MECKLENBURG COUNTY
HEALTH DEPARTMENT

5743B
#12523

APPLICATION FOR A RESIDENTIAL SITE IMPROVEMENT PERMIT/ CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER SYSTEM, NEW WELL INSTALLATION, OR REPAIR OF EXISTING WELL

1. **SEPTIC / TYPE APPLICATION:** (•) N/A ( ) NEW SYSTEM ( ) ALTERATION ( ) REPAIR (•) MODIFIED PLOT PLAN

2. **WELL / TYPE APPLICATION:** ( ) N/A (•) NEW WELL ( ) MAJOR REPAIR ( ) ABANDONMENT

3. **JOB LOCATION INFORMATION:**

TAX PARCEL NUMBER: 02305204

STREET ADDRESS: ~~9822~~ Midas Springs Rd.

CITY: Huntersville

STATE: NC ZIP: 28078

SUBDIVISION NAME: N/A

LOT #: 023-052-04 LOT SIZE (acres): 1.94

TOWNSHIP:

(•) MECKLENBURG ( ) CORNELIUS ( ) HUNTERSVILLE
( ) DAVIDSON ( ) CHARLOTTE ( ) PINEVILLE
( ) MATTHEWS ( ) MINT HILL

4. **BUILDING INFORMATION:**

BUILDING TYPE:

( ) SINGLE MOBILE HOME ( ) MODULAR HOME
( ) DOUBLE WIDE ( ) MULTIPLE FAMILY
(•) HOUSE ( ) OTHER _____

HEATED SQUARE FOOTAGE: 3,154

NUMBER OF BEDROOMS: 4

NUMBER OF OCCUPANTS: 2

FOUNDATION TYPE:

(•) CONCRETE SLAB ( ) BASEMENT WITH PLUMBING
( ) CRAWL SPACE ( ) BASEMENT WITH NO PLUMBING

5. **IF PLANNING TO EXPAND OR ALTER THE EXISTING SEPTIC SYSTEM PLEASE COMPLETE THE FOLLOWING SECTION:** ☑ N/A

NUMBER OF BEDROOMS TO BE ADDED: _____ NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: _____

6. **WATER SUPPLY:** ( ) MUNICIPAL (•) PRIVATE WELL ( ) PUBLIC WELL ( ) SHARED WELL ( ) OTHER _____

7. **PROPOSED USE OF WELL:** ( ) N/A ( ) IRRIGATION (•) POTABLE (DRINKING WATER) ( ) OTHER _____

8. **PLEASE INDICATE AND RANK DESIRED SEPTIC SYSTEM TYPE(S) IN ORDER OF PREFERENCE** *(1-MOST DESIRED 5-LEAST DESIRED):*

☑ N/A ☐ ANY TYPE ☐ CONVENTIONAL ☐ ACCEPTED ☐ INNOVATIVE ☐ ALTERNATIVE ☐ OTHER _____

8A. **RANK:** _____ _____ _____ _____ _____

9. **DO ANY OF THE FOLLOWING APPLY TO THE PROPERTY IN QUESTION? IF "YES" PLEASE ATTACH SUPPORTING DOCUMENTATION.**

BURIED CABLES, LANDFILLS, STUMPHOLES	( ) YES (•) NO	GRADING/SOIL REMOVAL PERFORMED	( ) YES (•) NO
EXISTING WASTEWATER (SEPTIC) SYSTEMS	( ) YES (•) NO	JURISDICTIONAL WETLANDS	( ) YES (•) NO
WELLS, SPRINGS, OR WATER LINES	( ) YES (•) NO	APPROVAL REQUIRED BY ANY OTHER PUBLIC AGENCY	( ) YES (•) NO
EASEMENTS OR RIGHT-OF-WAYS	( ) YES (•) NO	WASTEWATER OTHER THAN DOMESTIC SEWAGE	( ) YES (•) NO
CHEMICAL/PETROLEUM STORAGE TANKS	( ) YES ( ) NO	KNOWN UNDERGROUND CONTAMINATION	( ) YES (•) NO
WASTE STORAGE	( ) YES (•) NO	GROUNDWATER USE RESTRICTIONS/VARIANCES	( ) YES (•) NO

10. **WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED?** _____ ☑ UNKNOWN

11. **WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY?** 12/19/20 ☐ N/A

12. **PROPERTY OWNER:**

NAME: Aaron Leach
ADDRESS: 14030 Bernardy Ln.
CITY: Charlotte
STATE: NC ZIP: 28269
WORK PHONE: (704) 975-1533
MOBILE PHONE: (910) 580-8803
FAX: _____
E-MAIL: leachas@corning.com

13. **OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:**

NAME: _____
ADDRESS: _____
CITY: _____
STATE: _____ ZIP: _____
WORK PHONE: _____
MOBILE PHONE: _____
FAX: _____
E-MAIL: _____

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 980-314-1680, FAX: 704-336-6894
Email: Wellreg@MecklenburgCountyNC.gov

Revised on: 4/20/17

14. SEPTIC SYSTEM PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Improvement Permit and Authorization to Construct shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for either sixty (60) months or is non-expiring depending upon the documentation submitted: complete site plan = 60 months, complete plat = non-expiring.

_____ (Initial here for septic system applications)

15. WELL PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Well Permit shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for a period of twelve (12) months from the date of issuance. ASL (Initial here for well applications)

16. APPLICATION SIGNATURE SECTION:

ONLY COMPLETE APPLICATIONS WILL BE PROCESSED. A proper signature is required in order to process your application. Please review the application carefully and sign in the space provided below. A PROPOSED PLOT PLAN is required to be submitted with each application.

Aaron S. Leach
Property Owner's or Owner's Legal Representative Signature

8/3/21
Date

OFFICE USE ONLY

○ SURVEY PLAT TO SCALE SUBMITTED ○ SCALED SITE PLAN SUBMITTED ○ UN-SCALED SITE PLAN SUBMITTED

SEPTIC APPLICATION FEE RECEIVED: $ _____ DATE FEE RECEIVED: _____

WELL APPLICATION FEE RECEIVED: $ _____ DATE FEE RECEIVED: _____

APPLICATION PROCESSED BY: _____

GWS FILE NUMBER ASSIGNED: _____

APPLICATION ID NUMBER ASSIGNED: _____

COMMENTS:

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 980-314-1680, FAX: 704-336-6894
Email: Wellreg@MecklenburgCountyNC.gov

File #: _____

PROPOSED PLOT PLAN

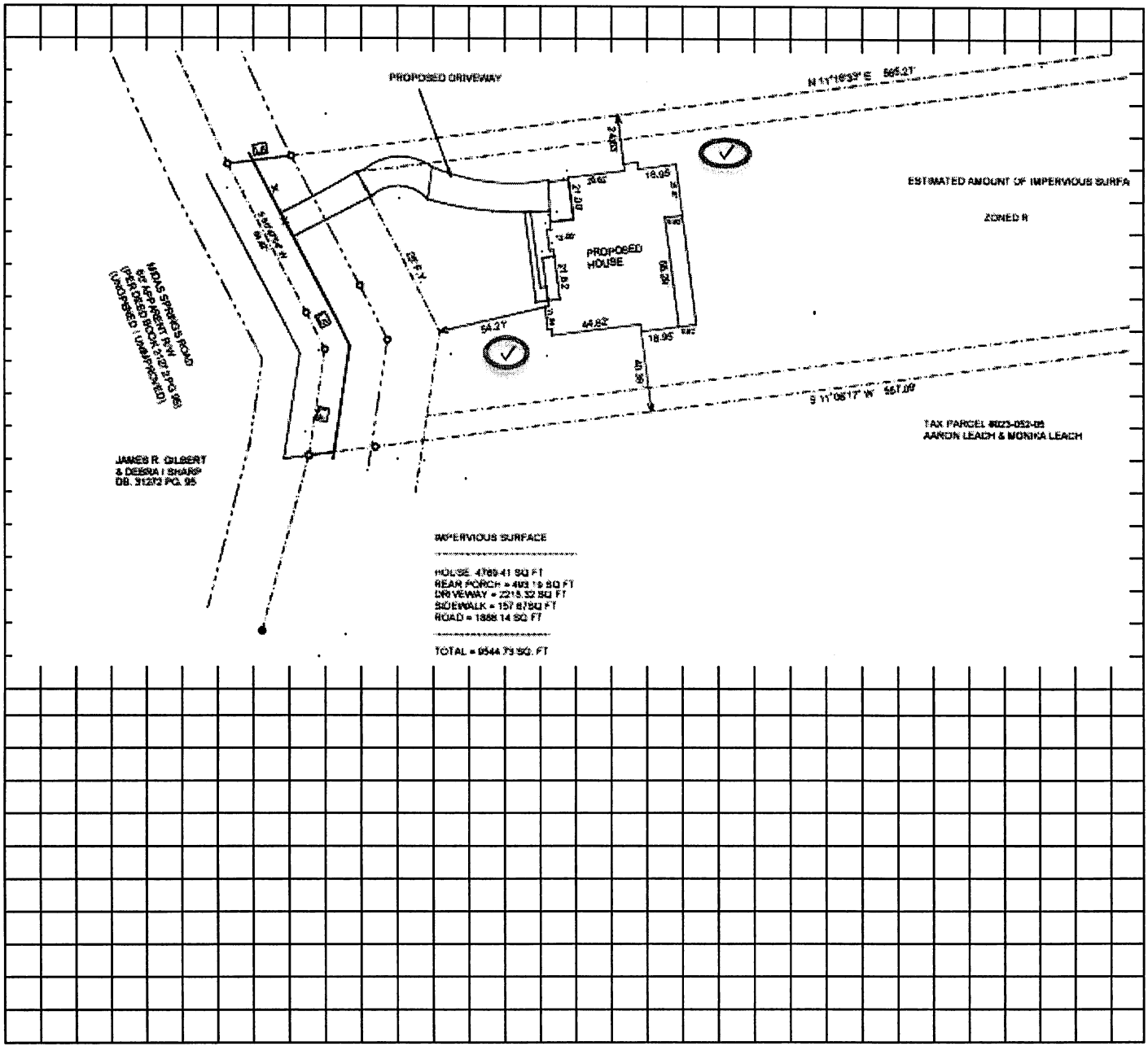
A drawing showing the locations of the following items is required: existing and proposed property lines with dimensions, easements or right-of-ways, proposed building pad(s) or existing building footprint(s), all appurtenances (garage, driveway, deck, pool, etc.), location of existing or proposed well(s), location of existing or proposed sewer lines and sewage disposal systems, surface water bodies, and any aboveground or underground storage tanks. Provide names for all roads that adjoin the property.

Street Address: 9822 Midas Springs Rd

Tax Parcel #: 023-052-04

Subdivision Name: N/A

Lot #: N/A



Aaron S. Loach

Property Owner's or Owner's Legal Representative Signature

8/3/21

Date

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 980-314-1680, FAX: 704-336-6894
Email: Wellreg@MecklenburgCountyNC.gov

Revised on: 4/20/17

Mecklenburg County Groundwater & Wastewater Services
3205 Freedom Dr., Suite 8000 Charlotte, NC 28208
Phone: (980) 314-1680 Fax: (704) 336-6894

NC DHHS
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30012523** GWS File #: **5743B** Tax Parcel #: **023-052-04**

- This IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be **NO** grading, filling, or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

I. This Improvement Permit Shall: Expire in Five (5) Years **Expiration Date (If Applicable):** 10/7/2026

Type of Installation: Residential - Modified Plot Plan Lot Number: 0

Structure Type: HOUSE Size (ft^2): 3154 # Bedrooms: 4 Max. Occup.: 8

Building Foundation: Concrete Slab Water Supply: Private Well

II. Initial System Type: PPBPS (pressurized) **System Classification:** IIIb

Initial System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	1000
Trench Width (ft):	2	Trench Spacing (ft):	8	Absorption Area (ft^2):	800	Total Trench Length (ft):	400
Maximum Trench Depth (in):	34	Depth of Media (in):	16	Distribution Device:	Pressure Manifold		

III. Repair System Type: PPBPS (pressurized) **System Classification:** IIIb

Repair System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.275	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	1000
Trench Width (ft):	2	Trench Spacing (ft):	8	Absorption Area (ft^2):	873	Total Trench Length (ft):	436
Maximum Trench Depth (in):	24	Depth of Media (in):	16	Distribution Device:	Pressure Manifold		

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment, and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until a Pre-Construction meeting has been completed by the Department.
- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: Heather Ray Owner/Legal Agent: _____
Print Name

Signature: Heather Ray Signature: _____

Date Issued: 10/7/2021

Mecklenburg County Groundwater & Wastewater Services
3205 Freedom Dr., Suite 8000 Charlotte, NC 28208
Phone: (980) 314-1680 Fax: (704) 336-6894

NC DHHS
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30012523** GWS File #: **5743B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 5 years by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- Upon completion of the project the system designer shall provide Groundwater & Wastewater Services with a letter certifying that the system was installed in accordance with the approved design.
- This permit is issued pursuant to Section 11.(c) of SL 2018-114 using the signed and sealed LSS Evaluation attached here.

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until a Pre-Construction meeting has been completed by the Department.
- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: Heather Ray

Signature: _____

Date Issued: 10/7/2021

Owner/Legal Agent: _____
Print Name

Signature: _____

Page 2 of 2

AGENT AUTHORIZATION FORM

PROPERTY LEGAL DESCRIPTION:

LOT NO. _____ PHASE _____ PARCEL ID: 02305204

STREET ADDRESS: 9808 Midas Springs Road
Charlotte, NC 28078

Please print:

Property Owner: Aaron Leach

Property Owner: _____

The undersigned, registered property owners of the above noted property, do hereby authorize

Larry Thompson, LSS, of Thompson Environmental Consulting, Inc.
(Contractor / Agent) (Name of consulting firm)

to act on my behalf and take all actions necessary for the processing, issuance and acceptance of this permit or certification and any and all standard and special conditions attached.

Property Owner's Address (if different than property above):
10430 Bernardy Lane, Charlotte, NC 28269

Telephone: 910-580-8803

We hereby certify the above information submitted in this application is true and accurate to the best of our knowledge.

The NC LSS evaluation attached to this application is to be used to produce a design and construction features for permitting in accordance with Session Law 2018-114 Section 11. (c).

Owner Signature: Aaron S leach
Aaron S leach (Sep 7, 2021 08:26 EDT)

Date: Sep 7, 2021

Owner Signature: _____

Date: _____

Residential Subsurface Wastewater Treatment and Disposal System Proposal

for

9808 Midas Springs Road
Huntersville, NC 28078

Tax Parcel # 02305204
MCGWS File # 10780B
September 4, 2021

Prepared for:

Aaron and Monika Leach
10430 Bernardy Lane
Charlotte, NC 28269
910-580-8803



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

Aaron and Monika Leach have contracted with Thompson Environmental Consulting, Inc. (TEC) to prepare a septic proposal for a new 4-bedroom single family residence to be constructed at 9808 Midas Springs Lane, Huntersville, North Carolina.

Based upon a previous soils investigation performed by TEC, it has been determined that a sufficient amount of "Suitable" Group IV soils are available for the installation of a **Pump-To Prefabricated Porous Block Panel System** (PPBPS) at a 0.3 gpd/sq. ft. long term acceptance rate (LTAR) via a legal easement on their adjacent property. The proposed repair would also be a PPBPS and the lot will be served by a new private well (existing well located close to the proposed septic drainfield is to be properly abandoned by a licensed well contractor).

The Leaches would like to request that Mecklenburg County Groundwater and Wastewater Services (MCGWS) reissue an Improvement Permit for a subsurface wastewater treatment and disposal system based upon the following proposal and the enclosed Licensed Soil Scientist Evaluation, which is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11. (c).

Location

The Charlotte, take US-77 North to Sunset Road. Turn left onto Sunset Road, right onto Beatties Ford Road, and left onto Midas Springs Road. Property is located on the right.

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 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
SC Certified Professional Soil Classifier No. 111
NC Subsurface Septic System Operator No. 22199
NC Grade IV Wastewater System Installer No. 1762
NC Certified Wastewater System Inspector No. 17621

A. Septic Tank — Plans and Specifications

1. The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and a minimum size of 1,000 gallons in capacity.

2. The septic tank will be fitted with an approved effluent filter.
3. It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tank has had time to properly cure and is free of cracks or other structural deficiencies.

B. Pump Tank

1. The pump tank shall be State approved, of one-piece construction, watertight, structurally sound and 1,000 gallons in capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
2. All pipe penetrations into the tank shall be booted (i.e., C-293 boot with a stainless-steel strap).
3. The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
4. Floats, pump and control circuits, and the control panel shall meet the requirements of Rule .1952(c). Panel and control equipment shall include lightning protection, be protected from unauthorized access, and always remain accessible to the system operator.
5. The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, Nema 4x rated control panel. The control panel must be securely mounted outside, adjacent to the pump tank riser and at a minimum of 12 inches above finished grade. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
6. Float switch tie downs must be made of a corrosion resistant material (per OWPS, all metal in the tanks shall be stainless steel). Floats should be mounted on a separate "float tree" rather than the pump supply line (see pump tank detail).
7. The pump removal system will be via a pump tether made of nylon rope or its equivalent. The tether material should be resistant to mildew and rot.

C. 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.
3. The supply line from the pump tank to the pressure manifold shall be 2-inch Schedule 40 PVC (approximate length of supply line is 231.5 feet).
4. There shall be a threaded PVC union above each pump to facilitate easy removal of the pumps for maintenance or replacement.

D. Pressure Manifold

1. A pressure manifold shall be used to distribute wastewater to five drainlines.
2. The pressure manifold shall be contained within an adequately sized box/vault that will allow future repair lines to be installed and is designed to allow for drainage of effluent that may accumulate in it during flushing and head pressure adjustments. The box should be placed upon a gravel base.
3. A gate valve shall be provided at the pressure manifold box to allow for final pressure adjustment (2 foot of head pressure as per design).
4. The pressure manifold shall be constructed of SCH 80 PVC.
5. There shall be 6 taps (1/2 inch SCH. 80 PVC - direct thread or saddle).
6. The connecting pipe between the pressure manifold taps and the drainfield shall be constructed of PVC.

E. 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).

F. Drainfield Installation

1. The drainfield, repair field 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 county for a preconstruction conference at which time the repair 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 the drain field 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 pump-to prefabricated permeable block panel system – specifically the 16-inch-high 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 drain field consists of six (6) lateral trenches 2 feet wide by one 44.5 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 **34 inches**. Each trench shall be placed on a minimum of 8 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 6 inches of sand and level to grade. Once leveled, place 1 x 4 or 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 2-inch Schedule 40 PVC connections 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. The end of each lateral should be fitted with a short turn up topped by a threaded female coupling with cap. Each turn up must be fitted with a turf/gate valve box with lid fitted flush to finished grade.
12. 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 MCGWS.

G. Proper Operation Check

1. After all components of the wastewater disposal system have been installed and connected, the system shall be checked for proper operation.
2. With the electrical power turned off, fill the pump tank with water until the liquid rises to a level high enough to activate the high-water alarm float. Turn on the electrical power. The alarm, alarm light and pump should activate at this time. Turn off the electrical power once these checks have been performed and prepare to set the head pressure at the valve box.

H. Pressure Head Adjustment

1. The pressure head must be adjusted to match the design specifications. The pressure head is measured by the height of the liquid coming from the pressure manifold.
2. Prepare a length of pipe (standpipe), cut to the desired head pressure height and fitted with a threaded adapter that will screw into the pressure manifold. Turn on pump and adjust the manifold gate valve within the supply manifold box to achieve the specified head pressure (liquid height in the standpipe should equal the design head pressure).
3. Once the pressure head has been adjusted, allow the pump to run through the remainder of the cycle. The pump float switch will automatically turn the pump off if it is operating properly. Make sure that the effluent pump is completely submerged in the remaining water, adjusting the float switch(es) as needed. This completes the checks for proper operation of the pump, alarm, and float switches.

4. At this point, the manifold standpipe may be removed and replaced with a threaded plug.

I. Final Landscaping

1. The drainfield shall be shaped to shed rainwater and be free from low spots.
2. 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.

J. 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 drain field 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.

Maintenance

K. Operation and Maintenance

1. The designed repair system will require ongoing maintenance. The local health department is required to inspect the system once every three years.
2. The septic and pump tanks shall be pumped out when the solids within the septic tank reach an elevation that is equivalent to 25% of the volume of the tank. In some situations, the tanks may need to be pumped more frequently; for example, if you are using a garbage disposal, it is recommended that the septic and pump tanks be cleaned out annually.
3. Pressure head for the manifold should be checked and adjusted annually, flushing with clean water as necessary to remove any accumulated solids.
4. The effluent filter should be inspected annually. When it becomes necessary to clean the effluent filter, the filter should be removed, and the accumulated debris washed back into the septic – not onto the lawn.
5. All piping and valves should be inspected annually for damage and corrections/repairs made immediately.
6. The pump and float controls/switches should be inspected annually to assure proper operation.
7. The drainfield area should be maintained to prevent overgrowth of vegetation. Any damp areas, leakages or malfunctions should be addressed immediately.

8. Divert gutter downspouts and surface water runoff away from the septic and pump tanks.

L. Suggestions to the Homeowner

1. As previously mentioned, a garbage disposal is not recommended. The ground up garbage adds large amounts of solids into a septic tank that tend to degrade at a very slow rate.
2. Grease, cooking oils, coffee grounds and non-degradable solids (disposable diapers, cigarettes, and solid paper wastes) should never be put into a septic tank.
3. Used motor oil or any oily liquids should not be disposed of in a septic tank.
4. 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 drain field.
5. Run dishwashers and washing machines only when you have a full load.
6. Repair leaky faucets and toilets. Small drips equal large volumes of water over time and can over burden your drain field.
7. 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.

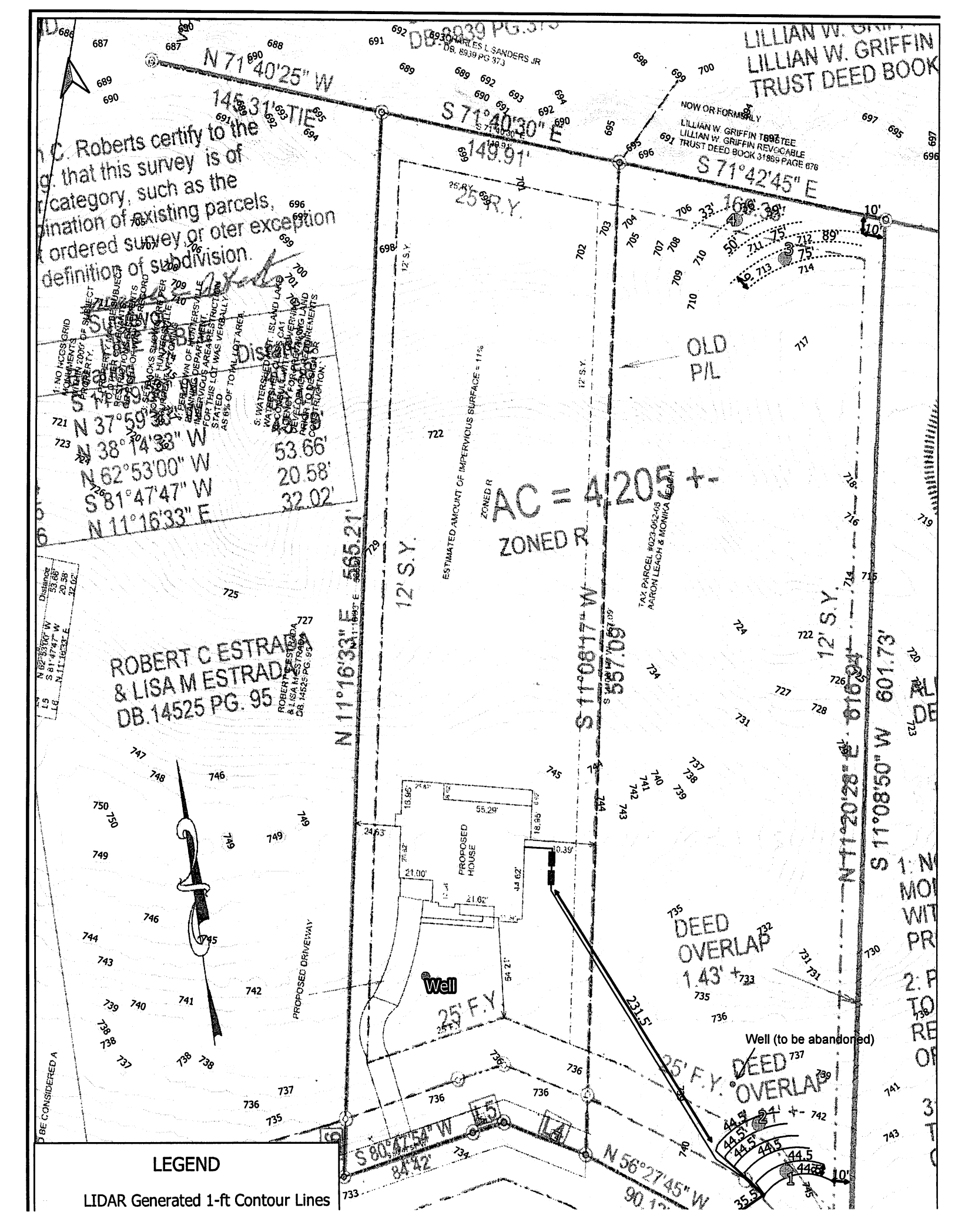
Design Specifics

Daily Design Flow:	480 GPD – 4 Bedrooms
Septic Tank Size:	1,000 Gallons
Pump Tank Size:	1,000 Gallons
Effluent Loading Rate:	Design = 0.3 GPD sq. ft. (50% reduction - PPBPS)
Supply Line Size:	2 Inch
Supply Line Length:	Approximately 231.5 Feet
Drainfield Type:	PPBPS
Distribution Method:	Pressure Manifold
Number and Size of Drainlines:	(6) 2' Wide x 44.5' Long
Total Length of Drainline:	267 Feet
Maximum Trench Depth:	34 Inches Deep
Drainline Spacing:	8 Foot on Centers

Total Number of Panels:	60
Dosing Volume:	216 gallons per dose
Flow Rate Through System:	32.88 gallons per minute
Elevation/Friction Head:	13 feet
Pressure Head:	2 feet
Pump Requirements:	32.88 GPM at 15 Feet TDH
Recommended Pump:	Liberty FL50 (or equiv.)
Pump Run Time:	6.57 Minutes
Depth of Water Pumped:	10.29 Inches (21 Gallons per Inch) Determined by Tank Size (1 Cu. Ft. of water = 7.48 Gal.)

Repair Specifics

Repair System Type:	Horizontal PPBPS
Repair System LTAR:	0.275 gpd/ft^2
Total Footage Required:	291 Linear Feet
Total Linear Feet Available:	397 Linear Feet
Installation Depth:	24 Inches



I, Robert C. Roberts certify to the
[illegible]g that this survey is of
[illegible]r category, such as the
[illegible]ination of existing parcels,
[illegible]t ordered survey or oter exception
definition of subdivision.

Surveyor

Distance

LEGEND

LIDAR Generated 1-ft Contour Lines

Plat was drawn under my
JAMES R. GILBERT
& DEBRA I. SHARP
DB. 3172 PG. 95
MIDAS SPRINGS ROAD
60' APPARENT R/W
(PER DEED BOOK 3172 PG 95)
(UNOPENED / UNIMPROVED)
DB. 3172 PG. 95
& DEBRA I. SHARP
JAMES R. GILBERT
(UNIMPROVED)
ROAD
R/W
N 56°27'45" W
90.12'
S 80°47'54" W
84.42'
84.42'
25' F.Y.
DEED OVERLAP
1.43' +-
DEED OVERLAP
1.43' +-
25' F.Y.
231.5'
35.5'
44.5'
44.5'
44.5'
44.5'
44.5'
44.5'
Well
54.21'
PROPOSED HOUSE
44.62'
21.62'
12.08'
21.00'
28.62'
24.63'
40.39'
18.95'
55.29'
18.95'
S 62°
S 62°
N 11°
S 11°
L1
L2
L3
L4
L5

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

Sheet 1 of 1
PROPERTY ID #: 0230525
COUNTY: Mecklenburg

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

OWNER: Aaron and Monika Jacob
ADDRESS: 14030 Beaverdale Lane, Charlotte, NC 28269
PROPOSED FACILITY: Res PROPOSED DESIGN FLOW (.1949): 4 Bed
LOCATION OF SITE: 9808/9812 Indian Spring Road, Huntersville
DATE EVALUATED:
PROPERTY SIZE: 2.26 ac
PROPERTY RECORDED:
WATER SUPPLY: ☒ Private ☐ Public ☐ Well ☒ Spring ☐ Other
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	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%	0-5	GR LSA	FR Bk Plast	—	48	—	—	PS 0.3
		5-30	SBK LC	FI SS Plast					
		30-48	SBK LC	FI SS Plast					
2	LS 6%	0-6	GR LSA	FR Bk Plast	—	48	—	—	PS 0.3
		6-32	SBK LC	FI SS Plast					
		32-48	SBK LC	FR Bk Plast					
3	LS 6%	0-4	GR LSA	FR SS Plast	—	48	—	—	PS 0.3
		4-32	SBK LC	FI SS Plast					
		32-48	SBK LC	FR SS Plast					
4	LS 6%	0-5	GR LSA	FR SS Plast	—	40"	—	40" HR	PS 0.275
		5-34	SBK LC	FI SS Plast					
		34-40	SBK LC	FI SS Plast					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	Pobes	Pobes
Site LTAR	0.3	0.275

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

LICENSED SOIL SCIENTIST — LARRY R. THOMPSON — 1287 — STATE OF NORTH CAROLINA

COMMENTS:

Updated February 2014

The LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c).

LEGEND

use the following standard abbreviations

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

MOIST	WET
VFR (Very Friable)	NS (Non-sticky)
FR (Friable)	SS (Slightly Sticky)
FI (Firm)	S (Sticky)
VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
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).

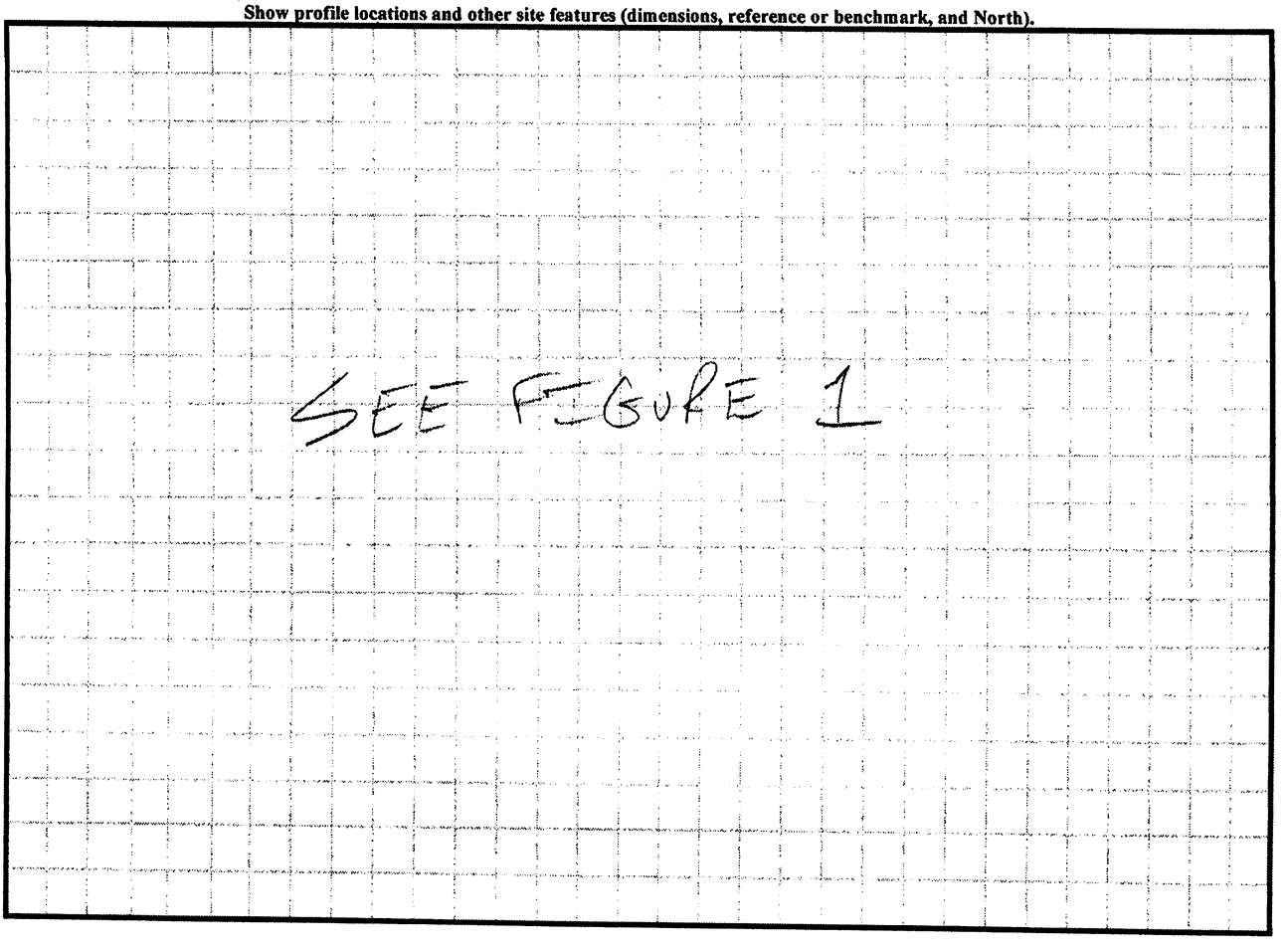


EXHIBIT A

LEGEND

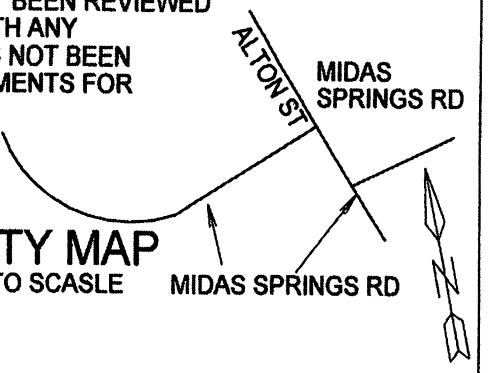
- △ PK NAIL FOUND
- ▲ PK NAIL SET
- ■ CONCRETE MONUMENT SET
- ● #4 REBAR SET
- ◉ # REBAR FOUND
- ○ POINT NOT SET
- ◎ 1" IRON PIPE FOUND

Boundary not surveyed

Tie Line (Not to Scale)

Right of Way

THIS MAP MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVIEWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS.



VICINITY MAP
NOT TO SCASLE

I Joesph C. Roberts certify to the following: that this survey is of another category, such as the recombination of existing parcels, a court ordered survey,or oter exception to the definition of subdivision.

Surveyor

CHARLES L. SANDERS JR
DB.8939 PG.373

LILLIAN W. GRIFFIN TRUSTEE
LILLIAN W. GRIFFIN REVOCABLE
TRUST DEED BOOK 31869 PAGE 676

N 71°40'25" W
145.31' TIE

(S 71°40'30" E)
(149.91')

(S 71°41'29" E 168.32')

(S 71°33'55" E)
(168.19' TIE)

25' R.Y.

MIDAS SPRINGS ROAD
60' APPARENT R/W
(PER DEED BOOK 31272 PG 95)
(UNOPENED / UNIMPROVED)

TAX PARCEL
#023-052-04

SEPTIC
EASEMENT B
4774.94 SQ. FT

ALEXANDER D SIMPSON
DEED BOOK 1653 PAGE 461

ROBERT C ESTRADA
& LISA M ESTRADA
DB.14525 PG. 95

(N 11°16'33" E 565.21')

12' S.Y.

S 11°11'28" W 366.05'

12' S.Y.

ZONED R

TAX PARCEL
023-052-05

ZONED R

EASEMENT A
AREA OF EASEMENT
= 4823.65 SQ. FT.
NOTE AREA
BY COMPUTER

30" OAK

N 11°09'58" E 119.19'

25' F.Y.

FOUNDATION
REMAINS

(S 11°20'31" W 600.18')

DB 35499
PG 267

S 83°38'35" W
98.92' TIE

S 80°47'54" W
84.42'

(N 56°27'45" W)
(90.12')

JAMES R. GILBERT
& DEBRA I SHARP
DB. 31272 PG. 95

GAP 4.50' +-

CATHY LYNN ROBINSON
& JOEL K ROBINSON
NOW OR FORMERLY

S 33°54'2
190.1

NOTES

THIS SURVEY IS NOT TO BE CONSIDERED A BOUNDARY SURVEY OF THE PROPERTIES SHOWN

1: NO NCGS GRID MONUMENTS WITHIN 2000' OF SUBJECT PROPERTY.

BEARINGS AND DISTANCES SHOWN FOR ALL DASHED LINES ARE BASED ON A PRIOR SURVEY BY ME OF THIS PROPERTY DATED 6/20/20 JCR

SCALE 1" =100' DATE OF SURVEY 9/20 2021

100 75 50 25 0 100

Joseph C. Roberts PLS L3580
424 Leland St.
Charlotte N.C. 28214

LINE TABLE

Id	Bearing	Distance
L1	S 11°18'39" W	16.76'
L2	S 11°15'24" W	24.04'
L3	N 37°58'17" W	64.27'
L4	N 38°14'33" W	43.79'
L5	N 11°10'47" E	33.24'
L6	N 62°53'00" W	53.66'
L7	S 81°47'47" W	20.58'
L8	N 11°16'33" E	32.02'
L9	N 10°39'37" E	16.02'
L10	S 79°08'24" E	8.49'
L11	S 17°34'19" E	167.43'
L12	S 89°54'35" E	40.94'
L13	S 67°56'42" E	28.90'
L14	S 13°29'07" W	49.73'
L15	N 53°39'34" W	80.49'
L16	N 18°41'45" W	165.79'
L17	S 11°37'22" W	10.02'
L18	S 72°18'41" E	80.92'
L19	S 70°27'42" E	75.27'
L20	S 32°41'37" W	79.81'
L21	N 30°32'16" W	73.31'

This Instrument drafted by:
Laura Snider Baker
Baker Law Office, PLLC
9620 Holly Point Drive, Suite 102
Huntersville, NC 28078

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

DEED OF EASEMENT FOR ACCESS AND SEWER REPAIR FIELD

THIS EASEMENT, made and entered into this ____ day of September, 2021, by and between Aaron Leach and wife, Monika Leach, owners of Tax Parcel 023-052-04, commonly known as 9822 Midas Springs, Road, Huntersville, North Carolina, hereinafter referred to as Grantors and Aaron Leach and wife, Monika Leach, owners of Tax Parcel 023-052-05, commonly known as 9808 Midas Springs Road, Huntersville, North Carolina, hereinafter referred to as Grantees.

WITNESSETH:

WHEREAS, Grantor is the owner of two certain tracts of land located on Midas Springs Road, Mecklenburg County, North Carolina, which adjoin each other, as more particular described in the deeds recorded in Book 35499 at Page 267 and Book 35499 at Page 272; and

WHEREAS, in order to be able to build a residence on 9822 Midas Springs Road, Grantee is required to obtain an access easement, as well as an easement for a sewer repair field located on 9808 Midas Springs Road; and

WHEREAS, as owner of 9808 Midas Spring Road, Grantor is willing to grant such easements for the benefit of 9822 Midas Springs Road;

NOW THEREFORE, Grantor, for and in consideration of the approval by Mecklenburg County and the Town of Huntersville Planning Boards, does hereby grant to the owner of Tax Parcel 023-052-05, commonly known as 9808 Midas Springs Road, now owned by Grantee, but which is appurtenant to the land and is binding on his successors in title, and/or assigns, two separate easements, as set forth more particularly below, for the purposes and in conjunction with the conditions set forth herein:

ACCESS EASEMENT
EASEMENT "A"

1. Grantor, as owner of 9822 Midas Springs Road, Huntersville, North Carolina, does hereby grant to Grantee, the owner of 9808 Midas Springs Road, Huntersville, North Carolina, the right to use the property described below for the purpose of ingress, egress, and regress to the said property. The boundary shall be located with the confines of Lot 9822 Midas Springs Road and is more particularly described as follows:

   To locate the point of BEGINNING, start at a point in the center line of Midas Springs Road, a sixty-foot apparent right of way per Deed Book 31272 at Page 95, which appears to be unopened and unimproved, and running along the common line dividing Tax Parcel 023-052-04 and Tax Parcel 023-052-05, North 11-09-56 East 119.19 feet to a 30 foot oak in the line, said Oak being the point and place of BEGINNING, and continuing thence North 10-39-37 East 16.02 feet; thence South 79-10-12 East 8.49 feet to a point; and continuing South 17-34-19 East 167.43 feet to a point; continuing thence South 89-54-35 East 40.94 feet to a point; continuing thence South 67-56-42 East 28.90 feet to a point; and thence South 13-29-07 West 49.73 feet to a point; continuing thence North 53-39-34 West 80.49 feet to a point; and thence North 18-41-45 West 165.79 feet to the Point and Place of BEGINNING, containing an area of 4,823.65 square feet, all of shown as Easement A on that certain survey drawn by Joseph C. Roberts, PLS, License 3580, dated September 21, 2021, which survey is attached hereto as Exhibit A for illustrative purposes only.

2. Said easement described above shall be for access only, and for no other purpose.

3. Said access easement shall belong to the Grantee, their successors and assigns, as such, it being agreed that the right of access as established herein runs with the land of the Grantee as set forth hereinabove.

4. Grantor covenants herein that they are seized of the premises in fee simple, has the right to convey said access easement, that the title is marketable and free of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinabove stated.

EASEMENT FOR SEWER REPAIR AREA
EASEMENT "B"

1. Grantor, as owner of 9822 Midas Springs Road, Huntersville, North Carolina, does hereby grant to Grantee, the owner of 9808 Midas Springs Road, Huntersville, North Carolina, the right to use the property described below for the purpose of a sewer repair area for the said property. The boundary shall be located with the confines of Lot 9822 Midas Springs Road and is more particularly described as follows:

   To locate the point of BEGINNING, start at a point in the center line of Midas Springs Road, a sixty-foot apparent right of way per Deed Book 31272 at Page 95, which appears to be unopened and unimproved, and running along the common line dividing Tax Parcel 023-052-04 and Tax Parcel 023-052-05, North 11-09-56 East 119.19 feet to a 30 foot oak in the line; thence continue along the common line North 11-11-28 East 366.05 feet to a point in the line, which point is the point and place of BEGINNING: and continuing thence North 11-17-10 East 12.50 feet to a point in the common line; and continuing thence North 72-07-05 West 79.49 feet to a point; and continuing thence North 17-52-55 East 17.99 feet; and continuing thence North 30-32-16 West 73.31 feet to a point; and continuing thence South 32-41-37 West 79.81 feet to a point; and continuing thence South 70-27-42 East 75.27 feet to a point; and continuing thence South 72-18-41 East 80.92 feet to a point; and continuing thence South 11-37-22 West 10.02 feet to the point and place BEGINNING, containing an area of 4,774.94 square feet, all of shown as Easement B, on that certain survey drawn by Joseph C. Roberts, PLS, License 3580, dated September 21, 2021, which survey is attached hereto as Exhibit A for illustrative purposes only.

2. Grantor does hereby grant, bargain, sell, and convey unto Grantee, a perpetual right and easement to construct and maintain across and upon the property as described above, a septic repair field for the use and benefit of 9822 Midas Springs Road, and to go upon 9808 Midas Springs Road whenever the same is reasonably necessary for the purpose of inspecting, constructing, maintaining and repairing said septic repair field.
3. Grantee shall remove all surplus earth, make level the ground above the septic repair field, and interfere as little as reasonably possible with any plants, fences, or other improvements upon the land of Grantors.
4. To have and to hold said right and easement to them the said Grantees and their successors in title; it being agreed that the right and easement hereby granted is appurtenant to and runs with the land now owned by the Grantees and hereinabove referred to.

In Testimony Whereof, the said Grantors, have hereunto set their hands and seals the day and year first above written.

_____(SEAL) _____(SEAL)
Aaron Leach Monika Leach

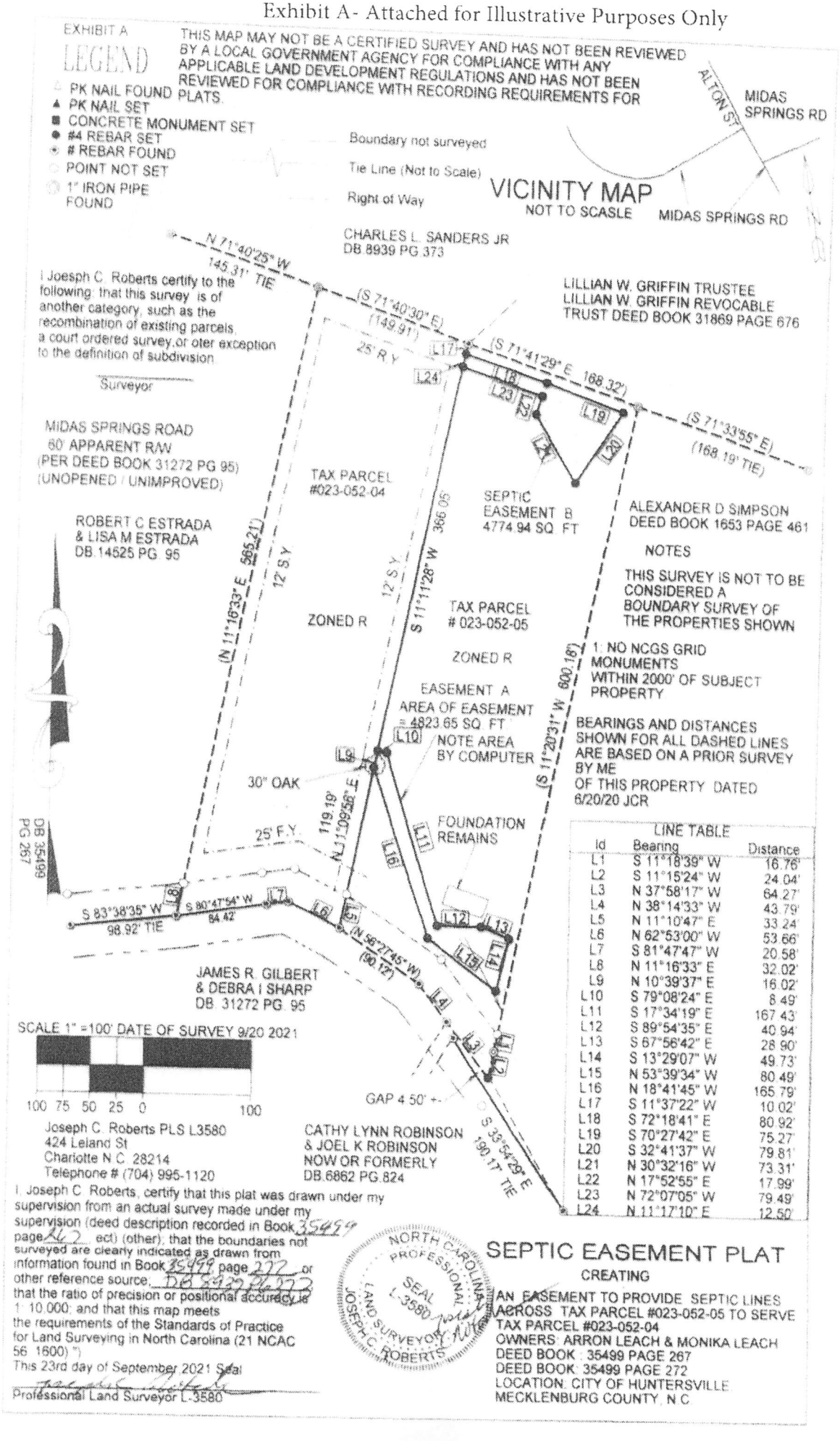
State of _____ - County or City of _____

I, the undersigned Notary Public of the County _____ and State aforesaid, certify that Aaron Leach and wife, Monika Leach personally appeared before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein expressed. Witness my hand and Notarial stamp or seal this _____ day of September, 2021.

_____
My Commission Expires:_____
_____Notary Public
Notary's Printed or Typed Name

(AFFIX SEAL HERE)

Exhibit A- Attached for Illustrative Purposes Only



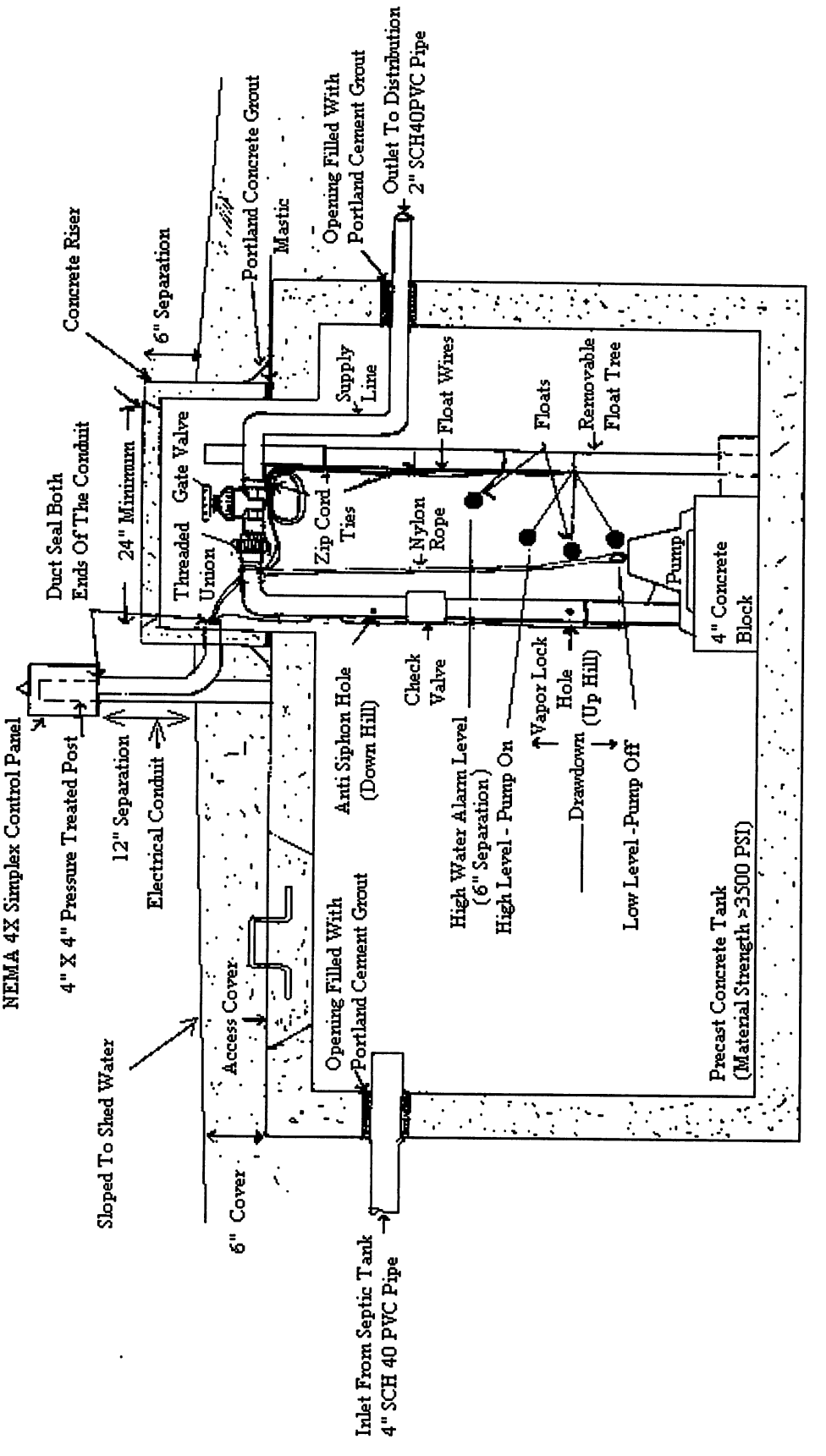
Thompson Environmental Consulting, Inc
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 02305204

Location: 9808 Midas Springs Road

Date: September 4, 2021

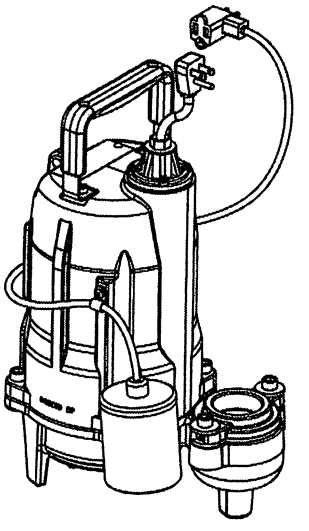
Recommended Pump Tank Design

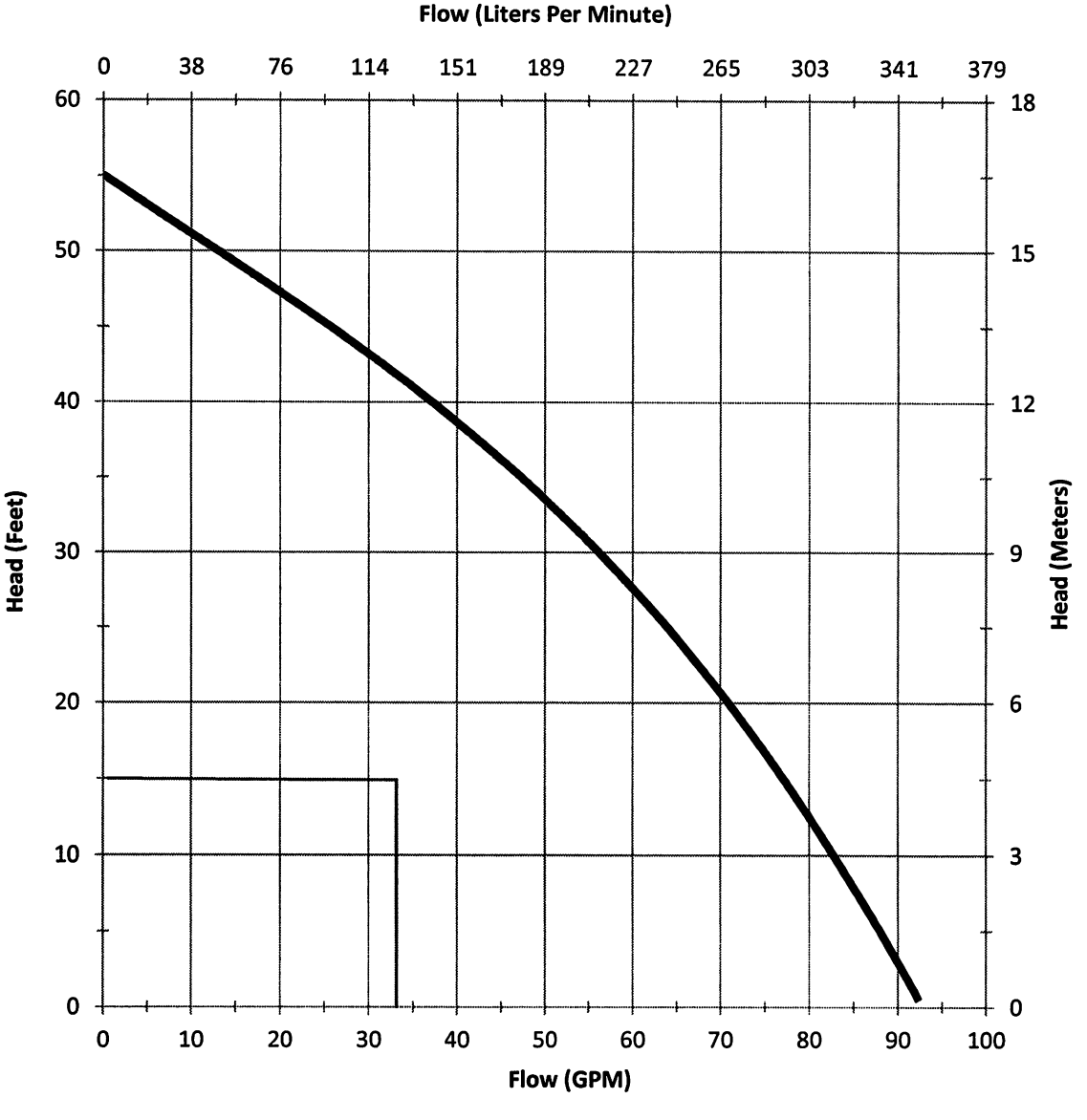


Liberty Pumps®

Pump Specifications

FL50 Series 1/2 hp Submersible Effluent Pump

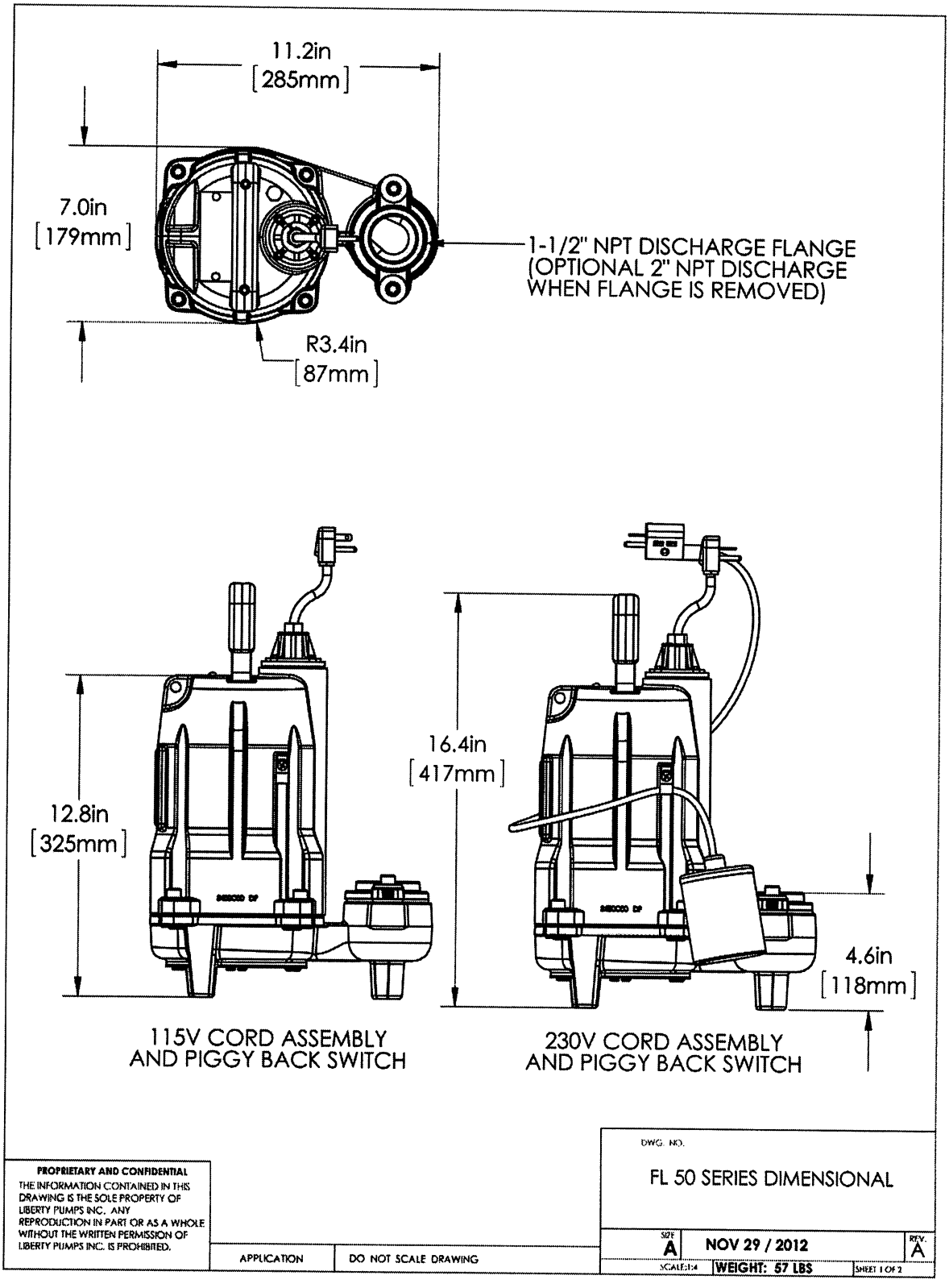




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Liberty Pumps

FL50-Series Dimensional Data



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FL50-Series Electrical Data

MODEL	HP	VOLTAGE	PHASE	FULL LOAD AMPS	LOCKED ROTOR AMPS	THERMAL OVERLOAD TEMP	STATOR WINDING CLASS	CORD LENGTH FT	DISCHARGE	AUTOMATIC	WGT.
FL51A	1/2	115	1	12	48.6	120°C 248°F	B	10	1 ½ OR 2"	YES	53 lbs.
FL51A-2	1/2	115	1	12	48.6	120°C 248°F	B	25	1 ½ OR 2"	YES	55 lbs.
FL51A-3	1/2	115	1	12	48.6	120°C 248°F	B	35	1 ½ OR 2"	YES	58 lbs.
FL51M	1/2	115	1	12	48.6	120°C 248°F	B	10	1 ½ OR 2"	NO	52 lbs.
FL51M-2	1/2	115	1	12	48.6	120°C 248°F	B	25	1 ½ OR 2"	NO	53 lbs.
FL51M-3	1/2	115	1	12	48.6	120°C 248°F	B	35	1 ½ OR 2"	NO	55 lbs.
FL52A	1/2	208-230	1	6.5	24.1	120°C 248°F	B	10	1 ½ OR 2"	YES	53 lbs.
FL52A-2	1/2	208-230	1	6.5	24.1	120°C 248°F	B	25	1 ½ OR 2"	YES	55 lbs.
FL52A-3	1/2	208-230	1	6.5	24.1	120°C 248°F	B	35	1 ½ OR 2"	YES	58 lbs.
FL52M	1/2	208-230	1	6.5	24.1	120°C 248°F	B	10	1 ½ OR 2"	NO	52 lbs.
FL52M-2	1/2	208-230	1	6.5	24.1	120°C 248°F	B	25	1 ½ OR 2"	NO	53 lbs.
FL52M-3	1/2	208-230	1	6.5	24.1	120°C 248°F	B	35	1 ½ OR 2"	NO	55 lbs.

FL50-Series Technical Data

IMPELLER	MULTI-VANE CAST IRON
PAINT	POWDER COAT
SOLIDS HANDLING CAPABILITY	¾"
MAX LIQUID TEMP	60°C 140°F
MAX STATOR TEMP	130°C 266°F
THERMAL OVERLOAD	120°C 248°F
POWER CORD TYPE	SJTW (1-PH) or SEOOW (3-PH), or SJOOW (35' – 1PH)
MOTOR HOUSING	CLASS 25 CAST IRON
VOLUTE	CLASS 25 CAST IRON
IMPELLER	CLASS 25 CAST IRON
SHAFT	STAINLESS
HARDWARE	STAINLESS
ORINGS	BUNA N
MECHANICAL SEAL	UNITIZED CERAMIC CARBON

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FL50-Series Specifications

1.01 GENERAL:

The contractor shall provide labor, material, equipment, and incidentals required to provide_____(QTY) centrifugal pumps as specified herein. The pump models covered in this specification are Series FL50 single phase pumps. The pump furnished for this application shall be model _____as manufactured by Liberty pumps.

2.01 OPERATING CONDITIONS:

Each submersible pump shall be rated at 1/2 hp_____volts single phase 60 Hz. 3450 RPM. The unit shall produce_____G.P.M. at_____ feet of total dynamic head.

The submersible pump shall be capable of handling sewage effluent with 3/4" solid handling capability. The submersible pump shall have a shut-off head of 55 feet and a maximum flow of 76 GPM @ 15 feet of total dynamic head.

The pump shall be controlled with:

_____A piggy back style on/off float switch.

_____A NEMA 4X simplex control panel with three float switches and a high water alarm.

_____A NEMA 4X duplex control panel with three float switches and a high water alarm.

3.01 CONSTRUCTION:

Each centrifugal sewage pump shall be equal to the ^{C} ^{US} certified Series FL50 SERIES pumps as manufactured by Liberty Pumps, Bergen NY. The castings shall be constructed of class 25 cast iron. The motor housing shall be oil filled to dissipate heat. Air filled motors shall not be considered equal since they do not properly dissipate heat from the motor. All mating parts shall be machined and sealed with a Buna-N o-ring. All fasteners exposed to the liquid shall be stainless steel. The motor shall be protected on the top side with sealed cord entry plate with molded pins to conduct electricity eliminating the ability of water to enter internally through the cord. The motor shall be protected on the lower side with a unitized ceramic/carbon seal with stainless steel housings and spring. The pump shall be furnished with stainless steel handle.

4.01 ELECTRICAL POWER CORD

The submersible pump shall be supplied with a 10, 25 or 35 feet of multiconductor power cord. It shall be cord type SJTW (1-PH) or SEOOW (3-PH), SJOOW (35' – 1PH), capable of continued exposure to the pumped liquid. The power cord shall be sized for the rated full load amps of the pump in accordance with the National Electric Code. The power cable shall not enter the motor housing directly but will conduct electricity to the motor by means of a water tight compression fitting cord plate assembly, with molded pins to conduct electricity. This will eliminate the ability of water to enter internally through the cord, by means of a damaged or wicking cord.

5.01 MOTORS

Single phase motors shall be oil filled, permanent split capacitor, class B insulated NEMA B design, rated for continuous duty. At maximum load the winding temperature shall not exceed 130 degrees C unsubmerged. Since air filled motors are not capable of dissipating heat they shall not be considered equal. The pump motor shall have an integral thermal overload switch in the windings for protecting the motor. The capacitor circuit shall be mounted internally in the pump.

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6.01 BEARINGS AND SHAFT

Upper and lower ball bearings shall be required. The bearings shall be a single ball / race type bearing. Both bearings shall be permanently lubricated by the oil, which fills the motor housing. The motor shaft shall be made of 17-4 PH stainless steel and have a minimum diameter of .625".

7.01 SEALS

The pump shall have a unitized carbon / ceramic seal with stainless steel housings and spring equal to Crane Type 6A. The motor plate / housing interface shall be sealed with a Buna-N o-ring.

8.01 IMPELLER

The impeller shall be a class 25 iron. It shall be threaded to the motor shaft.

9.01 CONTROLS

All units can be supplied with CSA and UL approved automatic wide angle tilt float switches. The switches shall be equipped with piggy back style plug that allows the pump to be operated manually without the removal of the pump in the event that a switch becomes inoperable. Manual Pumps are operable by means of a pump control panel.

10.01 PAINT

The exterior of the casting shall be protected with Powder Coat paint.

11.01 SUPPORT

The pump shall have cast iron support legs, enabling it to be a free standing unit.

12.01 SERVICEABILTY

Components required for the repair of the pump shall be shipped within a period of 24 hours.

13.01 FACTORY ASSEMBLED TANK SYSTEMS WITH GUIDE RAIL AND QUICK DISCONNECT DISCHARGE

_____Guide factory mounted rail system with pump suspended by means of bolt on quick disconnect which is sealed by means of nitrile grommets or o-rings. The Discharge piping shall be schedule 80 PVC and furnished with a PVC check valve and shut-off ball valve. The Tank shall be wound fiberglass or roto-molded plastic. An inlet hub shall be provided with the fiberglass systems.

_____Stainless steel Guide Rail

_____Zinc plated steel Guide Rail

_____"diameter of basin size

_____"height of basin size

_____"distance from top of tank to discharge pipe outlet

_____Fiberglass cover

_____Structural foam polymer cover

_____Steel cover

_____Simplex System with Outdoor panel and alarm

_____Duplex System with Outdoor panel and alarm

_____Separate Outdoor Alarm

_____Remote Outdoor Alarm

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14.01 TESTING

The pump shall have a ground continuity check and the motor chamber shall be Hi-potted to test for electrical integrity, moisture content and insulation defects. The motor and volute housing shall be pressurized, and an air leak decay test is performed to ensure integrity of the motor housing. The pump shall be run, voltage current monitored, and the tester checks for noise or other malfunction.

15.01 QUALITY CONTROL

The pump shall be manufactured in an ISO 9001 certified Facility.

16.01 WARRANTY

Standard limited warranty shall be 3 years.

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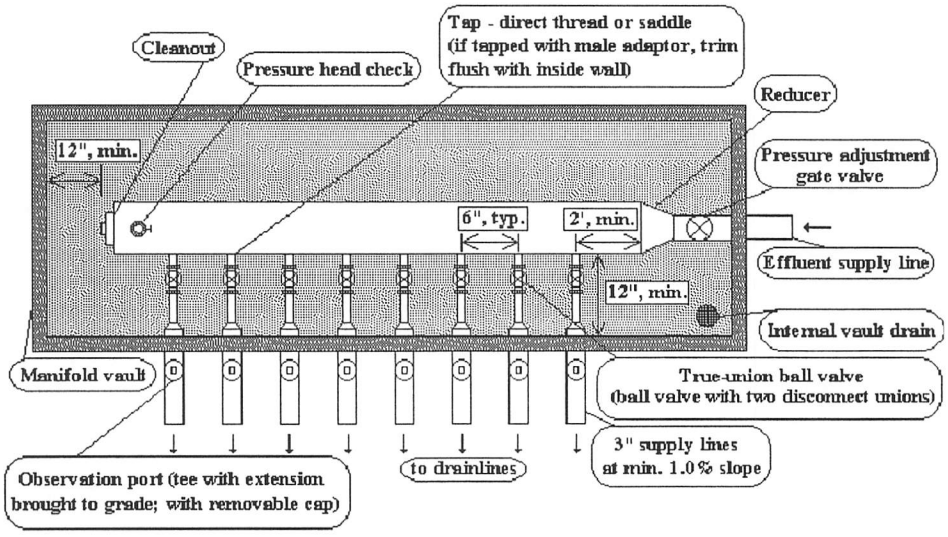
Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 02305204

Location: 9808 Midas Springs Road

Date: September 4, 2021

Recommended Pressure Manifold Design
(Number of Taps May Vary)



MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date: 09/28/21
Receipt #: 130828
Check / Auth #: MC 62128P
Received By: ELLISLW

Amount: 100.00
Tendered: 100.00
Returned: 0.00

Account Information

Account #: 200000
Contractor: LEACH, AARON
Attn:
Address:
Address:
City/State/Zip: ,

Item	Description	Permit#	Quantity	Unit Price	Total Price
0704	Change in Plot Plan ~~9808~~ MIDAS SPRINGS RD		1	100.00	100.00

----------Outstanding Balances----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance

For Registration
Fredrick Smith
Register of Deeds
Mecklenburg County, NC
Electronically Recorded
2021 Oct 05 10:44 AM RE Excise Tax: $ 0.00
Book: 36609 Page: 223 - 227 Fee: $ 26.00
Instrument Number: 2021190376

Fredrick Smith

Prepared by & return to: Laura Snider Baker, a validly licensed NC attorney, Baker Law Office, PLLC, 9620 Holly Point Dr., Ste. 102, Huntersville, NC 28078

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

DEED OF EASEMENT FOR ACCESS AND SEWER REPAIR FIELD

THIS EASEMENT, made and entered into this 29 day of September, 2021, by and between Aaron Leach and wife, Monika Leach, owners of Tax Parcel 023-052-04, commonly known as 9822 Midas Springs, Road, Huntersville, North Carolina, hereinafter referred to as Grantees and Aaron Leach and wife, Monika Leach, owners of Tax Parcel 023-052-05, commonly known as 9808 Midas Springs Road, Huntersville, North Carolina, hereinafter referred to as Grantors.

WITNESSETH:

WHEREAS, Grantor is the owner of two certain tracts of land located on Midas Springs Road, Mecklenburg County, North Carolina, which adjoin each other, as more particular described in the deeds recorded in Book 35499 at Page 267 and Book 35499 at Page 272; and

WHEREAS, in order to be able to build a residence on 9822 Midas Springs Road, Grantor is required to obtain an access easement, as well as an easement for a sewer repair field located on 9808 Midas Springs Road; and

WHEREAS, as owner of 9808 Midas Spring Road, Grantor is willing to grant such easements for the benefit of 9822 Midas Springs Road;

NOW THEREFORE, Grantor, for and in consideration of the approval by Mecklenburg County and the Town of Huntersville Planning Boards, does hereby grant to the owner of Tax Parcel 023-052-05, commonly known as 9808 Midas Springs Road, now owned by Grantor, but which is appurtenant to the land and is binding on his successors in title, and/or assigns, two separate easements, as set forth more particularly below, for the purposes and in conjunction with the conditions set forth herein:

Submitted electronically by "Baker Law Office, PLLC"
in compliance with North Carolina statutes governing recordable documents
and the terms of the submitter agreement with the Mecklenburg County Register of Deeds.

ACCESS EASEMENT
EASEMENT "A"

1. Grantor, as owner of 9808 Midas Springs Road, Huntersville, North Carolina, does hereby grant to Grantee, the owner of 9822 Midas Springs Road, Huntersville, North Carolina, the right to use the property described below for the purpose of ingress, egress, and regress to the said property. The easement shall be located with the confines of Lot 9808 Midas Springs Road and is more particularly described as follows:

   To locate the point of BEGINNING, start at a point in the center line of Midas Springs Road, a sixty-foot apparent right of way per Deed Book 31272 at Page 95, which appears to be unopened and unimproved, and running along the common line dividing Tax Parcel 023-052-04 and Tax Parcel 023-052-05, North 11-09-56 East 119.19 feet to a 30 foot oak in the line, said Oak being the point and place of BEGINNING, and continuing thence North 10-39-37 East 16.02 feet; thence South 79-10-12 East 8.49 feet to a point; and continuing South 17-34-19 East 167.43 feet to a point; continuing thence South 89-54-35 East 40.94 feet to a point; continuing thence South 67-56-42 East 28.90 feet to a point; and thence South 13-29-07 West 49.73 feet to a point; continuing thence North 53-39-34 West 80.49 feet to a point; and thence North 18-41-45 West 165.79 feet to the Point and Place of BEGINNING, containing an area of 4,823.65 square feet, all of shown as Easement A on that certain survey drawn by Joseph C. Roberts, PLS, License 3580, dated September 21, 2021, which survey is attached hereto as Exhibit A for illustrative purposes only.

2. Said easement described above shall be for access only, and for no other purpose.

3. Said access easement shall belong to the Grantee, their successors and assigns, as such, it being agreed that the right of access as established herein runs with the land of the Grantee as set forth hereinabove.

4. Grantor covenants herein that they are seized of the premises in fee simple, has the right to convey said access easement, that the title is marketable and free of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinabove stated.

EASEMENT FOR SEWER REPAIR AREA
EASEMENT "B"

1. Grantor, as owner of 9808 Midas Springs Road, Huntersville, North Carolina, does hereby grant to Grantee, the owner of 9822 Midas Springs Road, Huntersville, North Carolina, the right to use the property described below for the purpose of a sewer repair area for the said property. The sewer repair area shall be located with the confines of Lot 9808 Midas Springs Road and is more particularly described as follows:

   To locate the point of BEGINNING, start at a point in the center line of Midas Springs Road, a sixty-foot apparent right of way per Deed Book 31272 at Page 95, which appears to be unopened and unimproved, and running along the common line dividing Tax Parcel 023-052-04 and Tax Parcel 023-052-05, North 11-09-56 East 119.19 feet to a 30 foot oak in the line; thence continue along the common line North 11-11-28 East 366.05 feet to a point in the line, which point is the point and place of BEGINNING: and continuing thence North 11-17-10 East 12.50 feet to a point in the common line; and continuing thence North 72-07-05 West 79.49 feet to a point; and continuing thence North 17-52-55 East 17.99 feet; and continuing thence North 30-32-16 West 73.31 feet to a point; and continuing thence South 32-41-37 West 79.81 feet to a point; and continuing thence South 70-27-42 East 75.27 feet to a point; and continuing thence South 72-18-41 East 80.92 feet to a point; and continuing thence South 11-37-22 West 10.02 feet to the point and place BEGINNING, containing an area of 4,774.94 square feet, all of shown as Easement B, on that certain survey drawn by Joseph C. Roberts, PLS, License 3580, dated September 21, 2021, which survey is attached hereto as Exhibit A for illustrative purposes only.

2. Grantor does hereby grant, bargain, sell, and convey unto Grantee, a perpetual right and easement to construct and maintain across and upon the property as described above, a septic repair field for the use and benefit of 9822 Midas Springs Road, and to go upon 9808 Midas Springs Road whenever the same is reasonably necessary for the purpose of inspecting, constructing, maintaining and repairing said septic repair field.
3. Grantee shall remove all surplus earth, make level the ground above the septic repair field, and interfere as little as reasonably possible with any plants, fences, or other improvements upon the land of Grantors.
4. To have and to hold said right and easement to them the said Grantees and their successors in title; it being agreed that the right and easement hereby granted is appurtenant to and runs with the land now owned by the Grantees and hereinabove referred to.

In Testimony Whereof, the said Grantors, have hereunto set their hands and seals the day and year first above written.

_____(SEAL) _____(SEAL)
Aaron Leach Monika Leach

State of NC - County ~~or City~~ of Mecklenburg

I, the undersigned Notary Public of the County Iredell and State aforesaid, certify that Aaron Leach and wife, Monika Leach personally appeared before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein expressed. Witness my hand and Notarial stamp or seal this 29 day of September, 2021.

Marcia K. Long

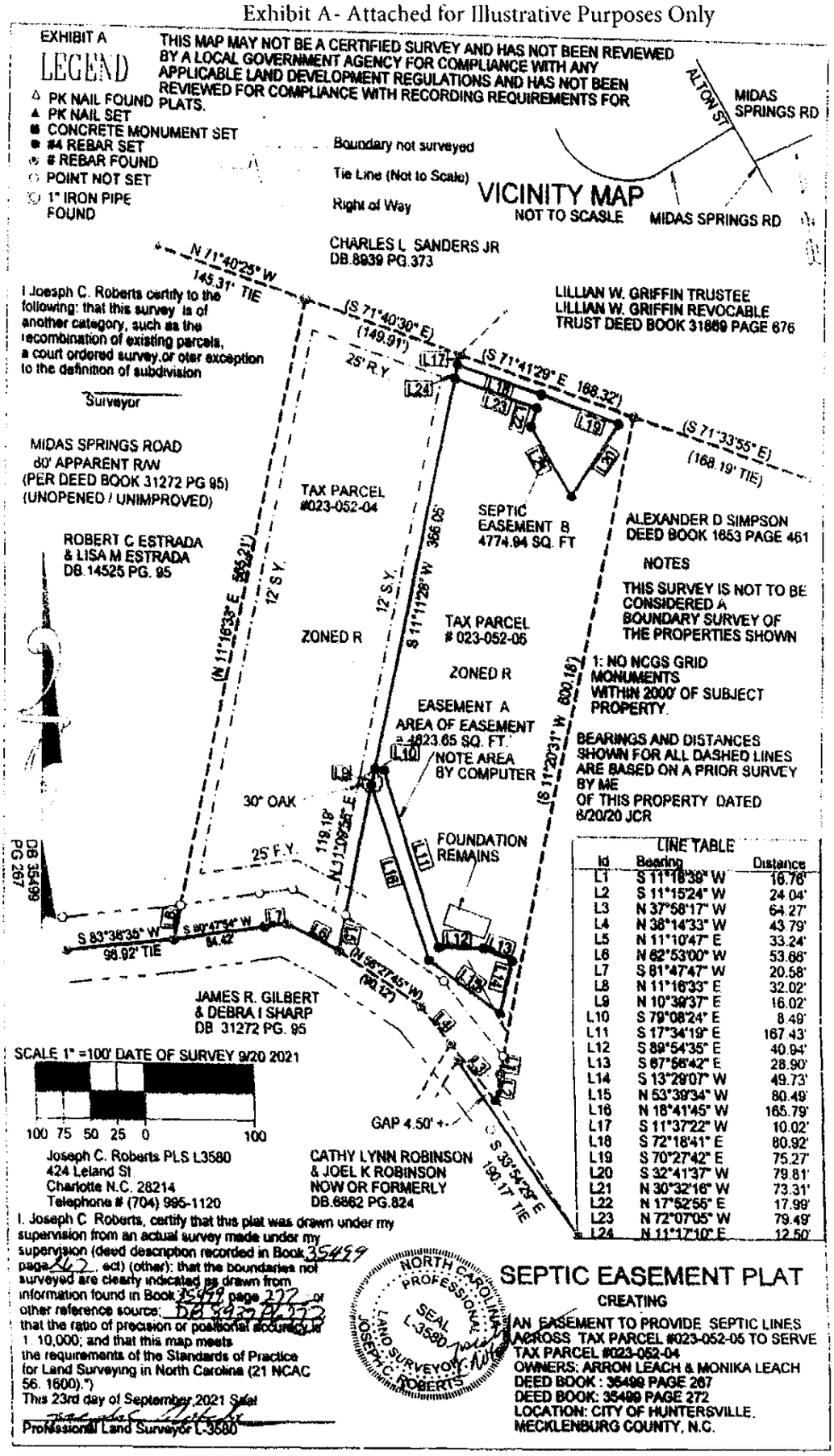
My Commission Expires: 11-6-23

Marcia K. Long Notary Public
Notary's Printed or Typed Name

MARCIA K. LONG
Notary Public
Iredell County, NC
My Commission Expires: 11-6-23

(AFFIX SEAL HERE)

Exhibit A- Attached for Illustrative Purposes Only



LINE TABLE

Id	Bearing	Distance
L1	S 11°16'38" W	16.76'
L2	S 11°15'24" W	24.04'
L3	N 37°58'17" W	64.27'
L4	N 38°14'33" W	43.79'
L5	N 11°10'47" E	33.24'
L6	N 62°53'00" W	53.66'
L7	S 81°47'47" W	20.58'
L8	N 11°16'33" E	32.02'
L9	N 10°39'37" E	16.02'
L10	S 79°08'24" E	8.49'
L11	S 17°34'19" E	167.43'
L12	S 89°54'35" E	40.94'
L13	S 87°56'42" E	28.90'
L14	S 13°29'07" W	49.73'
L15	N 53°39'34" W	80.49'
L16	N 18°41'45" W	165.79'
L17	S 11°37'22" W	10.02'
L18	S 72°18'41" E	80.92'
L19	S 70°27'42" E	75.27'
L20	S 32°41'37" W	79.81'
L21	N 30°32'16" W	73.31'
L22	N 17°52'55" E	17.99'
L23	N 72°07'05" W	79.49'
L24	N 11°17'10" E	12.50'