

# North Carolina 2018 - R402.1.5 Total UA

## Property

152 Walker Grove Lane  
Lillington, NC 27546  
Model: 2478 Lenox E-L2\_4  
Community: Walkers Grove

Walkers Grove 12  
True\_Walkers Grove 12\_2478  
Lenox E-L2\_4\_GL\_WinPerPlan

## Organization

Performance Point, LLC.  
Rick Blair  
704-614-7175

## Builder

True Homes

## Inspection Status

Results are projected

**This report is based on a proposed design and does not confirm field enforcement of design elements.**

## Building UA

Elements	NC Reference	As Designed
Ceilings	44.7	38.5
Above-Grade Walls	188.3	189.2
Windows, Doors and Skylights	103.8	90.8
Slab Floor:	76.3	76.3
Framed Floors	20.7	20.9
Foundation Walls	0.0	0.0
Rim Joists	10.8	10.6
<b>Overall UA (Design must be equal or lower):</b>	<b>444.6</b>	<b>426.3</b>

## Requirements

<input checked="" type="checkbox"/>	402.1.5	Total UA alternative compliance passes by 4.1%.
<input checked="" type="checkbox"/>	402.3.2	Average SHGC: 0.30 Max SHGC: 0.30
<input checked="" type="checkbox"/>	R402.4.2.2	Air Leakage Testing Air sealing is 5.00 ACH at 50 Pa. It must not exceed 5.00 ACH at 50 Pa.
<input checked="" type="checkbox"/>	R402.5	Area-weighted average fenestration SHGC
<input checked="" type="checkbox"/>	R402.5	Area-weighted average fenestration U-Factor
<input checked="" type="checkbox"/>	R404.1	Lighting Equipment Efficiency
<input checked="" type="checkbox"/>	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.
<input checked="" type="checkbox"/>	R403.3.1	Duct Insulation
<input checked="" type="checkbox"/>	403.3.3	Duct Testing

**Design exceeds requirements for North Carolina 2018 Prescriptive compliance by 4.1%.**

Name: Rick Blair

Signature:



Organization: Performance Point, LLC.

Digitally signed:

10/21/21 at 6:21 AM

## Ekotrope RATER - Version 4.0.1.2766

North Carolina 2018 Prescriptive compliance results calculated using Ekotrope RATER's energy and code compliance algorithm, including appropriate amendments.  
Ekotrope RATER is a RESNET Accredited HERS Rating Tool. All results are based on data entered by Ekotrope users.  
Ekotrope disclaims all liability for the information shown on this report.

# Energy Code Inspection Checklist

## Property

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## General Building Information


Conditioned Area (sq ft)	2,539
Conditioned Volume (cubic ft)	22,906
Insulated Shell Area (sq ft)	5,916.3


The building energy model in Ekotrope reflects the building assemblies and energy features listed below. Sometimes energy features will change in the field from what has been modeled. The inspection process should identify any changes and ensure that the home continues to meet the applicable energy code.

## Slab

 Name: House Slab(1,049 s.f., 158 ft. exterior perimeter)  
R-10 perimeter insulation, R-0 under slab insulation.

## Framed Floor


 Name: Over Garage (434 s.f.)  
R-0 continuous insulation, R-19 cavity insulation  
Insulation Grade: I


 Name: Cantilever (7 s.f.)  
R-0 continuous insulation, R-19 cavity insulation  
Insulation Grade: I

## Foundation Wall

None Present

## Above Grade Wall

 Name: 2x4 Ambient (2,327.5 s.f.)  
R-0 continuous insulation, R-15 cavity insulation  
Insulation Grade: I

 Name: Niche (2 s.f.)  
R-3 continuous insulation, R-0 cavity insulation  
Insulation Grade: I

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Name: 2x4 Garage (377.5 s.f.)  
R-0 continuous insulation, R-15 cavity insulation  
Insulation Grade: I



Name: 2x4 Kneewall (35.1 s.f.)  
R-0 continuous insulation, R-15 cavity insulation  
Insulation Grade: I

## Rim Joist



Name: Ambient (108.4 s.f.)  
R: 13.30



Name: Attic (34 s.f.)  
R: 13.30



Name: Garage (51.8 s.f.)  
R: 13.30

## Ceiling / Roof



Name: 2nd Fl Ceiling 12:12 (60 s.f.)  
R-28.5 continuous insulation, R-9.5 cavity insulation  
Insulation Grade: I



Name: 2nd Fl Ceiling 10:12 (188 s.f.)  
R-28.5 continuous insulation, R-9.5 cavity insulation  
Insulation Grade: I



Name: 2nd Fl Ceiling 6:12 (1,242 s.f.)  
R-28.5 continuous insulation, R-9.5 cavity insulation  
Insulation Grade: I

## Opaque Door



Name: Front Door (20 s.f.)  
R: 7.00



Name: Garage Entry (17.8 s.f.)  
R: 7.00

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## Glazing

- Name: Front (60 s.f.), U: 0.330, SHGC: 0.3, Orientation: EAST
- Name: Front Shd. (30 s.f.), U: 0.330, SHGC: 0.3, Orientation: EAST
- Name: Right (30 s.f.), U: 0.330, SHGC: 0.3, Orientation: NORTH
- Name: Back (75 s.f.), U: 0.330, SHGC: 0.3, Orientation: WEST
- Name: Back Fxd. (16 s.f.), U: 0.330, SHGC: 0.3, Orientation: WEST
- Name: Back Shd. /Most (15 s.f.), U: 0.330, SHGC: 0.3, Orientation: WEST
- Name: Back Door Shd. /Most (17.8 s.f.), U: 0.330, SHGC: 0.3, Orientation: WEST
- Name: Left (15 s.f.), U: 0.330, SHGC: 0.3, Orientation: SOUTH

## Skylight

None Present

## Mechanical Ventilation

None Present

## Mechanical Equipment

- Water Heater • Electric • 100% Hot Water Load @ 0.95 Energy Factor
- Heat Pump / All • Electric • 100% Heating Load @ 8.2 HSPF, 100% Cooling Load @ 14 SEER

## Air Leakage Control

- Test Status: Blower-door tested  
House is air-sealed as to achieve 1,909 CFM50 (5.00 ACH50) or less at final blower-door test.

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### Infiltration Requirements for IECC in Climate Zone 4

2009 IECC Infiltration limit for the design home is 7 ACH50.

2012 IECC Infiltration limit for the design home is 3 ACH50.

2015 IECC Infiltration limit for the design home is 3 ACH50.

2018 IECC Infiltration limit for the design home is 3 ACH50.

2021 IECC Infiltration limit for the design home is 5 ACH50.

## Duct Leakage

### Duct System 1

NOT entirely within conditioned space, testing required

Leakage to Outside specified as: 4 CFM25 / 100 ft<sup>2</sup>

Total Leakage specified as: 4 CFM25 / 100 ft<sup>2</sup> (Post-Construction)

## Duct Leakage Code Requirements for IECC

### 2009 IECC:

Postconstruction Leakage Test: Duct Leakage to Outdoors  $\leq$  8 CFM25 / 100 sq ft CFA.

Rough in Test with AHU: Total Duct Leakage  $\leq$  6 CFM25 / 100 sq ft CFA.

Rough in Test without AHU: Total Duct Leakage  $\leq$  4 CFM25 / 100 sq ft CFA.

### 2012 IECC Mandatory, 2015 and 2018 IECC Prescriptive Paths:

Postconstruction Leakage Test: Total Duct Leakage  $\leq$  4 CFM25 / 100 sq ft CFA.

Rough in Test with AHU: Total Duct Leakage  $\leq$  4 CFM25 / 100 sq ft CFA.

Rough in Test without AHU: Total Duct Leakage  $\leq$  3 CFM25 / 100 sq ft CFA.

### 2015 and 2018 IECC Performance Paths (Cost Compliance):

Leakage testing is required UNLESS all ducts and air handlers are located entirely within the thermal envelope.

There is no pass/fail threshold for duct leakage on the performance path.

## Project Notes

EP\_10/20/2021\_Performance Report

**True\_2478 Lenox E-L2\_4**

Worst orientation (E)

DG\_10/20/2021

Revised

## Energy Specifications Label

*152 Walker Grove Lane*

Model: 2478 Lenox E-L2\_4

Ekotrope RATER - Version: 4.0.1.2766

### Building Envelope Specs

Ceiling: R-38

Above Grade Walls: R-15

Foundation Walls: N/A

Exposed Floor: R-19

Slab: R-10

Infiltration: 5 ACH50

Duct Insulation: Supply: R8, Return: R8

Duct Lkg to Outdoors: 4 CFM25 / 100 ft<sup>2</sup>

### Window & Door Specs

U-Value: 0.33, SHGC: 0.3

Door: R-7

### Mechanical Equipment Specs

Heating: Air Source Heat Pump • Electric • 8.2

HSPF

Cooling: Air Source Heat Pump • Electric • 14

SEER

Hot Water: Residential Water Heater • Electric •

0.95 Energy Factor

Average Mechanical Ventilation: 0 CFM

### Builder or Design Professional

Signature: \_\_\_\_\_

# Builder Affidavit

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**Inspection Status**

Results are projected

## Important Notice to Builder

Builder affirms in this affidavit that all building characteristics described in the Building Summary Report accurately reflect this New Home. Builder agrees to allow the Home Energy Rating System (HERS) Provider and/or Rater to verify building characteristics of this New Home fully at the HERS Rater/Provider's discretion. The HERS Provider and Rater do not create or imply any duty or obligations to Builder or any subsequent owner. Builder is responsible for taking any actions necessary to protect Builder's interest. There is no guarantee or warranty whatsoever expressed or implied from the HERS Provider or Rater.

HERS® Index Score:79

Builder Name: True Homes

Builder Signature: \_\_\_\_\_

Name:                     Rick Blair                    

Signature:                                         

Organization:                     Performance Point, LLC.                    

Digitally signed:                     10/21/21 at 6:21 AM