

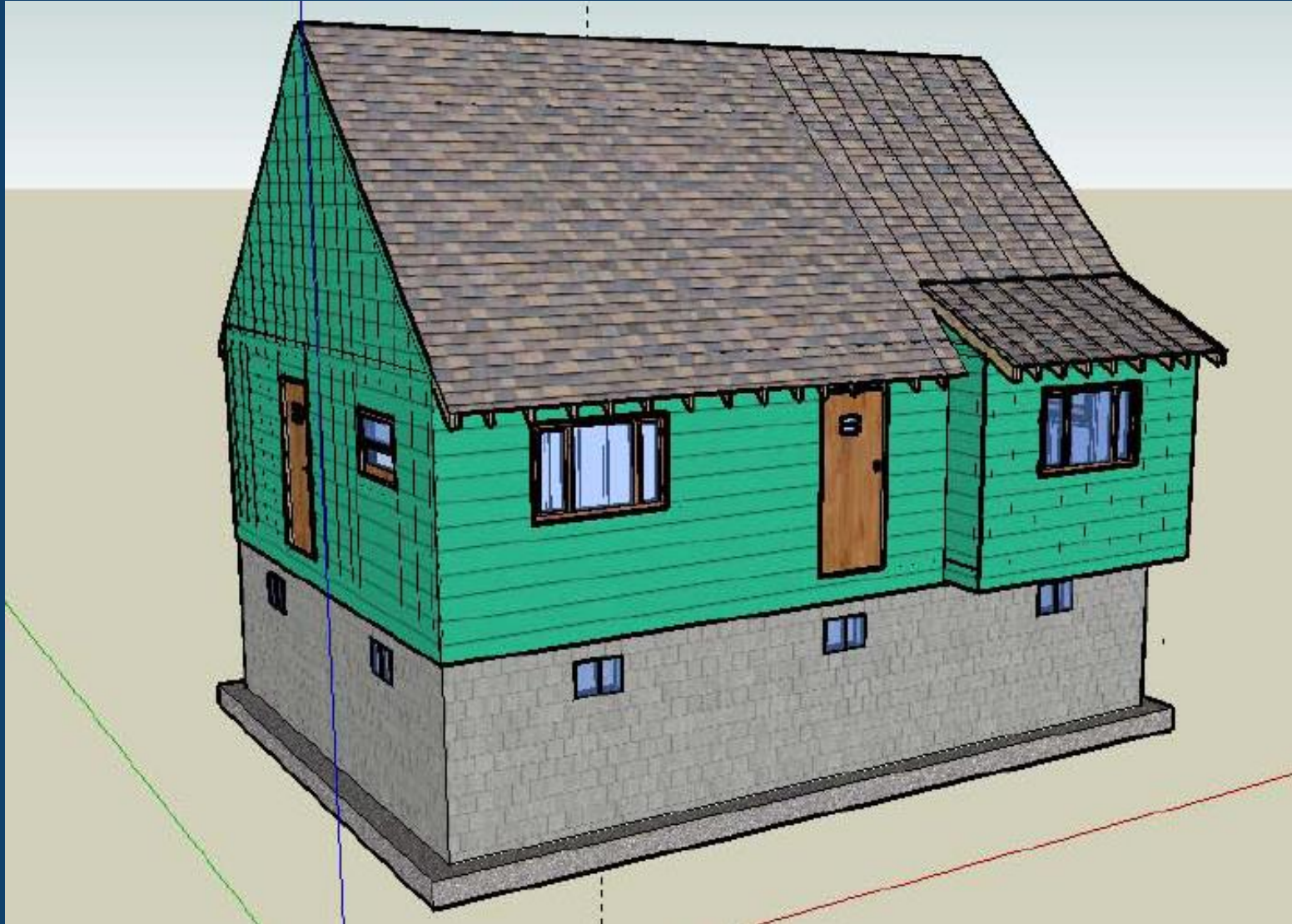
NEAT/MHEA

Site Measuring Aids



Appendix A – Cantilevered Floor / Exposed Floor

Appendix A – Cantilevered Floor / Exposed Floor

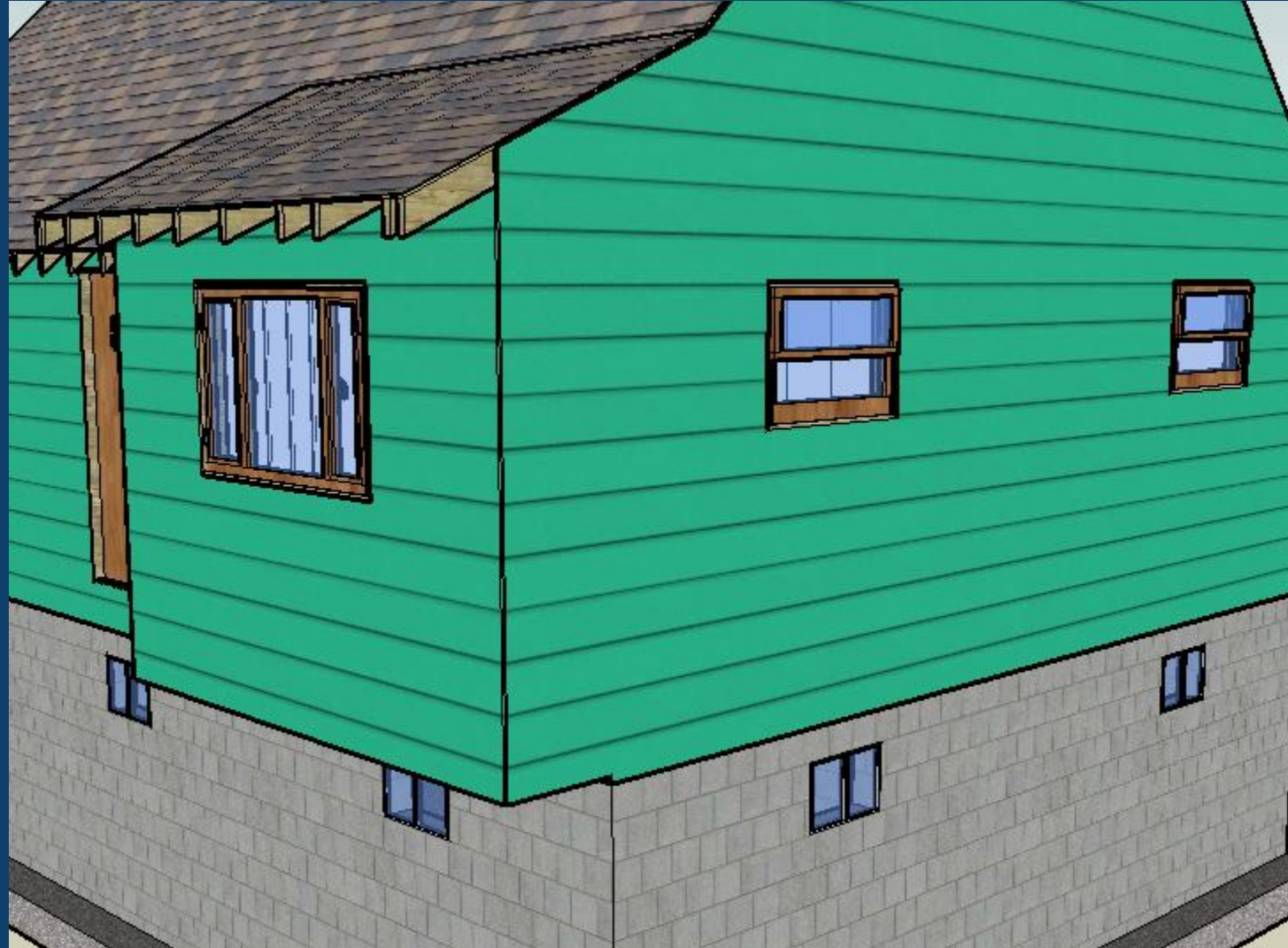


Example using a 1-story dwelling with a cantilevered floor



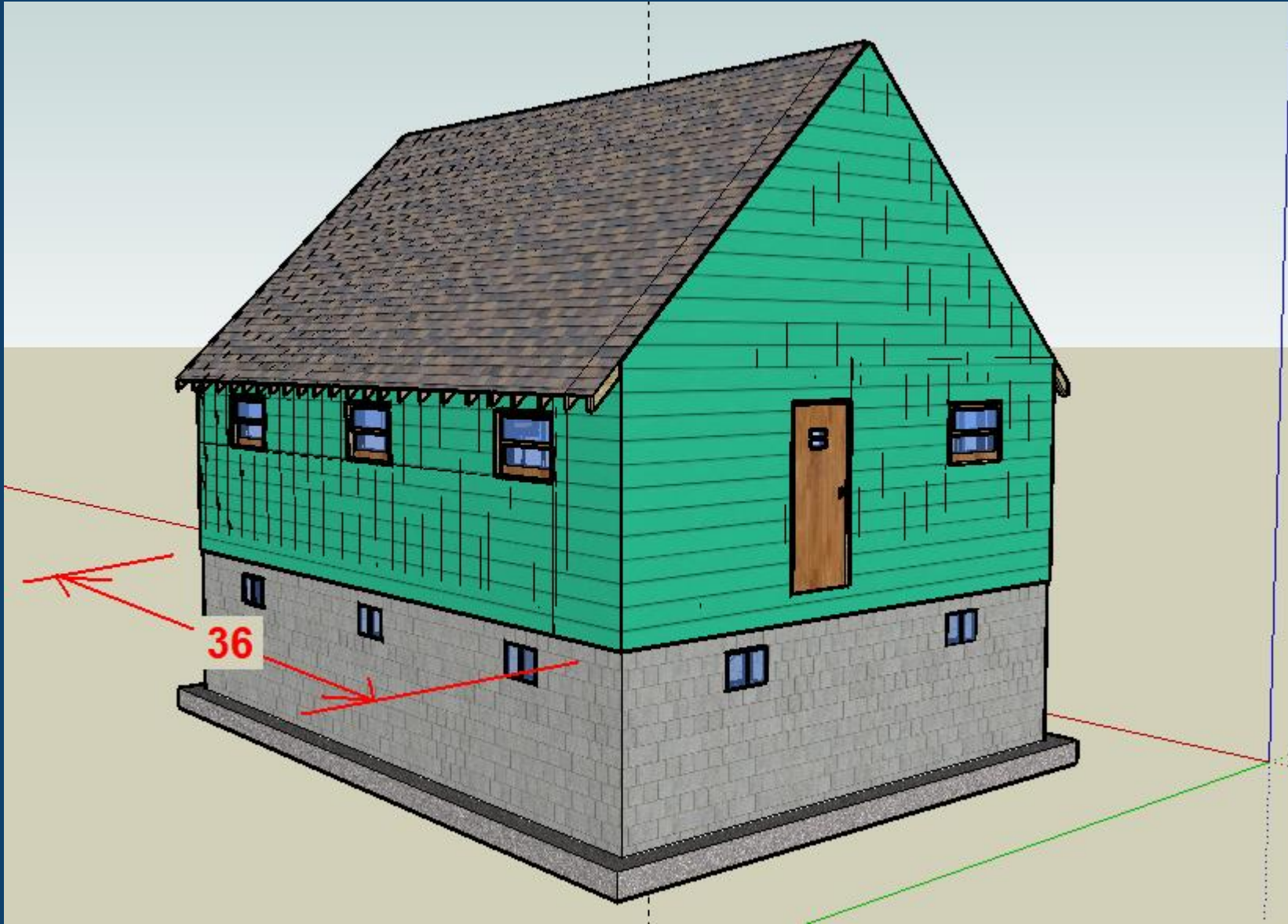
Do a walk around to get an overall view of the structure.









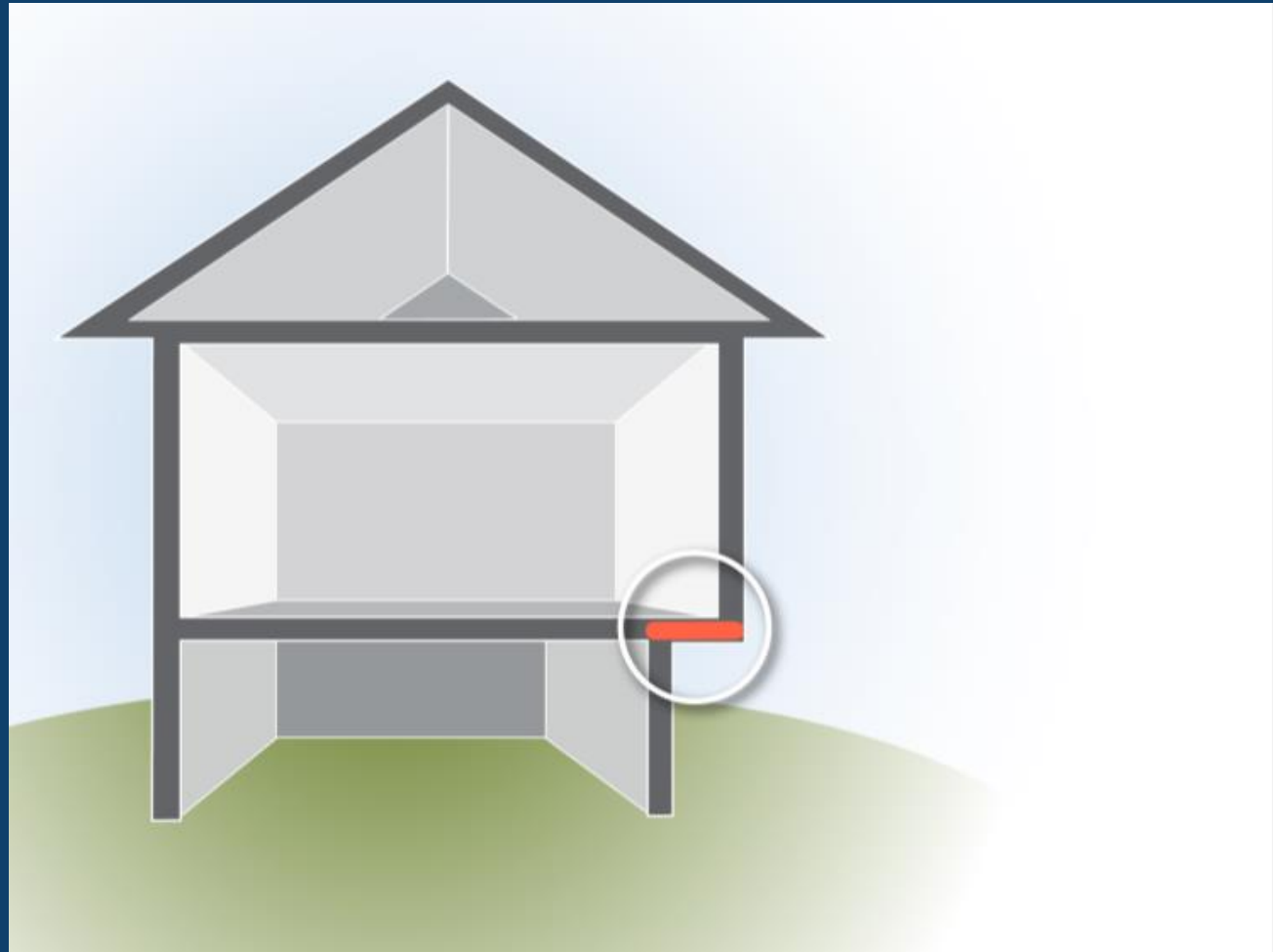


36



Cantilevered Floors

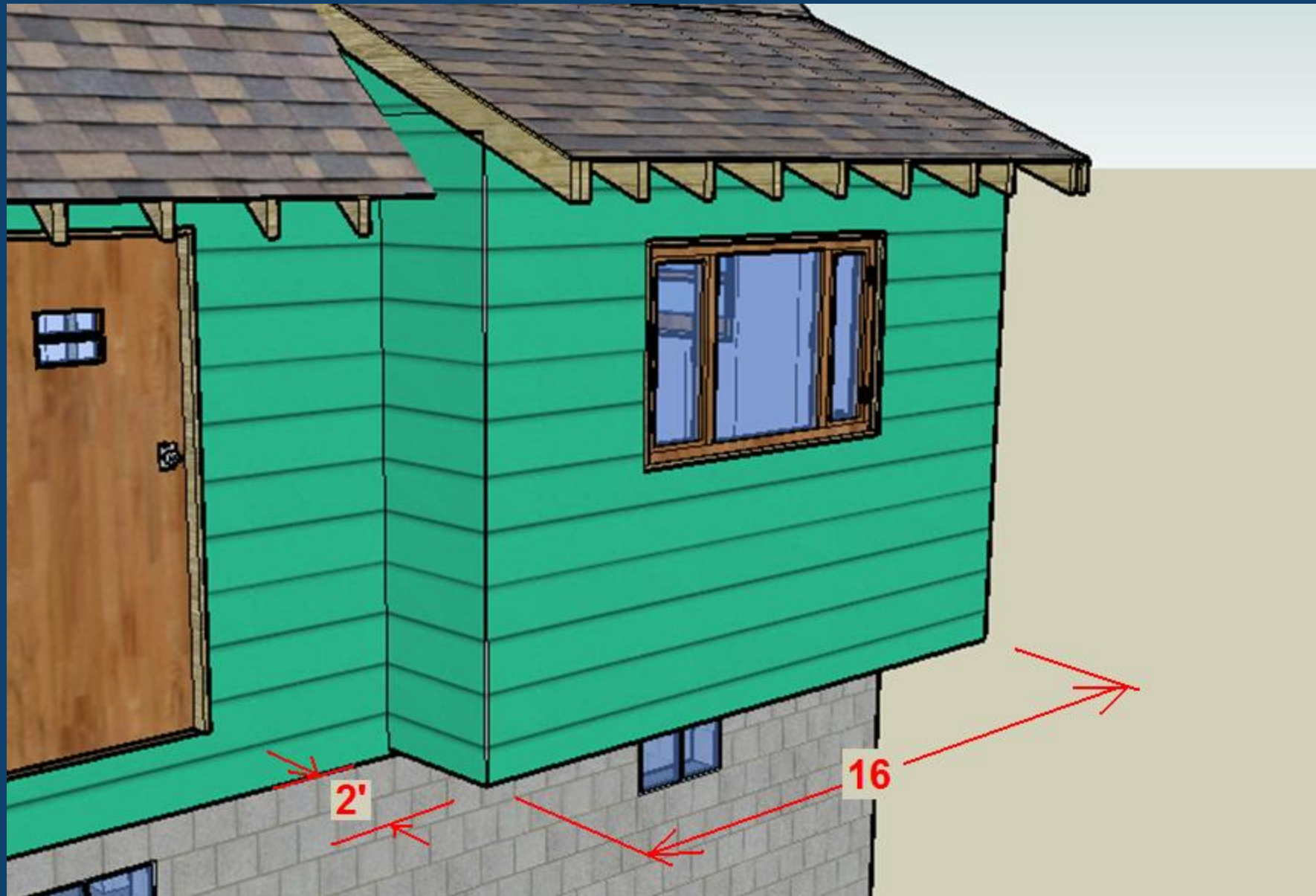
- Cantilevered floor is exposed to outdoor temperatures.
- Specify dense-pack insulation if none exists.
- Always air seal before you insulate!

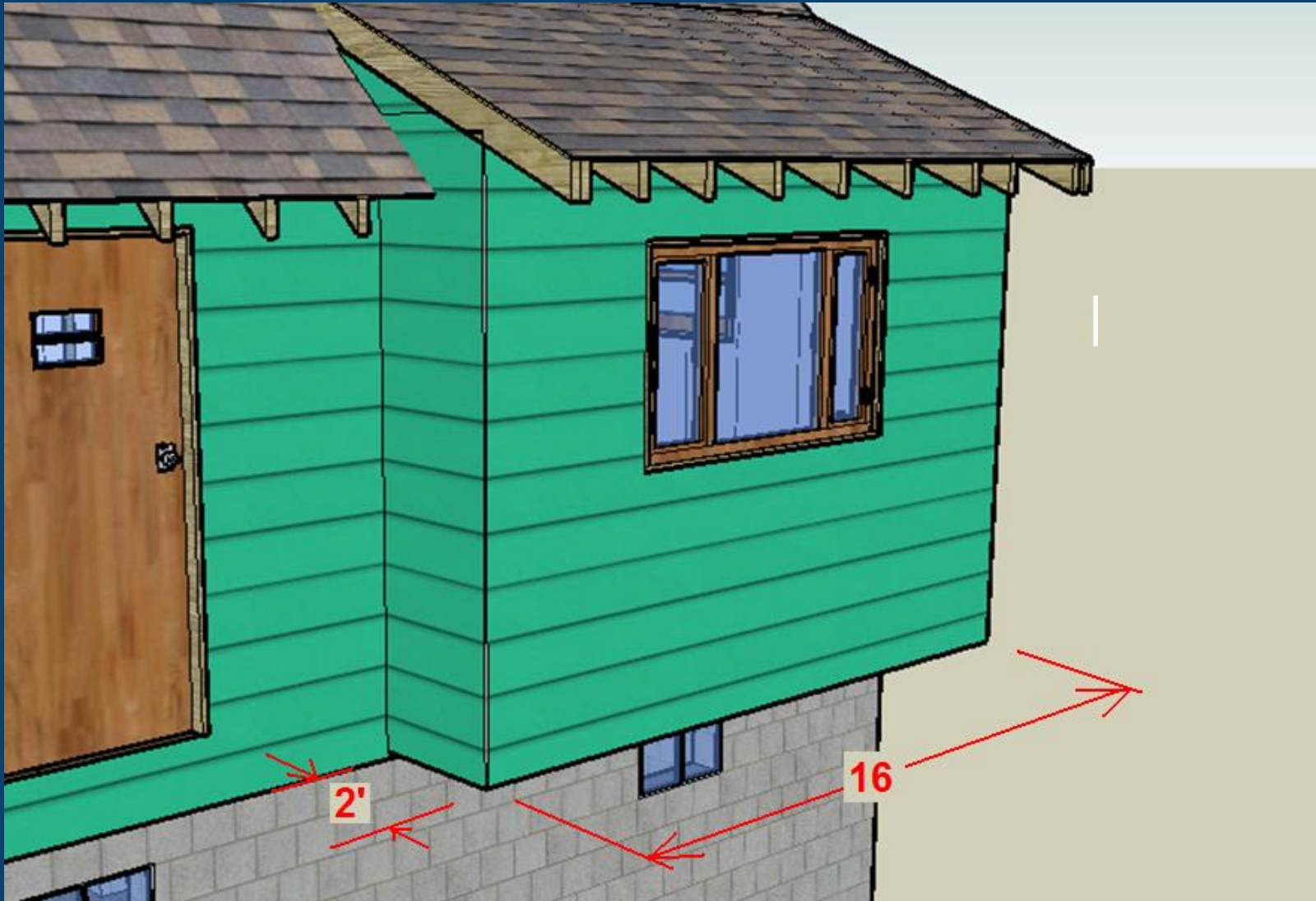




Measuring the cantilever...

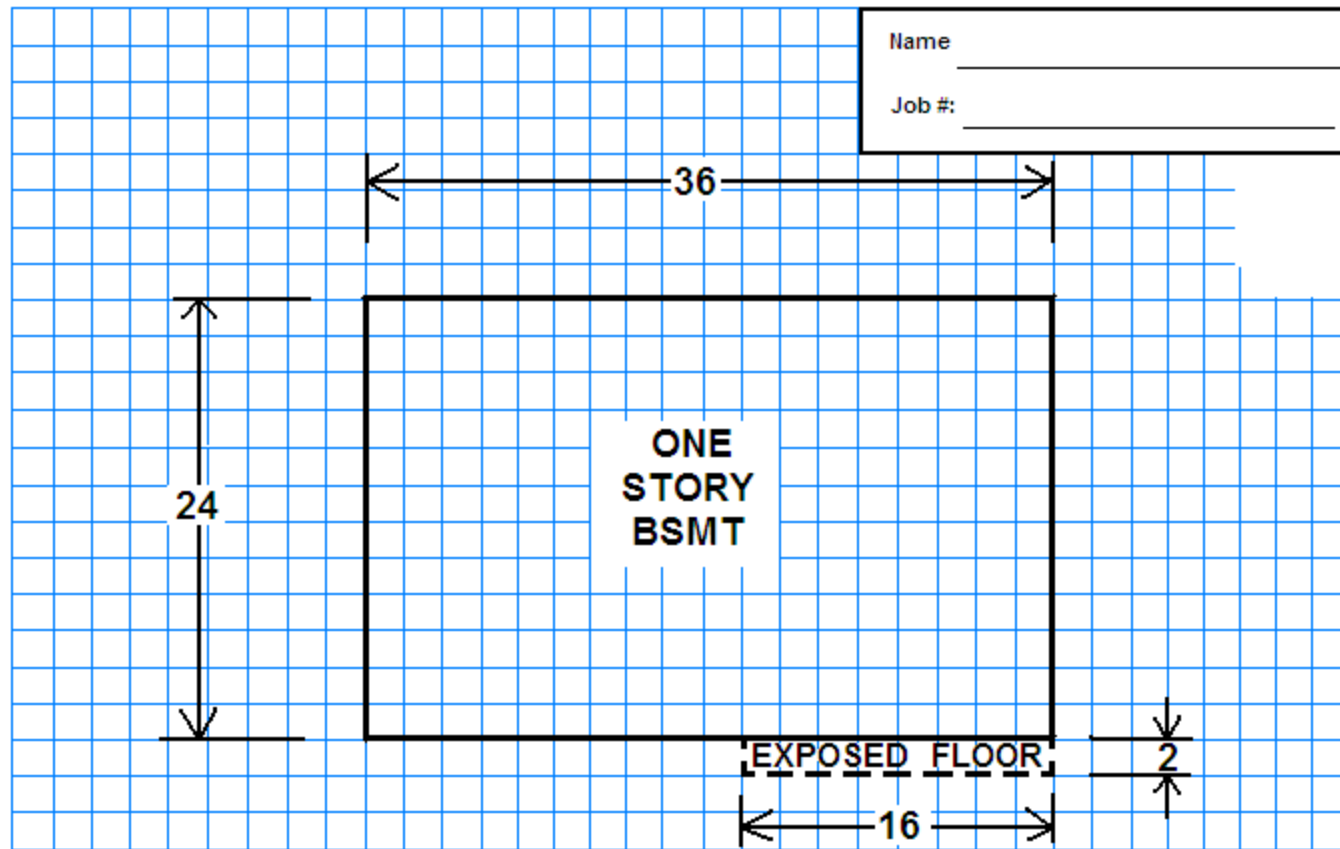






The cantilever is classified as an “exposed floor” in the NEAT audit.

FIELD DATA SHEET



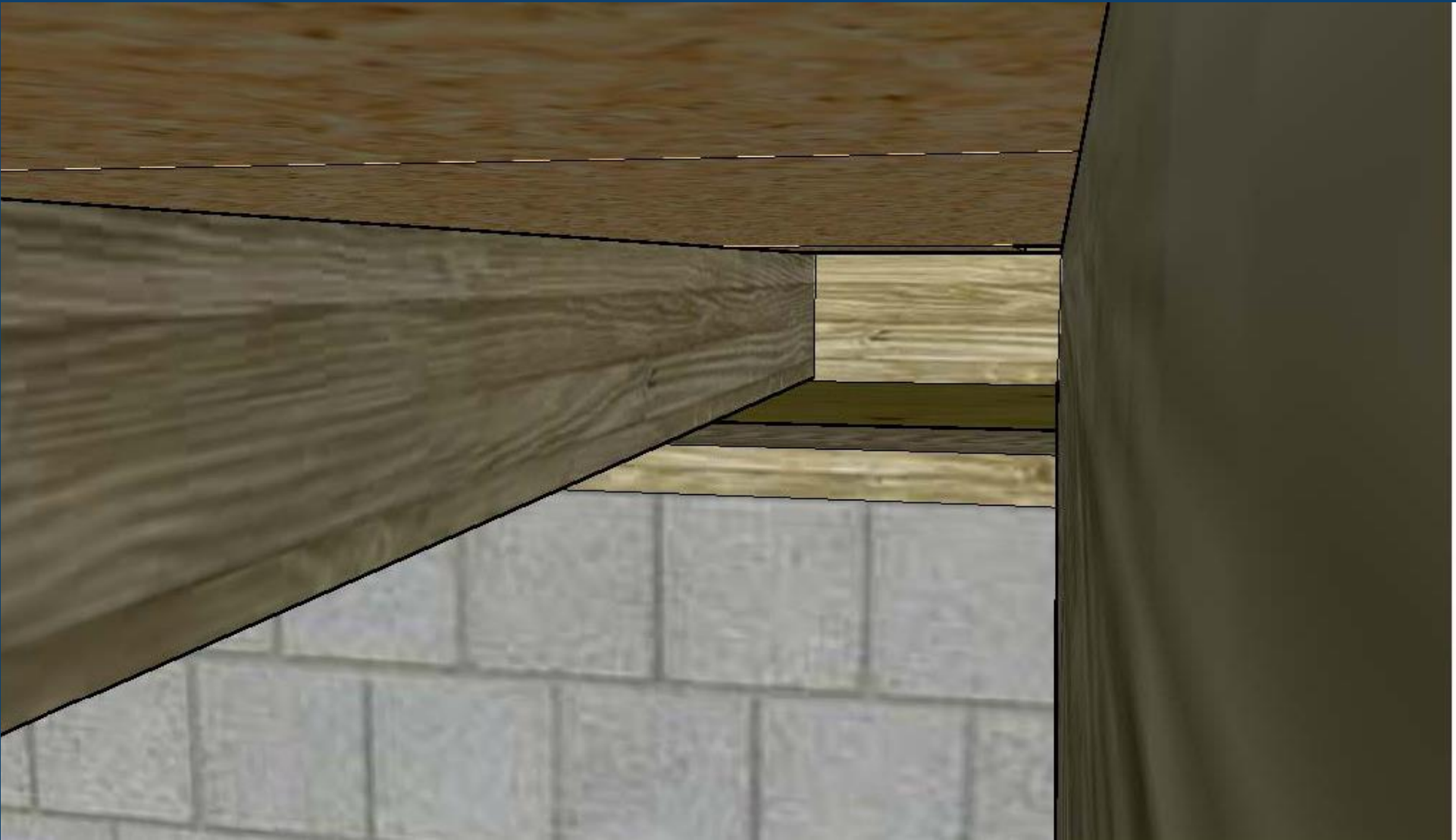


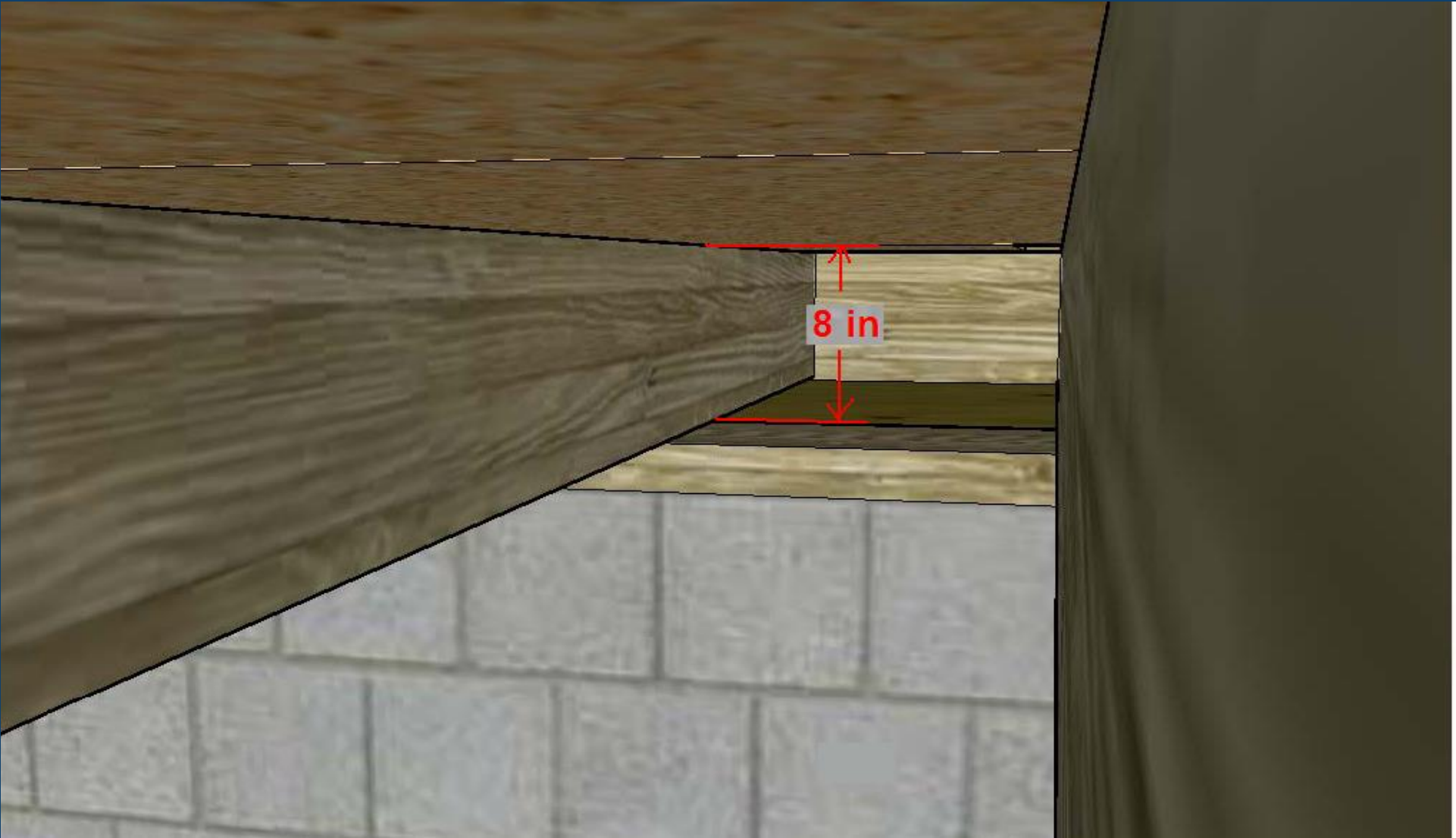
An “exposed floor” is a floor area that is fully exposed to the weather.



In many homes, the exposed floor cavities can be viewed from the basement.



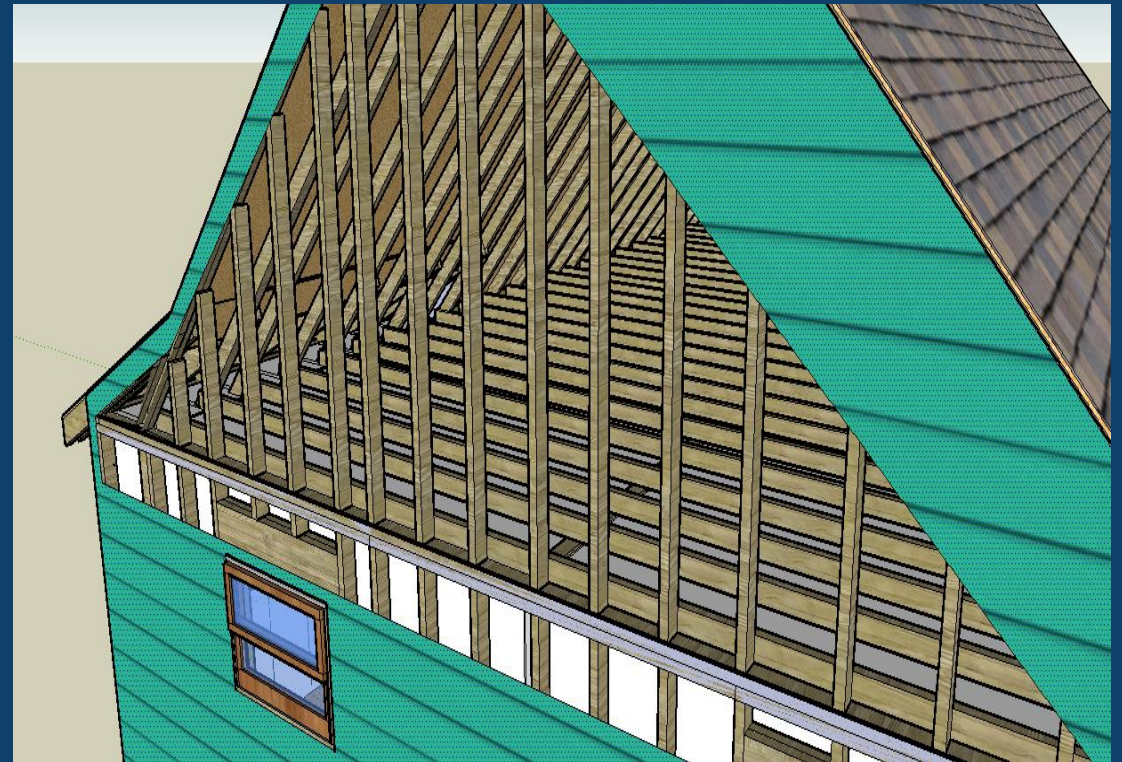
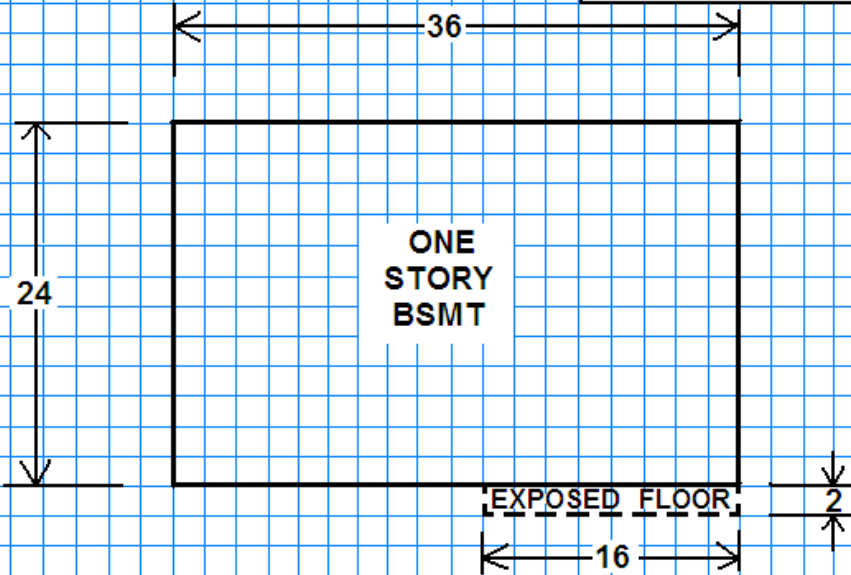




The floor cavity height measurement is needed.

FIELD DATA SHEET

Name _____
 Job #: _____



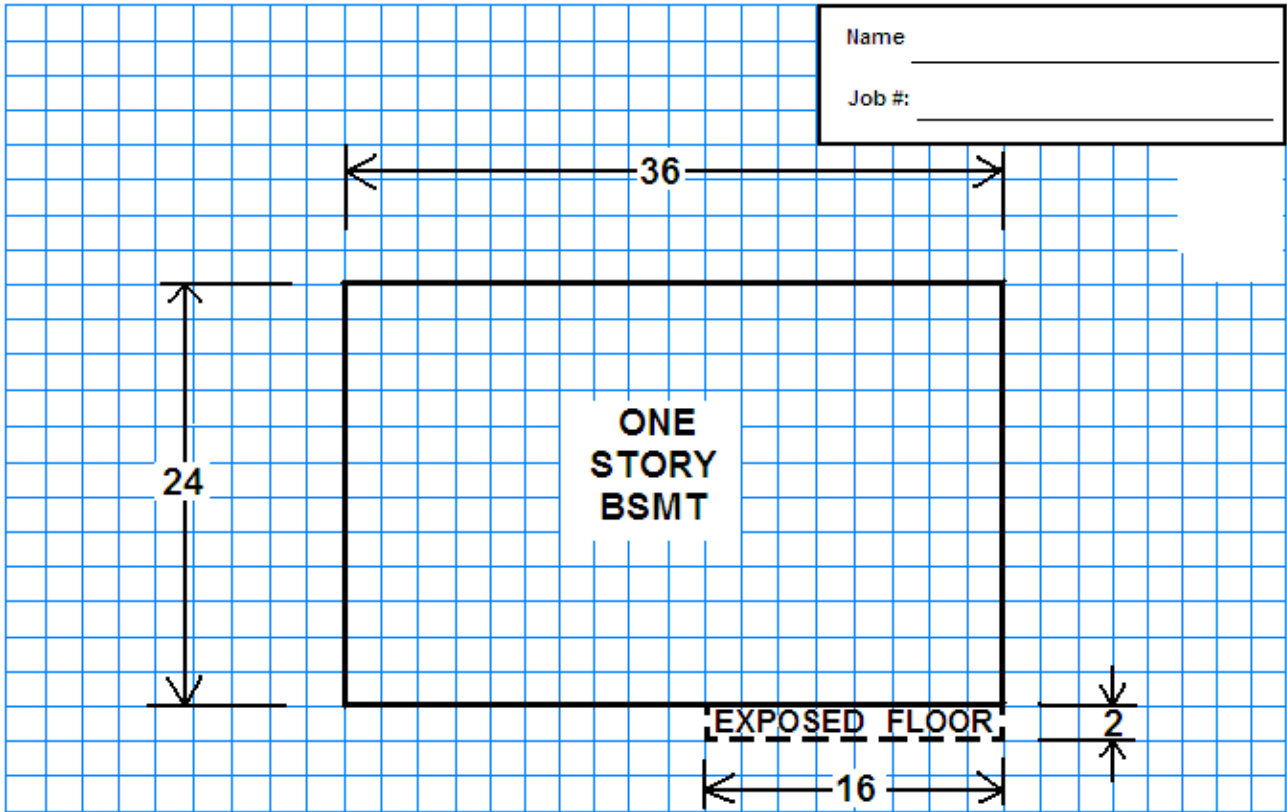
| Unfinished Attics | | Joist | | Existing Insulation | | | | |
|-------------------|-----------|--------------|-------------|---------------------|----------------------|------|------------|------------------|
| Attic Code | Type | Spacing (in) | Length (Ft) | Width (Ft) | Area Ft ² | Type | Depth (in) | |
| A1 | Unfloored | 24 | 36 | 24 | 864 | None | 0 | Main Attic |
| A2 | Unfloored | 24 | 16 | 2 | 32 | None | 0 | Cantilever Attic |
| | | | | | 0 | | | |
| | | | | | 0 | | | |

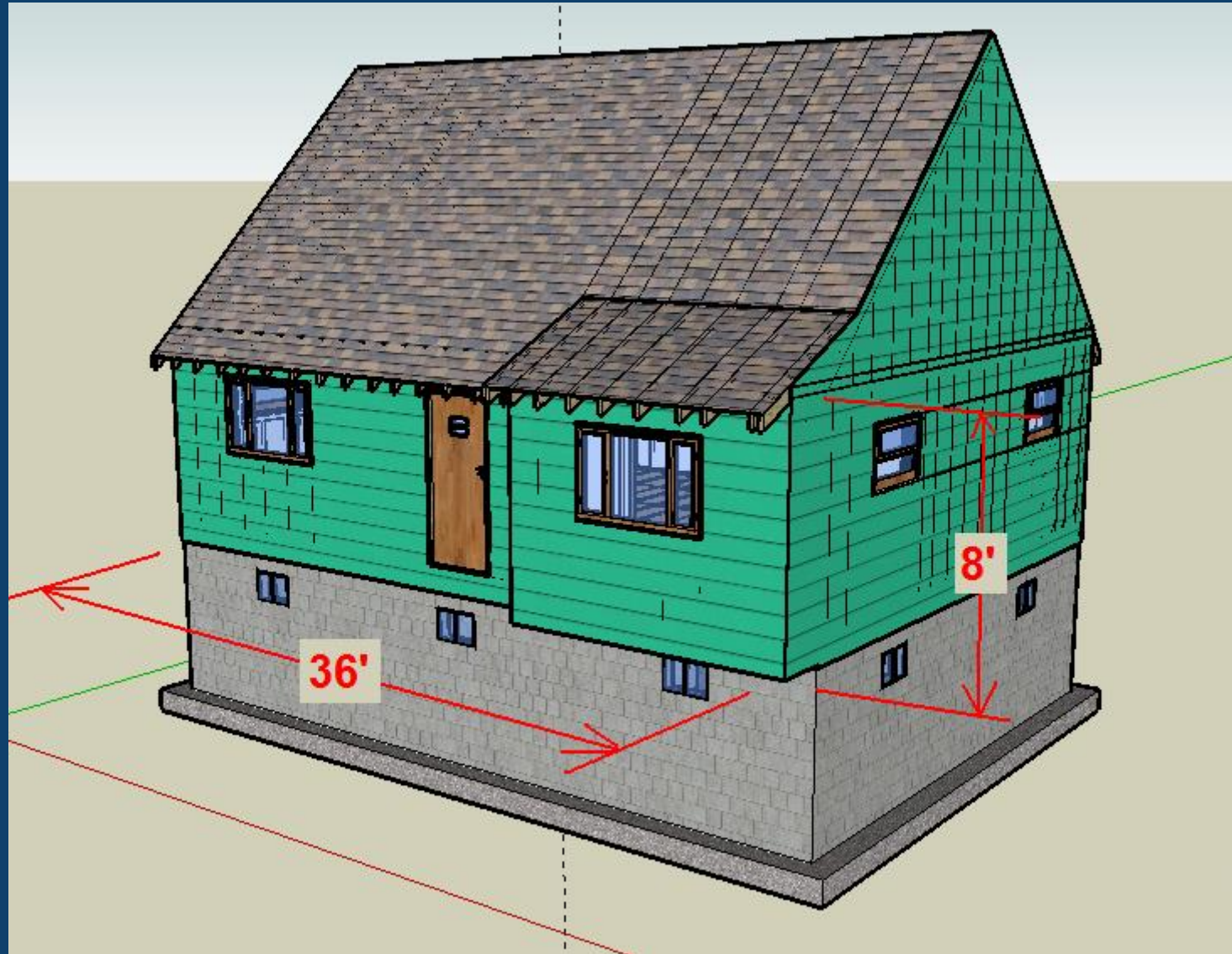


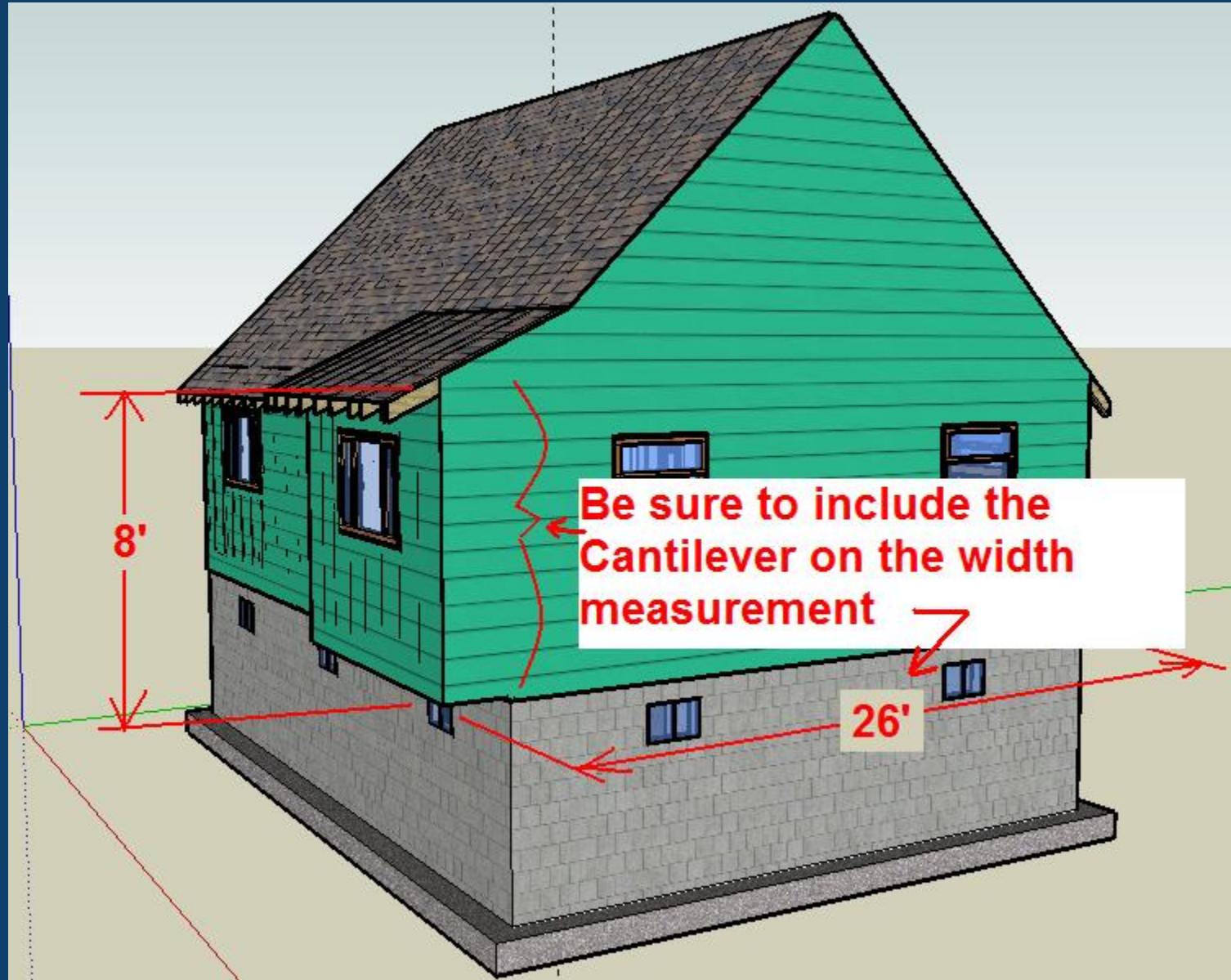
Appendix B – Measuring Walls Correctly

Appendix B – Measuring Walls Correctly

FIELD DATA SHEET



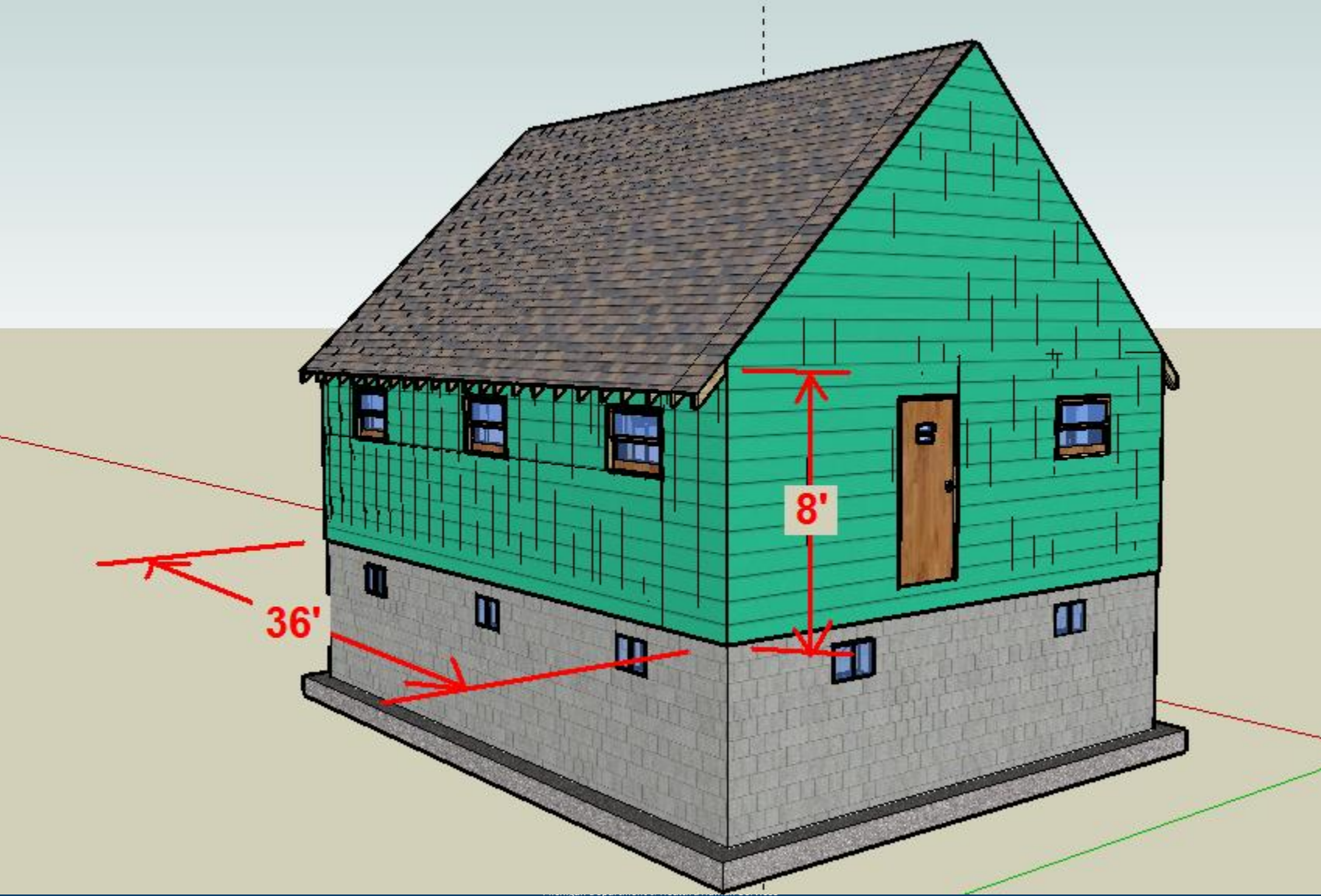


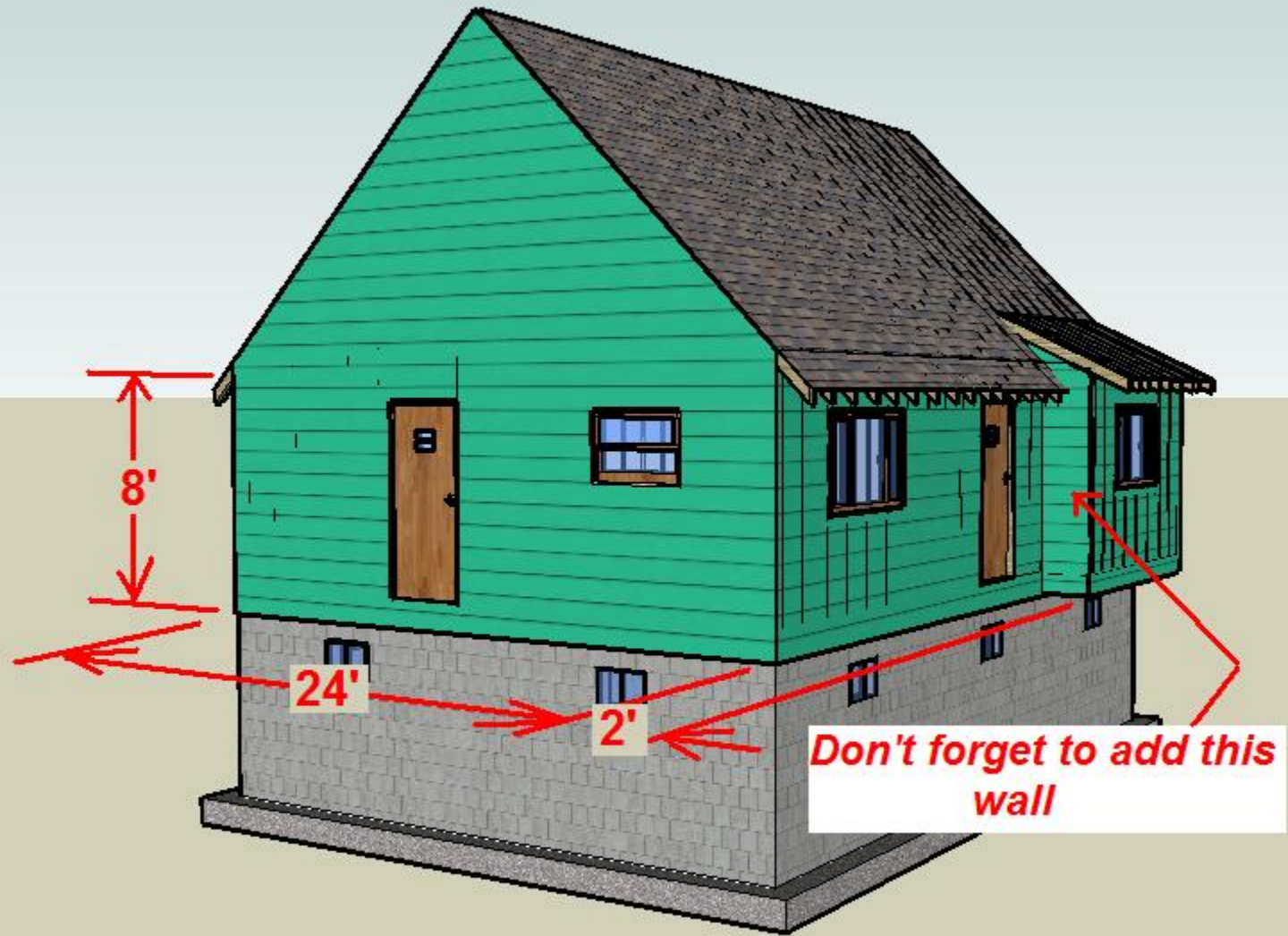


Be sure to include the Cantilever on the width measurement

8'

26'

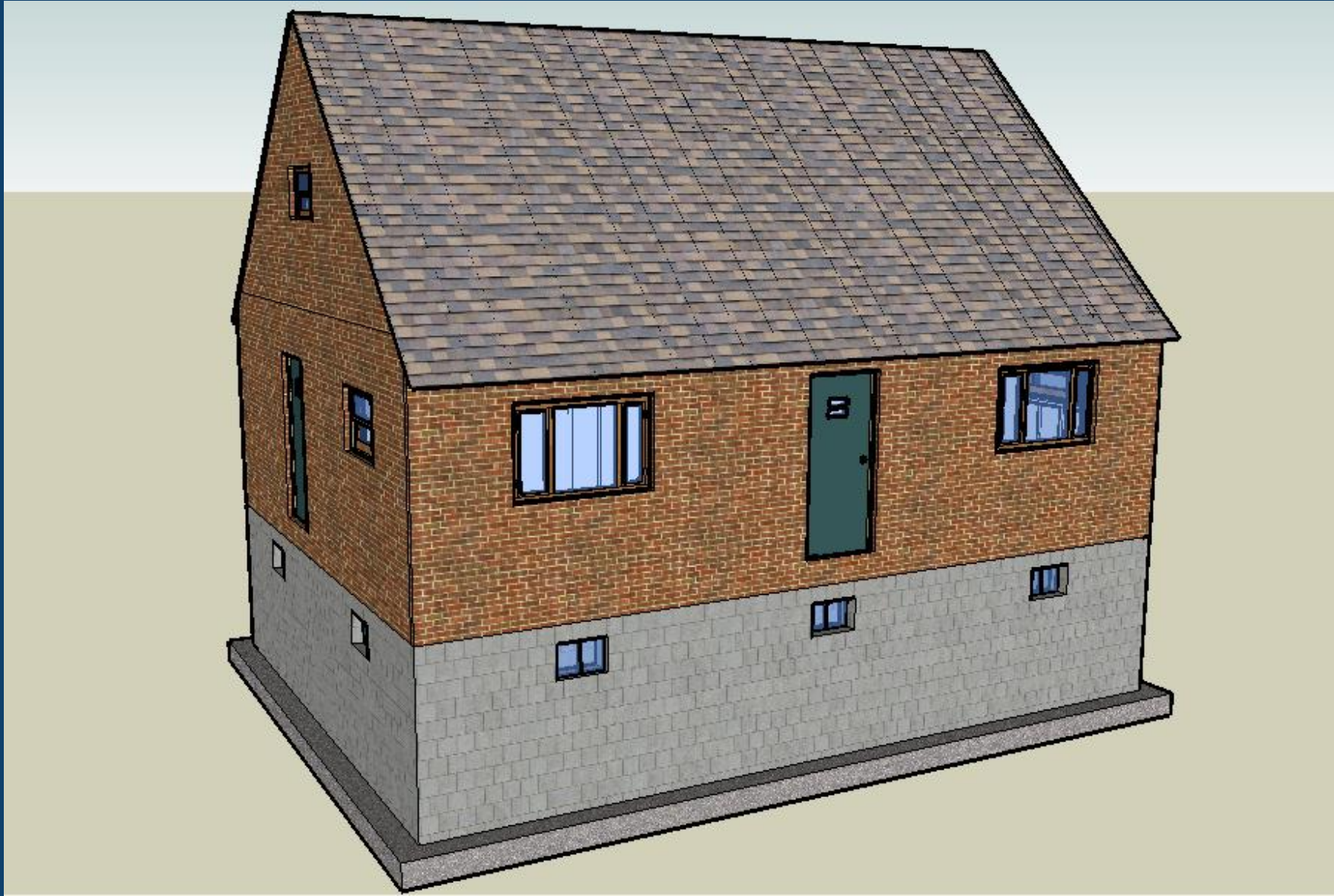


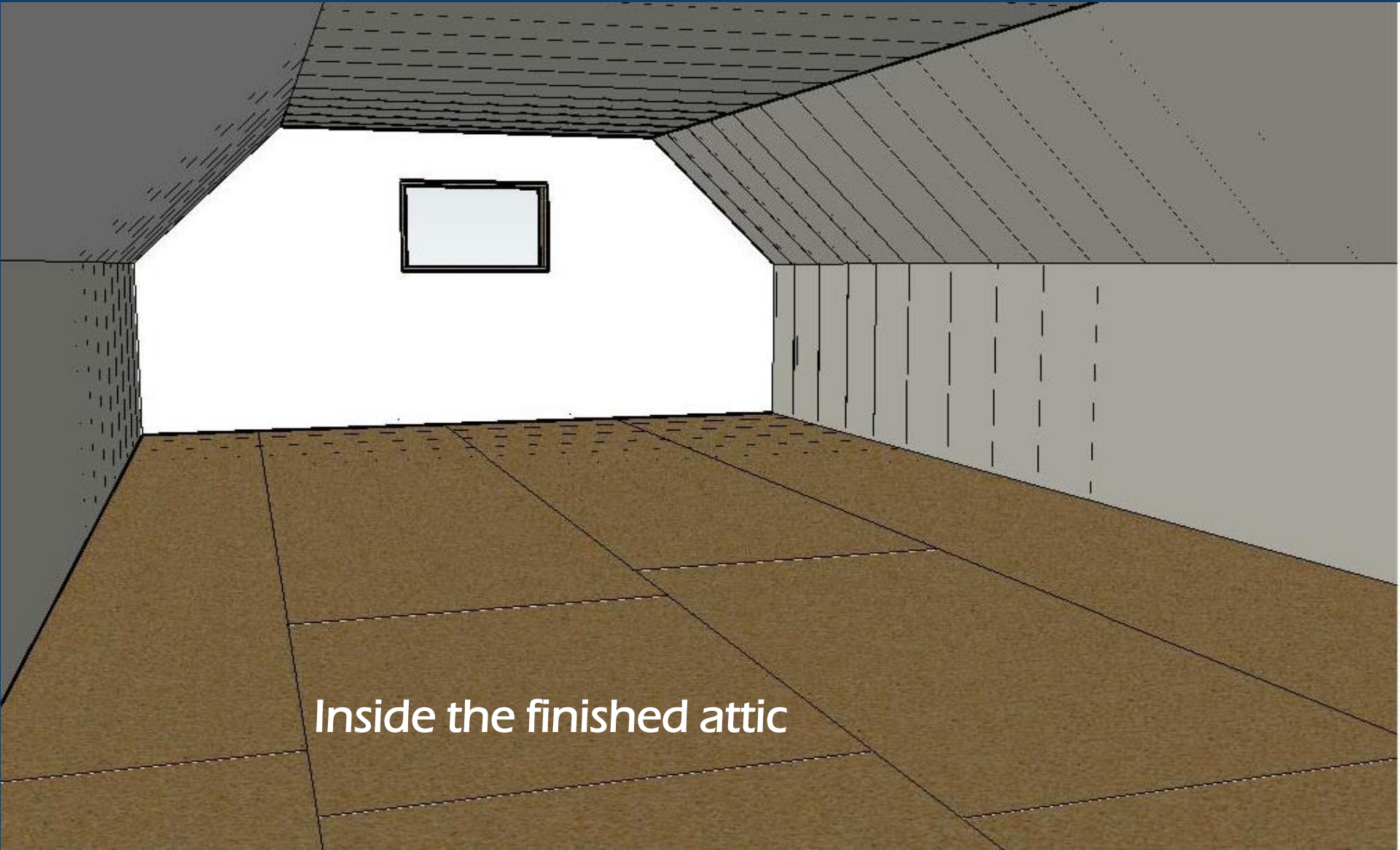


Don't forget to add this wall

Appendix C – Measuring Finished Attics

Appendix C – Measuring Finished Attics



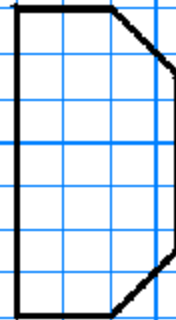
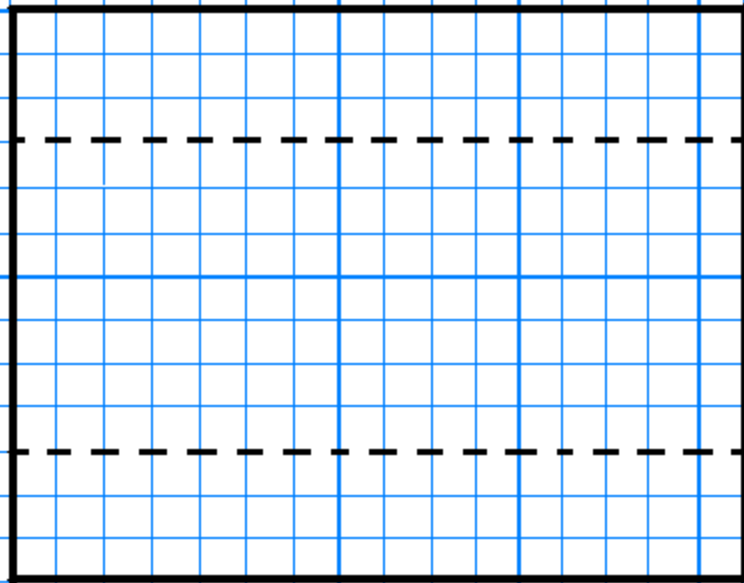


Inside the finished attic

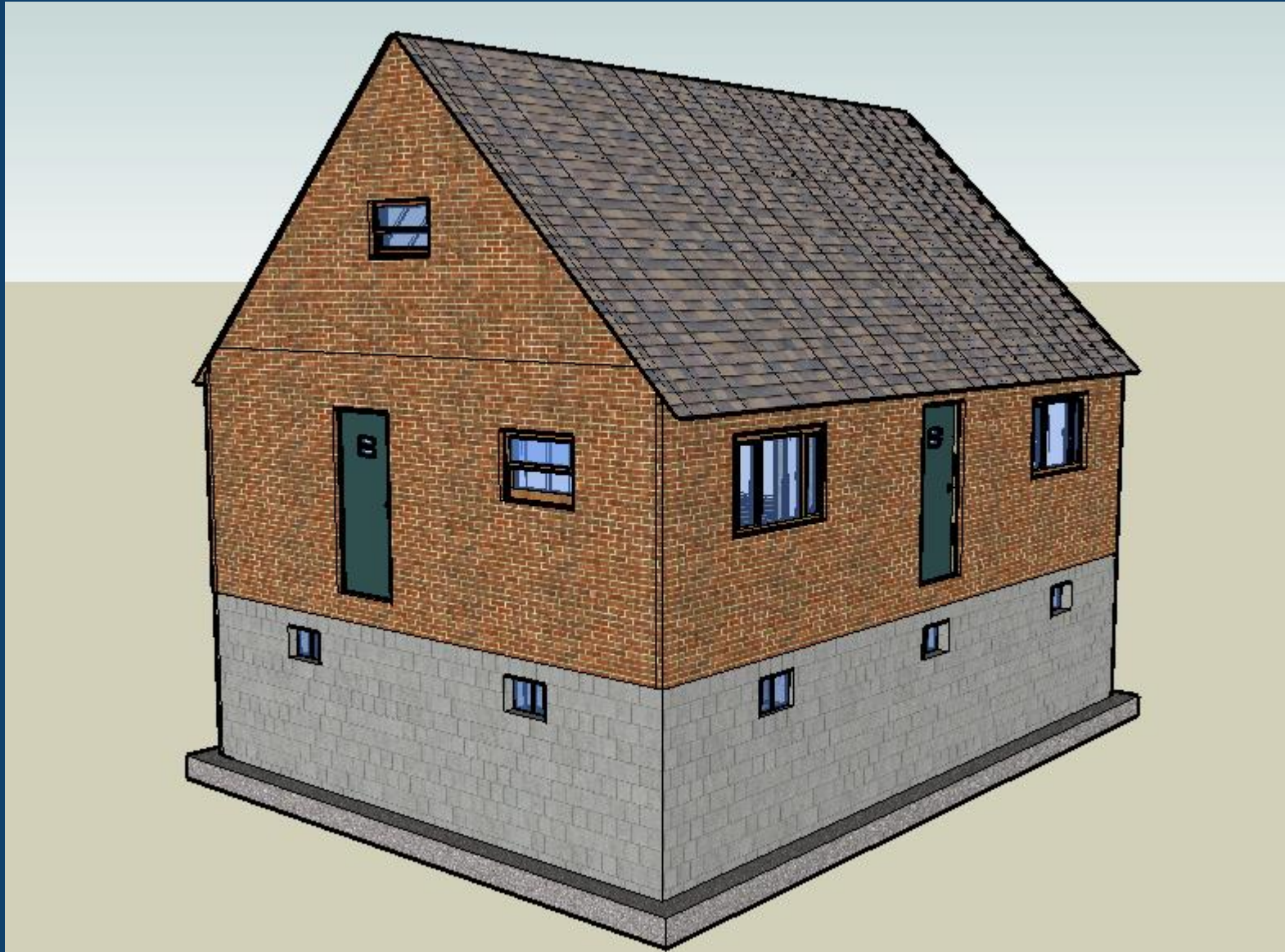
FIELD DATA SHEET

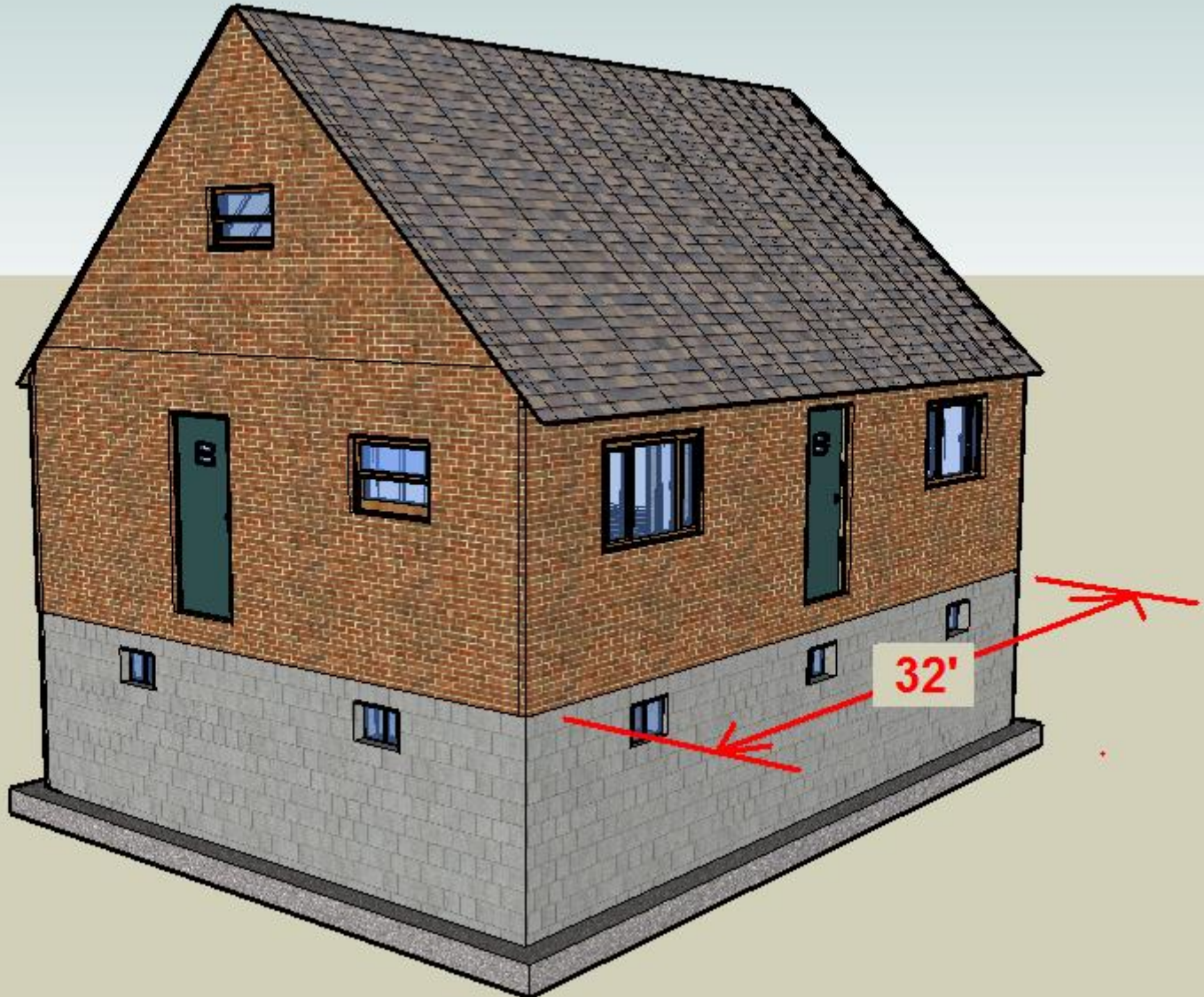
Name _____

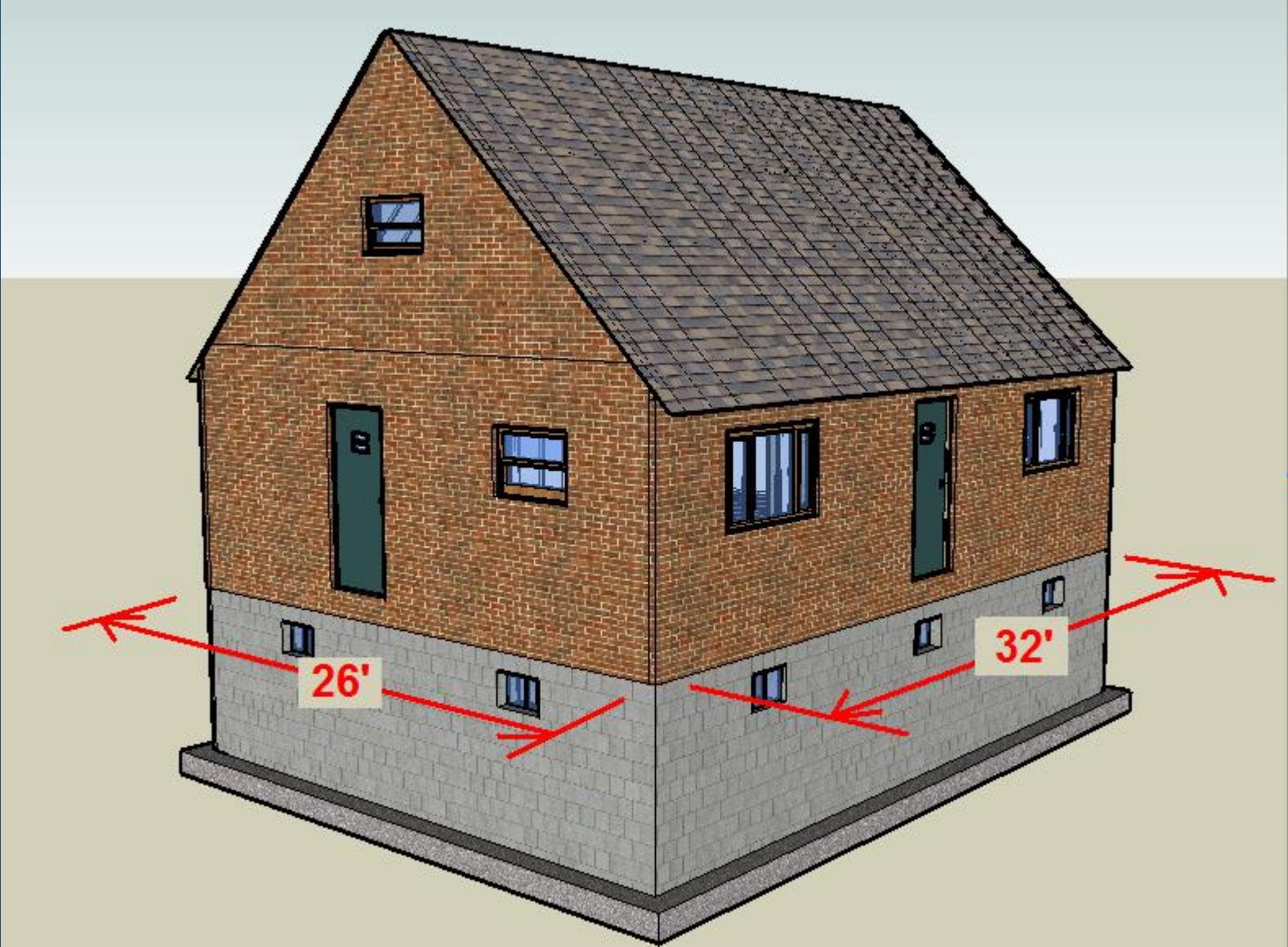
Job #: _____



Taking measurements



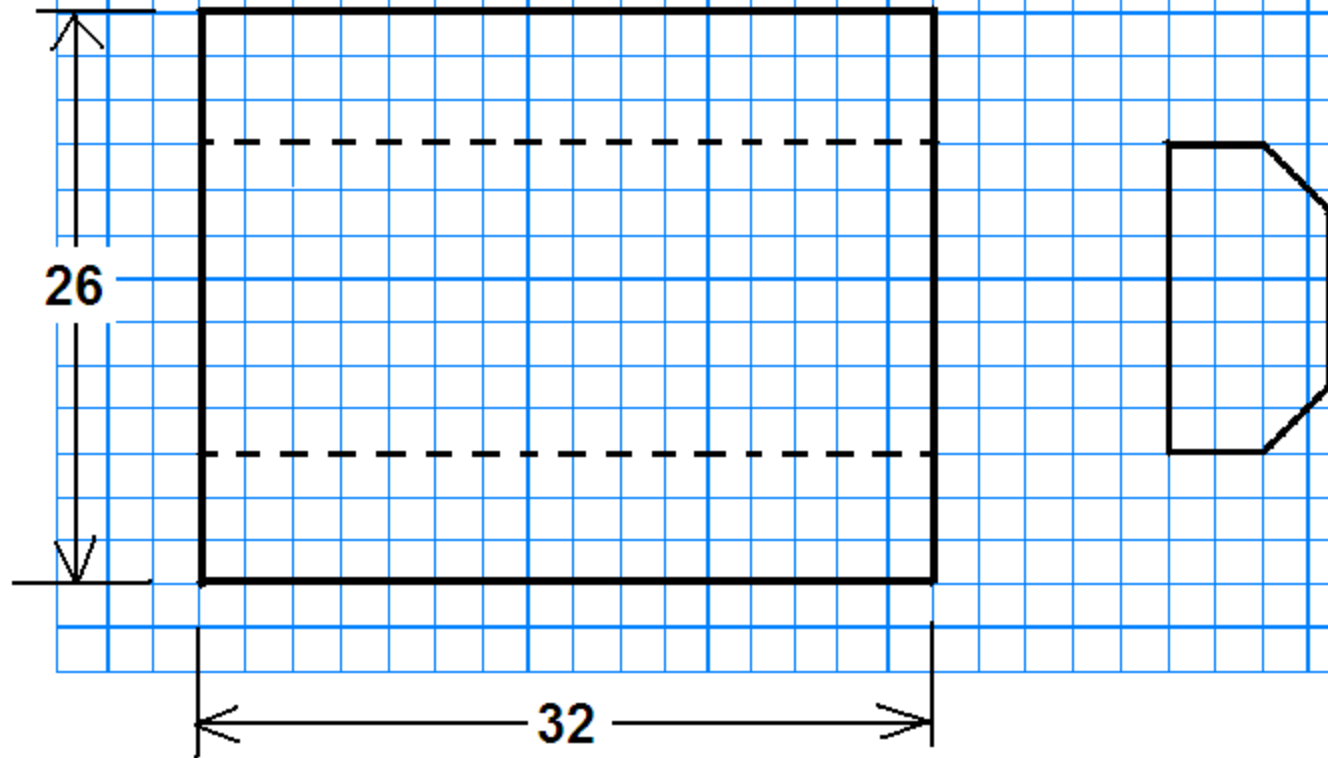


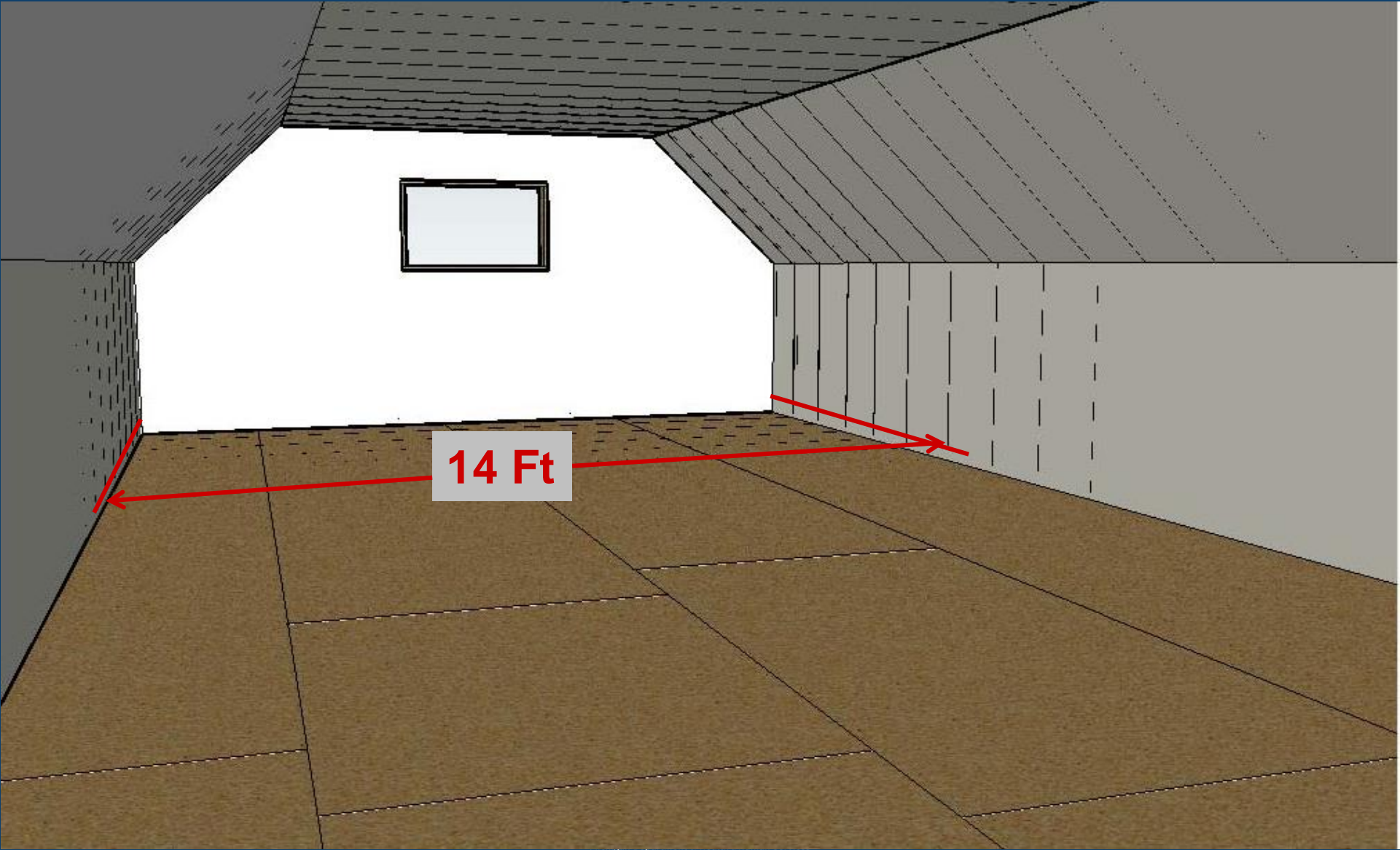


FIELD DATA SHEET

Name _____

Job #: _____

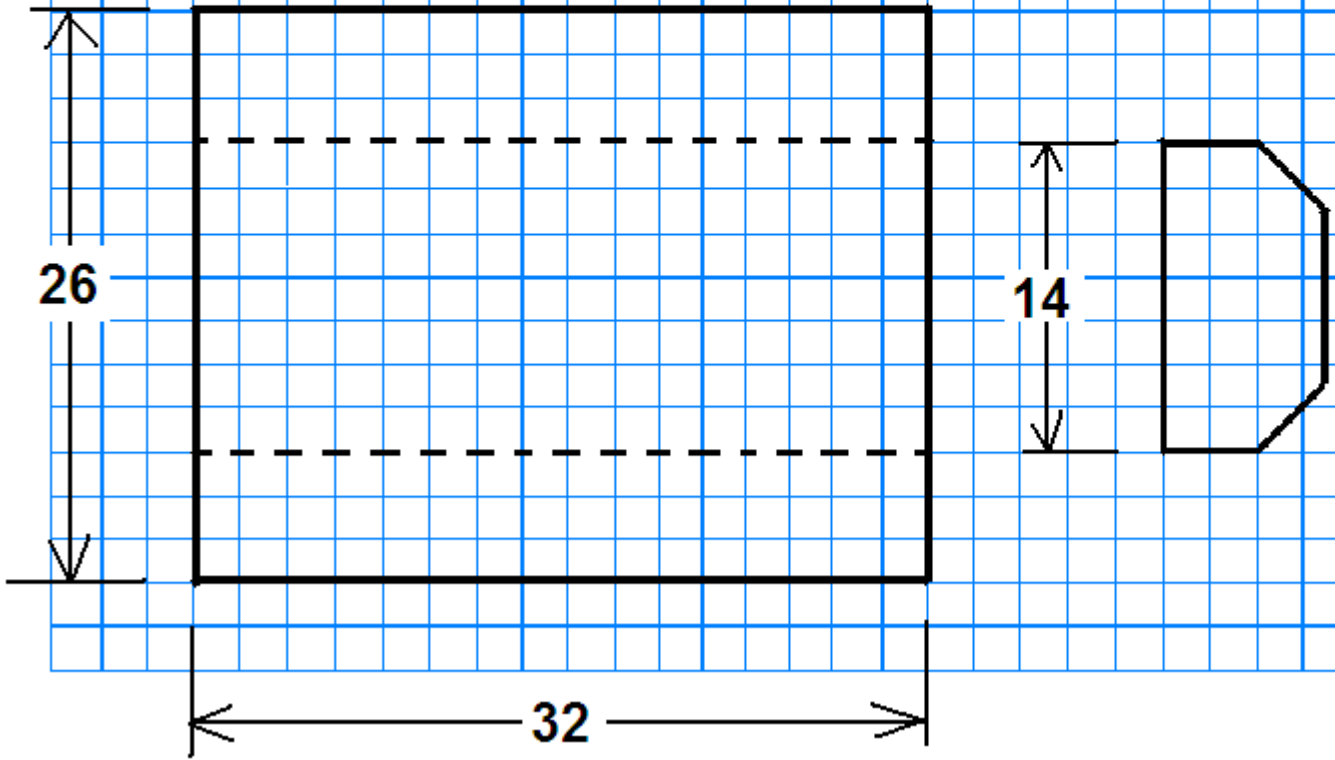


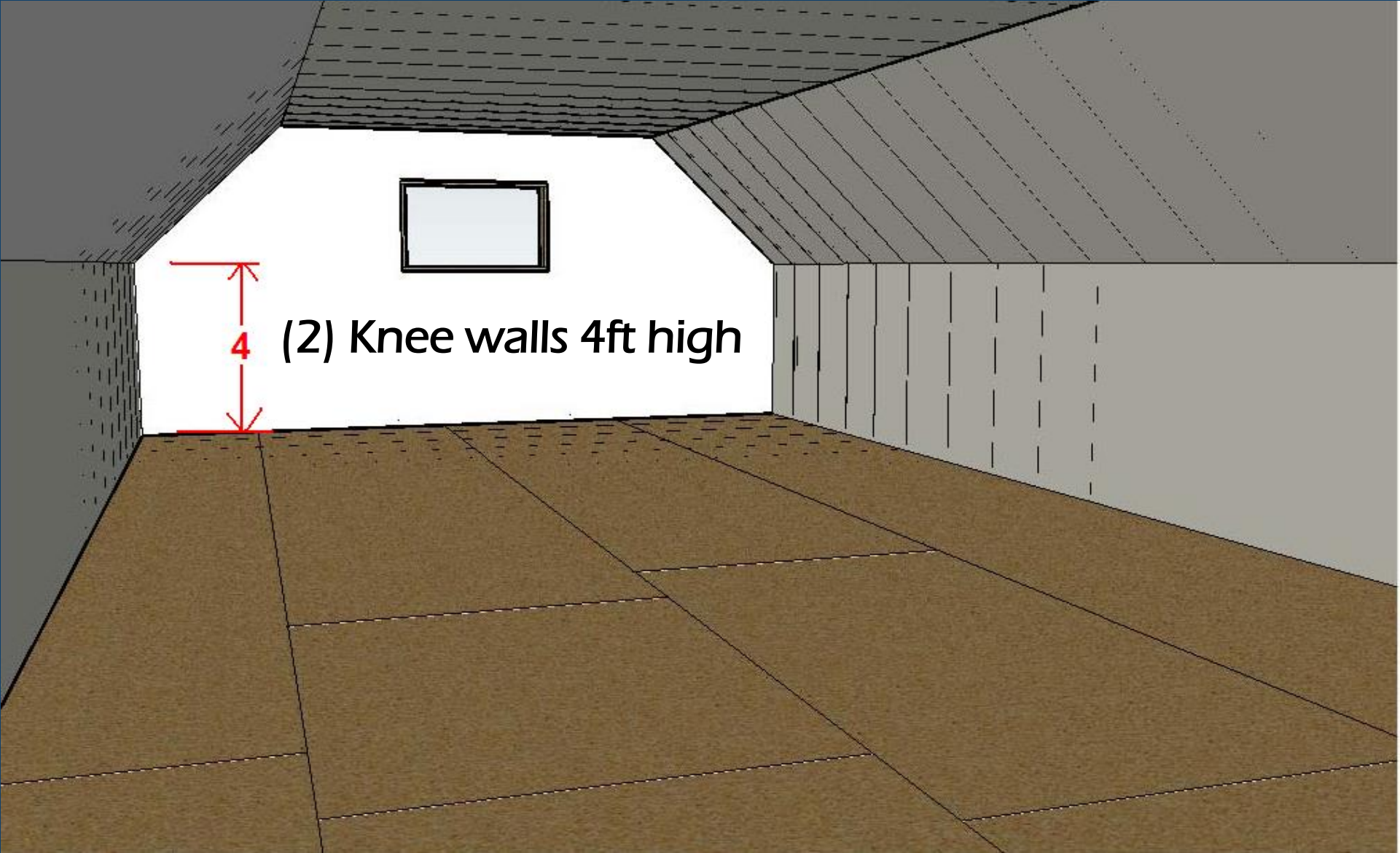


14 Ft

FIELD DATA SHEET

| | |
|--------|-------|
| Name | _____ |
| Job #: | _____ |



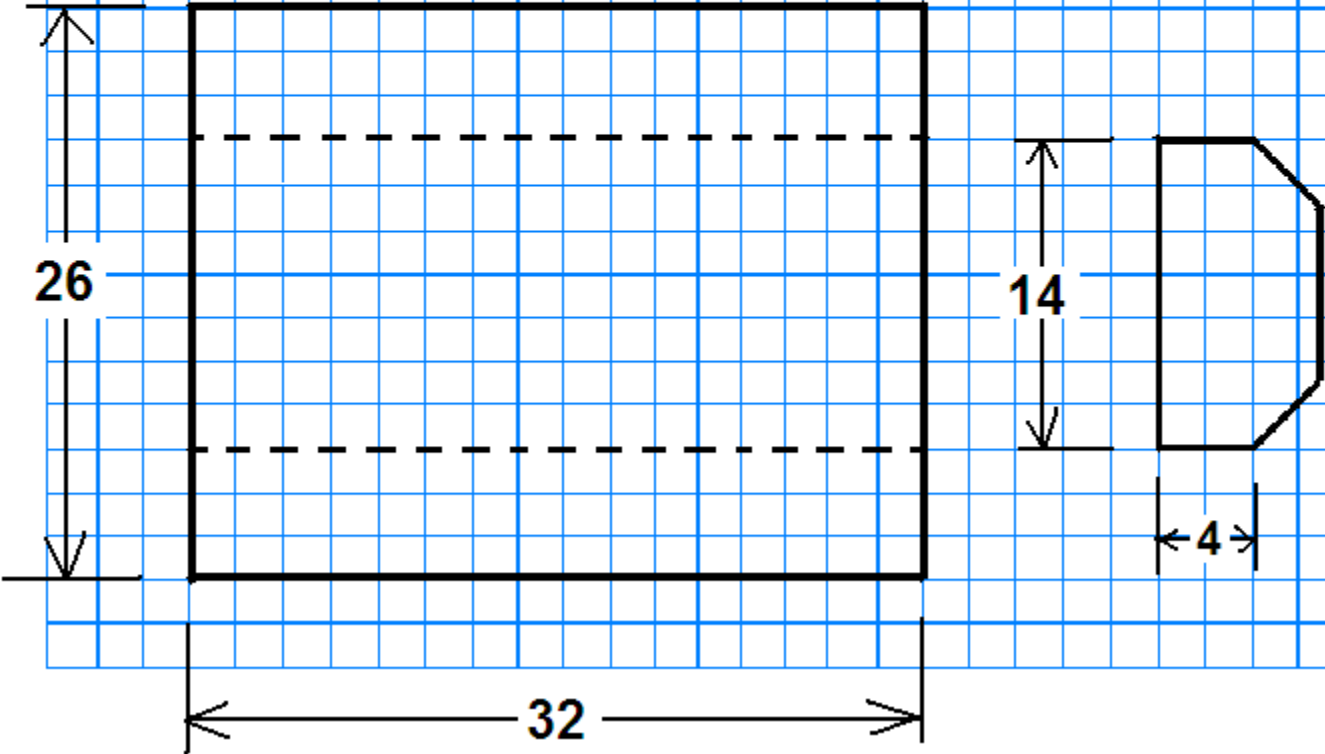


4 (2) Knee walls 4ft high

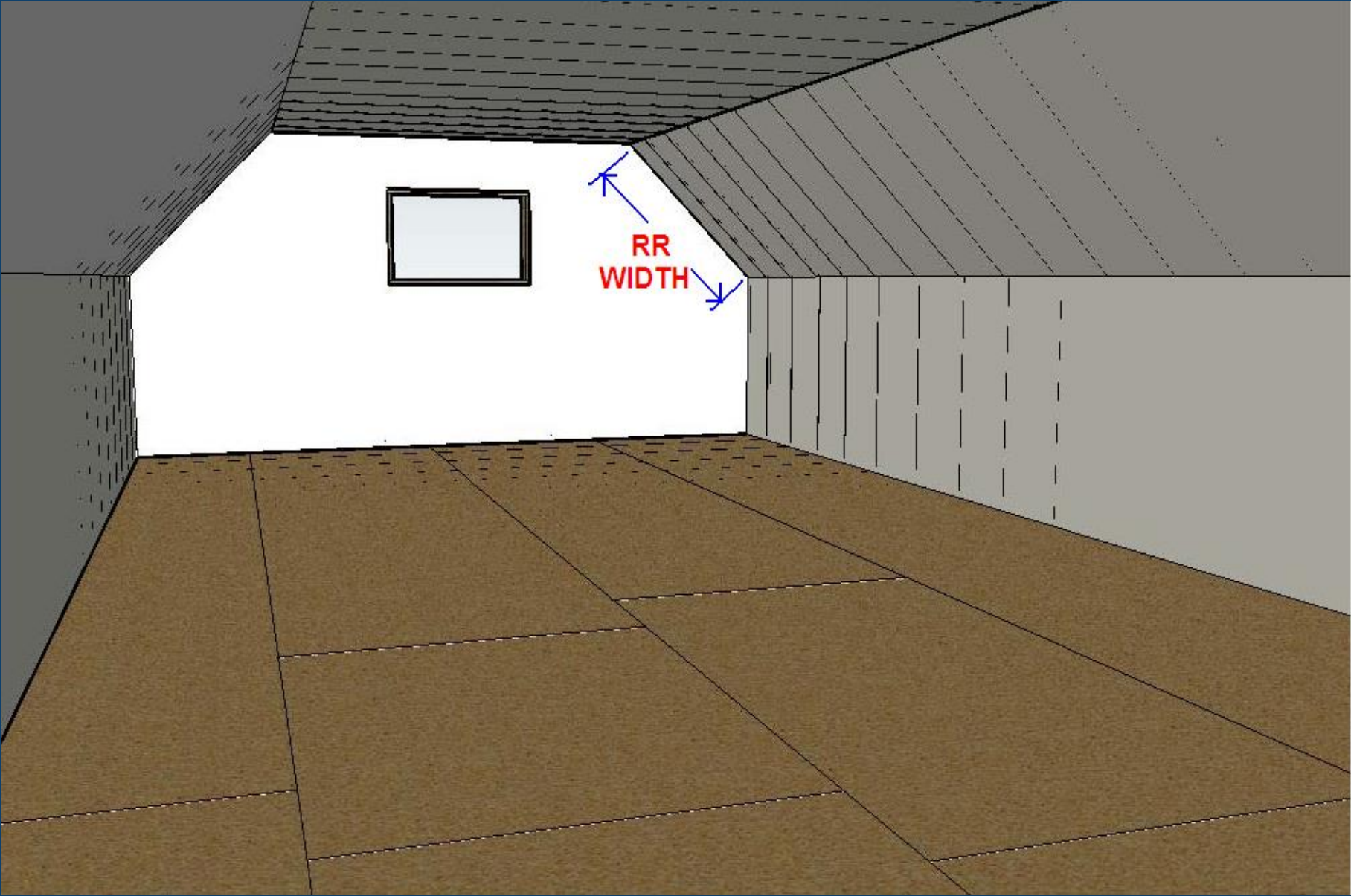
Kneewall area: 4 x 2 x 32 = 256 sq ft

FIELD DATA SHEET

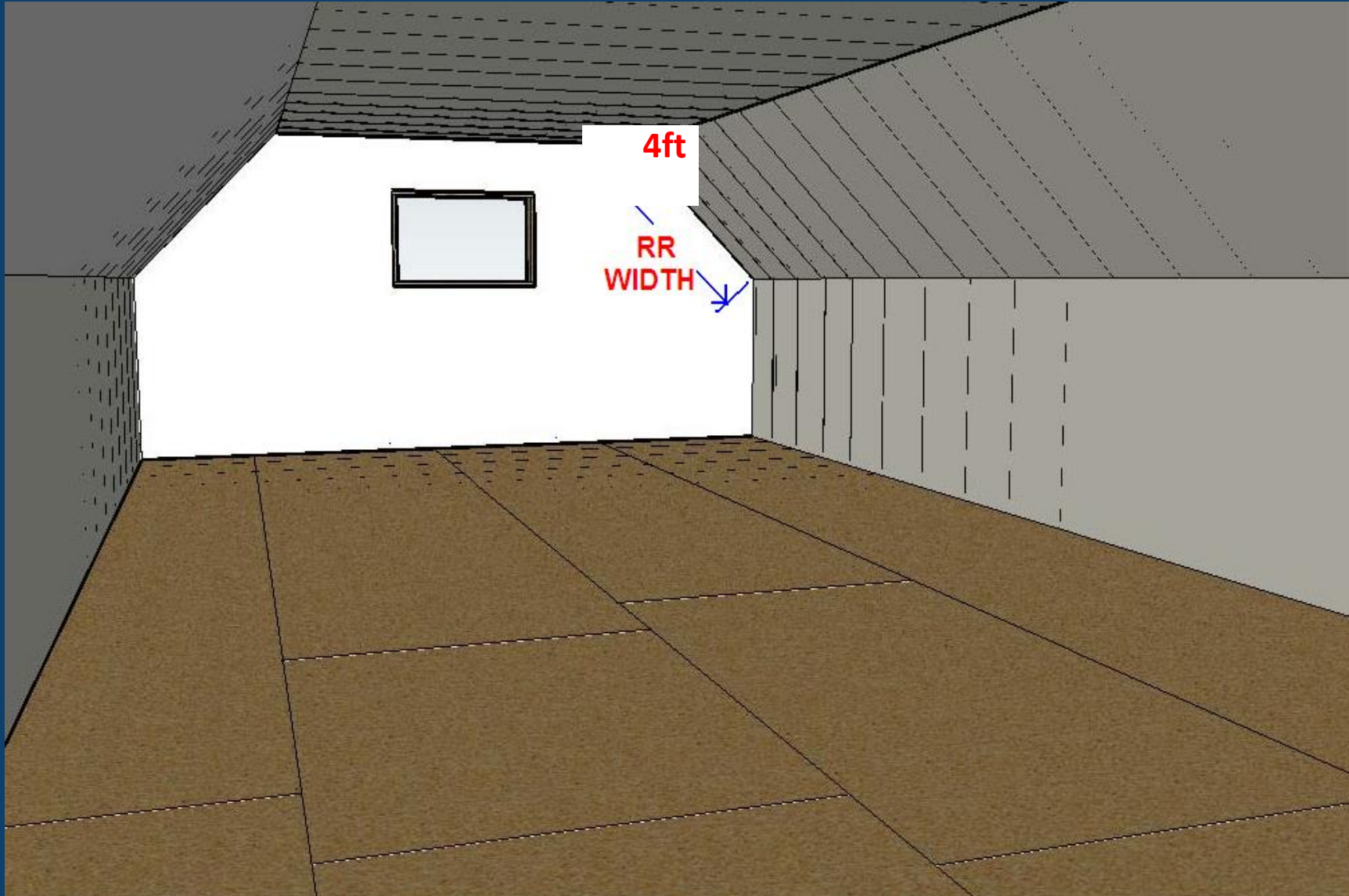
| | |
|--------|-------|
| Name | _____ |
| Job #: | _____ |



The slope ceiling areas are called “roof rafters” in the NEAT audit.



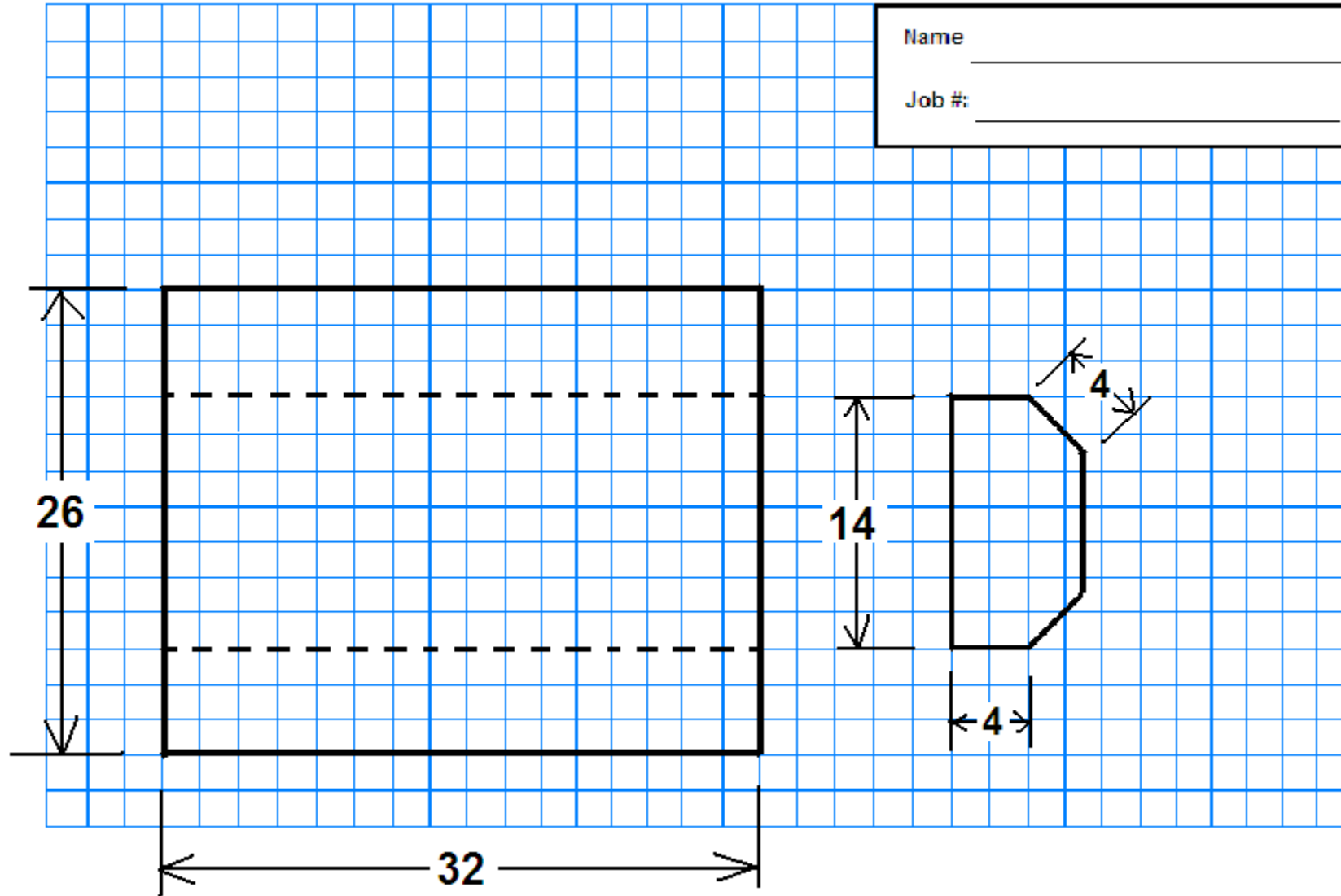
There are 2 "roof rafter" ceilings at 4 ft wide



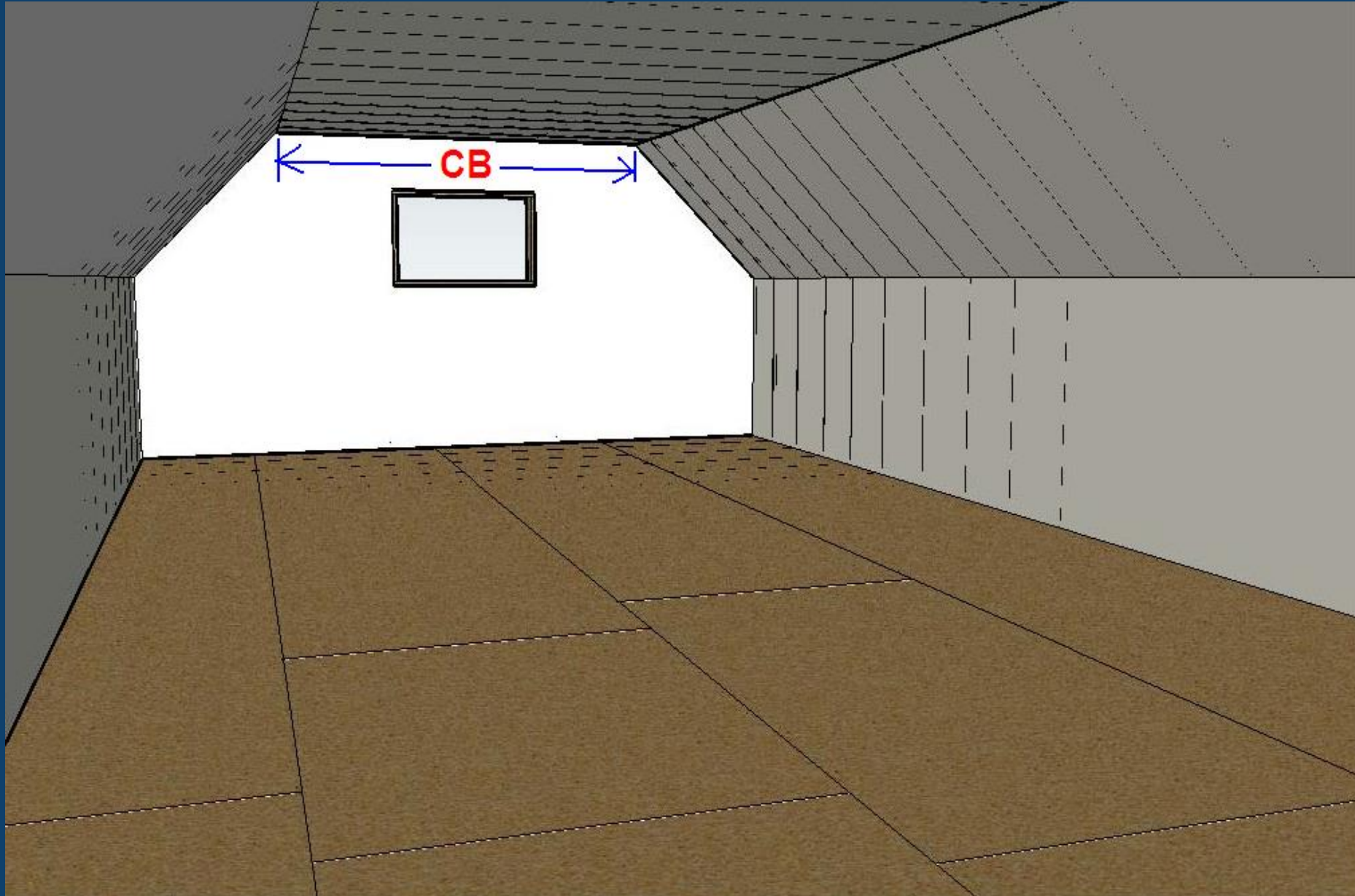
Roof Rafter Area: $4 \times 2 \times 32 = 256 \text{ sq ft}$

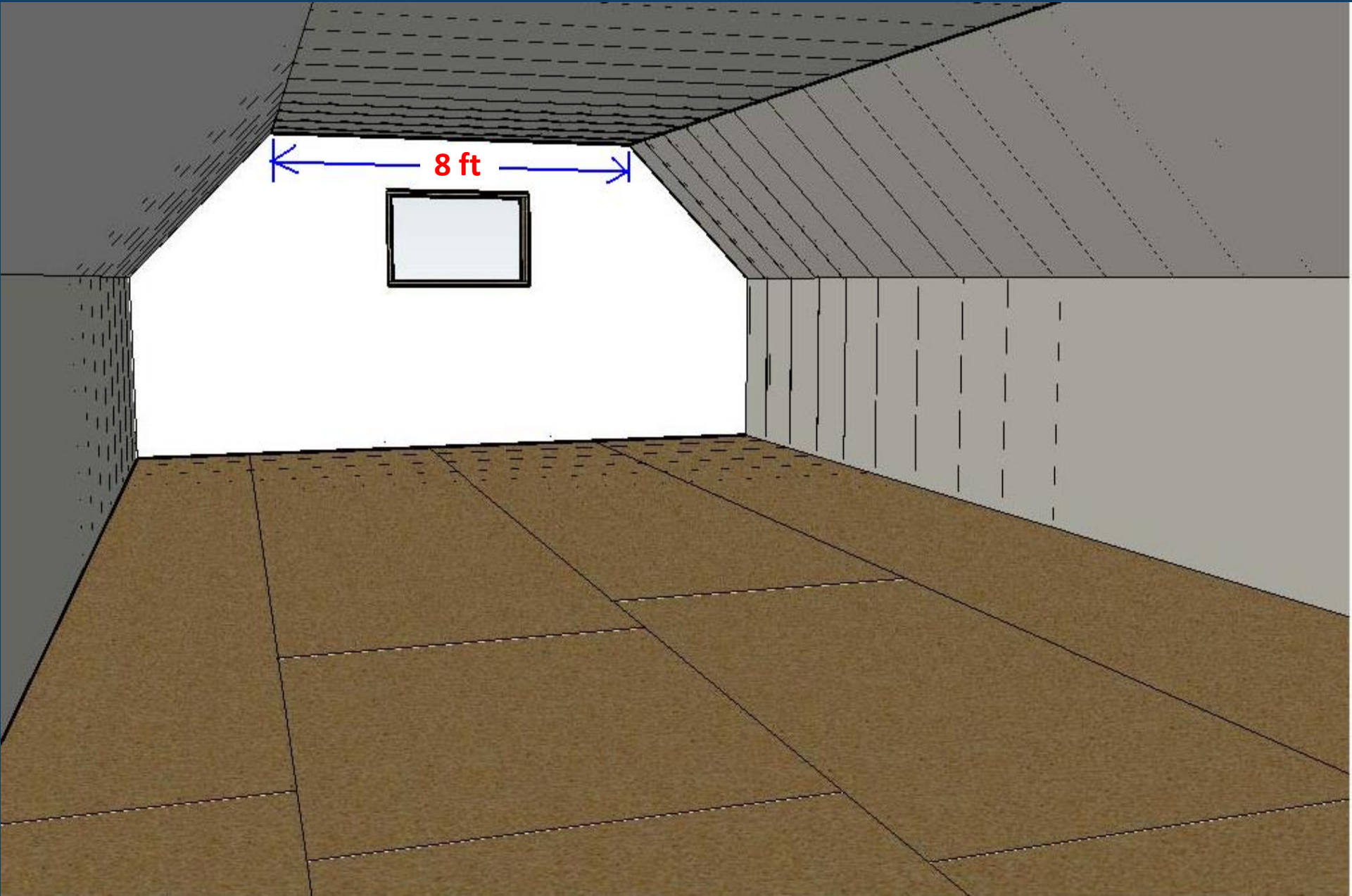
FIELD DATA SHEET

| | |
|--------|-------|
| Name | _____ |
| Job #: | _____ |



The upper ceiling section is called the "collar beam" there is an attic above it.

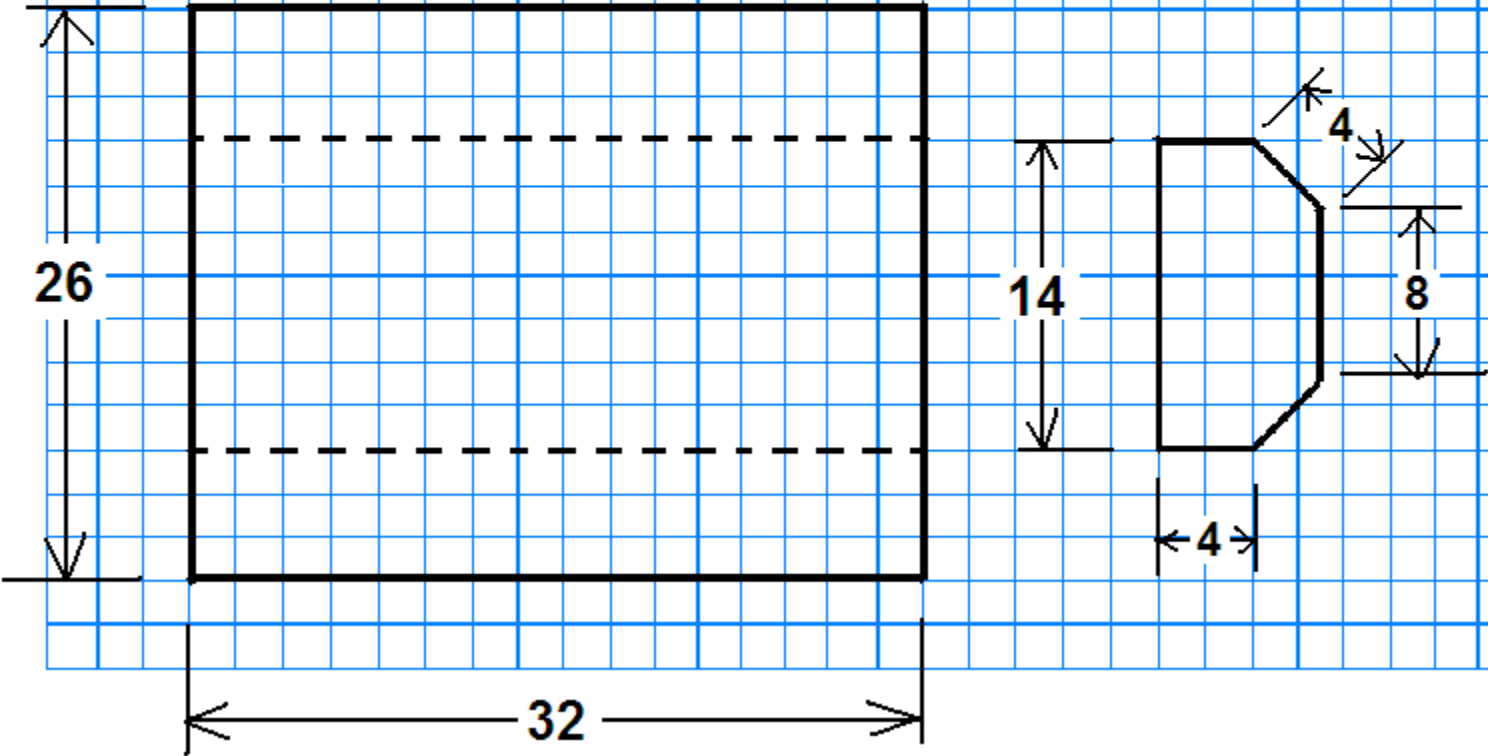




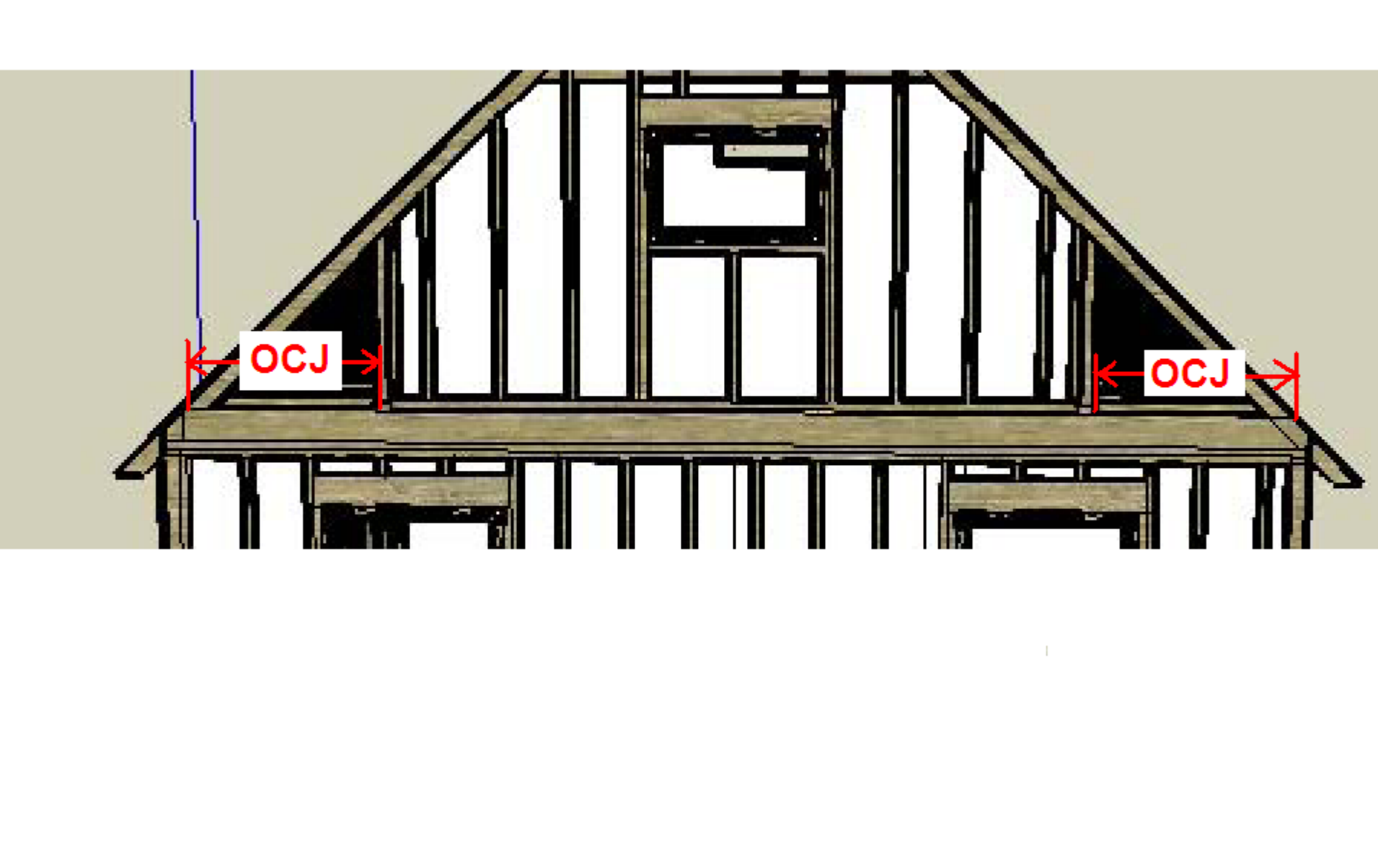
Collar Beam Area: $8 \times 32 = 256$ sq ft.

FIELD DATA SHEET

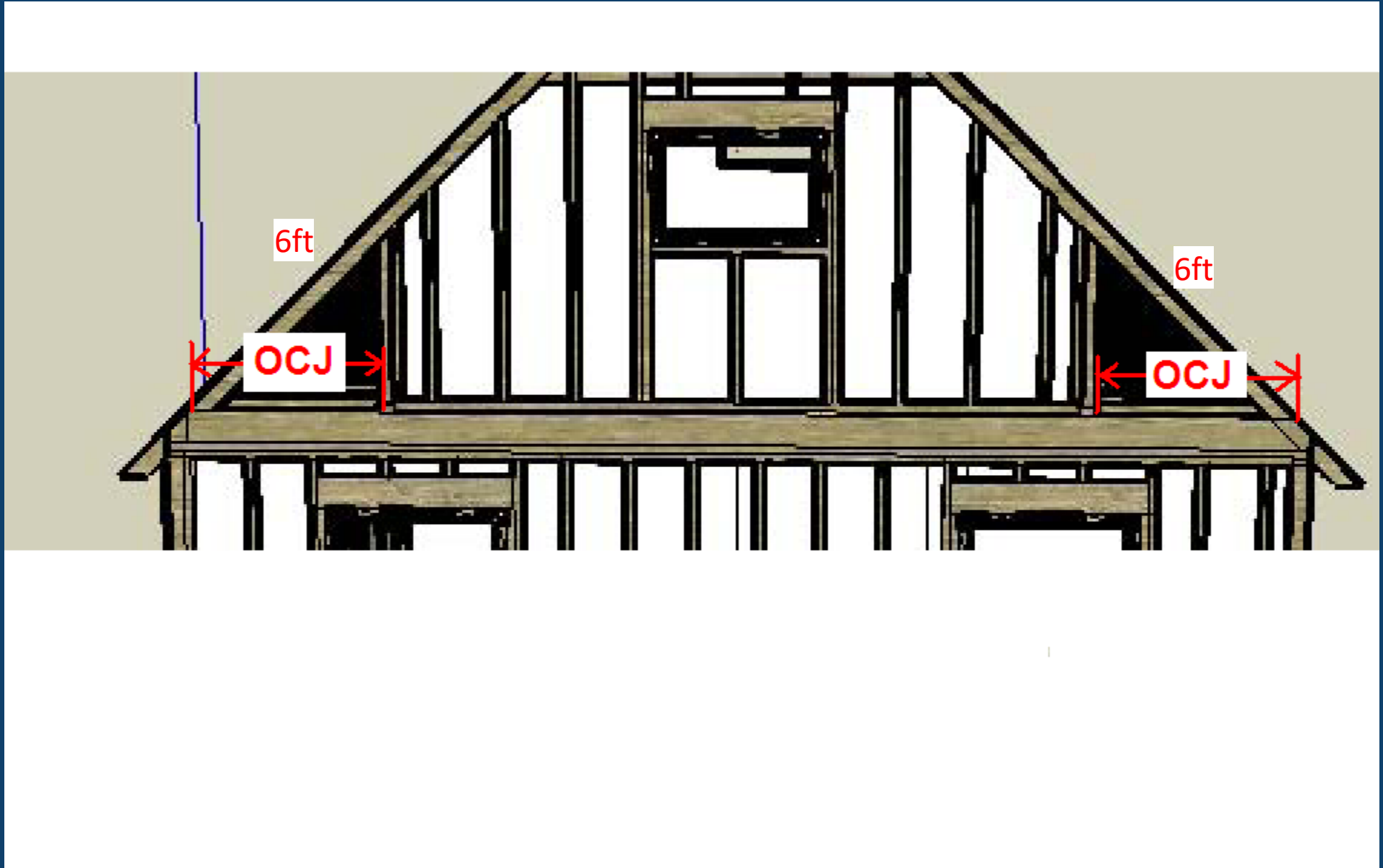
| | |
|--------|-------|
| Name | _____ |
| Job #: | _____ |



The attic floors behind the kneewalls are called "outer ceiling joists"



In this example there are 2 OCJ attics that are each 6ft wide.

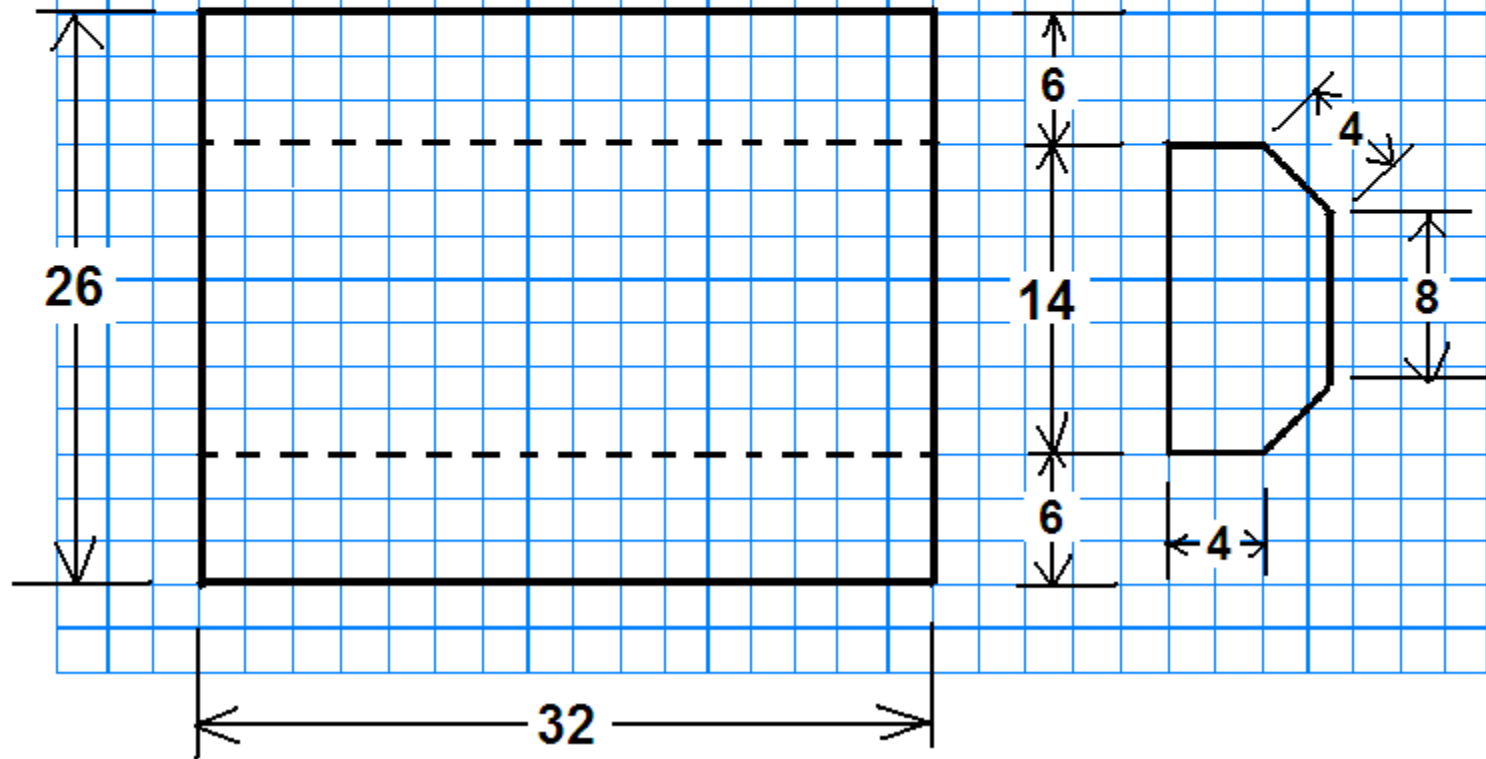


OCJ attic area: $6 \times 2 \times 32 = 384$ sq ft.

FIELD DATA SHEET

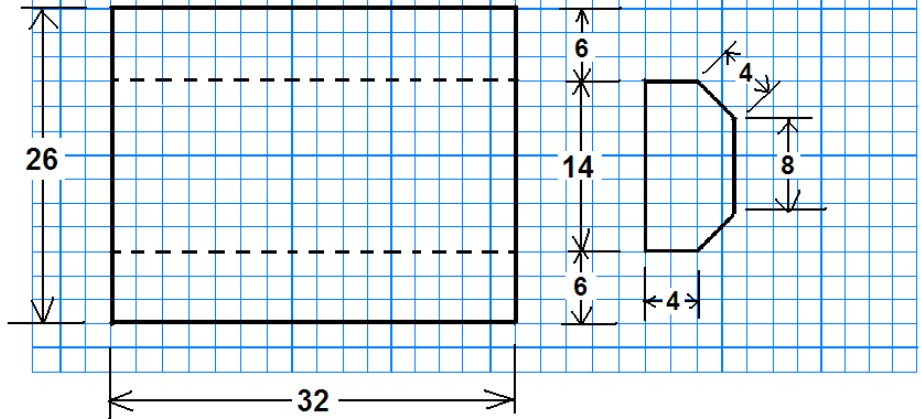
Name _____

Job #: _____



FIELD DATA SHEET

Name _____
 Job #: _____

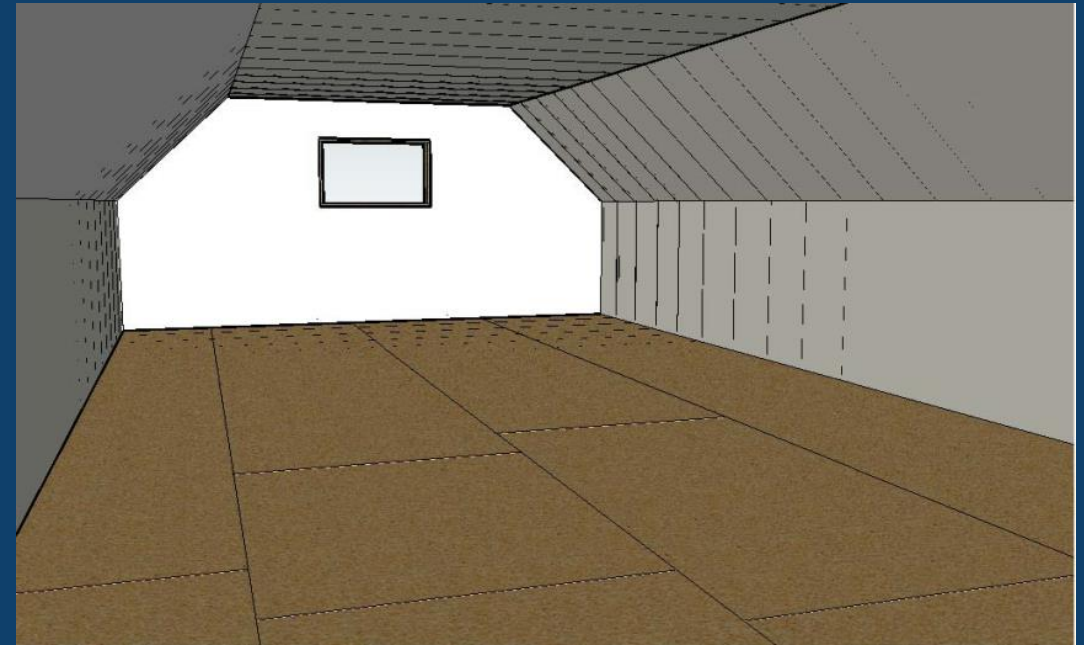
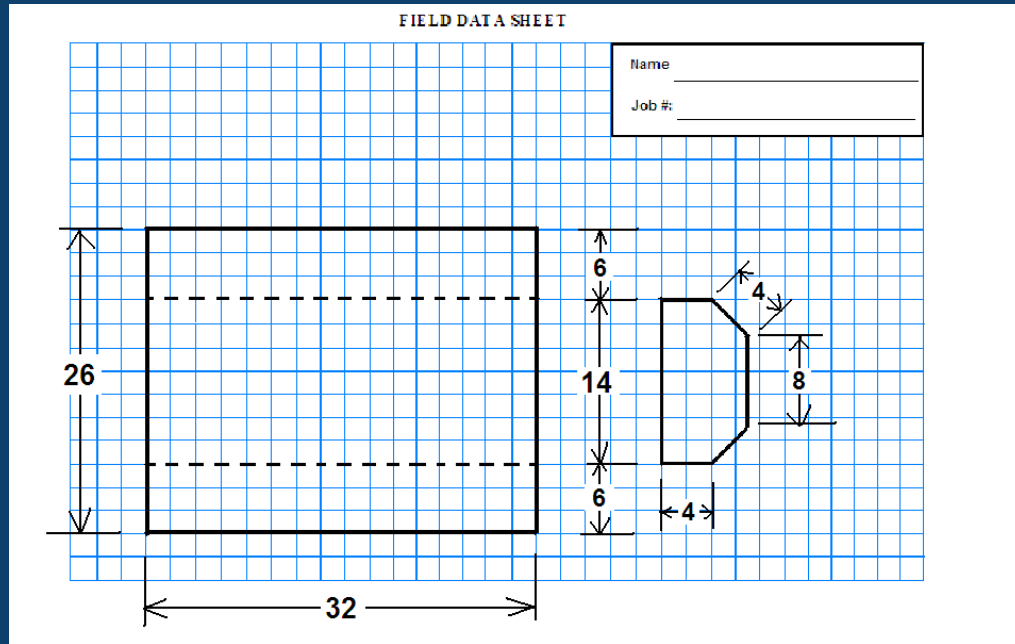


8 Ft walls
on main
floor

*Pick an average ceiling
height for the finished
attic*

| | | | | | | | | |
|---|-----------|---------|-----------|------------|--|-------------|------------|-----------|
| Number of Conditioned Stories: | | | | 1.5 | Is foundation within "Thermal" boundary? | | Yes | |
| First Floor Length: | 32 | x Width | 26 | 832 | Ft ² x Height | 8 | 6656 | Cubic Ft. |
| Second Floor Length: | 32 | x Width | 14 | 448 | Ft ² x Height | 7.35 | 3292.8 | Cubic Ft. |
| Other Length: | | x Width | | 0 | Ft ² x Height | | 0 | Cubic Ft. |
| Other Length: | | x Width | | 0 | Ft ² x Height | | 0 | Cubic Ft. |
| Other Length: | | x Width | | 0 | Ft ² x Height | | 0 | Cubic Ft. |
| Other Length: | | x Width | | 0 | Ft ² x Height | | 0 | Cubic Ft. |
| <i>Area excludes foundation if not considered Part of "Thermal" bound</i> | | | | 2112 | Sq./Ft | | 16604.8 | Cubic Ft. |
| Foundation Length: | 32 | x Width | 26 | 832 | Ft ² x Height | 8 | 6656 | Cubic Ft. |
| Other Foundation Length | | x Width | | 0 | Ft ² x Height | | 0 | Cubic Ft. |

Combining Similar Attic Types in the I.W.C / WA 8.9 / WAweb



| | | | | | | 0 | | Existing Insulation | |
|-------------|--------|--------|-------|-------|----------|--------|-------------|---------------------|------------|
| Finished | Attics | Length | Width | Depth | | | Attic Floor | Type | Depth (in) |
| OCJ | #1 | 32 | 6 | 2x8 | Combined | Sq./Ft | Type | | |
| | #2 | 32 | 6 | 2x8 | | | Unfloored | Rockwool | 3.5 |
| Collar Beam | | 32 | 8 | 2x6 | | 256 | Unfloored | Rockwool | 3.5 |
| Knee Wall | #1 | 32 | 4 | 2x4 | Combined | Sq./Ft | | | |
| | #2 | 32 | 4 | 2x4 | | | | 256 | None |
| Roof Rafter | #1 | 32 | 4 | 2x6 | Combined | Sq./Ft | | | |
| | #2 | 32 | 4 | 2x6 | | | | 256 | None |

Appendix D: Measuring Ducts Manually

Appendix D: Measuring Ducts Manually

Duct Systems

DUCT 1 DUCT 2

Existing Equipment

Duct System Code: DUCT 1

Duct Type: Supply Return

HVAC Systems Served: Heating: FURNACE Cooling: None

Duct Location: Unconditioned Attic/Ceiling

Duct Insulation: No Insulation

Use Defaults:

Surface Area (sq ft): 230.38 **Duct Dimensions** Calculate

Insulation R-value: 0

Number of Return Registers:

Supply Ducts on 1 Tab

Duct Systems

DUCT 1 DUCT 2

Existing Equipment

Duct System Code: DUCT 2

Duct Type: Supply Return

HVAC Systems Served: Heating: FURNACE Cooling: None

Duct Location: Unconditioned Attic/Ceiling

Duct Insulation: No Insulation

Use Defaults:

Surface Area (sq ft): 73.33 **Duct Dimensions** Calculate

Insulation R-value: 0

Number of Return Registers: 1

Return Ducts on Tab 2

Duct Dimensions

Add Delete Close

| Duct Section | Shape | Length (ft) | Width (in) | Height (in) | Diameter (in) |
|--------------|-------|-------------|------------|-------------|---------------|
| Section 1 | Round | 20 | | | 20 |
| Section 2 | Round | 60 | | | 8 |

Add Insulation

Measure Number: 1

Added R-value: 8

Additional Cost (\$): 250

R-8 per SWS & MI Field Guide