

CERTIFICATE OF COMPLETION / OPERATIONAL PERMIT

Name: (owner) Kern Anderson Const. ☒ New Installation ☒ Septic Tank
Property Location: SR# 1415 ☐ Repairs ☒ Nitrification Line
Subdivision Woodland Ridge Lot # 7
Contractor: Alternatives By Choice Registration # _____
Basement with Plumbing: ☐ Garage: ☐ (James R. Brown)
Water Supply: ☐ Well ☒ Public ☐ Community
Distance From Well: 50 ft. +

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

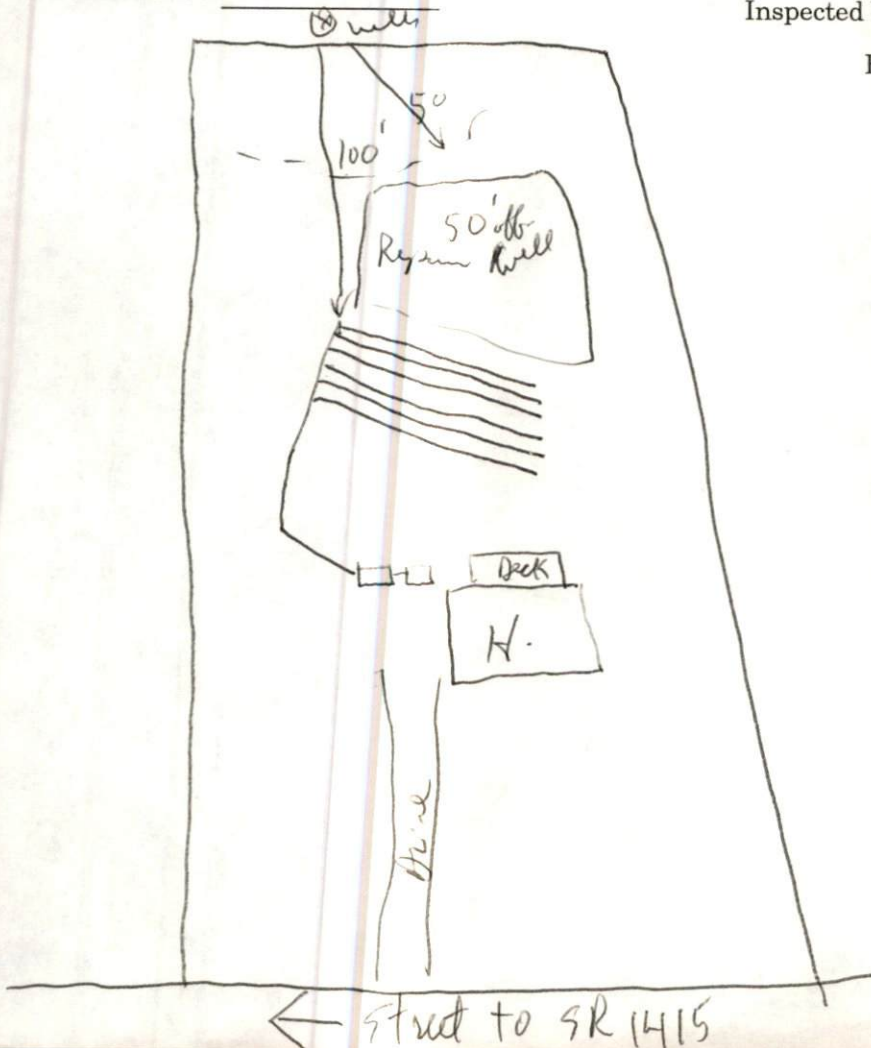
Type of system: ☐ Conventional ☒ Other LPP
Size of tank: Septic Tank: 1000 gallons Pump Tank: 1000 gallons
Subsurface Drainage Field No. of ditches 6 exact length of each ditch 80 ft. width of ditches 10" depth of ditches 12-14 in.
French Drain: _____ Linear feet

PERMIT NO. _____

Date: 07-21-93

Inspected by: J. H. Byrd R.S.

Environmental Health Specialist



DATE OF INSPECTION 5-25-04PERMITTEE: NAME Leon Anderson Const.owner: Tom Goebel
81 Woodland Ridge Dr.ADDRESS Lot 7 Woodland RidgePERMIT # 7071 TAX MAP# _____ PARCEL _____ PIN _____

STATUS	CODE	DESCRIPTION
<u>S</u>	COM01	Collection System
<u>S</u>	COM02	Septic Tank
<u>S</u>	COM03	Pump Tank
<u>NA</u>	COM04	Sand Filter
<u>S</u>	COM05	Supply Lines
<u>S</u>	COM06	Distribution Devices
<u>S</u>	COM07	Ground Absorption Field
<u>S</u>	COM08	General

DELIVERY RATE 18.18 4.5" / 5 minutes assuming 20.2 gpiWRITTEN COMMENTS: flushed all laterals and reset head @ 2'
installed 4" PVC outlet tee w/ Zoeller filter
designed POR 41 gpmCERTIFIED OPERATOR INFORMATION: NAME: Ricky Holland
ADDRESS: 554 Homestead Lane
Angier, NC 27501PHONE: 639-8929CERTIFIED OPERATORS SIGNATURE Ricky Holland #15416

Status Codes

S	Satisfactory
U	Unsatisfactory
N/A	Not Applicable
M	Marginal

Recommended To owner to increase
use of copper sulfate.6-11-04 Faxed in report.Attention: Oliver,Please recommend further
instructions referencing flow rate.Thank youRicky Holland

MICHAEL G. BENNETT, R.S.
P.O. Box 583
Benson, N.C. 27504
phone (919) 897-8790

LOW PRESSURE PIPE SEPTIC SYSTEM - SPECIFICATIONS

NAME Billy Anderson Builders LOCATION SR 1415
ADDRESS % Billy Anderson
Fuquay - Varing Lot 7 Woodland Ridge
NC PHONE 552-6914 COUNTY Harnett

☒ RESIDENTIAL (single family dwelling) - # of bedrooms 3
☐ BUSINESS (office / warehouse) - # of employees
☐ OTHER (describe)
DESIGN FLOW 360 gpd LTAR (long term acceptance rate) 0.15

NITRIFICATION FIELD

SIZE: 2400 ft² (design flow 360 gpd + LTAR 0.15 g/ft²/day
linear ft. 480' configuration 6 laterals - 80' each PVC size 1 1/2" 160psi
(1 1/2" for laterals > 70') better
SUPPLY LINE (sch.40 PVC): length 120 ft size 2"
MANIFOLD (sch.40 PVC): length 35' size 4" Placement side Tee up
TRENCH WIDTH 10" GRAVEL DEPTH 8" GRAVEL SIZE 3/8"-1" TRENCH DEPTH 12"-14"

PUMP and ACCESSORIES

1000 gallon Septic Tank
1000 gallon Pump Tank

DESIGN HEAD 2.0 ft
ELEVATION HEAD 5.9 ft (pump elevation 94.1' = top lateral 100.0')
FRICTION LOSS 4.5 ft (maximum 120'/100' X 3.7')
FITTINGS LOSS .9 ft (friction loss X 0.2)
TDH 13.3 ft (total dynamic head) - use 15'

MANIFOLD VOLUME 23.14 gal (length 35' ft X 66.1 gal/100ft.)
SUPPLY LINE VOLUME 20.88 gal (length 120' ft X 17.4 gal/100ft.)
LATERAL VOLUME 58.10 gal (length 480 ft X (50R21) 12.1 gal/100ft.)

DOSING VOLUME 327 gal (5 x lateral vol + manifold vol = 313.6
(10 x lateral vol + manifold vol = 604.1)

DRAW DOWN 16 in (dosing volume 327 g X 49" liquid depth
P tank volume 1000 g)

SING RATE 38.2 gpm (see flow chart) - actual

UP RUN TIME 8.6 min. (dosing volume 327 gal
dosing rate 38.2 gal/min.)

614-4742

PUMP (TDH 15' GPM 41) Hydromatic SP40 ml - 4/10 hp
 CONTROLS - Control Panel - i.e. SSE 1102-01 (OR) Mercury Float with a
piggy-back plug in a NEMA 4X enclosure with Tank Alert Alarm System
 CHECK VALVE yes GATE VALVE(S) 2 * ANTI-SIPHON / AIRLOCK HOLE yes

FLOW CHART - 80' side manifold

lat #	elev	diff	head	hole size	hole flow	# holes	spacing	lat flow	flow/lin. ft	1st/la hole
Top 1,	100.0'	0'	2.0'	5/32"	.41	19	4'	7.79		4'
2,	99.8'	.2'	2.2'		.43	17	4'	7.31		8'
3,	99.5'	.5'	2.5'		.46	15	5'	6.90		5'
4,	99.3'	.7'	2.7'		.47	13	6'	6.11		4'
5,	99.1'	.9'	2.9'		.49	11	7'	5.39		5'
6,	98.8'	1.2'	3.2'	↓	.52	9	9'	4.68		4'

Flow Reduction: 7.79 6 laterals - 3% Slope 2.00 airlock anti-siphon
 (Field taper) - 4.68
 TOTAL DOSING RATE 40.18 GPM
 * $3.11 \div 7.79 = 39.9\%$

* COMMENTS Field taper increased due to length of draining supply line.
one gate valve at field - gate valve in pump tank optional.
4" manifold due to cross sectional ratio - 1 1/2" laterals due to
length > 70'. Sch 40 Turn-ups with threaded end caps protected
by 6" PVC sleeves.

Billy Anderson

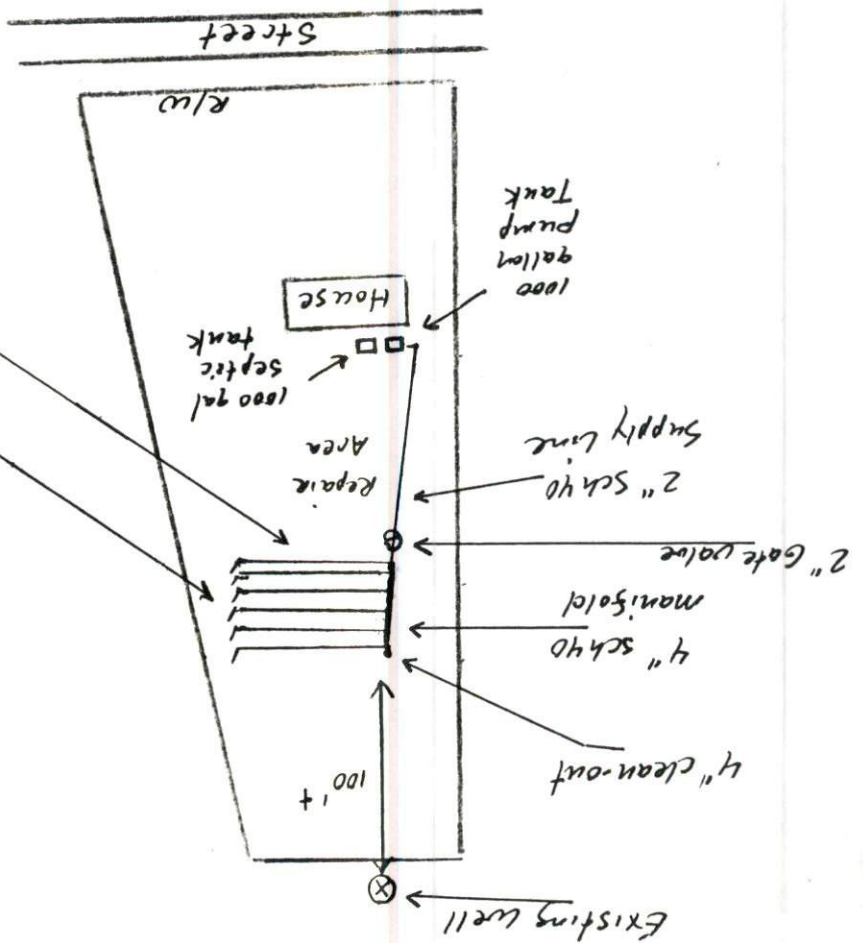
Lot 7 Woodland Ridge

Sketch = not to scale

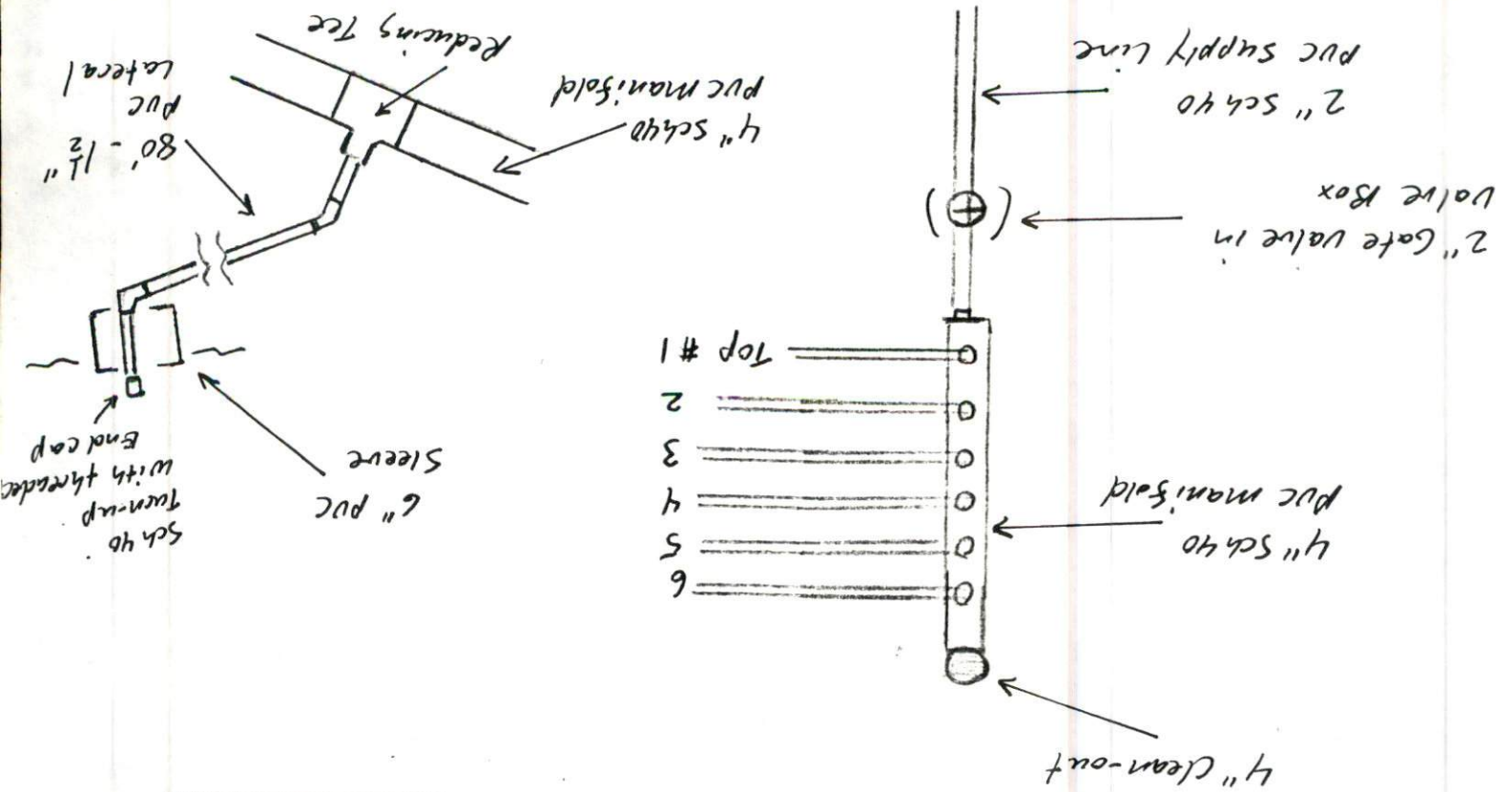
Public Water System

Sch 40 Turnups 1 1/2" PVC with threaded end caps and 6" PVC sleeve

6 - 80' laterals - recommend 200 psi or better SDR 21 160 psi - required (or better)



Schematic - not to scale



Billy Anderson Builders - Lot 7 woodland Ridge

Summary

1000 gallon Septic Tank

1000 gallon Pump Tank

Total Dynamic Head = 15'

Dosing Rate = 41 gpm

Pump on 4" Blocks

Check Valve, Threaded Union, 2 - 2" Gate Valves

120' - 2" sch 40 pvc supply line - 35' - 4" sch 40 PVC Manifold

6 - 80' laterals - 1 1/2" PVC - recommend 200 psi or better

6 - 1 1/2" sch 40 PVC Turn-ups with threaded endcaps and 6" PVC sleeves.

Dosing Volume = 327 gallons - Draw Down = 16"

Trench Width = 10" Trench Depth = 12"-14"

Gravel Depth = 8" Gravel size = 3/8" - 1"

Design Head = 2'

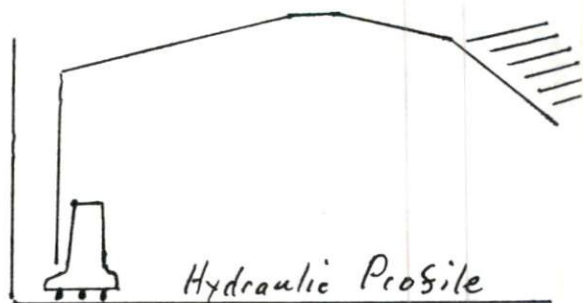
Side Manifold - tee up

NEMA 4X Control Panel - or -

3/16" Anti-air lock hole

Mercury float switch in NEMA 4X
Enclosure with piggyback plug - plus
Tank Alert Alarm system on separate circuit

2' undisturbed earth, Dam between manifold and gravel.



	Lateral #	Hole size	# Holes	Spacing	1st & Last Hole
Top	1	5/32"	19	4'	4'
	2		17	4'	8'
	3		15	5'	5'
	4		13	6'	4'
	5		11	7'	5'
	6		9	9'	4'