

## Harnett County Department of Public Health Improvement Permit

A building permit cannot be issued with only an Improvement Permit

ISSUED TO: Davidson Homes, LLC PROPERTY LOCATION: 142 Blue Monarch Ln. (Christian Light Rd.  
 SUBDIVISION Prince Place LOT # 16  
 NEW  REPAIR  EXPANSION  Site Improvements required prior to Construction Authorization Issuance:  
 Type of Structure: 56x62 sfd 3 beds 2.5 baths  
 Proposed Wastewater System Type: 25% Reduction Sys.  
 Projected Daily Flow: 360 GPD  
 Number of bedrooms: 3 Number of Occupants: 6 max  
 Basement  Yes  No  
 Pump Required:  Yes  No  May be required based on final location and elevations of facilities  
 Type of Water Supply:  Community  Public  Well Distance from well NA feet Permit valid for:  Five years  
 Permit conditions: \_\_\_\_\_  No expiration

Authorized State Agent: [Signature] Date: 01/25/2022 SEE ATTACHED SITE SKETCH  
 The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit.

## Construction Authorization

(Required for Building Permit)

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

ISSUED TO: Davidson Homes, LLC PROPERTY LOCATION: 142 Blue Monarch Ln. (Christian Light R  
 SUBDIVISION Prince Place LOT # 16  
 Facility Type: 56x62 sfd 3 beds 2.5 bath  New  Expansion  Repair  
 Basement?  Yes  No Basement Fixtures?  Yes  No  
 Type of Wastewater System\*\* 25% Reduction System (Initial) Wastewater Flow: 360 GPD  
 (See note below, if applicable )

50% Reduction PPBPS System (Repair)

Installation Requirements/Conditions	Number of trenches <u>3</u>	
Septic Tank Size <u>1000</u> gallons	Exact length of each trench <u>100</u> feet	Trench Spacing: <u>9</u> Feet on Center
Pump Tank Size _____ gallons	Trenches shall be installed on contour at a	Soil Cover: <u>8</u> inches
	Maximum Trench Depth of: <u>20</u> inches	(Maximum soil cover shall not exceed
	(Trench bottoms shall be level to +/-1/4"	36" above the trench bottom)
	in all directions)	
Pump Requirements: _____ ft. TDH vs. _____ GPM		<u>NA</u> inches below pipe
		Aggregate Depth: <u>NA</u> inches above pipe
Conditions: <u>Gravity to D-Box Equal Distribution; Proposal by Mitchell Enviro.</u>		<u>NA</u> inches total

**WATER LINES (INCLUDING IRRIGATION) MUST BE 10FT. FROM ANY PART OF SEPTIC SYSTEM OR REPAIR AREA.  
 NO UTILITIES ALLOWED IN INITIAL OR REPAIR DRAIN FIELD AREA.**

**\*\*If applicable:** I understand the system type specified is different from the type specified on the application. I accept the specifications of this permit.

Owner/Legal Representative Signature: \_\_\_\_\_ Date: \_\_\_\_\_

This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be transferred when there is 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. SEE ATTACHED SITE SKETCH

Authorized State Agent: [Signature] Date: 01/25/2022  
ANDREW CORAN Construction Authorization Expiration Date: 01/25/2024

Application # SFD2201-0014

## Harnett County Department of Public Health Site Sketch

Property Location: 142 Blue Monarch Ln. (Christian Light Rd. - SR 1412)

Issued To: Davidson Homes, LLC

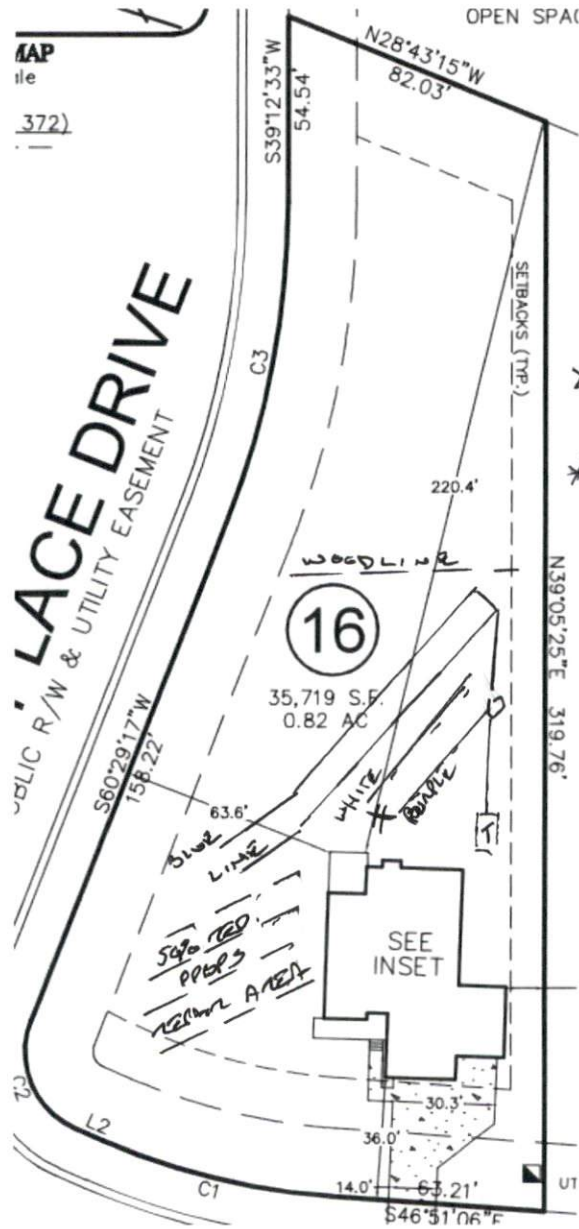
Subdivision Prince Place

Lot # 16

Authorized State Agent: \_\_\_\_\_

*Andrew Corbin*  
ANDREW CORBIN

Date: 01/25/2022



\* GRAVITY TO D-BOX  
EQUAL DISTRICTION  
REQUIRED

\* PROPOSAL BY  
MITCHELL ENVIRONMENTAL

\* SHIFTED UPHILL TO  
KEEP OUT OF  
WOODLINE

This drawing is for illustrative purposes only. System installation must meet all pertinent laws, rules, and regulations.

**Mitchell Environmental, P.A.**

**SEPTIC SYSTEM DESIGN**

**for**

**PRINCE PLACE SUBDIVISION- LOT 16**

**Fuquay-Varina, Harnett County, North Carolina**

**Submitted to:**

Harnett County Health Department  
307 Cornelius Harnett Blvd.  
Lillington, NC 27546

**Prepared for:**

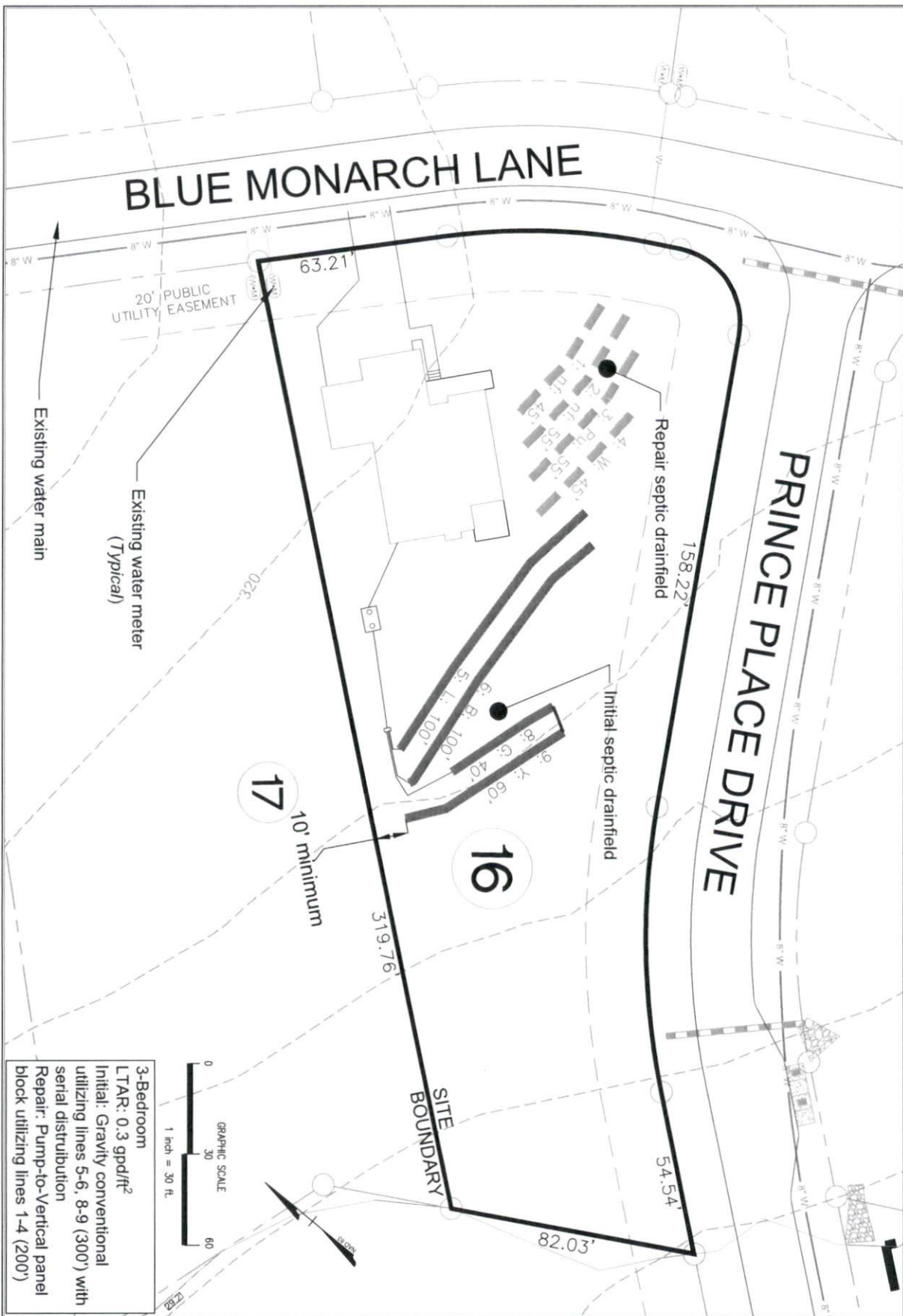
Davidson Homes, LLC  
336 James Record Road  
Huntsville, Alabama 35824

**Prepared by:**

Scott Mitchell, PE, LSS  
Adam Aycock, EI

**DATE: January 10, 2022**

**PROJECT NO.: 4321**



3-Bedroom  
 LTAR: 0.3 gpd/ft<sup>2</sup>  
 Initial: Gravity conventional  
 utilizing lines 5-6, 8-9 (300') with  
 serial distribution  
 Repair: Pump-to-Vertical panel  
 block utilizing lines 1-4 (200')

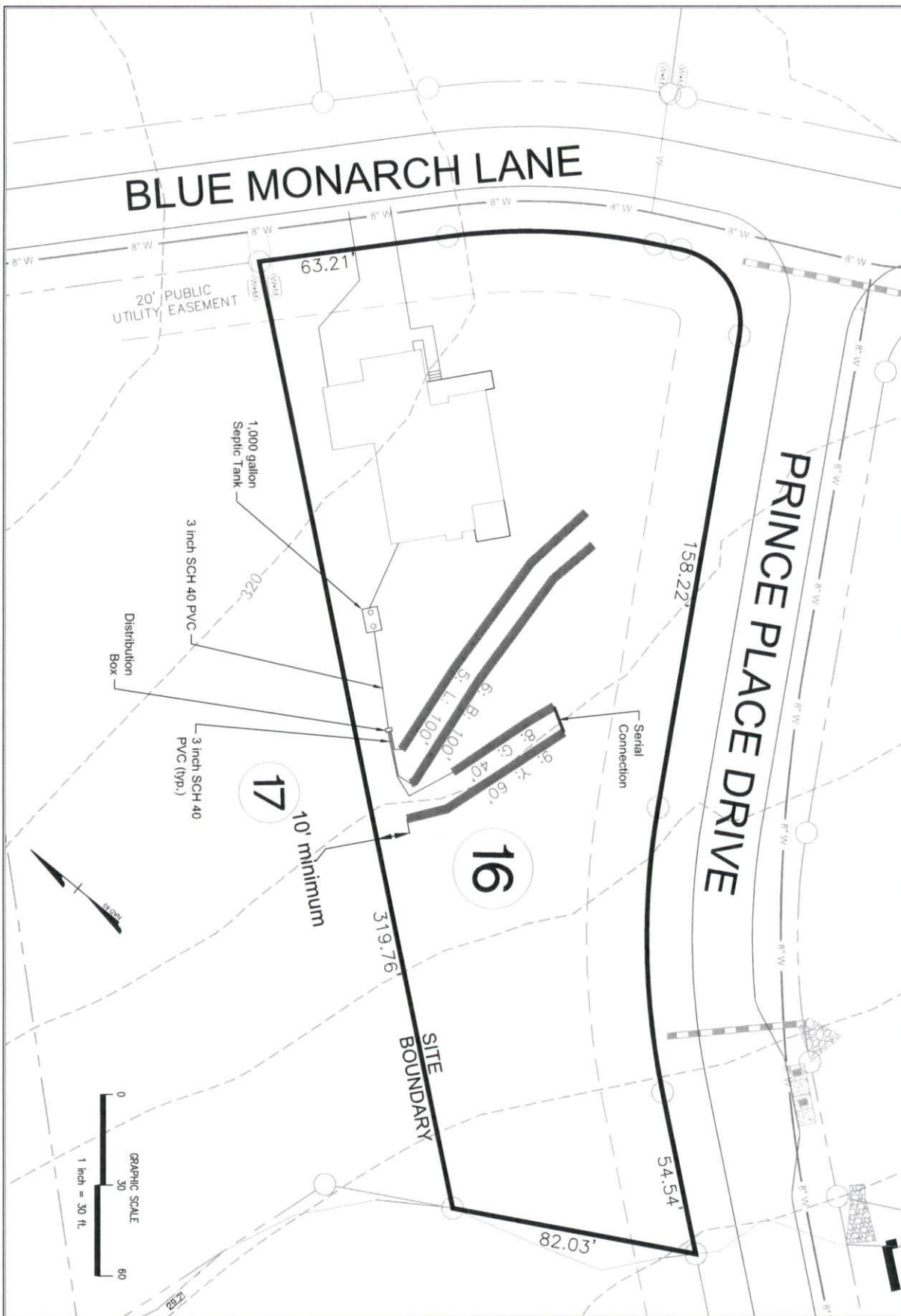


**MITCHELL ENVIRONMENTAL, PA**  
 C-2911  
 1501 LAKESTONE VILLAGE LANE  
 SUITE 205  
 FUQUAY VARINA, NC 27526

PREPARED FOR : Davidson Homes  
 330 James Record Road  
 Huntsville, AL 35824  
 DATE : January 7, 2022  
 ENGINEER AND SOIL SCIENTIST CONTACT:  
 SCOTT MITCHELL, PE, LSS  
 DRAWN BY:  
 ADAM AYCOCK, EI

REVISION NO.	DATE
Original Submittal	January 7, 2022
Revision 1	-----
Revision 2	-----
Revision 3	-----
Master Set	-----

**SHEET NUMBER**  
 1 of 6  
 Prince Place  
 Lot 16  
 Overall Septic



 <p><b>MITCHELL ENVIRONMENTAL, PA</b> C-2911</p> <p>1501 LAKESTONE VILLAGE LANE SUITE 205 FUQUAY VARINA, NC 27526</p>	PREPARED FOR : Davidson Homes 336 James Record Road Huntville, AL 35824	REVISION NO. Original Submittal	DATE January 7, 2022	<b>SHEET NUMBER</b>  2 of 6  Prince Place Lot 16 Initial Nitrification Field
	DATE : January 7, 2022	Revision 1	_____	
	ENGINEER AND SOIL SCIENTIST CONTACT: SCOTT MITCHELL, PE, LSS	Revision 2	_____	
	DRAWN BY: ADAM AYCOCK, EI	Revision 3	_____	
		Master Set	_____	

Repair System

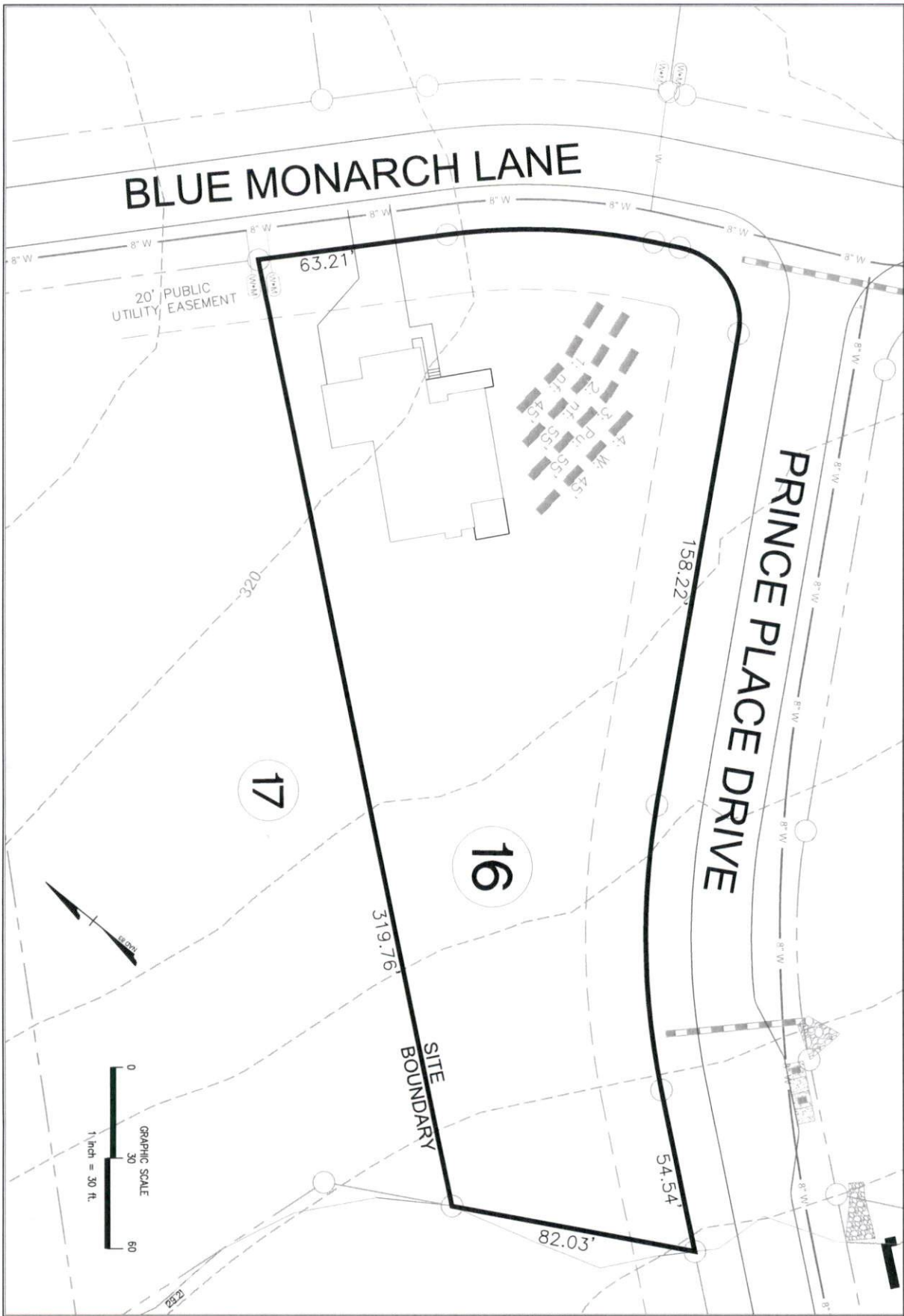
**PRESSURE MANIFOLD DESIGN**

Name: Davidson Homes P.I.N. #: 0633-87-2079 D #: N/A  
 Address: Blue Monarch Lane Subdiv: Prince Place Lot#: 16  
 # of BDR: 3 Daily Flow: 360 gal/day L.T.A.R.: 0.300 gal/day/sq.ft  
 Septic Tank: 1000 gals (min.) Pump Tank: 1200 gals (min.) Sq. Foot: 600 Stone Depth: N/A  
 Number of Taps: 4 Length of Trenches: Varies ft(See Tap Chart for Details) (Vertical Panel Block)  
 Depth of Trenches: see Harnett County Permit Manifold Length: 42 in  
 Manifold Diameter: 4 in sch 80pvc (minimum) Tap Configuration: 6 in spacing 1 side(s) of manifold  
 Supply Line: length: 120 ft Diameter: 2 in sch 40pvc  
 Friction Loss + Fitting Loss: 2.87 ft(supply line length + 70' for fittings in pump tank)  
 Design Head: 2.0 ft Elevation Head: 6.45 ft  
 Vent Hole Size: 3/16 in Orifice Coefficient of Discharge: 0.60  
 Orifice Coefficient of Contraction: 0.62 Orifice Coefficient of Velocity: 0.97  
 Maximum Head Supplied by Selected Pump(s) at Total Design Flowrate: 22 ft  
 Orifice / Vent Hole Flowrate: 1.94 gpm Head Loss at Orifice / Vent Hole: 1.40 ft  
 Total Head: 12.72 ft Pump to Deliver: 27.12 gals/min at 12.72 ft head  
 Dosing Volume: 182.00 gals.  
 Drawdown: 182.00 gals divided by 19 gals/in = 9.58 inches

SJE Rhombus Installer Friendly Series simplex control panel, or equivalent, required  
 A septic tank filter, or equal is required.  
 Possible pumps: Hydromatic: Goulds: Myers:  
 Zoeller: 137 Other:

**TAP CHART**

Bench Mark	<u>4.43</u>	is = 100.00	set at	<u>EG at MV monument</u>	Design Head:	<u>2.0</u>			
Pump tank elev.	<u>3.75</u>	<u>100.68</u>	<u>95.68</u>	Pump elev.	Manifold elev.	<u>102.13</u>			
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1	nf	3.30	101.13	45	1/2in SCH 80	5.48	78.35	135	0.5804
2	nf	3.50	100.93	55	1/2in SCH 40	7.11	101.65	165	0.6161
3	Purple	3.73	100.70	55	1/2in SCH 40	7.11	101.65	165	0.6161
4	White	4.17	100.26	45	1/2in SCH 80	5.48	78.35	135	0.5804
		<b>total</b>	<b>feet =</b>	<b>200</b>	<b>gal/min =</b>	<b>25.2</b>	<b>LTAR =</b>		<b>0.3000</b>
% of Pipe Vol.	<u>140</u>			<b>Des. Flow</b>	360.00			<b>(Itar + 5%)</b>	0.3150
Dose Volume	182.00			<b>Pump Run=</b>	14.30			<b>(Itar W/ INOV)</b>	0.6000
Dose Pump Time	7.23			<b>Tank Gal/IN</b>	19			<b>(Itar + 5%)</b>	0.6300
Drawdown in Inches	9.58			<b>Elev. Head</b>	6.45				
Supply Line Length	120								
<b>Comments:</b>									



**MITCHELL ENVIRONMENTAL, PA**  
 C-2911  
 1501 LAKESTONE VILLAGE LANE  
 SUITE 205  
 FUQUAY VARINA, NC 27526

PREPARED FOR : Davidson Homes  
 336 James Record Road  
 Huntville, AL 35824

DATE : January 7, 2022

ENGINEER AND SOIL SCIENTIST CONTACT:  
 SCOTT MITCHELL, PE, LSS

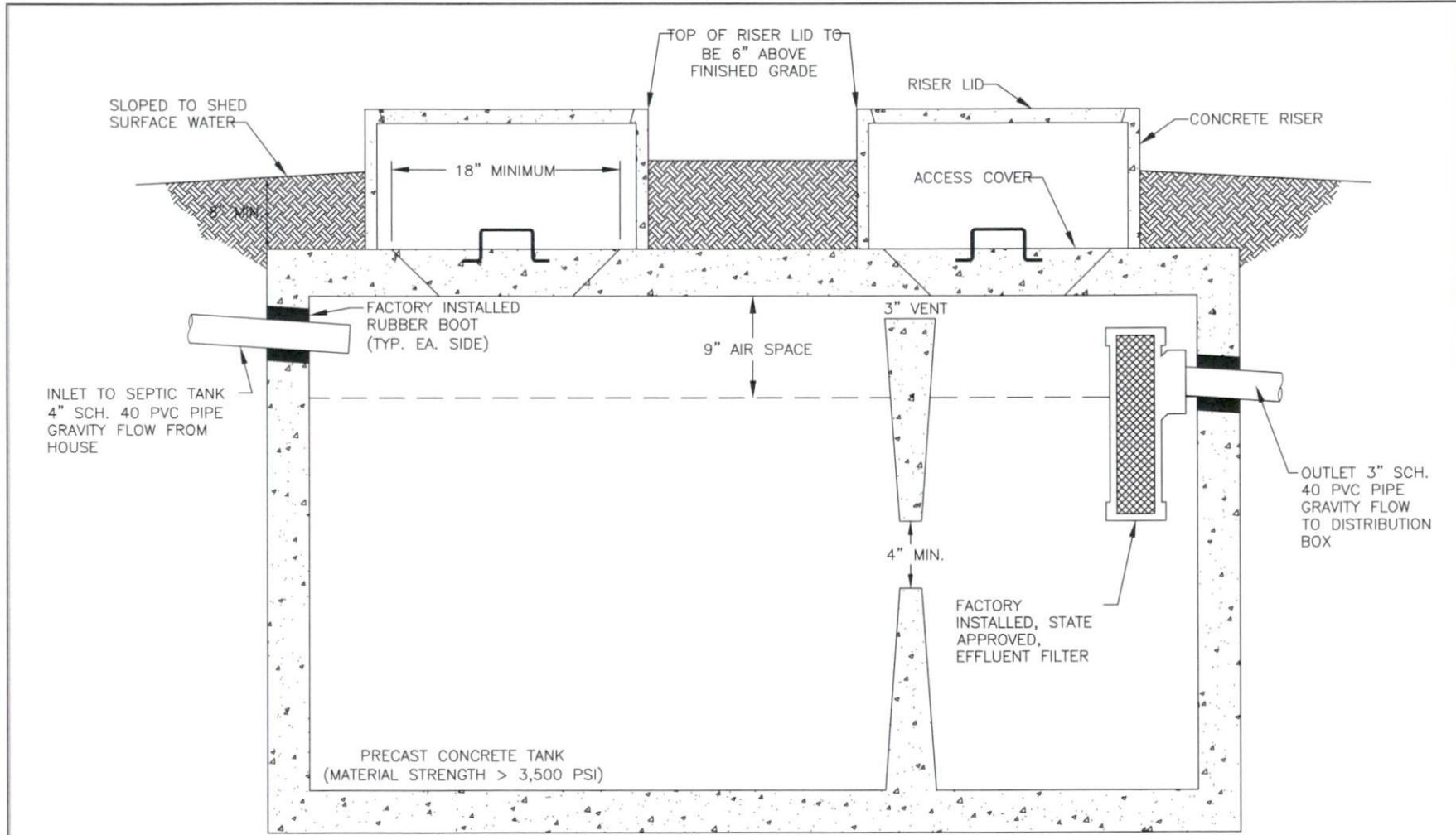
DRAWN BY:  
 ADAM AYCOCK, EI

REVISION NO.	DATE
Original Submittal	January 7, 2022
Revision 1	-----
Revision 2	-----
Revision 3	-----
Master Set	-----

**SHEET NUMBER**

**3 of 6**

Prince Place  
 Lot 16  
 Repair Nitrification Field



1,000 GALLON SEPTIC TANK

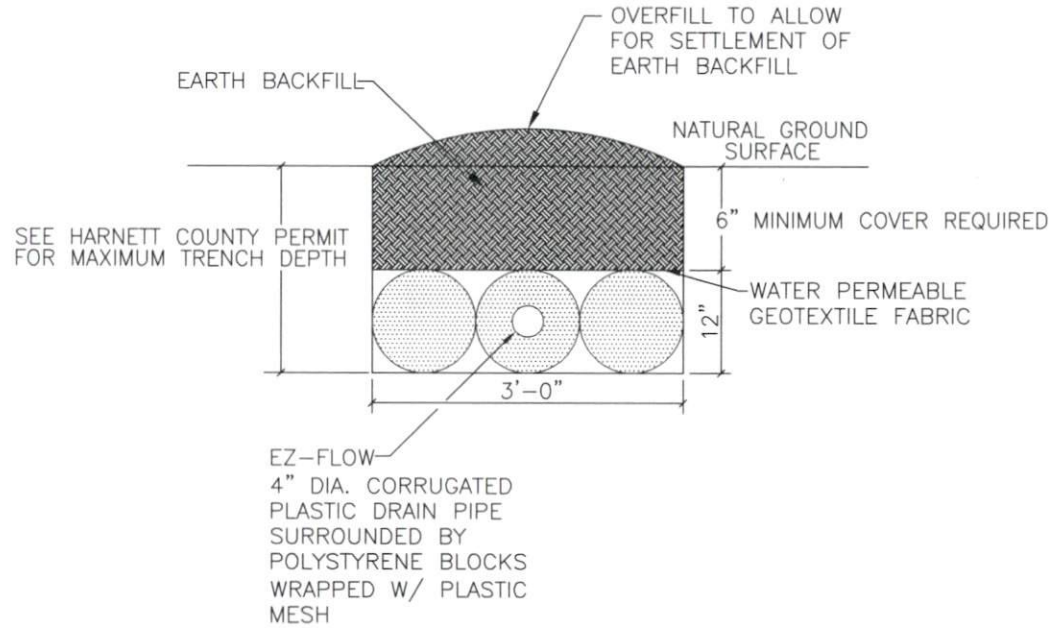
SEPTIC TANK DETAIL  
N.T.S.

<p><b>Division Home</b>          PREPARED FOR : 330 Jenna Road          Fuquay Varina, NC 27526</p>		<p>REVISION NO.          Original Submitted          Revision 1          Revision 2          Revision 3          Master Set</p>	<p>DATE          January 7, 2022</p>	<p><b>SHEET NUMBER</b>          4 of 6</p>
<p>1501 LAKESTONE VILLAGE LANE          SUITE 205          FUQUAY VARINA, NC 27526</p>		<p>DATE : January 7, 2022          ENGINEER AND SEAL SOCIETIST CONTACT:          SCOTT MITCHELL, P.E., L.S.          DRAWN BY:          ADAM WOOD, E</p>	<p>Prince Place          Lot 16          Septic Tank Detail</p>	



# NITRIFICATION TRENCH DETAIL FOR EZ-FLOW

N.T.S.



**NOTES:**

1. PERFORATED CORRUGATED PLASTIC PIPE SHALL MEET REQUIREMENTS OF ASTM D 2729.
2. PIPE SHALL BE LEVEL.
3. ENDCAP SHALL BE PROVIDED AT END OF ALL CORRUGATED PLASTIC PIPE LINES.
4. TRENCH BOTTOM SHALL BE LEVEL.
5. HAND RAKE TRENCH WALLS PRIOR TO PLACEMENT OF TRENCH MEDIA IF SOIL SMEARING IS PRESENT.

**MITCHELL ENVIRONMENTAL, PA**  
C-2911

Division Homes  
PREPARED FOR : 130 James Record Road  
Huntsville, AL 35824

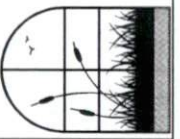
REVISION NO. DATE  
Original Submittal January 7, 2022  
Revision 1  
Revision 2  
Revision 3  
Master Set

**SHEET NUMBER**  
**5 of 6**

1501 LAKESTONE VILLAGE LANE  
SUITE 205  
FUQUAY VARINA, NC 27526

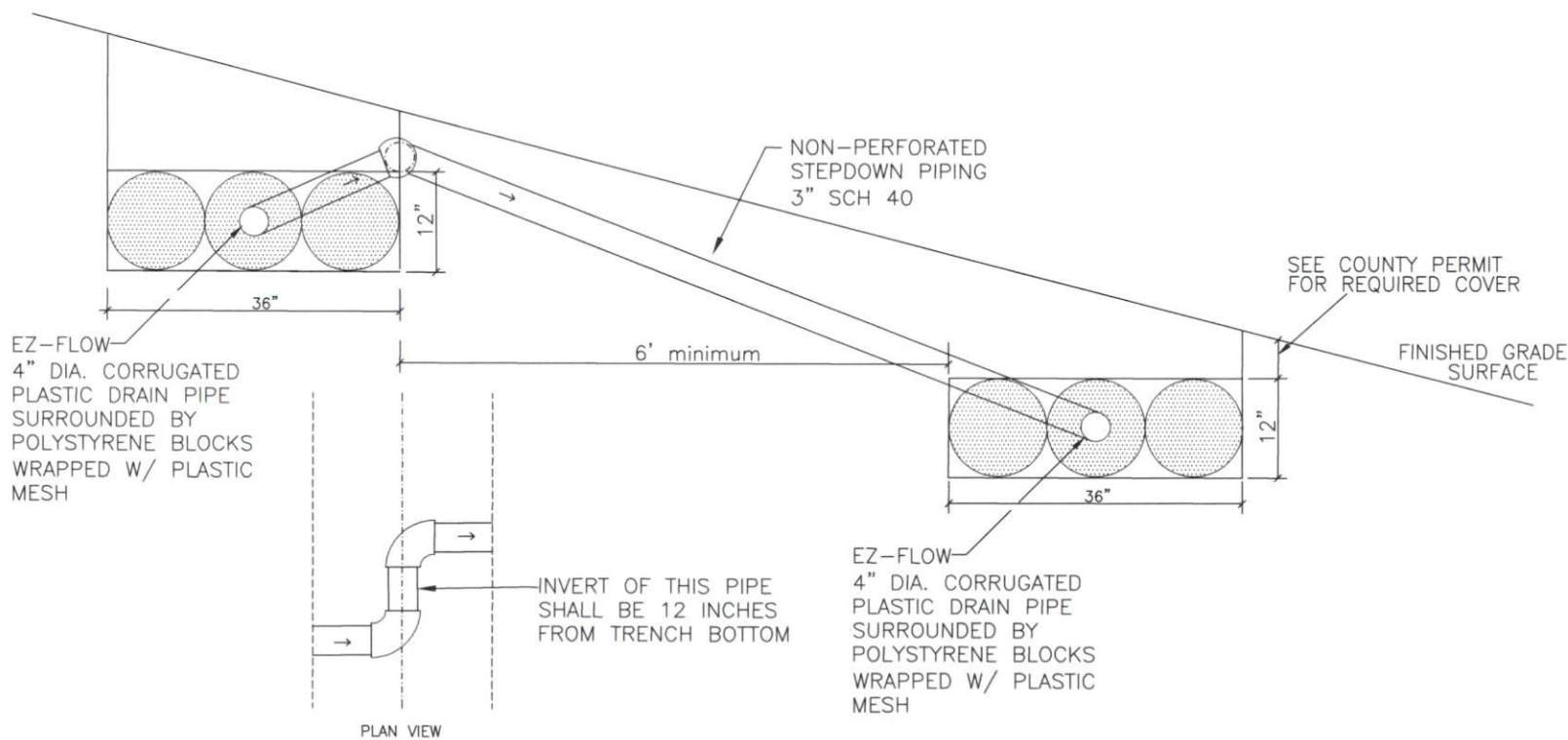
DATE : January 7, 2022  
ENGINEER AND SOIL SCIENTIST CONTACT:  
SCOTT MITCHELL, PE, LSS  
DRAWN BY:  
ADAM AYCOCK, B

Prince Place  
Lot 16  
Trench Detail

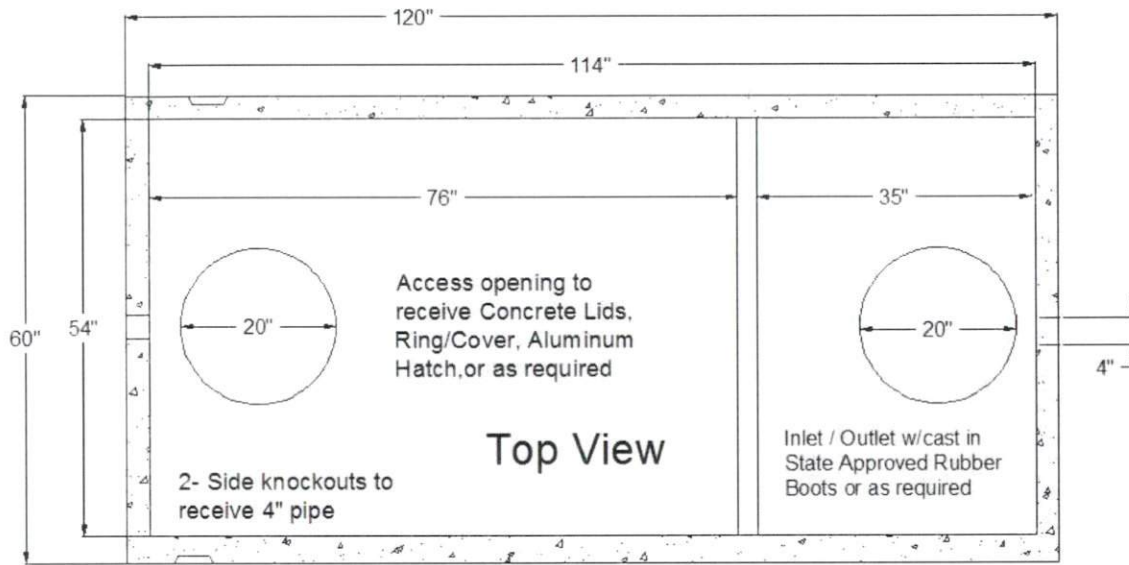


# TRENCH CONNECTION DETAIL FOR SERIAL DISTRIBUTION

N.T.S.



<b>SHEET NUMBER</b>	<b>6 of 6</b>	Printed Place Lot 16 Serial Connection Detail	
REVISION NO. Original Submittal	DATE January 7, 2022	REVISION 1	
		REVISION 2	
		REVISION 3	
		Master Set	
PREPARED FOR : Division Home 300 James River Road Huntersville, NC 28024	DATE : January 7, 2022	ENGINEER AND SEAL SCIENTIST CONTACT: SCOTT MITCHELL, P.E., L.S.S.	DRAWN BY: ADAM AYCOCK, B
<b>MITCHELL ENVIRONMENTAL, PA</b> <b>C-2917</b> <b>1501 LAKESTONE VILLAGE LANE</b> <b>SUITE 205</b> <b>FUQUAY VARINA, NC 27526</b>			



## STB - 345 - Top Seam

Approval Date: 12 - 09 - 99

Liquid Capacity 1007 Gallons

Non Traffic Rated

Reinforcing Schedule: # 3 Grade 60 Rebar

4500 PSI Concrete w/ State Approved Structural Fiber

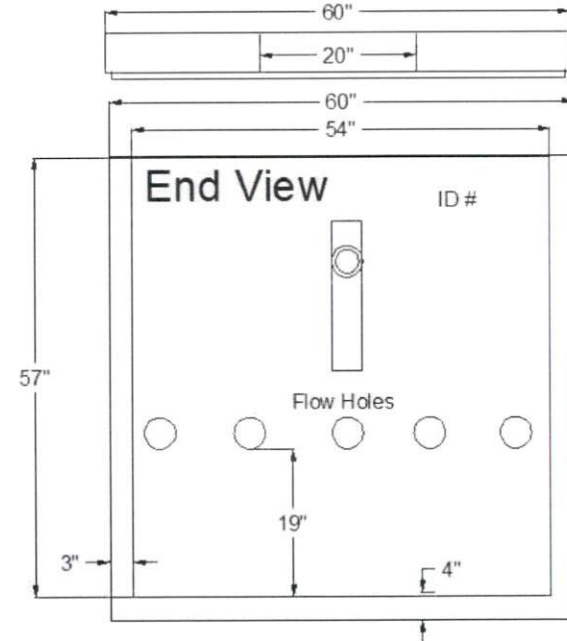
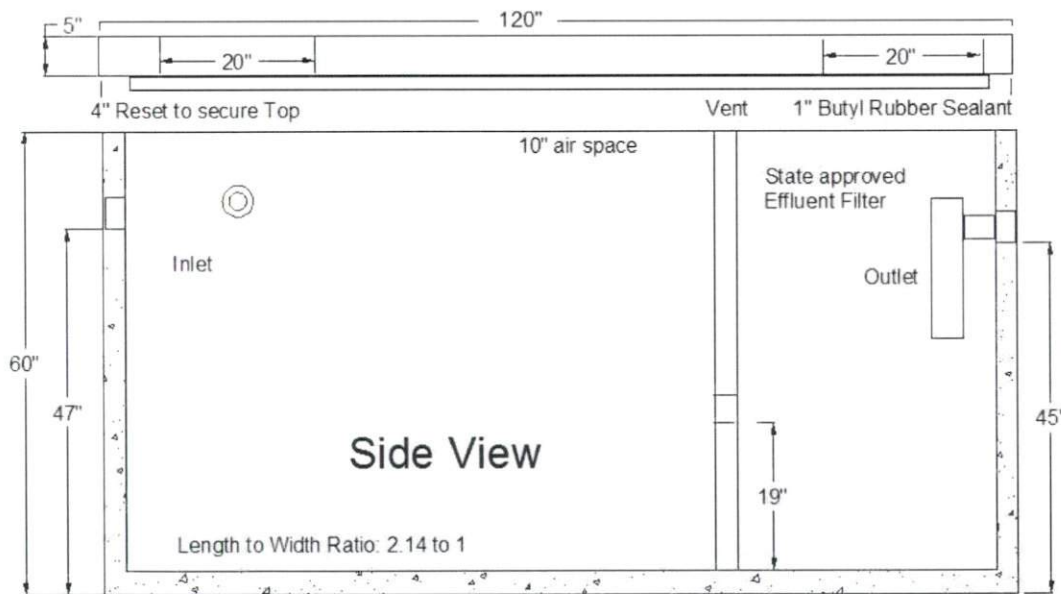
Est. Weight: 8,200 lbs.

Manufactured By:

**GARNERS**  
Septic Tanks, Inc.

Eddie Garner, President  
919-718-5181

121 Stanton Hill Road  
Carthage, NC 28327 Fax 919-775-2229  
Eddie@garnerseptic tanks.com



**PL-68 Filter and Tee**

PL-68 is much more than just an effluent filter. The housing can also be used as an inlet baffle (tee) or an outlet baffle. The housing is designed to accept Polylok's snap in gas deflector to deflect gas bubbles away from the tee and to keep the solids in the tank.

**Features:**

- Offers 68 linear feet of 1/16" filter slots, which significantly extends time between cleaning.
- Accepts 3/4" PVC handle.
- Locks in any 360° position when used with PL-68 Tee.
- PL-68 Housing can be used as an inlet or outlet tee.
- Gasket prevents bypass.

**PL-68 Installation:**

Ideal for residential waste flows up to 800 gallons per day (GPD). Easily installs in any new or existing 4" outlet tee.

1. Locate the outlet of the septic tank.
2. Remove the tank cover and pump tank if necessary.
3. Glue the filter housing to the outlet pipe, or use a Polylok Extend & Lok if not enough pipe exists.
4. Insert the PL-68 filter into tee.
5. Replace and secure the septic tank cover.

**PL-68 Maintenance:**

The PL-68 Effluent Filter will operate efficiently for several years under normal conditions before requiring cleaning. It is recommended that the filter be cleaned every time the tank is pumped, or at least every three years.

1. Do not use plumbing when filter is removed.
2. Pull PL-68 out of the tee.
3. Hose off filter over the septic tank. Make sure all solids fall back into septic tank.
4. Insert filter back into tee/housing.

**Related Products:**

PL-68 Filter Concrete Baffle  
 Extend & Lok™



Extend & Lok™  
 Easily installs into existing tanks.



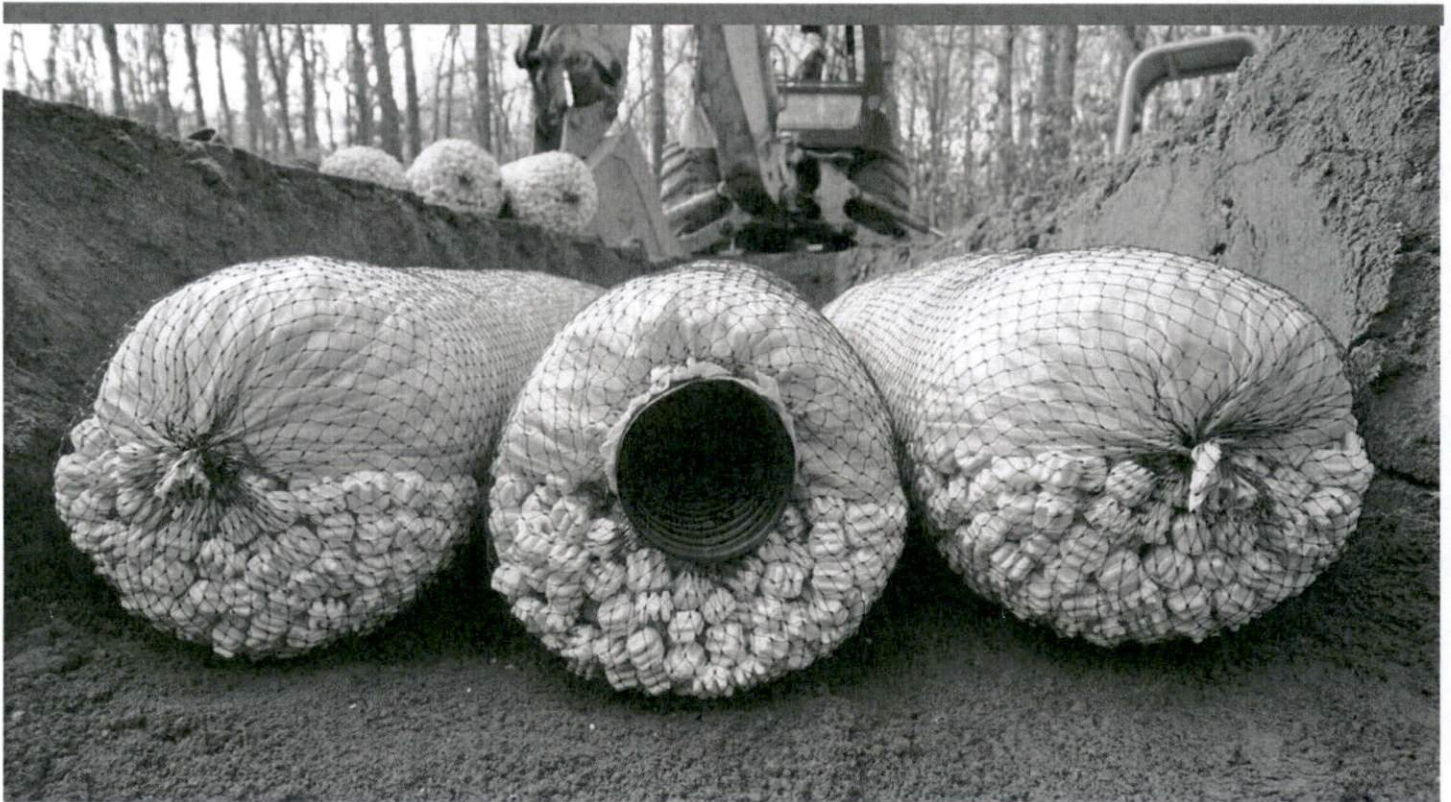
Spacer Bushing  
 4" SCHD 40 to SDR 35



Spacer Bushing  
 4" SCHD 40 to 110mm Pipe



2" Extender



EZflow by Infiltrator is an environmentally friendly replacement to traditional stone and pipe drainfields using an engineered geosynthetic aggregate modular design. The EZflow system is designed to improve infiltration performance by eliminating the fines associated with crushed stone, and reducing compaction and embedment associated with stone. Preassembled units include a 3" or 4" perforated pipe surrounded by aggregate and held in place with a durable high-strength netting. This product comes in easy-to-contour 5' and 10' lengths and in diameters of 7, 8, 9, 10, 12, 13, or 14 inches.

**Lightweight expanded polystyrene**

construction offers structural integrity and resists compaction. Engineered flow-channels increase void space creating improved water flow and greater storage.

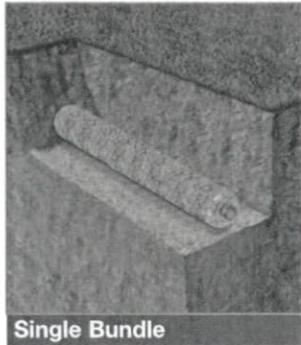


**Compared with stone and pipe, benefits include:**

- Always clean and free of fines
- Bundles are quick to install, saving costs on heavy machinery and labor
- Modular construction allows configurations to match trench dimensions for most system shapes and sizes
- Engineered for optimal storage and absorption efficiencies
- Ability to contour along sloped sites and around trees or landscaping
- Lightweight system is perfect for repairs and tight job sites
- Easily hand-carried into position reducing time and labor
- 5' or 10' lengths with simple snap, internal couplers
- Easier cleanup at the job site with the elimination of stone
- Manufactured from recycled materials rather than a mined natural resource
- A wide variety of diameters and configurations to meet any installation professional's needs
- Approved in many jurisdictions with an increased efficiency rating, reducing drainfield size
- Backed by the leader in the onsite wastewater industry

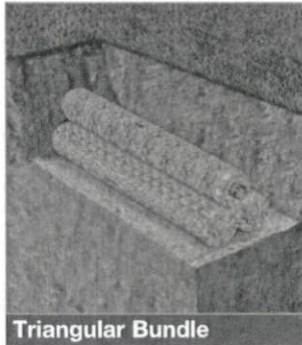


**Bundle System Configurations:** Available in 7", 8", 9", 10", 12", 13" and 14" diameter bundles.



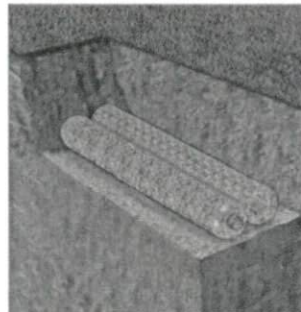
**Single Bundle**

0701P-GEO 1201P-GEO  
0801P-GEO 1401P-GEO  
1201P-GEO 1801P-GEO  
1001P-GEO



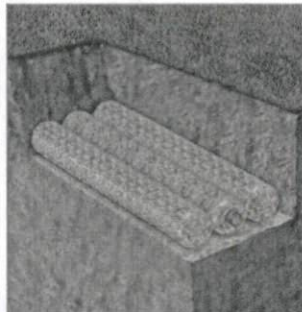
**Triangular Bundle**

1003T-GEO 1303T-GEO  
1203T-GEO 1403T-GEO

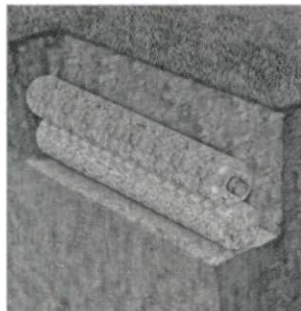


**Horizontal Bundles**

0705H-GEO 1303H-GEO  
0904H-GEO 1202H-GEO  
1002H-GEO 1203H-GEO

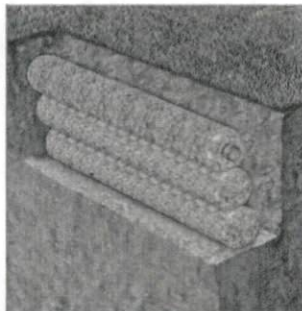


1206H-GEO 1402H-GEO  
1303H-GEO 1802H-GEO



**Vertical Bundles**

1002V-GEO 1006V-GEO 1203V-GEO 1206V-GEO  
1003V-GEO 1202V-GEO 1204V-GEO 1402V-GEO  
1004V-GEO



**Notes:**

1. Other systems include 10" and 12" bed systems. Bed size will dictate the number of bundles.
2. System dimensions are dependent upon bundle diameter and configuration.
3. LLP is for "Low Pressure Pipe" in which a pressurized distribution pipe is field installed within the corrugated pipe.
4. Internal pipe and couplings meet the requirements of ASTM F405.
5. Bundles are also available without geotextile between the netting and synthetic aggregate.

**INFILTRATOR WATER TECHNOLOGIES STANDARD LIMITED WARRANTY**

(a) The structural integrity of each EZflow by Infiltrator expanded polystyrene drainfield system and other accessories manufactured by EZflow by Infiltrator ("Units"), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one year from the date that the septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required by applicable law, the warranty period will begin upon the date that installation of the septic system commences. To exercise its warranty rights, Holder must notify Infiltrator in writing at its Corporate Headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for Units determined by EZflow by Infiltrator to be covered by this Limited Warranty. EZflow by Infiltrator's liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE

(c) This Limited Warranty shall be void if any part of the EZflow system is manufactured by anyone other than EZflow by Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty. Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Infiltrator's installation instructions.

(d) No representative of Infiltrator has the authority to change or extend this Limited Warranty. No warranty applies to any party other than the original Holder.

The above represents the Standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator's Corporate Headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.



4 Business Park Road  
P.O. Box 768  
Old Saybrook, CT 06475  
860-577-7000 • Fax 860-577-7001  
1-800-221-4436  
www.infiltratorwater.com

U.S. Patents: 4,759,661; 5,017,041; 5,156,488; 5,336,017; 5,401,116; 5,401,459; 5,511,903; 5,716,163; 5,588,778; 5,839,844 Canadian Patents: 1,329,959; 2,004,564 Other patents pending. Infiltrator, Equalizer, Quick4, and SideWinder are registered trademarks of Infiltrator Water Technologies. Infiltrator is a registered trademark in France. Infiltrator Water Technologies is a registered trademark in Mexico. Contour, MicroLeaching, PolyTuff, ChamberSpacer, MultiPort, PosiLock, QuickCut, QuickPlay, SnapLock and StraightLock are trademarks of Infiltrator Water Technologies. PolyLok is a trademark of PolyLok, Inc. TUF-TITE is a registered trademark of TUF-TITE, INC. Ultra-Rib is a trademark of IPEX Inc.

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**Contact Infiltrator Water Technologies' Technical Services Department for assistance at 1-800-221-4436**