



NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**

ROY COOPER • Governor

KODY H. KINSLEY • Secretary

MARK BENTON • Chief Deputy Secretary for Health

SUSAN KANSAGRA • Assistant Secretary for Public Health

Division of Public Health

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

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

County: Harnett

PIN/Lot Identifier: 9557-80-8085

Issued To: Glenwood Homes, LLC

Property Location: 79 Fern Ridge Drive - Cameron, NC 28326

Subdivision (if applicable) Carolina Seasons Phase III Lot #: 3 Block: _____ Section: _____

LSS Report Provided: Yes ☒ No ☐

If yes, name and license number of LSS: Alex Adams - LSS#1247

New ☒ Expansion ☐ System Relocation ☐ Change of Use ☐

Facility Type: SFH

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

Design Wastewater Strength: ☒ Domestic ☐ High Strength ☐ Industrial Process Wastewater

Proposed Design Daily Flow: 480 GPD Proposed LTAR (Initial): 0.8 Proposed LTAR (Repair): 0.8

Proposed Wastewater System Type*: Accepted Status (Initial) Pump Required: ☒ Yes ☐ No ☐ May be required

Proposed Wastewater System Type*: Accepted Status (Repair) Pump Required: ☒ Yes ☐ No ☐ May be required

**Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*

Effluent Standard: ☒ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW

Saprolite System (Initial): ☐ Yes ☒ No Saprolite System (Repair): ☐ Yes ☒ No

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

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

Usable Depth to LC (Initial)*: 48 Usable Depth to LC (Repair)*: 48 ** Limiting Condition*

Max. Trench Depth (Initial)*: 24 Max. Trench Depth (Repair)*: 24 ** Measured on the downhill side of the trench*

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

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

Drainfield location meets requirements of Rule .0508: Yes ☒ No ☐ Drainfield location meets requirements of Rule .0601: Yes ☒ No ☐

Permit valid for: ☒ Five years [site plan submitted pursuant to GS 130A-334(13a)] ☐ No expiration [plat submitted pursuant to GS 130A-334(7a)]

Permit conditions:

Licensed Soil Scientist Print Name: Alex Adams

Licensed Soil Scientist Signature: Alex Adams Date: 5-29-25

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

See attached site sketch



This Section for Local Health Department Use Only

Initial submittal received: 6/4/25 by MD
Date Initials

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

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

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

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

The following items are missing:

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

State Authorized Agent: _____ Date: _____

☒ Complete

State Authorized Agent: MD RETH Date: 6-9-25

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This permit is subject to revocation if the site plan, plat, or the intended use changes. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of 15A NCAC 18E and to the conditions of this permit.

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

Improvement Permit Expiration Date: 6-9-30

See attached site sketch



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

County: Harnett

Pre-Construction Conference Required: Yes ☐ No ☒

PIN/Lot Identifier: 9557-80-8085

Issued To: Glenwood Homes, LLC

Property Location: 79 Fern Ridge Drive - Cameron, NC 28326

AOWE/PE Plans/Evaluations Provided: Yes ☒ No ☐ If yes, name and license number of AOWE/PE: Alex Adams - AOWE#10021E

Facility Type: SFH

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

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

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

Crawl Space? ☐ Yes ☒ No Slab Foundation? ☒ Yes ☐ No

Type of Wastewater System* Accepted Status (Initial) Accepted Status (Repair)

**Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*

Design Daily Flow: 480 GPD Wastewater Strength: ☒ Domestic ☐ High Strength ☐ Industrial Process WW

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

Effluent Standard: ☒ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW

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

Installation Requirements/Conditions

Septic Tank Size: 1000 gallons Total Trench/Bed Length: 240 feet Trench/Bed Spacing: 9 feet on center

Trench/Bed Width: 36 inches LTAR: 0.8 gpd/ft² Usable Depth to LC (Initial)*: 48 ^{*Limiting condition}

Soil Cover: 6 inches Slope Corrected Maximum Trench/Bed Depth†: 24 inches ^{* Measured on the downhill side of the trench}

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

Pump Requirements: 20.7 ft. TDH vs. 28.4 GPM Grease Trap Size (if applicable): _____ gallons

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

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

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

Multi-party Agreement Required [.0204(g)]: ☐ Yes ☒ No Declaration of Restrictive Covenants: ☐ Yes ☒ No

Easement, Right-of-Way, or Encroachment Agreement Required [.0301(b)]: ☐ Yes ☒ No

Management Entity Required: ☐ Yes ☒ No Minimum O&M Requirements: _____

Permit conditions:

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached site sketch. This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of 15A NCAC 18E, or 15A NCAC 18A .1900, as applicable, and to the conditions of this permit.

AOWE/PE Print Name: Alex Adams

AOWE/PE Signature: Alex Adams

Date: 5-29-25

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

See attached site sketch



This Section for Local Health Department Use Only

Initial submittal received: 6/4/25 by uo
Date Initials

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

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

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

Construction Authorization is determined to be:

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

The following items are missing: _____

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

State Authorized Agent: _____ Date: _____

☒ Complete

State Authorized Agent: [Signature] Date of Issuance: 6-9-25

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

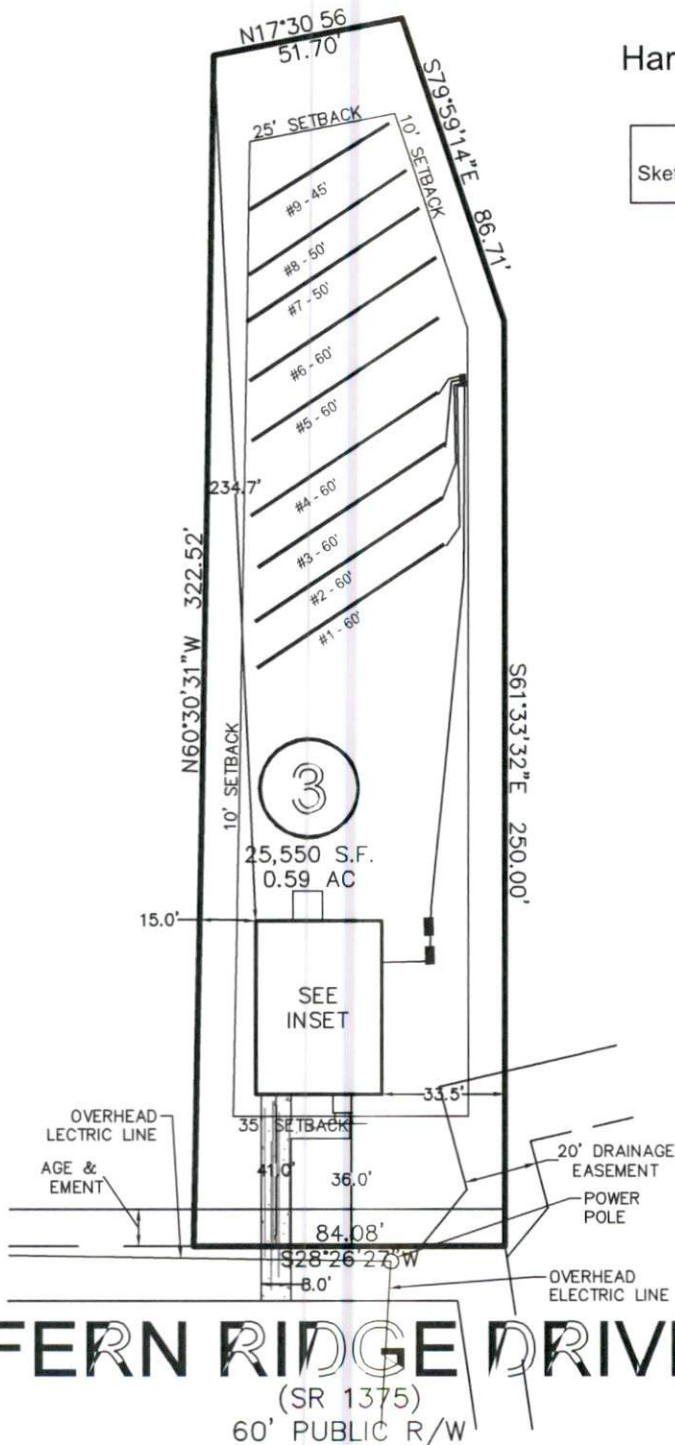
The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to plans, evaluations, preconstruction conference findings,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

Construction Authorization Expiration Date: 6-9-30

See attached site sketch

Lot #3 - Carolina Seasons Phase 3
4-Bedroom Septic Design
79 Fern Ridge Drive
Glenwood Homes, LLC
Harnett County PIN: 9556-80-8085

*Not a Survey
Sketched from a plot plan supplied by owner



System: Pressure manifold
Lines: 1-4 (240')
0.8 LTAR
24" Max Trench Bottom
Accepted Status System
Repair: Pressure Manifold
Lines: 5-9 (265')
0.8 LTAR
24" Max Trench Bottom
Accepted Status System

**1000 Gallon Septic and Pump Tanks
Tank and trenches to be located minimum of 10'
from any property line and minimum of 5'
from any building foundation.
*Do Not Cut, Fill, or Alter Drainfield or Repair Area
*Comply with all setbacks
*Contact local health dept. and/or Alex Adams prior to
or during installation with any questions or concerns.

Adams
Soil Consulting
919-414-6761
Job #2151
5-27-25

GRAPHIC SCALE
1" = 50'



RESIDENTIAL PRESSURE MANIFOLD DESIGN

Permit # Carolina Seasons Phase 3 - Lot #3

79 Fern Ridge Drive

of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.8000 gal/day/sq.ft

Septic Tank: 1000 gals Pump Tank: 1000 gals Sq. Foot: 720 System Type: Accepted

Number of Taps: 4 Length of Trenches: 240 ft(See Tap Chart for Details)

Depth of Trenches: 24 in Manifold Length: 42 in

Manifold Diameter: 4in sch 80pvc Tap Configuration: 6 in spacing 1 side(s) of manifold

Supply Line: length: 75 ft Diameter: 2 in sch 40pvc

Friction Loss + Fitting Loss: 2.74 ft(supply line length + 70' for fittings in pump tank)

Design Head: 2 ft Elevation Head: 16.00 ft

Total Head: 20.74 ft Pump to Deliver: 28.44 gals/min at 20.74 ft head

Dosing Volume: 117 gals,

Drawdown: 117 gals divided by 20 gals/in = 5.9 inches

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

TAP CHART

Benchmark	is = 100.00	set at						Design Head:	2		
Pump tank elev.			100.00	Pump elev.	95.00			Manifold elev.	111.00		
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	# of Panels (PPBPS)	
1			110.00	60	1/2in SCH 40	7.11	120.00	180	0.6667		
2			111.00	60	1/2in SCH 40	7.11	120.00	180	0.6667		
3			112.00	60	1/2in SCH 40	7.11	120.00	180	0.6667		
4				60	1/2in SCH 40	7.11	120.00	180	0.6667		
			100.00			0	0.00	0	#DIV/0!		
			100.00			0	0.00	0	#DIV/0!		
			100.00			0	0.00	0	#DIV/0!		
			100.00			0	0.00	0	#DIV/0!		
			100.00			0	0.00	0	#DIV/0!		
			Total Feet =	240	gal/min =	28.44	LTAR =		0.8000		
			Feet Required =	150	Velocity =	2.72	(ltar + 5%)		0.8400		
				Des. Flow	480	(ltar w/25% red)		1.0667			
				Pump Run=	16.88	(ltar + 5%)		1.1200			
				Tank Gal/IN	20						
				Elev. Head	16.00						
Total # of Panels (PPBPS)											
% of Dose Vol.			75								
Dose Volume			117								
Dose Pump Time			4.11								

Total # of Panels (PPBPS)

% of Dose Vol. 75

Dose Volume 117

Dose Pump Time 4.11

Drawdown in Inches 5.9

Comments: