ICHD - ENVIRONMENTAL HEALTH DIVISION

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

PERMIT # OSWP-2023-35565

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

PIN # 4646-28-7866 ✓

PPLICANT / OWNER: Suzanne Algeo APPLICANT ADDRESS: 294 Corona Circle Mooresville NC 28117

TE ADDRESS: 294 CORONA CIR, MOORESVILLE, NC 28117 ✓ PHONE: ALT. PHONE:

TE DIRECTIONS: SAP CONTROLLED: YES ☐ NO ☑

UBDIVISION: The Estates at Sundown Cove ✓ SECTION: 2 ✓ LOT #: 60 ✓ LOT AREA: 0.6 DESIGN FLOW: 480 L.T.A.R.: 0.25

eptic Tank: 1000 (gal)	STB: 760	Date: 11-8-23	☐ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 4	Water Supply: Other Public Water
ump Tank: 1000 (gal)	PT: 363	Date: 12-9-23	System Description: 25% reduction Pressure manifold		☐ Business	No. Persons: 8	
ump Make:	Model:	Serial #:	Repair System Description: 50% reduction LP-PPBPS		☐ Other	No. Employees:	
Nitrification Fields: 1	# Lines: 3	Linear Ft.: 486	Maintenance Agreement Required: ☐ YES ☑ NO		☐ Slab	☑ Crawl Space	
ench Width: 36	Trench Bottom Depth (Low side): 30		Gravel Depth:	☐ GRAVITY ☑ PRESSURE	☐ Basement w/ Plumbing	☐ Basement w/o Plumbing	

omments / Conditions: This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) ttached here. This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here.

INITIAL SITE SKETCH

AS BUILT SKETCH

Tanks } SH
New 3 Lines } 1/19/24
↳ Serial distribution flipped to other side, approved by L.S.S.

Inspected manifold / Supply lines
HS 01/23/24

Checked
Floats
Electrical } 1/23/24 MW
Pressure Head
Alarm

→ Risers ✓ Playground moved-✓SH

* Need 6" riser + playground to be removed before signing OP

rmit 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.

wner / Applicant Signature: Date: Installed By: B.O.S.S.

IPROVEMENT PERMIT by: Benjamin A. Bolton Date: 9/12/2023 OPERATION PERMIT by: Sydney Mellard Date: 2/14/24

UTHORIZATION TO CONSTRUCT by: Benjamin A. Bolton Date: 9/12/2023 Existing System Inspected By: Date:

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

ICHD - ENVIRONMENTAL HEALTH DIVISION

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

PERMIT # OSWP-2023-35565

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

PIN # 4646-28-7866

PPLICANT / OWNER: Suzanne Algeo APPLICANT ADDRESS: 294 Corona Circle Mooresville NC 28117

TE ADDRESS: 294 CORONA CIR, MOORESVILLE, NC 28117 PHONE: ALT. PHONE:

TE DIRECTIONS: SAP CONTROLLED: YES ☐ NO ☑

UBDIVISION: The Estates at Sundown Cove SECTION: 2 LOT #: 60 LOT AREA: 0.6 DESIGN FLOW: 480 L.T.A.R.: 0.25

eptic Tank: 1000 (gal)	STB:	Date:	☐ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 4	Water Supply: Other Public Water
ump Tank: 1000 (gal)	PT:	Date:	System Description: 25% reduction Pressure manifold		☐ Business	No. Persons: 8	
ump Make:	Model:	Serial #:	Repair System Description: 50% reduction LP-PPBPS		☐ Other	No. Employees:	
Nitrification Fields: 1	# Lines: 3	Linear Ft.: 486	Maintenance Agreement Required: ☐ YES ☑ NO		☐ Slab	☑ Crawl Space	
rench Width: 36	Trench Bottom Depth (Low side): 30		Gravel Depth:	☐ GRAVITY ☑ PRESSURE	☐ Basement w/ Plumbing	☐ Basement w/o Plumbing	

omments / Conditions: This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) ttached here. This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here.

INITIAL SITE SKETCH

AS BUILT SKETCH

rmit 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

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wner / Applicant Signature: Date: Installed By:

IPROVEMENT PERMIT by: Benjamin A. Bolton Date: 9/12/2023 OPERATION PERMIT by: Date:

UTHORIZATION TO CONSTRUCT by: Benjamin A. Bolton Date: 9/12/2023 Existing System Inspected By: Date:

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

NCDHHS

Permit #: OSWP-2023-35565

This Section for Local Health Department Use Only

Initial submittal received: 9/5/2023 (*Date*) by BB (*Initials*)

G.S. 130A-335(a3) states the following:

When an applicant for an Improvement Permit submits to a local health department an Improvement Permit application, the permit fee charged by the local health department, the common form developed by the Department, and a soil evaluation pursuant to subsection (a2) of this section, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Improvement Permit includes all of the required components. If the local health department determines that the Improvement Permit is incomplete, the local health department shall notify the applicant of the components needed to complete the Improvement Permit. The applicant may submit additional information to the local health department to cure the deficiencies in the Improvement Permit. The local health department shall make a final determination as to whether the Improvement Permit is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The Department shall develop a common form for use as the Improvement Permit.

The review for completeness of this Improvement Permit was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing:

_____

_____

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

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: Benjamin A Botkins Date: 9/12/2023

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit 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 permit is subject to revocation if the site plan, plat, or the intended use changes. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to evaluations, submittals, or actions from a licensed soil scientist or licensed geologist pursuant to GS 130A-335(a2).

Improvement Permit Expiration Date: 9/12/2028

See attached site sketch

NCDHHS

Permit #: OSWP-2023-35565

This Section for Local Health Department Use Only

Initial submittal received: 9/5/2023 (*Date*) by BB (*Initials*)

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

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

The review for completeness of this Construction Authorization was conducted in accordance with G.S. 130A-335(a5). This Construction Authorization is determined to be:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing: _____

_____

Copies of this were sent to the AOWE/PE and the Applicant on _____ (*Date*)

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: Benjamin A Botkins Date of Issuance: 9/12/2023

This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here. This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to plans, evaluations, preconstruction conference findings, submittals, or actions from a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator in GS 130A-335(a2), (a5), and (a7). The Department, the Department's authorized agents, and the local health departments shall be responsible and bear liability for their actions and evaluations and other obligations under State law or rule, including the issuance of the operations permit pursuant to GS 130A-337.

Construction Authorization Expiration Date: 9/12/2028

See attached site sketch

Permit #: _____

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

County: Iredell

PIN/Lot Identifier: 4646287866

Issued To: Suzanne Algeo

Property Location: 294 Corona Circle, Mooresville NC 28117

AOWE/PE Plans/Evaluations Provided: Yes ☒ No ☐ If yes, name and license number of AOWE/PE: Samuel Ashley Rollins # 10027E

Facility Type: 4 Br Residence

☐ New ☐ Expansion ☐ Repair ☒ System Relocation ☐ Change of Use FOR POOL

Basement? ☐ Yes ☒ No Basement Fixtures? ☐ Yes ☒ No

Type of Wastewater System* 25% Reduction - Pressure Manifold (Initial) 50% Reduction - PPBPS - Low Pressure (Repair)

**Please include system classification for proposed wastewater system types in accordance with 15A NCAC 18A .1961 Table V(a)*

Design Daily Flow: 480 GPD Wastewater Strength: ☒ domestic ☐ high strength ☐ industrial process

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

Installation Requirements/Conditions

Septic Tank Size: 1000 gallons Total Trench/Bed Length: 486 feet Trench/Bed Spacing: 9 feet on center

Trench/Bed Width: 36 inches LTAR: 0.25 gpd/ft²

Soil Cover: 6" min inches Slope Corrected Maximum Trench/Bed Depth‡: 30 inches ‡ ***Measured on the downhill side of the trench***

Aggregate Depth: _____inches above pipe _____inches below pipe _____inches total

Pump Tank Size (if applicable): 1000 gallons Requires more than 1 pump? ☐ Yes ☐ No

Pump Requirements: 10.46 ft. TDH vs. 42.66 GPM Grease Trap Size (if applicable): _____ gallons

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

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

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

Multi-party Agreement Required [.1937(h)]: ☐ Yes ☒ No

Easement, Right-of-Way, or Encroachment Agreement Required [.1938(j)]: ☐ Yes ☒ No

Declaration of Restrictive Covenants: ☐ Yes ☒ No

Pre-Construction Conference Required: Yes ☐ No ☒

Conditions: See Design

The construction and installation requirements of Rules .1950, .1952, .1954, .1955, .1956, .1957, .1958, and .1959 are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached system layout.

AOWE/PE Print Name: Samuel Ashley Rollins Expiration Date: TBD By Local HD

AOWE/PE Signature: Samuel Ashley Rollins Date: 8/30/23

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

NC ONSITE WASTEWATER EVALUATOR Certification Number 10027E

See attached site sketch

Permit #: _____

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • Deputy Secretary for Health
SUSAN KANSAGRA • Assistant Secretary for Public Health
Division of Public Health

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

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

County: Iredell

PIN/Lot Identifier: 4646287866

Issued To: Suzanne Algeo

Property Location: 244 Corona Circle, Mooresville NC 28117

Subdivision (if applicable) Estate at Sundown Cove Lot #: 60 Block: _____ Section: _____

LSS Report Provided: Yes ☒ No ☐

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

New ☐ Expansion ☐ System Relocation ☒ Change of Use ☐

Proposed Structure: 4 Br Residence - Adding Pool, Trimming Existing Lines, Adding new lines

Number of bedrooms: 4 Number of Occupants: 8 Other: _____

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

Proposed Design Daily Flow: 480 GPD Proposed LTAR (Initial): 0.25 Proposed LTAR (Repair): 0.25

Proposed Wastewater System Type*: 25% Reduction - Pressure Manifold (Initial) Pump Required: ☑ Yes ☐ No ☐ May be required

Proposed Wastewater System Type*: PPBPS - Low Pressure (Repair) Pump Required: ☑ Yes ☐ No ☐ May be required

**Please include system classification for proposed wastewater system types in accordance with 15A NCAC 18A .1961 Table V(a)*

Saprolite System (initial): ☐ Yes ☒ No Saprolite System (repair): ☐ Yes ☒ No

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

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

Usable Soil Depth (Initial): 50" Usable Soil Depth (Repair): 50"

Max. Trench Depth (Initial)‡: 30" Max. Trench Depth (Repair)‡: 30" ***‡ Measured on the downhill side of the trench***

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

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

Drainfield location meets requirements of Rule .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 Rollens

Licensed Soil Scientist Signature: _____ Date: 8/30/23

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

See attached site sketch

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

Project#: 23-0079
August 30th, 2023

Suzanne Algeo
Attn: *Anita Sabates*
Email: anita.sabates@allentate.com

RE: Soil& Site Evaluation for a 4 Bedroom Residence at 294 Corona Circle, 0.6 ac Parcel, PIN# 4646287866, Mooresville, NC 28117.

Mrs. Algeo:

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 submittal to Iredell County Health Department.

Site Conditions

At the time of our evaluation land cover on the property mostly open with some scattered trees. There is an existing house, tank and septic field. Topography within the evaluated area was gentle slope near the house site and proposed drainfield area. Property lines and corners were marked at the time of the evaluation by Don Allen and associates. The surveyor provided an Autocad File of a survey as a basemap. The proposed septic layout was located via GPS & tape measures and used to produce the attached *Site Plan*. The existing system was located via tile probe and will be modified to accommodate a pool.

Methodology

We evaluated soil areas through the use of soil borings. Soil morphological conditions including color, texture, structure, etc. were reviewed in the field with four soil boring locations on the property flagged and located via tape measure. All of the soil borings 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. An on-ground layout of system and repair was performed using a laser level. Pin flaglocations of the layout were also located by GPS and tape measures. Detailed system & repair information is summarized in the following paragraph for this Lot.

294 Corona Circle -Lot 60 *(See Attached Design)*
The septic layout for this lot (9' centers) yielded a total of 950 linear feet of line. The primary system is proposed as 486 linear feet of Accepted (25% Reduction) drainfield with pressure manifold distribution. **We are using 400 linear ft of the existing system. 86 linear feet of drainfield will be added along with the distribution network, Septic Tank and Pump Tank. Trench depth is specified at 30 inches (Low Side) for the added 25% Reduction lines.** The repair system is proposed as 320 linear feet of PPBPS (50% Reduction) drainfield with low pressure distribution. Trench depth is specified at 30 inches (Low Side). There is 354 linear feet of repair available.

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 Suzanne Algeo
Signature Suzanne Algeo 8-31-23

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. *ThisLSS 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 294 Corona Circle, Mooresville, NC 28117. 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
STATE OF NORTH CAROLINA
1231

S. Ashley Rollans, LSS
Attachment: *Septic Design, Required Statement for Local Health Department/NCDHHS*

I understand that the documentation and fees, as required in G.S. 130A-335(a2), (a3), (a5), and (a6), attached to this application are to be used to issue an Improvement Permit and/or Construction Authorization pursuant to G.S. 130A-335(a2),(a3), and (a5). I understand that authorized county and state officials are granted right of entry to the property indicated on this application to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that if the information in the application for an Improvements Permit and/or Construction Authorization is falsified, changed, or the site is altered, then the Improvement Permit and Construction Authorization shall become invalid.

* Applicant Signature: Suzanne Algeo Date: 8-31-23

Owner's Signature: Suzanne Algeo Date: 8-31-23

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

Attached is a proposed design for a modification of an Existing Accepted (25% reduction) w/Pressure Manifold distribution for a 4 bedroom single family residence at 294 Corona Circle., Mooresville 28117, Iredell County, NC. PIN (4646287866).

Contents:

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Information for the Installer	1
Design Information	
Design Specifications	2-3
Layout Specifications	4
System Tapsheet	5
Pressure Manifold Diagram	6
Site Plan/System Plan	7
Calculations	8
Profile Descriptions	9
Application	ONLINE
IP Form	10
CA Form	11
Operations Permit	12

LICENSED SOIL SCIENTIST
SAMUEL A. ROLLINS
1231
STATE OF NORTH CAROLINA

August 30, 2023
Project No. 23-0079
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 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 left 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.
- 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 beginning trenches.
- 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 Accepted 25% reduction installation w/Pressure Manifold.
- Repair is specified as a PPBPS installation with Low Pressure Distribution.
- Rake trench walls, lime sidewalls, install trenches 36" wide and have no more than 1/4" fall in 10 feet.
- **Existing septic tank must be pumped and crushed/removed.**

PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	Suzanne Algeo
Address:	294 Corona Circle Mooresville, NC 28117
Phone:	615-587-7745
County:	Iredell
Location:	294 Corona Circle Mooresville, NC 28117
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	480 gpd
System Flow:	42.66

Design Specifications

Drainfield Size:	486
Loading Rate:	0.25
Depth of Gravel in Trench:	NA (25% reduction)
Gravel Size:	NA (25% reduction)
Trench Depth (low side):	30 in. Repair Trench Depth 30 in.
Trench Width:	36 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	43
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	7.48
Dosing Volume:	222.15
Supply Manifold:	4 in. SCH 80 PVC
Supply Manifold Length:	4 ft. (minimum)
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:	1.50
Elevation Head:	5.60
Total Dynamic Head:	10.46
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 at Pressure Manifold
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Additional Comments:	Soil suitability was performed by Soil & Forestry Services of the Carolinas, PA.

294 Corona Circle
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.25
TOTAL AREA TRENCH BOTTOM:	1458
TOTAL LATERAL LENGTH:	486
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	480
SUPPLY LINE LENGTH:	43
TOTAL DYNAMIC HEAD:	10.46
MANIFOLD SIZE:	4 in.SCH 80 PVC
DOSING VOLUME:	222.15
PUMP TANK DRAW DOWN*:	10.6
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.*

Layout Specifications - 294 Corona Circle

Project #: 23-0079

LAYOUT FOR 4 BEDROOM HOME

August 30, 2023

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM	(left rear hc)						
HOUSE	(left rear)						
PUMP TANK					824.10		
INSTR. 1							
1	YELLOW				825.20	15	15
2	ORANGE				825.10	28	28
3	RED				825.00	44	44
4	PINK				824.80	62	62
5	***RED***		***connect***		***824.60***	***36***	***34***
6	***ORANGE***		***connect***		***824.40***	***35***	***30***
7	***YELLOW***		***connect***		***824.20***	***25***	***22***
8	***Existing Blue***		***ABANDON 20'***		***824.00***	***100***	***80***
9	***Existing Yellow***		***ABANDON 20'***		***823.80***	***100***	***80***
10	***Existing Orange***		***ABANDON 20'***		***823.40***	***100***	***80***
11	***Existing Red***		***ABANDON 20'***		***823.00***	***100***	***80***
12	***Existing Blue***		***ABANDON 20'***		***822.80***	***100***	***80***
13	PINK				822.20	44	44
14	YELLOW				821.70	17	17
15	RED				823.60	23	23
16	BLUE				823.20	28	28
17	YELLOW				822.90	28	28
18	ORANGE				822.70	36	36
19	RED				822.50	29	29
					Total	950	840

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION	LOW SIDE TRENCH DEPTH
**** System***	***486***	***0.250***	***ACCEPT.***	***0.250***	***25% RED***	***PRESSURE MANIFOLD***	30"
Repair	354	0.250	MOD. CONV.	0.250	PPBPS	LOW PRESSURE	30"

Notes: **All measures in feet

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

**Nitrification lines were located by GPS, Tape Measure & Tile probe.

PRESSURE MANIFOLD TAPSHEET - 294 Corona Circle

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	Trench Area	Line LTAR
5	RED	824.60	34	SCH 40 1/2	7.11	102	0.14
6	ORANGE	824.40	30			90	0.00
7	YELLOW	824.20	22			66	0.00
8	Existing Blue	824.00	80	SCH 40 1/2	7.11	240	0.15
9	Existing Yellow	823.80	80	SCH 40 1/2	7.11	240	0.15
10	Existing Orange	823.40	80	SCH 40 1/2	7.11	240	0.15
11	Existing Red	823.00	80	SCH 40 1/2	7.11	240	0.15
12	Existing Blue	822.80	80	SCH 40 1/2	7.11	240	0.15

total	feet =	486	gal/min =	42.66
		Des. Flow	480	
		Pump Run=	5.21	
		soil LTAR	0.25	
		LTAR +5%	0.2625	
		LTAR with ACCEPTED	0.333333333	
		LTAR with ACCEPTED + 5%	0.35	

NOTES

1) THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENTS AND/OR

CORONA CIRCLE
(50' PUBLIC R/W)

R/W

S02°01'02"W

225.00'

25' SIDE STREET

SIGHT TRIANGLE

10'X70'

CONC DRIVE

FLP PAD

2 STORY
BRICK/VINYL
COMP. ROOF

CONC PORCH

EXISTING DECK WILL HAVE TO BE MODIFIED/REMOVED TO ACCOMMODATE POOL.

EXISTING SEPTIC TANK MUST BE PROPERLY ABANDONED.

20.5

249.94'

15' SIDE

ST

ST

PT

TRIANGLE BOARD DECK

MAX POOL AREA

33.5'

23'

20'

15'

10'

10.6'

8'

ABANDON 20'

ABANDON 20'

ABANDON 20'

ABANDON 20'

ABANDON 20'

14 Y 17'

13 P 44'

12 EXISTING B 100' (80')

11 EXISTING R 100' (80')

10 EXISTING O 100' (80')

9 EXISTING Y 100' (80')

8 EXISTING B 100' (80')

7 Y 25'

6 O 33'

5 R 36'

4 P 62'

3 R 44'

2 O 28'

1 Y 15'

5' REAR

LOT 60
(0.60 AC.)

N02°01'02"E
(BASE BEARING)

N88°00'58"W

105.18'

EIP

EIP

R/W

LOT 78
JOSEPHINE CAMILO
1719/2314

PB.42 PG.15

SCALE
1" = 30'

BASE
BENT IRON

S87°57'56"E

180.07' TOTAL

(TIE ON
S53°E

80.00'

approx. water line

16 B 28'

17 Y 25'

38.9'

15 R 23'

18 O 36'

CONC WALK

35' FRONT

19 R 29'

10' RSDE

C1

CP

CP

50.1'

BASE
BENT IRON
approx. water line
16 B 28'
15 R 23'
17 Y 28'
38.9'
18 O 36'
CONC WALK
19 R 29'
10'X70' SIGHT TRIANGLE
35' FRONT
CONC
PORCH
CONC
DRIVE
TILE
PAD
2 STORY
BRICK/VINYL
COMP. ROOF
EXISTING DECK WILL HAVE
TO BE MODIFIED/REMOVED
TO ACCOMMODATE POOL.
EXISTING SEPTIC TANK
MUST BE PROPERLY
ABANDONED.
ST
DECK
15' SIDE
15'
ST
PT
33.5'
11.9'
MAX
POOL
AREA
20'
10.6'
23'
ABANDON
ABANDON
ABANDON
ABANDON 20'
25' SIDE STREET
14 Y 17'
13 P 44'
7 Y 25'
6 O 33'
5 R 36'
4 P 62'
3 R 44'
2 O 28'
1 Y 15'
8 EXISTING B 100' (80')
9 EXISTING Y 100' (80')
10 EXISTING O 100' (80')
11 EXISTING R 100' (80')
12 EXISTING B 100' (80')
25' REAR
EIP
EIP
R/W
R/W
CORONA CIRCLE
(50' PUBLIC R/W)
PB 42 PG 15

SCALE
1" = 30'

CALCULATIONS

Location 294 Corona Circle
Mooresville, NC 28117
Project Number 23-0079

Lot No: 60

No. of Bedrooms 4

Design Flow 480 $^{gal}/_{day}$

LTAR 0.250 $^{gpd/ft^2}$

25% RED.? (YES OR NO) YES

Supply Line Length 43 ft.

Supply Line Volume 7.482 gal.

Required Feet of Line 480 ft.
Amount of Line from Layout 486 ft.

Gallons per Minute 42.66 $^{gal}/_{min}$

Required Septic Tank Capacity 1000 gal.
Minimum Standard Tank Size 1000

Lateral Line Volume 317.358 gal.

Dosing Volume 222.15 gal.

Note: Dosing Volume based on 70% of lateral line volume

Tank Draw Down 10.6 *Generic Draw Down of 21 gal.per in.*

Pump Run Time 5.21 minutes

Elevation Head 5.6 ft.
Pressure Head 2 ft.
Friction Factor 3.48 ft./100 ft. *(From the interpolater.)*
Friction Head 1.50 ft.

Total Dynamic Head (+15%) 10.46 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

Sheet 1 of 1
PROPERTY ID #: 4646287866
COUNTY: Iredell

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

OWNER: Timothy Arnold
ADDRESS: 294 Corona Cir Mooresville NC 28117
PROPOSED FACILITY: EXISTING SINGLE FAMILY RESIDENCE 480 spd
LOCATION OF SITE: 294 Corona Cir Mooresville NC 28117

APPLICATION DATE:
DATE EVALUATED: 7/5/2023
PROPERTY SIZE: 0.6
PROPERTY RECORDED: YES

WATER SUPPLY: ☐ Private ☐ Well ☐ Spring ☑ Other Community Water

EVALUATION METHOD: ☑ Auger Boring ☐ Pit ☐ Cut

TYPE OF WASTEWATER: ☑ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPR CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	L/5%	0-8	BSLG	FRSSSP	FEW SAP FEW/COM SAP	50"	—	—	PS 0.3
		8-29	BRCWMSBK	FRSSSP					
		29-50	BRSCLWFSBK	FRSSSP					
2	L/5%	0-8	BSLG	FRSSSP	FEW SAP	50"			PS 0.3
		8-50	BRCWMABK/SBK	FRSSSP					
3	L/5%	0-7	BSLG	FRSSSP	FMN	50"			PS 0.25-0.275
		7-16	BCLWFSBK	FRSSS					
		16-32	BCWMSBK	FRSSSP					
		32-50	BRCWFSBK	FRSSSP					
4	L/4%	0-17	BCLWFSBK	FRSSSP		50"			PS 0.3
		17-50	RCWMSBK	FRSSSP					
5									
6									
7								N/A	
8								N/A	
9								N/A	
10								N/A	

LICENSED SOIL SCIENTIST
SAMUEL A. ROLLANS
STATE OF NORTH CAROLINA
1231

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Types(s)	35% Red- PM	PPBPS - Low Pressure
Site LTAR	0.25	0.25

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Ashley Rollans
OTHER(S) PRESENT: Chad Wagner & Mason Freeman

COMMENTS: