ICHD - ENVIRONMENTAL HEALTH DIVISION

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

PERMIT # OSWP-2023-12708

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

PIN # 4774-25-1343

APPLICANT / OWNER: Larry Thompson | APPLICANT ADDRESS: PO Box 541, Midland, NC 28107

SITE ADDRESS: 512 NEW SALEM RD, STATESVILLE, NC 28625 | PHONE: 7738441567 | ALT. PHONE:

SITE DIRECTIONS: | SAP CONTROLLED: YES ☐ NO ☑

SUBDIVISION: New Salem Estates | SECTION: — | LOT #: 6 | LOT AREA: 0.574 | DESIGN FLOW: 480 | L.T.A.R.: 0.3

Septic Tank: 1000 (gal)	STB: 760	Date: 08/02/2022	☑ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 4	Water Supply: Municipal Water
Pump Tank: (gal)	PT:	Date:	System Description: HPPBPS		☐ Business	No. Persons: 8	
Pump Make:	Model:	Serial #:	Repair System Description: HPPBPS		☐ Other	No. Employees:	
# Nitrification Fields:	# Lines: 5	Linear Ft.: 280	Maintenance Agreement Required: ☐ YES ☑ NO		☑ Slab	☐ Crawl Space	
Trench Width: 36	Trench Bottom Depth (Low side): 36		Gravel Depth:	☑ GRAVITY ☐ PRESSURE	☐ Basement w/ Plumbing	☐ Basement w/o Plumbing	

Comments / Conditions: See attached plan by Larry Thompson. System installed 9-14-22, inspected by Bryant White. Paperwork changed to reflect installation too deep and tank location change.

INITIAL SITE SKETCH

This permit is issued pursuant to G.S. 130A-335(a2), (a3) & (a4) using the signed and sealed LSS/LG Evaluation attached here, from:

Thompson Env. Consulting Inc

LSS# 1287 Larry Thompson

AOWE# 100166

AS BUILT SKETCH

See previous permit for as built design

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: Larry Thompson Date:

IMPROVEMENT PERMIT by: D.Weberg Date: 1/10/23

AUTHORIZATION TO CONSTRUCT by: D.Weberg Date: 1/10/23

Installed By: Lago Vista

OPERATION PERMIT by: D.Weberg Date: 1/10/23

Existing System Inspected By: Date:

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

Residential Subsurface Wastewater Treatment and Disposal System As-Built Plans

for

Lot 6 – New Salem Estates
512 New Salem Road
Statesville, NC 28625

Tax Parcel Number: 4774251343.000
January 3, 2023

Prepared for:

Ruben Tapia Rivera
105 Cornelian Ct.
Mooresville, NC 28115
773-844-1567



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

The following "As-Built" package is submitted to Iredell County Environmental Health (ICEH) at the request of Mr. Ruben Tapia Rivera. Mr. Rivera has constructed a new 4-bedroom single family residence on Lot 6 – New Salem Estates, 512 New Salem Road, Statesville, North Carolina which required septic system changes due to relocated plumbing. The property is served by a municipal water supply.

Based upon a soil and site investigation performed by Thompson Environmental Consulting, Inc. (TEC), as well as a separate evaluation performed by TEC, it has been determined that there is a sufficient amount of "Suitable" Group IV soils were available for the installation of a **Horizontally Installed Gravity-Flow Prefabricated Permeable Block Panel System (PPBPS)** at a 0.3 GPD/sq. ft. long-term acceptance rate (LTAR) for the 4-bedroom residence. The proposed repair system would be a PPBPS with low-pressure distribution.

Location

From Statesville, take US-64 East to New Salem Road. Turn right onto New Salem Road and the property will be located on the right in 1.7 miles.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, April 1, 2017.

Design, Installation and Maintenance of the T & J Panel Wastewater Treatment System; Sixth Edition, published by T & J Panel.

Primary Investigator's Credentials

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

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 (minimum).
2. The septic tank will be fitted with an approved effluent filter and riser for easy access and periodic maintenance.

3. It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tank has had time to properly cure and is free of cracks or other structural deficiencies.

B. Pipes and Fittings

1. All discharge piping, connectors and supply lines should be made of SCH 40 PVC.
2. All joints must be properly "welded" utilizing the appropriate PVC cement for each application.

C. Distribution Method

1. Individual drainlines shall be evenly fed via a distribution box.
2. Distribution box shall be water tested for equal flow at the time of the final inspection.

D. Backfill

1. Backfill sand shall be clean, washed, medium sand that is naturally occurring and falls within the gradation of ASTM C-33 specification (used in the ready-mix industry and is readily available). Properly compact backfill to provide the intended subgrade support.

E. Drainfield Installation

1. The drainfield and the proposed septic tank location have been marked on-site utilizing metal stemmed flags. Once this area has been approved by the county, the property owner/builder should mark this area and isolate it as much as possible from construction traffic. Prior to the system installation, the septic contractor shall contact the designer for a preconstruction conference at which time the drainfield area will be re-verified.
2. Under no circumstances shall any construction take place within the drainfield area while the soil is in a wet condition. If the installer has doubts as to whether or not the drainfield area is dry enough to begin construction, the environmental health specialist for this area should be contacted for permission to proceed with the installation.
3. The specified system is a Type V(e) horizontally installed pre-fabricated permeable block panel system – specifically the horizontal prefabricated permeable block panel system manufactured by T&J Panel Wastewater Treatment System, Patent No. 4013559; telephone: 1-800-222-2577. The installer must follow the manufacturer's guidelines for installing the T&J Panel System and should request an installation manual from the manufacturer prior to beginning construction.
4. The initial drainfield consists of five (5) laterals constructed 3-feet wide by 56-feet in length.

5. It is essential that the lateral trenches be constructed on contour with the land, with each trench being excavated level from beginning to end. The use of a tripod mounted engineer's level is essential to assure that each trench is constructed as level as possible.
6. The maximum trench depth for this system shall be **36-inches (high-side)**. Each trench shall be placed on a minimum of 9-foot on centers.
7. Once trenches are dug, the side walls shall be raked, and a light dusting of lime applied.
8. Backfill the trench with 7-inches of sand and level to grade properly compacted to intended subgrade support. Once leveled, place 1 x 6-inch boards on top of the sand the entire length of each trench. Once the grade boards have been set, the panels may be set into the trench. The panels should be placed 6 inches apart.
9. Once the panels have been set, line the top portion of each chamber with the T&J supplied sand alternative product (SAP – geotextile fabric). GE Foam Sealer or tar seal rope should be placed in the bottom of the "U" outs to form seals around the pipe as shown in earlier drawings.
10. Tar seal rope, or approved foam, should be placed in the "U" outs of each end of the panel to form seals. Once the tar rope is in place, the 1¼ inch Schedule 40 PVC connectors can be added, and the seal completed by the addition of more tar rope on the top and sides of the pipe. Now that the connection and seals are complete, a block cap is placed on each end of the panel so that all openings are covered.
11. Once the lateral has been installed and the panels closed, the trench is ready to be backfilled to the top with the sand used in the trench bottom. At this point, the trenches should be left open for the final inspection by the local health department.

F. Final Landscaping

1. The drainfield shall be shaped to shed rainwater and be free from low spots.
2. Minimum cover requirement over the drainfield area is 6-inches.
3. The entire area of the drainfield 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.

G. Utility/Drive Conflicts

1. The builder and property owner must take special care in planning for utilities (water, power, gas, telephone, cable lines, etc.). All utilities shall be kept clear of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage and permit revocation.
2. Water lines must be kept at least ten (10) feet from any portion of the septic system.
3. Irrigation systems should not be placed in the drainfield area.

4. The builder must also take special care in planning for a drive into the property. The driveway must be installed along the property sideline to allow enough clearance for the proposed repair drainlines. The driveway must be constructed at-grade without cuts or excavations.
5. The entire drainfield area shall be delineated with orange barrier fencing throughout the construction process to protect it from unnecessary encroachment.

Maintenance

H. 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 that is equivalent to 25 percent of the volume of the tank. 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. Use of a garbage disposal is not recommended. Solids added through the garbage disposal tend to degrade at a very slow rate.
4. Grease, cooking oils, coffee grounds and non-degradable solids (disposable diapers, cigarettes, and solid paper wastes) should never be put into a septic tank.
5. Used motor oil or any oily liquids should not be disposed of in a septic tank.
6. Be aware of the amount of water that you are using in your home. Water saving fixtures and devices can be installed on sinks, toilets, and showers to reduce the volume of wastewater that you are sending to your drainfield.
7. Run dishwashers and washing machines only when you have a full load.
8. Repair leaky faucets and toilets. Small drips equal large volumes of water over time and can over burden your drainfield.
9. Do not use chemical additives in your system. Studies have indicated that they do not increase the biological activity that naturally occurs in the septic system and in some cases certain additives have been found to be detrimental to the life of a system.

Design Specifics

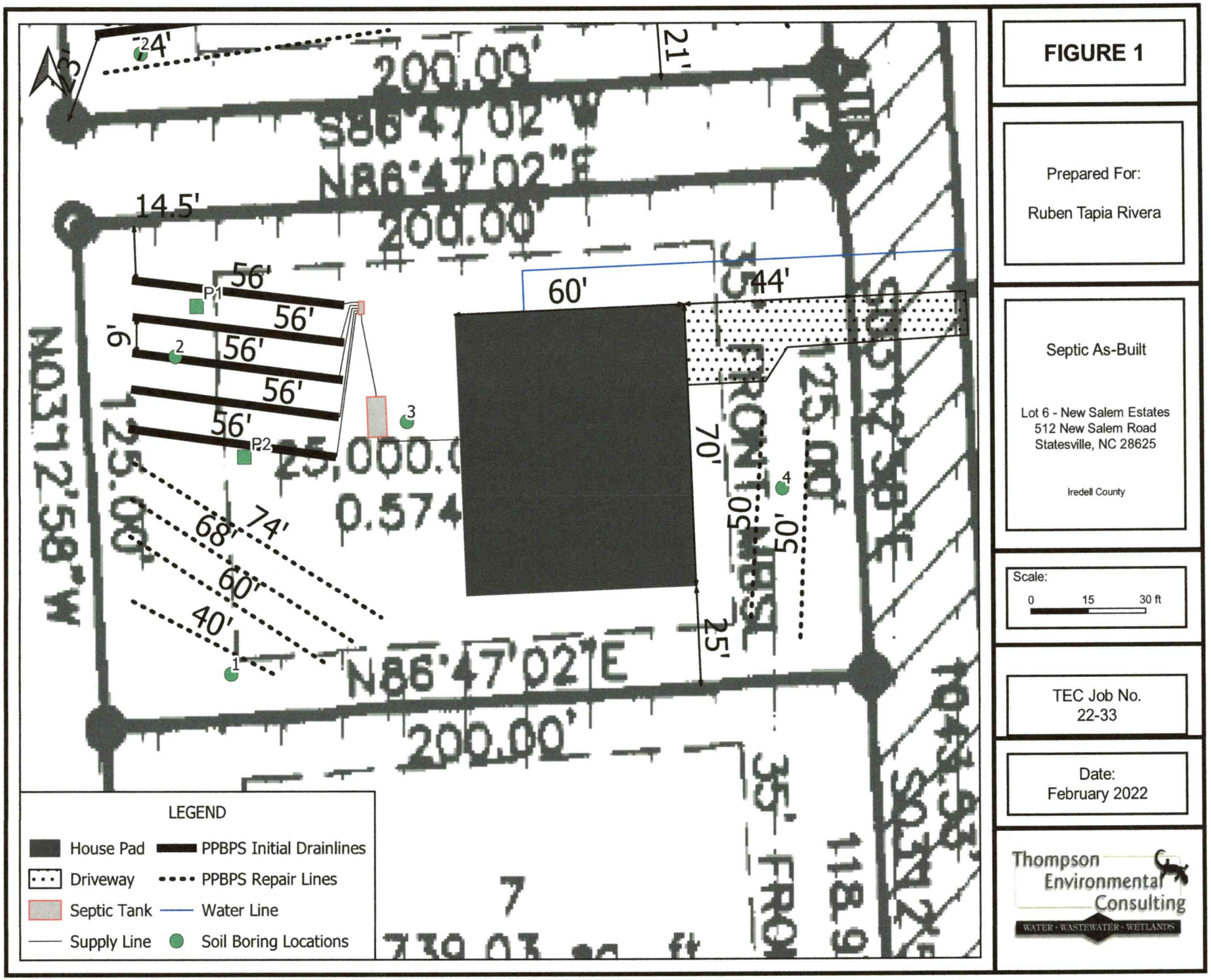
Daily Design Flow:	480 GPD
Septic Tank Size:	1,000 Gallons
Effluent Loading Rate:	Design = 0.3 GPD sq. ft. (50 % reduction - PPBPS)
Drainfield Type:	Horizontal PPBPS
Number and Size of Drainlines:	(5) 3' Wide x 56' Long

Maximum Trench Depth:	36 Inches (high-side)
Drainline Spacing:	9 Foot on Centers
Total Length of Drainline:	280 Feet
Total Number of Panels:	60

Repair Specifics

Effluent Loading Rate:	Design = 0.3 GPD sq. ft. (50 % reduction - PPBPS)
Drainfield Type:	PPBPS
Distribution Method:	Pressure Distribution
Required Linear Footage:	267 Feet
Available Linear Footage:	342 Feet
Maximum Trench Depth:	36 Inches (high-side)

*See septic layout for site locations and additional details.


FIGURE 1
Prepared For:
Ruben Tapia Rivera
Septic As-Built
Lot 6 - New Salem Estates
512 New Salem Road
Statesville, NC 28625
Iredell County
Scale:
0 15 30 ft
TEC Job No.
22-33
Date:
February 2022
Thompson Environmental Consulting
WATER · WASTEWATER · WETLANDS
LEGEND
House Pad
Driveway
Septic Tank
Supply Line
PPBPS Initial Drainlines
PPBPS Repair Lines
Water Line
Soil Boring Locations
200.00'
S86°47'02"W
N86°47'02"E
14.5'
56'
6'
P1
P2
60'
44'
70'
50'
25'
74'
68'
60'
40'
125.00'
N03°12'58"W
N86°47'02"E
200.00'
21'
24'

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

Sheet 1 of 1
PROPERTY ID #: 4774251343.000
COUNTY: Iredell

PB 47.102

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Governale
ADDRESS: 8817 Church Lake Rd, Statesville, NC 28678
PROPOSED FACILITY: Res PROPOSED DESIGN FLOW (.1949):
LOCATION OF SITE: 512 New Salem Rd, Statesville, NC 28678
WATER SUPPLY: ☐ Private ☒ Public ☐ Well ☐ Spring ☐ Other New Salem Estates
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut
DATE EVALUATED: 9.7.21
PROPERTY SIZE: 0.51 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 6%	0-9	GR/SBK/CL	FR SS P SO	–	50	–	–	PS 0.3
		9-50	SBK/C	FI SS P SO P					
2	LS 11%	0-8	SBK/CL	FR SS P SO	–	45	I SL	–	PS 0.3
		8-35	SBK/C	FI SS P SO					
		35-45	SBK/CL	FR SS P SO					
		45+	M/SL	FR SS P NO					
3	LS 8%	0-6	GR/SL	FR NS P NO	–	50	–	–	
		6-50	SBK/C	FI SS P SO					
4	LS 6%	0-6	GR/SBK/CL	FR SS P SO	–	49	–	–	P 0.3
		6-49	SBK/C	FI SS P SO					

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

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): Provisionally Suitable
EVALUATED BY: Larry Thompson, LSS
OTHER(S) PRESENT:

COMMENTS:

Updated February 2014

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

PROPERTY ID #: 4774251343.000

DATE OF EVALUATION:

COUNTY: Iredell

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
P1	LS 11%	0-8	GR/CL	FR/SS/SP/SEXP		44"	Group II SL - PS		PS 04
		8-36	SBK/C	FI/S/P/SEXP					
		36-44	SBK/LC	FR/SS/SP/SEXP					
		44-72	M/SL	FR/NS/NP/NEXP					
P2	LS 9%	0-10	GR/CL	FR/SS/SP/SEXP		48"	Group II SL - PS		PS 0.4
		10-48	SBK/C	FI/S/P/SEXP					
		48-72	M/SL	FR/NS/NP/NEXP					

COMMENTS:

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).



ICHD - ENVIRONMENTAL HEALTH DIVISION

~~Statesville~~ Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # AP 325890

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

PIN # 4774 --25 --1343

APPLICANT/OWNER: Ruben Tapia APPLICANT ADDRESS: 105 Comedian CT Mooresville NC 28115

SITE ADDRESS: 512 New Salem Rd Statesville NC PHONE: 773-844-1567 ALT. PHONE

SITE DIRECTIONS: SAP CONTROLLED: ☐ YES ☒ NO

SUBDIVISION: New Salem Estates SECTION: LOT # 6 LOT AREA: .574Ac DESIGN FLOW: 480 L.T.A.R.: .30

Septic Tank 1000 (gal) STB 760 Date 9-2-2022
Pump Tank (gal) PT Date
Pump Make Model Serial #
Nitrification Fields 1 # Lines 5 Linear Ft 267.5
Trench Width 36in. Trench Bottom Depth ~~(Soil Cover)~~ 29 in High Gravel Depth –

☒ New System ☐ Repair ☐ Expansion System Type: I II (III) IV V VI
System Description: Gravity - 50% PPBPS (Horizontal)
Repair System Description: PPBPS - 50% Reduction
Maintenance Agreement Required: ☐ YES ☒ NO
☒ GRAVITY ☐ PRESSURE

☒ Residence No. Bedrooms 4
☐ Business No. Persons 8
☐ Other No. Employees
☒ Slab ☐ Crawl Space
☐ Basement w/plumbing ☐ Basement w/o plumbing

Water Supply: ☐ Private ☒ Public ☐ Community

Comments / Conditions:

- VERTICALE PANELS INSTALLED AT A 36IN TRENCH DEPTH
9-14-2022 NEED NEW PAPER WORK

Needs New Submittal

Per Bryant installed too deep

This per
Section
using th
Evaluati

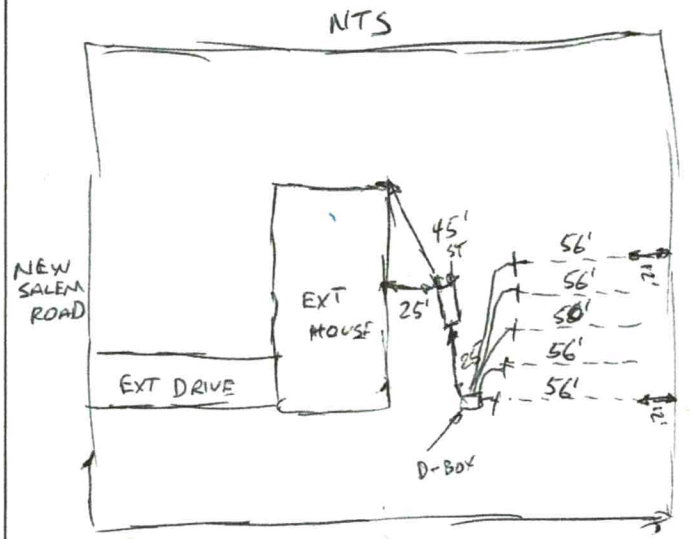
Thompson Environmental Consulting, Inc.

LSS # 1287 Dated Feb 19, 2022

Revised

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.



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☐ **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: 03-7-22 Installed by: LAGO VISTA

IMPROVEMENT PERMIT by: Date: 9-1-22 OPERATION PERMIT by: Date:

AUTHORIZATION TO CONSTRUCT by: Date: 5-7-22 Existing System Inspected by: Date:

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