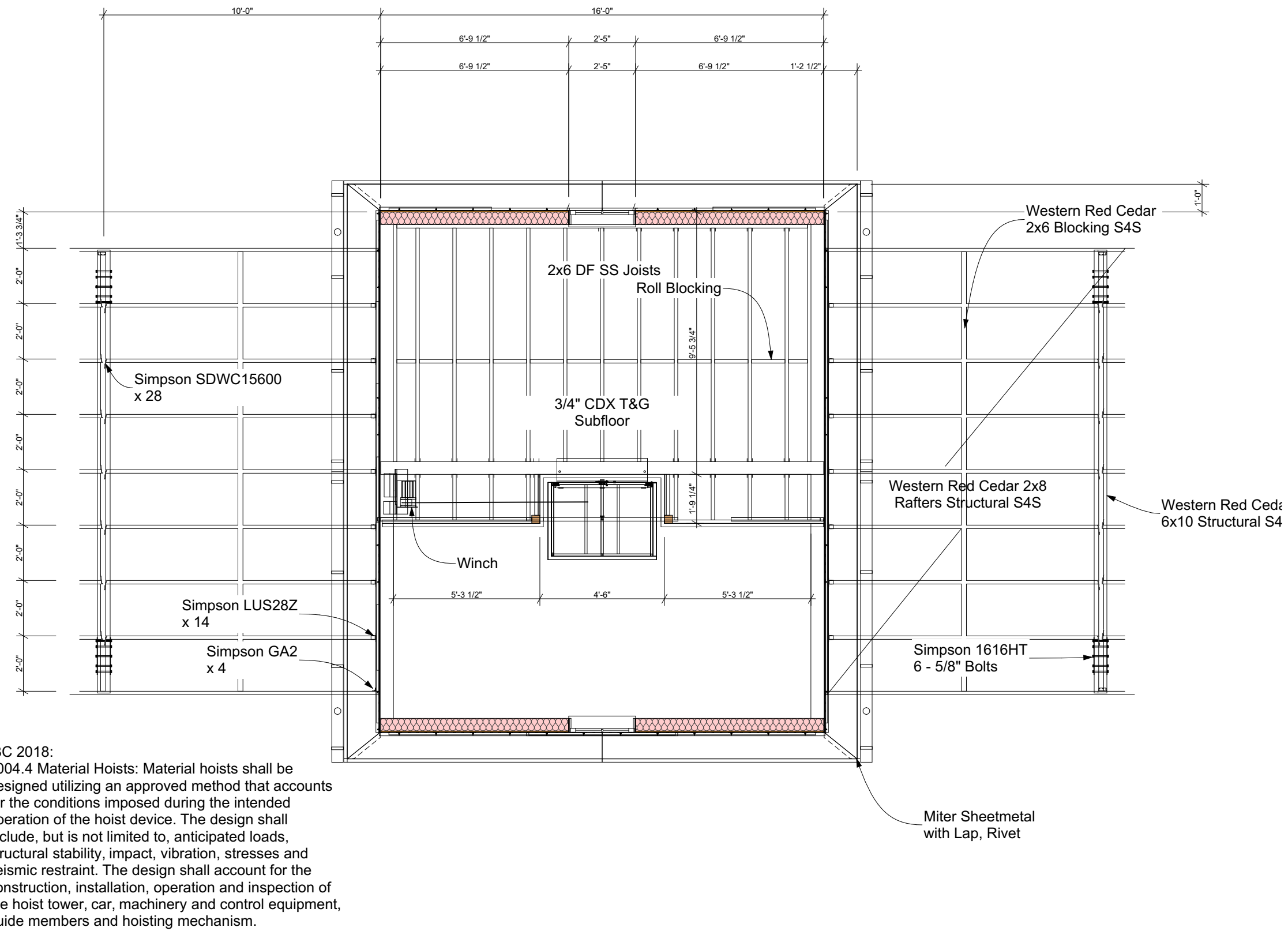
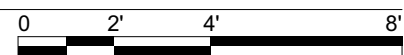
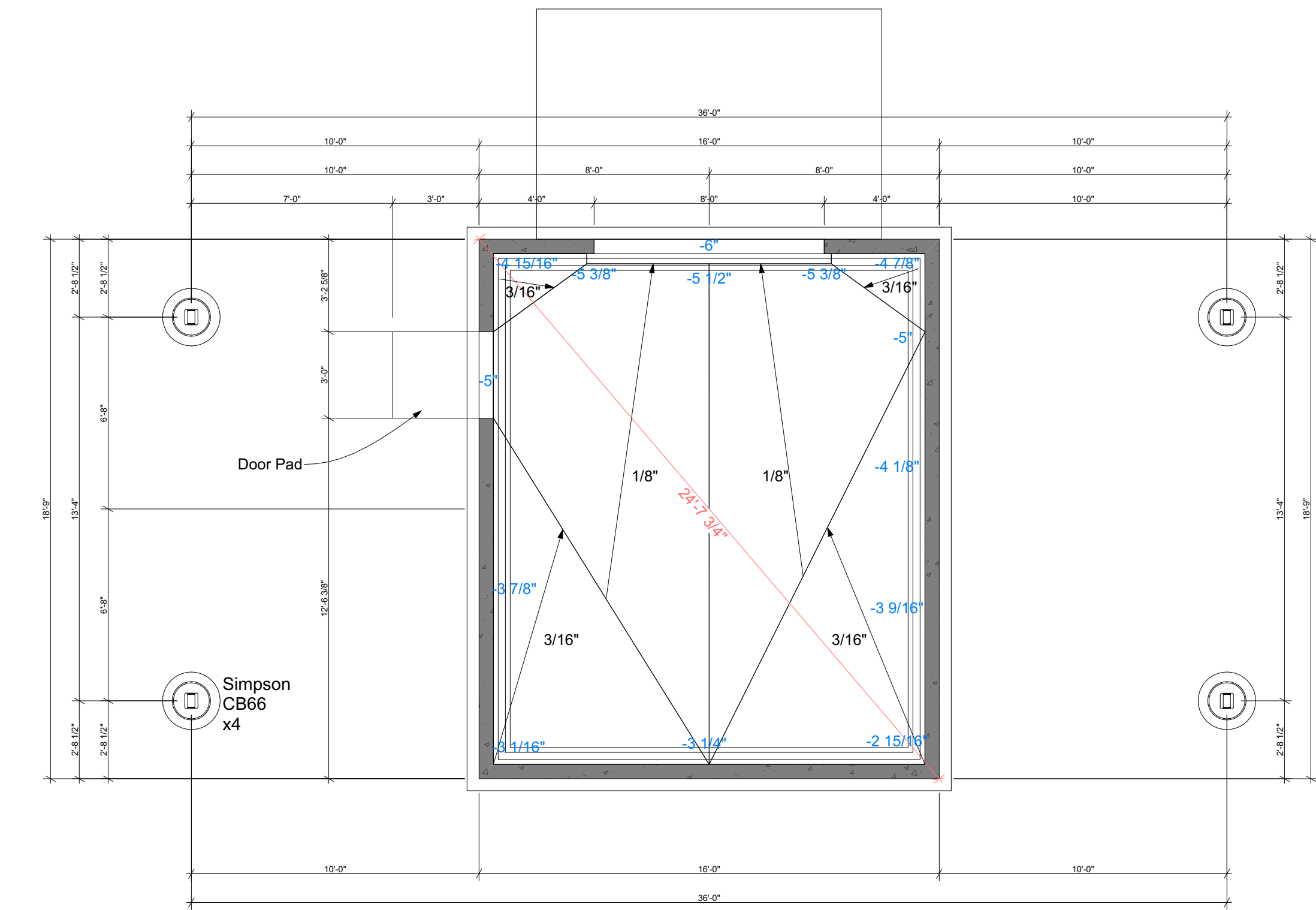
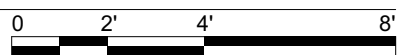


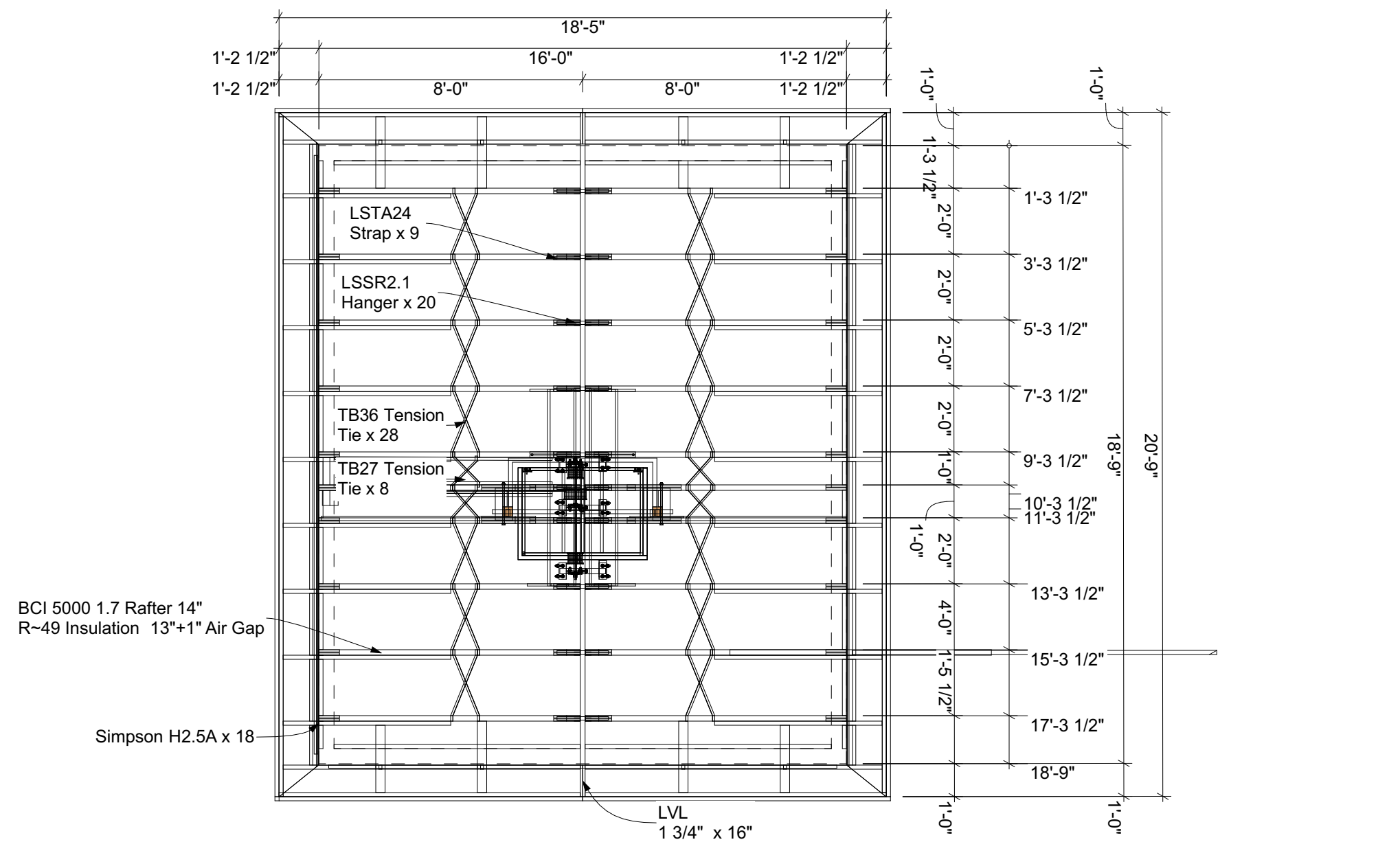
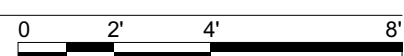
2 Top of Foundation
A101 SCALE: 1/4" = 1'-0"



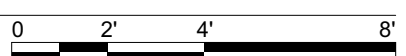
3 Top of Wall
A101 SCALE: 1/4" = 1'-0"

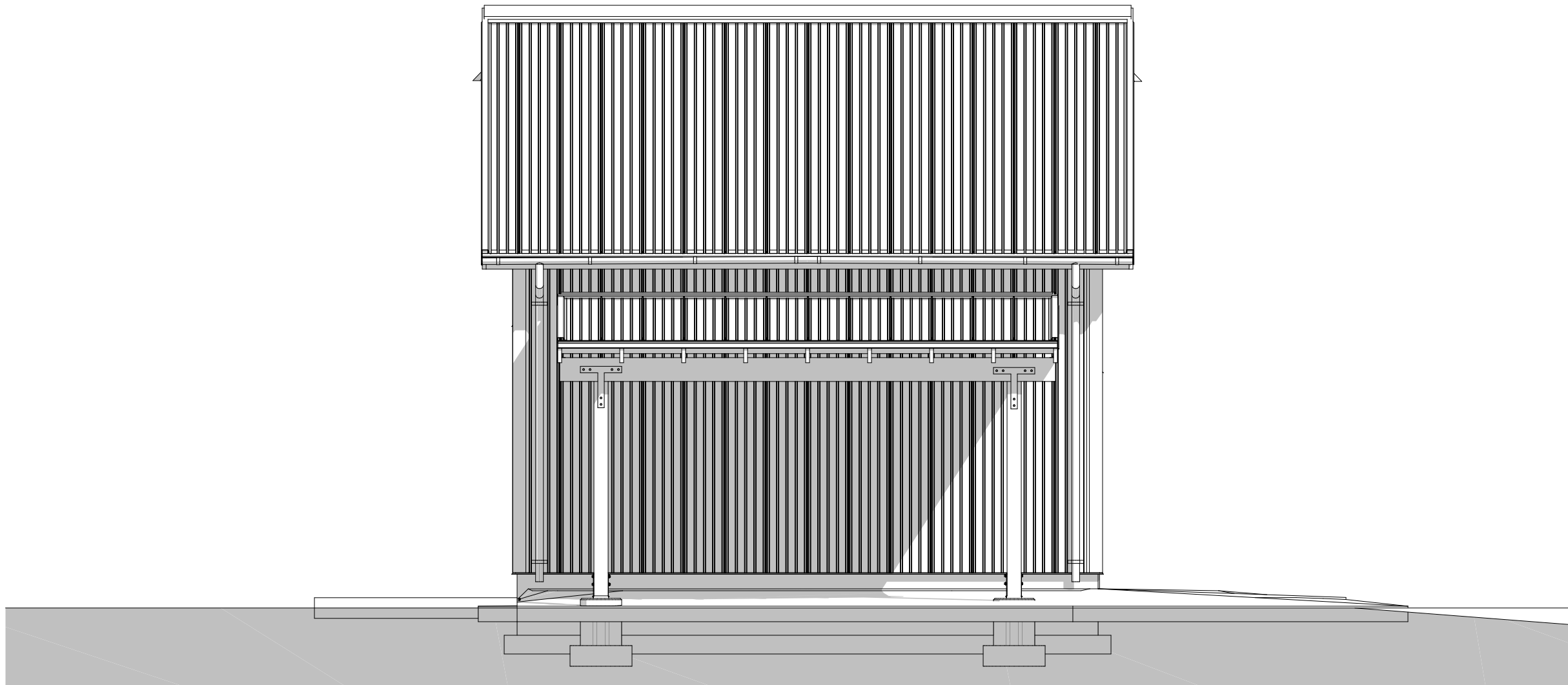


1 Foundation
A101 SCALE: 1/4" = 1'-0"



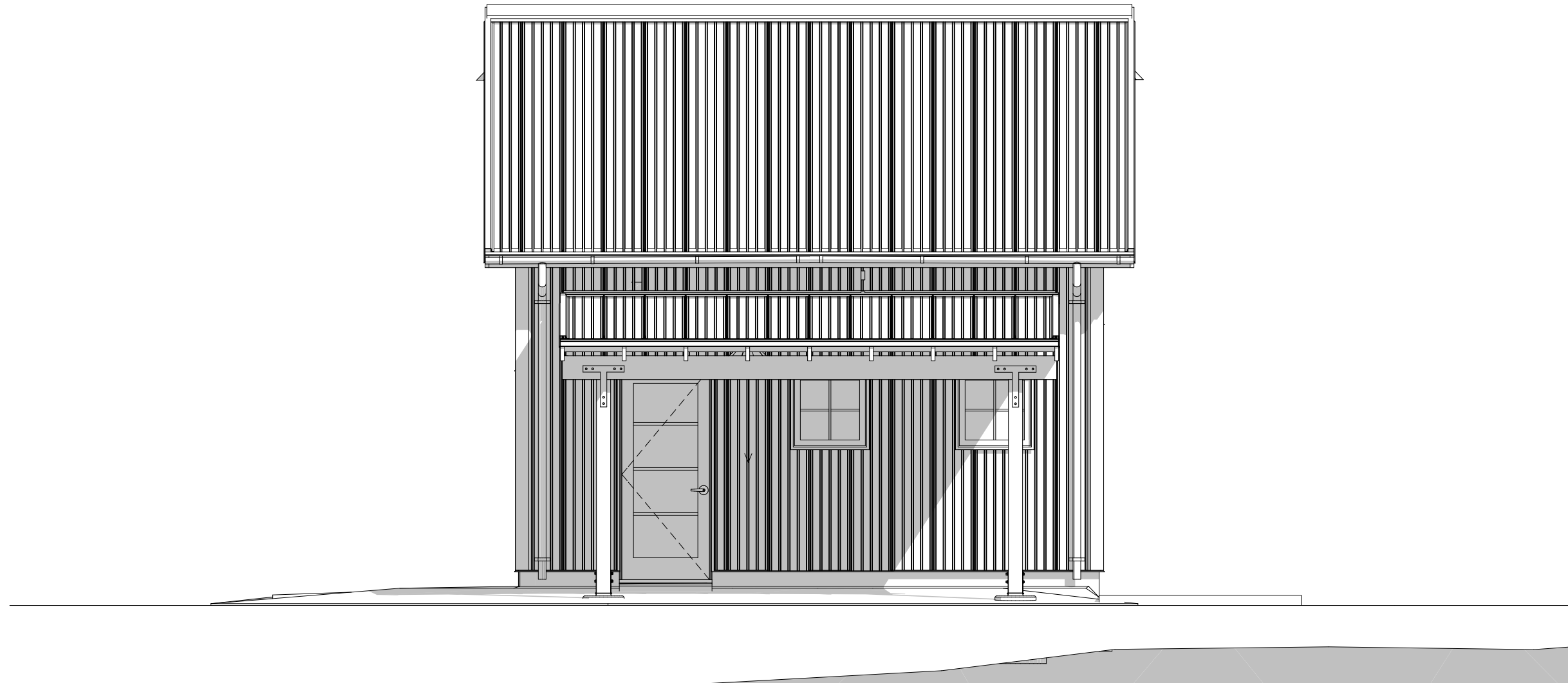
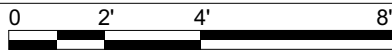
4 Ridge Line
A101 SCALE: 1/4" = 1'-0"





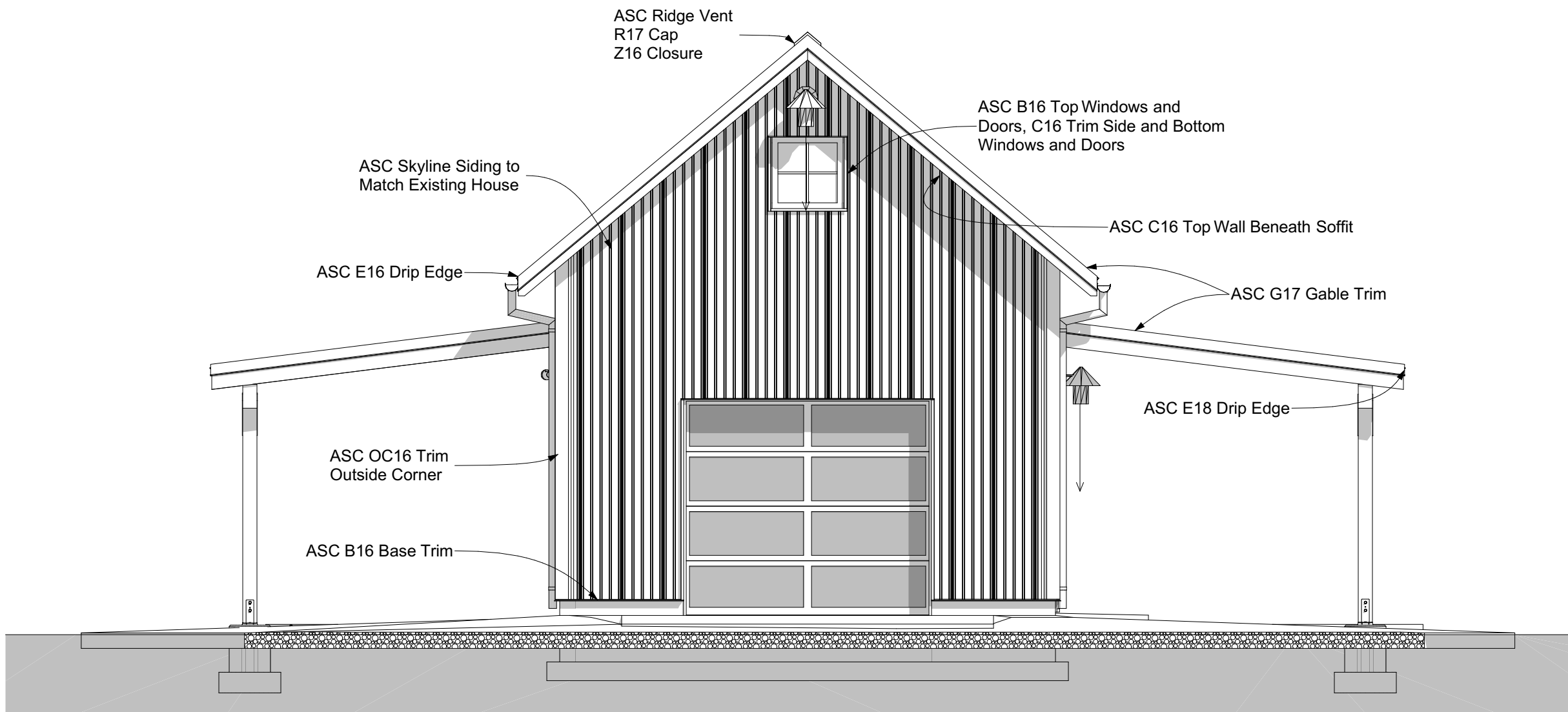
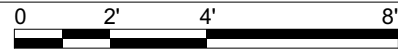
2 East Elevation
A201

SCALE: 1/4" = 1'-0"



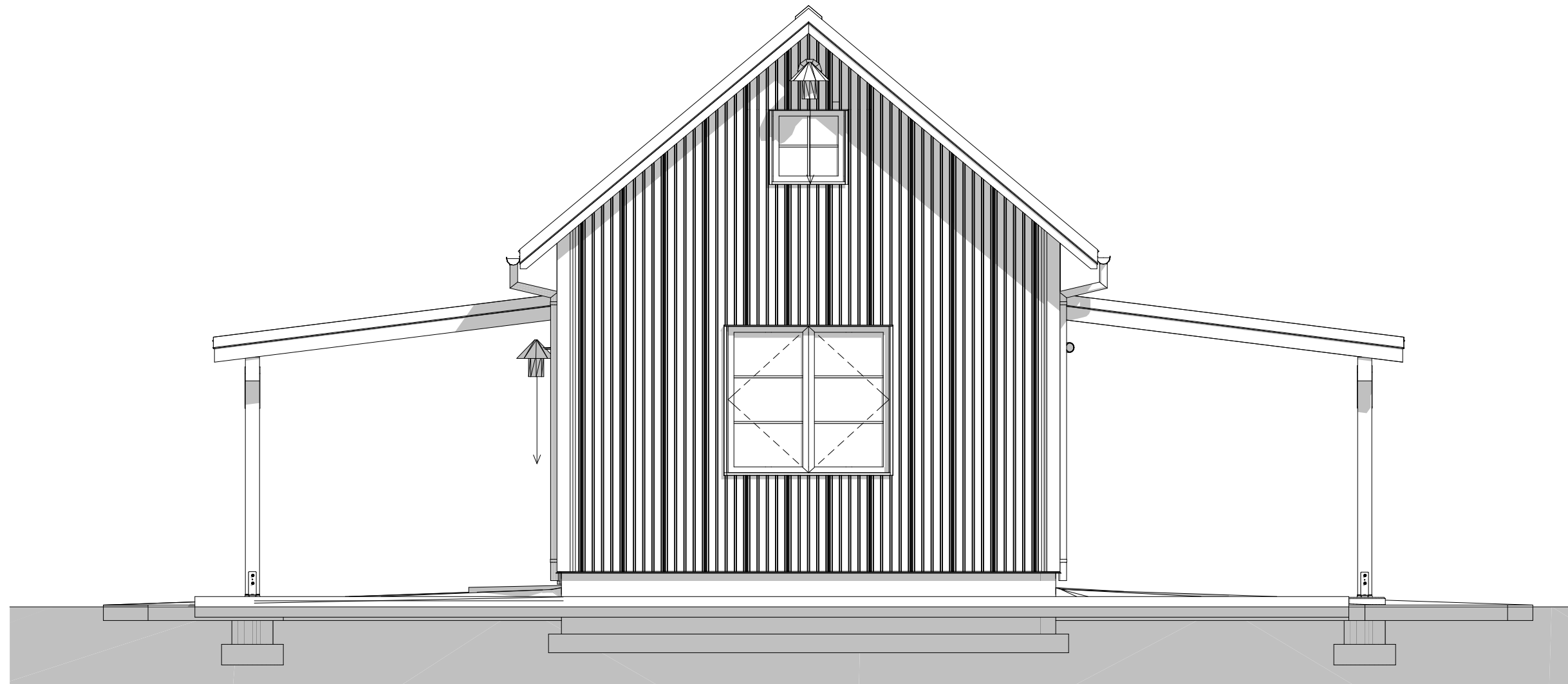
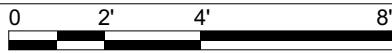
4 West Elevation
A201

SCALE: 1/4" = 1'-0"



1 North Elevation
A201

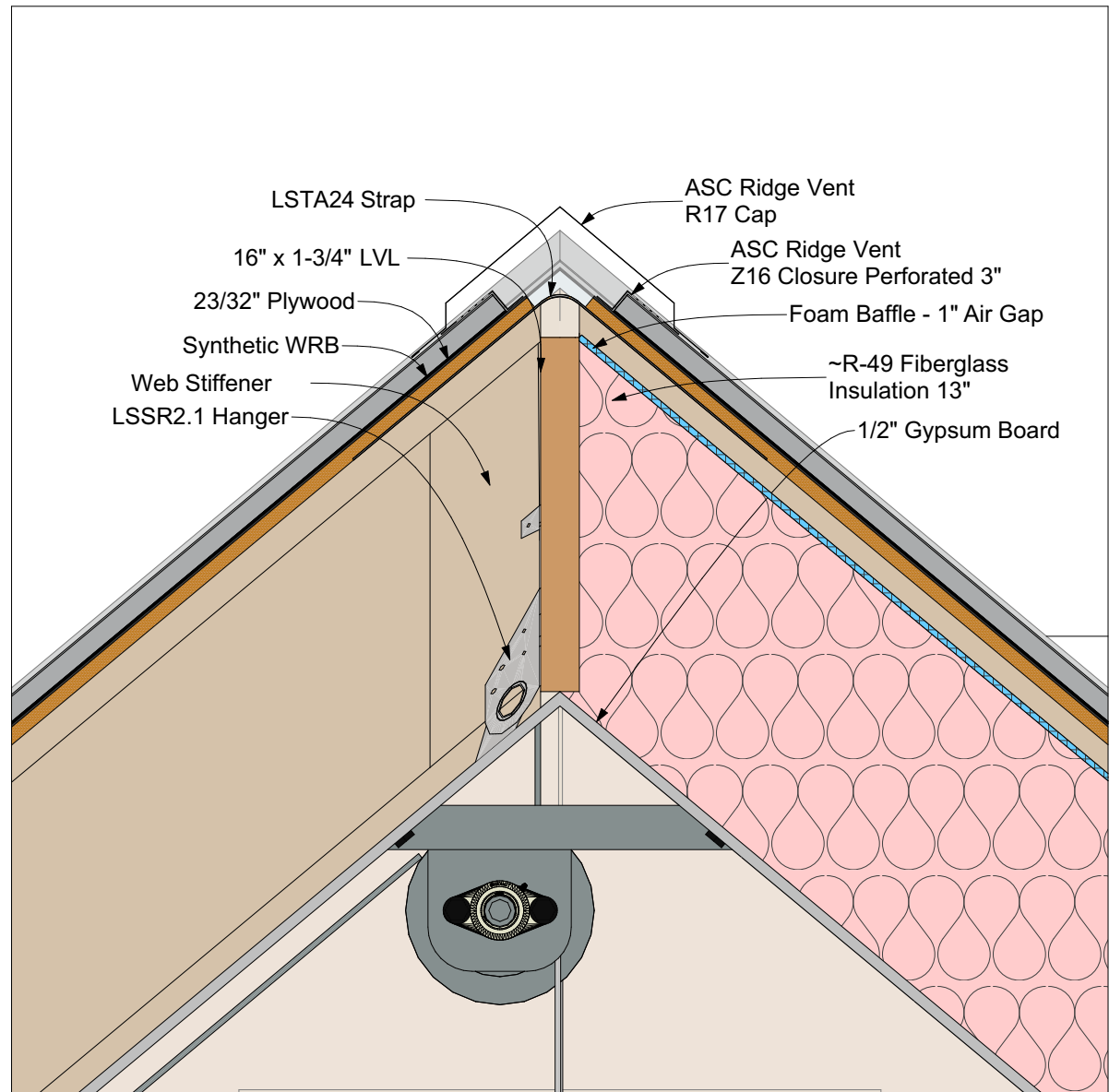
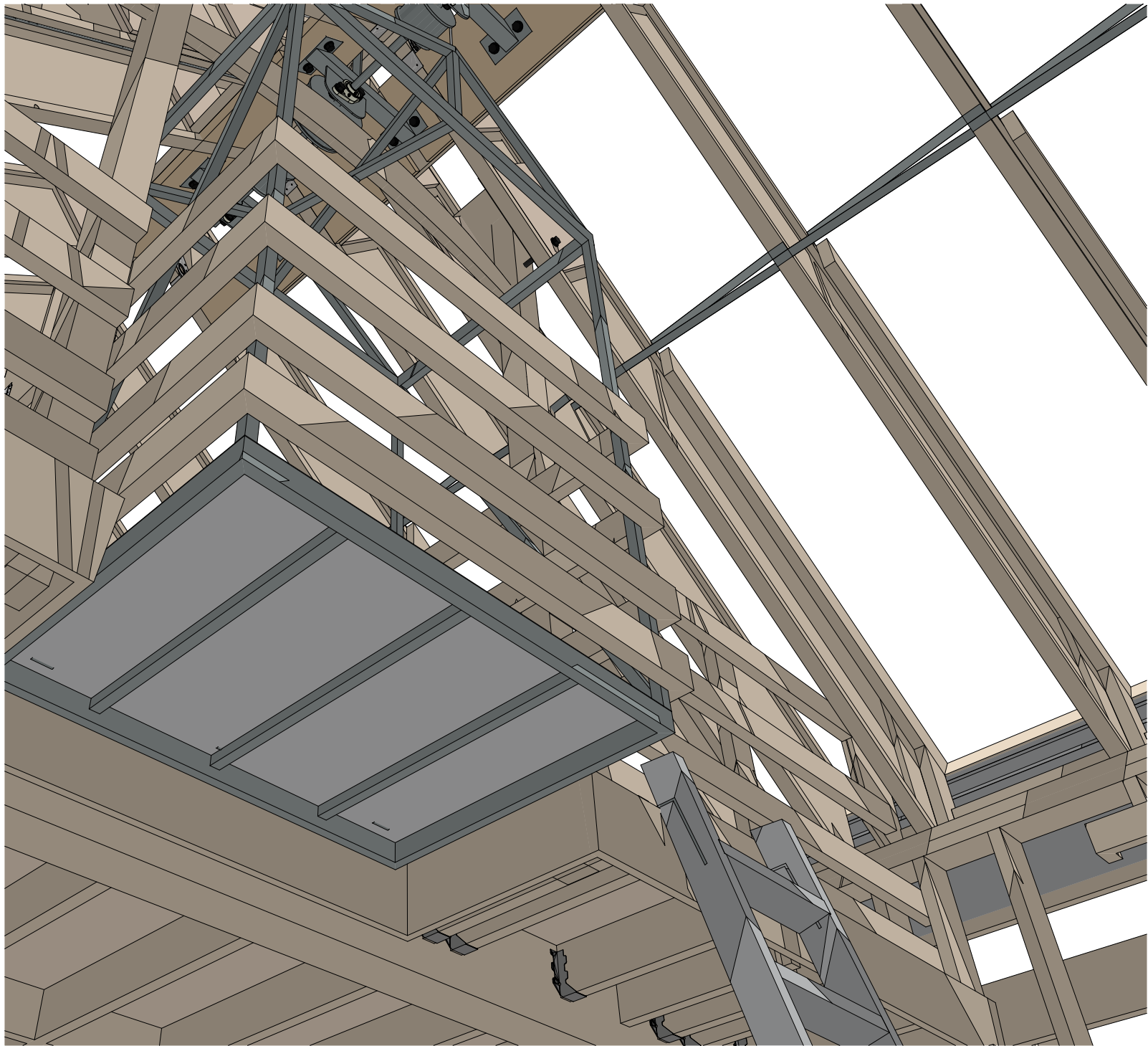
SCALE: 1/4" = 1'-0"



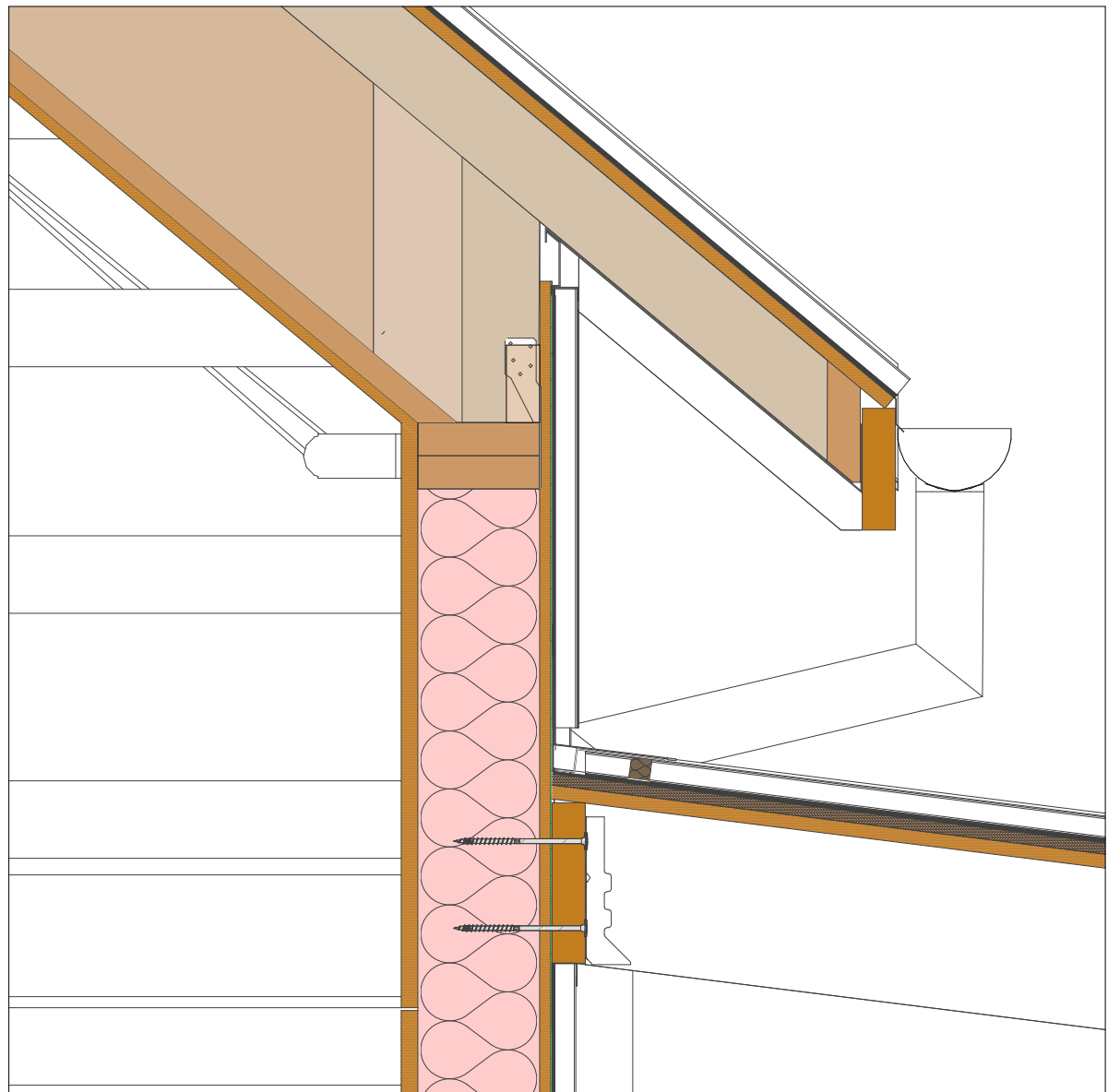
3 South Elevation
A201

SCALE: 1/4" = 1'-0"

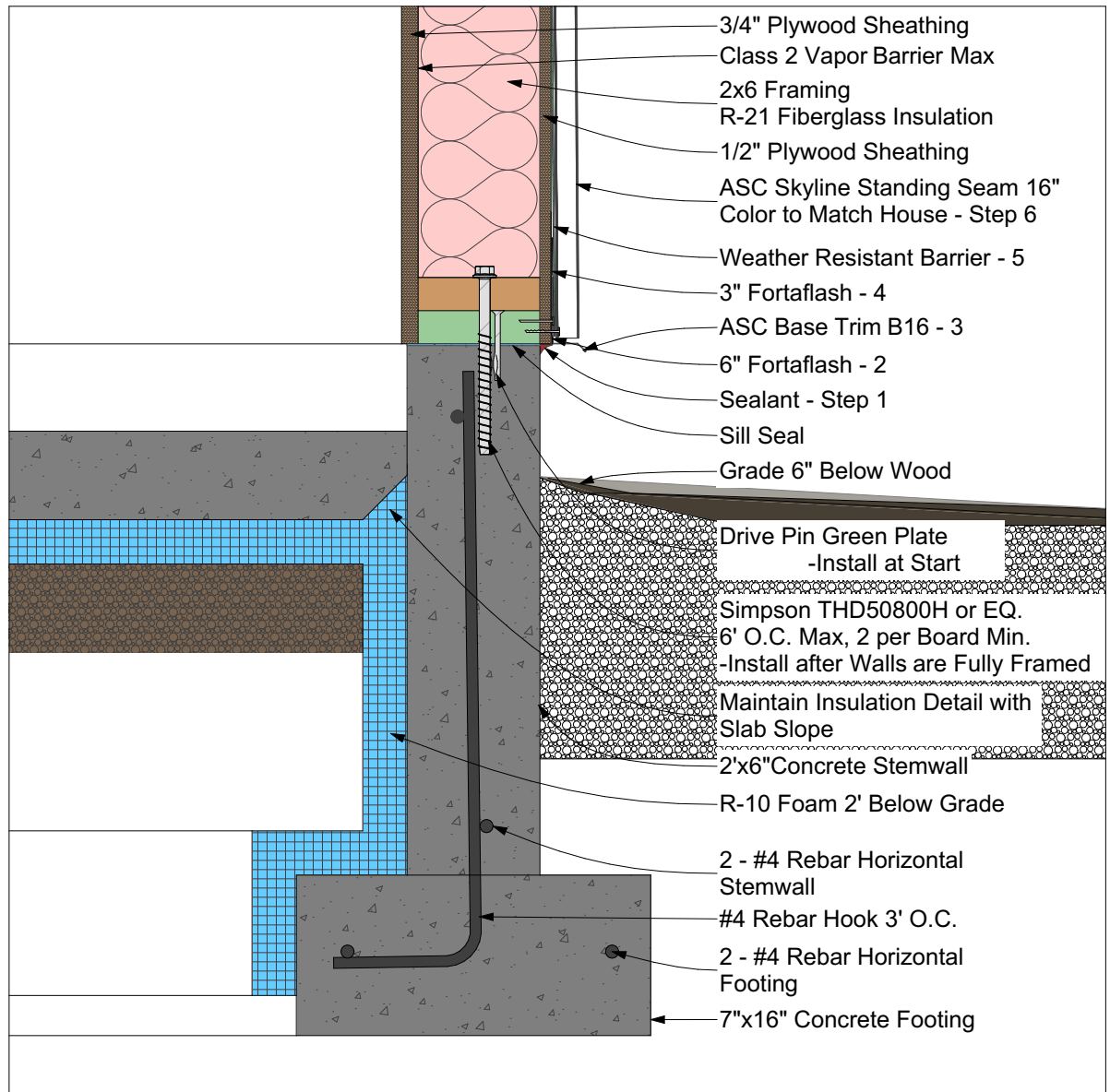




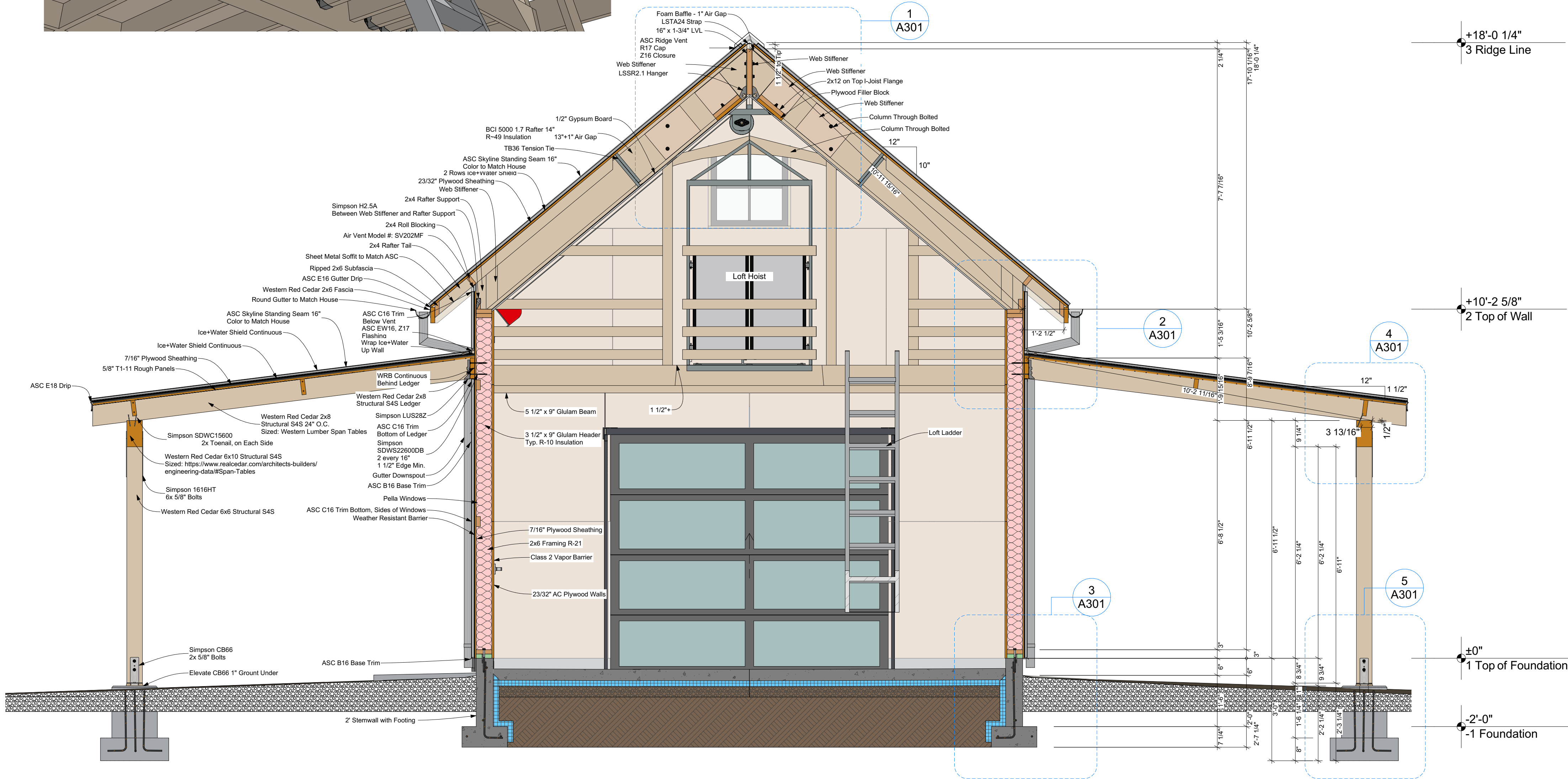
1 DETAIL
A301 SCALE: 1 1/2"= 1'-0" 0 6" 12" 18"



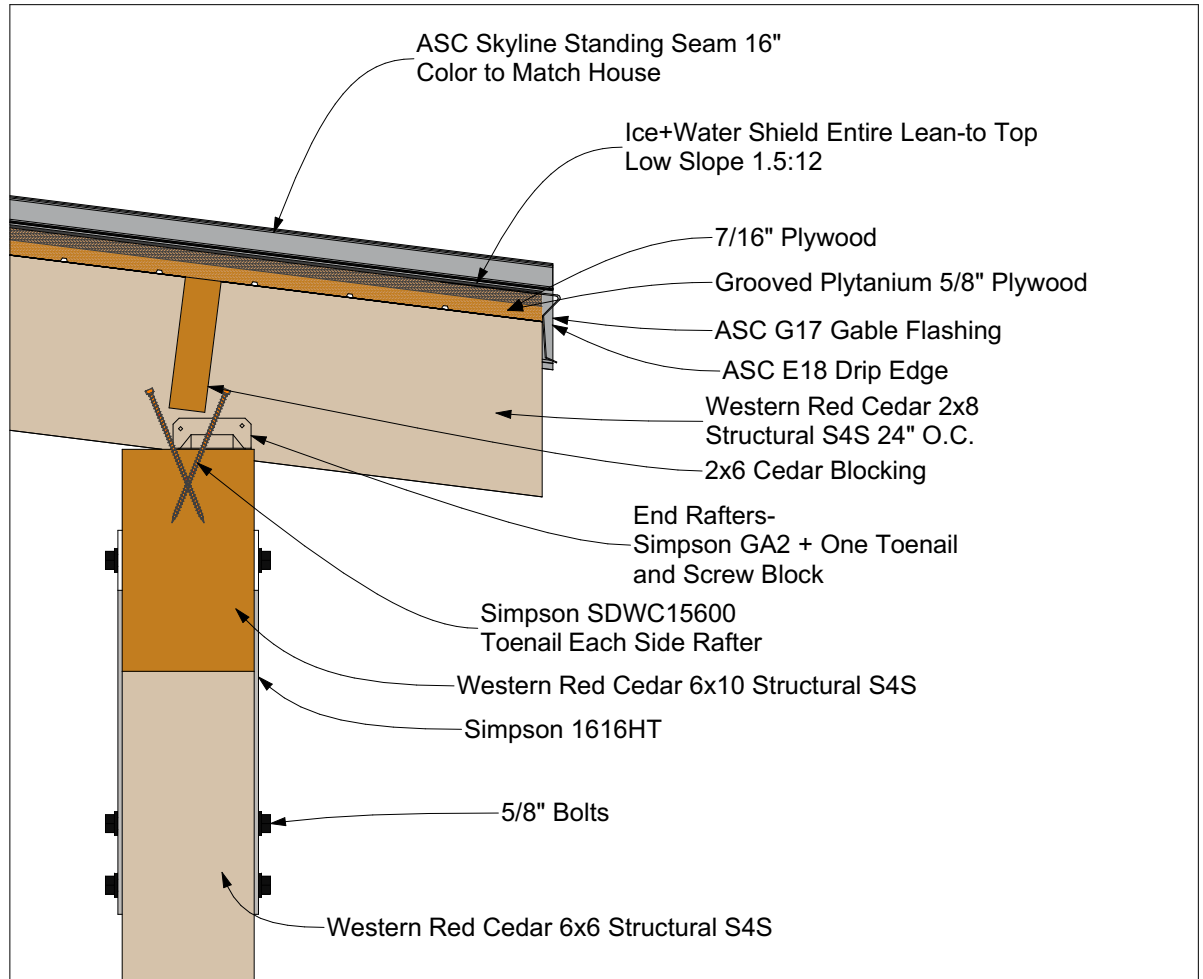
2 DETAIL
A301 SCALE: 1 1/2"= 1'-0" 0 6" 12" 18"



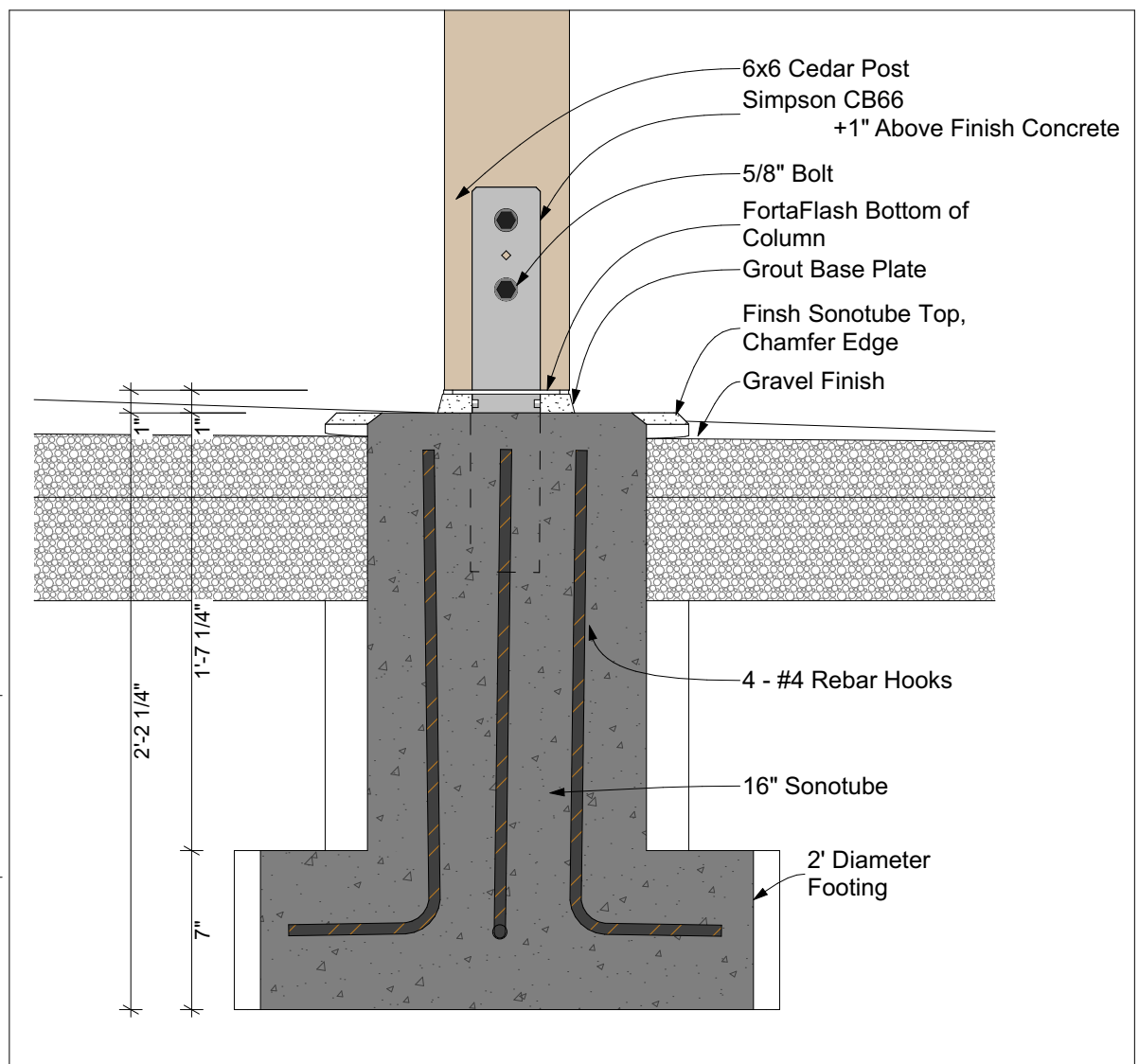
3 DETAIL
A301 SCALE: 1 1/2"= 1'-0" 0 6" 12" 18"



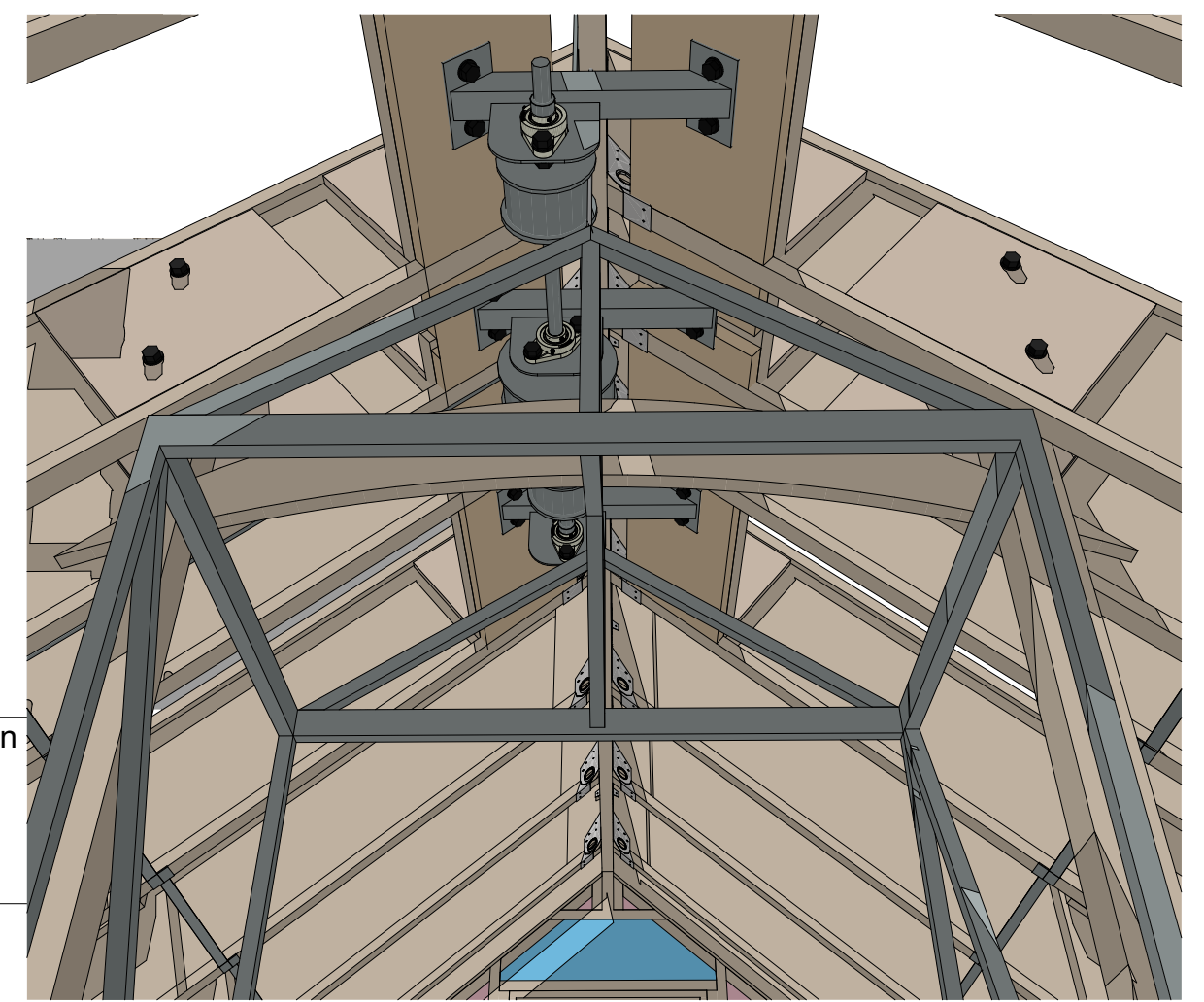
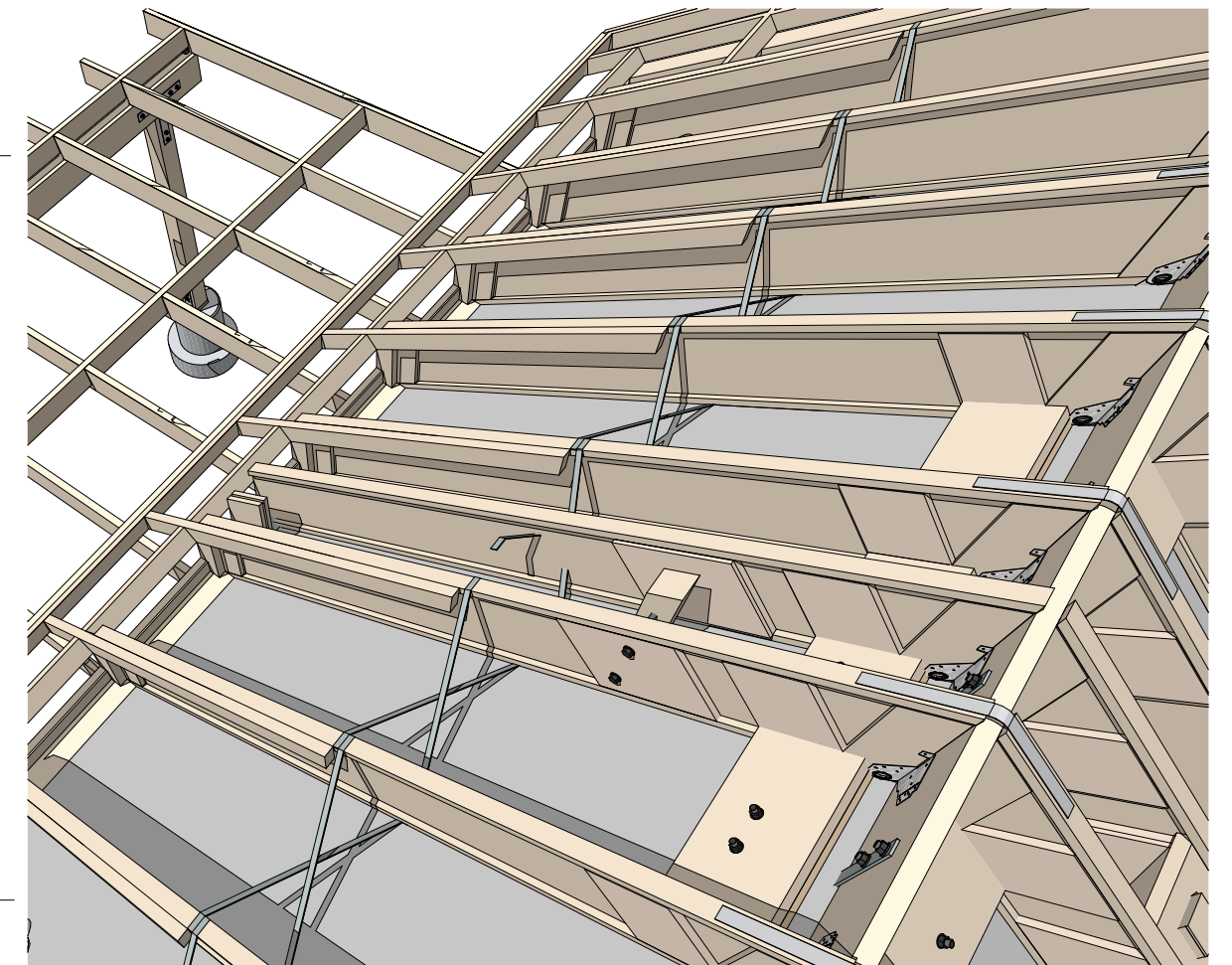
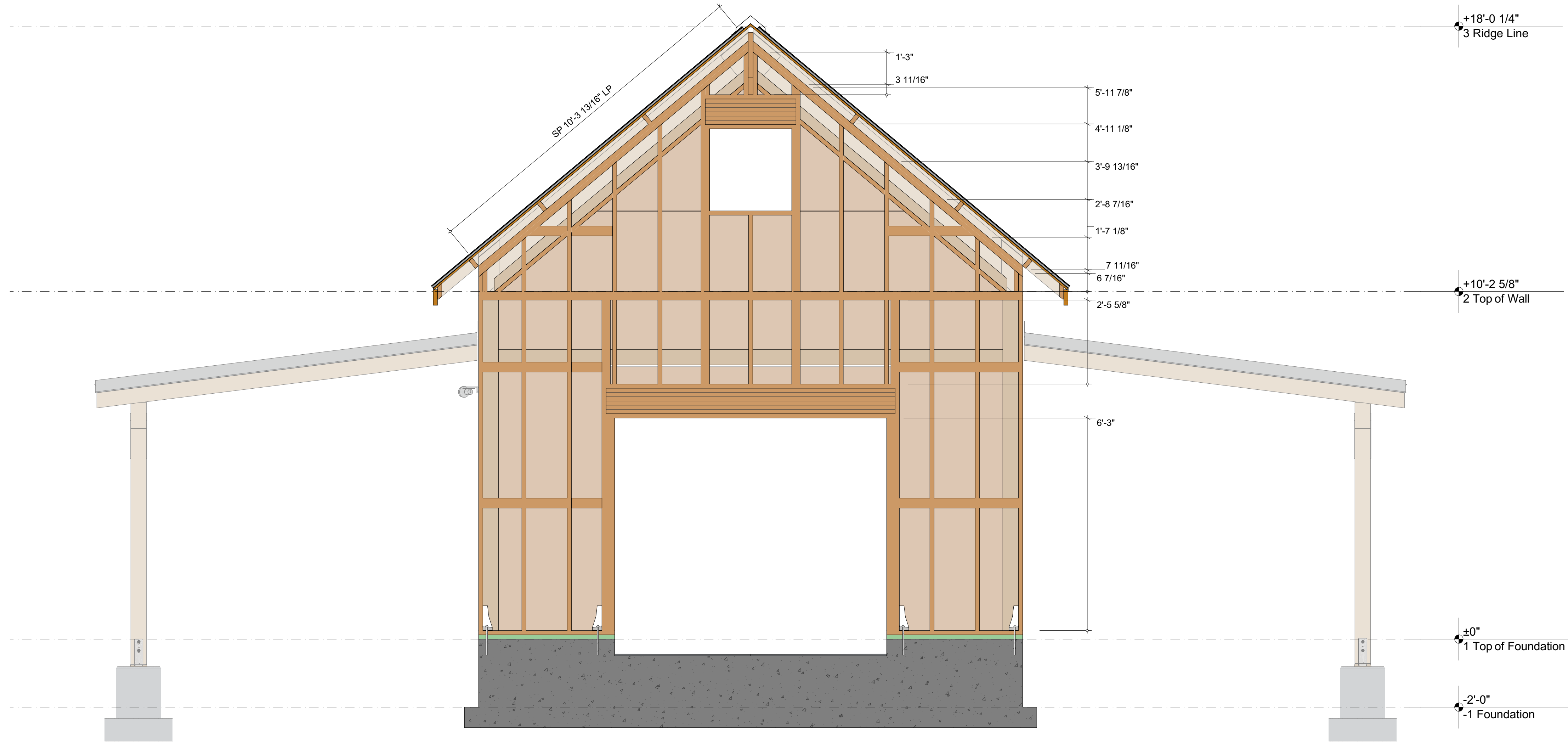
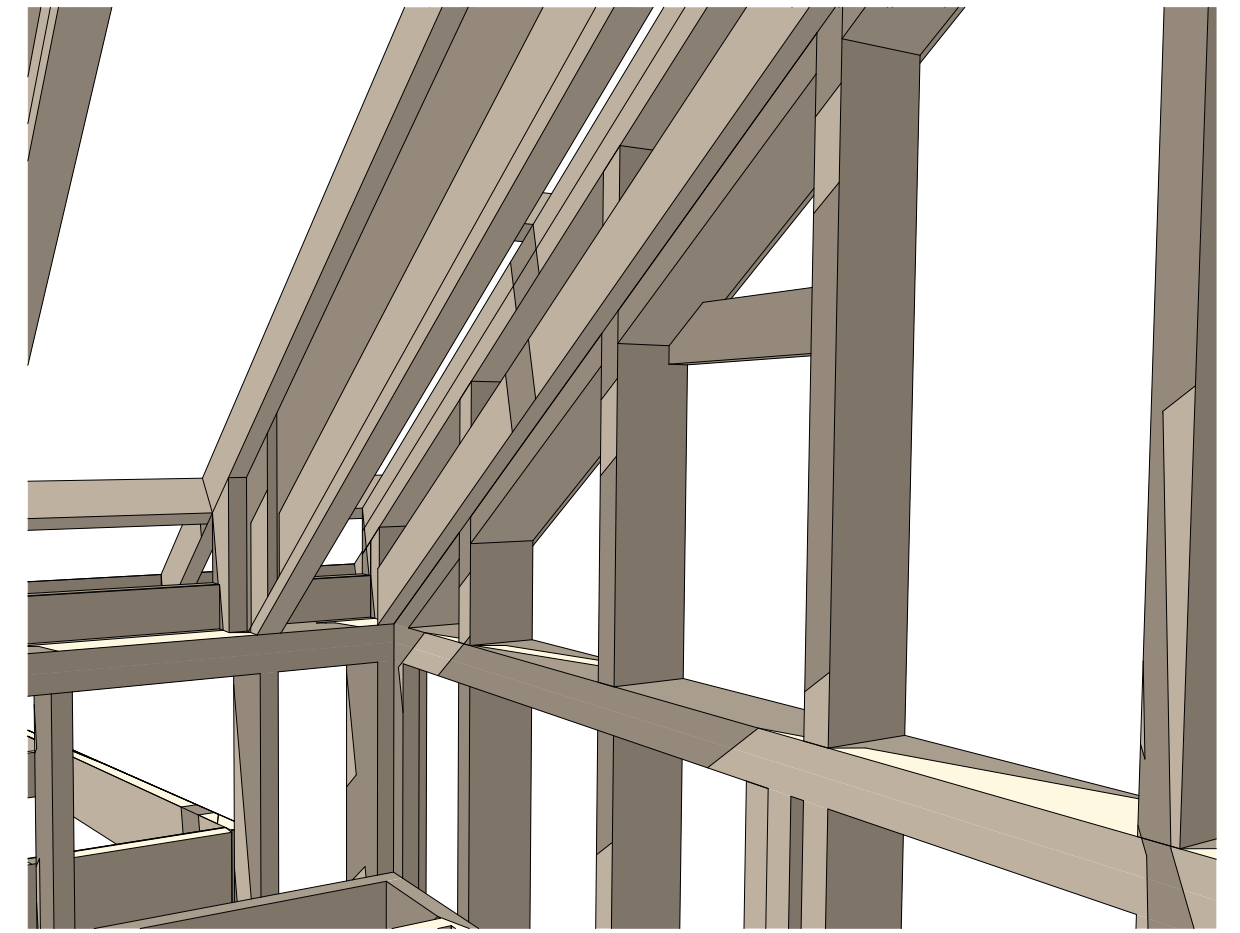
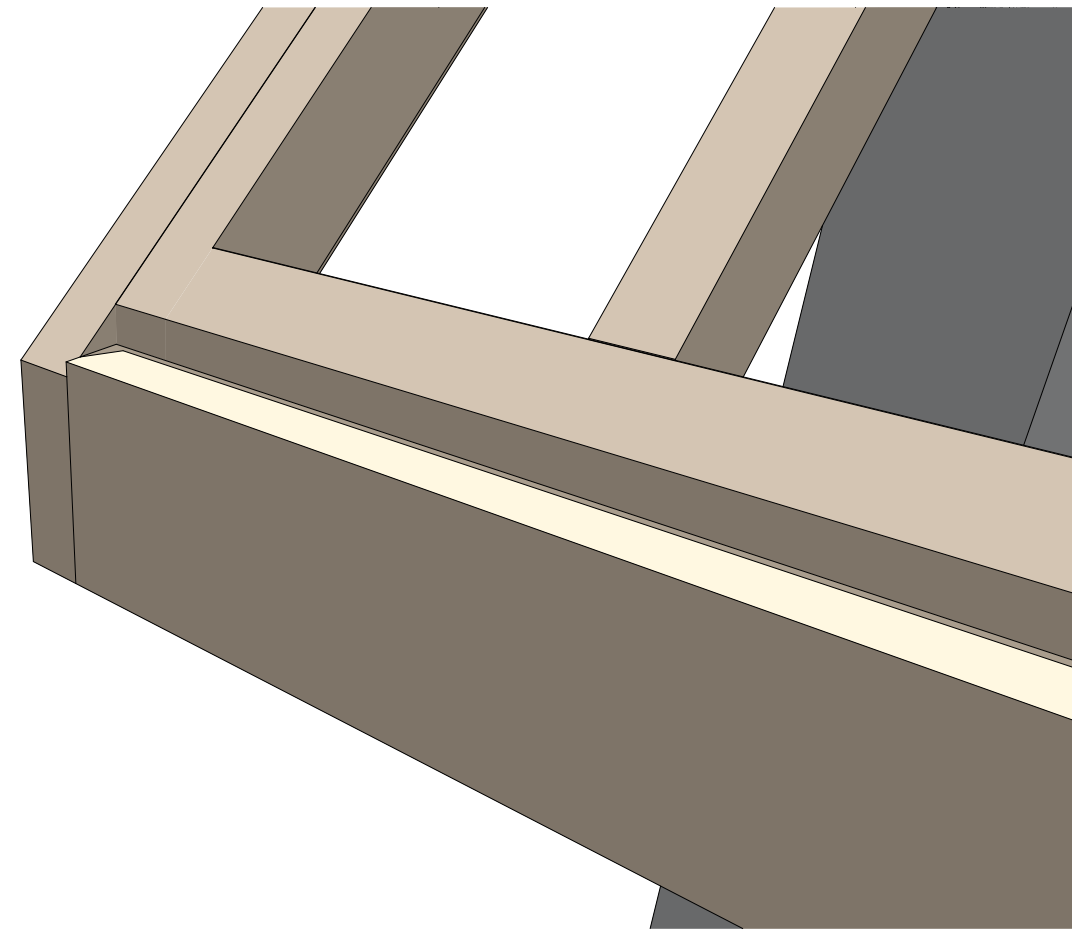
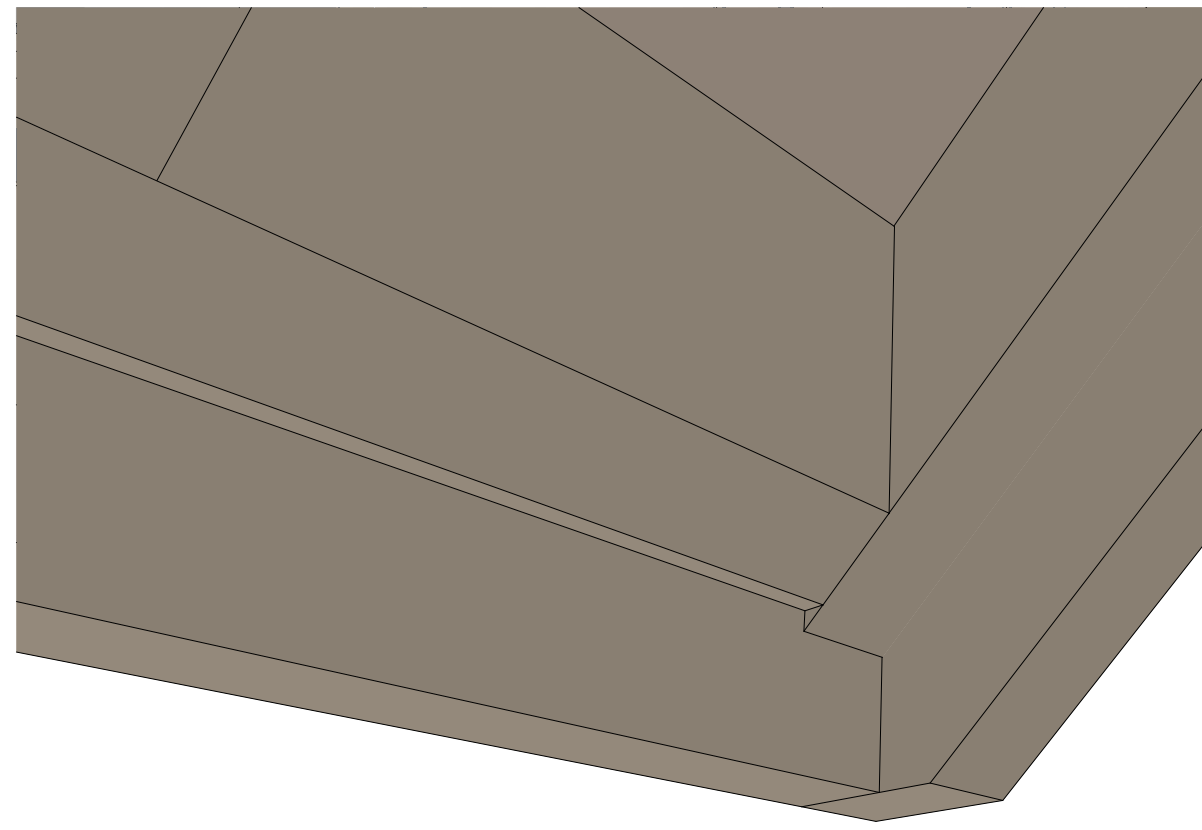
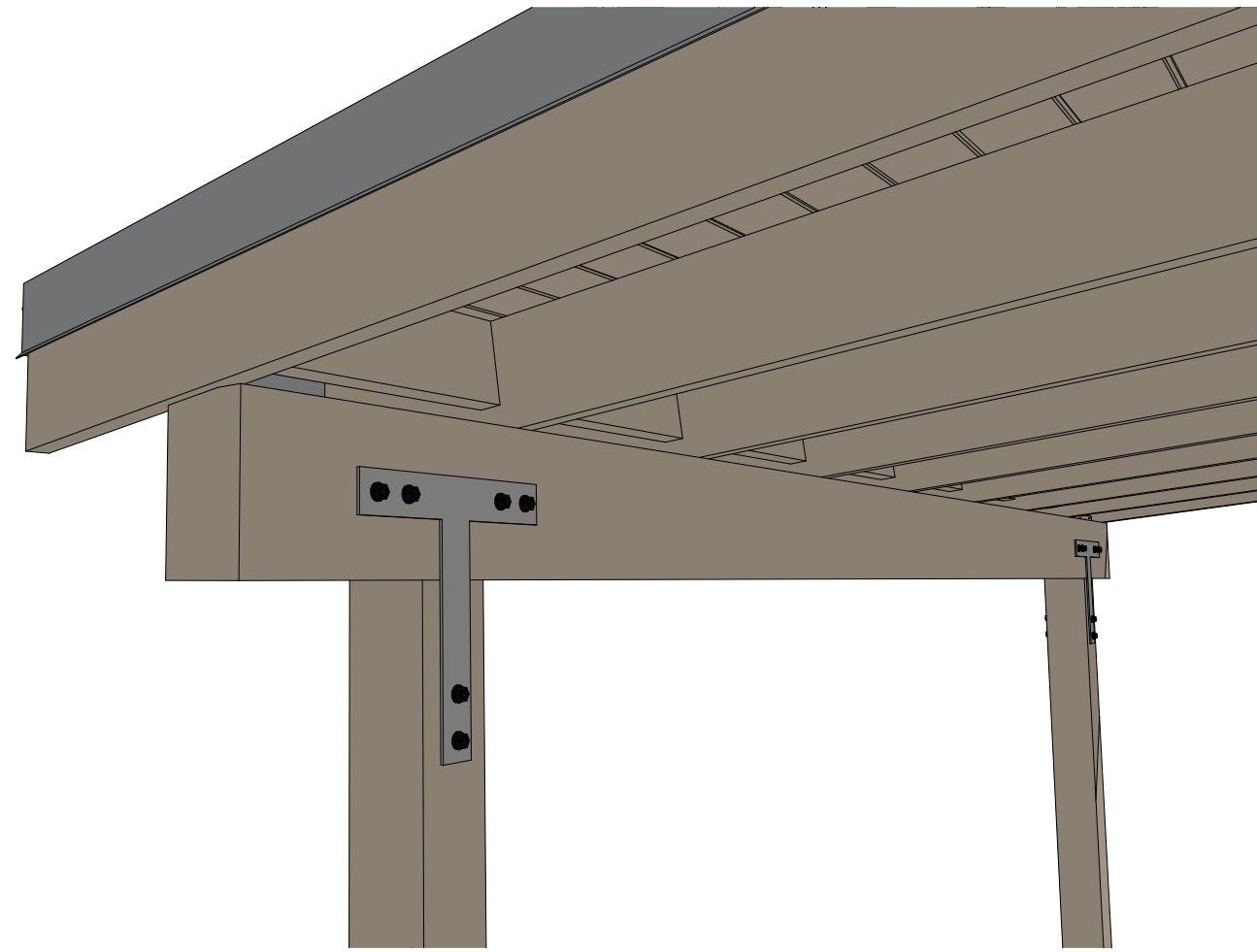
1 Building Section
A301 SCALE: 1/2" = 1'-0"

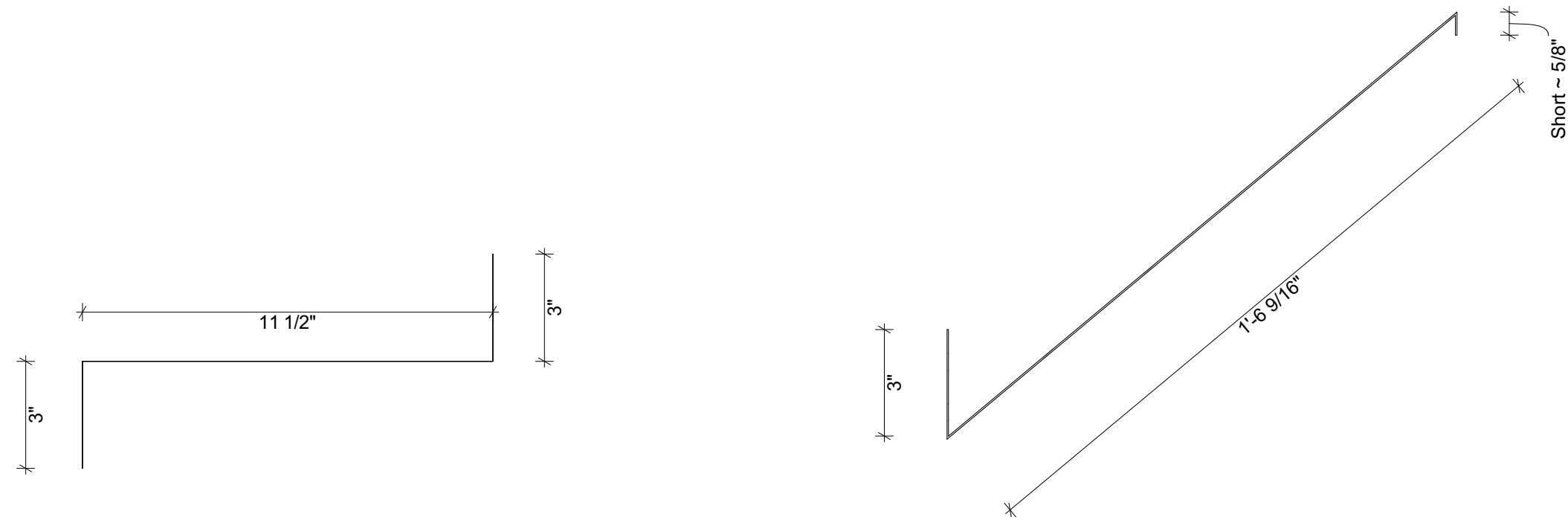
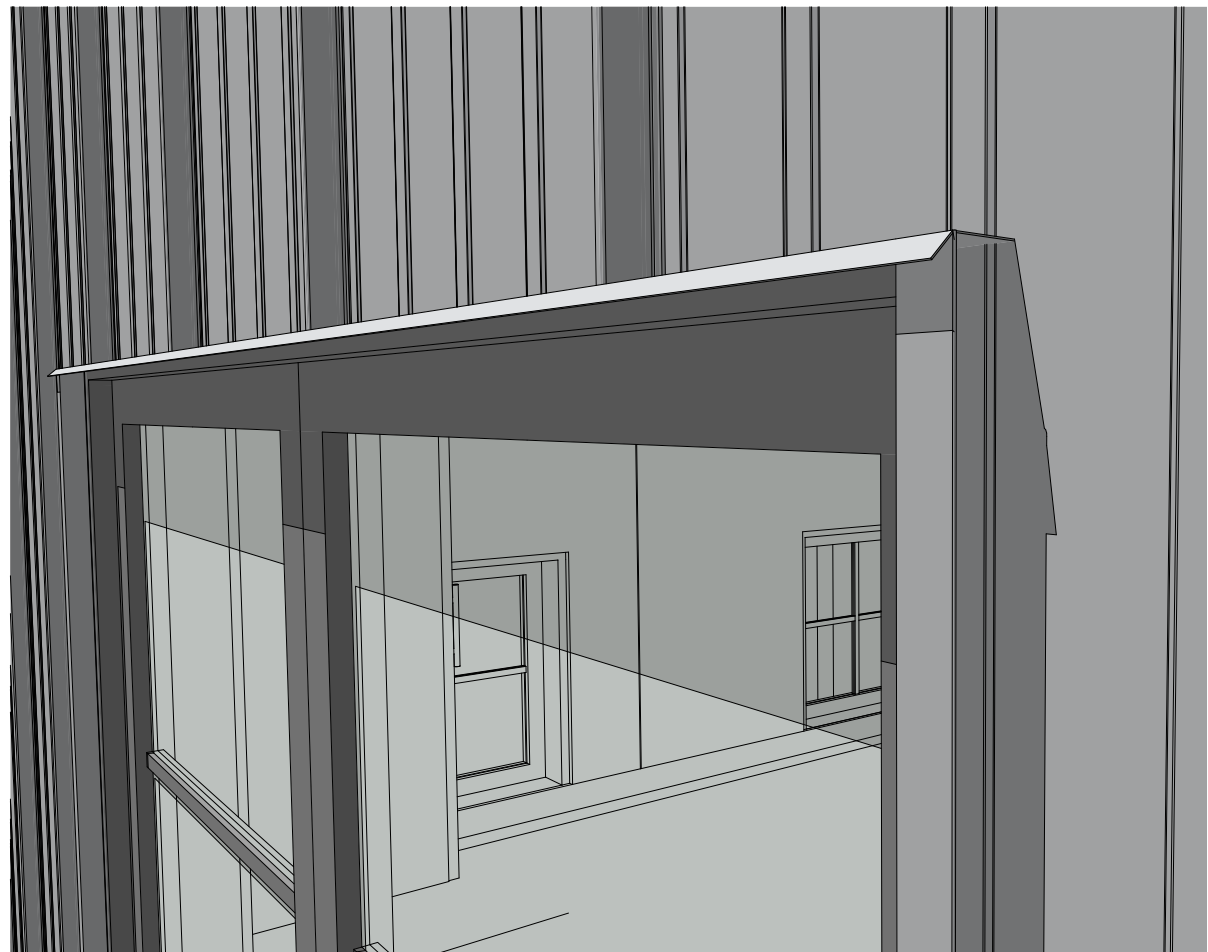
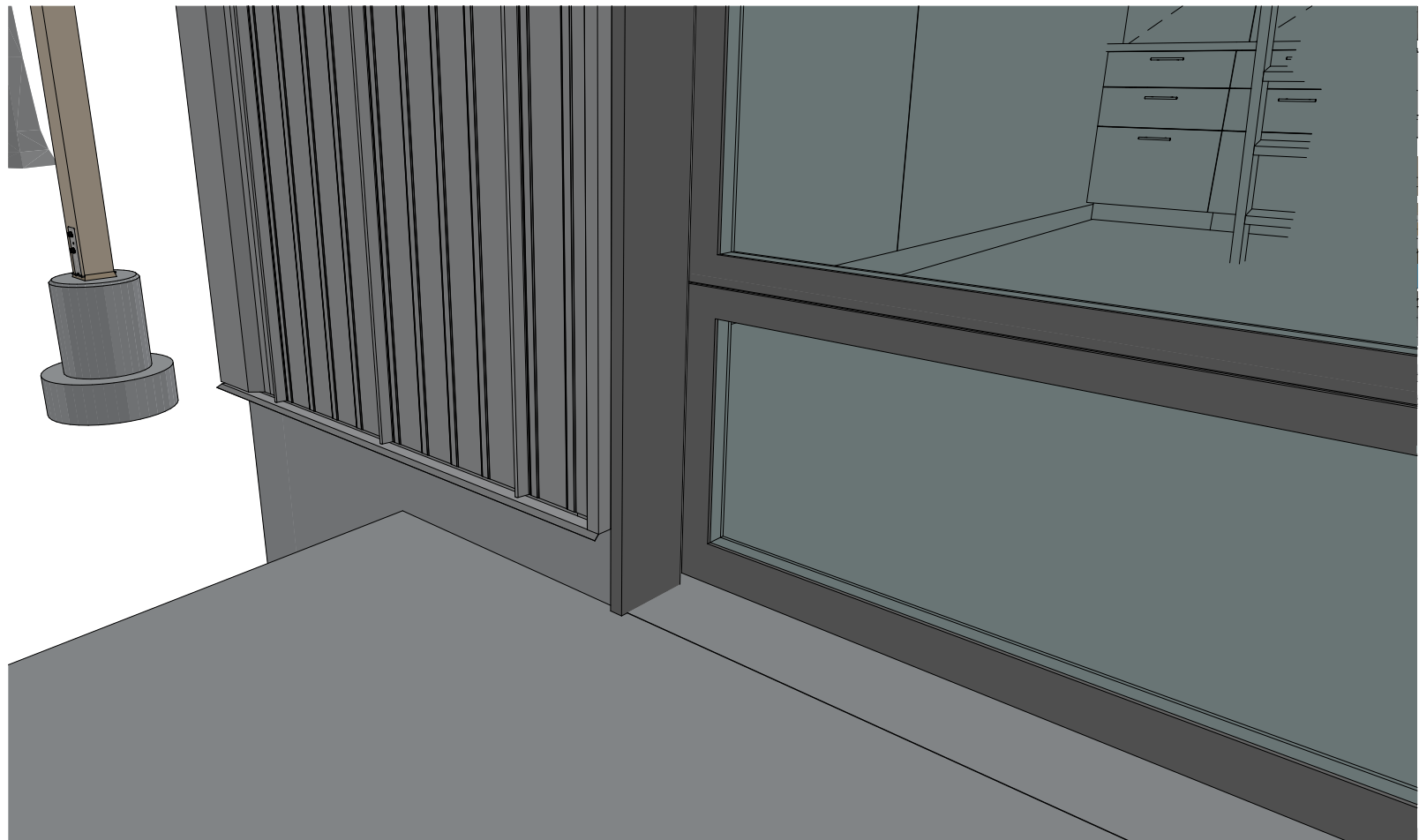


4 DETAIL
A301 SCALE: 1 1/2"= 1'-0" 0 6" 12" 18"



5 DETAIL
A301 SCALE: 1 1/2"= 1'-0" 0 6" 12" 18"

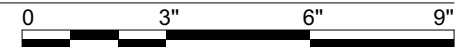




1
A303

Rake Soffit Metal DETAIL

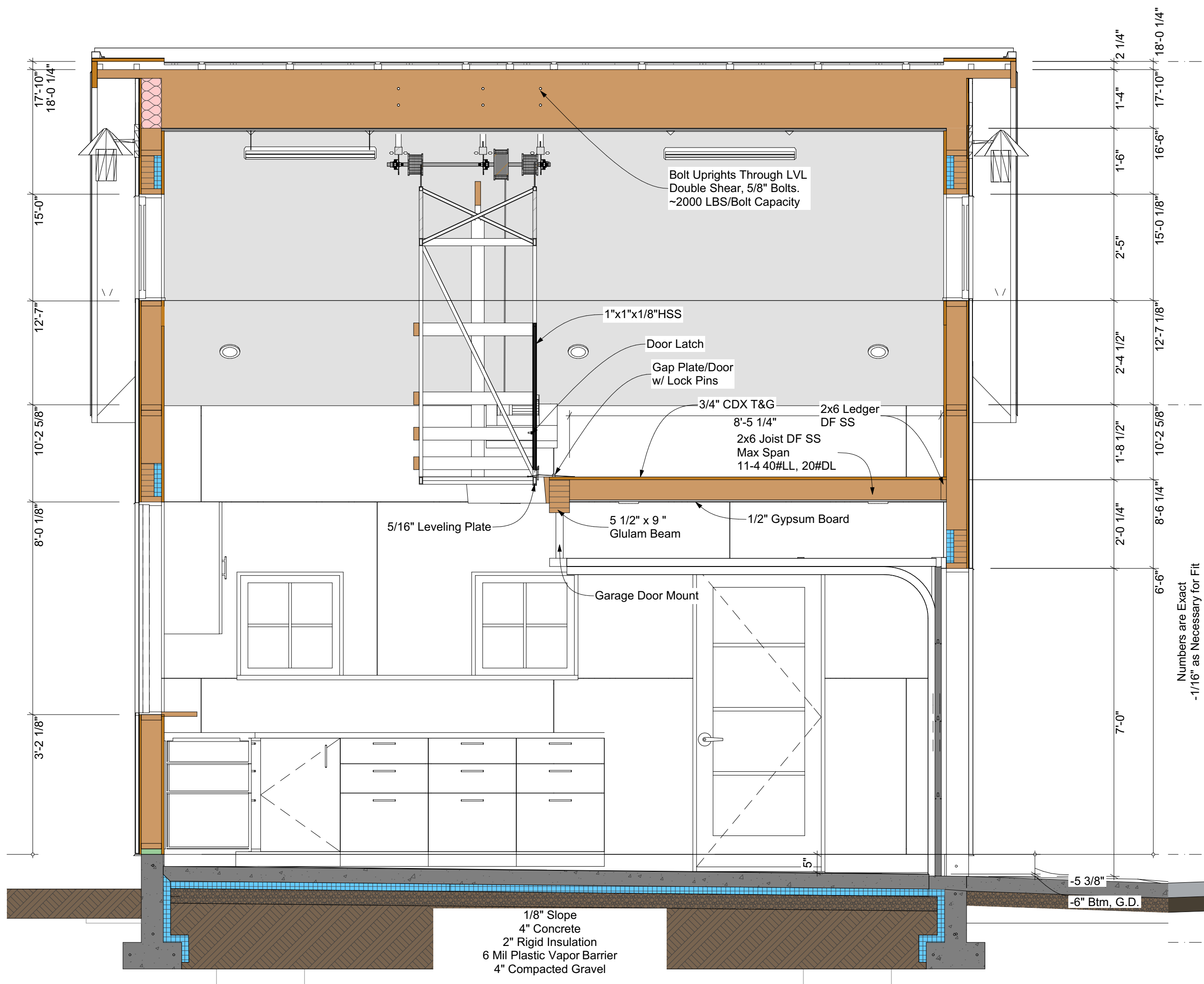
SCALE: 3" = 1'-0"



2
A303

Eave Soffit Metal DETAIL

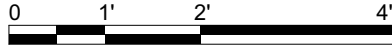
SCALE: 3" = 1'-0"



1
A303

Building Section

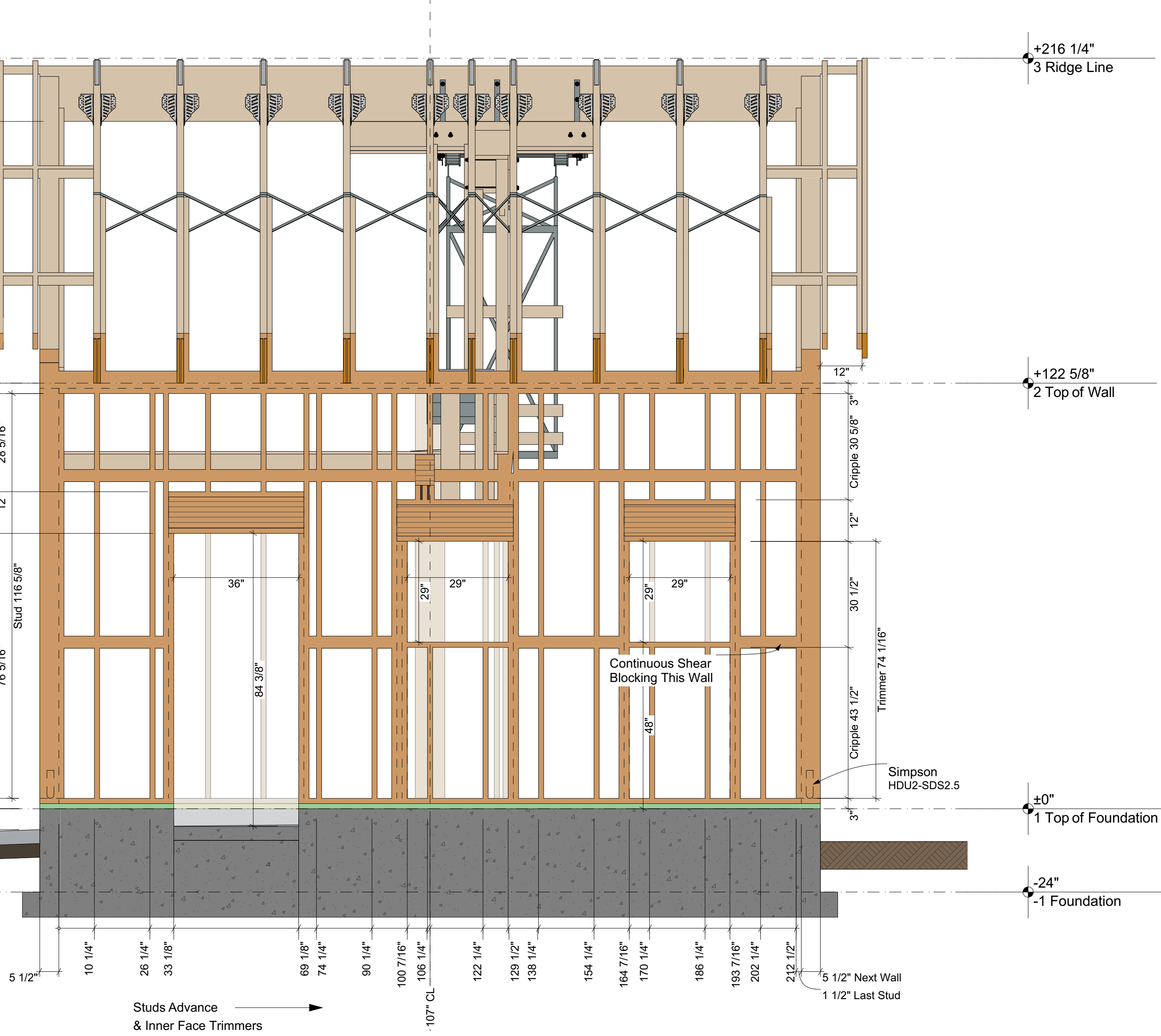
SCALE: 1/2" = 1'-0"



2
A303

Building Section

SCALE: 1/2" = 1'-0"



System Specifications:

LVL Capacity: 1700 pounds.
Safety Factor: 2 (applies to the ultimate design strength, not the operational lifting capacity).
Safety Factor Load: 1700 pounds x 2 = 3400 pounds

Winch Rating: 1100 pounds.
Safety Factor: 5 (applies to the ultimate design strength, not the operational lifting capacity).

Drum Specifications:
8-inch Drum: Rated for 1100 pounds, with a circumference of 50 inches.
5.25-inch Drum: Rated for 750 pounds, with a circumference of 33 inches.

Load Calculations:

Operational Live Load: 550 pounds (the load the hoist will lift during operation).
Dead Load: 250 pounds (constant weight of the hoist structure).
Total System Load: 550 pounds (live) + 250 pounds (dead) = 800 pounds.
Safety Factor Load: 550 pounds x 5 (live) + 250 pounds (dead) = 3000 pounds

Gear Ratio Calculation:

The gear ratio is calculated based on the circumferences of the drums. It is determined by dividing the circumference of the 8-inch drum by that of the 5.25-inch drum, resulting in approximately 1.515.

Increased Capacity Due to Gearing:

The increased capacity provided by the gear ratio is calculated by multiplying the winch's rated capacity by the gear ratio. This yields:
1100 pounds x 1.515 = 1666.5 pounds.

System Capacity Based on Component Ratings:

Each 5.25-inch drum is rated for 750 pounds. With two drums sharing the load, the practical operational capacity is evaluated based on the drum ratings and the mechanical advantage provided by the gear ratio.

The system's theoretical capacity, considering the gear ratio, is 1666.5 pounds, which is significantly higher than the total calculated operational load of 800 pounds.

Conclusion:

The hoist system is well-suited for the intended operational load of 550 pounds plus a dead load of 250 pounds, totaling 800 pounds. The capacity of the system, enhanced by the gearing to 1666.5 pounds, provides a robust safety margin. This assessment confirms that the hoist system should operate safely within these parameters, and the use of a safety factor in design ensures the strength and reliability of the system under maximum expected loads. The system's components, including the winch and drums, are adequate to meet and exceed the operational demands.

RCW 70.87.200
Exemption
(c) A single-occupancy farm conveyance is used exclusively by a farm operator and the farm operator's family members.

