10:00

ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625

PERMIT # OSWP AP 2022-0092

SEPTIC: IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PIN # 4731 -91 -5706

APPLICANT/OWNER: Garrison Davis

APPLICANT ADDRESS: 631-300 Brawley School Road Mooresville NC 28117.

SITE ADDRESS: 6100 Lake Circle Troutman NC 28166.

PHONE: 704 363 2845 ALT. PHONE —

SITE DIRECTIONS: Wagner St @ Era ST @ on Lake Circle

SAP CONTROLLED: ☐ YES ☒ NO

SUBDIVISION: J P Holthouser

SECTION: M2 LOT # 10 LOT AREA: .877AC

DESIGN FLOW: 360 L.T.A.R.: .20

Septic Tank	1000 (gal)	STB	7100	Date	9/7/22	☒ New System	☐ Repair	☐ Expansion	System Type: I II III IV V VI	☒ Residence	No. Bedrooms 3
Pump Tank	1000 (gal)	PT	303	Date	9/26/22	System Description:	LP-HPPBRS-50% Reduction			☐ Business	No. Persons 6
Pump Make	Gould 5½	Model	WE280V	Serial #		Repair System Description:	Drip			☐ Other	No. Employees —
# Nitrification Fields	1	# Lines	6	Linear Ft	307	Maintenance Agreement Required:	☒ YES	☐ NO		☐ Slab	☒ Crawl Space
Trench Width	36 in	Trench Bottom Depth(Low side)	16 in	Gravel Depth	—		☐ GRAVITY	☒ PRESSURE		☐ Basement w/ plumbing	☐ Basement w/o plumbing

Water Supply: ☒ Private ☐ Public ☐ Community

Comments / Conditions:

INITIAL SITE SKETCH

This permit issued pursuant to GS. 130A-335 (a2)(a3), and (a4) using the signed & Sealed LSS/LG Evaluations attached here

AS BUILT SKETCH

FOR SEPTIC FINAL INSPECTION CALL: 704-664-3703 between 8am-9am the day the inspection is needed. Be sure to speak with an inspector to confirm your time.

- Verify 6" cover, no trash/fill/gravel in cover
- Check filter in tank
- Lines checked, plumbing CVB 11/3/22

12-1-22 - Filter - Floats - Electrical - OK - B.B.
- Cover OK.

Permit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. **CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION**

☐ **IMPROVEMENT PERMIT** *with plat valid without expiration.* ☒ **IMPROVEMENT PERMIT** *with site plan valid for 60 mos.* ☒ **AUTHORIZATION TO CONSTRUCT** *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: _____ Date: _____

Installed by: Russell Williams

IMPROVEMENT PERMIT by: Benjamin A Butler Date: 8-10-2022

OPERATION PERMIT by: Benjamin A Butler Date: 12-6-2022.

AUTHORIZATION TO CONSTRUCT by: Benjamin A Butler Date: 8-10-2022.

Existing System Inspected by: _____ Date: _____

FOR SEPTIC FINAL INSPECTION: CALL 704-664-3703 between 8am-9am the day the inspection is needed.

County: Iredell

This Section for Local Health Department Use Only

Initial submittal received: 8/2/2022 (Date) by BB (Initials)

Permit Number: OSWP 2022-0092

G.S. 130A-335(a4) states the following: *'If a local health department fails to act on an application for an improvement permit submitted pursuant to subsection (a3) of the section within 10 business days of receipt of a complete application, the local health department shall issue the improvement permit.'*

In accordance with G.S. 130A-335(a3) the improvement permit application is:

☐ 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 Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☐ Denied (See attached report.)

Copies of this were sent to the LSS and the Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☑ Complete

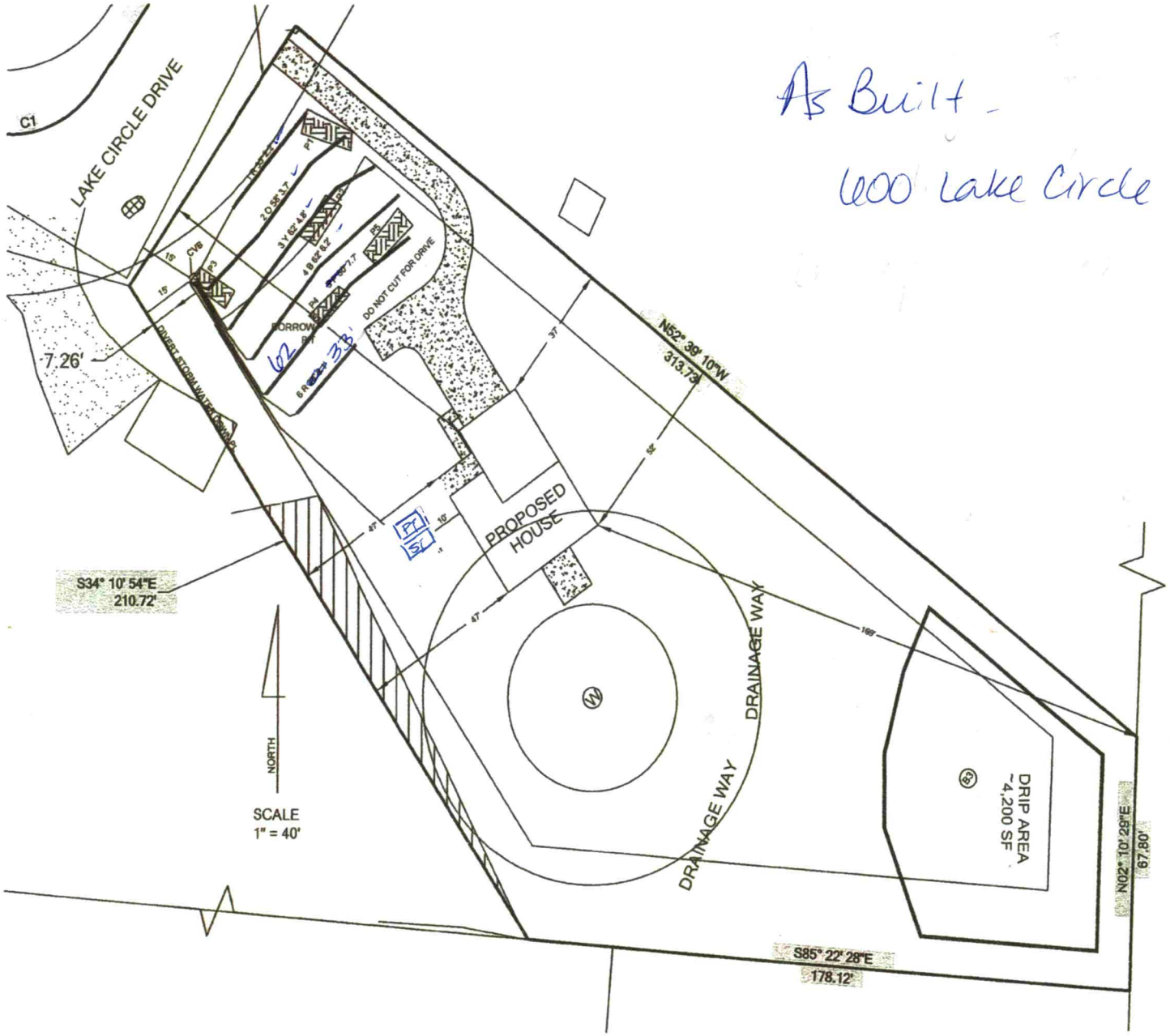
State Authorized Agent: Benjamin A Bubbs Date of Issuance: 8-10-2022.

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2), (a3), and (a4) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes, or if information submitted in the application was falsified, inaccurate or misleading. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit. The location and identification of all property lines, easements, water lines, and other appropriate utilities shall be the responsibility of the owner.

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: 8-10-2027

See attached site sketch


As Built -
600 Lake Circle
LAKE CIRCLE DRIVE
C1
7.26'
DIVERT STORM WATER FLOWING
DO NOT CUT FOR DRIVE
BORROW
62
38'
N52° 39' 10"W
313.73'
PROPOSED HOUSE
S34° 10' 54"E
210.72'
NORTH
SCALE
1" = 40'
DRAINAGE WAY
DRAINAGE WAY
DRIP AREA
~4,200 SF
N22° 10' 28"E
67.80'
S85° 22' 28"E
178.12'

LP HPPBPS TAPSHEET -600 Lake Circle

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	*RED*	*98.80*	*33*	*0.156*	*0.41*	*99*	*8*
2	*ORANGE*	*97.30*	*62*	*0.156*	*0.41*	*186*	*14*
3	*YELLOW*	*96.20*	*65*	*0.156*	*0.41*	*195*	*15*
4	*BLUE*	*94.80*	*63*	*0.156*	*0.41*	*189*	*15*
5	*PINK*	*93.30*	*64*	*0.156*	*0.41*	*192*	*15*
6	*RED*	*91.90*	*20*	*0.156*	*0.41*	*60*	*5*
	total	feet =	307	gal/min =	29.52		72

Des. Flow	360
Pump Run=	8.78
soil LTAR	0.2
LTAR +5%	0.21
LTAR with mod.	0.4
LTAR with mod.. + 5%	0.42

.156 equals 5/32 inch hole

BLDR-2022-0092

ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # OSWP ~~AP~~ 2022-0092

SEPTIC: IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PIN # 4731 -- 91 -- 5706

APPLICANT/OWNER: Garrison Davis APPLICANT ADDRESS: 631-300 Brawley School Road Mooresville NC 28117.

SITE ADDRESS: 600 Lake Circle Troutman NC 28166. PHONE: 704.363.2845 ALT. PHONE —

SITE DIRECTIONS: Wagner St @ Era ST @ on Lake Circle SAP CONTROLLED: ☐ YES ☒ NO

SUBDIVISION: J P Holthouser SECTION: M2 LOT # 10 LOT AREA: .877 AC DESIGN FLOW: 360 L.T.A.R.: .20

Septic Tank 1000 (gal) STB Date

Pump Tank 1000 (gal) PT Date

Pump Make Model Serial #

Nitrification Fields 1 # Lines 6 Linear Ft 307

Trench Width 36 in Trench Bottom Depth(Low side) 16 in Gravel Depth —

☒ New System ☐ Repair ☐ Expansion System Type: I II III (IV) V VI

System Description: LP-HPPBBS-50% Reduction

Repair System Description: Drip

Maintenance Agreement Required: ☒ YES ☐ NO

☐ GRAVITY ☒ PRESSURE

☒ Residence No. Bedrooms 3

☐ Business No. Persons 6

☐ Other No. Employees

☐ Slab ☒ Crawl Space

☐ Basement w/ plumbing ☐ Basement w/o plumbing

Water Supply: ☒ Private ☐ Public ☐ Community

Comments / Conditions:

INITIAL SITE SKETCH

This permit issued pursuant to GS. 130A-335 (a2) (a3), and (a4) using the signed & Sealed LSS/LG Evaluations attached here

AS BUILT SKETCH

FOR SEPTIC FINAL INSPECTION CALL: 704-664-3703 between 8am-9am the day the inspection is needed. Be sure to speak with an inspector to confirm your time.

Permit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. **CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION**

☐ **IMPROVEMENT PERMIT** *with plat valid without expiration.* ☒ **IMPROVEMENT PERMIT** *with site plan valid for 60 mos.* ☒ **AUTHORIZATION TO CONSTRUCT** *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: Date: Installed by:

IMPROVEMENT PERMIT by: Benjamin A Butts Date: 8-10-2022 OPERATION PERMIT by: Date:

AUTHORIZATION TO CONSTRUCT by: Benjamin A Butts Date: 8-10-2022 Existing System Inspected by: Date:

FOR SEPTIC FINAL INSPECTION: CALL 704-664-3703 between 8am-9am the day the inspection is needed.

County: Iredell

This Section for Local Health Department Use Only

Initial submittal received: 8/2/2022 (Date) by BB (Initials)

Permit Number: OSWP 2022-092

G.S. 130A-335(a4) states the following: *'If a local health department fails to act on an application for an improvement permit submitted pursuant to subsection (a3) of the section within 10 business days of receipt of a complete application, the local health department shall issue the improvement permit.'*

In accordance with G.S. 130A-335(a3) the improvement permit application is:

☐ 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 Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☐ Denied (See attached report.)

Copies of this were sent to the LSS and the Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: Benjamin A Bates Date of Issuance: 8-10-2022.

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2), (a3), and (a4) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes, or if information submitted in the application was falsified, inaccurate or misleading. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit. The location and identification of all property lines, easements, water lines, and other appropriate utilities shall be the responsibility of the owner.

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: 8-10-2027

See attached site sketch

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

Project#: 22-0040
July 8th 2022

TRUNORTH HOMES, LLC
Attn: *Garrison Davis*
Email: garrison@trunorthhomes.com

RE: Soil & Site Evaluation for a 3 Bedroom Residence at 600 Lake Circle., 0.877 ac Parcel, PIN# 4731915706, Troutman, NC 28166, Iredell County, NC.

Mr.Davis:

At your request Soil & Forestry Services of the Carolinas (S&FS) has performed soil/site evaluations on parcel noted above.The Lot size is noted on the attached survey map & soil evaluation form. The purpose of our work was to identify soil areas with potential to support subsurface wastewater disposal systems and provide design details for Session Law submittals to Iredell County Health Department.

Site Conditions

At the time of our evaluation land cover on the property was mostly wooded. Topography within the evaluated area was gentle slope near the house site with gentle percentage of slope in the proposed drainfield area. Property lines and corners were marked at the time of the evaluation by Bateman Civil Survey Company. The Surveyor provided an Autocad File of the survey as a basemap. The proposed septic layout was located via GPS and tape measures which were used to produce the attached *Site Plan*. The house envelope was pinned in the field during our evaluation.

Methodology

We evaluated soil areas through the use of auger borings. Soil morphological conditions including color, texture, structure, etc. were reviewed in the field with five backhoe pits & one boring location on the property flagged and located via GPS. All five backhoe pits/augers are located in or adjacent to the proposed septic layout. Soil suitability was determined by referencing 15A NCAC 18A.1900 "Laws and Rules for Sewage Treatment and Disposal Systems". *Soil & Site Evaluation Forms* were utilized to record the soil morphological data for each boring. The house envelope waslocated via tape measure.An on-ground layout of system and repair was performed using a laser level. Pin flag locations of the layout were also located by GPS and tape measure. Detailed system & repair information is summarized in the following paragraph for this Lot.

DocuSign Envelope ID: 5C9D1EC8-801C-4DEE-9314-A4A570FF7556

600 Lake Circle Drive. PIN #4731915706 (*See Attached Design*)
The septic layout for this lot (9' centers) yielded a total of 348 linear feet of line. The primary system is proposed as 307' of Modified Conventional HPPBPS (50% Reduction) drainfield with low pressure distribution. Trench depth (LOW SIDE) is specified at 16 inches. The Primary System requires 6 inches of Group II or III cover. The repair system is proposed as ~4,200SF of Innovative Drip Irrigation drainfield with pressure distribution. Trench depth is specified at 6 inches. Drainage water must be diverted down the right side property line. Any cutting of soil for the driveway would impact the primary system and may nullify the design.

Session Law Requirements

All information needed to issue the IP must be submitted with the application. The application shall include all information described in 15A NCAC 18A .1937(d) and be accompanied by a signed and dated statement from the applicant (owner or owner's legal representative) that reads as follows:

"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)."

Owner

Date

Print Name Kenneth Stutts
DocuSigned by:

Signature Kenneth Stutts 7/26/2022
1D5C8D9B4BB64D7...

The LSS evaluation shall include a statement bearing the LSS seal and signature that reads as follows:

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

Disclaimer
This report reflects the findings of S&FS, PA. *This LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2)."* Any site modifications that impact the proposed septic areas on the site may nullify this design for 600 Lake Circle Drive, Troutman NC 28166. System design requirements and site requirements shall be adhered to for installation and Operations Permits to be issued by the local Health Department. If you have questions regarding these requirements a Pre-Construction meeting should be scheduled to discuss. Please contact S&FS if you have any questions regarding this report or the attached information. S&FS also offers septic system inspection, wetland delineation and forestry services.

Sincerely,

LICENSED SOIL SCIENTIST
Samuel A. Rollans
1231
STATE OF NORTH CAROLINA

S. Ashley Rollans, LSS
Attachment: *Septic Design*

County: Iredell

IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)/SL2022-11

PIN/Lot Identifier: 4731915706

Issued To: Stutts Family Tr

Property Location: 600 Lake Circle

Subdivision: JP Holthouser Lot #: 10 Block: N/A Section: N/A

LSS Report Provided: Yes ☑ No ☐

If yes, name and license number of LSS: Samuel Ashley Rollans #1231

New ☑ Repair ☐ Expansion ☐ System Relocation ☐

Proposed Structure: _____

Proposed Wastewater System Type: Mod. Conv. (HPP BFS) w/6" cover (Initial) Innov. Subsurface Drip (Repair)

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

Proposed Design Daily Flow: 360 GPD Proposed LTAR (Initial): 0.2 Proposed LTAR (Repair): 0.1

Design Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process

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

Pump Required: ☑ Yes ☐ No ☐ May be required based upon final location and elevations of facilities

Artificial Drainage Required: ☑ Yes ☐ No If yes, please specify details: See Design (Drainage to be diverted down Right PL

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

Drainfield location meets requirements of Rule .1945: Yes ☑ No ☐

Drainfield location meets requirements of Rule .1950: Yes ☑ No ☐

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

Permit conditions:

See Design

Licensed Soil Scientist Print Name: Samuel Ashley Rollans

Licensed Soil Scientist Signature: Samuel A Rollans Date: 7/15/22

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

See attached site sketch

See Design

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

Attached is a proposed design for an At-Grade HPPBPS Septic System w/Low pressure distribution for a 3 bedroom single family residence on 600 Lake Circle, (PIN# 4731915706), Troutman NC, 28166.

Contents: **Page**

Information for the Installer---------- 1

Design Information
- Design Specifications---------- 2-3
- Layout Specifications---------- 4
- System Tapsheet---------- 5

Site Plan/System Plan---------- 6

Calculations---------- 7

Profile Descriptions---------- 8-9

Original Plat---------- 10

Agent Authorization---------- 11

Green Sheet---------- ONLINE

Septic Application---------- ONLINE

LICENSED SOIL SCIENTIST
Samuel A. Roberts
1231
STATE OF NORTH CAROLINA

July 8, 2022
Project #: 22-0040
Design By: Soil & Forestry Services of the Carolinas, PA

INFORMATION FOR THE INSTALLER:

The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.

- Tanks shall be approved by NC DHHS, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to excavation
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as an HPPBPS installation with low pressure distribution.
- Repair is specified as an Innovative Drip Irrigation installation with low pressure dist.
- Backfill 4 - 6" of material (County Approved) over panels, rake trench walls, lime side-walls, install trenches 36" wide and have no more than 1/4" fall in 10 feet.
- **SYSTEM REQUIRES 6 INCHES OF GROUP II OR II COVER**

LP HPPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	TruNorth Homes, LLC
Current Address:	631-300 Brawley School Rd Mooresville, NC 28117
Phone:	704.363.2845
County:	Iredell
Location:	600 Lake Circle Drive Troutman, NC 28166
Source of Wastewater Flow:	3 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	360 gpd
System Flow:	29.52 gpm

Design Specifications

Drainfield Size:	307
Loading Rate (gpd/ft.^{2}):	0.2
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth (LOW SIDE):	16 in. w/6" COVER, Repair 6 in. Trench Depth
Trench Width:	36 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	100
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	17.40
Dosing Volume:	259.20
Supply Manifold:	N/A
Supply Manifold Length:	N/A
Supply Manifold Volume:	N/A
Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head:	2 ft.
Friction Head:	1.78
Elevation Head:	18.10
Total Dynamic Head:	25.16
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 per lateral
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Additional Comments:	Soil suitability was performed by Soil & Forestry Services of the Carolinas, PA

600 Lake Circle Drive

LP HPPBPS

DESIGN FLOW (gpd):	360
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.2
TOTAL AREA TRENCH BOTTOM:	921
TOTAL LATERAL LENGTH:	307
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	300
SUPPLY LINE LENGTH:	100
TOTAL DYNAMIC HEAD:	25.16
MANIFOLD SIZE:	N/A
DOSING VOLUME:	259.20
PUMP TANK DRAW DOWN*:	12.3
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

600 Lake Circle

Project #: 22-0040

LAYOUT FOR 3 BEDROOM HOME — July 8, 2022

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM	(TOG PP)	1.0	101		100.00		
INSTR. 1							
HOUSE CNR	(RIGHT FRONT)			13.00	*88.00*		
P. TANK				15.10	*85.90*		
1	***RED***			*2.20*	*98.80*	*33*	*33*
2	***ORANGE***			*3.70*	*97.30*	*62*	*62*
3	***YELLOW***			*4.80*	*96.20*	*65*	*65*
4	***BLUE***			*6.20*	*94.80*	*63*	*63*
5	***PINK***			*7.70*	*93.30*	*64*	*64*
6	***RED***			*9.10*	*91.90*	*61*	*20*
7	DRIP REPAIR					~4,200SF	~4,200SF
					Total	**348**	**307**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION	TRENCH DEPTH (LOW SIDE)
** System*	*307*	*0.200*	*MOD.*	*0.200*	***HPPBPS***	**LOW**	***16"***
					AT - GRADE	**PRESSURE**	6" GROUP II OR III
							COVER REQUIRED
Repair	~4200SF	0.100	INNOV.	***0.100***	DRIP IRRIGATION	PRESSURE	***6"***

Notes:

****All septic lines and pits located via GPS and tape measures**
**All measures in feet
**Nitrification lines are demonstrated on contour via colored pin flags

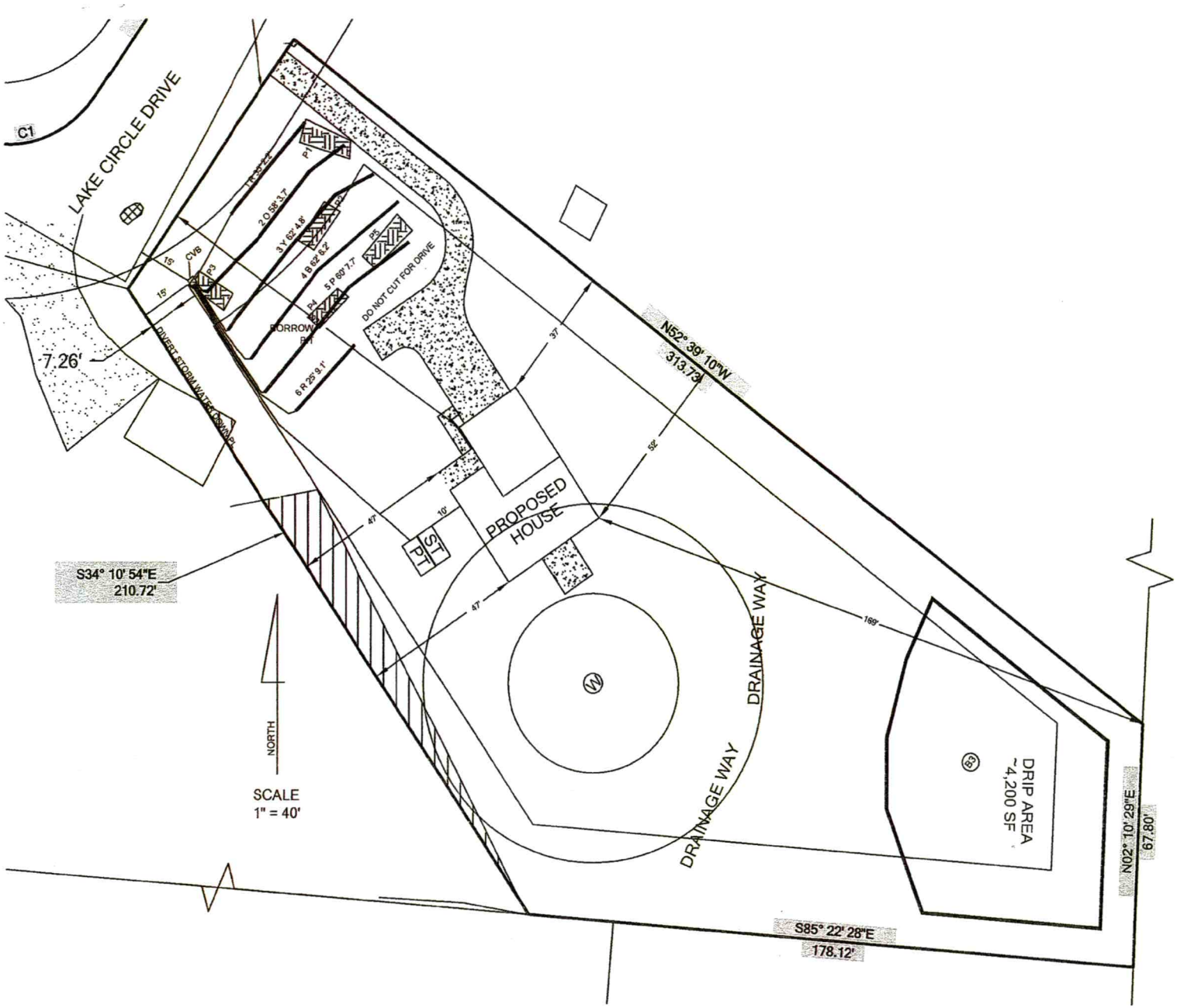
LP HPPBPS TAPSHEET -600 Lake Circle

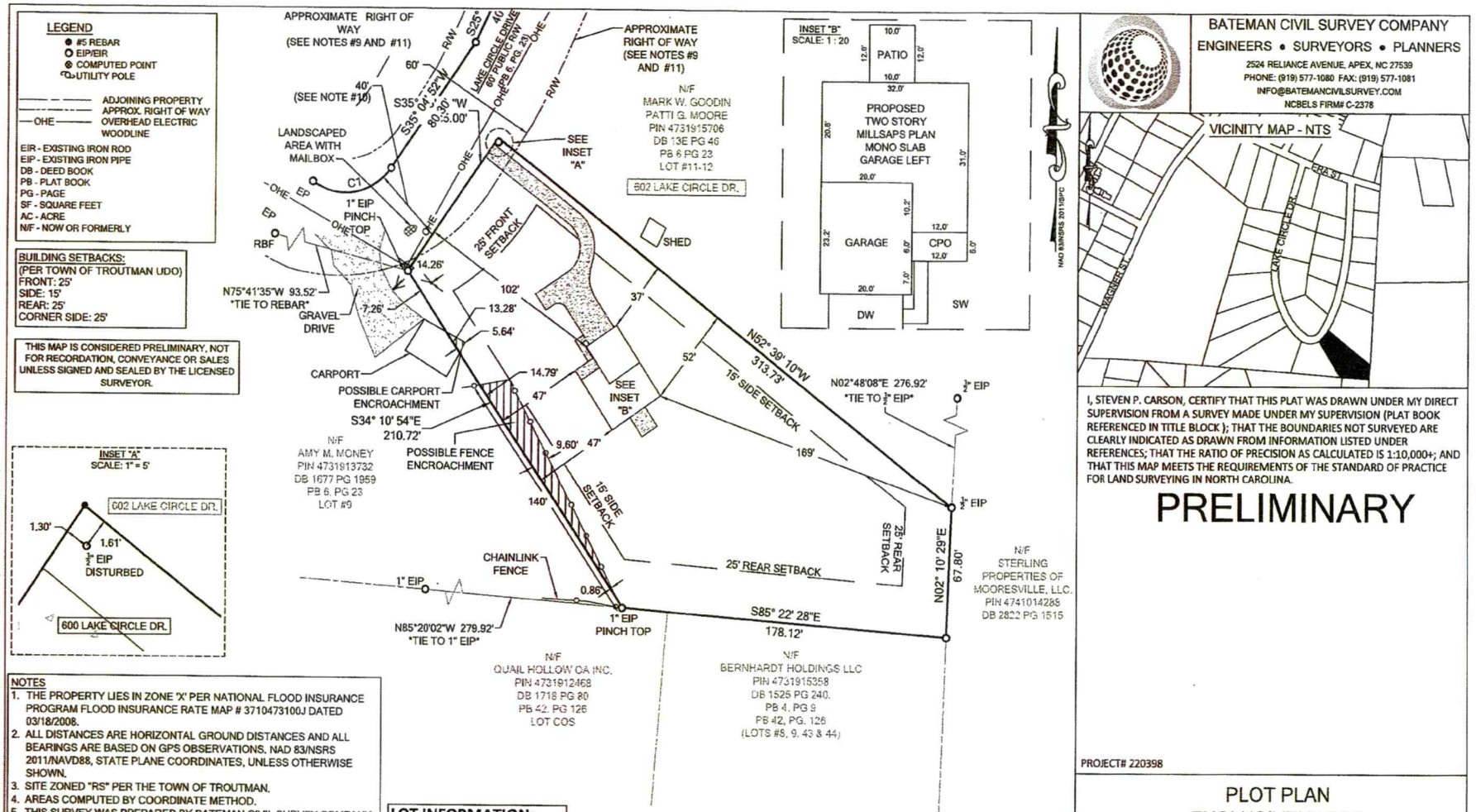
SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	***RED***	*98.80*	*33*	*0.156*	*0.41*	*99*	*8*
2	***ORANGE***	*97.30*	*62*	*0.156*	*0.41*	*186*	*14*
3	***YELLOW***	*96.20*	*65*	*0.156*	*0.41*	*195*	*15*
4	***BLUE***	*94.80*	*63*	*0.156*	*0.41*	*189*	*15*
5	***PINK***	*93.30*	*64*	*0.156*	*0.41*	*192*	*15*
6	***RED***	*91.90*	*20*	*0.156*	*0.41*	*60*	*5*
	total	**feet =**	**307**	**gal/min =**	**29.52**		72

Des. Flow	**360**
Pump Run=	**8.78**
soil LTAR	**0.2**
LTAR +5%	**0.21**
LTAR with mod.	**0.4**
LTAR with mod.. + 5%	**0.42**

.156 equals 5/32 inch hole


LAKE CIRCLE DRIVE
C1
CVB
15'
15'
DRIVEWAY
7.26'
P1
P2
P3
P4
P5
2 O 58' 3.7'
3 V 62' 4.8'
4 B 62' 6.2'
5 P 60' 7.7'
6 R 25' 9.1'
BORROW PIT
DO NOT CUT FOR DRIVE
37'
N52° 39' 10"W
313.73'
52'
PROPOSED HOUSE
ST
PT
10'
47'
47'
S34° 10' 54"E
210.72'
NORTH
SCALE
1" = 40'
DRAINAGE WAY
DRAINAGE WAY
189'
DRIP AREA
~4,200 SF
N02° 10' 29"E
67.80'
S85° 22' 28"E
178.12'



NOTES

1. THE PROPERTY LIES IN ZONE 'X' PER NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP # 3710473100J DATED 03/18/2008.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES AND ALL BEARINGS ARE BASED ON GPS OBSERVATIONS. NAD 83/NSRS 2011/NAVD88, STATE PLANE COORDINATES, UNLESS OTHERWISE SHOWN.
3. SITE ZONED "RS" PER THE TOWN OF TROUTMAN.
4. AREAS COMPUTED BY COORDINATE METHOD.
5. THIS SURVEY WAS PREPARED BY BATEMAN CIVIL SURVEY COMPANY, UNDER THE SUPERVISION OF STEVEN P. CARSON, PLS.
6. SURVEY PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT.
7. NO GRID MONUMENTS FOUND WITHIN 2000'.
8. PROPERTY LINES FOR LOT 25 WERE ESTABLISHED USING DEED BOOK 1718, PAGE 1683 (TRACT 1) & FIELD LOCATED EVIDENCE.
9. APPROXIMATE RIGHT OF WAY ESTABLISHED USING FIELD LOCATION OF PAVED PORTION OF LAKE CIRCLE DRIVE.
10. 40' RIGHT OF WAY SHOWN FOR LAKE CIRCLE DRIVE PER PB 6, PG. 23
11. RIGHT OF WAY NOTE PER PB 6, PG. 23:
"NOTE: A 60' RIGHT OF WAY IS RESERVED TO MEET N.C. STATE REQUIREMENTS ON ERA ST. AND LAKE CIRCLE."

LOT INFORMATION:

OWNER(S):
KENNETH L. STUTTS JR.
PATRICIA M. STUTTS, TRUSTEES
THE STUTTS FAMILY TRUST OF 2006
AS COMMUNITY PROPERTY
ADDRESS: 600 LAKE SHORE DRIVE
PIN#: 4731915706
DB 1718, PG. 1683 (TRACT #2)
PB 6, PG. 23 (LOT 10)
TOTAL LOT AREA = 0.88 AC.
38,621 SF

PROPOSED IMPERVIOUS:

TOTAL IMPERVIOUS = 2,941 SF
HOUSE : 788 SF
GARAGE: 464 SF
DW: 1,451 SF
SW: 46 SF
CPO: 72 SF
PATIO: 120 SF
TOTAL LOT AREA = 0.88 AC / 38,621 SF
PERCENT IMPERVIOUS = 7.61%

BUILDER TO VERIFY HOUSE LOCATION, DIMENSIONS AND REVIEW TOTAL IMPERVIOUS NOTED ON THIS PLOT PLAN.

THIS MAP IS OF AN EXISTING PARCEL OF LAND AND IS ONLY INTENDED FOR THE PARTIES AND PURPOSES SHOWN. THIS MAP NOT FOR RECORDATION. NO TITLE REPORT PROVIDED.

SCALE: 1" = 50 ft.

BATEMAN CIVIL SURVEY COMPANY
ENGINEERS • SURVEYORS • PLANNERS
2524 RELIANCE AVENUE, APEX, NC 27539
PHONE: (919) 577-1080 FAX: (919) 577-1081
INFO@BATEMANCIVILSURVEY.COM
NCBELS FIRM# C-2378

VICINITY MAP - NTS

I, STEVEN P. CARSON, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY DIRECT SUPERVISION FROM A SURVEY MADE UNDER MY SUPERVISION (PLAT BOOK REFERENCED IN TITLE BLOCK); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION LISTED UNDER REFERENCES; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARD OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA.

PRELIMINARY

PROJECT# 220398

PLOT PLAN
EXCLUSIVELY FOR:
TRUNORTH HOMES, LLC.

600 LAKE CIRCLE DRIVE
(LOT 10 - J.P. HOLTSHOUSER PROPERTY)
TROUTMAN, NC
#15 TOWNSHIP, IREDELL COUNTY
DRAWN BY: CKW CHECKED BY: SPC DATE: 07/14/2022
REFERENCE: PB 6, PG. 23 SCALE:1"=50'

P:\2022 Projects\220398 600 lake circle drive, plot plan_trunorth\PLOT PLAN\REV 1\220398_600 LAKE CIRCLE DRIVE_PLOT PLAN_rev 1.DWG, 7/14/2022 12:54:54 PM, tt

CALCULATIONS

Location	600 Lake Circle Troutman, NC 28166	
Project Number	22-0040	
Lot No:	10	
No. of Bedrooms	3	
Design Flow	360	$^{gal}/_{day}$
LTAR	0.2	$^{gal}/_{ft^2\,day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	100	ft.
Supply Line Volume	17.4	gal.
Required Feet of Line	300	ft.
Amount of Line from Layout	307	ft.
Gallons per Minute	29.52	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Pump Tank Capacity	1000	gal.
Panel Volume	3.6	gal.
# of Panels	72	
Dosing Volume	259.20	gal.

Note: Dosing Volume based on 100% of # of panels times 3.6 gal/panel

Tank Draw Down	12.3	*Generic Drew Down of 21 gal.per in.*
Pump Run Time	8.78	minutes
Elevation Head	18.1	ft.
Pressure Head	2	ft.
Friction Factor	1.78	ft./100 ft. *(From the interpolater.)*
Friction Head	1.78	ft.
Total Dynamic Head (+15%)	25.16	ft.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
	-2.25
40	3.03
43.07	3.48
45	3.77
48.14	4.28
50	4.58
57.11	5.89
60	6.42

INSPECTION AND MAINTENANCE AGREEMENT

STATE OF NORTH CAROLINA

COUNTY OF Iredell

This agreement is made and entered into this 3rd day of December, 2022 by and between TruNorth Homes c/o Garrison Davis (hereinafter referred to as the "Owner") and Russell Williams (hereinafter referred to as the "Contractor").

WITNESSETH

WHEREAS, the Owner owns or controls the property upon which a ground absorption sewage treatment system (hereinafter "system") is installed, such system being designated a Type 4A system under the Rules for Sanitary Sewage Collection, Treatment and Disposal found at 15A N.C. Administrative Code 18A.1900 et seq.; and

WHEREAS, 15A N.C. Administrative Code 18A.1961 requires a contract to be executed between the system owner and a management entity prior to the issuance of an Operation Permit for said system; and

WHEREAS, 15A N.C. Administrative Code 18A.1961 requires that a condition of the Operation Permit for said system be that a properly executed contract between the system owner and a management entity, shall be in effect for as long as the system is in use; and

WHEREAS, the Contractor is a management entity, of a type authorized by 15A N.C. Administrative Code 18A.1961 to manage a Type 4A system.

NOW THEREFORE, in consideration of the premises and of the mutual covenants and promises contained in this Agreement, it is hereby agreed by and between the Owner and the Contractor as stipulated below.

1. The Contractor's Obligations. The Contractor shall perform the following services on the Owner's system located at 600 Lake Circle Troutman NC, 28166.

a) The contractor shall inspect the system at least at the frequency, required in Table V(b) of 15A N.C. Admin. Code 18A.1961(b) for a Type 4A System.

b) The Contractor shall perform the following routine maintenance procedures in accordance with the conditions of the Operation Permit:

1) Flush and set pressure on all drain line laterals
2) Inspect system and grounds for any mal functions
3) Test Run Pump and control panel
4) Check solids depth in septic tank & Clean Effluent Filter

c) The Contractor shall report the results of its inspections to the local health department at the frequency specified in Table V (b) of 15A N.C. Administrative Code 18A.1961(b) for a Type 4A System.

d) If an inspection indicates the need for system repairs, the Contractor shall notify the local health

department within 48 hours of the inspection.

e) The Contractor shall notify the Owner of needed repairs, which are outside of the scope of routine maintenance described in subparagraph (b) above. The Contractors shall perform necessary repairs to the system at the request of the Owner and shall be entitled to payment therefor at the Contractor's normal charge for services and materials.

f) The Contractors shall employ or shall contract with a certified operator(s) if required by Table V (b) of 15A N.C. Admin. Code 18A.1961(b) for a Type 4A System.

g) The Contractor shall respond to a request for a nonscheduled service or maintenance call within 48 hours after receipt of such request.

2. The Owner's Obligations.

a) The Owner shall pay to the Contractor the sum of $ 375 per year for periodic inspections, routine maintenance procedures and periodic reports. The annual fee may be amended upon sixty (60) days advance notice to the Owner but may not be increased more than 5 % percent per year. The Owner shall pay to the Contractor his normal and customary fees for any work performed on the system as a result of nonscheduled service or maintenance calls. All fees are due and payable within thirty (30) days of billing. Payments due to the Contractor and unpaid by the Owner after thirty (30) days shall accrue interest from the due date until paid at a rate of 1 5 percent per month.

b) Within 15 days of receipt of notice of needed repairs pursuant to paragraph 1.e. above, the Owner shall request the Contractor to complete needed repairs or shall provide to the Contractor evidence that the needed repairs were satisfactorily completed by another entity.

c) The Owner shall provide the Contractor with such access to the system as is reasonably necessary for the Contractor to comply with the terms of this Agreement.

3. Term. This Agreement shall remain in effect until terminated.

a) Automatic Termination.
This agreement shall automatically terminate if the Operation Permit for the system is revoked and all appeals of the revocation are exhausted or the time for taking an appeal has passed.

b) Termination by Mutual Consent.
The Parties may mutually agree to terminate this Agreement by giving written notice of termination by mutual consent to the local health department thirty (30) days in advance of the date of termination.

c) Termination by the Owner.
The Owner may terminate this Agreement by giving notice to the Contractor and to the local health department thirty (30) days in advance of the date of termination.

d) Termination by the Contractor.

1) The Contractor may terminate this Agreement for cause by giving written notice of intent to terminate this Agreement to the Owner and to the local health department thirty (30) days in advance of the date of termination. Cause shall be defined as:

a) failure to remit payment for any bill for services performed under and in accordance with this Agreement if said bill is not paid within thirty (30) days of receipt by the Owner of the bill. If said bill is paid after notice of termination of this Agreement, the Agreement shall continue in effect; or

b) failure of the Owner to provide to the Contractor authorization to complete needed repairs or satisfactory evidence that needed repairs to the system were completed by another entity within 15 days of receipt of notice of needed repairs pursuant to paragraph 1.e. above. If said authorization to complete needed repairs or evidence of completion of said repairs is provided after notice of termination is given but prior to the date of termination of this Agreement, this Agreement shall continue in effect; or

c) failure of the Owner to allow the Contractor such access to the system as is reasonably necessary in order for the Contractor to comply with the terms of this Agreement.

2) The Contractor may not terminate this Agreement without cause, but may assign its rights and duties under this Agreement as provided in paragraph 4, below.

4. Assignment.

a) Assignment by the Owner.
The Owner shall notify the Contractor of the name and address of any purchaser of the property on which the system is located. The Owner shall also notify any purchaser of the property on which the system is located of the existence of this Agreement and shall assign all rights and duties under this Agreement to said purchaser.

b) Assignment by the Contractor.
The Contractor may assign its rights and duties under this Agreement to another management entity, which is qualified pursuant to 15A N.C. Admin. Code 18A.1961 to manage a Type 4A system upon thirty (30) days written notice to the Owner and to the local health department.

5. Use of Subcontractors. The Contractor may subcontract with such manufacturers, suppliers and contractors as it deems desirable to perform any of the Contractor's duties under this Agreement. The Contractor shall at all times remain responsible for the performance of and payment for all work performed by all subcontractors.

6. Representations. The Parties represent to each other that each has the power, authority and legal right to enter into and perform its obligations as set forth in this Agreement.

7. Regulatory Amendments. References in this Agreement to sections of the Administrative Code shall include such rules as they may be amended in the future.

8. No Implied Waiver. The waiver by either Party, of the default or a breach by the other Party of any provision of this Agreement shall not operate or be construed to operate as a waiver of any subsequent default or breach. The failure at any time of either Party to enforce any provision of this Agreement (a) shall not be construed to be a waiver of such provisions, or of any other provision; and (b) shall not in any way affect the validity of this Agreement, or any part of this Agreement, or the right of either Party thereafter to enforce each and every provision of this Agreement.

9. Notice. Every notice required under this Agreement shall be in writing and shall be deemed sufficiently given if delivered in person or sent by certified or registered mail, return receipt requested, postage prepaid to the Party to be notified and addressed as follows:

To the Owner: TruNorth Homes LLC c/o Garrison Davis
631-300 Brawley School Rd.
Mooresville NC 28117

To the Contractor: Wastewater Solutions - Russell Williams
4919 E. Maiden Rd.
Maiden NC 28650 980 429 1580

To the Local Health Department: Iredell County Env. Health
610 East Center Ave
Mooresville NC 28115

The date of any Notice shall be the date of personal delivery or the date shown on the return receipt as the date of delivery or attempted deliver, as the case may be. Changes in the respective addresses to which notice may be directed may be made from time to time by either Party by notice to the other party.

10. Place of Agreement. This Agreement and any questions concerning its validity, the system construction or performance shall be governed by the laws of the State of North Carolina. notwithstanding the place of execution, or the order in which the signatures of the Parties are affixed.

11. Entire Agreement and Amendment. This Agreement supersedes all prior negotiations, agreements and understandings between the Parties with respect to the subject matter hereof and constitutes the entire Agreement between the Parties with respect to the subject matter hereof. To be effective, any amendment or modification to this Agreement must be in writing and must be signed by the Parties.

12. Severability. In the event that any provision of this Agreement shall, for any reason, be determined to be invalid, illegal or unenforceable in any respect, the Parties shall negotiate in good faith and agree to such amendments, modifications or supplements of or to this Agreement or such other appropriate actions as shall, to the maximum practicable in light of such determination, implement and give effect to the intentions of the Parties as reflected in this Agreement, and the

INSPECTION AND MAINTENANCE AGREEMENT

other provisions of this Agreement shall, as so amended, modified, supplemented or otherwise affected by such actions, remain in full force and effect.

IN TESTIMONY WHEREOF, the Parties hereto have executed this Agreement in duplicate originals, one of which is retained by each of the Parties, the day and year first above written.

Tuttle Home LLC / [signature]
(Owner)

12-3-22

Wastewater Solutions / Russell Williams
(Contractor)

12-3-22

Wastewater Solutions & Design
Russell B Williams
"Wastewater Specialist"
4711 Rocking Horse Dr
Maiden, NC 28650
Ph. 980-429-1380
Fax. 828-428-3028 [illegible]
"Certified Septic Installer, Inspector & Operator"

Sent from my iPhone