

# Harnett County Department of Public Health

PERMIT # SED2110-0097

## Operation Permit

521412

New Installation  Septic Tank  Nitrification Line  Repair  Expansion

PROPERTY LOCATION: 175 PRINCE PLACE LN. (CHRISTIAN LT. RD.)

Name: (owner) DAVIDSON HOMES LLC SUBDIVISION PRINCE PLACE LOT # 7

System Installer: FULL CIRCLE ENVIRONMENTAL

Basement with plumbing:  Garage  Number of Bedrooms 4

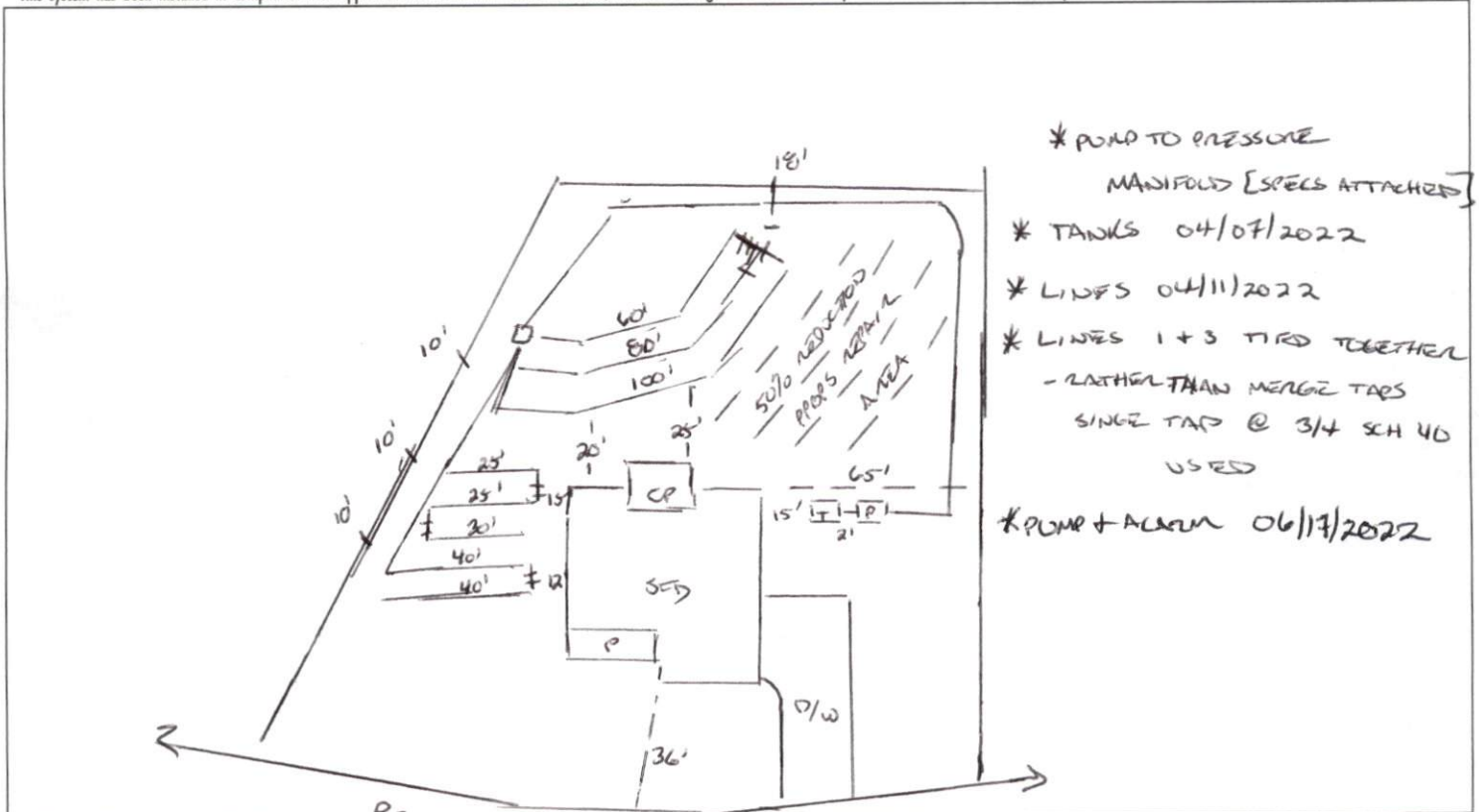
Type of Water Supply:  Community  Public  Well Distance from well NA feet

System Type: 25% REDUCTION SYSTEM III B Types V and VI Systems expire in 5 years.

(In accordance with Table V a)

Owner must contact Health Department 6 months prior to expiration for permit renewal.

This system has been installed in compliance with applicable North Carolina General Statutes, Rules for Sewage Treatment and Disposal, and all conditions of the Improvement Permit and Construction Authorization.



\* PUMP TO PRESSURE  
MANIFOLD [SPECS ATTACHED]  
\* TANKS 04/07/2022  
\* LINES 04/11/2022  
\* LINES 1 + 3 TIED TOGETHER  
- RATHER THAN MERGE TAPS  
SINGLE TAP @ 3/4 SCH 40  
USED  
\* PUMP + ALARM 06/17/2022

**PERMIT CONDITIONS:**

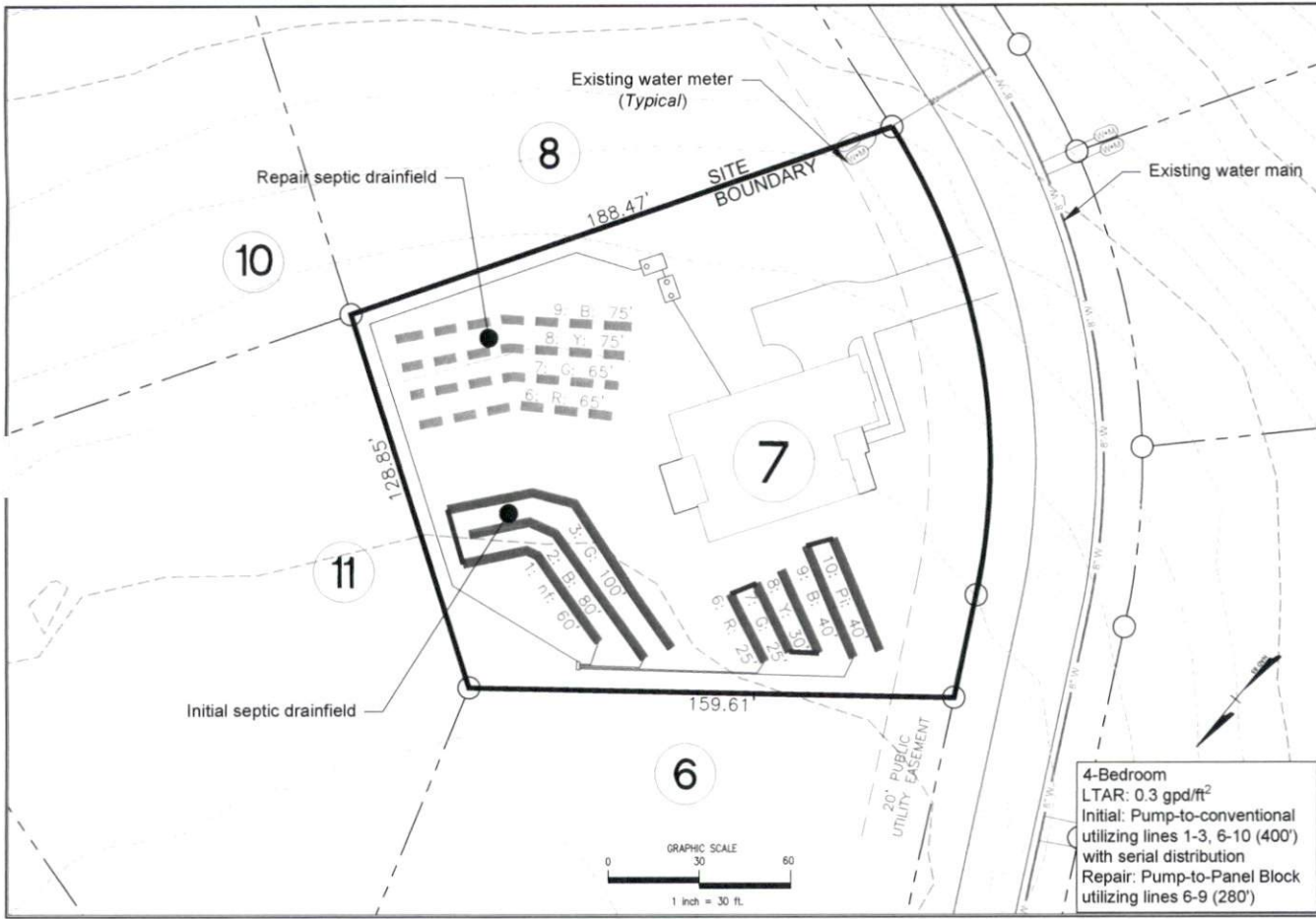
- I. Performance: System shall perform in accordance with Rule .1961.
- II. Monitoring: As required by Rule .1961.
- III. Maintenance: As required by Rule .1961. Other: \_\_\_\_\_  
Subsurface system operator required? Yes  No   
If yes, see attached sheet for additional operation conditions, maintenance and reporting.
- IV. Operation: \_\_\_\_\_
- V. Other: \_\_\_\_\_

D-Box  Pump  Alarm  H2O Line  PWR Line

Following are the specifications for the sewage disposal system on the above captioned property.

Type of system:  Conventional  Other EE FLOW III B Septic Tank: 1000 gallons Pump Tank: 1500 gallons  
Subsurface No. of exact length width of depth of  
Drainage Field ditches MULTI of each ditch MULTI feet ditches 3 feet ditches 24 inches  
French Drain Required: \_\_\_\_\_ Linear feet

Authorized State Agent [Signature] Date 06/17/2022



4-Bedroom  
 LTAR: 0.3 gpd/ft<sup>2</sup>  
 Initial: Pump-to-conventional  
 utilizing lines 1-3, 6-10 (400')  
 with serial distribution  
 Repair: Pump-to-Panel Block  
 utilizing lines 6-9 (280')

<b>MITCHELL ENVIRONMENTAL, PA</b> C-2911 1501 LAKESTONE VILLAGE LANE SUITE 205 FUQUAY VARINA, NC 27526		REVISION NO. Original Submittal Revision 1 Revision 2 Revision 3 Issue Set	DATE October 19, 2021	SHEET NUMBER <b>1 of 8</b>
PREPARED FOR: <b>Dalhousie Homes</b> 1501 Lakestone Village Lane Fuquay Varina, NC 27526		PRICE PLACE Overall Significance		
DATE: October 19, 2021 ENGINEER AND SEAL SCIENTIST CONTACT: SCOTT MITCHELL, P.E., L.S.E. DRAWN BY: ADAM HAYWOOD, D.				



**PRESSURE MANIFOLD DESIGN**

Name: Davidson Homes P.I.N. #: 0633-76-4647 D #: N/A  
 Address: Prince Place Drive Subdiv: Prince Place Lot#: 7  
 # of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.300 gal/day/sq.ft  
 Septic Tank: 1000 gals (min.) Pump Tank: 1200 gals (min.) Sq. Foot: 1200 Stone Depth: N/A  
 (EZ Flow)  
 Number of Taps: 5 Length of Trenches: Varies ft(See Tap Chart for Details)  
 Depth of Trenches: see Harnett County Permit Manifold Length: 48 in  
 Manifold Diameter: 4 in sch 80pvc (minimum) Tap Configuration: 6 in spacing 1 side(s) of manifold  
 Supply Line: length: 235 ft Diameter: 2 in sch 40pvc  
 Friction Loss + Fitting Loss: 5.39 ft(supply line length + 70' for fittings in pump tank)  
 Design Head: 2.0 ft Elevation Head: 9.55 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: 18.33 ft Pump to Deliver: 29.34 gals/min at 18.33 ft head  
 Dosing Volume: 171.60 gals.  
 Drawdown: 171.60 gals divided by 19 gals/in = 9.03 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**

line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1 & 3	rf & G	4.70	99.40	160	(2) - 1/2in SCH 80	10.96	192.00	480	0.4000
2	Blue	4.95	99.15	80	1/2in SCH 80	5.48	96.00	240	0.4000
6 & 7 & 8	R & G & Y	5.59	98.51	80	1/2in SCH 80	5.48	96.00	240	0.4000
9 & 10	B & Pi	6.23	97.87	80	1/2in SCH 80	5.48	96.00	240	0.4000
		<b>total</b>	<b>feet =</b>	<b>400</b>	<b>gal/min =</b>	<b>27.4</b>	<b>LTAR =</b>		<b>0.3000</b>
% of Pipe Vol.		<b>66</b>	<b>Des. Flow</b>		<b>480.00</b>	<b>(ltar + 5%)</b>		<b>0.3150</b>	
Dose Volume		<b>171.60</b>	<b>Pump Run=</b>		<b>17.52</b>	<b>(ltar W/ INOV)</b>		<b>0.4000</b>	
Dose Pump Time		<b>6.26</b>	<b>Tank Gal/IN</b>		<b>19</b>	<b>(ltar + 5%)</b>		<b>0.4200</b>	
Drawdown in Inches		<b>9.03</b>	<b>Elev. Head</b>		<b>9.55</b>				
Supply Line Length		<b>235</b>							
<b>Comments:</b>									



Repair System

**PRESSURE MANIFOLD DESIGN**

Name: Davidson Homes P.I.N. #: 0633-76-4647 D #: N/A  
 Address: Prince Place Drive Subdiv: Prince Place Lot#: 7  
 # of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.300 gal/day/sq.ft  
 Septic Tank: 1000 gals (min.) Pump Tank: 1200 gals (min.) Sq. Foot: 840 Stone Depth: N/A  
 Number of Taps: 4 Length of Trenches: Varies ft(See Tap Chart for Details) (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: 135 ft Diameter: 2 in sch 40pvc  
 Friction Loss + Fitting Loss: 2.40 ft(supply line length + 70' for fittings in pump tank)  
 Design Head: 2.0 ft Elevation Head: 9.16 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: 14.95 ft Pump to Deliver: 23.86 gals/min at 14.95 ft head  
 Dosing Volume: 120.12 gals.  
 Drawdown: 120.12 gals divided by 19 gals/in = 6.32 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**

line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
6	Red	5.59	98.51	65	1/2in SCH 80	5.48	120.00	195	0.6154
7	Green	5.72	98.38	65	1/2in SCH 80	5.48	120.00	195	0.6154
8	Yellow	5.91	98.19	75	1/2in SCH 80	5.48	120.00	225	0.5333
9	Blue	6.23	97.87	75	1/2in SCH 80	5.48	120.00	225	0.5333
		<b>total</b>	<b>feet =</b>	<b>280</b>	<b>gal/min =</b>	<b>21.9</b>		<b>LTAR =</b>	<b>0.3000</b>
% of Pipe Vol.		<b>66</b>		<b>Des. Flow</b>	480.00			<b>(Itar + 5%)</b>	0.3150
Dose Volume		120.12		<b>Pump Run=</b>	21.90			<b>(Itar W/ INOV)</b>	0.6000
Dose Pump Time		5.48		<b>Tank Gal/IN</b>	19			<b>(Itar + 5%)</b>	0.6300
Drawdown in Inches		6.32		<b>Elev. Head</b>	9.16				
Supply Line Length		135							
Comments:									