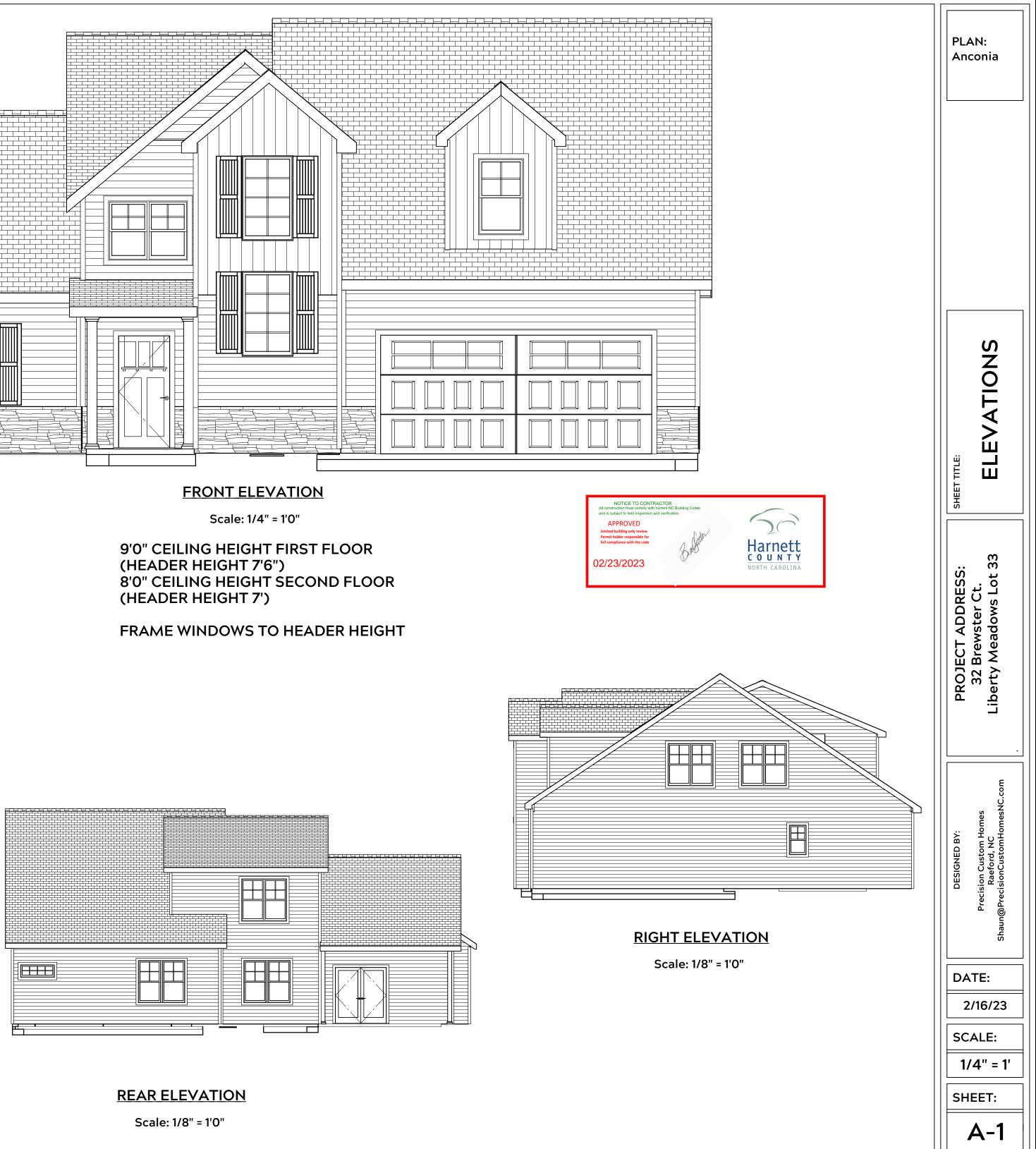
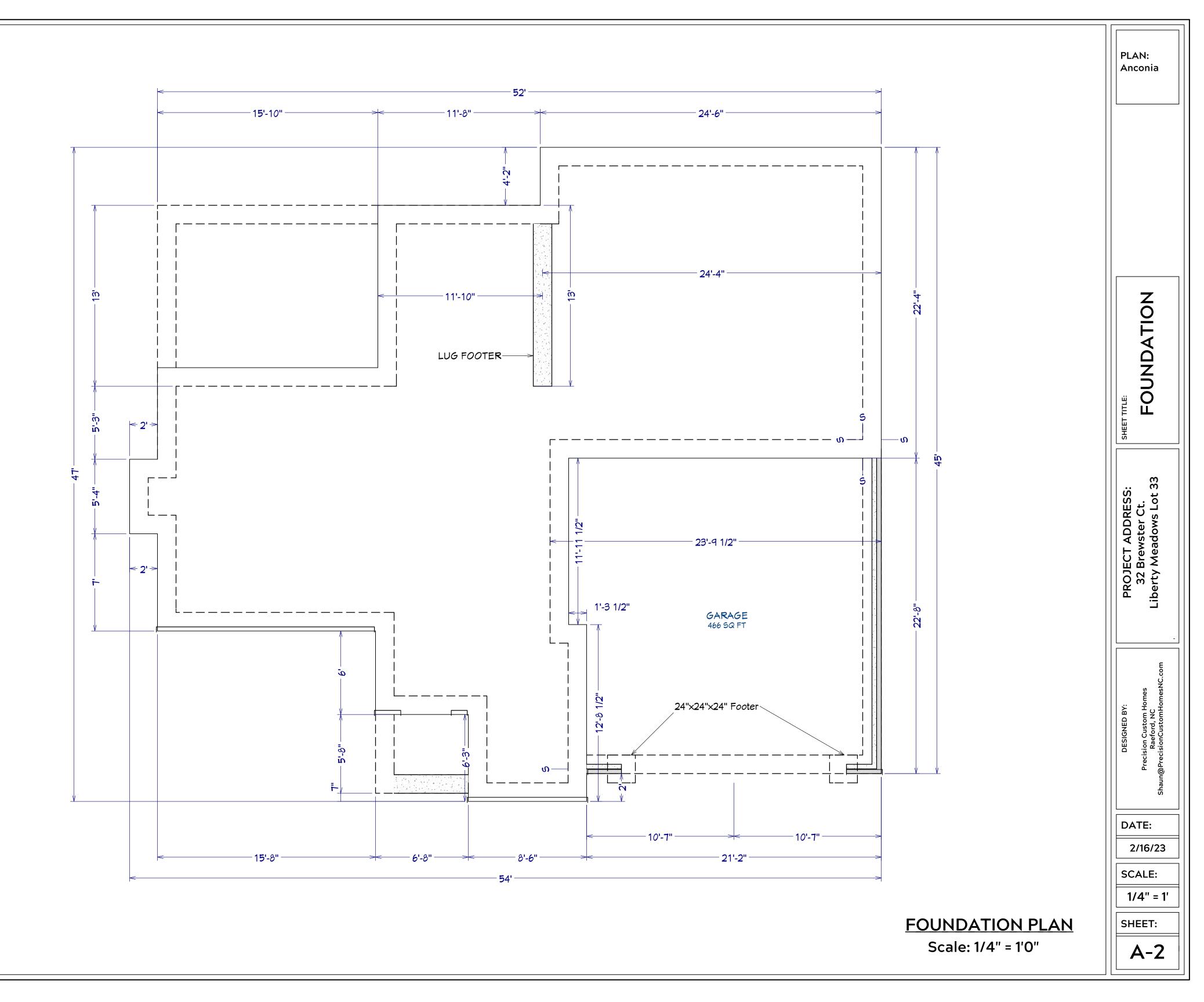


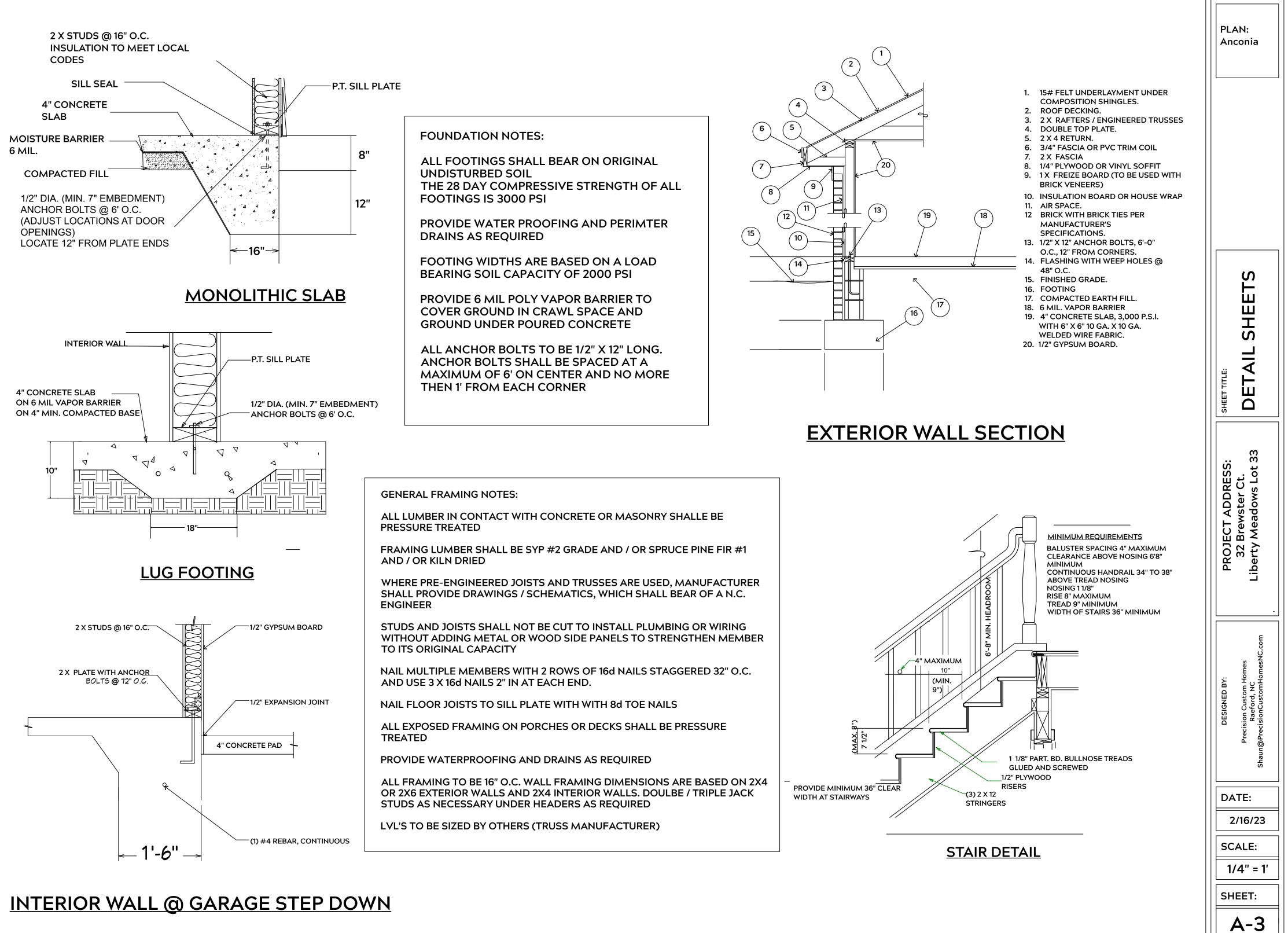


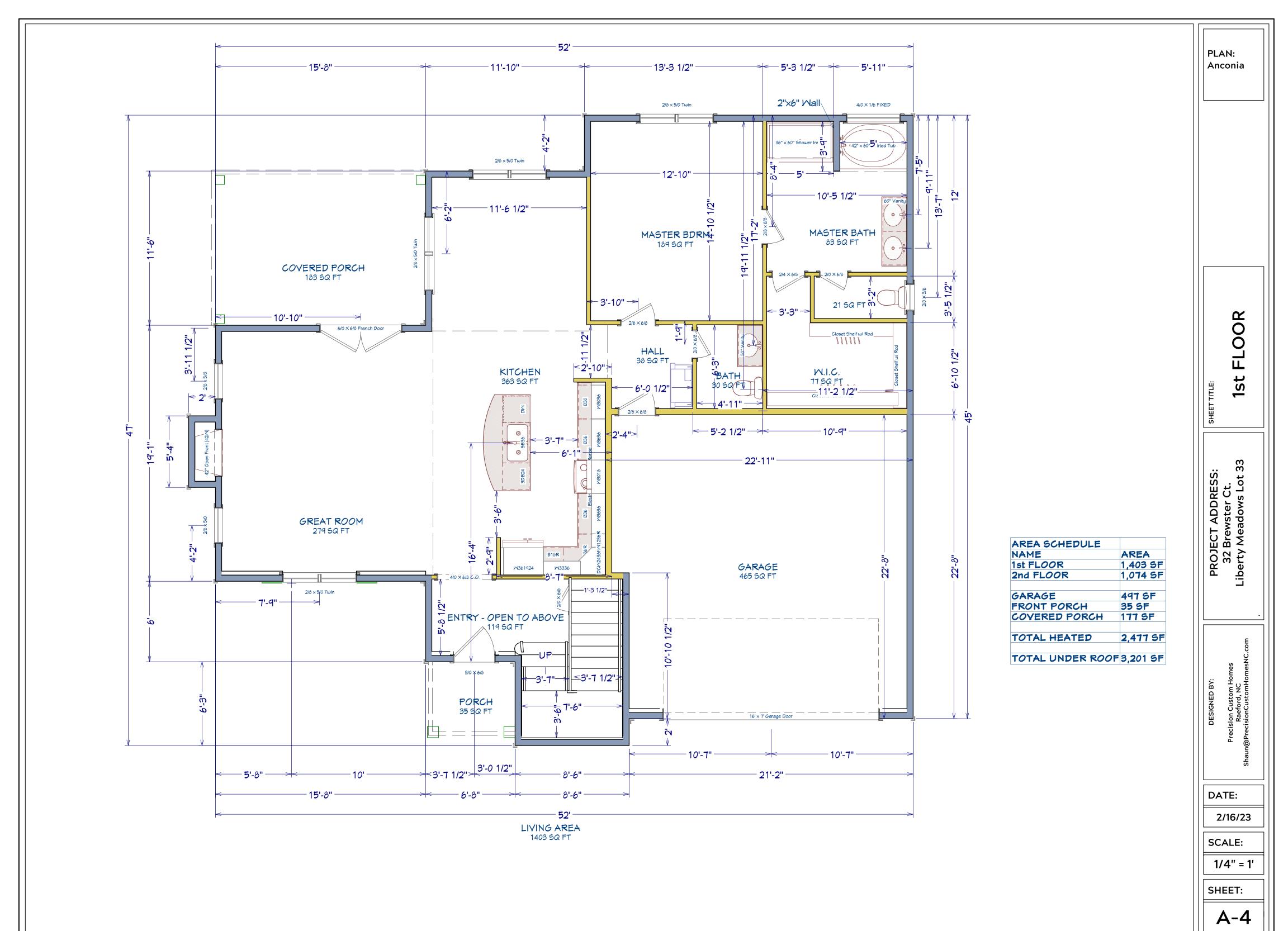
LEFT ELEVATION

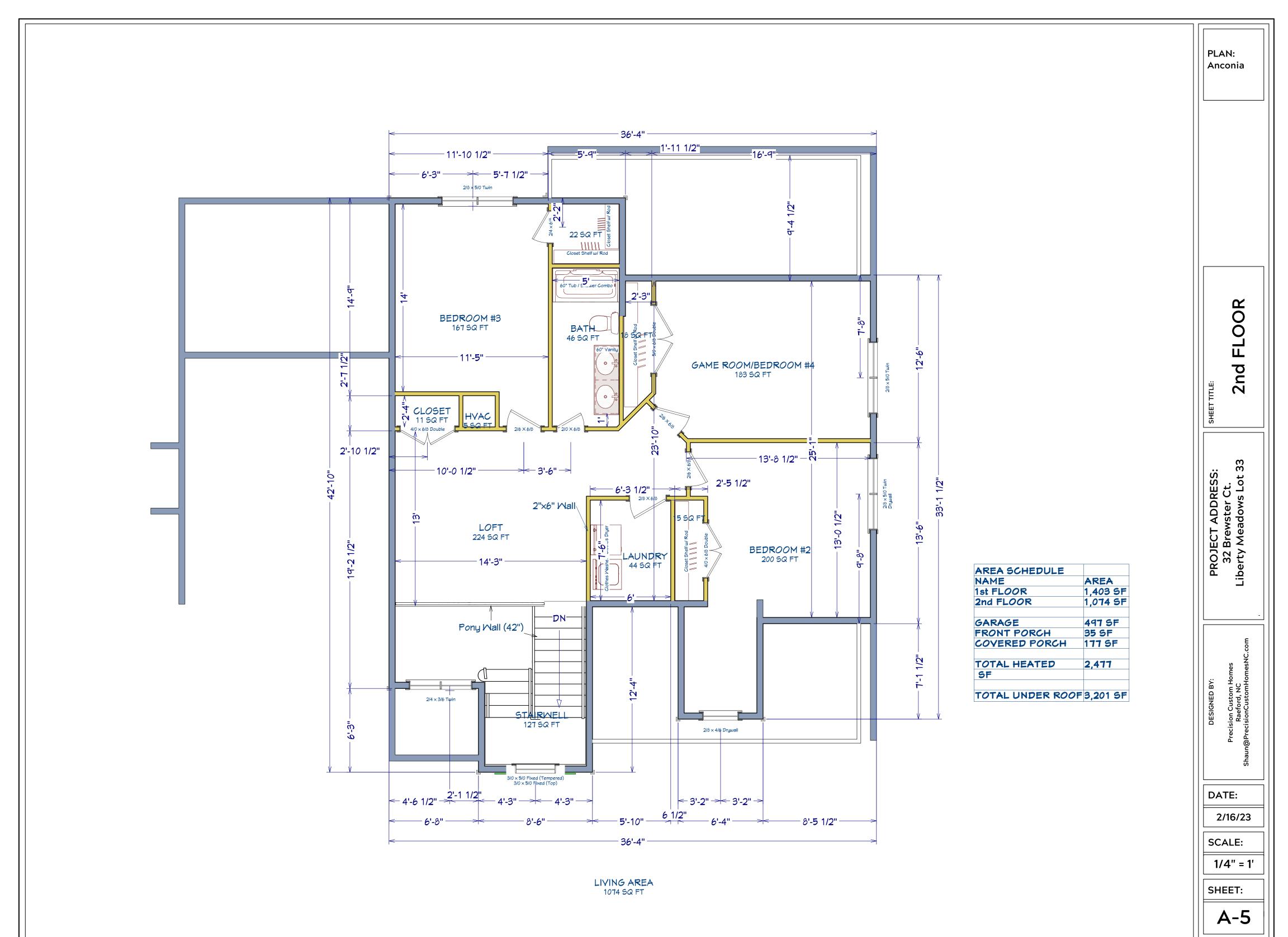
Scale: 1/8" = 1'0"

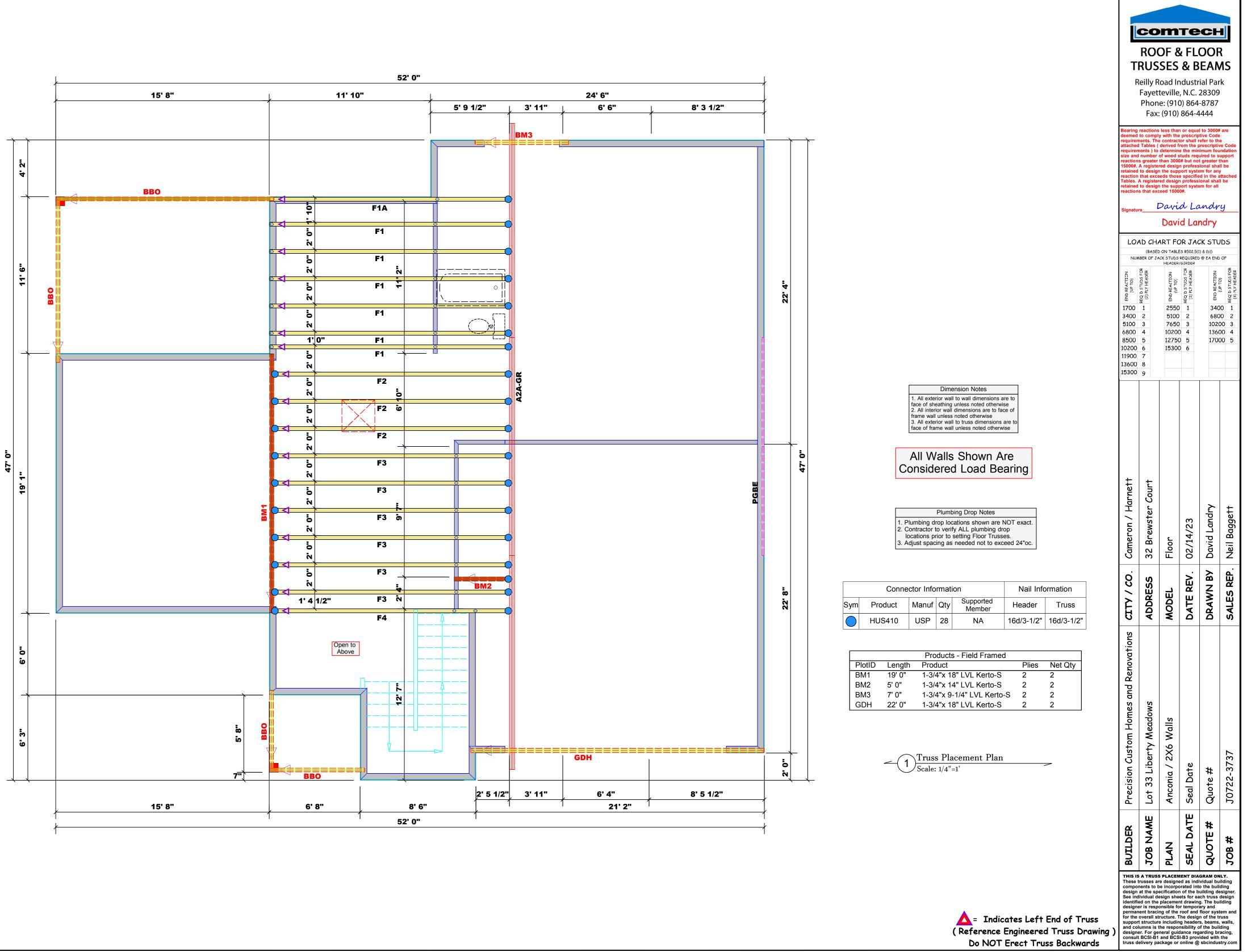


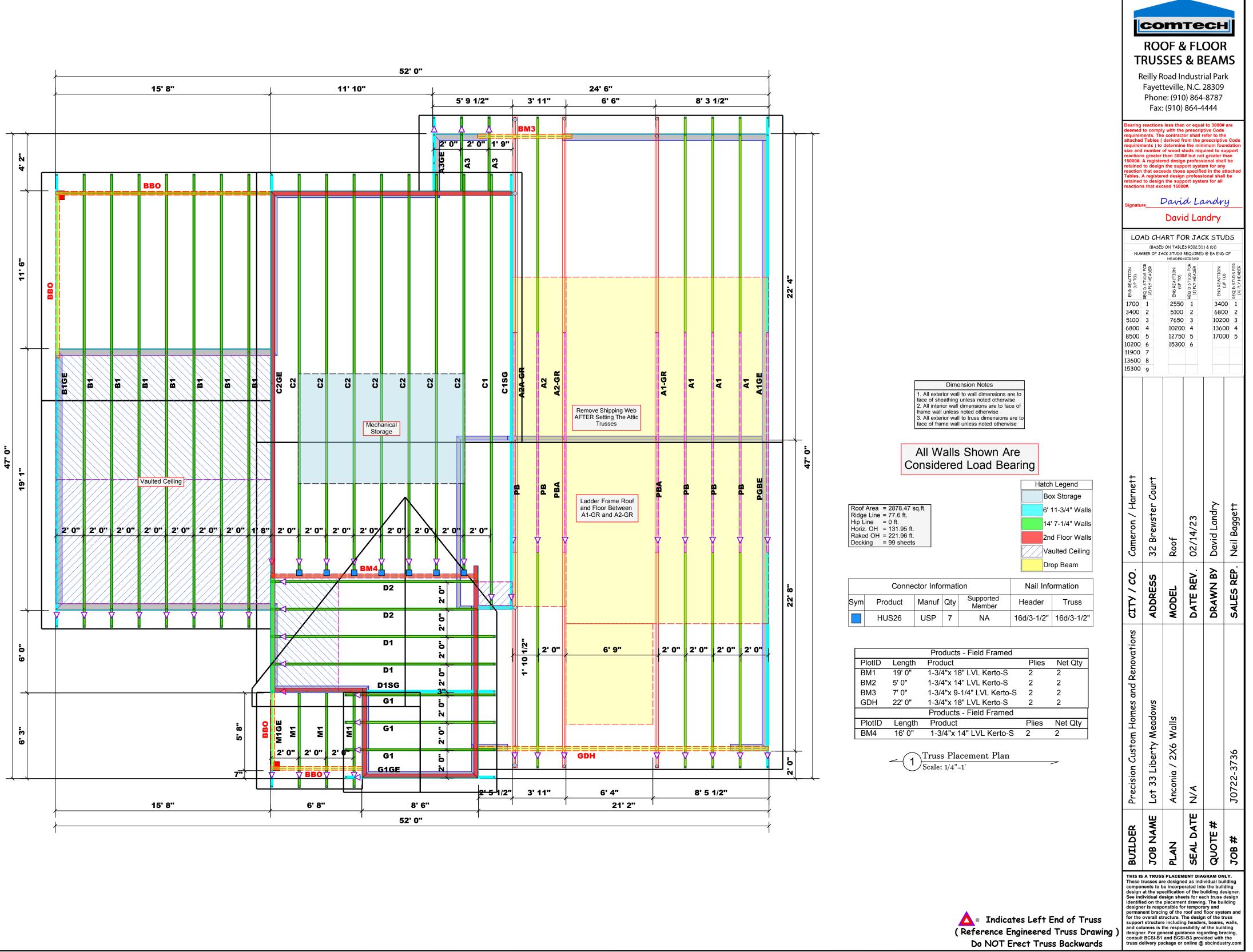












Do NOT Erect Truss Backwards

# North Carolina 2018 - R402.1.5 Total UA

### Property

32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab -Liberty Meadows Lot 33 Organization

Southern Energy Manager Justin Smith

Inspection Status Results are projected



Builder

SMG Precision Properties

### 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	52.2	49.6
Above-Grade Walls	219.5	163.0
Windows, Doors and Skylights	122.3	110.4
Slab Floor:	95.1	123.3
Framed Floors	15.8	17.2
Foundation Walls	0.0	0.0
Rim Joists	7.4	6.0
Overall UA (Design must be equal or lower):	512.3	469.5

## Requirements

$\bigcirc$	R402.1.5	Total UA alternative compliance passes by 8.4%.	The proposed home meets the UA requirement by 8.4%
$\bigcirc$	402.3.2	Average SHGC: 0.28 Max SHGC: 0.30	Average SHGC of 0.28 is greater than the maximum of 0.30.
$\bigcirc$	R402.4.2.2	Air Leakage Testing	Air sealing is 0.27 CFM50 / ft <sup>2</sup> Shell Area. It must not exceed 0.30 CFM50 / ft <sup>2</sup> Shell Area.
$\bigcirc$	R402.5	Area-weighted average fenestration SHGC	Area-weighted average fenestration SHGC is 0.28. The maximum allowed value is [No Limit].
$\bigcirc$	R402.5	Area-weighted average fenestration U-Factor	
$\bigcirc$	R404.1	Lighting Equipment	At least 75.0% of fixtures shall be high-efficacy lamps, currently 100.0% are high- efficacy.
$\bigcirc$	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.	2015 IECC Mandatory Checklist must be checked as complete.
$\bigcirc$	R403.3.1	Duct Insulation	Duct insulation meets the requirements specified in North Carolina 2018 Code Section 403.3.1.
$\bigcirc$	403.3.3	Duct Testing	

# Design exceeds requirements for North Carolina 2018 Prescriptive compliance by 8.4%.

Name:	Justin Smith	Signature:	Justin Smith
Organization:	Southern Energy Management	Digitally signed:	2/1/23 at 10:15 AM

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.

Property 32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33

Organization Southern Energy Management Justin Smith

Builder

SMG Precision Properties

Inspection Status Results are projected



General Building Information	
Number Of Bedrooms	4
Number Of Floors	2
Conditioned Floor Area [sq. ft.]	2,477
Has Electric Vehicle Ready Space	No
Unconditioned, attached garage?	Yes
Conditioned Volume [cu. ft.]	22,622
Total Units in Building	1
Residence Type	Single family detached
Number of Floors in Building	-
Floor Number	-
Model	Anconia
Community	Liberty Meadows
RESNET/IECC 2006-2018 Climate Zone	4A
IECC 2021 Climate Zone	3A

# **Foundation Wall**

None Present

**Foundation Wall Library List** 

None Present

Name	Library Type	Perimeter	Floor Grade	Carpet R	Exposed Masonry Area	Surface Area	Location	Enclosing
slab	Uninsulated	200	On Grade	1	0	1,403.0 ft²	Exposed Exterior	Conditioned Space
						Masonry Area	Masonry Area	Masonry Area

Slab Library	List						
Name	Wall Construction Type	Slab Completely Insulated?	Underslab Insulation Width [ft]		Perimeter Insulation R Value	Thermal Break	Effective R-value
Uninsulated	Wood Frame / Other	No	0	0	0	No	0.00

Property 32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33

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Inspection Status Results are projected



Builder SMG Precision Properties

Framed Floor					
Name	Library Type	Carpet R	Floor Grade	Surface Area	Location
over garage	R 19, 16"OC G1 Carpet	0	Above Grade	337.0 ft²	Unconditioned, attached garage



# **Rim Joist**

Locatior	Surface Area	Library Type	Name
Exposed Exterior	87.0 ft²	R 19 G1, 16"OC	1st floor ambient
Unconditioned, attached garage	47.0 ft²	R 19 G1, 16"OC	1st floor garage

I	Rim Joist Libra	ry List			
		Name Effective Insu	lation R-value		
	R 19 G1, 1	5"OC	17.30		
	Wall				
	Name	Library Type	Surface Color	Surface Area	Location
	1st floor ambient	R 19 Adv. Framing G1 16" O C	Medium	1 381 0 ff²	Exposed Exterior

Exposed Exterior	1,381.0 π²	Medium	R 19 Adv. Framing G1 16" O.C	1st floor ambient
Unconditioned, attached garage	419.0 ft²	Medium	R 19 Adv. Framing G1 16" O.C	1st floor garage
Exposed Exterior	694.0 ft²	Medium	R 19 Adv. Framing G1 16" O.C	2nd floor ambient
Attic	706.0 ft <sup>2</sup>	Medium	R 19 Adv. Framing G1 16" O.C	2nd floor attic

Property 32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33

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SMG Precision Properties

Builder

Inspection Status Results are projected



Wall Library List Name Effective R-value R 19 Adv. Framing G1 16" O.C 17.492

## Glazing

j									
Name	Library Type	e Wall Assignment	Foundation Wall Assignment	is Operable	e Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Area
front 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	Southeast	42.2 ft²
front unshaded	33/28	1st floor ambient		Yes	0	0	0	Southeast	27.0 ft <sup>2</sup>
left shaded	33/28	1st floor ambient		Yes	15	1	6	Southwest	27.0 ft <sup>2</sup>
left unshaded	33/28	1st floor ambient		Yes	0	0	0	Southwest	27.0 ft²
rear 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	Northwest	27.0 ft <sup>2</sup>
rear shaded	33/28	1st floor ambient		Yes	12	2	9	Northwest	40.2 ft²
rear unshaded	33/28	1st floor ambient		Yes	0	0	0	Northwest	60.0 ft <sup>2</sup>
right 2nd unshaded	33/28	2nd floor ambient		Yes	0	0	0	Northeast	54.0 ft²
right unshaded	33/28	1st floor ambient		Yes	0	0	0	Northeast	7.0 ft <sup>2</sup>

Glazing Libra	ary List	
Name	Shgc	U-factor
33/28	0.28	0.330

## Skylight

None Present

Property 32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33

## **Skylight Library List**

None Present

Opaque Doo	1							
Name	Library Type	Wall Assignment	Foundation Wall Assignment		Solar Absorptance	Surface Color	Surface Area	Location
front entry	Fiberglass R-5	1st floor ambient		0.9	0.75	Medium	20.0 ft²	Exposed Exterior
garage entry	Fiberglass R-5	1st floor garage		0.9	0.75	Medium	18.0 ft²	Unconditioned, attached garage

Inspection Status

Results are projected

# **Opaque Door Library List**

Name Effective U-factor Fiberglass R-5 0.200

Roof Insulation	on					
Name	Library Type	Attic Exterior Area [ft <sup>2</sup> ]	Clay or Concrete Roof Tiles	Surface Color	Surface Area	Location
attic	R 38 Attic BLOWN FG G1 2x10 24"OC NO Padiant Barrier	2,557.8	No	Dark	1,740.0 ft²	Attic

Roof Insulation Library List				
Name	Has Radiant Barrier	Effective R-value		
R 38 Attic BLOWN FG	No	35.115		
G1 2x10 24"OC NO				

Whole House	e Infiltration		
Infiltration	Measurement Type	Shelter Class	
1809 CFM at 50 Pa	Blower-door tested	4	



4

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Builder SMG Precision Properties

### Property

32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33 Organization Southern Energy Management Justin Smith

SMG Precision Properties

Builder

Inspection Status Results are projected



Mechanical Ve		ne Present			
Lighting					
% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting	% Exterior LED Lighting	% Garage Fluorescent Lighting	% Garage LED Lighting

10	90	0	0	0	(	0
						_

Unsite Generation	Onsite	Generation
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None Present

**Onsite Generation Library List** 

None Present

Solar Generation

None Present

Dehumidifier

None Present

**Dehumidifier Library List** 

None Present

### Property

32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

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## Whole House Fan

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Builder SMG Precision Properties

None Present

# Whole House Fan Library List

None Present

Conditioning	Equipment					
Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	
1st floor heat pump	z 24k 14 SEER 8.2hspf		57%	57%	0%	Attic
2nd floor heat pump	z 30k 14 SEER 8.2hspf		43%	43%	0%	Attic
Water Heating	z 50 gal. 0.95 EF Elec		0%	0%	100%	Unconditioned Garage

# Equipment Type: z 24k 14 SEER 8.2hspf

Equipment Type	Air Source Heat Pump
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	PSC (Single Speed)
Heating Efficiency	8.2 HSPF
Heating Capacity [kBtu/h]	24
Backup Fuel Type	Electric
Switchover Temperature [°F]	0
Backup Heating Efficiency	1 COP
Use default Supplemental Heat	Yes
Cooling Efficiency	14 SEER
Cooling Capacity [kBtu/h]	24

Property 32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33

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# Equipment Type: z 30k 14 SEER 8.2hspf

Equipment Type	Air Source Heat Pump
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	PSC (Single Speed)
Heating Efficiency	8.2 HSPF
Heating Capacity [kBtu/h]	30
Backup Fuel Type	Electric
Switchover Temperature [°F]	0
Backup Heating Efficiency	1 COP
Use default Supplemental Heat	Yes
Cooling Efficiency	14 SEER
Cooling Capacity [kBtu/h]	30

# Equipment Type: z 50 gal. 0.95 EF Elec

Equipment Type	Residential Water Heater
Fuel Type	Electric
Distribution Type	Hydronic Delivery (Radiant)
List Water Efficiency	0.05 Energy Easter
Hot Water Efficiency	0.95 Energy Factor
Tank Capacity (gal.)	50
Talik Capacity (gal.)	50
Hot Water Capacity [kBtu/h]	40
HOL WALEL CAPACILY [KDIU/II]	40
Recovery Efficiency	0.98
Recovery Linclency	0.30

### Property

32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33

## **Distribution System**

Distribution Type Forced Air Heating Equipment 1st floor heat pump **Cooling Equipment** 1st floor heat pump Sq. Feet Served 1,403 # Return Grilles 2 Supply Duct R Value 8 Return Duct R Value 8 Supply Duct Area [ft2] 378.81 Return Duct Area [ft<sup>2</sup>] 140.3 Leakage to Outdoors 56 CFM @ 25Pa (3.99 / 100 ft2) Total Leakage 56 CFM25 Total Leakage Duct Test Conditions Post-Construction Use Default Flow Rate Yes Duct 1 Duct Location Attic (well vented) Percent Supply Area 100 Percent Return Area 100 Duct 2 Duct Location Conditioned Space Percent Supply Area 0 Percent Return Area 0 Duct 3 Duct Location Conditioned Space Percent Supply Area 0 0 Percent Return Area Duct 4 Duct Location Conditioned Space Percent Supply Area 0 0 Percent Return Area Duct 5 Duct Location Conditioned Space Percent Supply Area 0 Percent Return Area 0 Duct 6 Duct Location Conditioned Space Percent Supply Area 0 Percent Return Area 0

Organization

Justin Smith

SMG Precision Properties

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Inspection Status Results are projected



### Property

32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33

## **Distribution System**

Distribution Type Forced Air Heating Equipment 2nd floor heat pump **Cooling Equipment** 2nd floor heat pump Sq. Feet Served 1,074 # Return Grilles 2 Supply Duct R Value 8 8 Return Duct R Value Supply Duct Area [ft2] 289.98 Return Duct Area [ft<sup>2</sup>] 107.4 Leakage to Outdoors 42 CFM @ 25Pa (3.91 / 100 ft2) Total Leakage 42 CFM25 Total Leakage Duct Test Conditions Post-Construction Use Default Flow Rate Yes Duct 1 Duct Location Attic (well vented) Percent Supply Area 100 Percent Return Area 100 Duct 2 Duct Location Conditioned Space Percent Supply Area 0 Percent Return Area 0 Duct 3 Duct Location Conditioned Space Percent Supply Area 0 0 Percent Return Area Duct 4 Duct Location Conditioned Space Percent Supply Area 0 Percent Return Area 0 Duct 5 Duct Location Conditioned Space Percent Supply Area 0 Percent Return Area 0 Duct 6 Duct Location Conditioned Space Percent Supply Area 0 Percent Return Area 0

Builder

SMG Precision Properties

## **HVAC Grading**

HVAC Grading Not Conducted

## **Ceiling Fan**

Has Ceiling Fan Cfm Per Watt No 100

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Property 32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33

# Water Distribution

Water Fixture Type	Low-flow
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	100
At Least R3 Pipe Insulation?	No
Hot Water Recirculation System?	No
Recirculation System Pipe Loop Length [ft]	20
Drain Water Heat Recovery?	No

Builder

## **Clothes Dryer**

Cef	3.01
Fuel Type	Electric
Field Utilization	Timer Controls
Is Outside Conditioned Space	No
Clothes Dryer Available	Yes
Defaults Type	HERS Reference

## **Clothes Washer**

153 kWh/Year
\$12.00
\$0.11/kWh
\$1.22/Therm
3.31
2.1547
Custom
Front-load
6
No
Yes

Dishwasher	
Dishwasher Efficiency	270 kWh
Dishwasher Size	Standard
Annual Gas Cost	\$22.23
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Is Outside Conditioned Space	No

Organization Southern Energy Management Justin Smith

SMG Precision Properties

Inspection Status Results are projected



Property 32 Brewster Ct Cameron, NC 28326 Model: Anconia Community: Liberty Meadows

Template - SMG Precision - Liberty Meadows Lot 33 - CZ 4 slab - ecoSelect Liberty Meadows Lot 33

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Inspection Status Results are projected



Appliances and Controls	
Thermostat Cooling Setpoint	* * * * 75.0
Thermostat Heating Setpoint	* * * * 70.0
Range/Oven Fuel	Electric
Convection Oven?	No
Induction Range?	No
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	538 kWh/Year
Refrigerator Outside Conditioned Space?	No

Builder

## Notes

Initial Inputs

\_\_\_\_JS 02/01/22\_\_\_\_\_

-confirm HVAC specs -confirm water heater specs -confirm ventilation entry -modeled to worst case orientation -confirm cfl lighting %