 115V, 1 PHASE

Control : 15 AMP, 115V, 1 PHASE

Other :

SYSTEM MODEL NUMBER: You may use either drop-down list. **SELECT ONLY ONE.**

Aerobic OR Anaerobic: ASD152-S122: 2 Zone Drip w/ Simplex 2 Filter, 2 Zone Control Panel

Aerobic Only: None

OPTIONS

1. DH-INSKIT225: Insulation & Heater Kit for Large Enclosure (208W)
2. BIOLINE500: Drip Tubing per 500 ft Roll
3. BIOLINE1000: Drip Tubing per 1000 ft Roll

no

1

1

Click link below to access PDF for selected model number.

~ Contains Installation Instructions, Specifications, & Standard Details

[Aerobic](#)

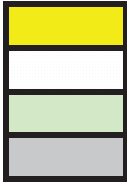
[Pump Curve](#)

Click link below to access Bill of Materials for selected model number.

NORTH CAROLINA WORKSHEET - Dispersal system design worksheet for residential systems.

line #	INPUTS	Select One		You must be able to answer YES to both questions in order to continue.									
		yes		Are supply and return pipes 1"?									
		yes		Is the lift to the HU <8' and the run to the HU <30' with 1-1/2" pipe?									
1	Aerobic: TS-II	Select One: Anaerobic or Aerobic?		ASD15 Units are septic or secondary. Washdown units are secondary or better.									
2	Soil Group IV.	Select One: Soil or Saprolite Group?		Found in column 1 on the Loading Rate Chart. (given by site evaluator)									
3	360	Select One # Bedrooms x 120		Design quantity of wastewater to disperse. This row equals the total number of GPD. Remember to multiply # Bedrooms by 120.									
4	100	Contour Run Length		Enter the tubing length along contour. If run length is not on table, use the actual run length. Example: 85 ft.									
5	150	Supply LF		Length of supply line between hydraulic unit and farthest zone.									
6	8	Lift Ft.		Vertical lift from off level in the pump chamber and highest zone elevation.									
7	0.15	Area (gpd/ft ²) per code	Tab over from Soil Group IV. in Loading Rate Chart	Area loading rate required to treat and disperse wastewater. This line is to be input from Loading Rate Chart. (See Loading Rate Chart)									
8	2400	Area Calculation		Total land area needed to disperse wastewater.									
9	1200	Total LF Tubing		Required total linear feet of tubing to treat and disperse wastewater.									
10	12.00	Calculated Runs		Determines number of runs (Total LF / Contour RL). Rounds up to the next whole number. Found on Zone Detail Table.									
	12	Min. # Runs											
11	<table border="1"> <tr> <td></td><td>Z</td><td>L</td><td>R</td></tr> <tr> <td>Z</td><td>2</td><td>3</td><td>2</td></tr> </table>		Z	L	R	Z	2	3	2	Zone Detail	ASD 15: Z232 Input the appropriate Zone Detail # into the drop-down list to the left.	On Zone Detail Table , cross the next highest Run Length (ft) from 100 with the row for at least 12 runs	Use the ASD 15 Zone Detail Table. Select zone detail from column with next higher Contour Run Length and with equal or greater # Runs . You may input your Zone Detail # in the indicated cell next to the chart. It will then appear in the second column to the left on this worksheet.
	Z	L	R										
Z	2	3	2										
11	12	Actual # Runs		Determined from selected Zone Detail.									
12	24	Proposed Spacing (inches)		Based on available area and site condition.									
13	24	Down Slop Width (ft)		Calculated from runs and run spacing.									
14	2400	Area Calculated (ft ²)		Calculated from runs, run spacing, and contour run length.									
12	61	Max. Lift Allowed	ASD 15: 61 Select which Lift & Distance table you used in the box to the left.	On Lift & Distance Table , cross the Supply/Return 150 with the column for 3 laterals	Use the ASD 15 Lift & Distance Table. You may input your Lift in the indicated cell next to the chart. It will then appear in the second column to the left on this worksheet.								
13	1200	LF Provided		Total linear feet of tubing Provided to disperse wastewater.									
14	600	LF/Zone		Total linear feet per zone.									
15	YES	Will zone flush?		Reference Lift & Distance Table for pump capacity determined by the length of run to the farthest field and the number of laterals. For 1" supply and return only.									
	53	Residual TDH Available											

*In line # 11, Z = # of zones, L = laterals per zone, R = runs per lateral



given by engineer 1
 auto-computed 1
 looked up on tables 3
 user select

[Back to top of page](#)

OPERATING PARAMETERS

16	360	Peak Gallons per day	Maximum or design gallons per day.
17	216	Average Gallons per day	Average gallons per day. (calculated as 60% of Peak)
18	3.05	Dosing Flow (gpm)	Based on .61 gph per emitter.
19	7.85	Flushing Flow (gpm)	Flow to generate 2 fps at the distal end of each lateral.
20	39	Gallons per dose	The zone dose volume is 5 times the volume of the pipe.
21	9.23	Peak Design Doses per day	The total number of zone doses. Individual zone doses is this number divided by the number of zones.
22	656.6	Run Time (Seconds)	Estimated run time for dose gallons based on filtration capacity, flushing flow, and dosing rate
23	Zone	min	Default Standard Rest Time This is the rest time at average flow. The rest time is independent of run time. (60 min. rest = 24 doses per day)
	2	180	
24	Zone	min	Default Peak Rest Time This is the rest time at peak flow. The rest time is independent of run time. (60 min. rest = 24 doses per day)
	2	108	
25	Zone	min	(Recommended) Calculated Standard Rest This is the rest time at average flow. The rest time is independent of run time. (60 min. rest = 24 doses per day)
	2	260	
26	Zone	min	(Recommended) Calculated Peak Rest Time This is the rest time at peak flow. The rest time is independent of run time. (60 min. rest = 24 doses per day)
	2	156	
27	Zone	doses/day	(Recommended) Calculated Standard doses per day This is the total number of doses per day independent of the number of zones. The rest time is independent of run time. (450 gal. per day / 50 gal per dose = 9 doses per day) for a 2, 3, or 4 zone system.
	2	5.5	
28	Zone	doses/day	(Recommended) Calculated Peak doses per day This is the total number of doses per day independent of the number of zones. The rest time is independent of run time. (450 gal. per day / 50 gal per dose = 9 doses per day) for a 2, 3, or 4 zone system.
	2	9.2	

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NO PERMIT(S) FOR CONSTRUCTION, LOCATION OR RELOCATION ACTIVITY SHALL BE ISSUED UNTIL AN AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION AUTHORIZATION HAS BEEN ISSUED

PERMIT VOID IF NOT IN COMPLIANCE WITH ZONING REGULATIONS AND/OR IF SITE IS ALTERED OR INTENDED USE CHANGED

IMPROVEMENT PERMIT

PERMIT #: WRP-084629-2022

APPLICATION DATE: 07/08/2022

BLDG. PERMIT #: RBPR-089798-2022

PIN: 0720249771

RECORDED: Yes

TOWNSHIP: 03 - Buckhorn

JURISDICTION: Wake County

ZONING: R-30

APPLICANT: William Liles
809 swan hill CT

BUSINESS PHONE:
HOME PHONE:
MOBILE PHONE: (919) 924-5691

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 7032 OAKVILLE LN

SUBDIVISION: OTHO E & SHAREE S LILES RCMB

LOT: 1

ACRES: 6.23

DIRECTIONS: US Hwy 1 South to New Hill / Jordan Lake exit - exit RIGHT go to stop light in downtown New Hill - make a RIGHT on Old US #1 - go about 1/2 a mile - turn RIGHT on Mason Road - as soon as you cross railroad tracks make an immediate LEFT down Oakville Lane - Property is on left hand side about half way down - house will go past the red roofed building on the bend of the road.

Permit is subject to revocation if the Site Plan or Plat changes or the intended use changes.

*Maximum depth of line is calculated using the downhill side of the trench and includes slope correction.

IP VALID FOR: Five Years AS PER GS 130A-335 (f)

DESIGNED BY: Chris Murray-Piedmont Environmental

SYSTEM LAYOUT: Private Sector

SITE CLASSIFICATION: Provisionally Suitable

IP STATUS: Issued

BY: Caroline Suggs

DATE: 12/01/2022

NUMBER OF BEDROOMS: 3

OR TOTAL NUMBER OF OCCUPANTS: 6

PERMITTED DESIGN FLOW: 360 GPD

BASEMENT: No

BASEMENT PLUMBING: No

WASTEWATER STRENGTH: Domestic

SYSTEM TYPE: IIIG

LTAR: 0.250

EXISTING SYSTEM UTILIZED: No

PRETREATMENT STRENGTH REQUIRED: None

EASEMENT FOR WW SYSTEM ASSOCIATED WITH PARCEL: No

MAXIMUM TRENCH DEPTH: 8 INCHES

PUMP REQUIRED: No

SPECIFIC SYSTEM REQUIREMENTS: -System designed for a 3 bedroom home with 360 gals per day

-Initial system designed with Low Profile Chambers-no reduction taken

-Future Repair is a VC type system with a max trench depth of 6" and a 0.15 LTAR

-Site serviced by private well water

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

-Maintain all required setbacks.

-The Initial system is ultra shallow placement, which requires imported soil cover at time of installation. This imported soil must cover the entirety of the system area and extend beyond the system area 5 feet on all sides. A minimum of 6" of soil cover is required after settling, additional soil cover beyond 6" may be required to account for settling. Imported soil cover must be approved by WCES prior to placement. System area must be seeded and strawed for stabilization

-An interceptor drain to divert subsurface water and a berm to divert surface water are required to be installed upslope from the Initial system area as shown on the IP site plan

ISSUED BY:

Caroline Augsp. RTHS

DATE: 12/01/2022

