

### Integration Narrative

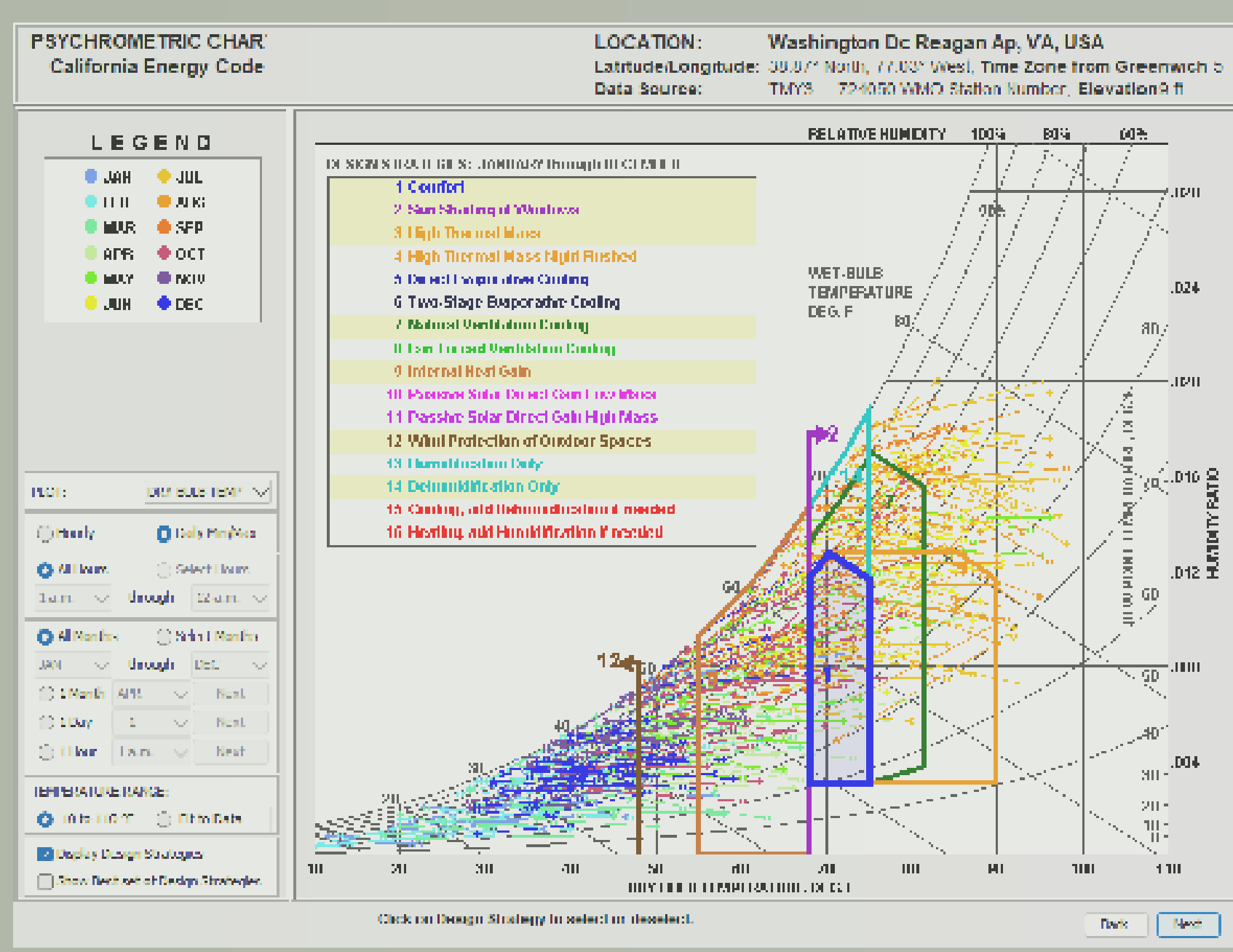
Student Names: Jessica Bowers and Erin Nivison

Daylighting simulation has been immensely helpful in determining our roof overhangs, and the balance of solid walls and glass along the facades of the building. We had started with significantly more glass, but were able to more effectively place it due to our analysis. The second most helpful part of our analysis has been the determination of the energy needs of the building based upon the insulative properties of the building materials. Our analysis has shown that the HES wall, ceiling, and floor are capable of maintaining the necessary interior atmosphere. Lastly, we have also been able to pinpoint trouble areas in terms of which spaces have excessive solar gain, resulting in overwarming, and the loading of our HVAC systems.

Process Integration Narrative

### BIOClimATIC / PERFORMANCE

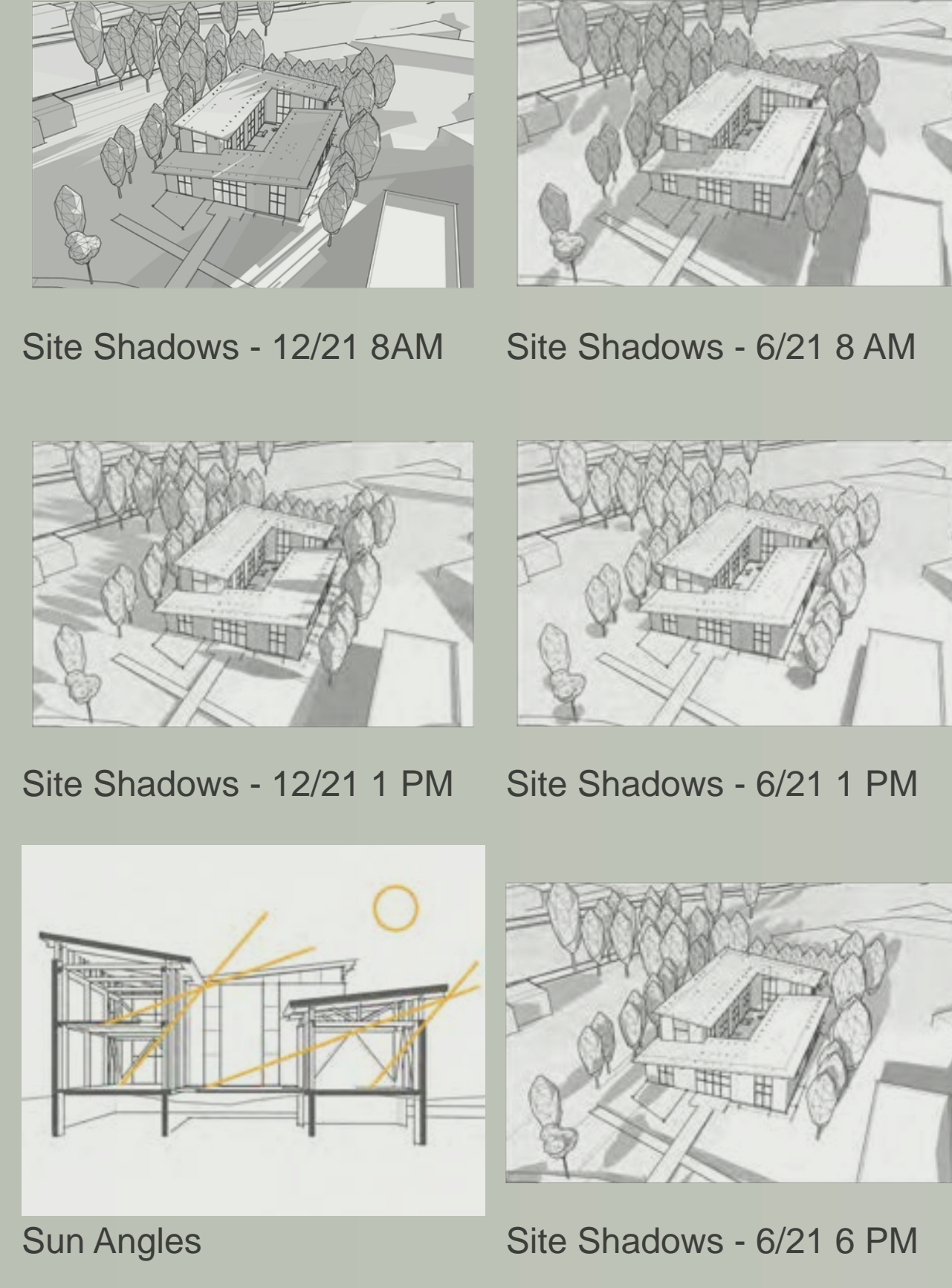
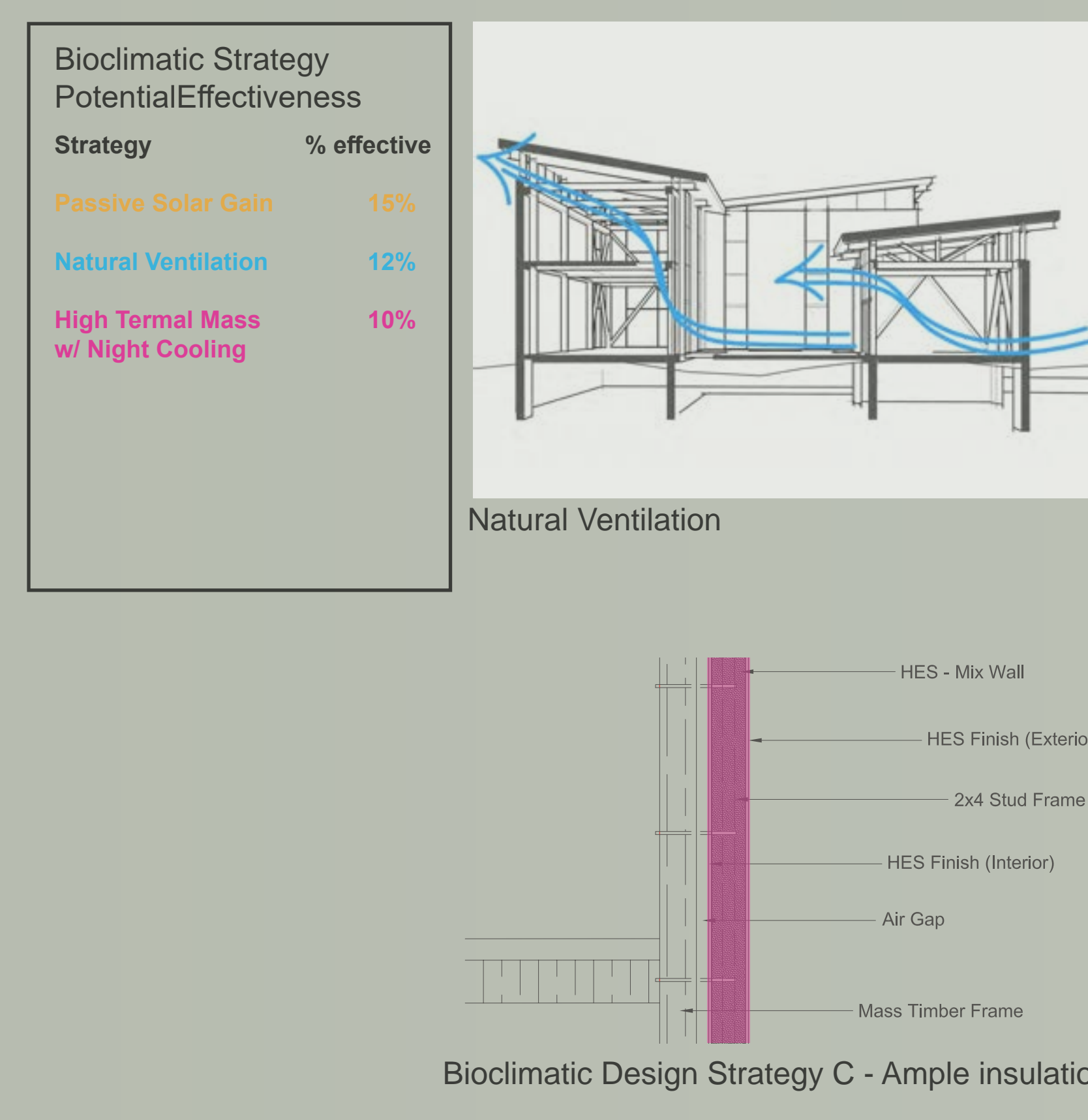
1-1/2" = 1'



### Bioclimatic Strategies - measurable outcomes of building performance

Date: 12/11/2023

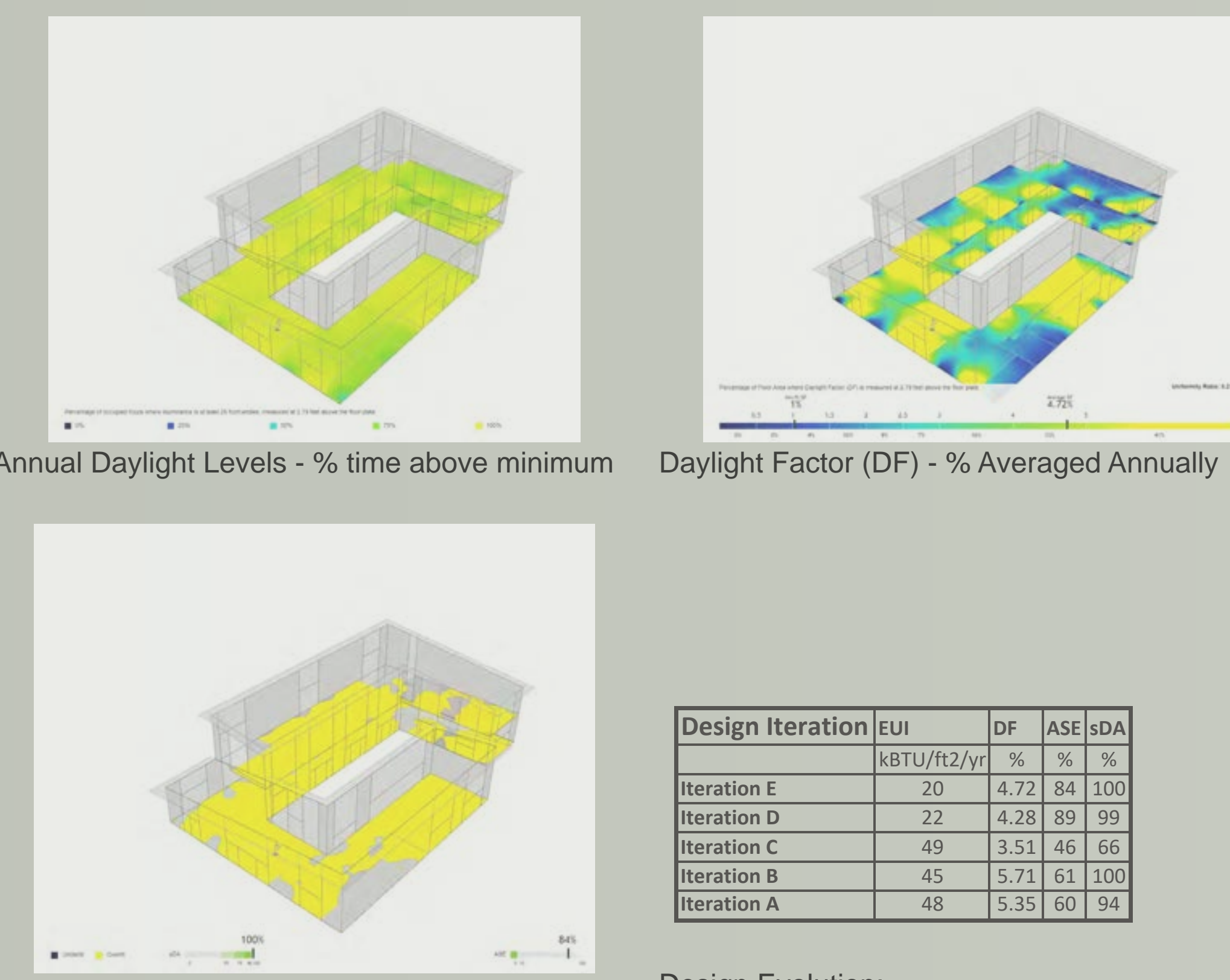
Student Names: Jessica Bowers and Erin Nivison



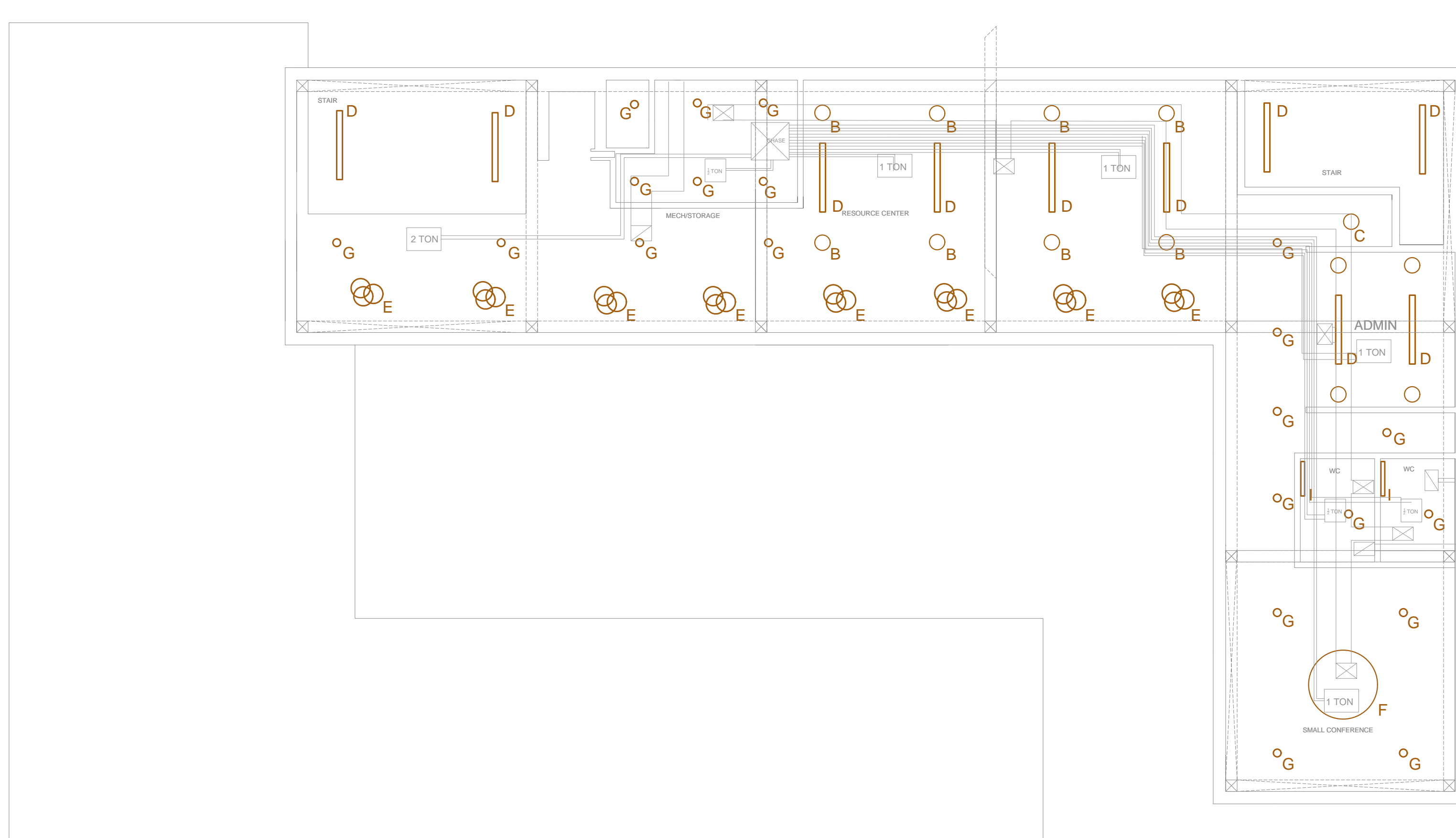
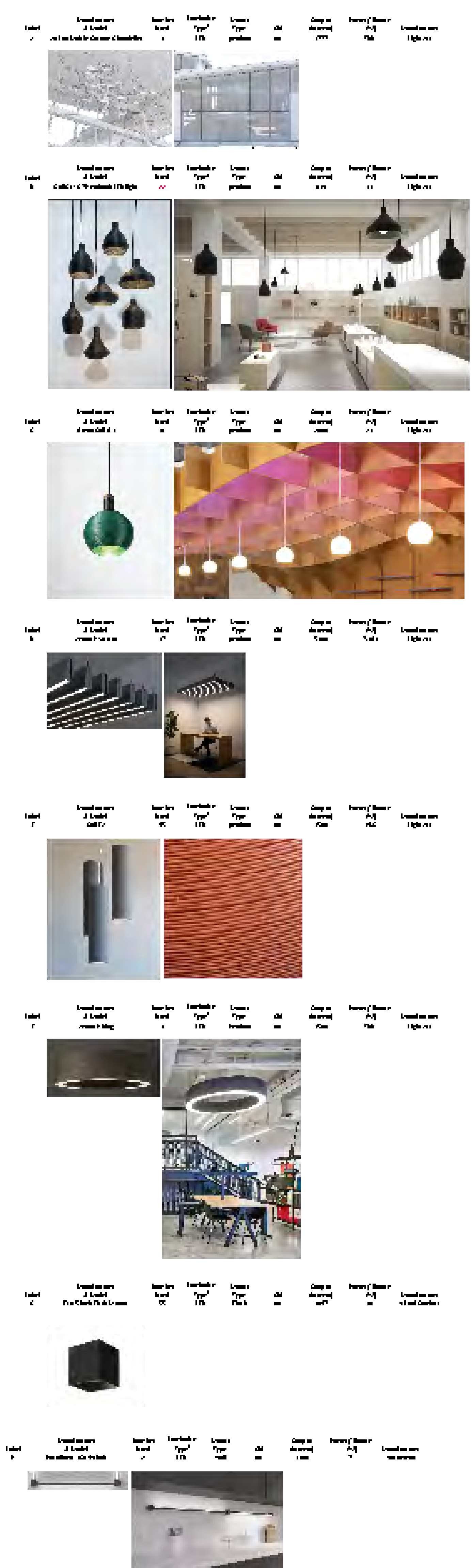
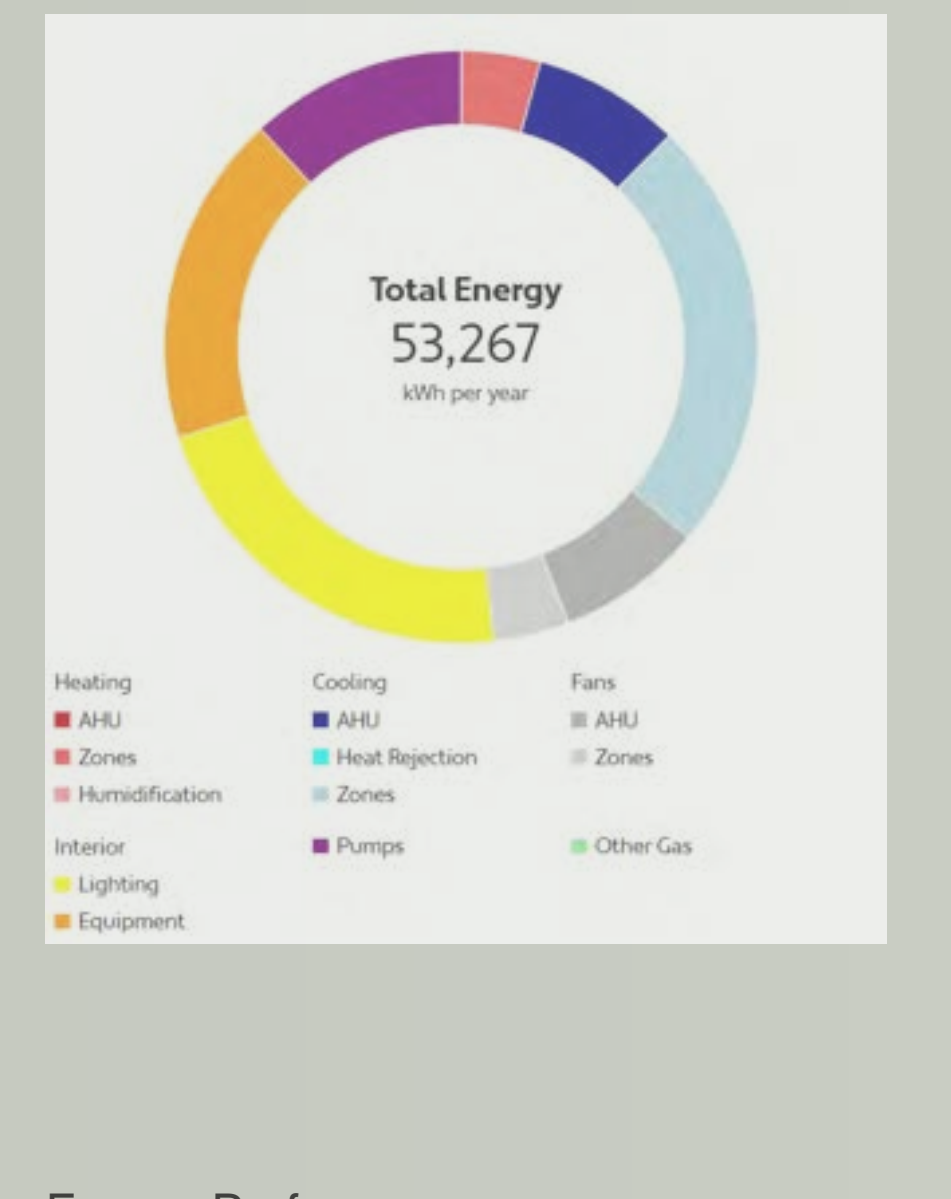
### Daylighting & Energy - measurable outcomes of building performance

Date: 12/11/2023

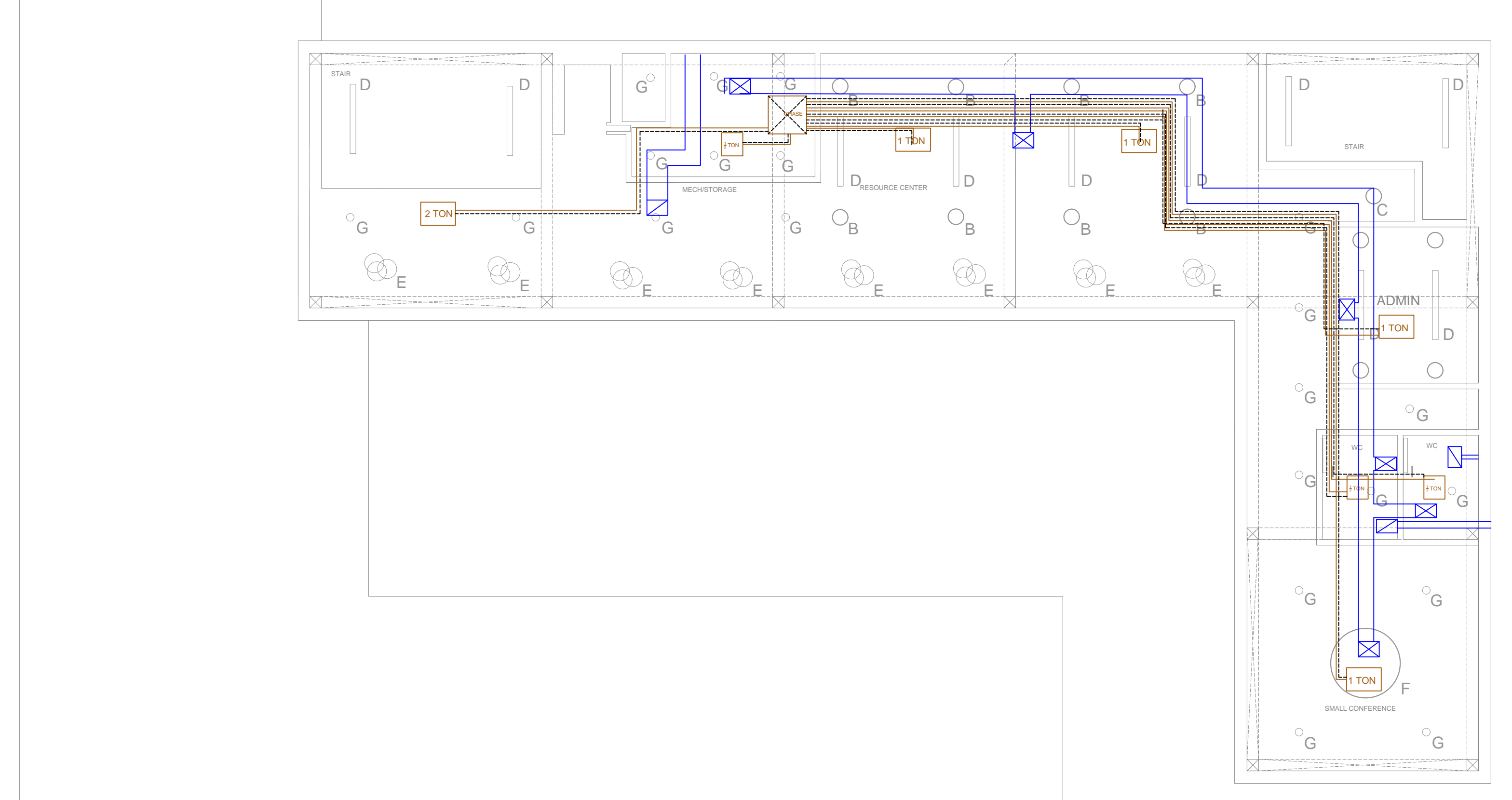
Student Names: Jessica Bowers and Erin Nivison



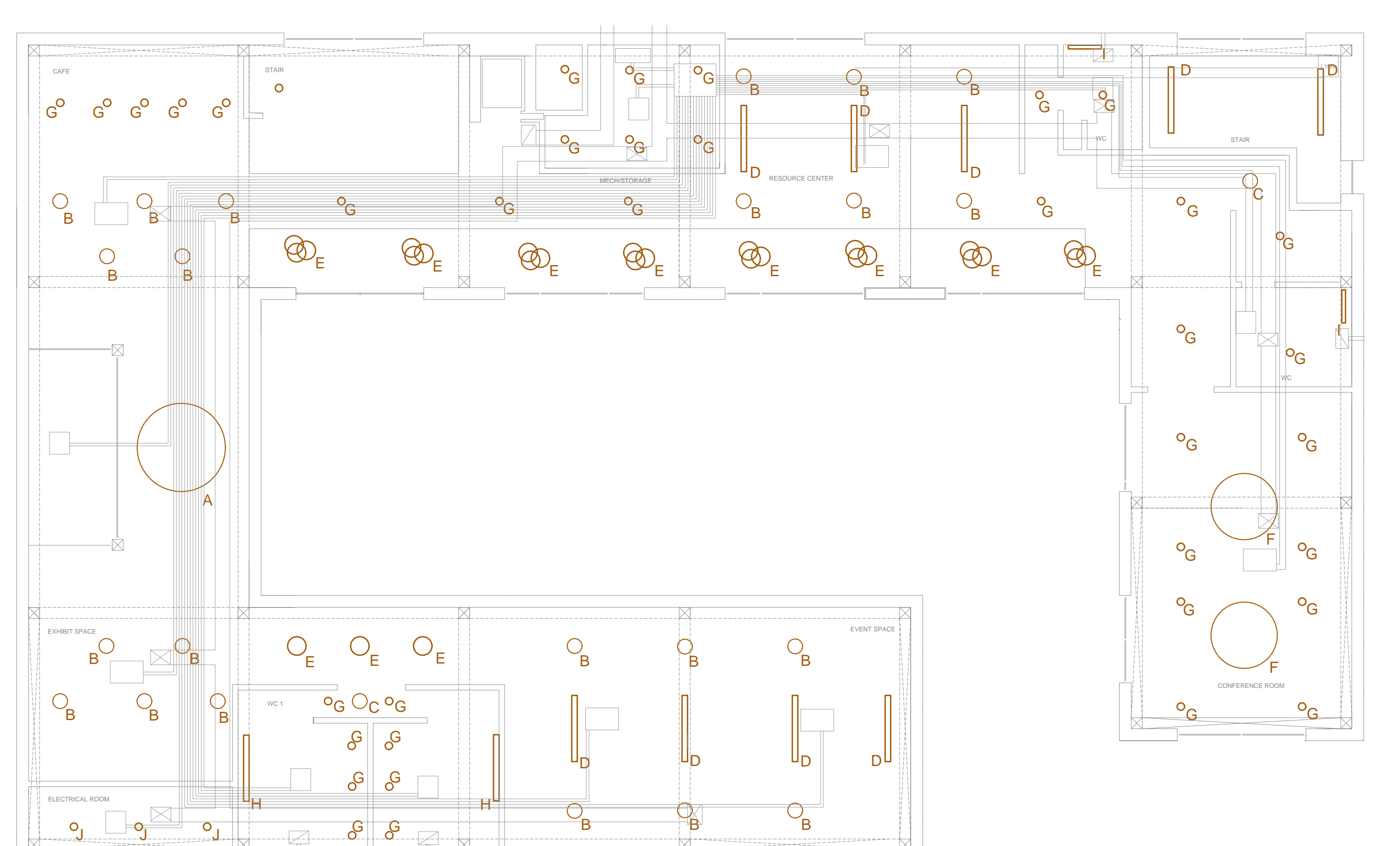
Design Iteration	LVI	DF	ASHRAE
Iteration A	10	4.23	84
Iteration B	20	4.23	84
Iteration C	30	4.23	84
Iteration D	40	3.53	66
Iteration E	40	3.73	83
Iteration A	40	3.53	66



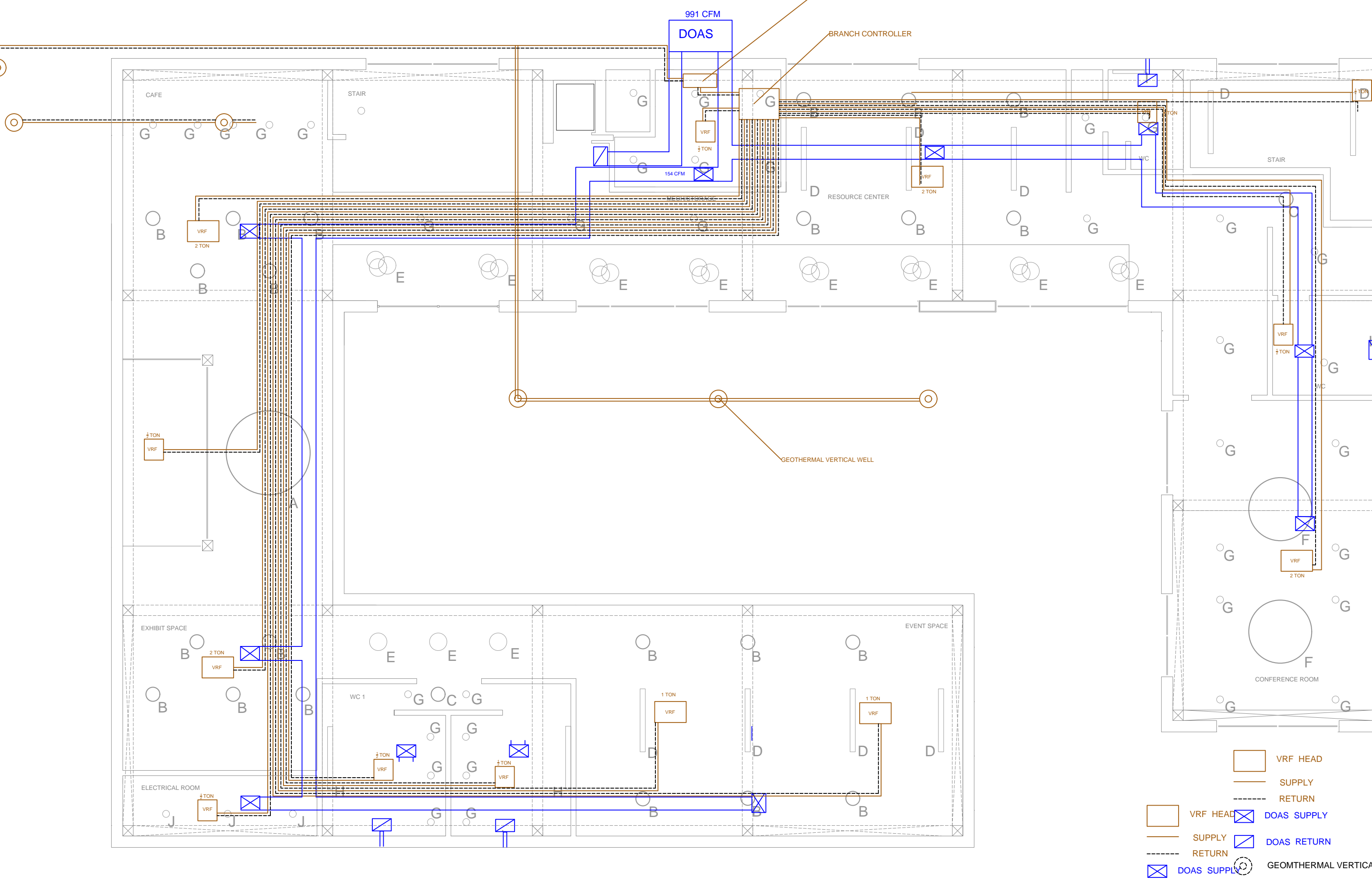
RCP 2ND FLOOR 1/8"



HVAC 2ND FLOOR 1/8"



RCP 1ST FLOOR 1/8"



HVAC 1ST FLOOR 1/8"

LIGHTING SCHEDULE



NATIONAL BUILDING INSTITUTE HQ 2  
 KENSINGTON, MD  
 ARCH600  
 JESSICA BOWERS & ERIN NIVISON

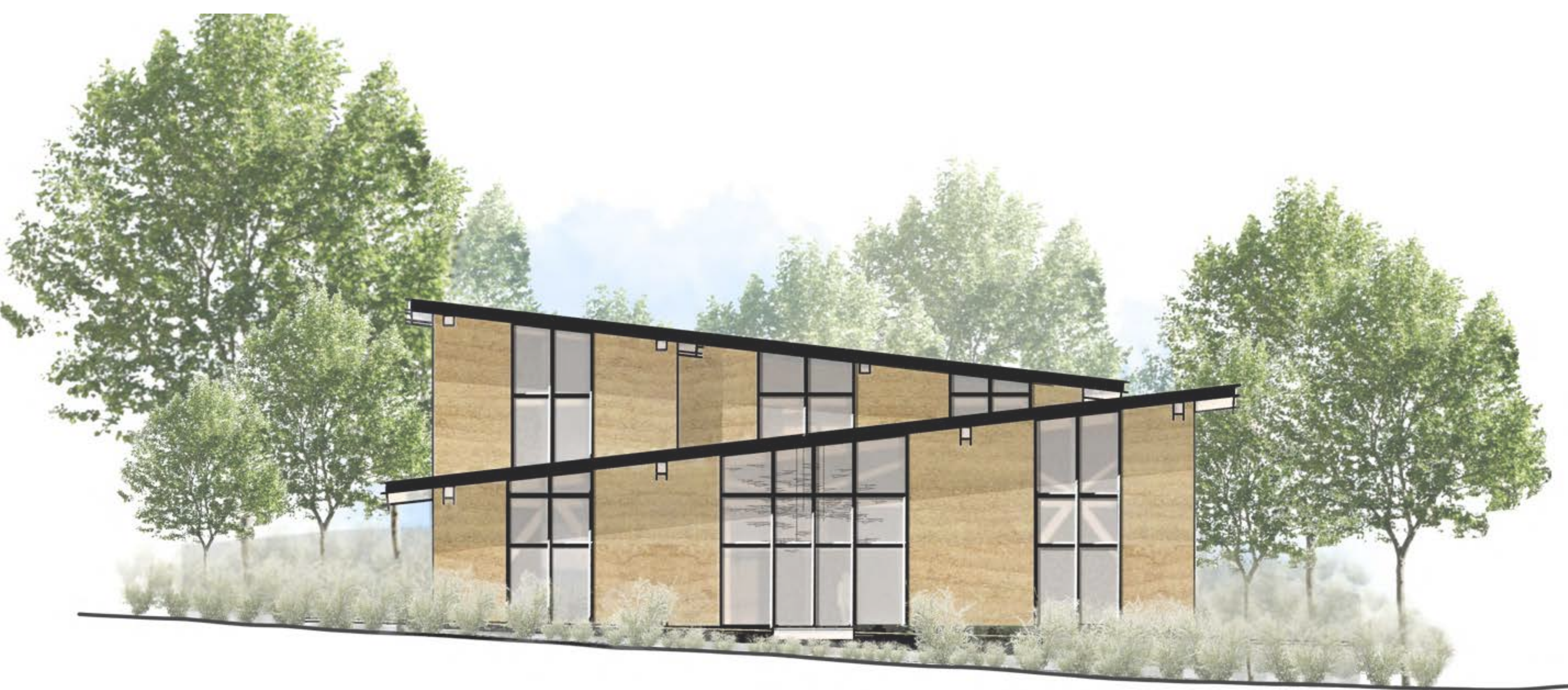




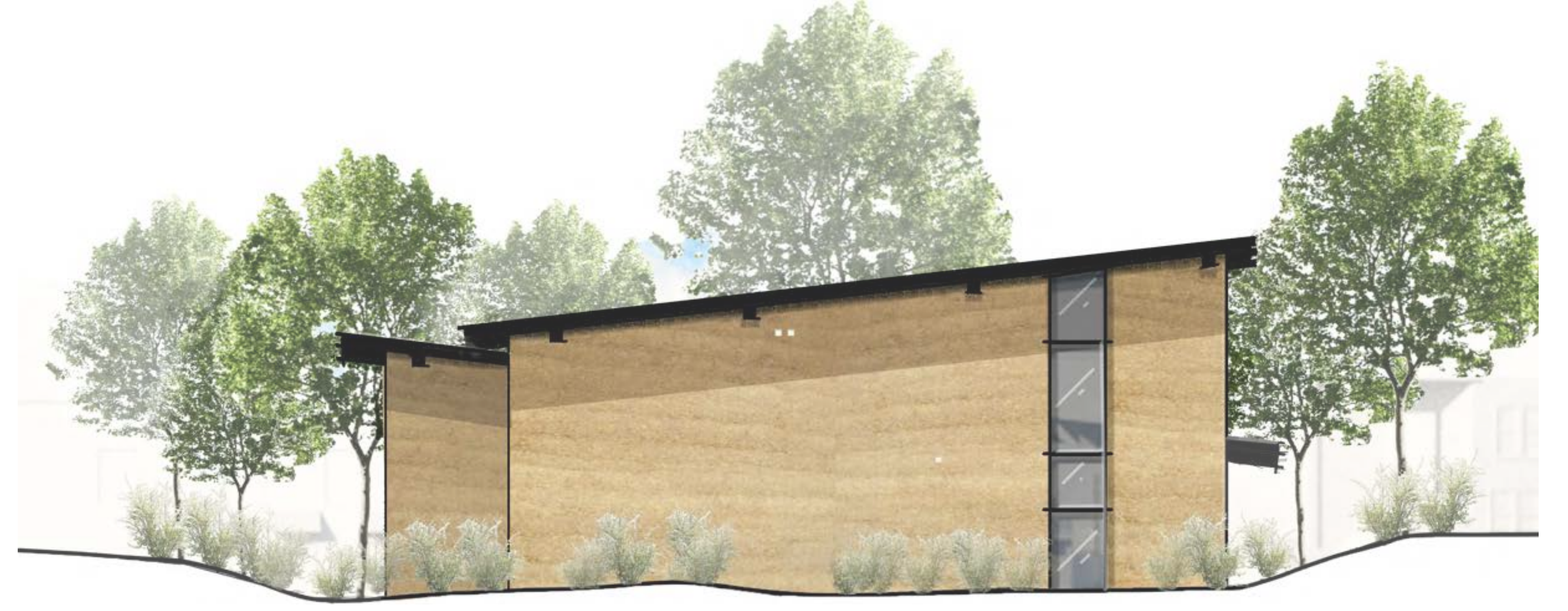
ARRIVAL



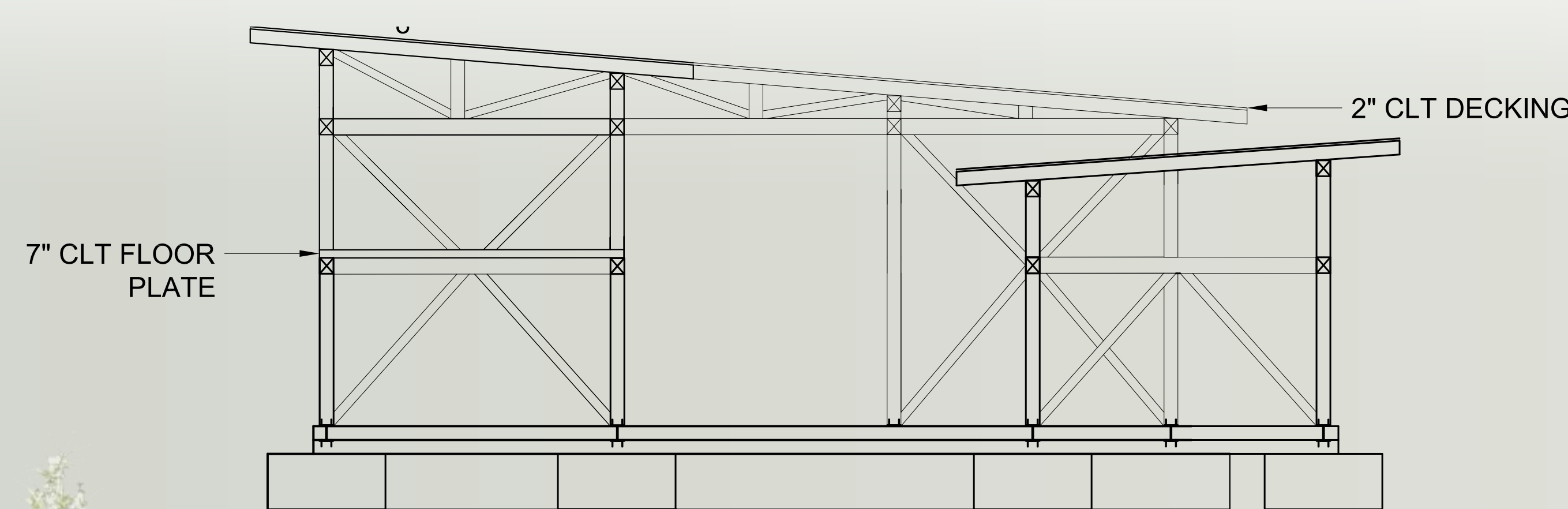
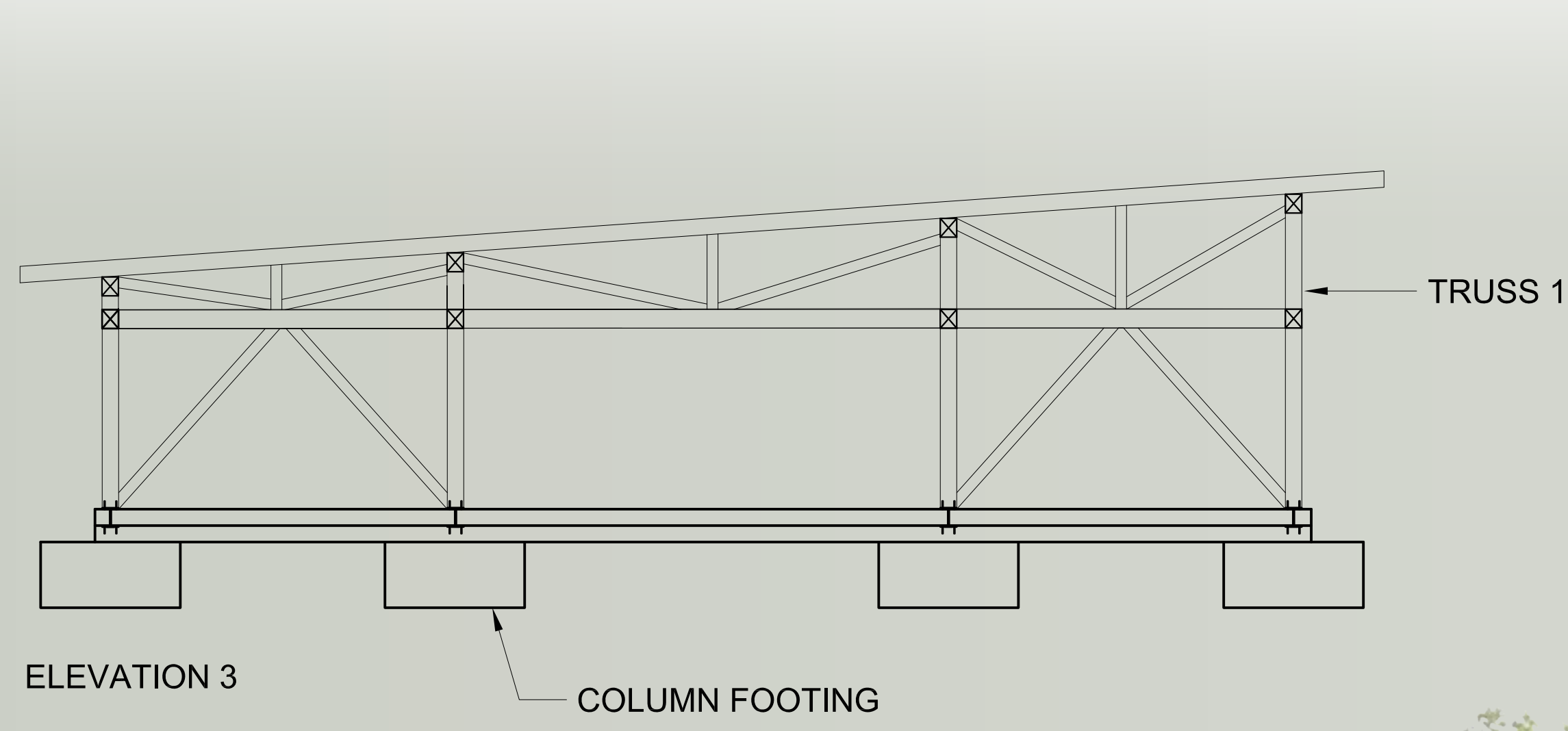
APPROACH



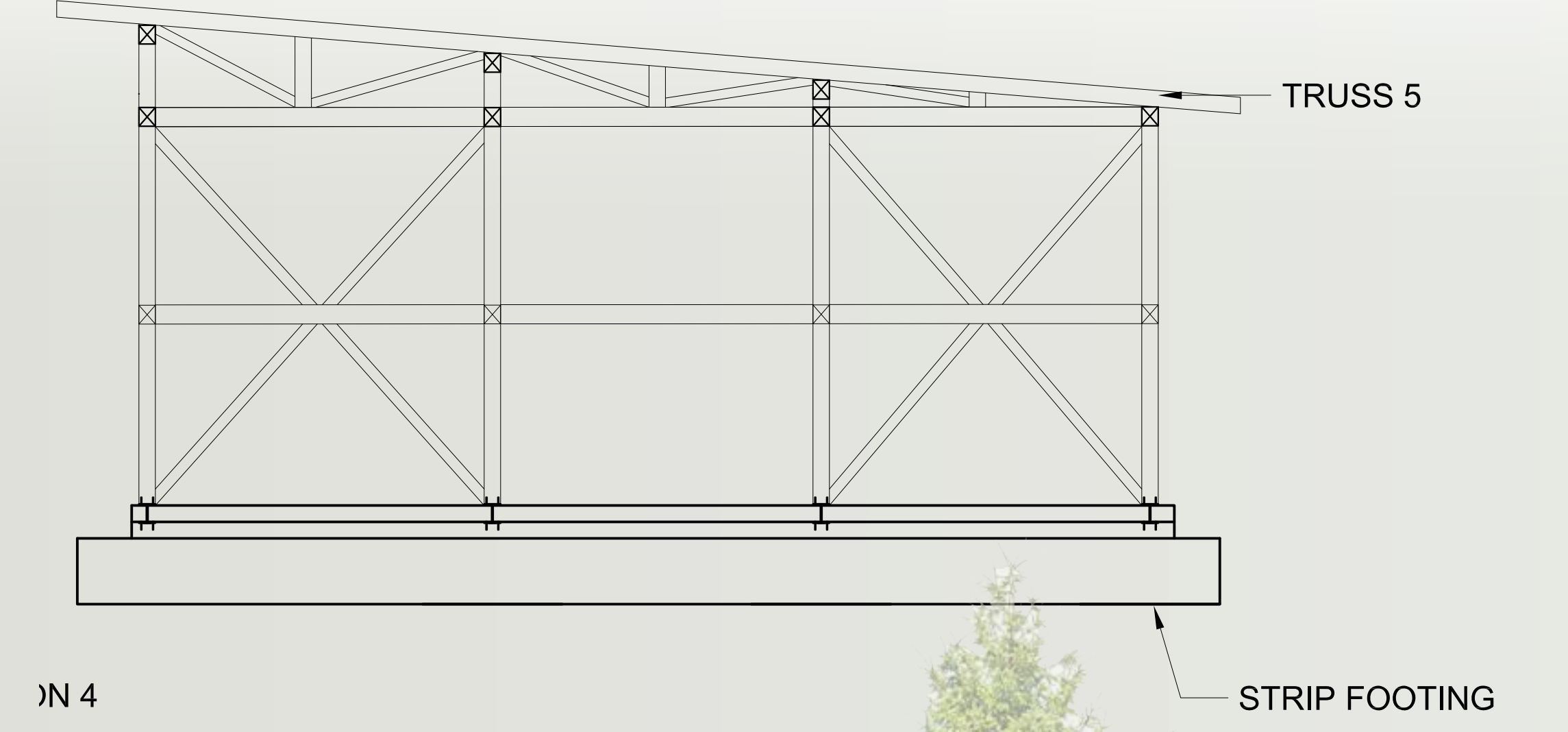
WEST ELEVATION 1/8"



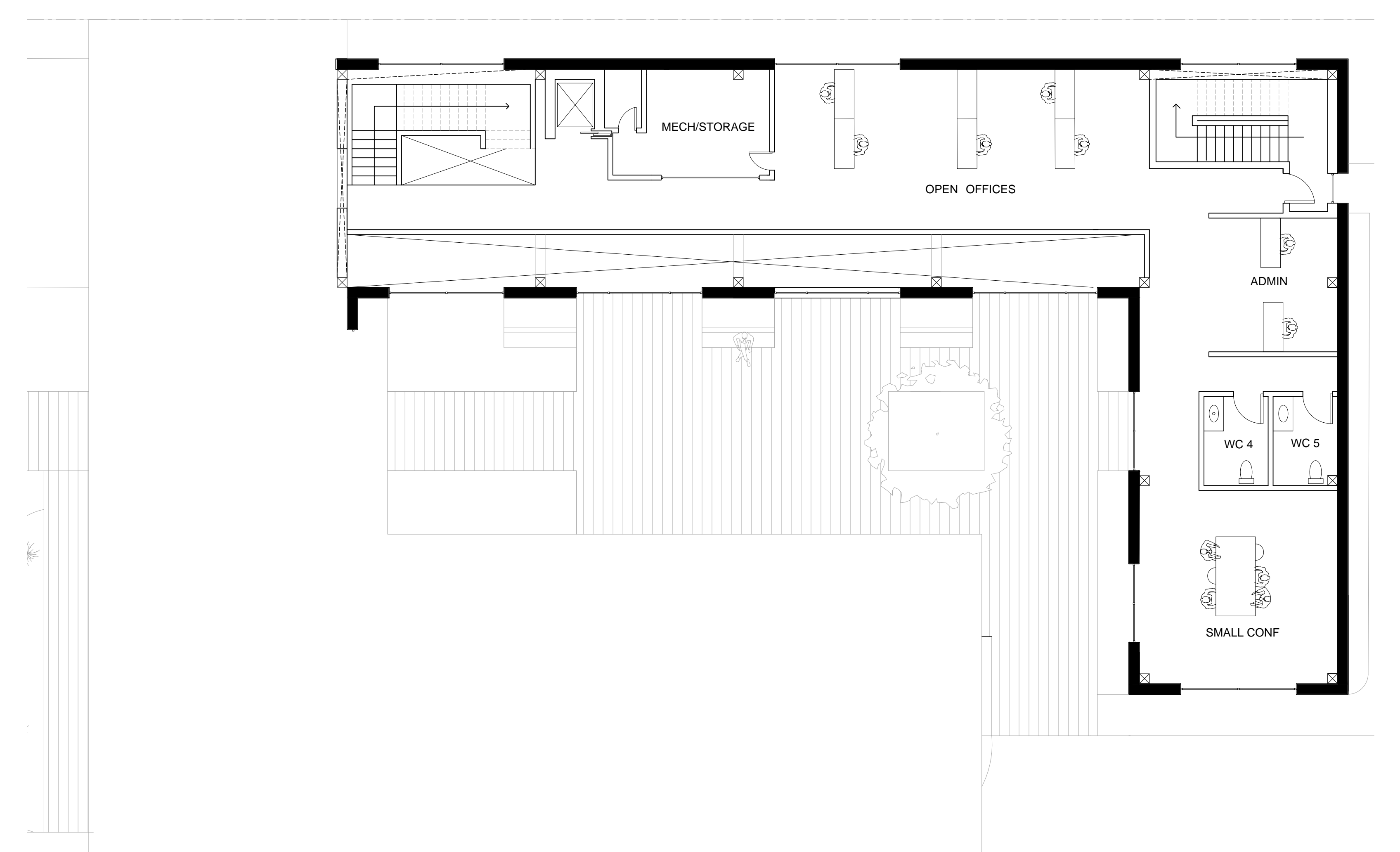
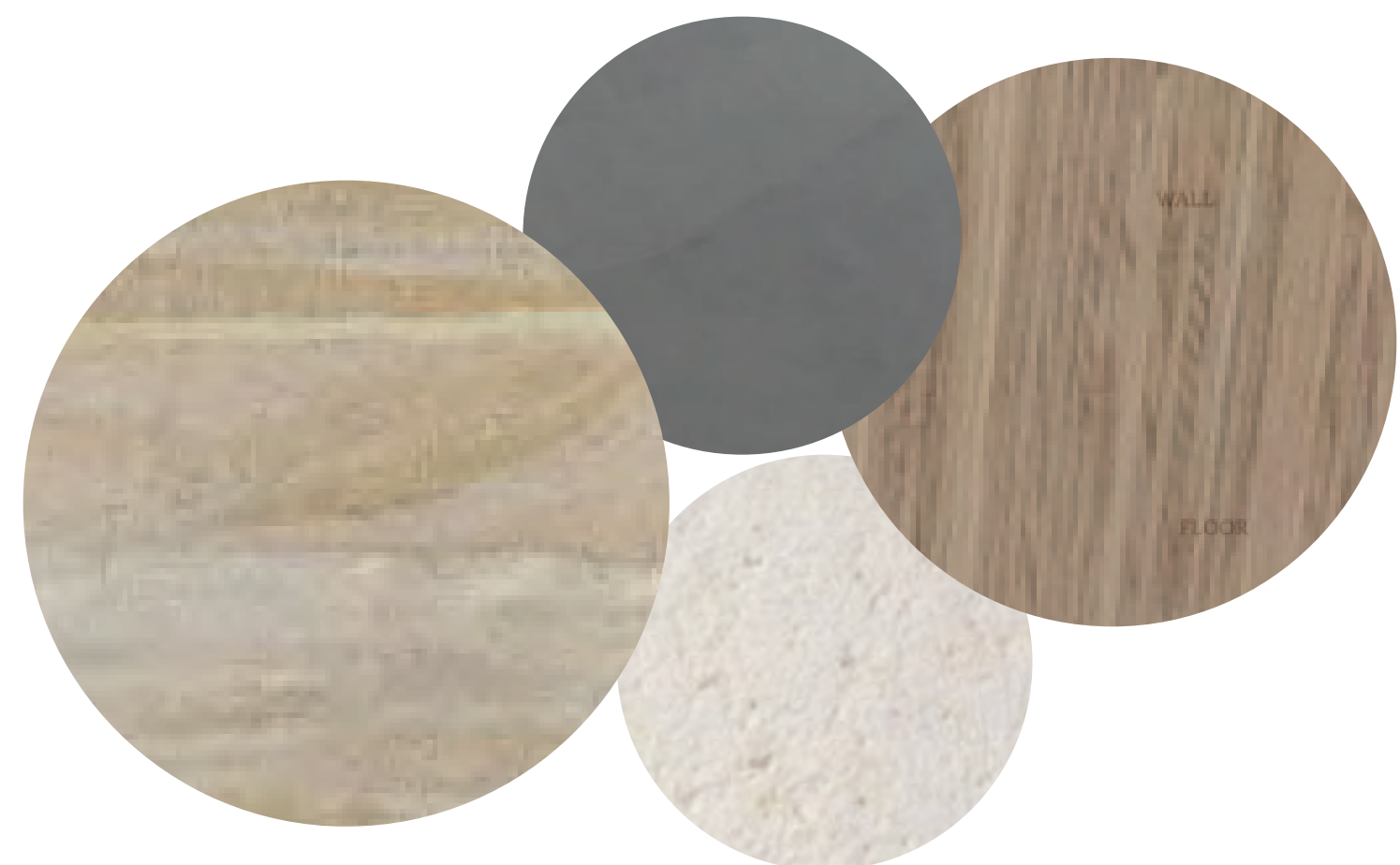
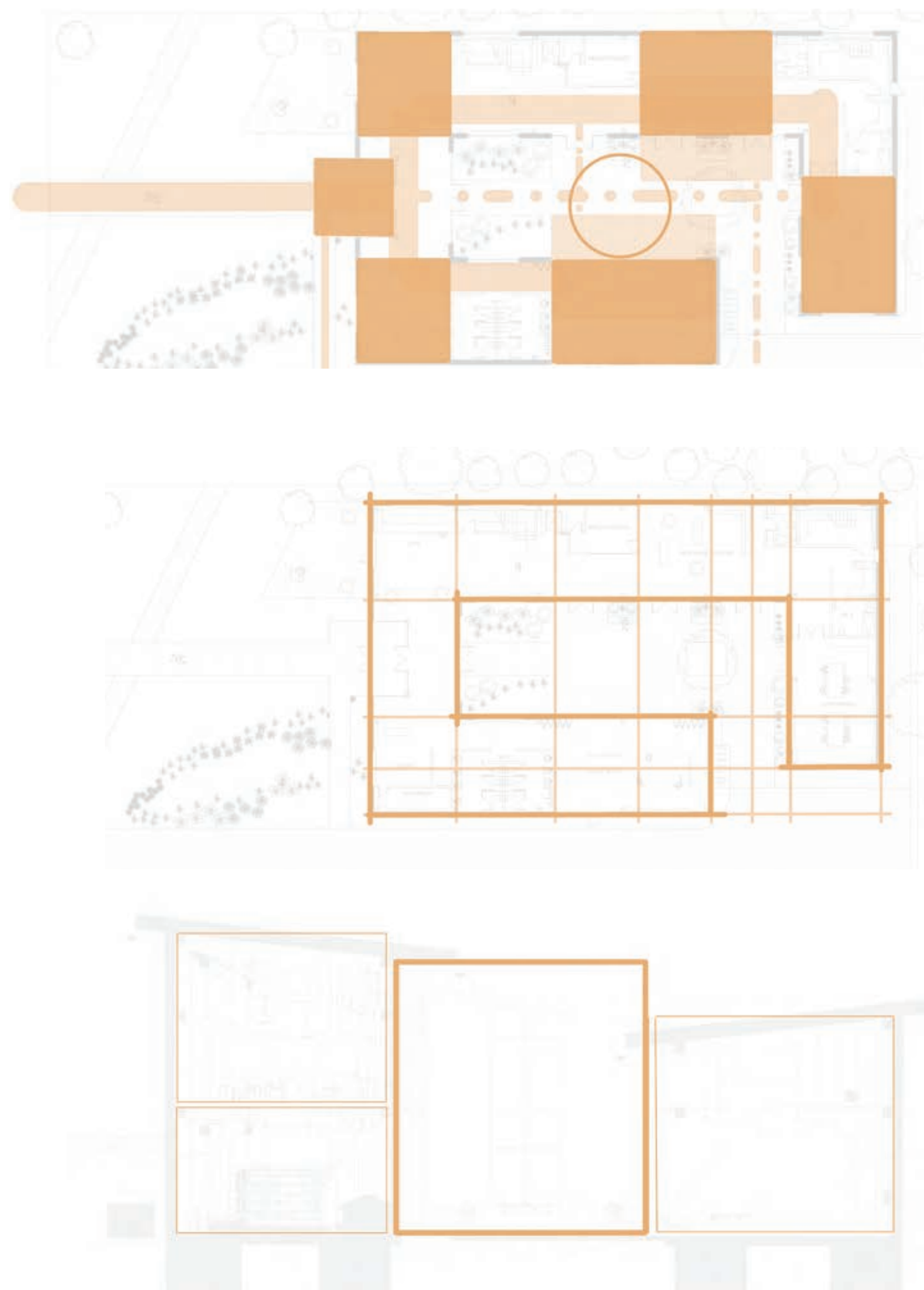
EAST ELEVATION 1/8"



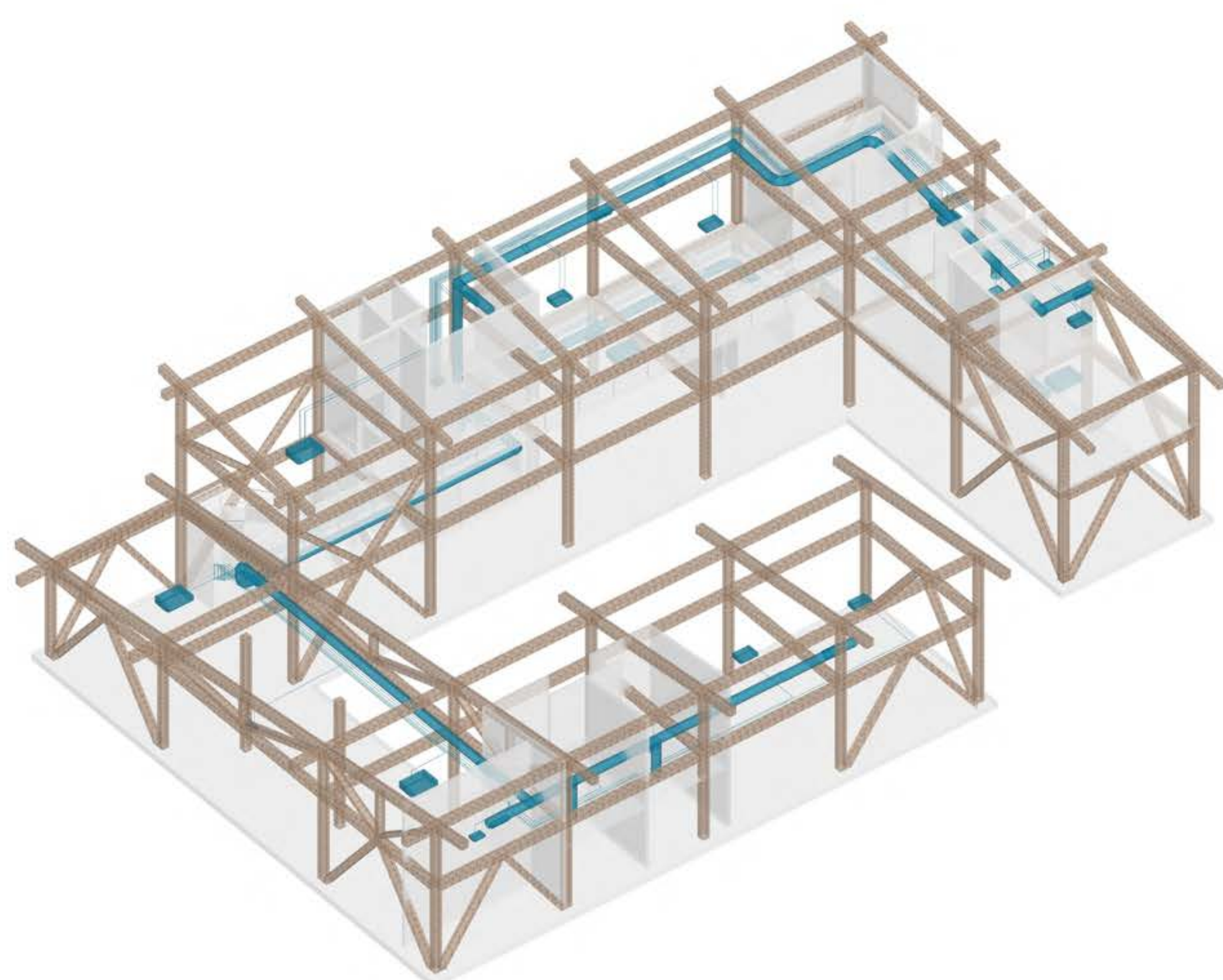
N-S SECTION 1/8"



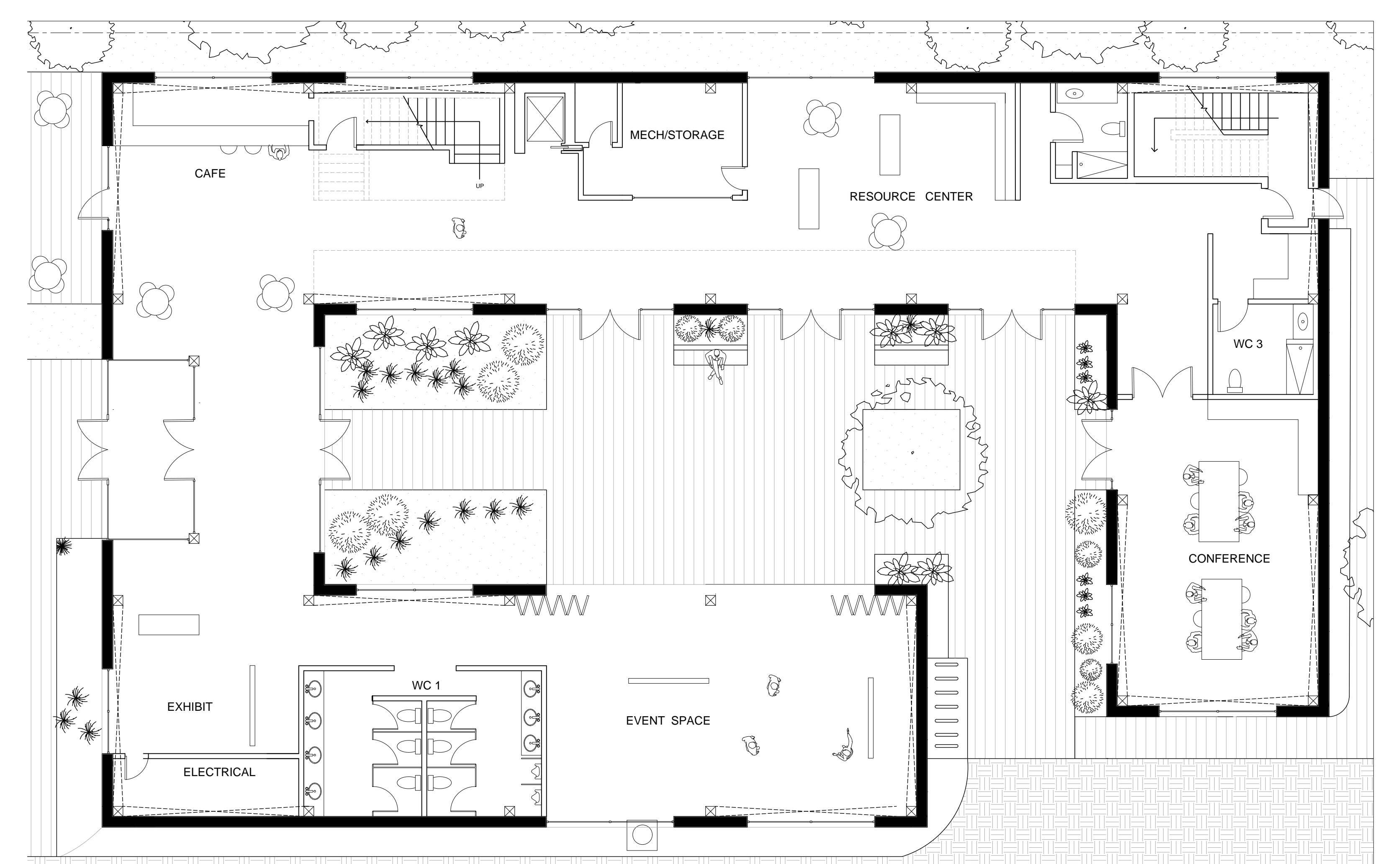
IN 4



SECOND FLOOR PLAN 1/8"



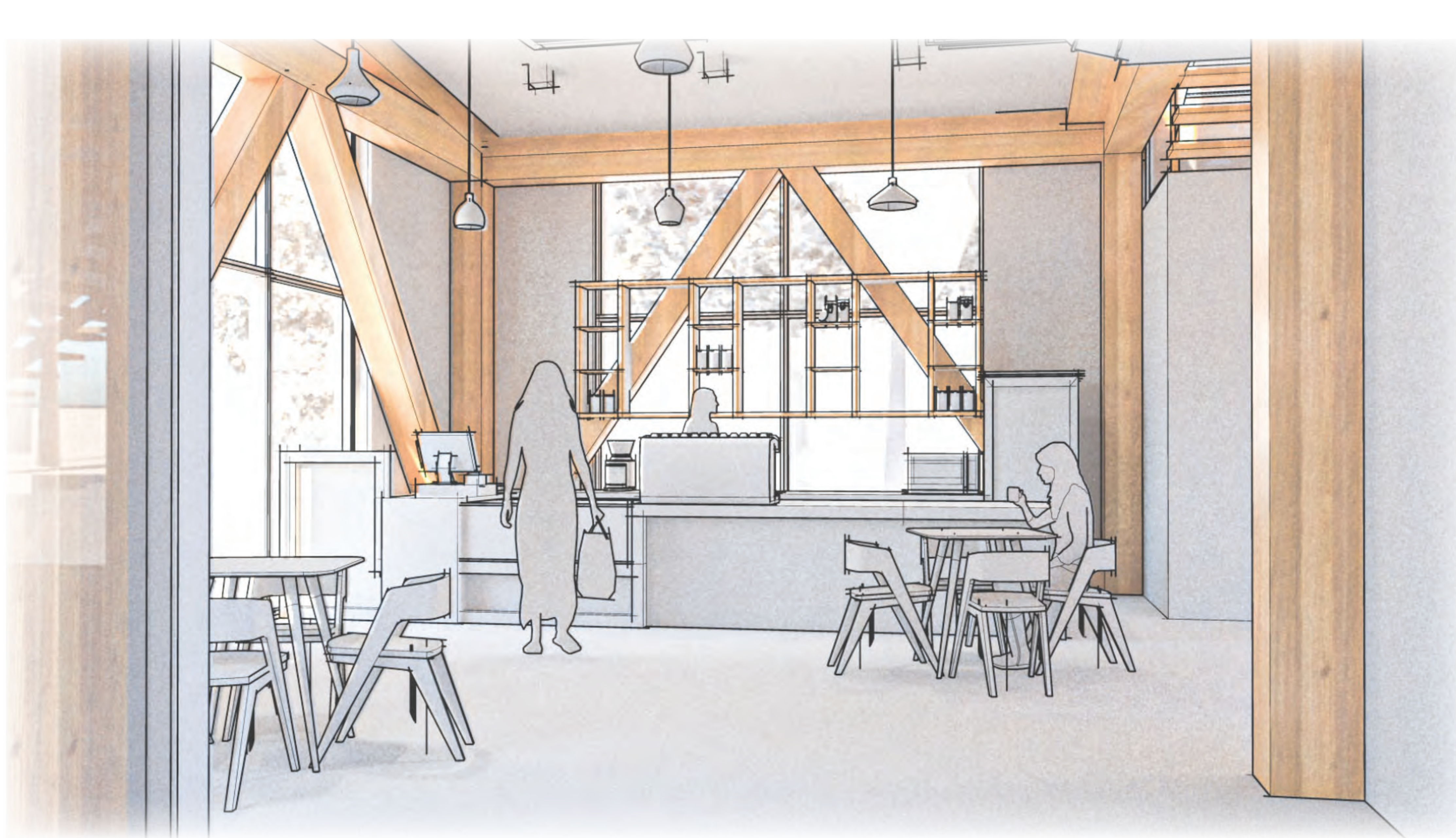
COLLISION DETECTION 3/32"



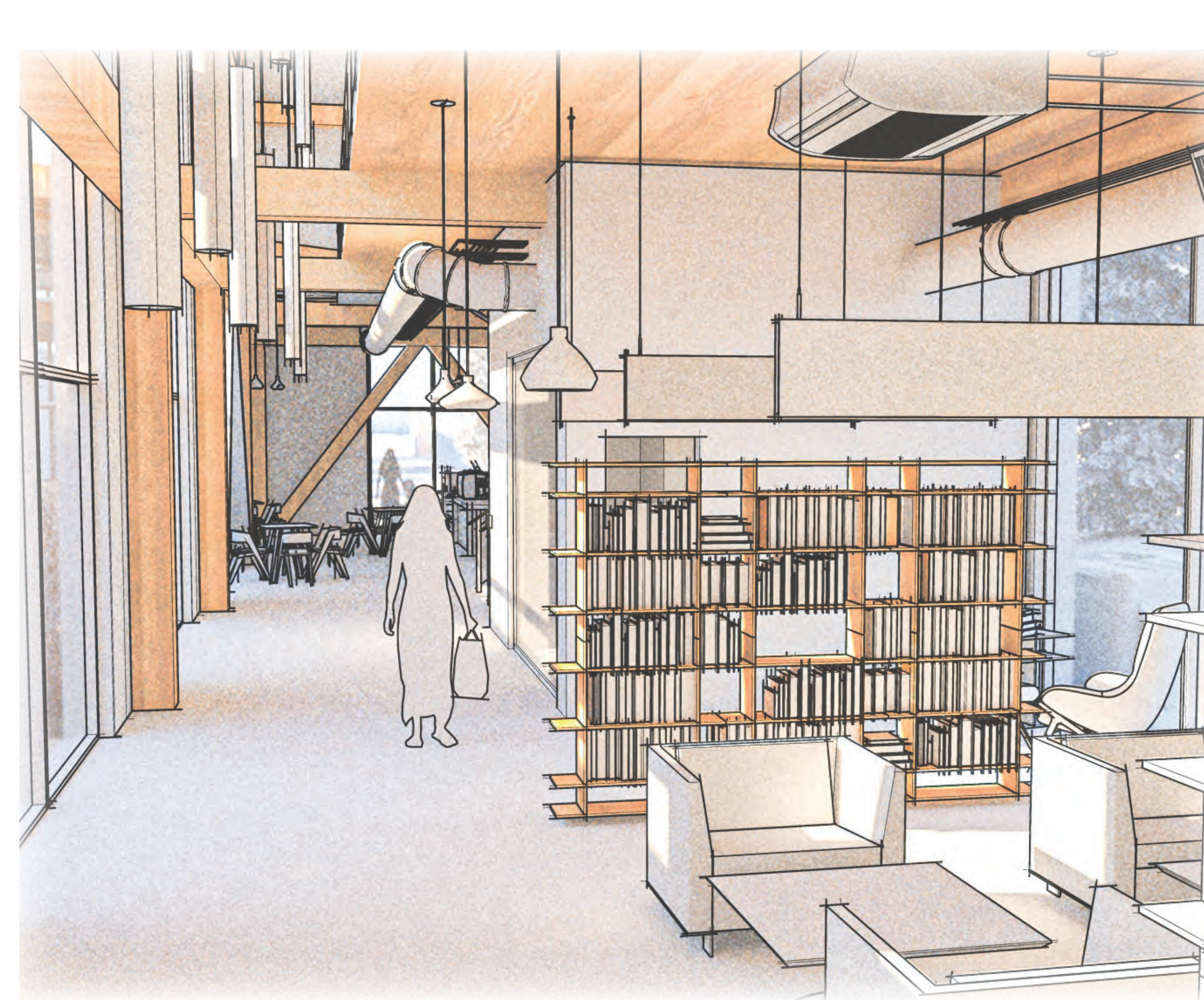
FIRST FLOOR PLAN 1/8"







CAFE



RESOURCE ROOM



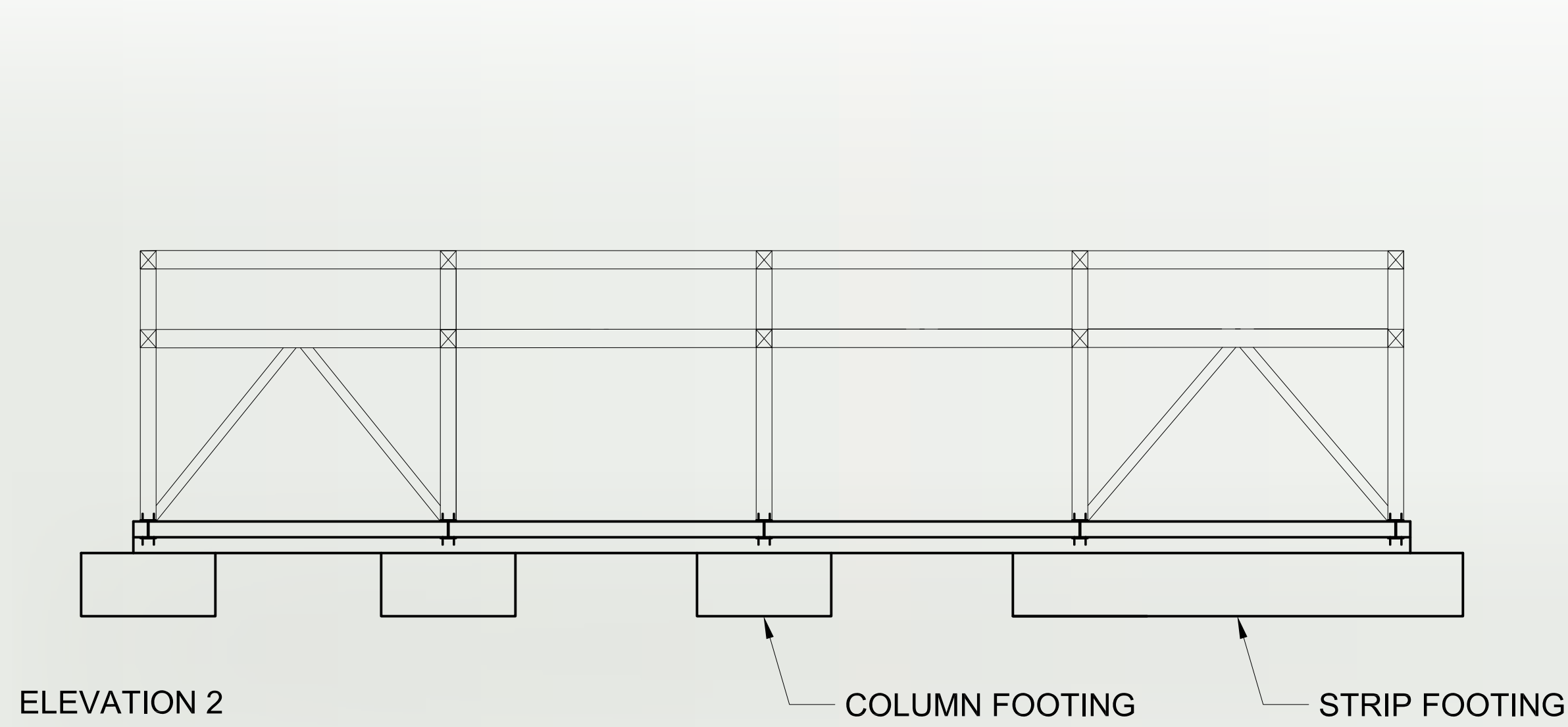
SOUTH ELEVATION

1/8" = 1'

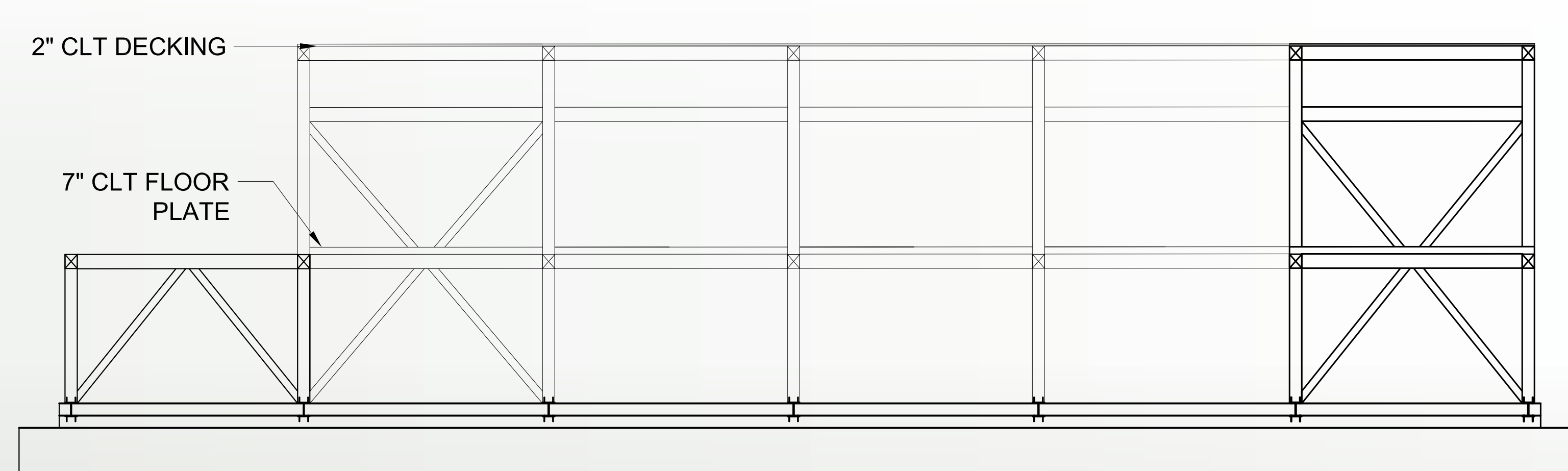


NORTH ELEVATION

1/8" = 1'

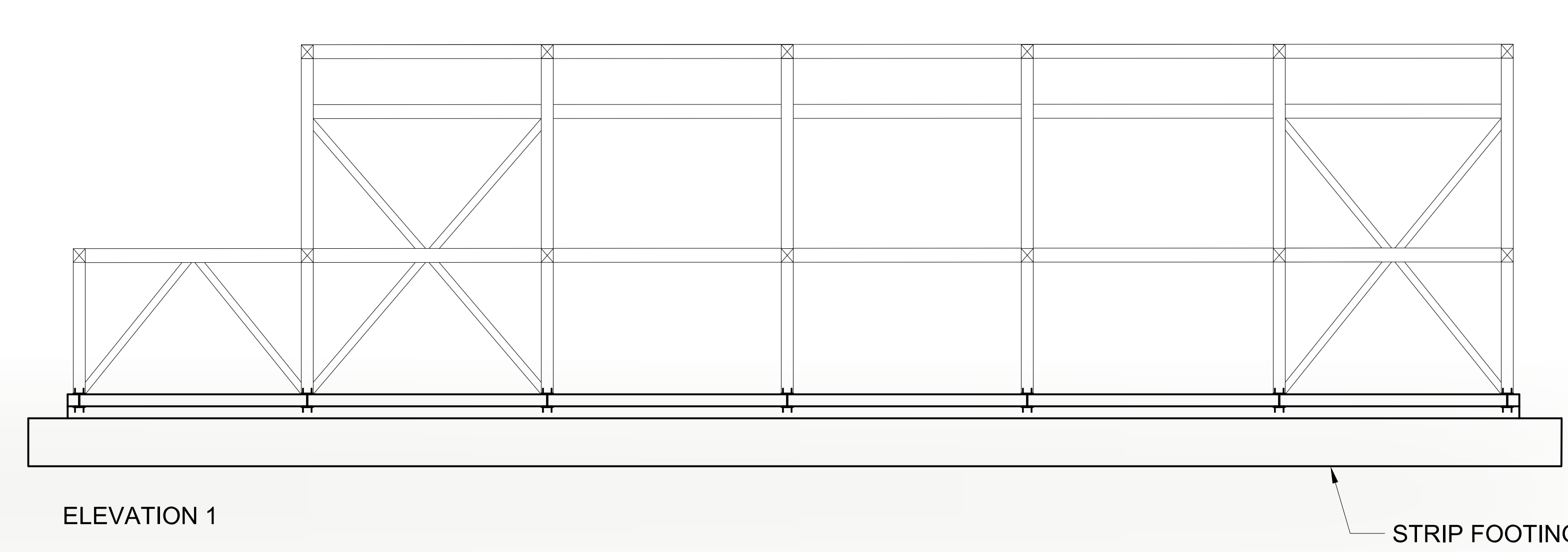


COLUMN FOOTING STRIP FOOTING



E-W STRUCTURAL SECTION

1/8" = 1'



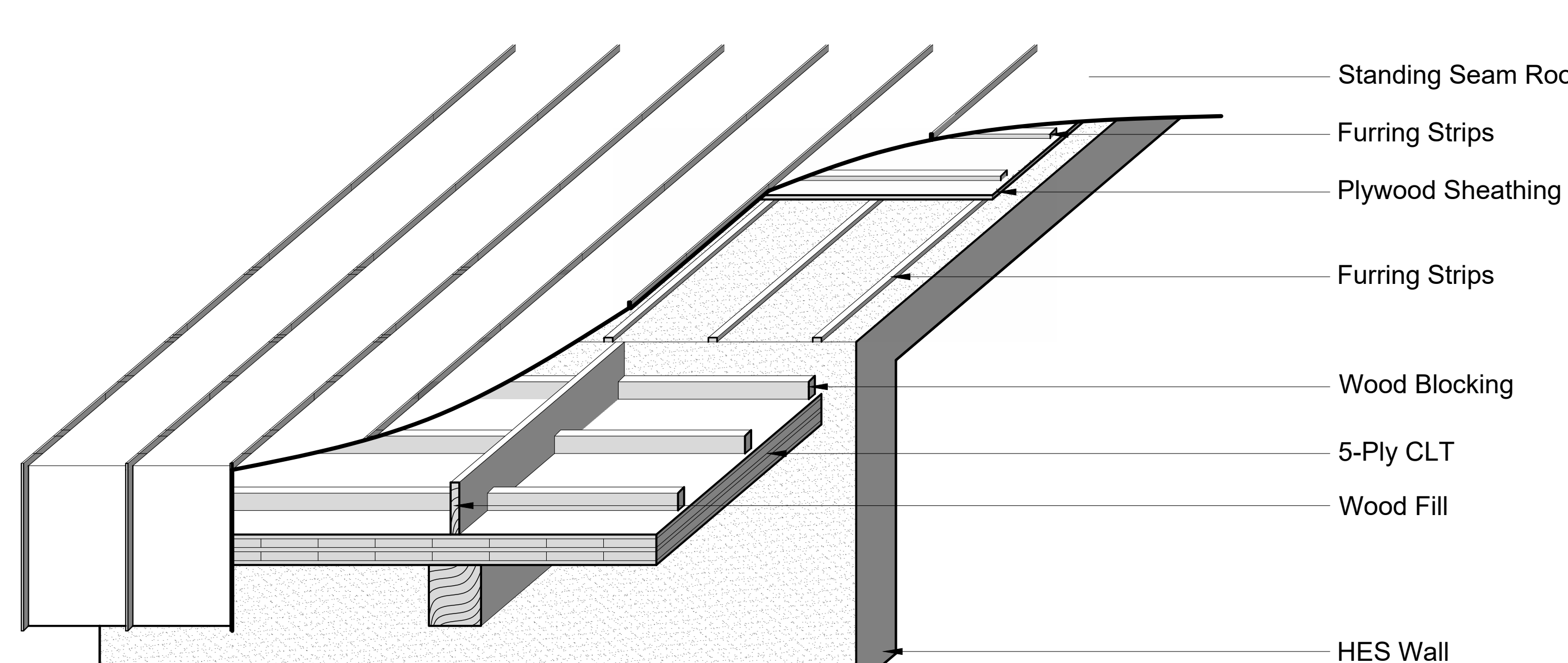
ELEVATION 1

STRIP FOOTING



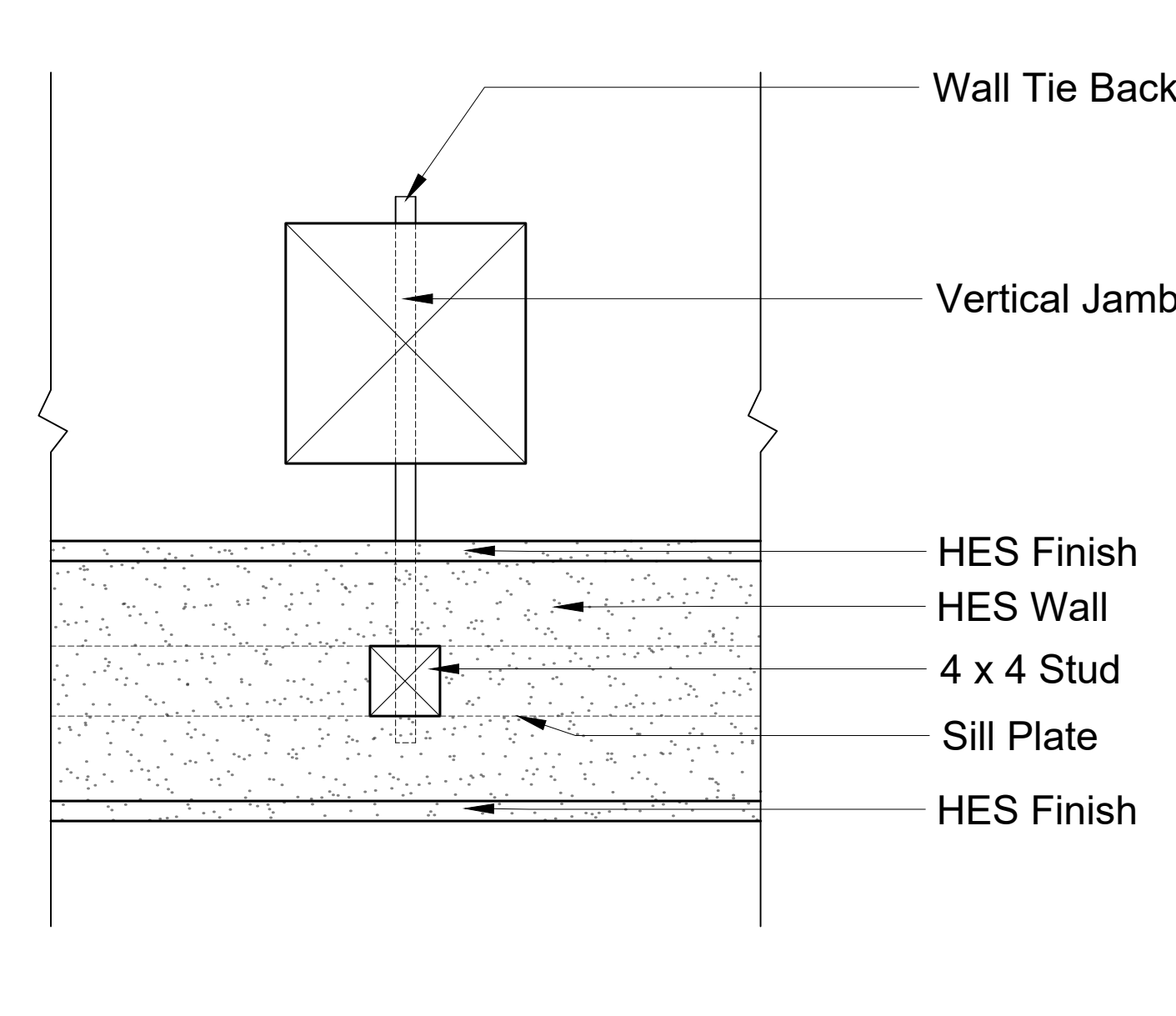
E-W BUILDING SECTION

1/8" = 1'



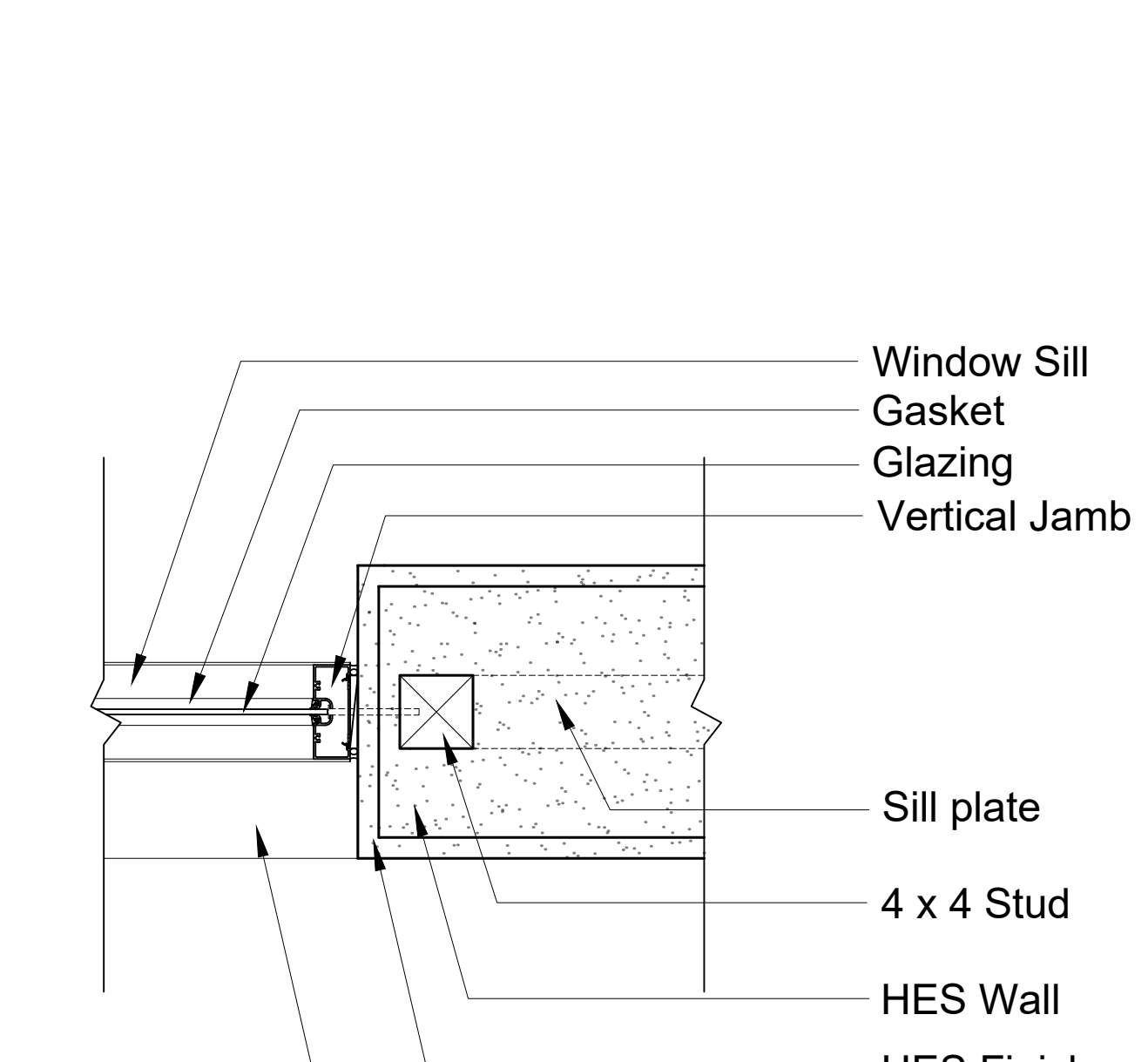
ROOF ASSEMBLY AXON

1/2" = 1'



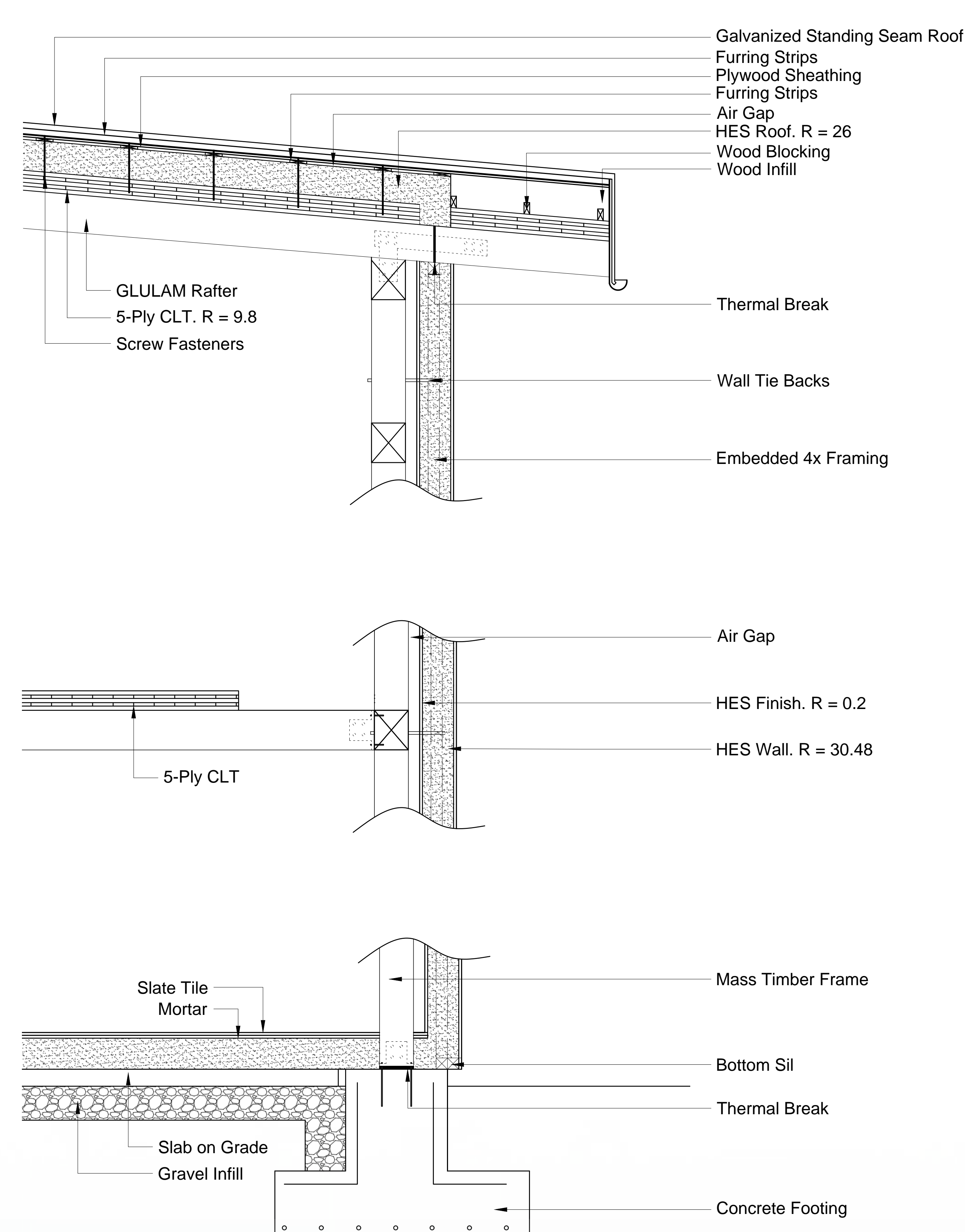
SOLID WALL DETAIL (PLAN)

1-1/2" = 1'



GLAZING CONNECTION (PLAN)

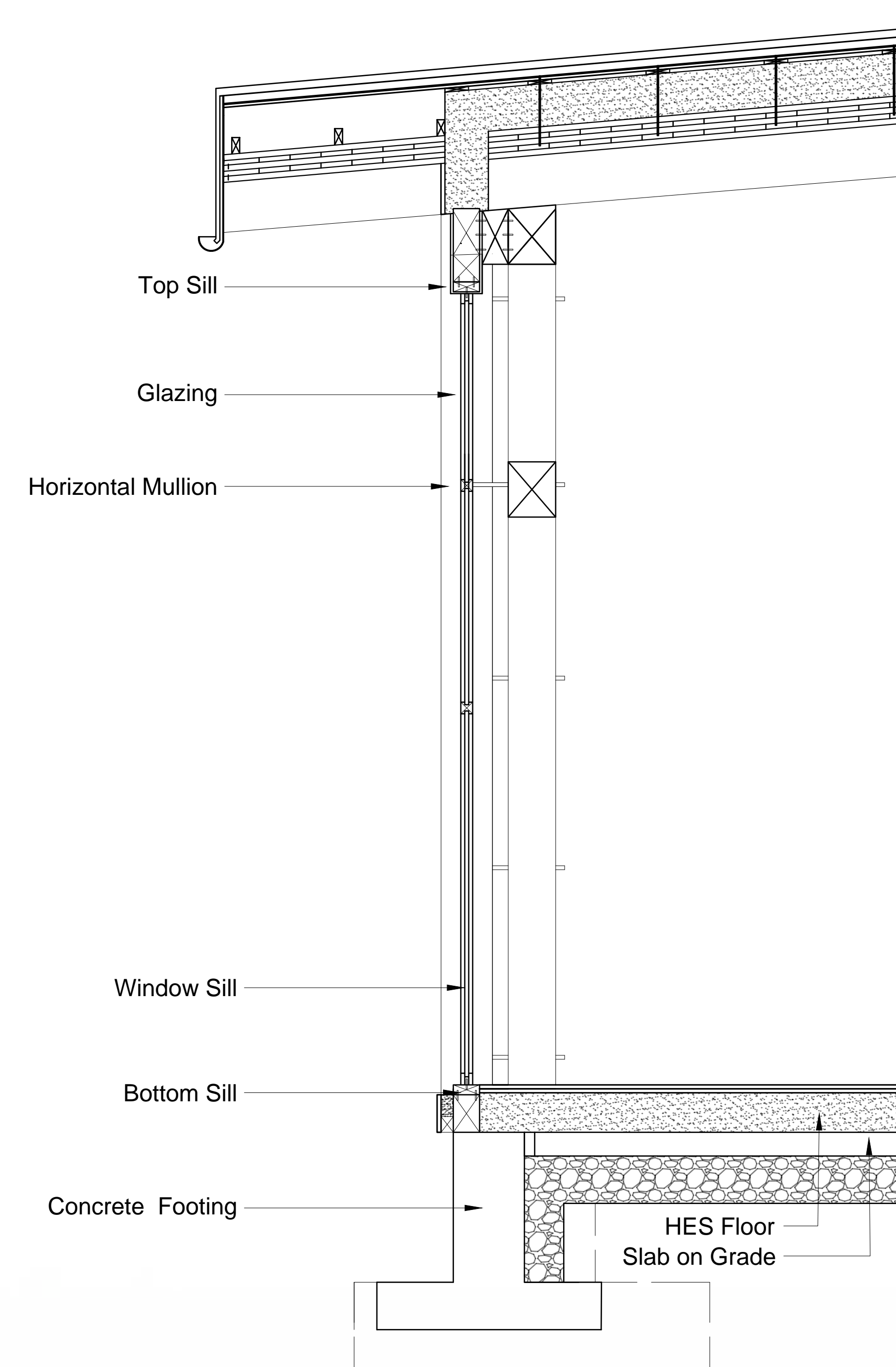
1-1/2" = 1'



SOLID WALL SECTION

1/2" = 1'

Assembly R-Values	
Wall Assembly	30.62
Roof Assembly	25.8
Floor Assembly	15.2



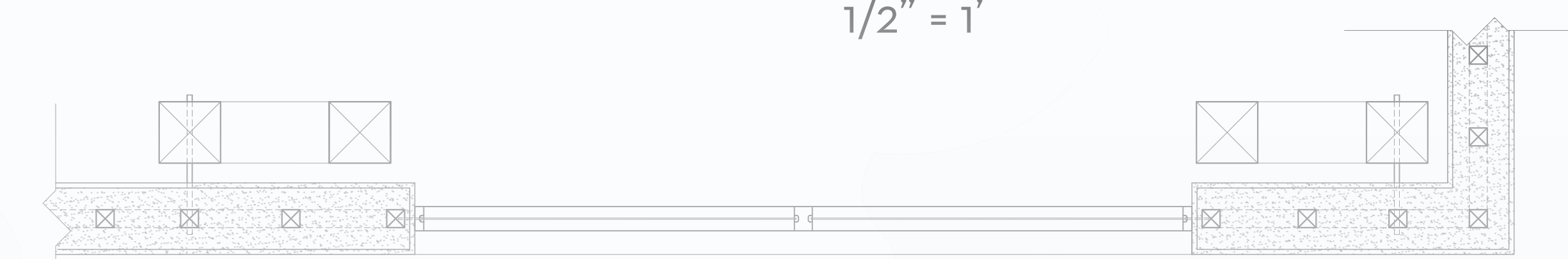
GLASS WALL SECTION

1/2" = 1'



FACADE STUDY

1/2" = 1'



PLAN DETAIL

1/2" = 1'





