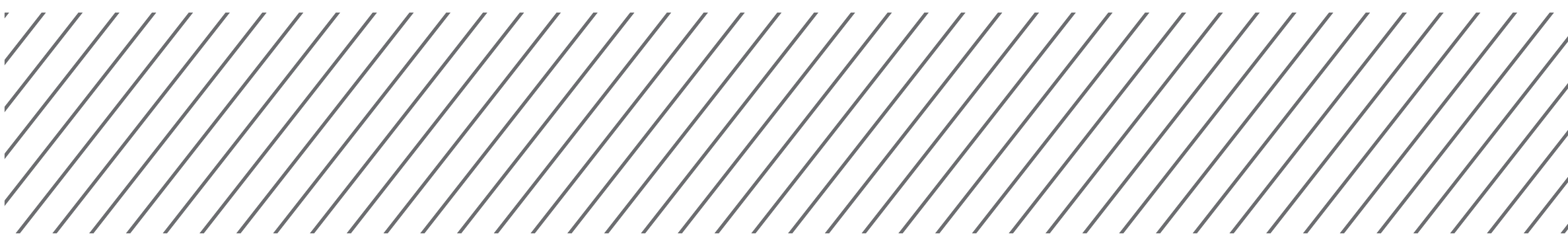
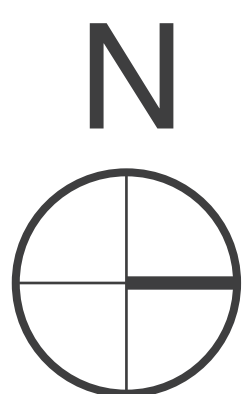
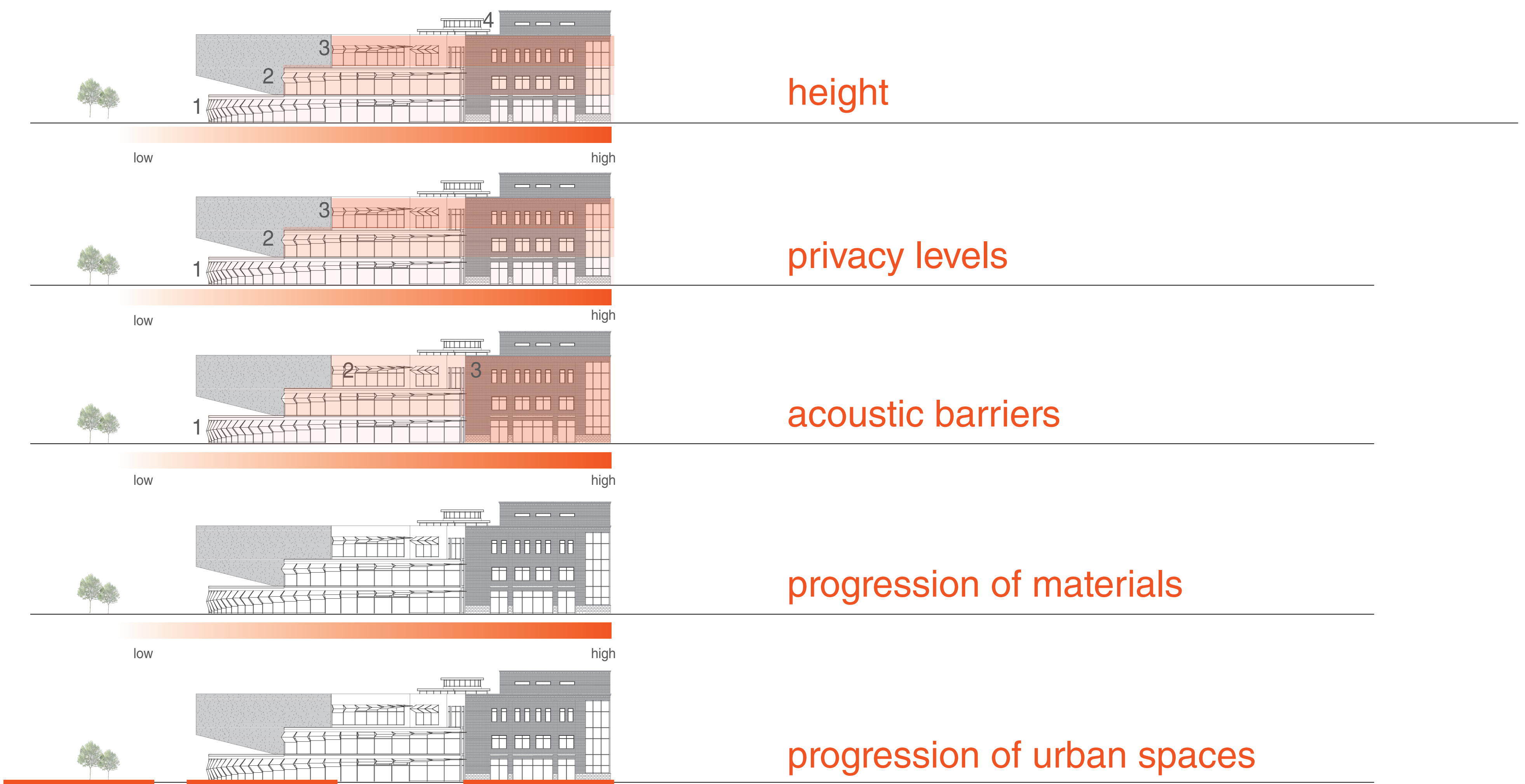


bryan public library concept



transformation

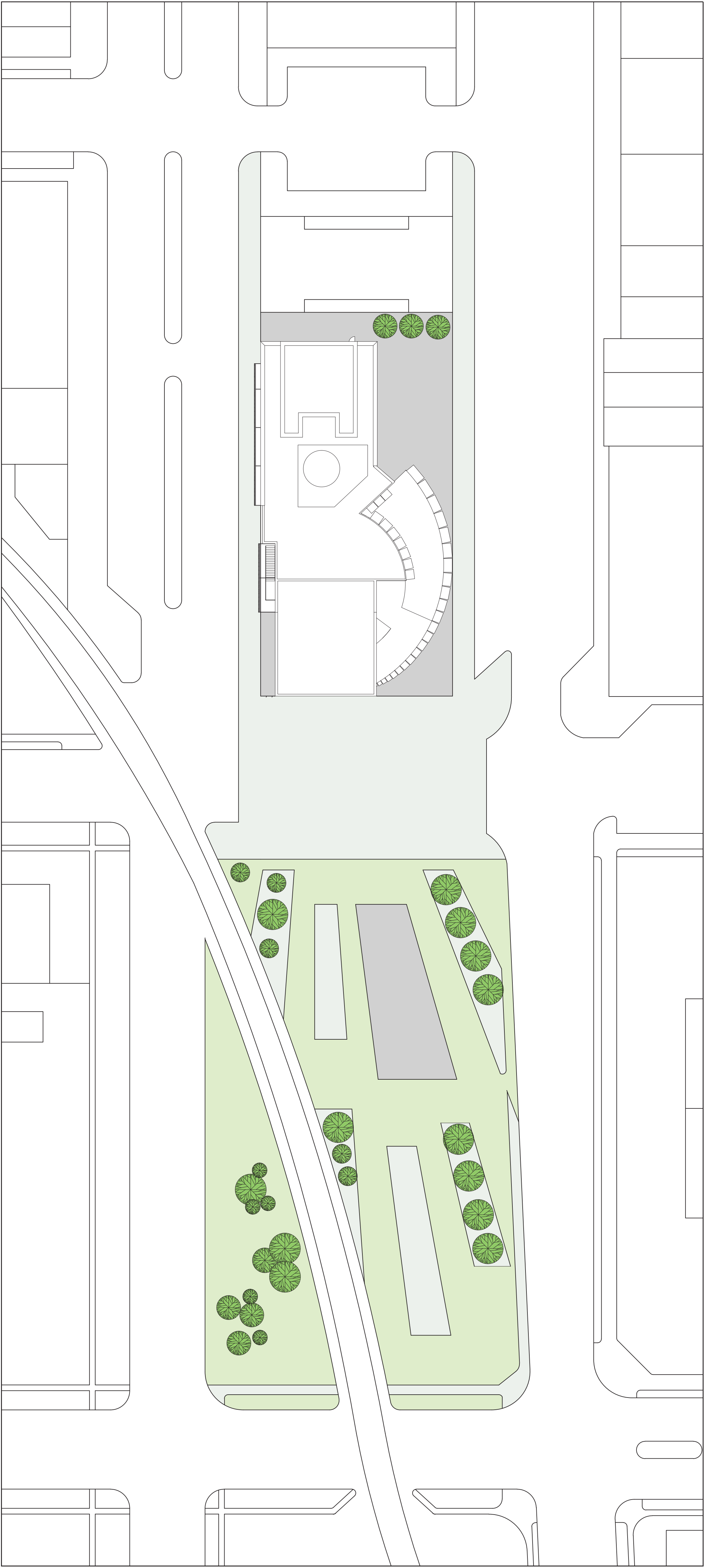


arch 405
integrated studio

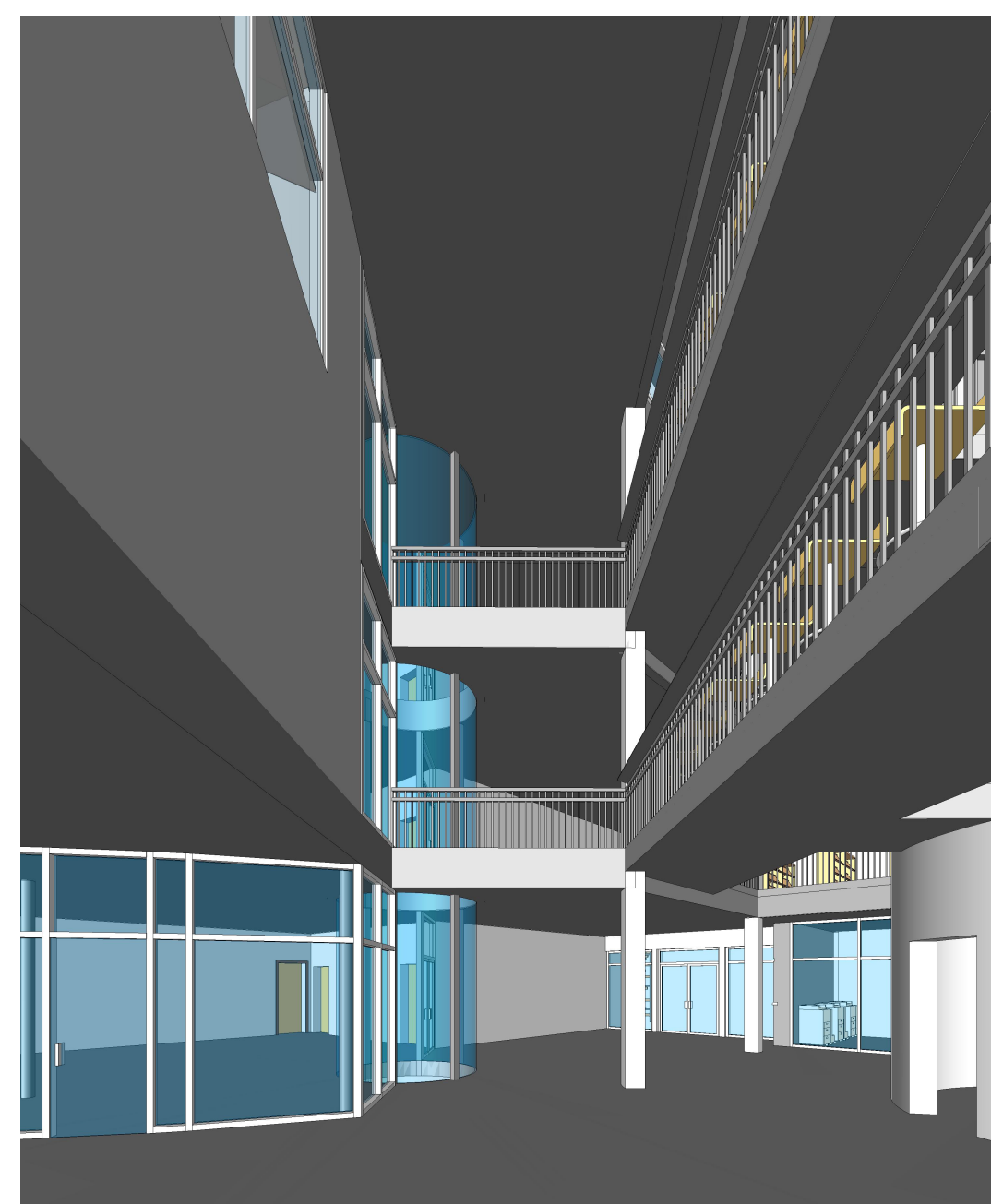
justin garrison
carolyn glenn

site plan

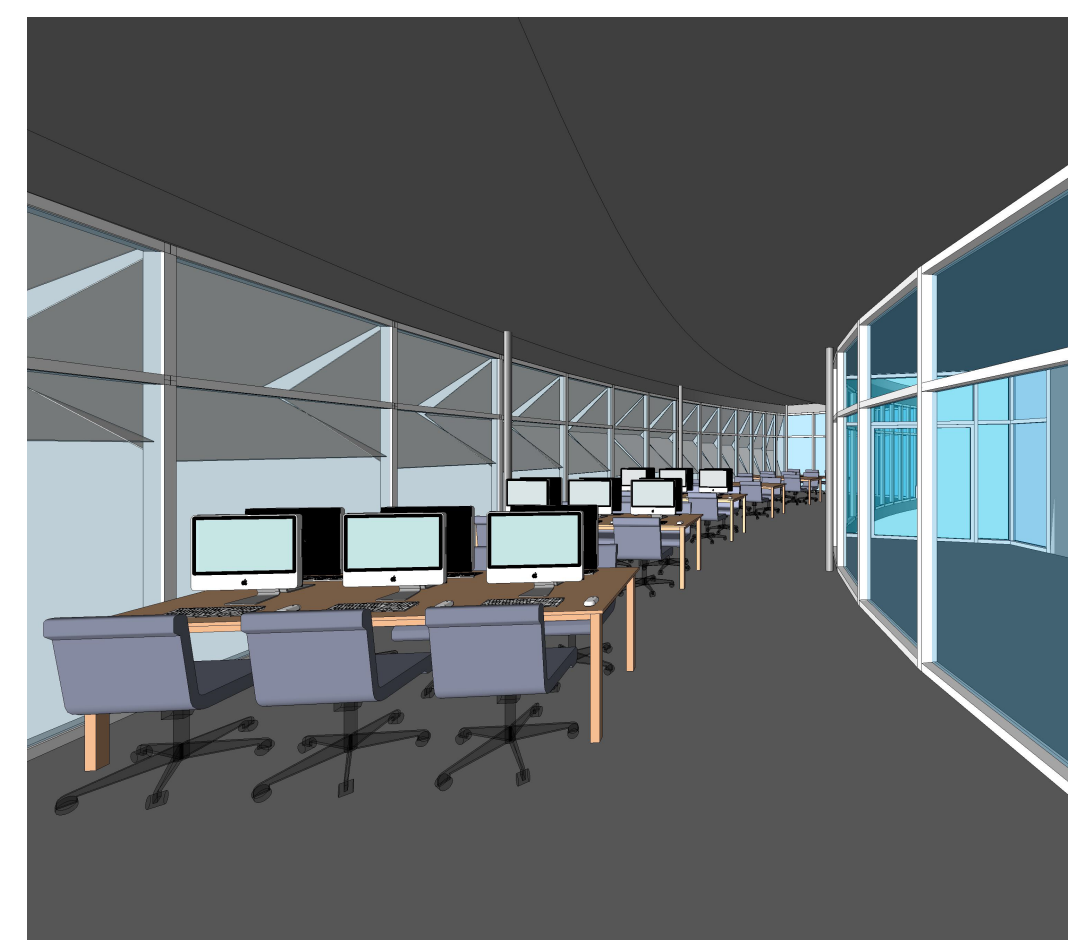
outdoor spaces



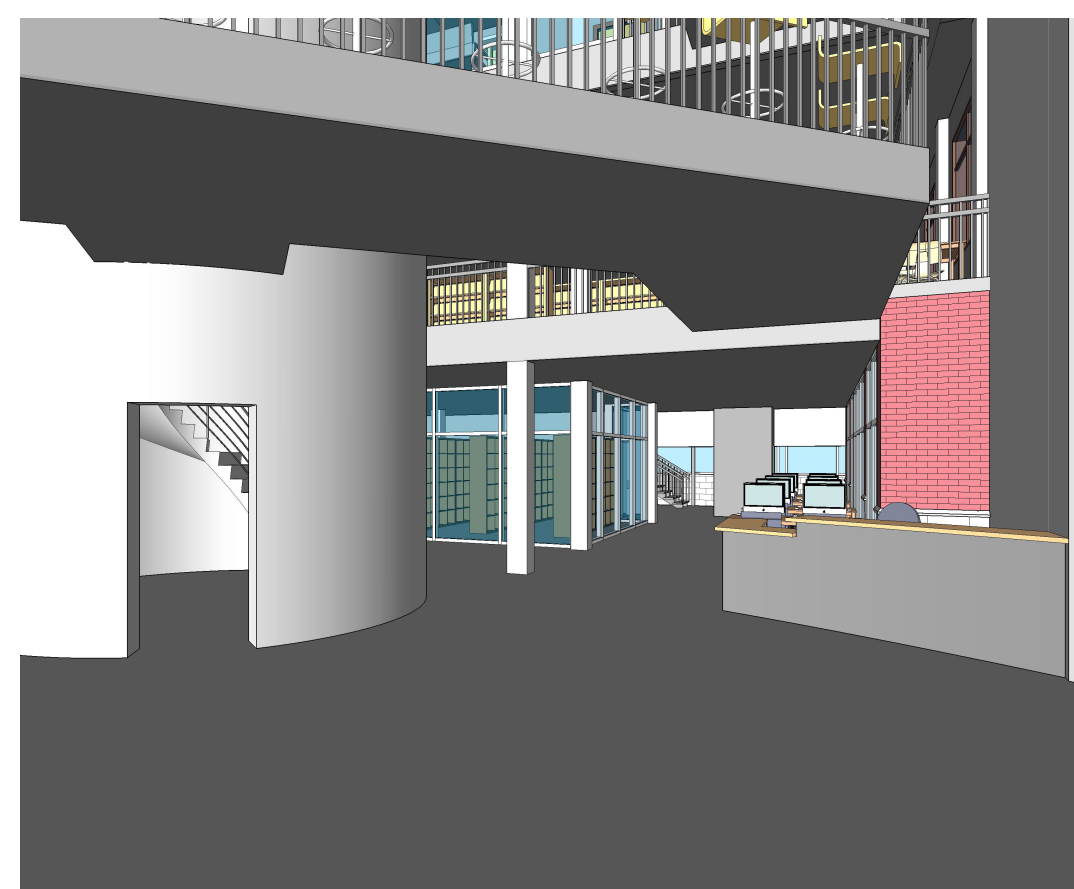
special collections | reading rooms



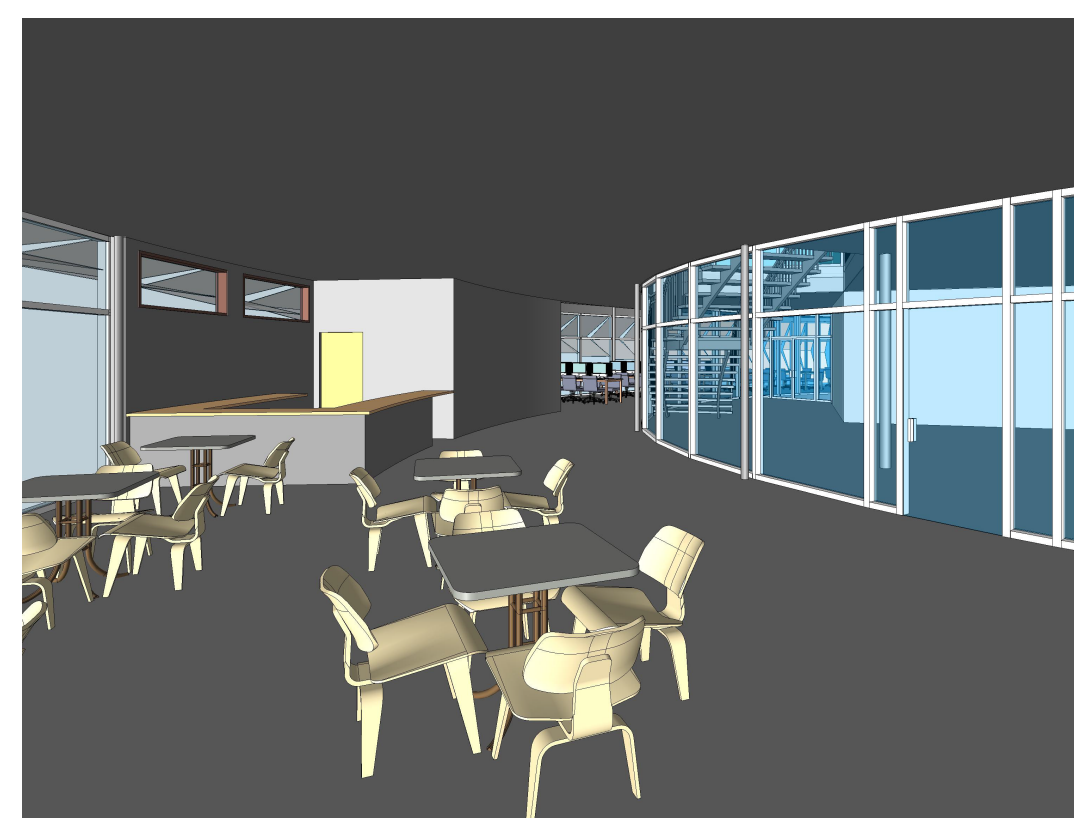
a



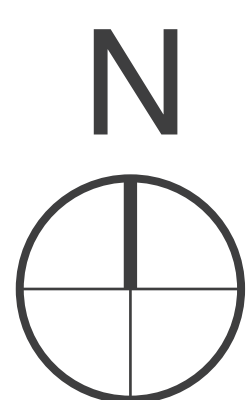
b



C



d



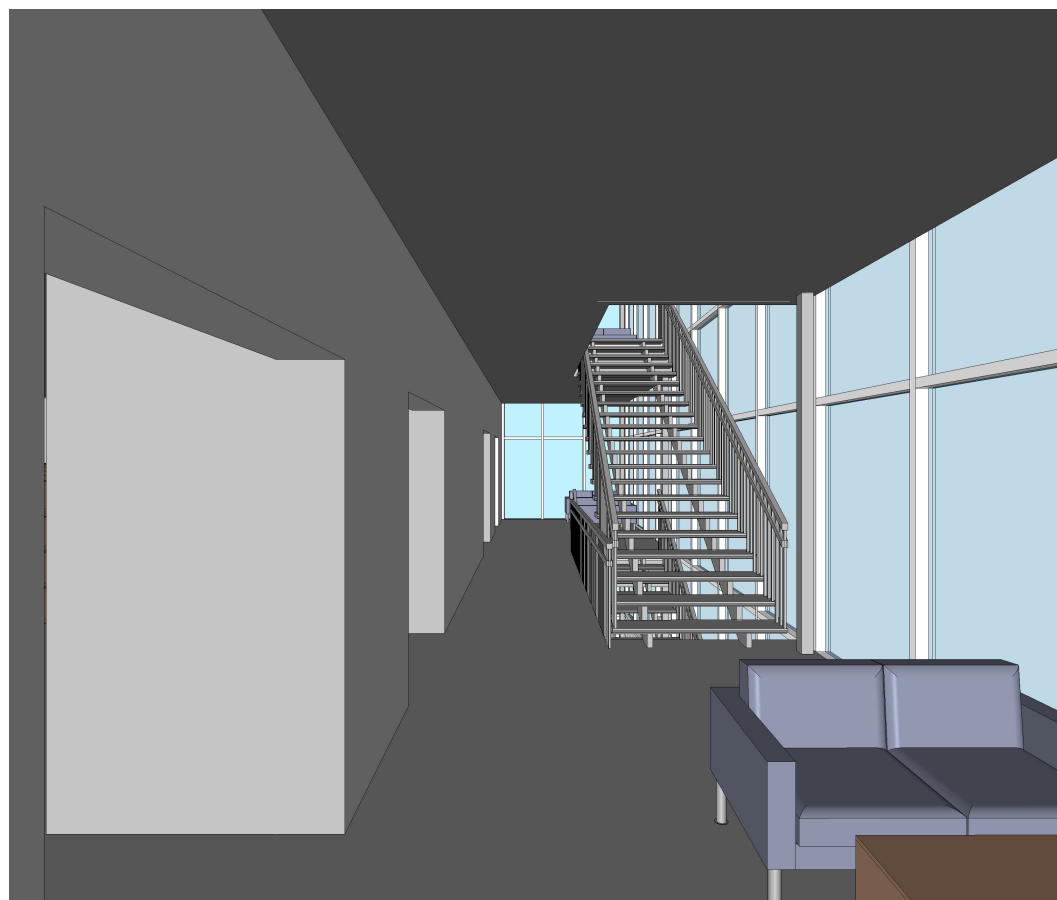
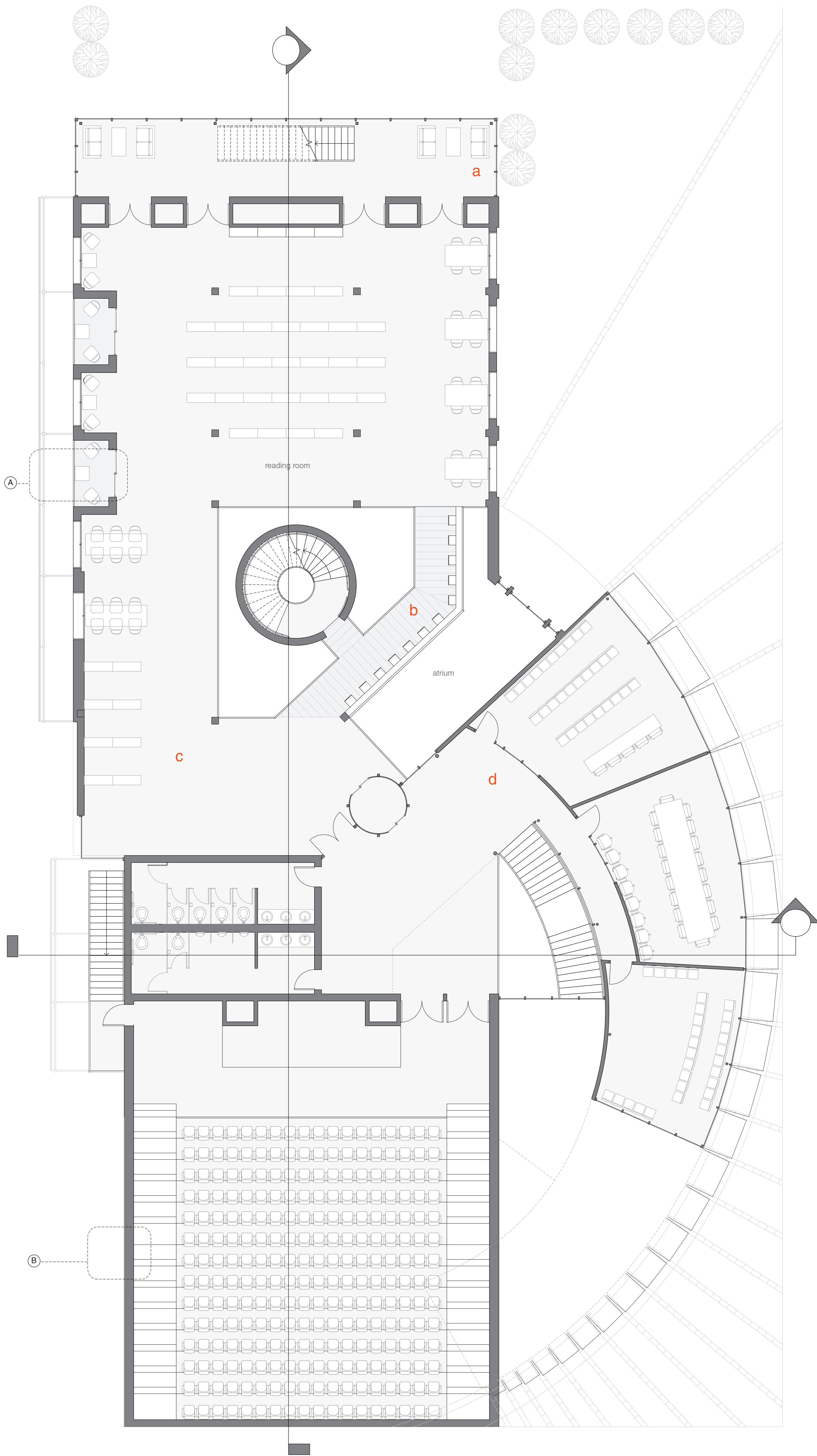
1/8" = 1'-0"

arch 405
integrated studio

justin garrison
carolyn glenn

second floor

auditorium | reading room



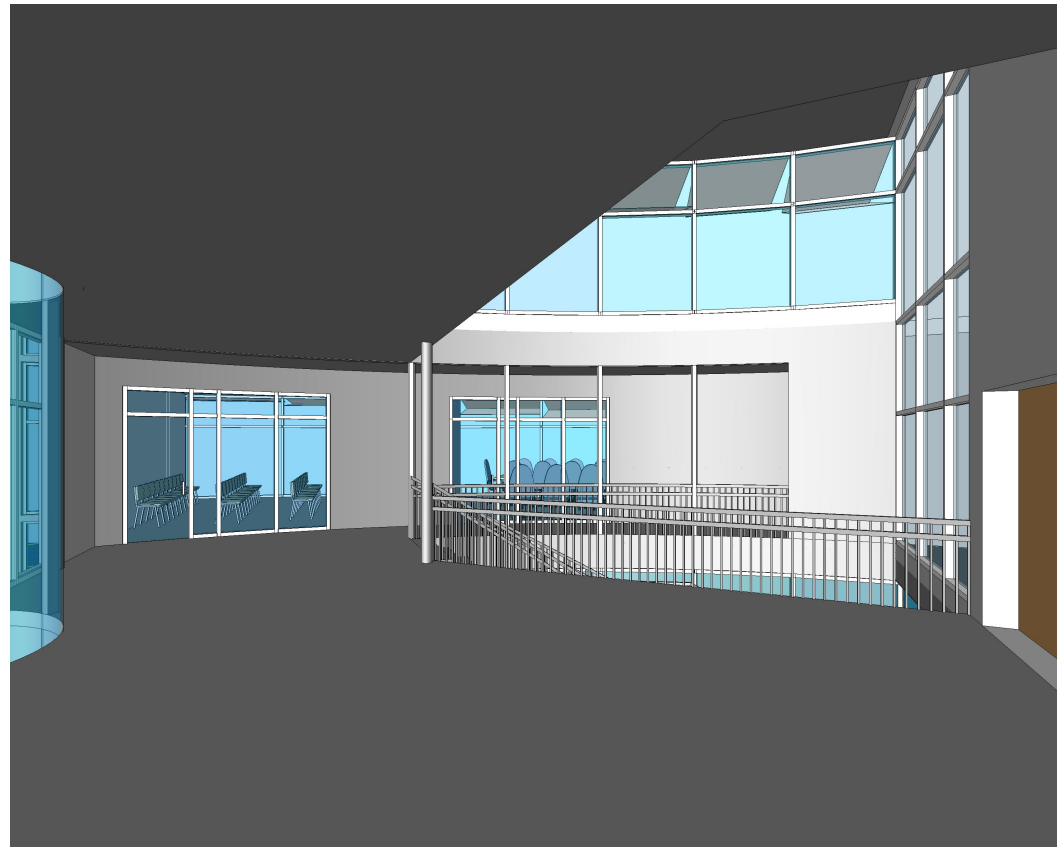
a



b



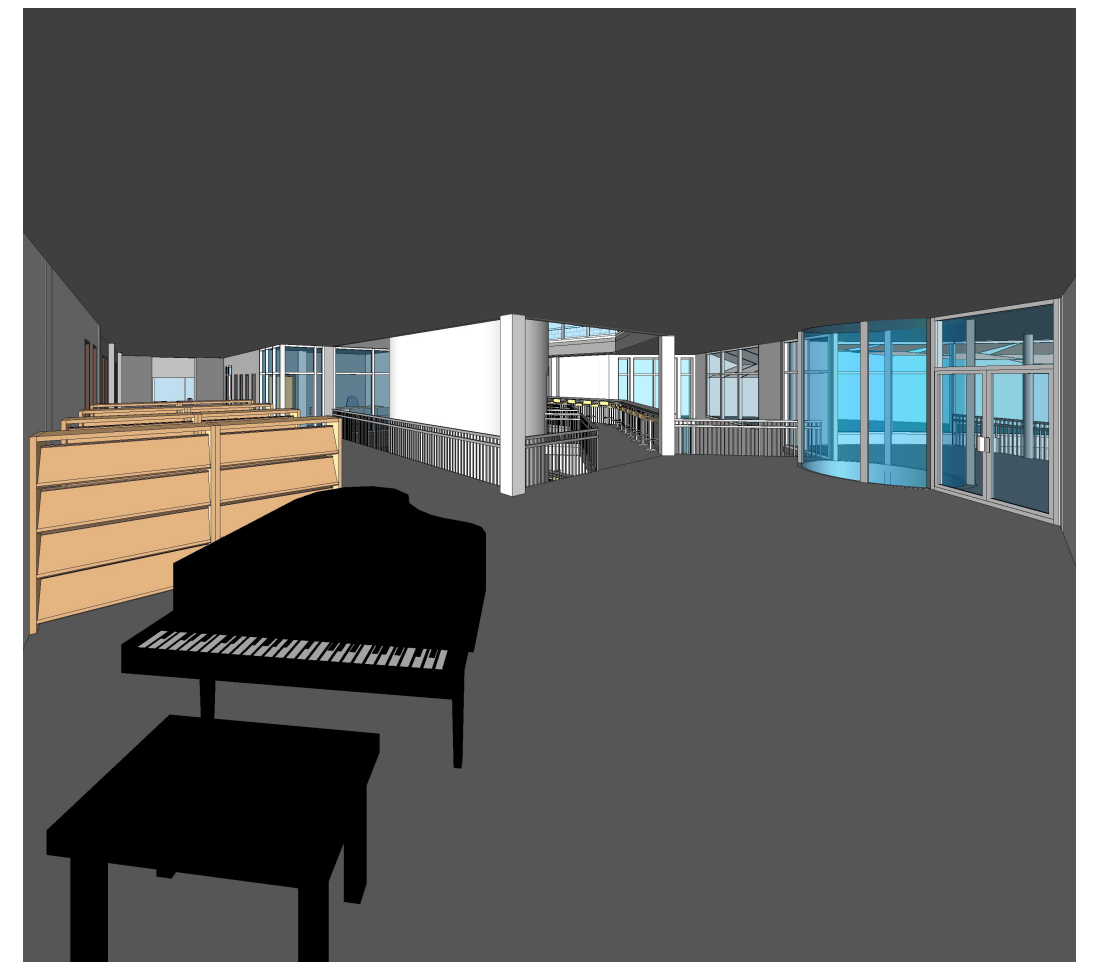
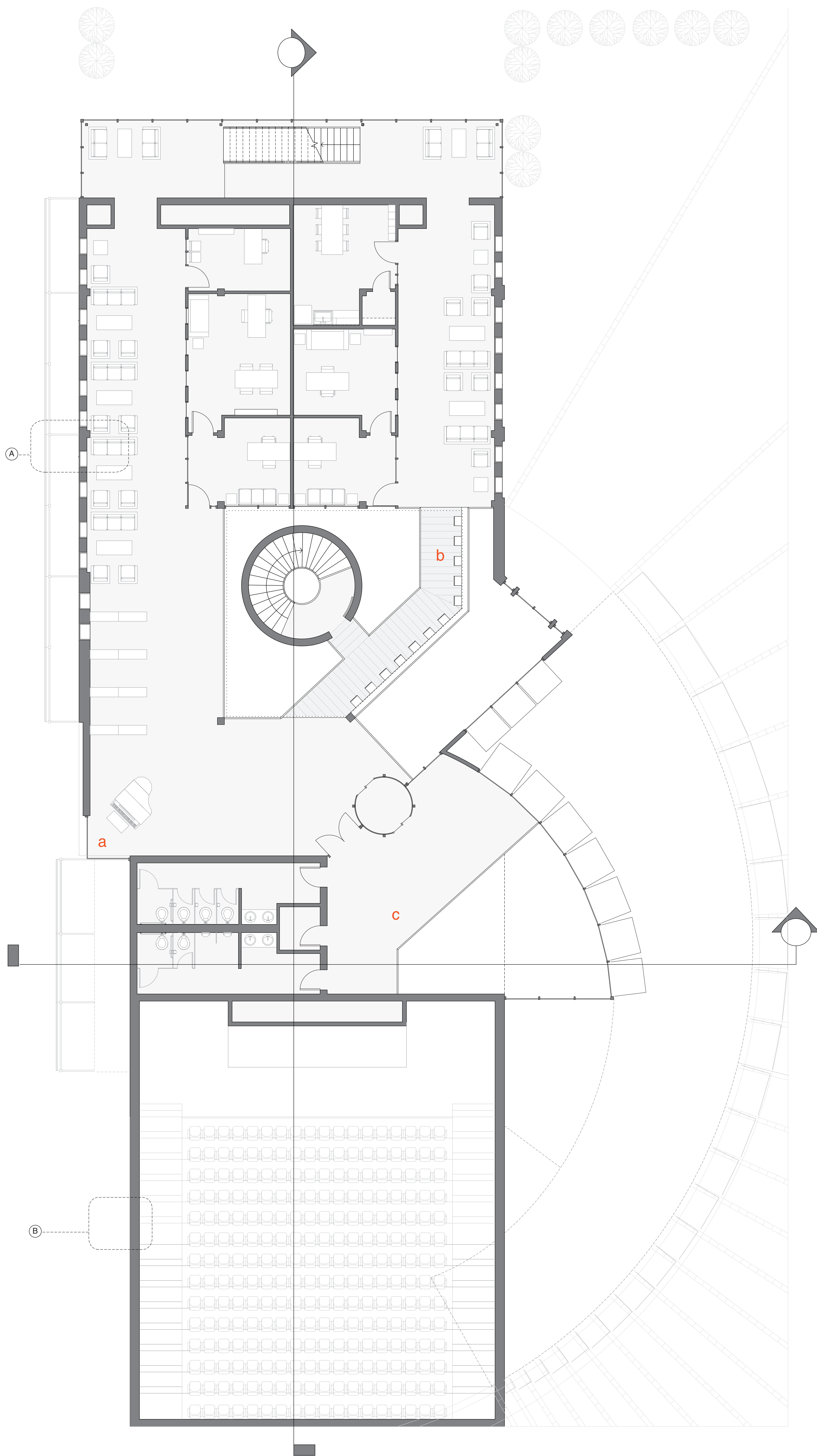
c



d

third floor

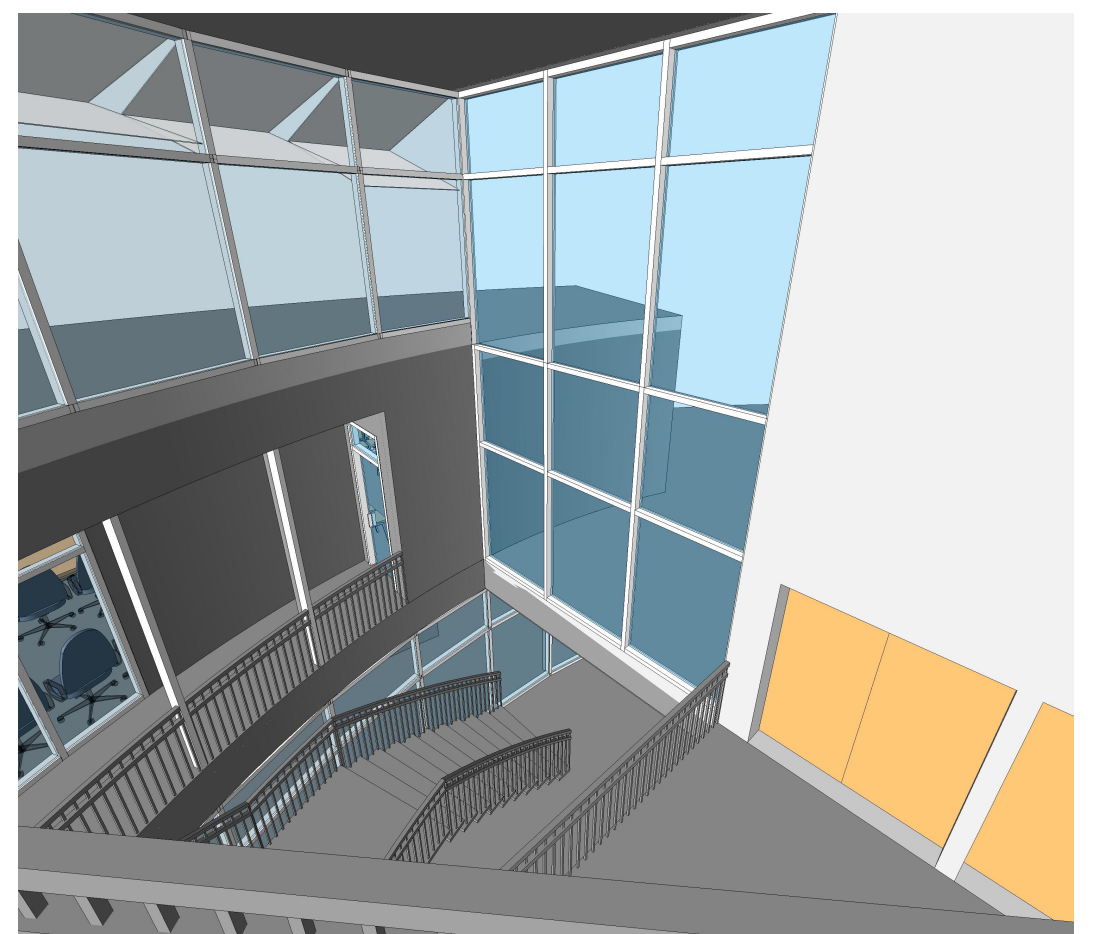
reading rooms | offices



a



b

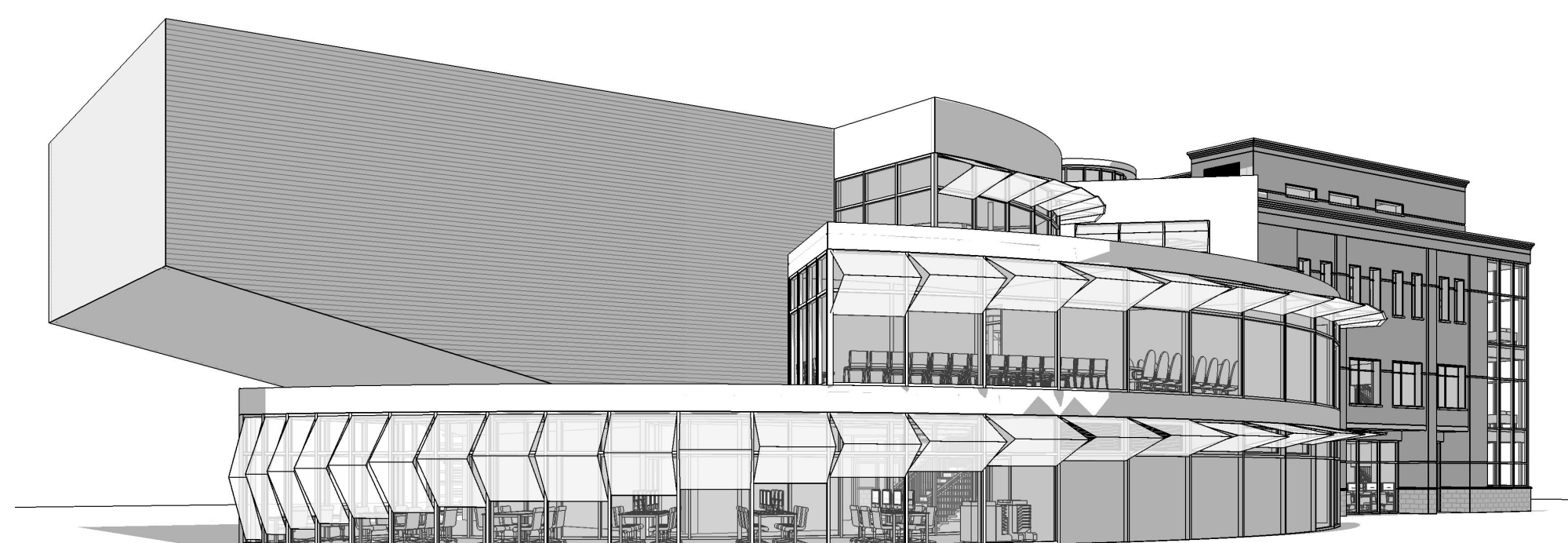
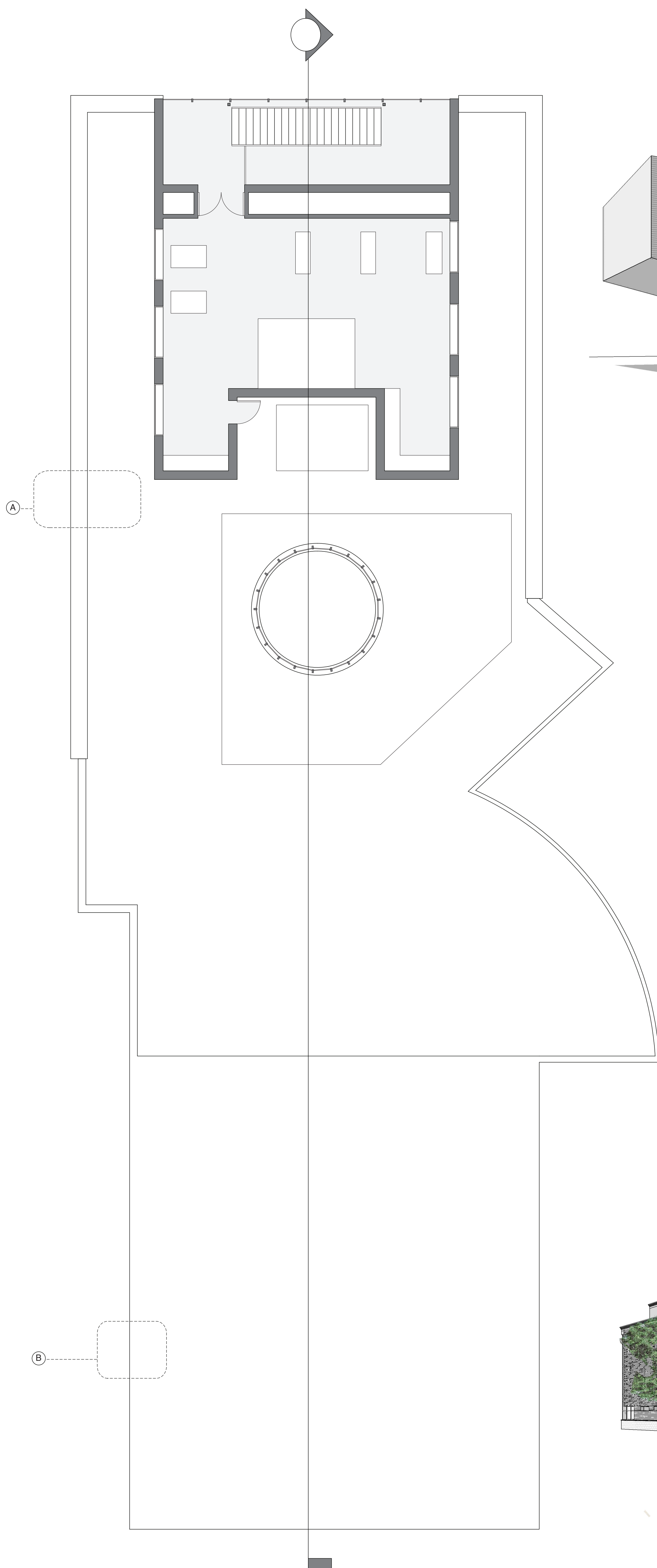


c

d

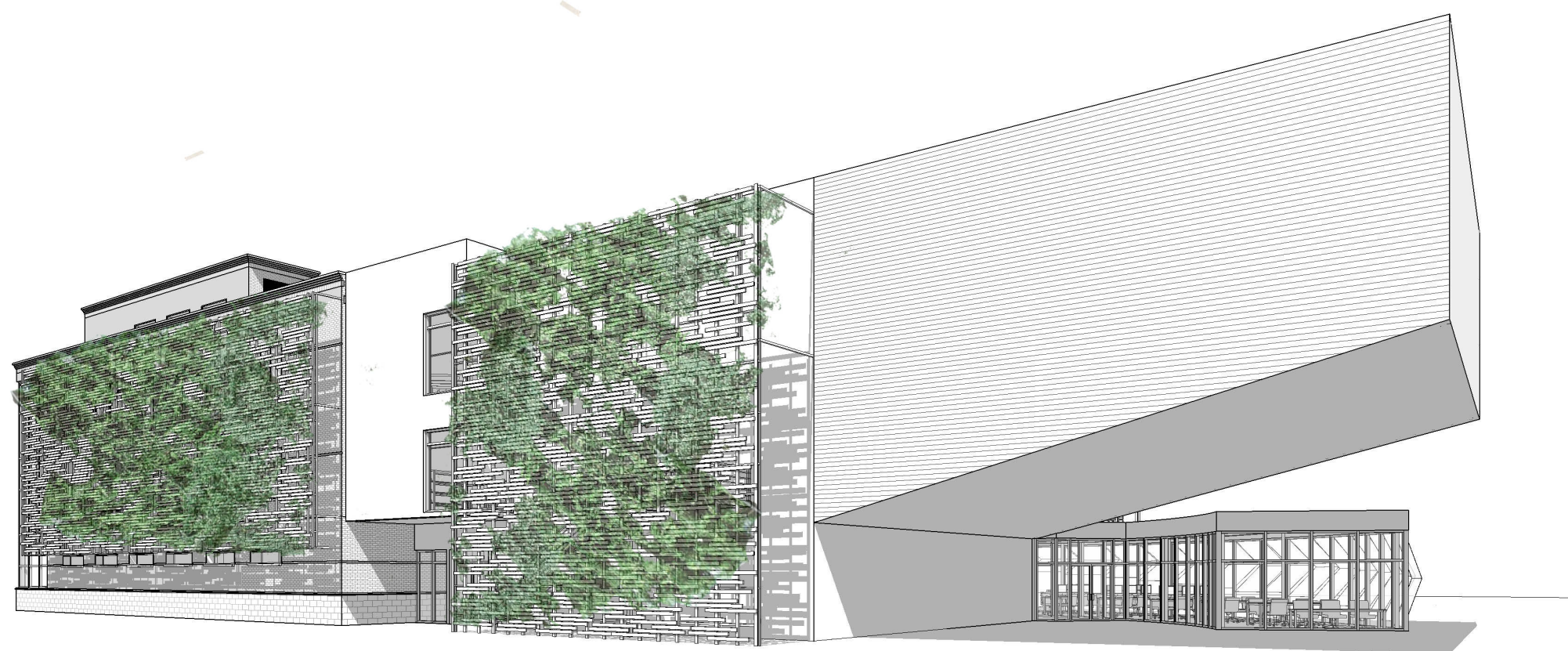
fourth floor

mechanical room



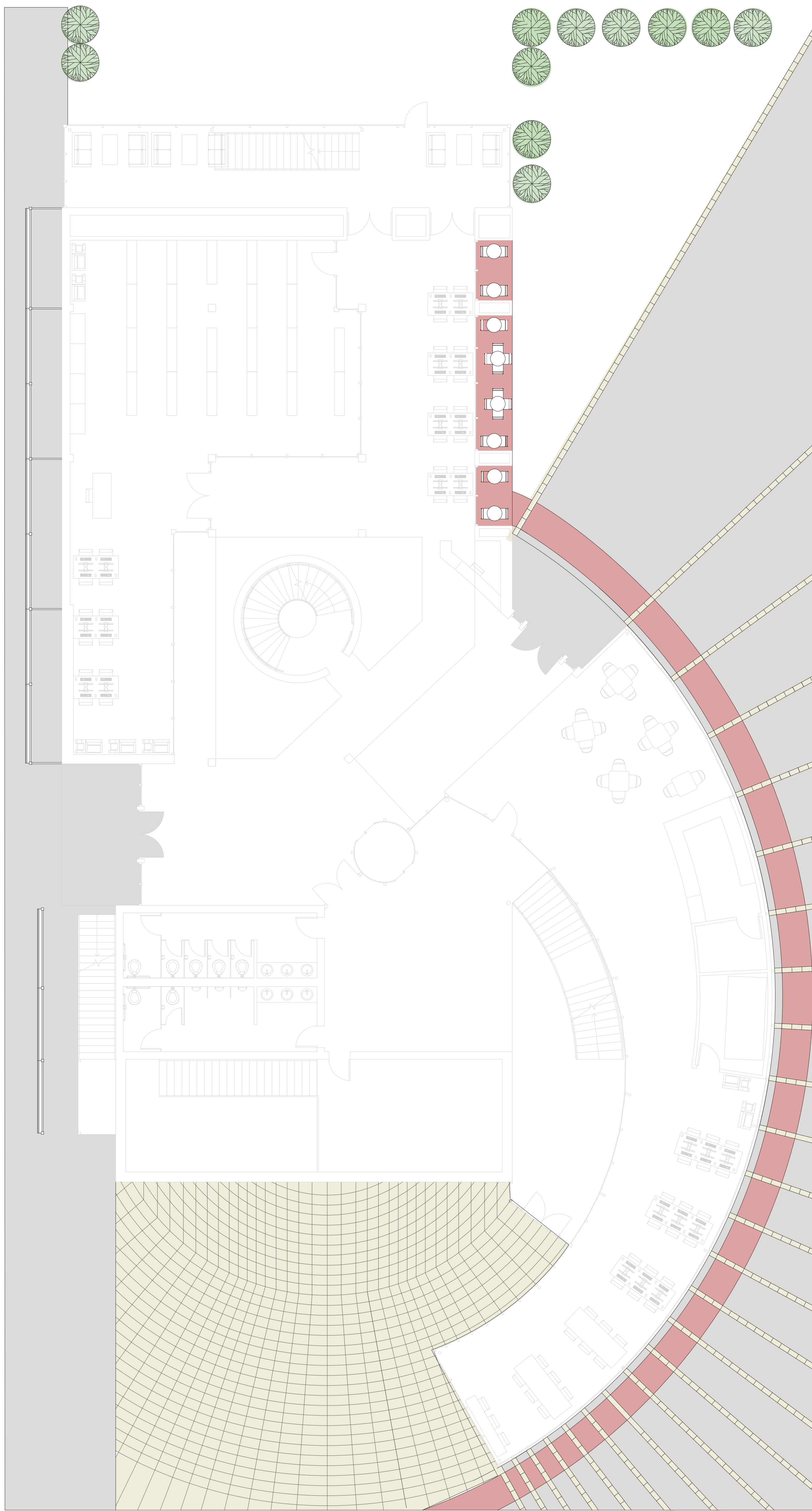
climatic strategies

1. window overhangs and/or operable sunshades that extend in summer and retract in winter
2. natural ventilation and shaded windows
3. use plant materials to shade the structure
4. minimize west facing glazing
5. high efficiency appliances
6. light colored building materials and green roof



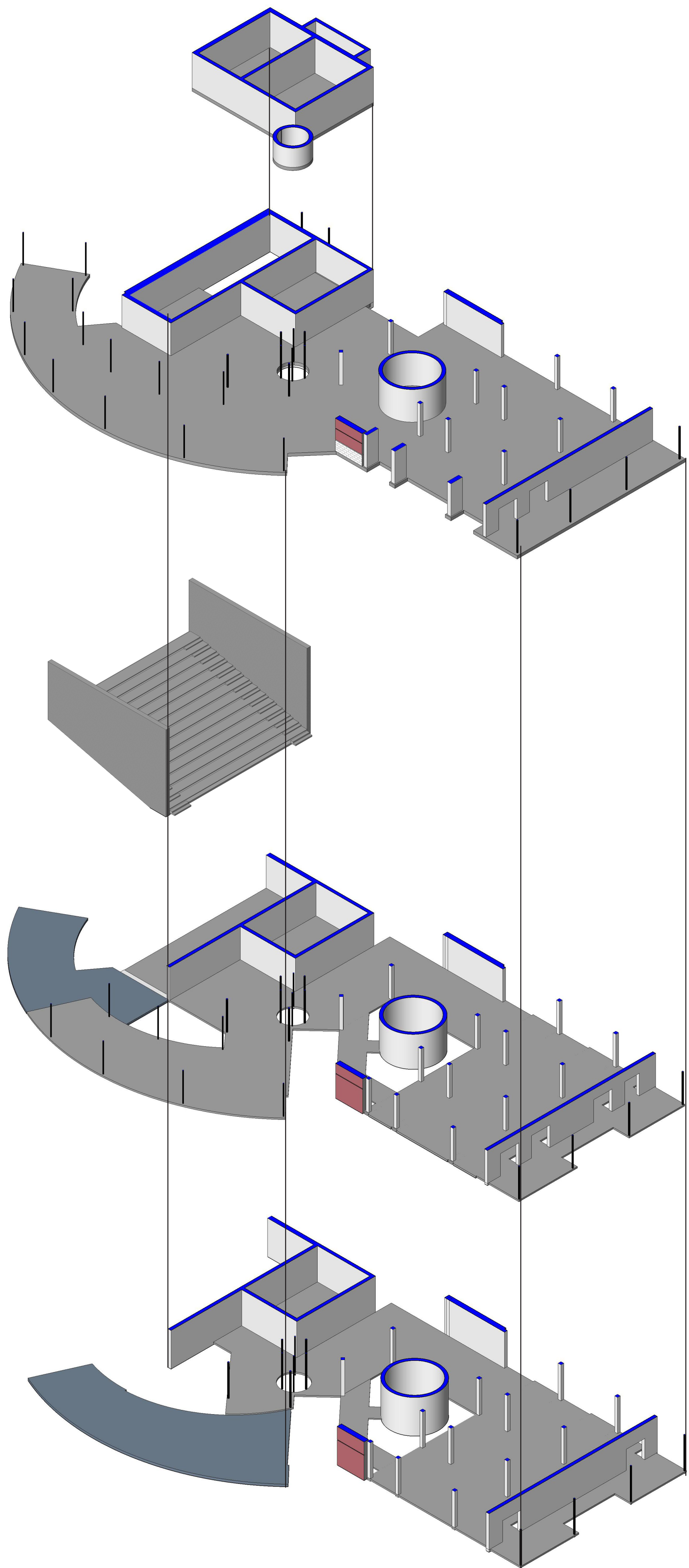
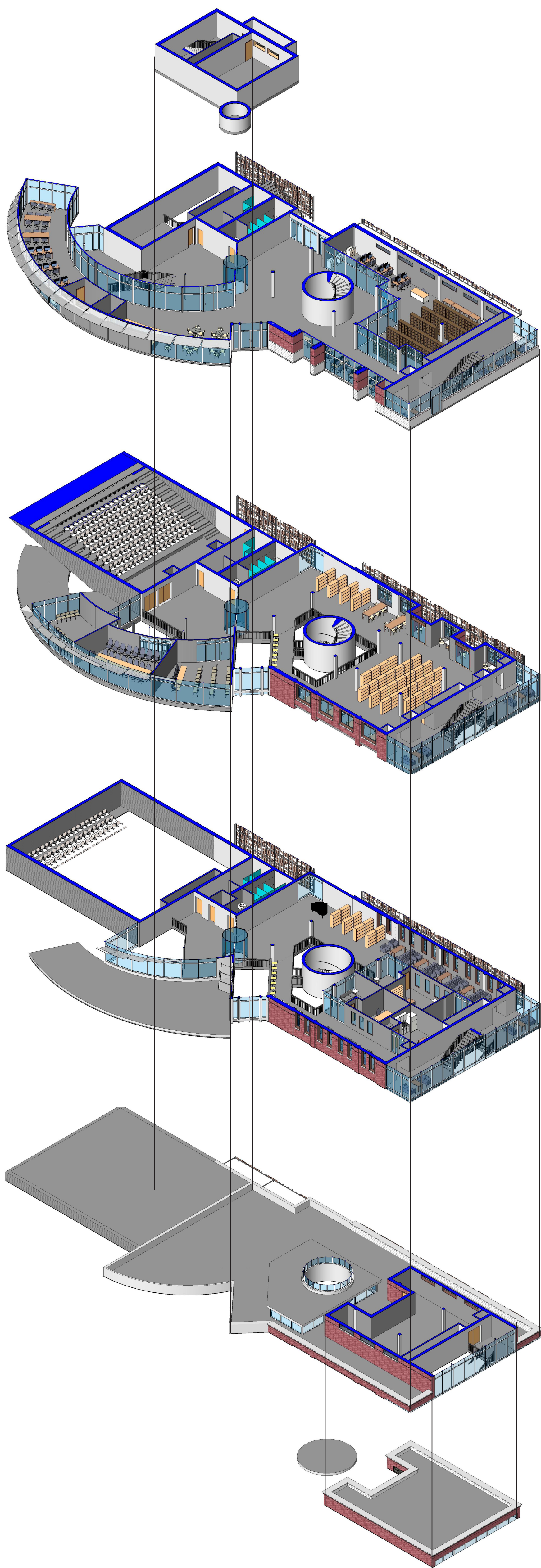
urban plaza

outdoor multi-use spaces



axonometric

structural | architectural



perspectives

interior/exterior views

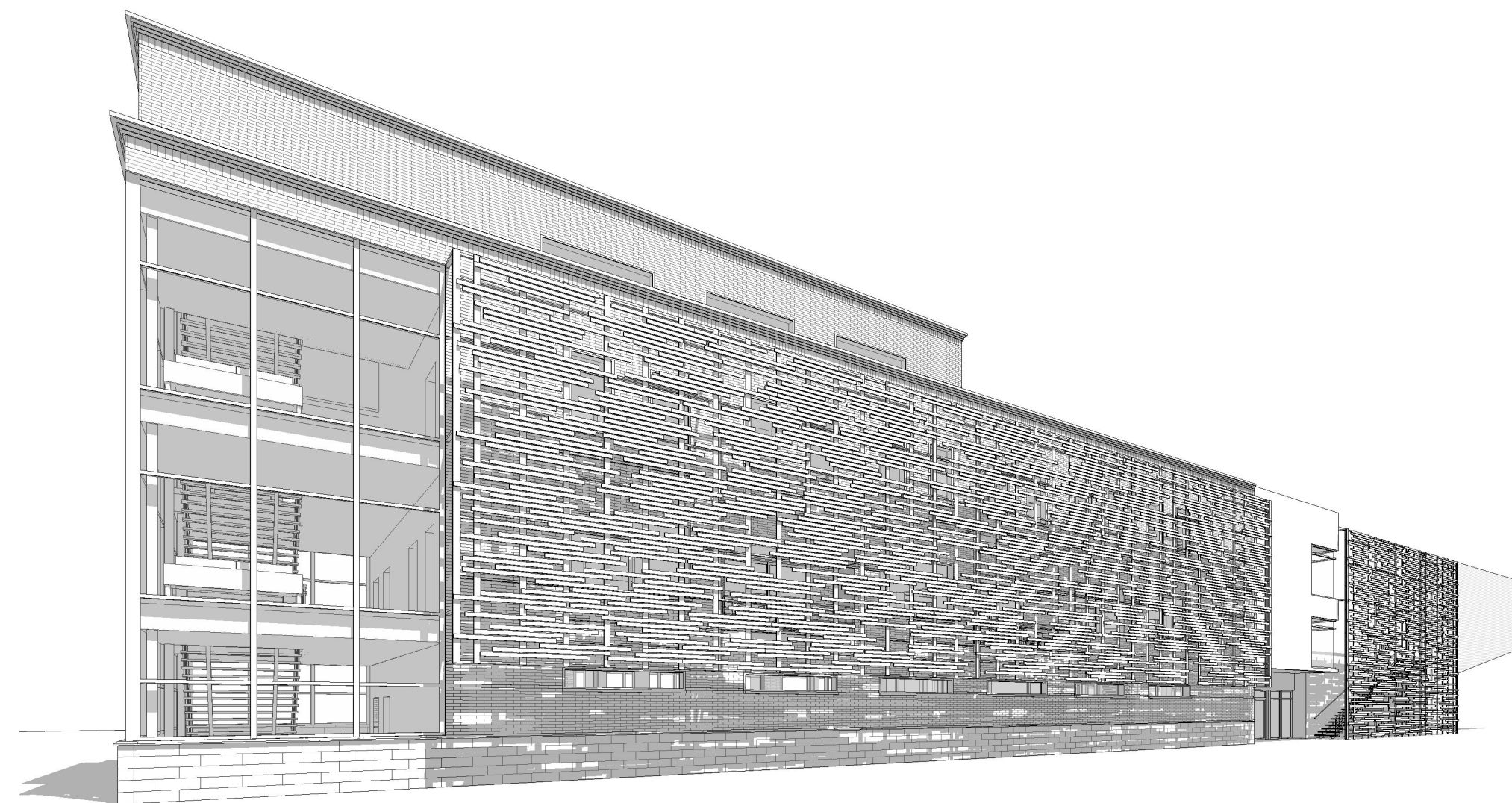


interior view of main entrance

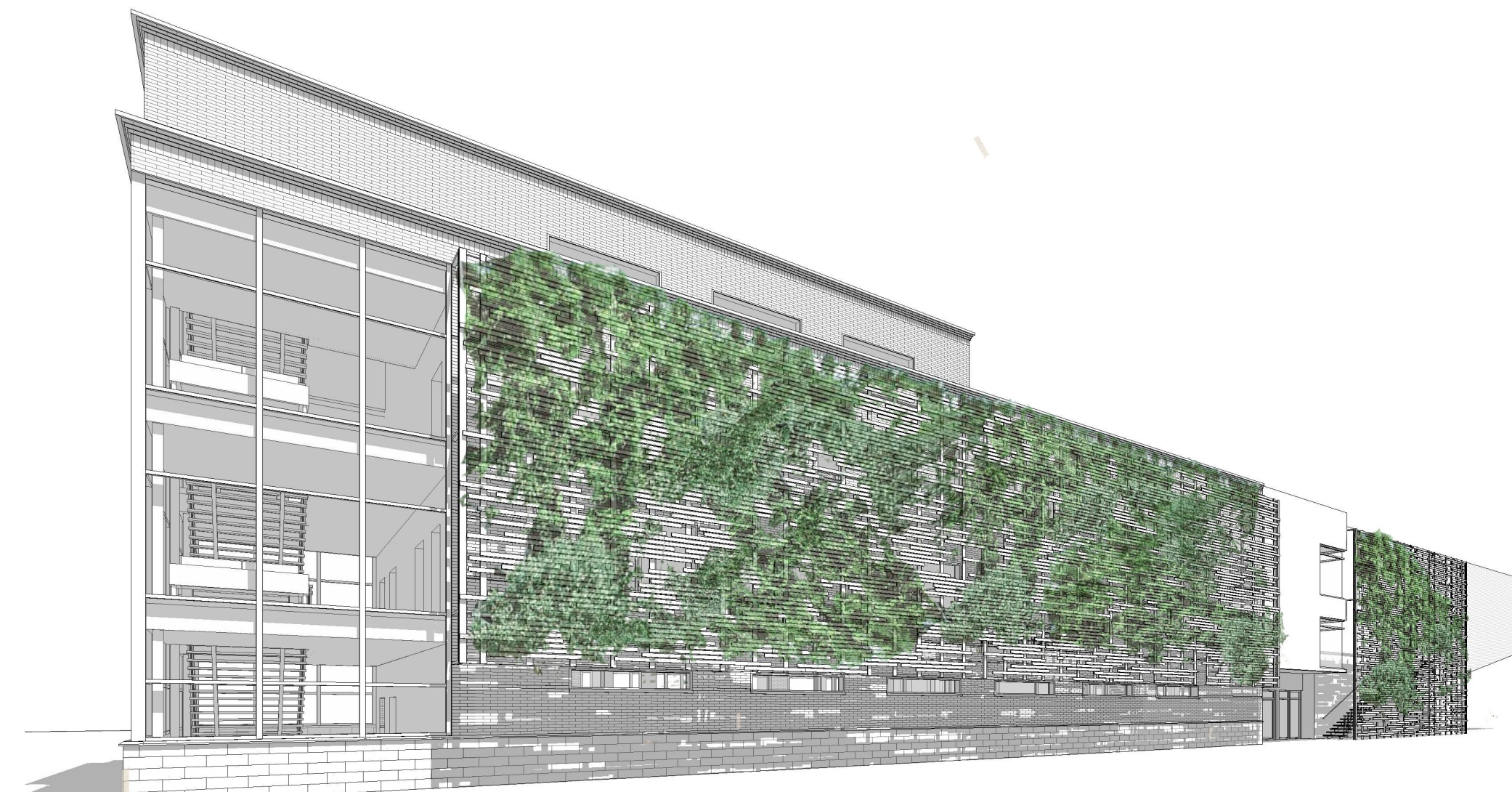


exterior view of main entrance

longitudinal section



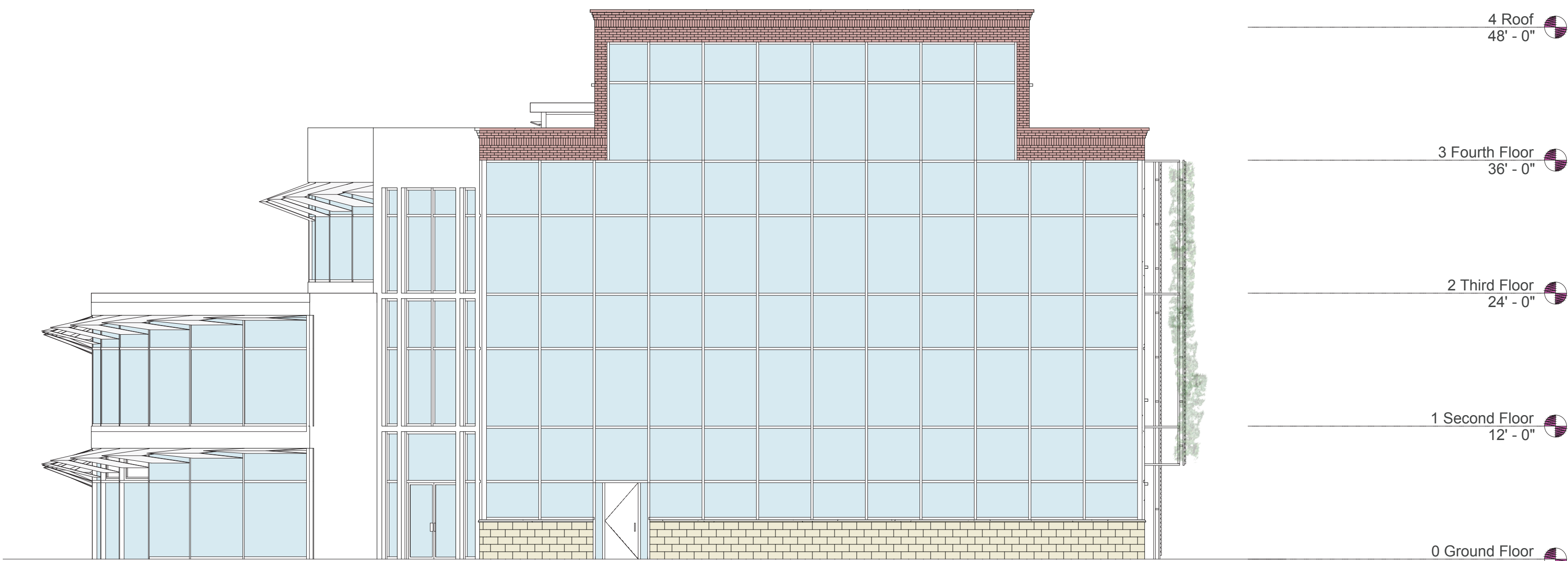
west wall vertical garden trellis before vegetation growth | still provides shading



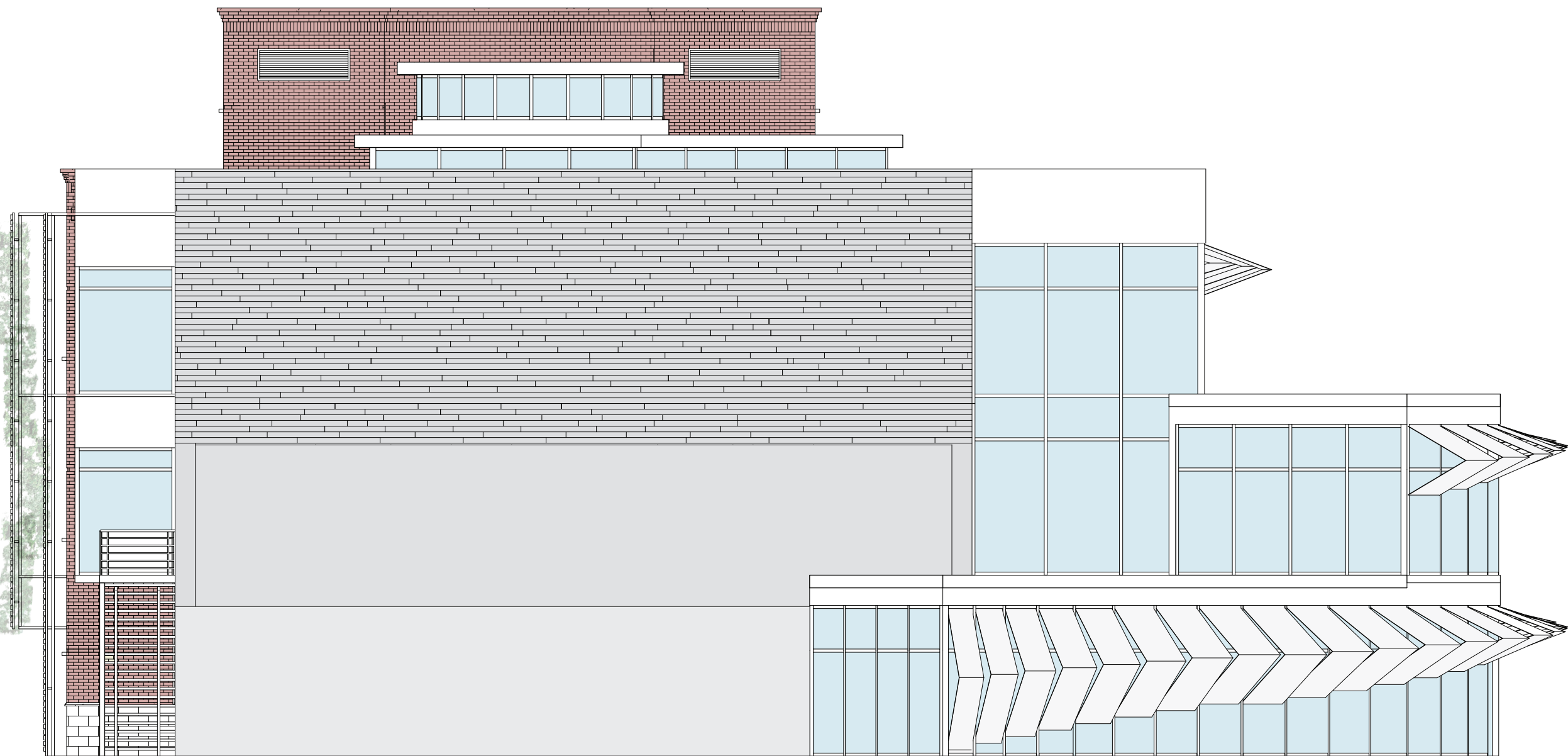
west wall vertical garden trellis with vegetation growth



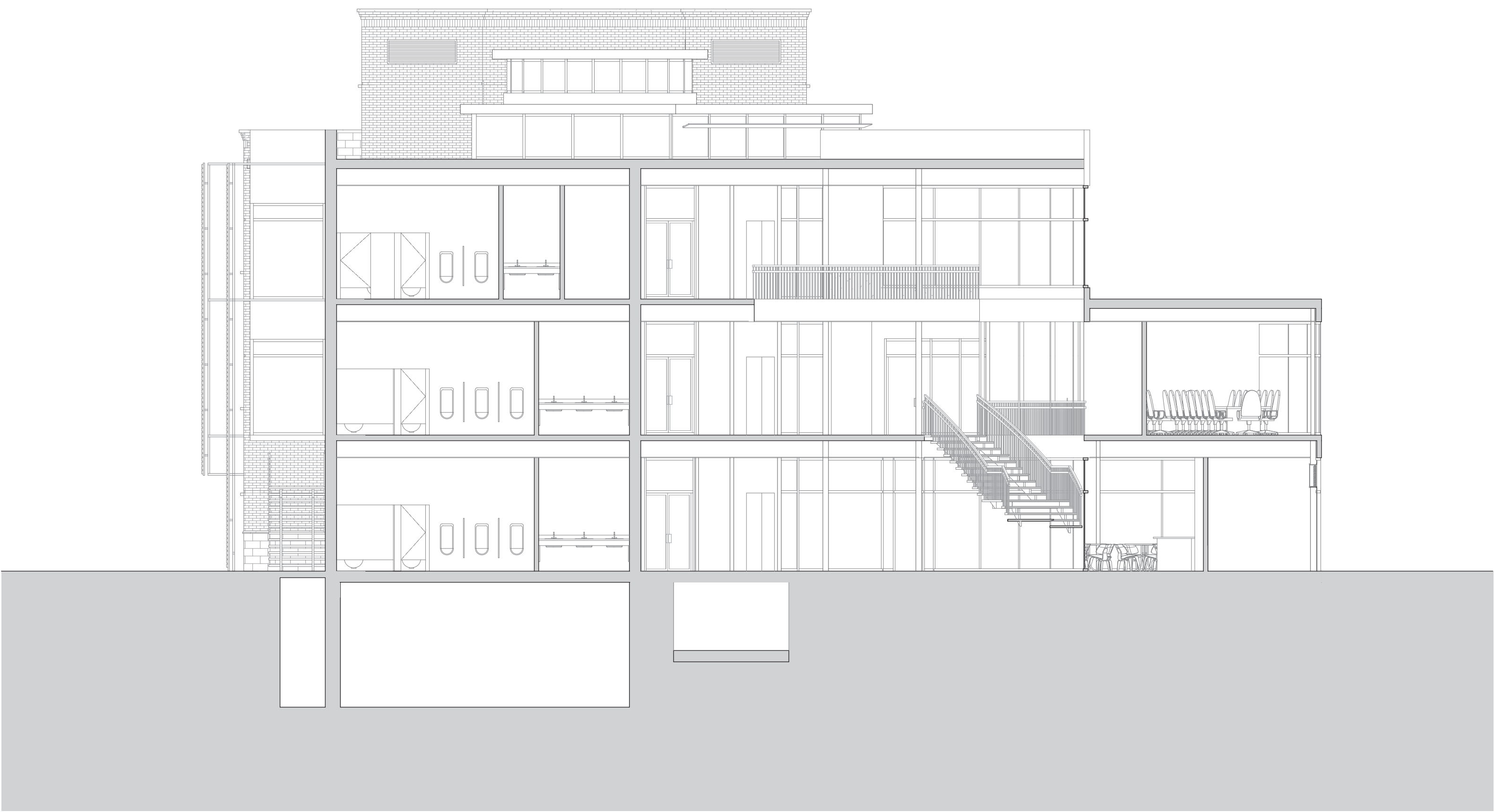
section elevation



north elevation



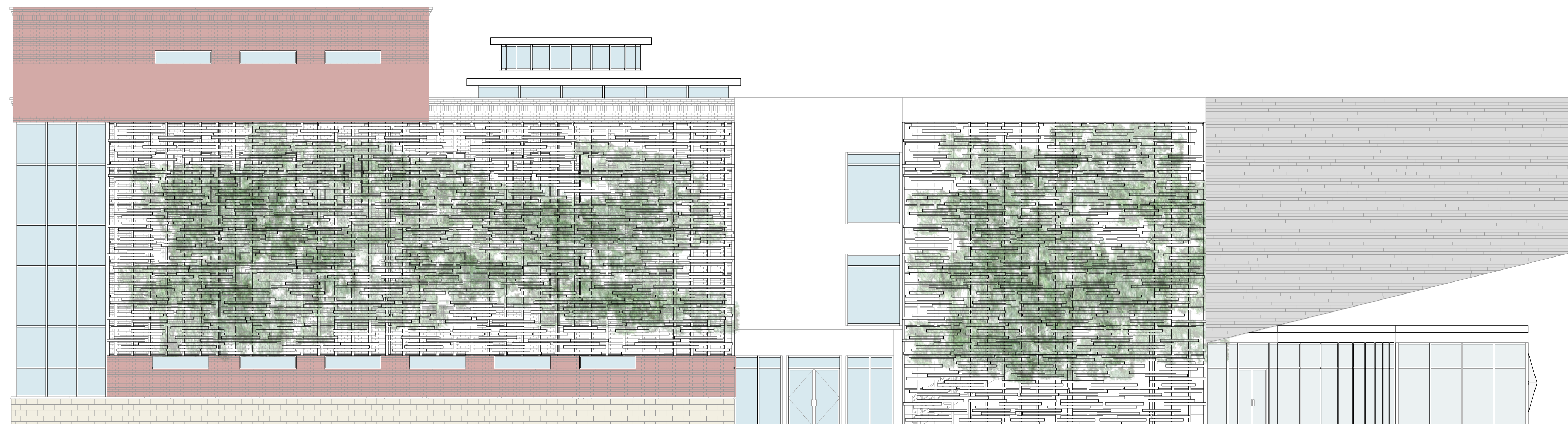
south elevation



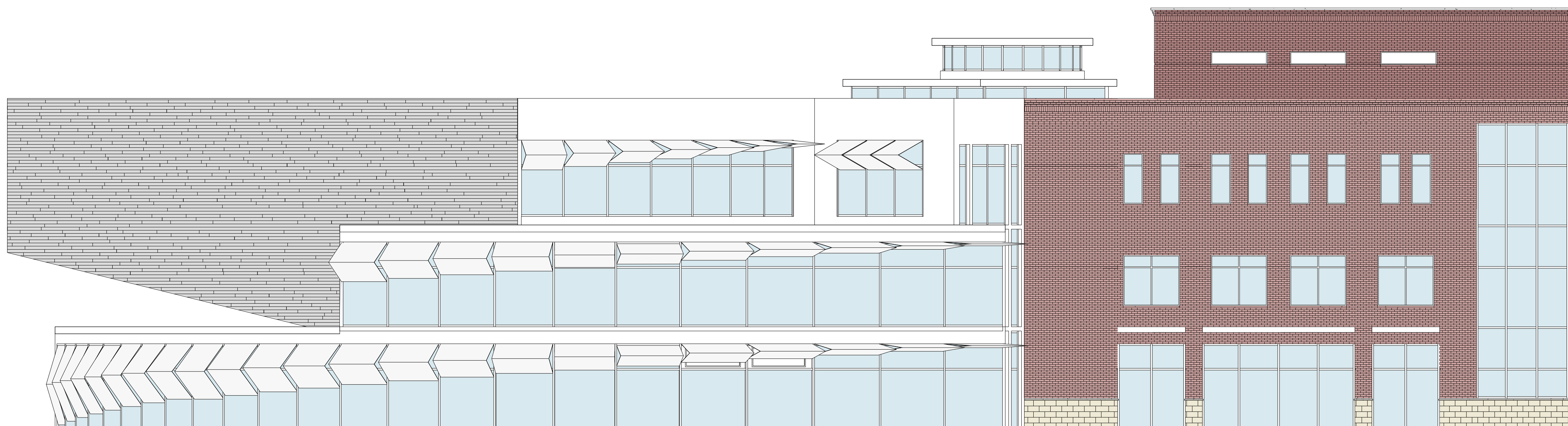
transverse section

elevations

east and west



west elevation

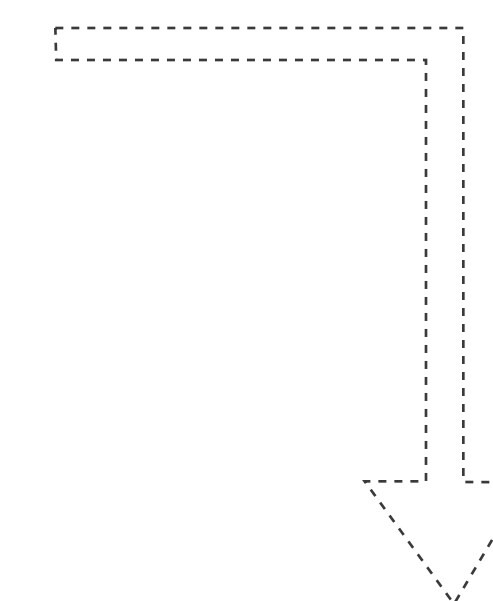


east elevation



vertical garden system
before vegetation

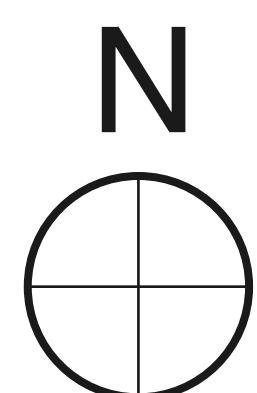
still provides shade when
vines are starting to grow



vertical garden system
after full growth

shades west facade
from sun

provides enjoyable
greenspace
for pedestrians



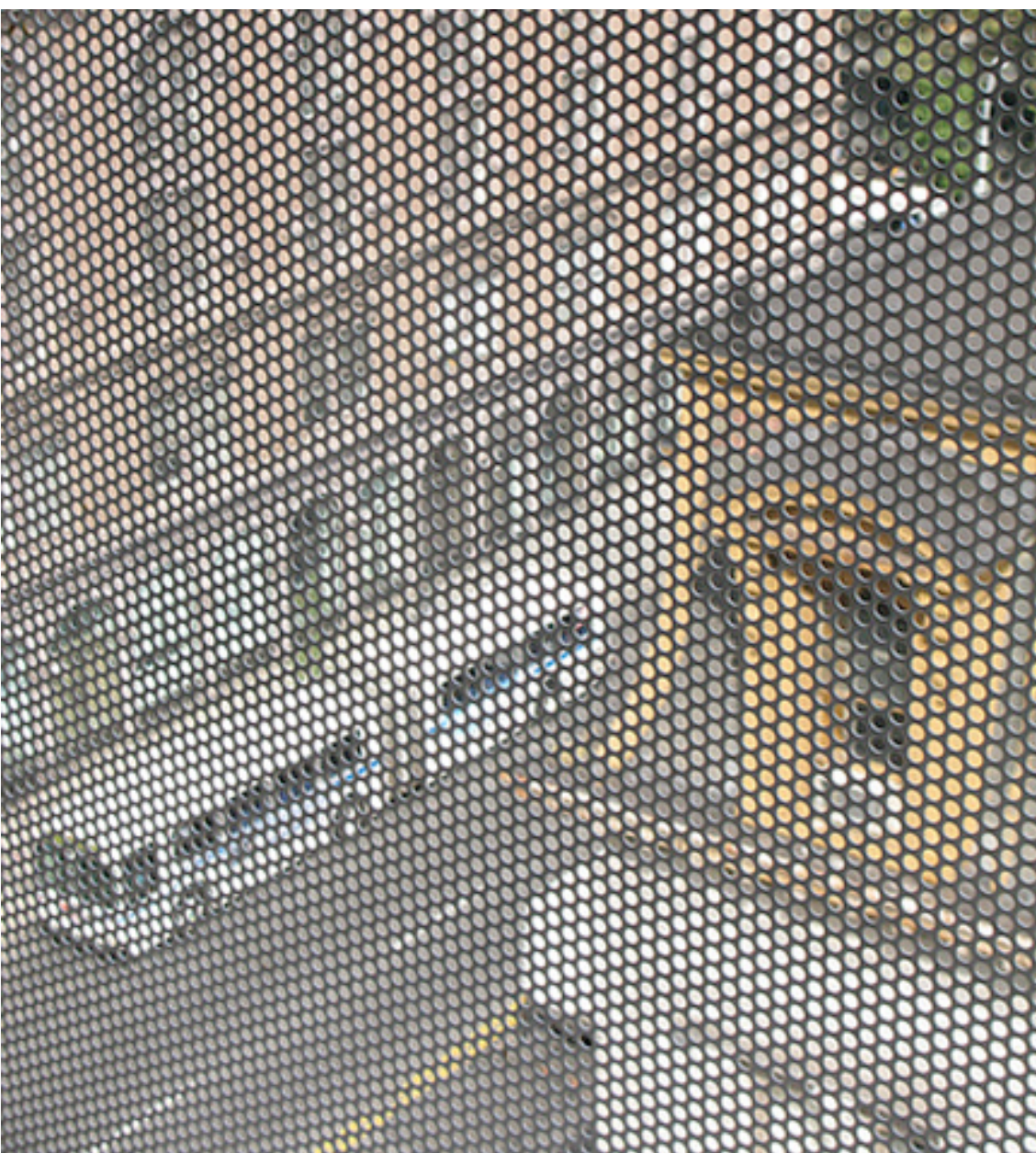
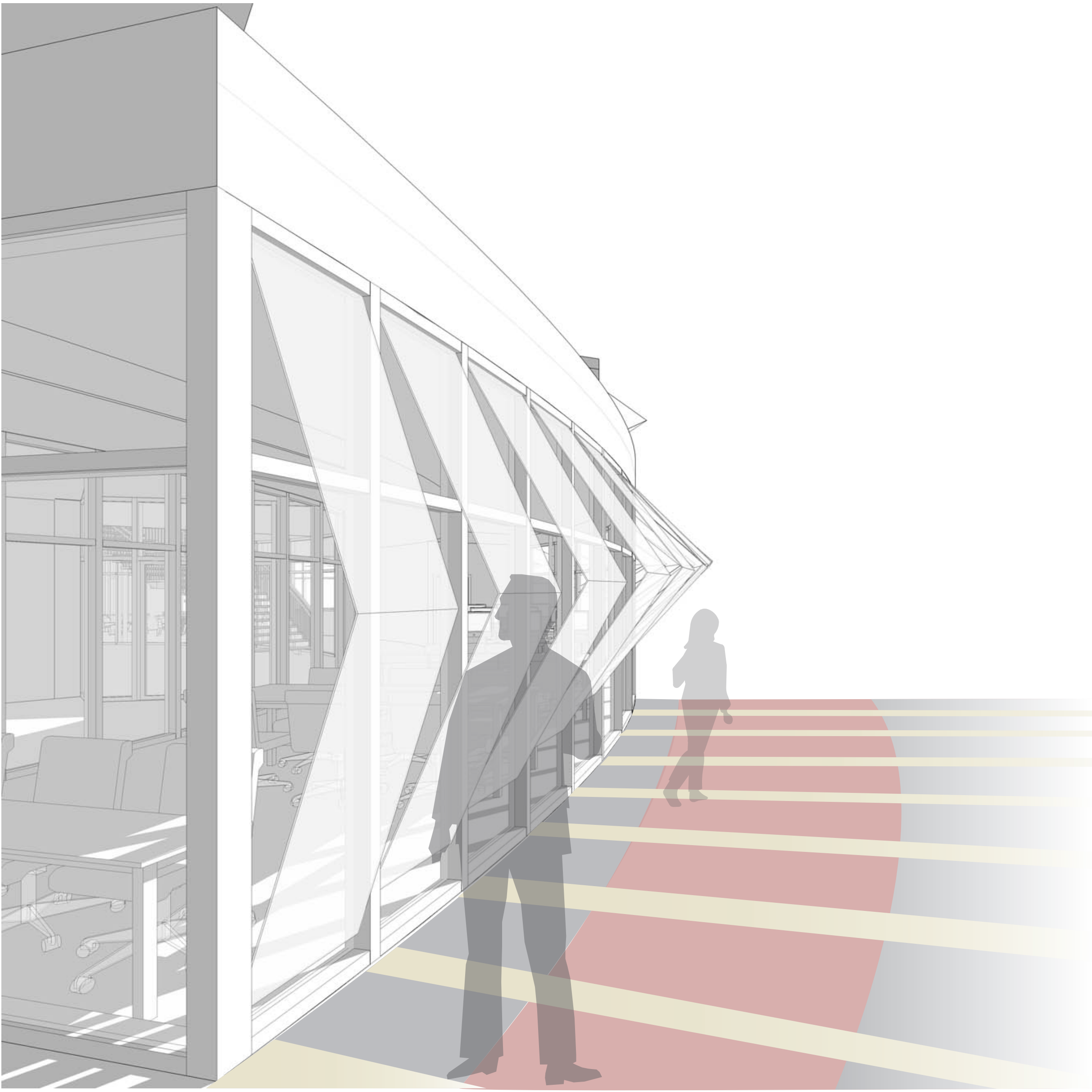
1/8" = 1'-0"

arch 405
integrated studio

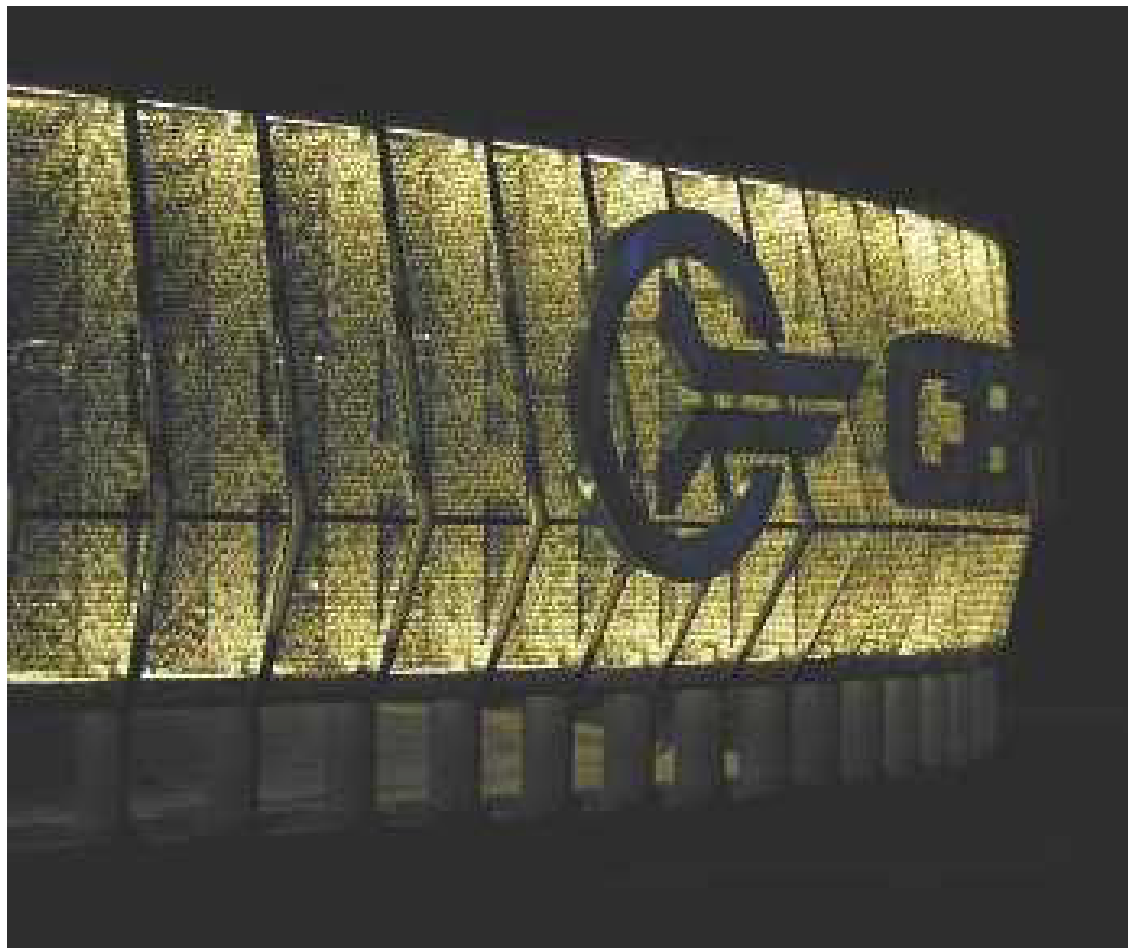
justin garrison
carolyn glenn

sunshading

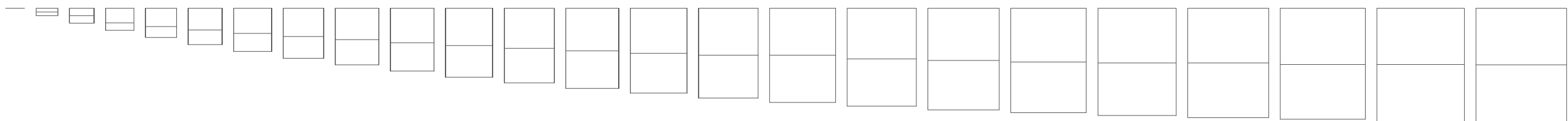
motor driven devices



perforated metal screen from Zahner
blocks daylight while allowing views to the outside



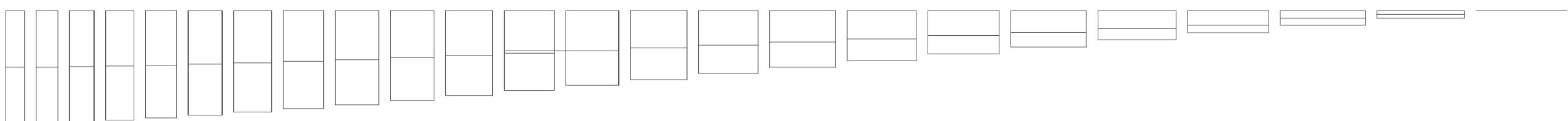
perforated metal screen viewed with lighting at night



SE end

NE end

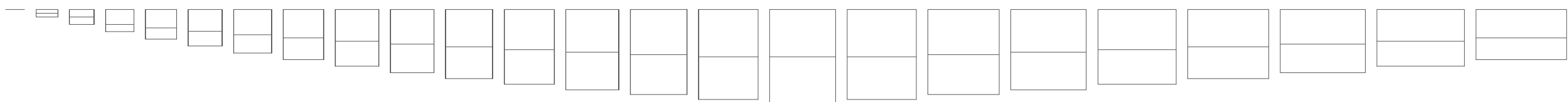
mornings to sunny afternoons



SE end

NE end

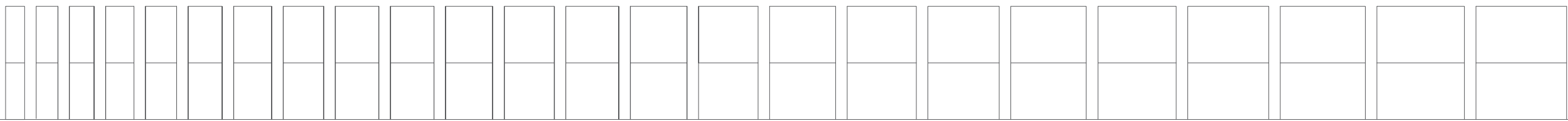
afternoons to dusk



SE end

NE end

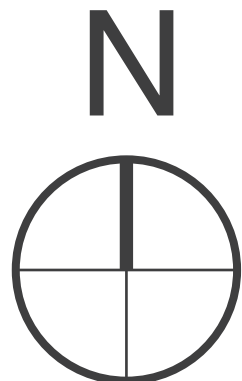
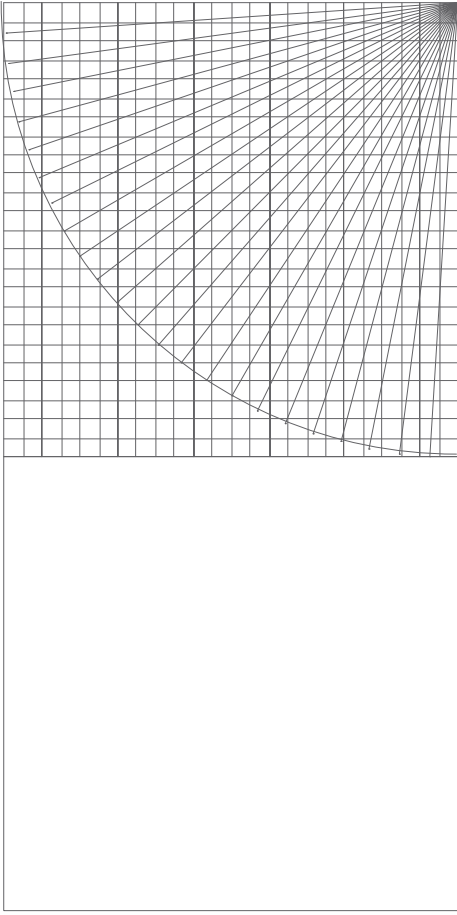
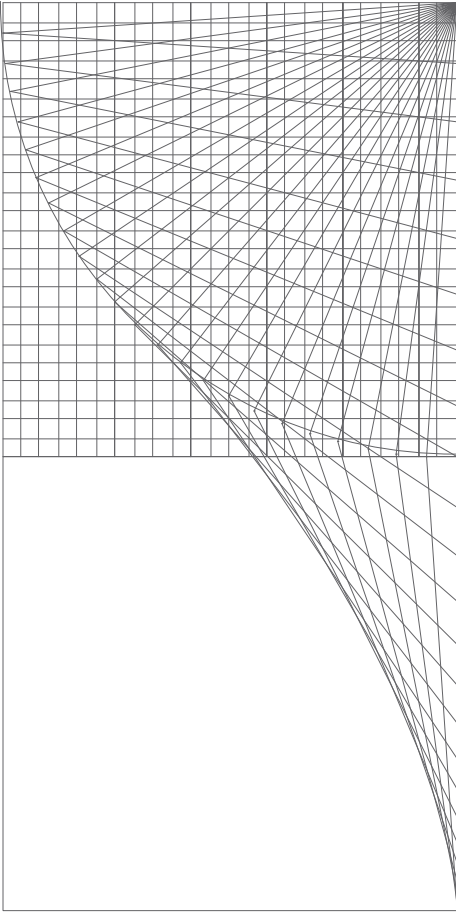
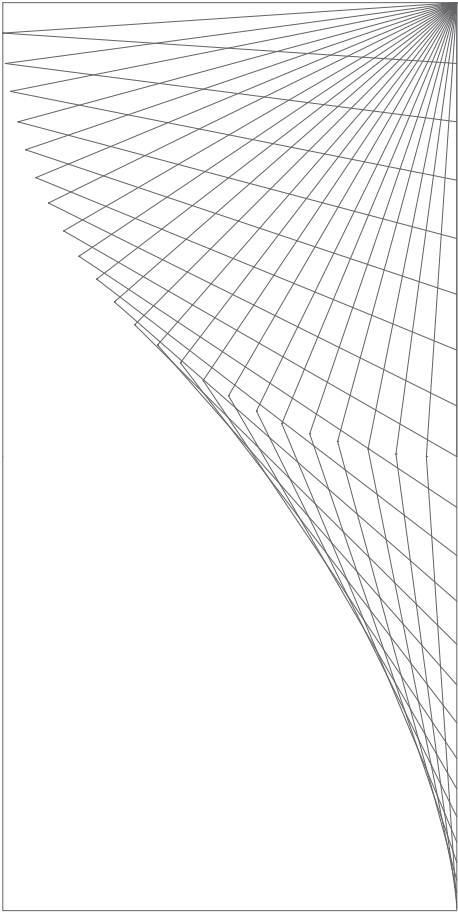
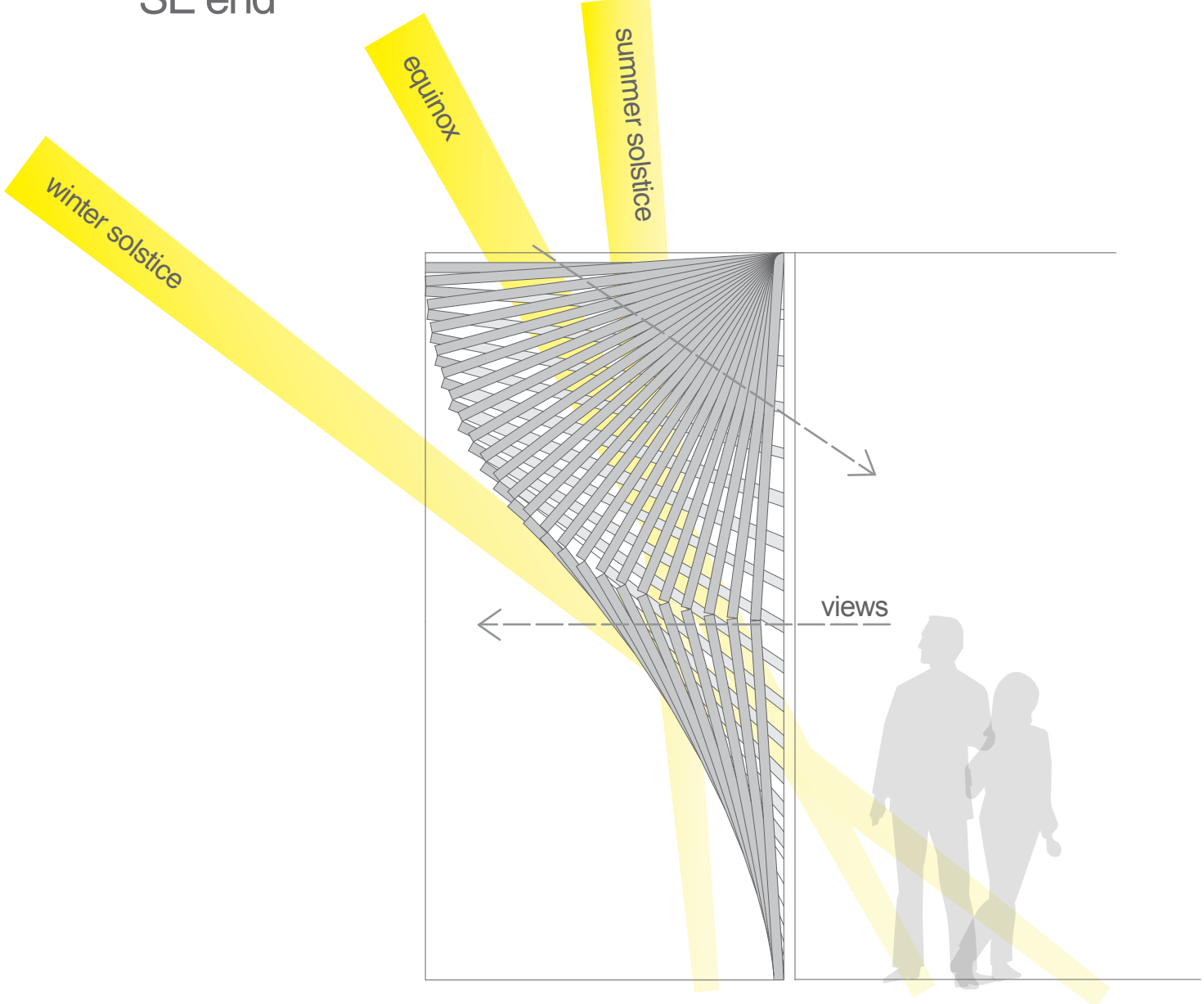
various patterns depending on
time of year



SE end

NE end

hot summer days
require much more shading



1/8" = 1'-0"

arch 405
integrated studio

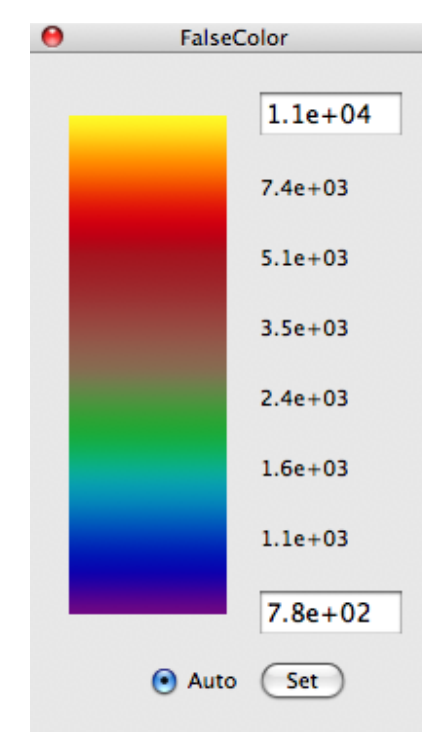
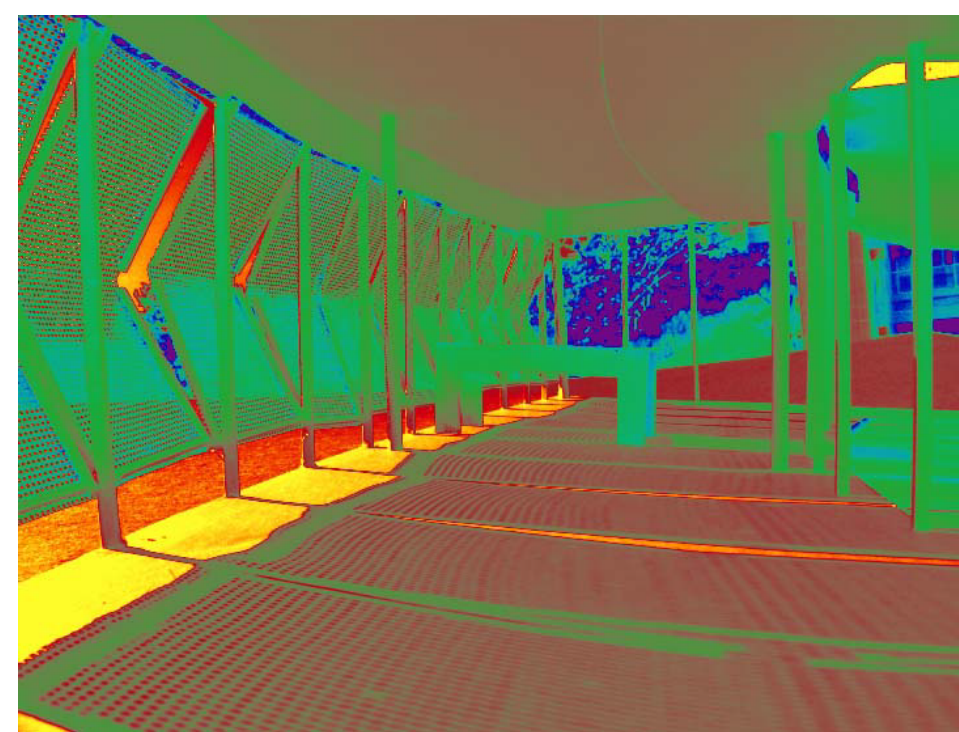
justin garrison
carolyn glenn

daylighting

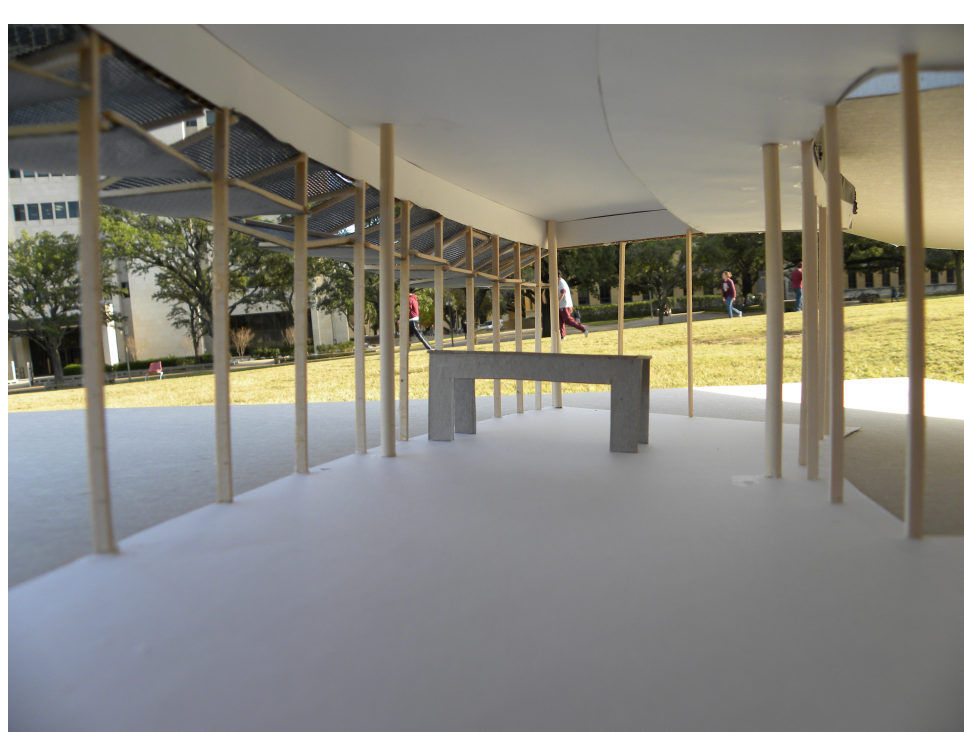
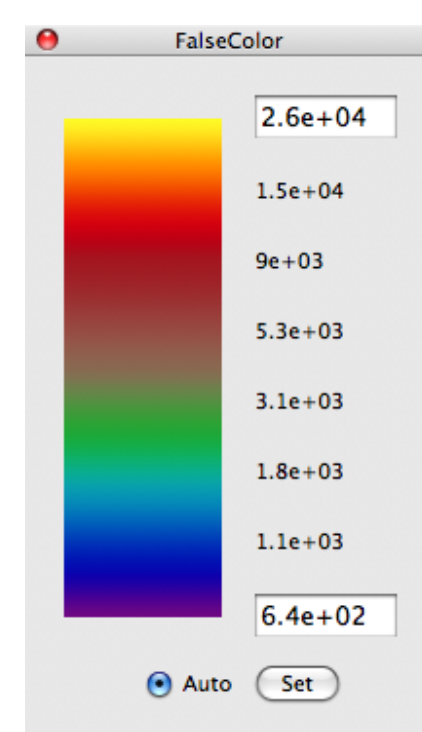
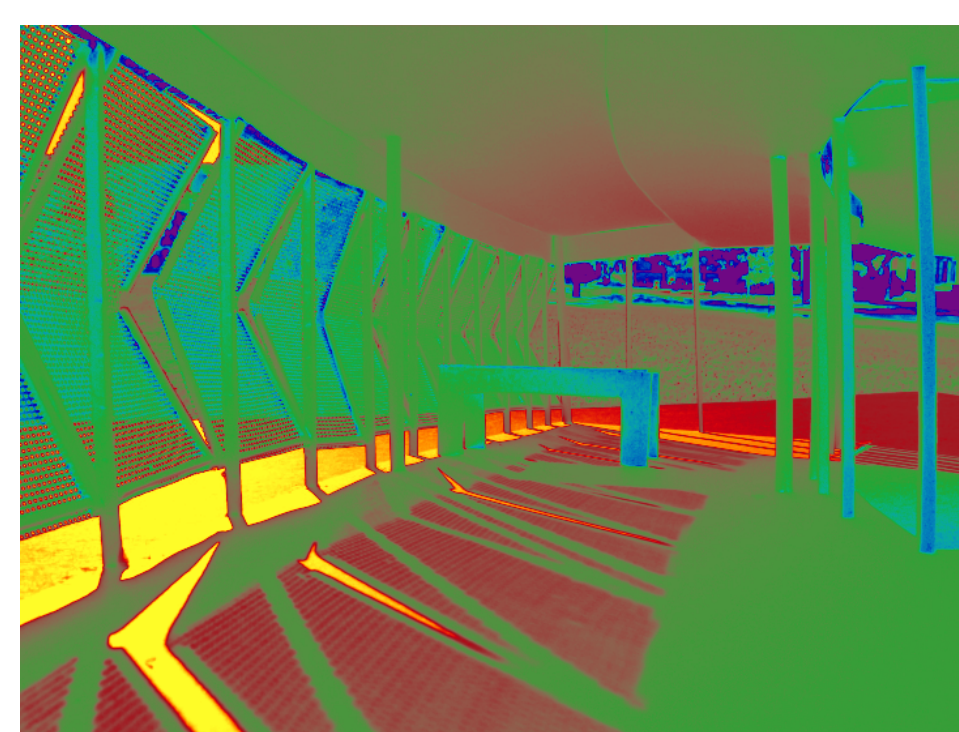
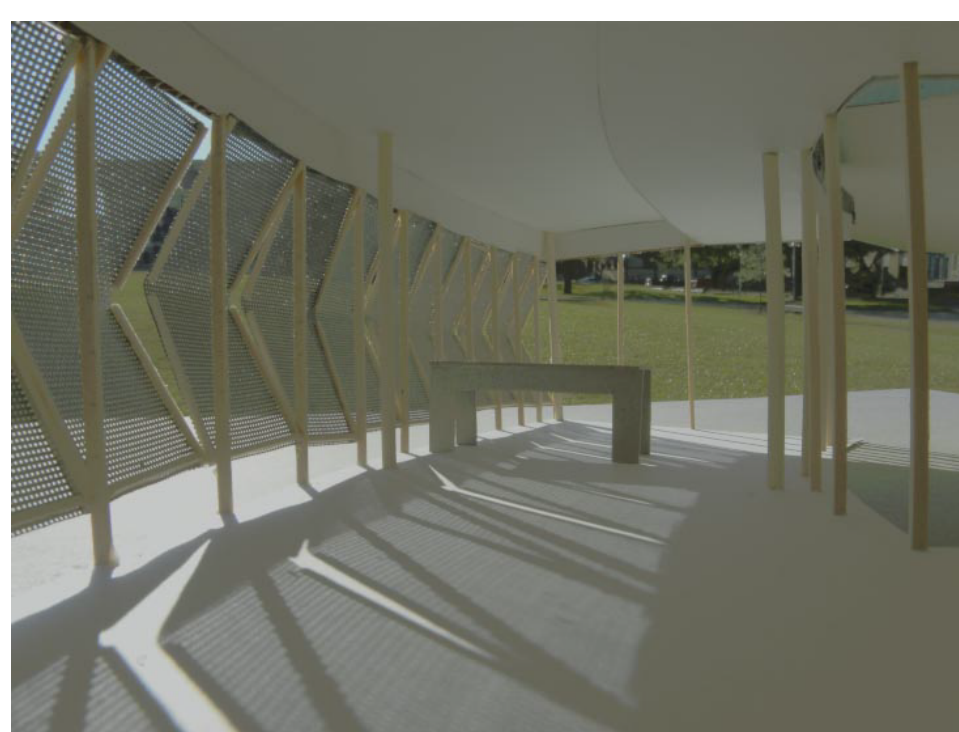
systems studies



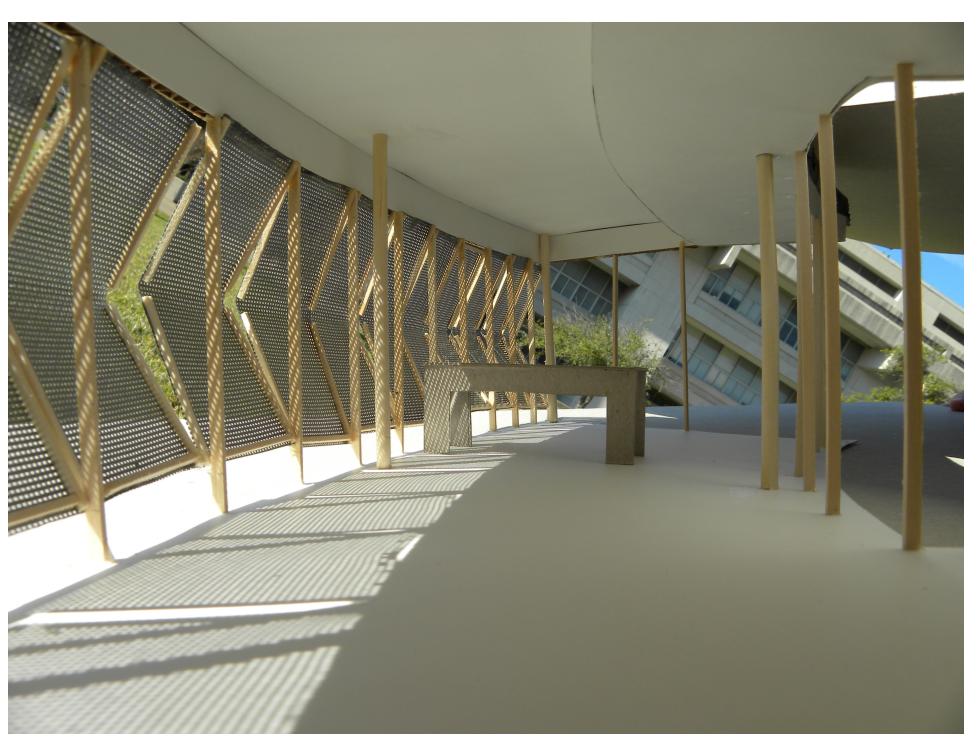
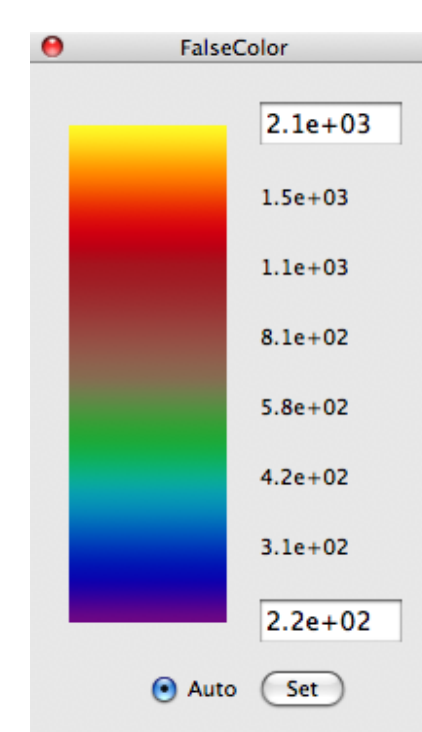
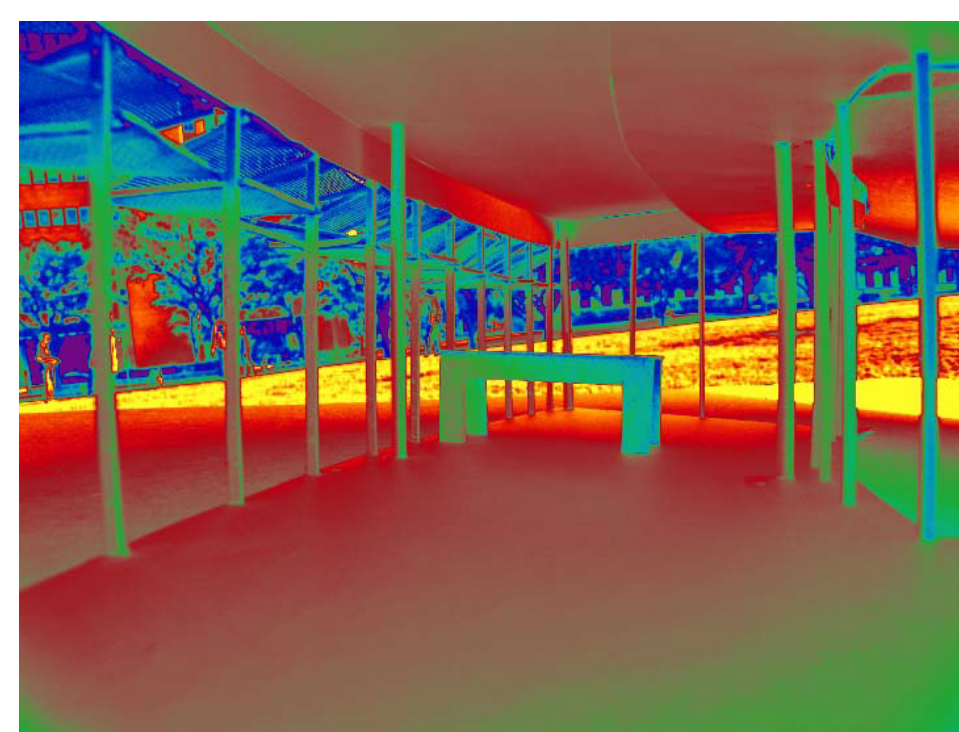
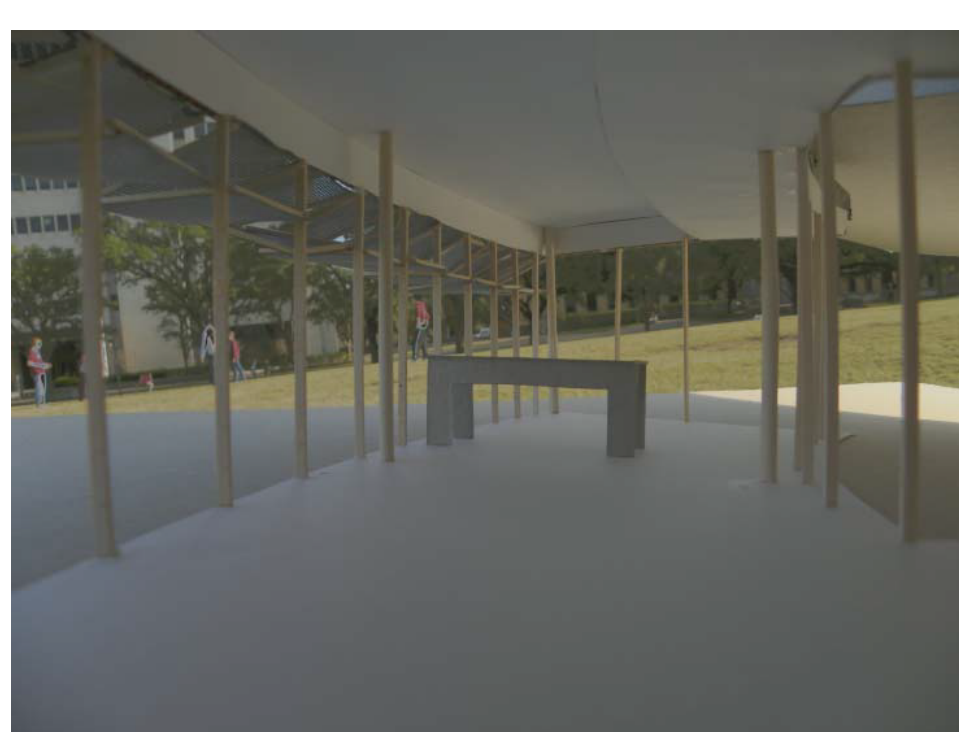
dec 21 9:00am



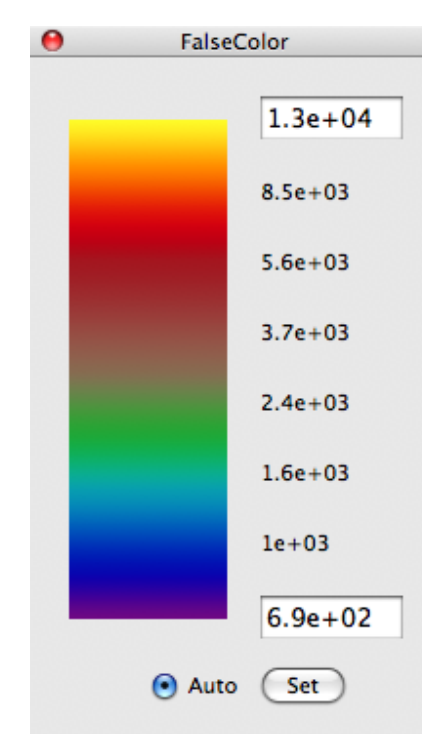
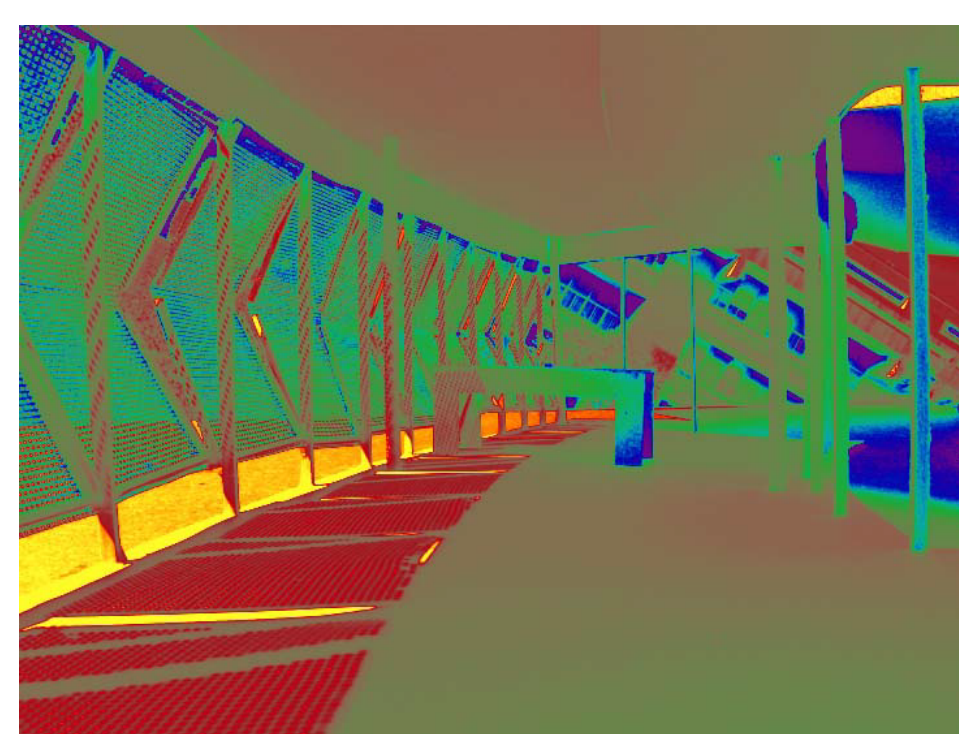
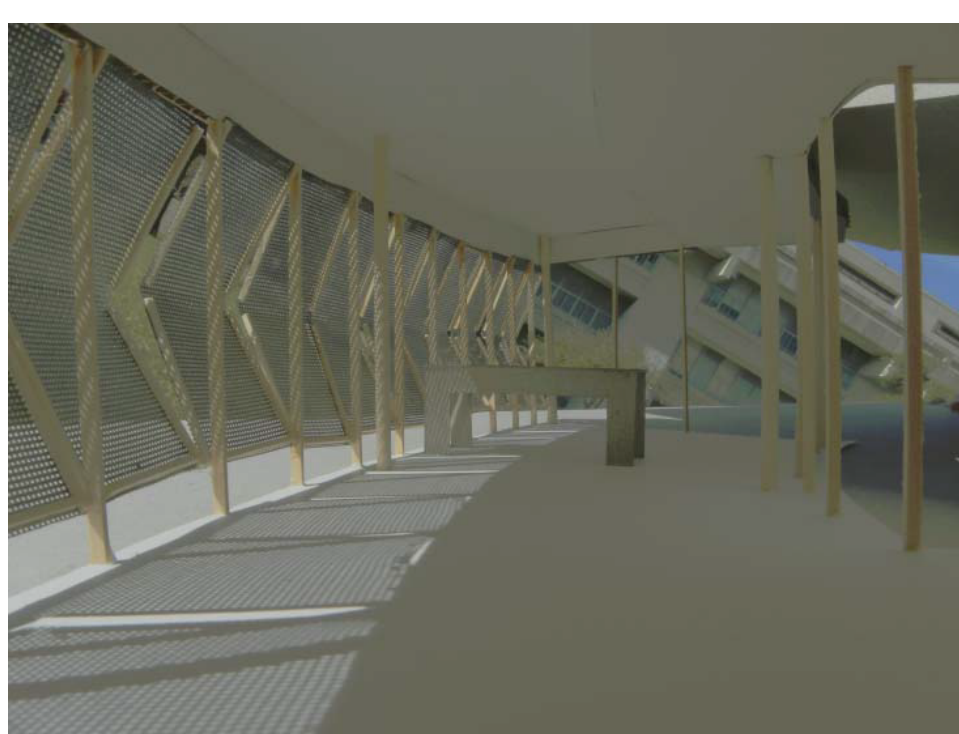
dec 21 12:00am



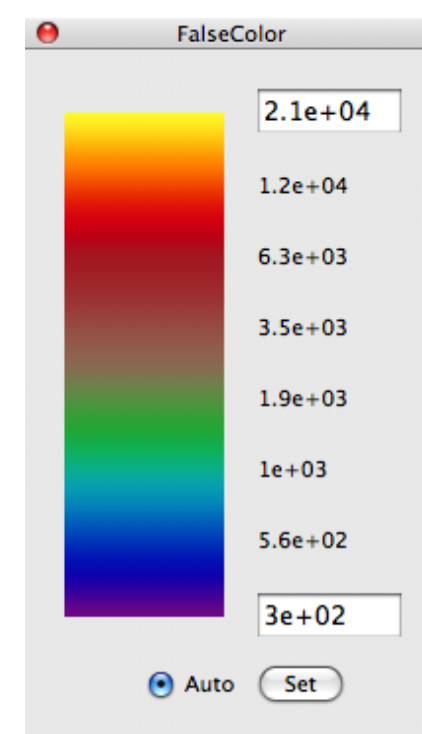
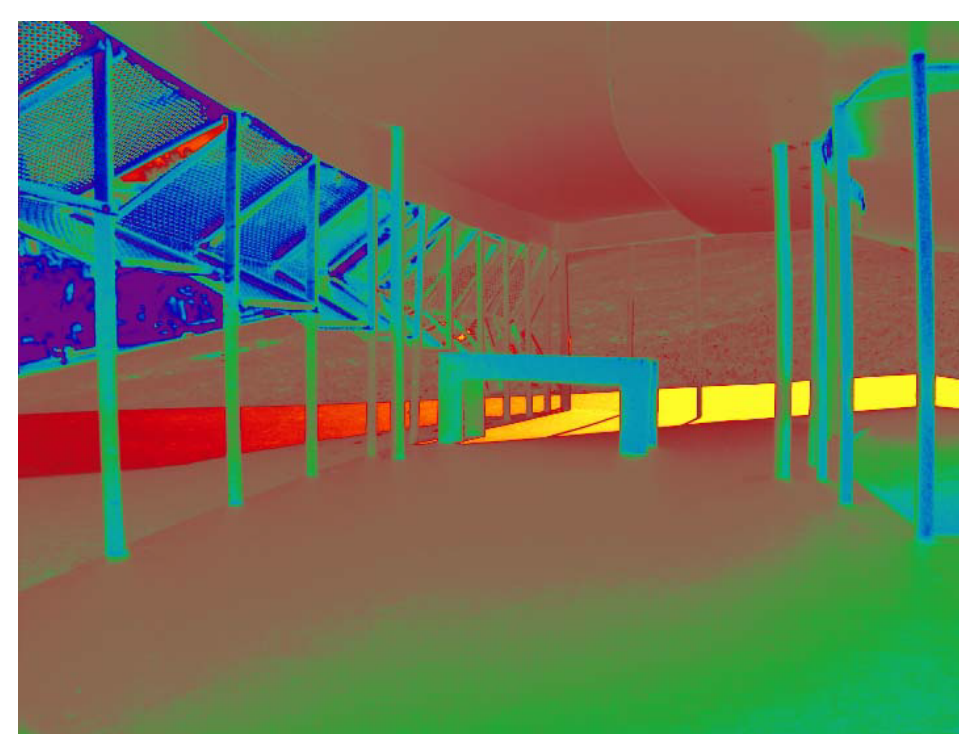
june 21 5:00 pm



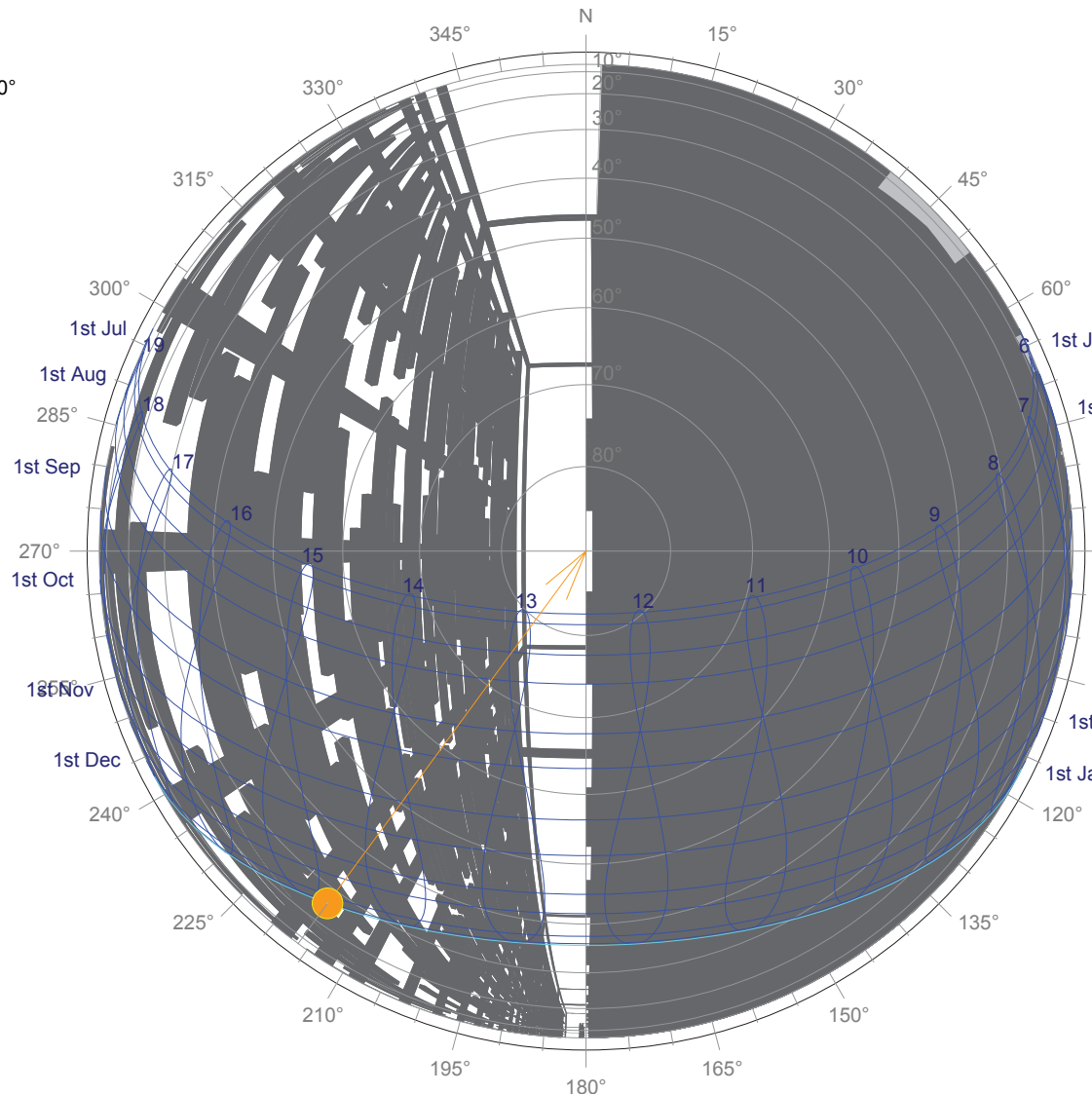
june 21 9:00am



sept 21 3:00am



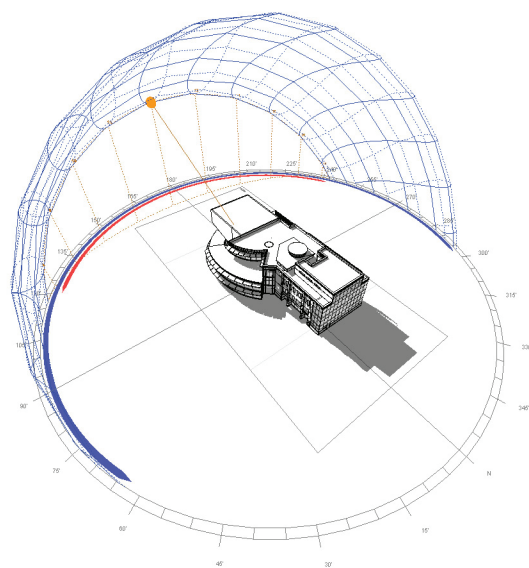
Spherical Projection
Location: 30.6° -96.4°
Obj: 87504 Orientation: 0.0° 0.0°
Sun Position: -143.7°, 26.2°
HSA: -143.7°
VSA: 148.6°



Time: 14:45
Date: 21st Dec (355)
Dotted lines: July-December.

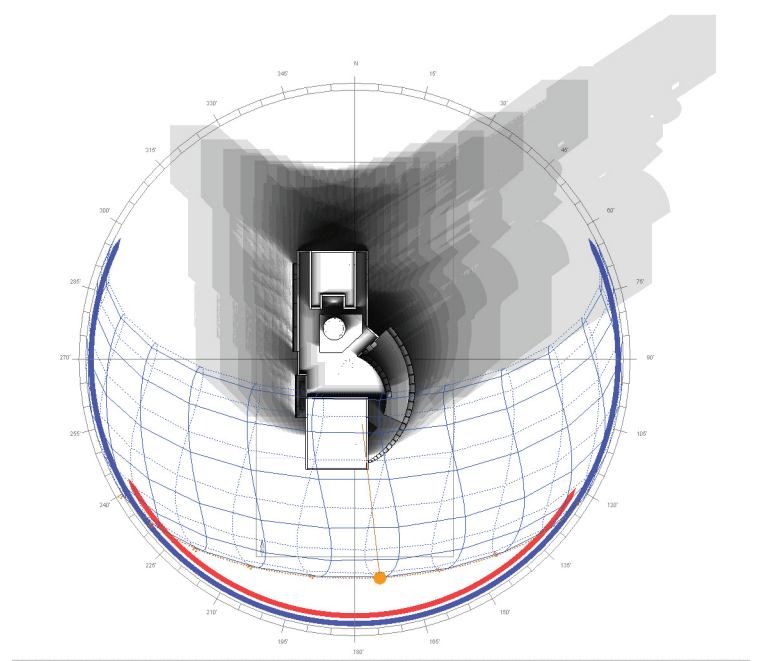
Point of reference is taken from a second floor window on the west elevation.

single day study

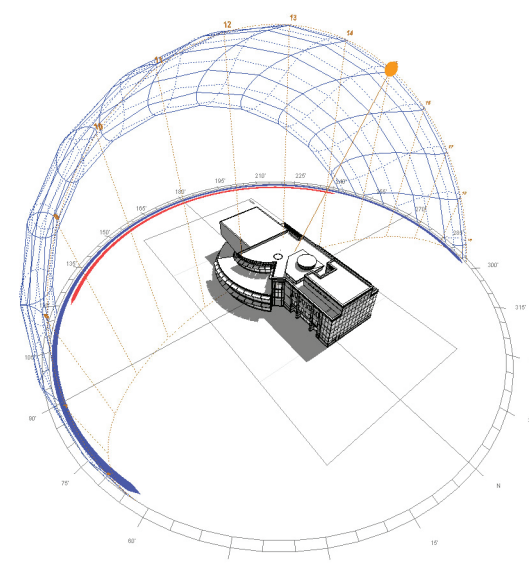


dec 21 12:00am

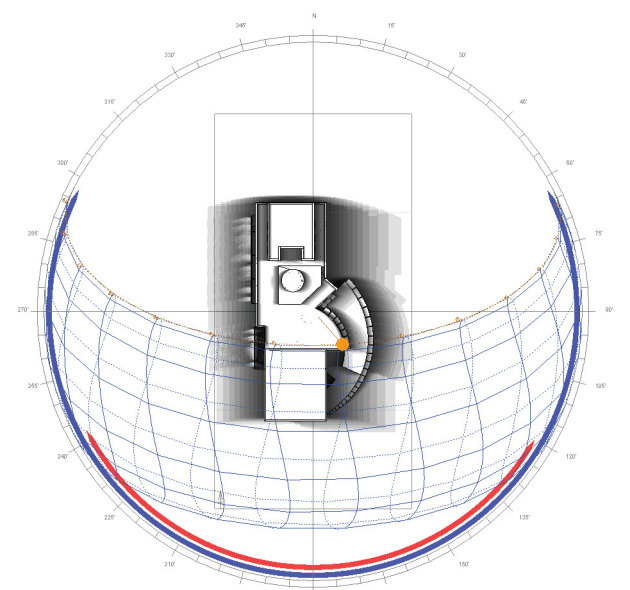
shadow range study 9:00am-5:00pm



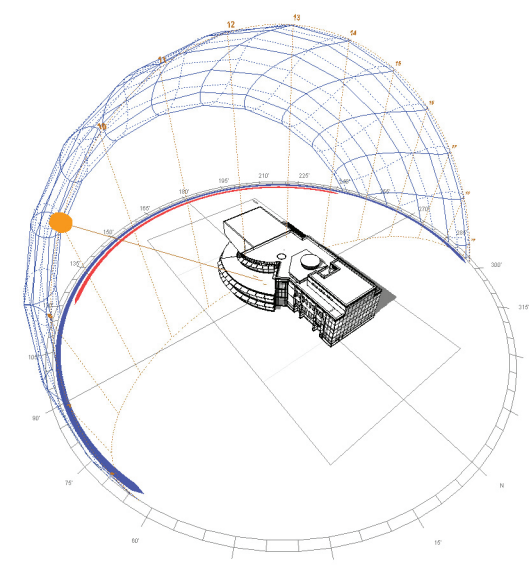
winter solstice



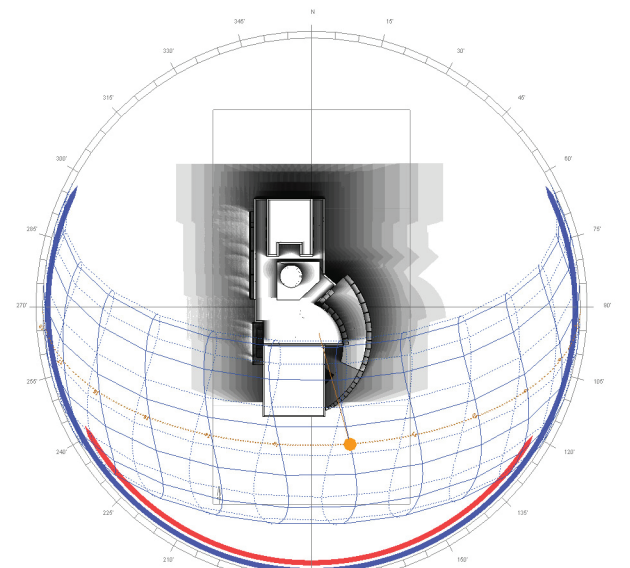
june 21 5:00pm



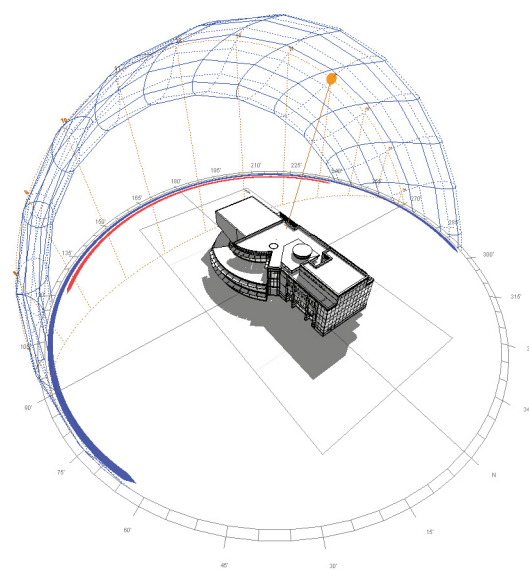
summer solstice



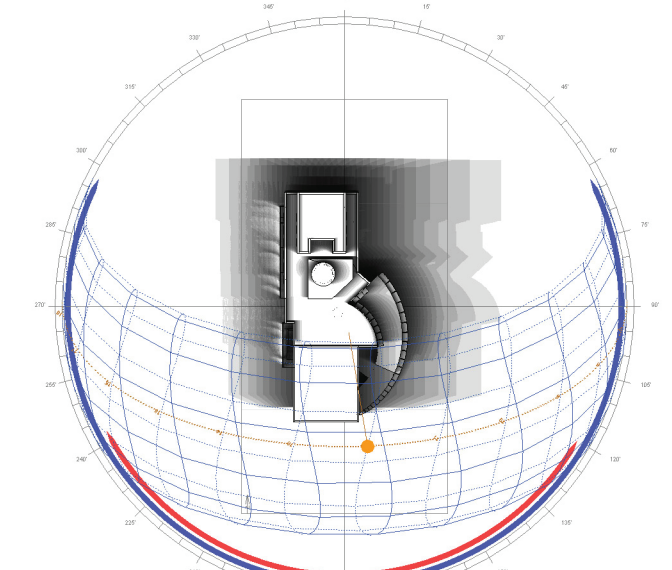
june 21 9:00am



spring solstice



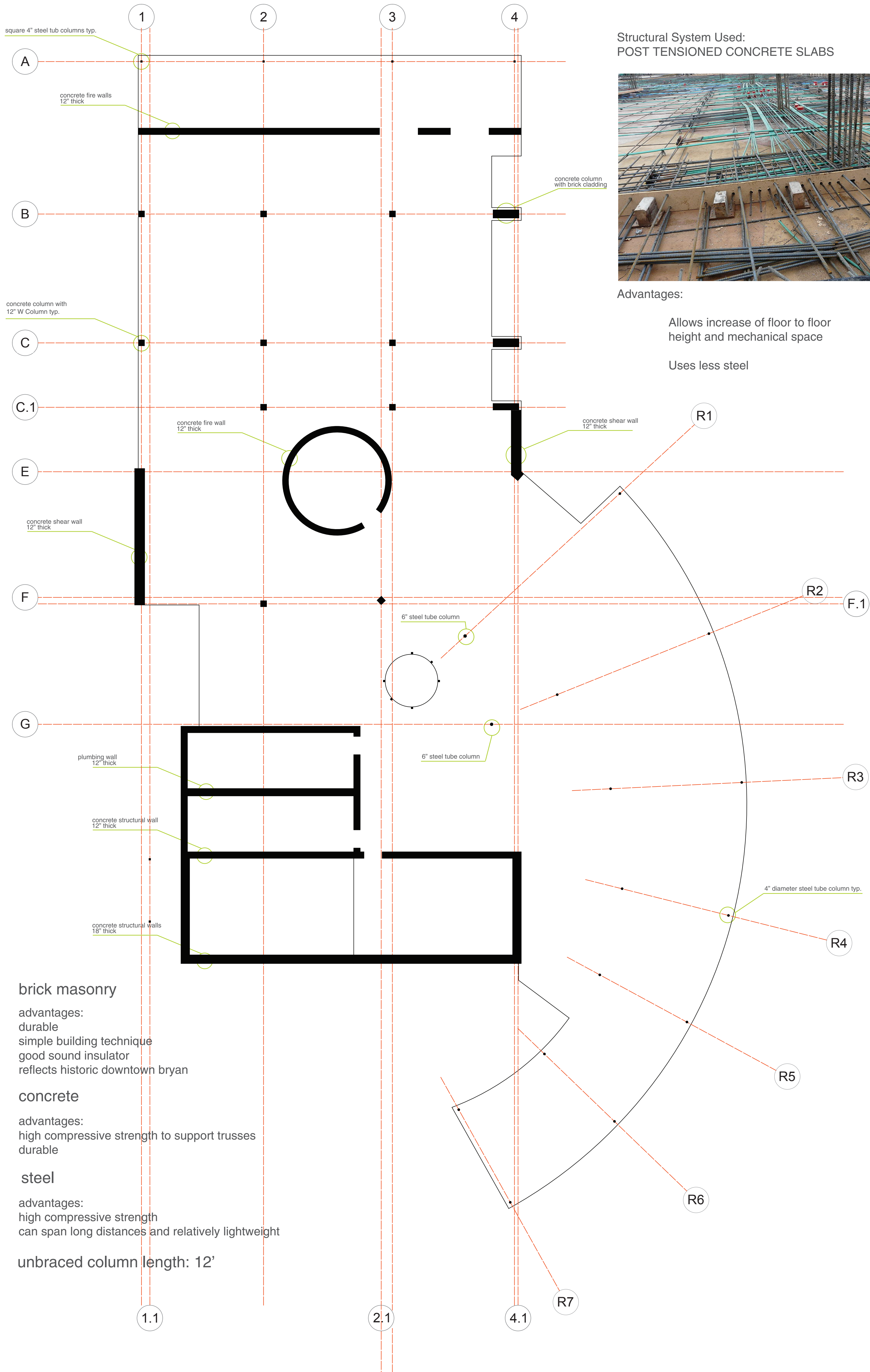
sept 21 3:00pm



fall solstice

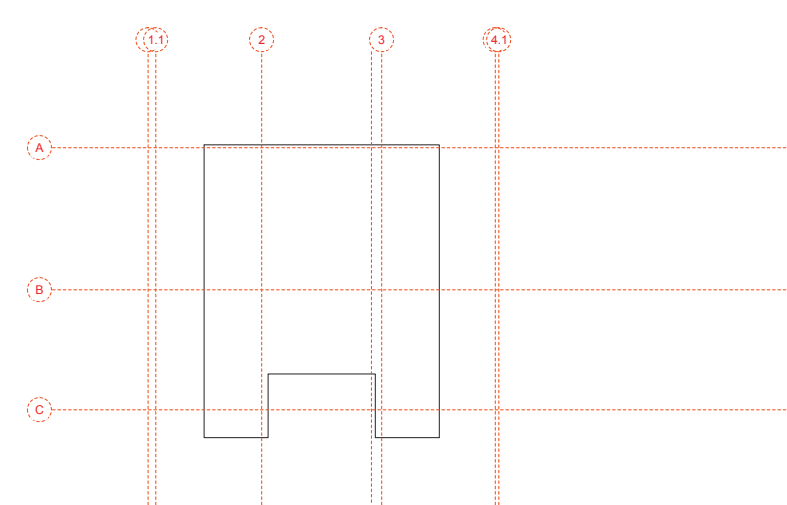
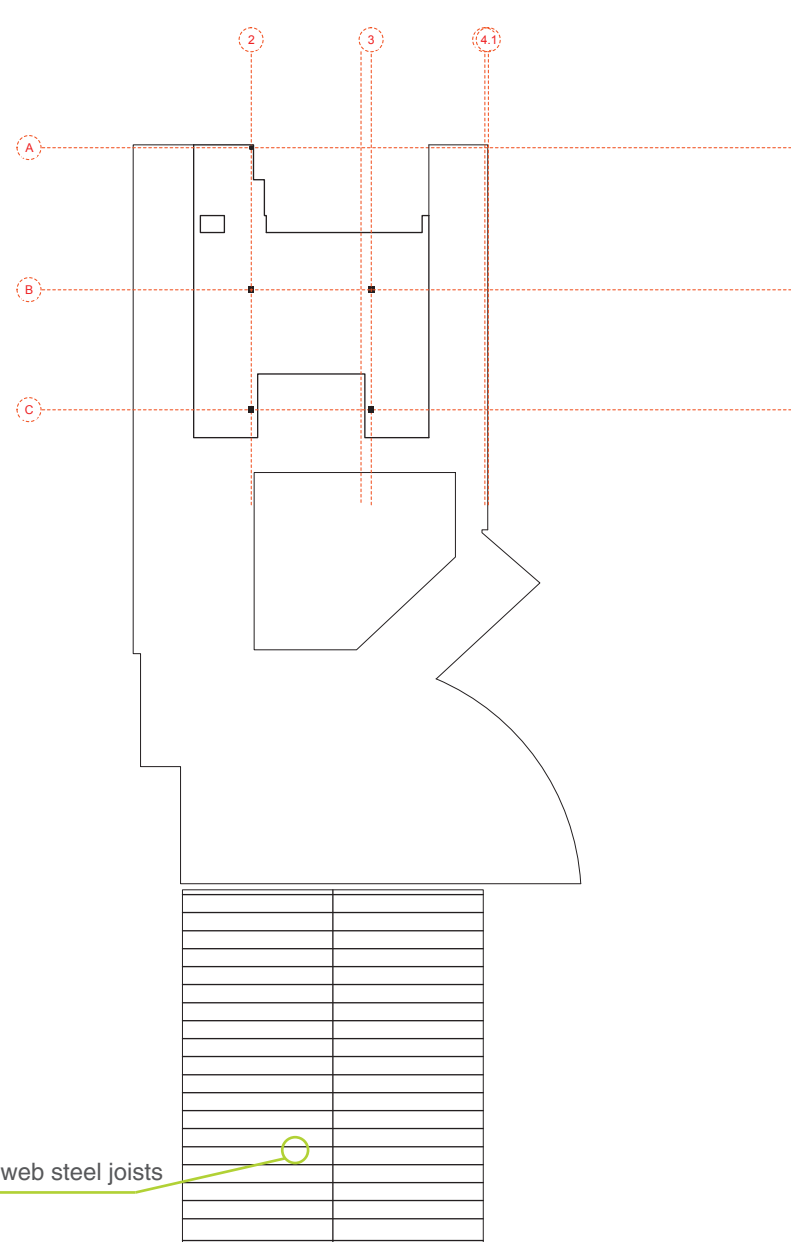
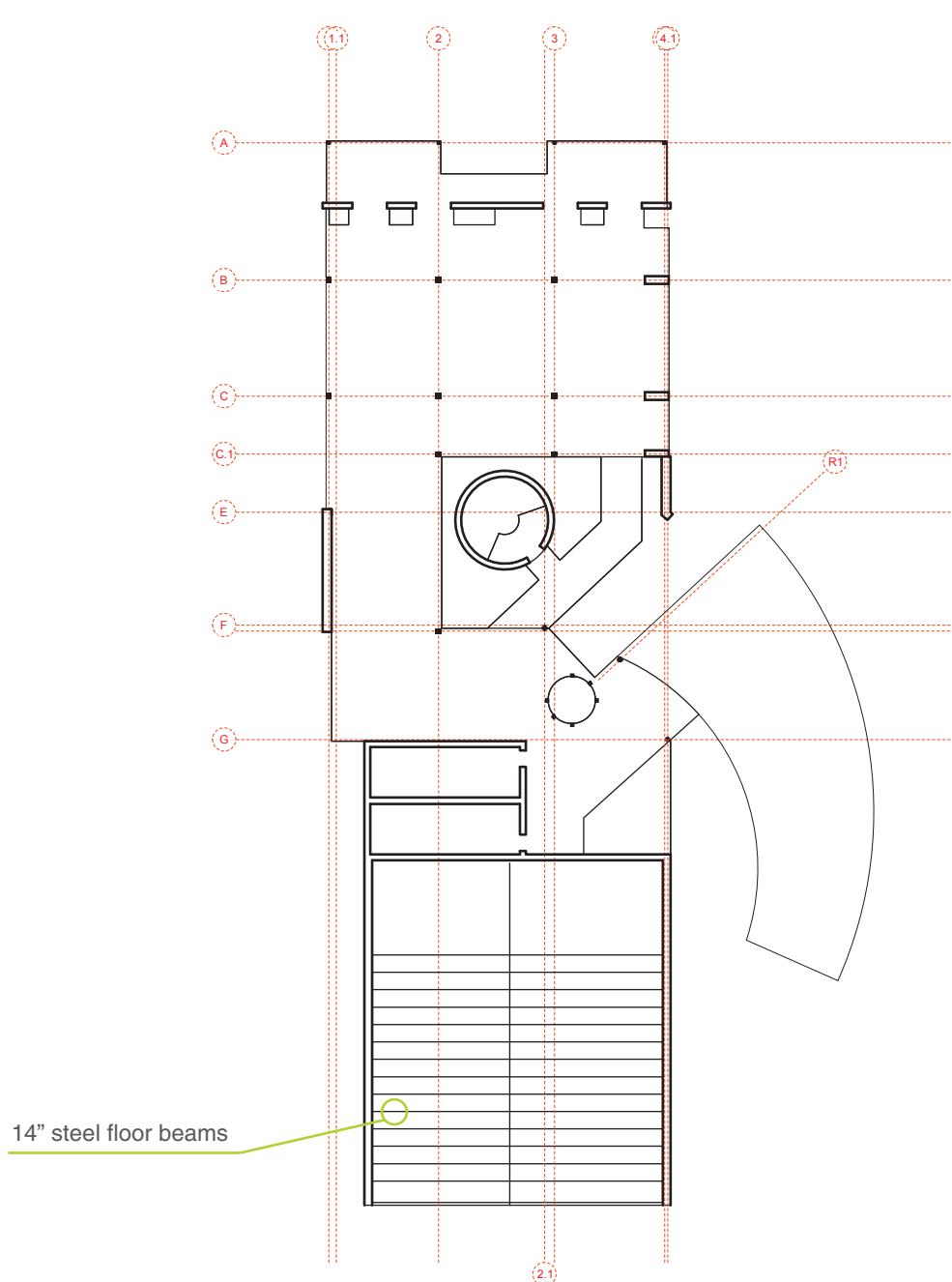
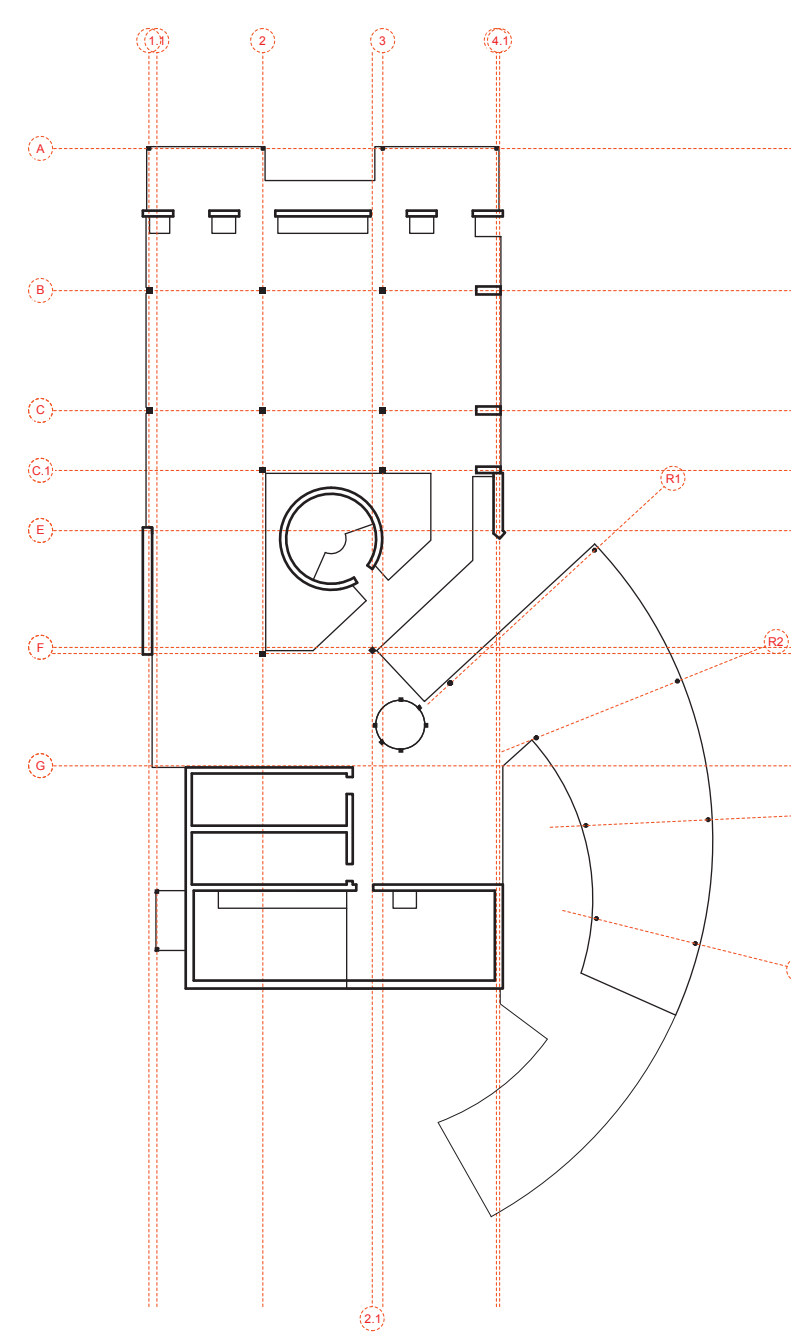
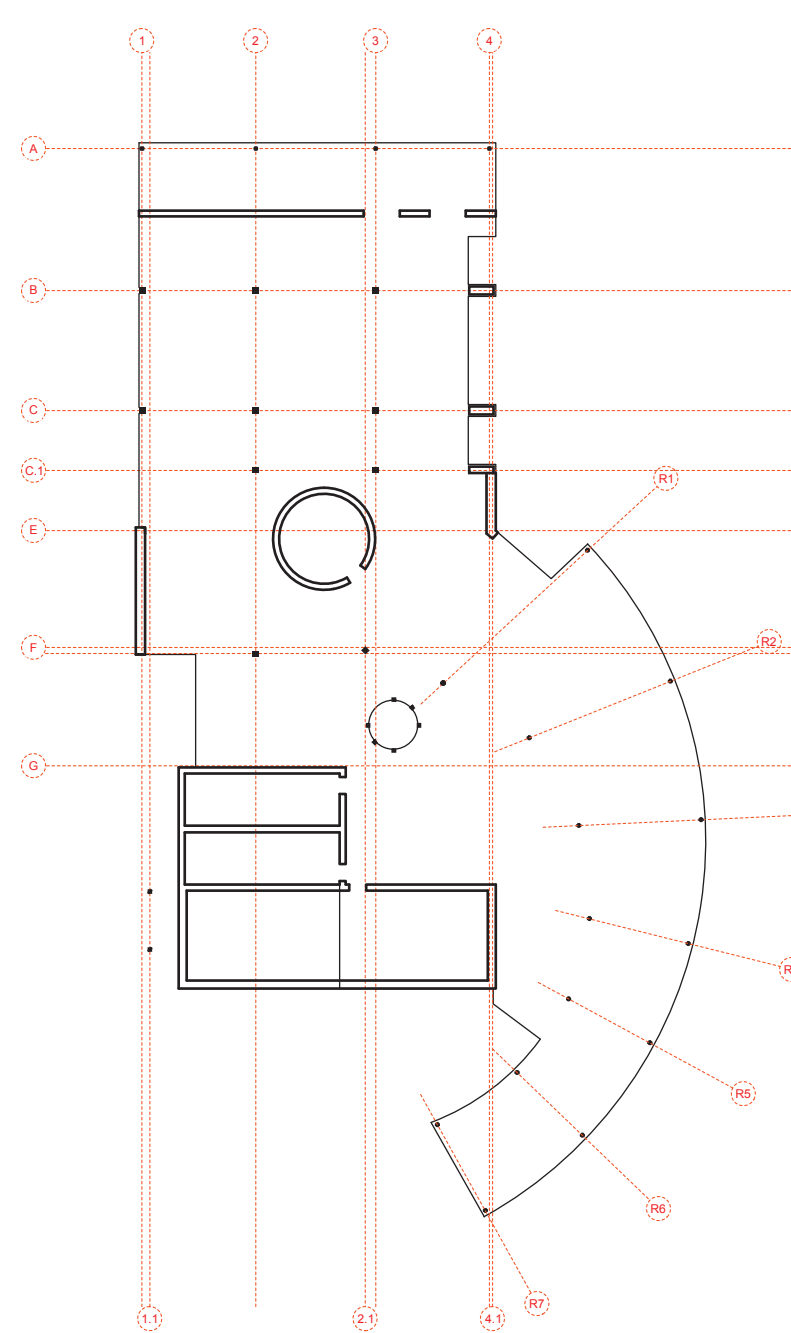
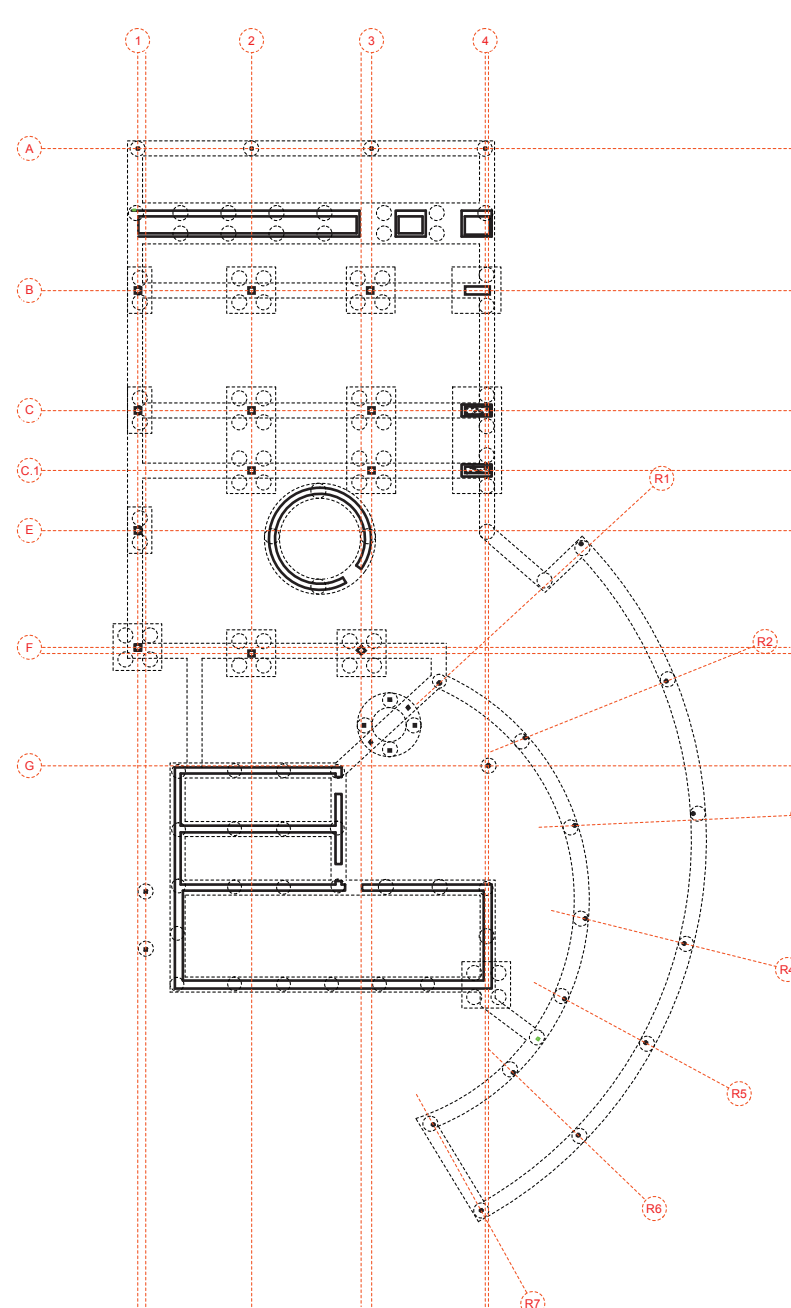
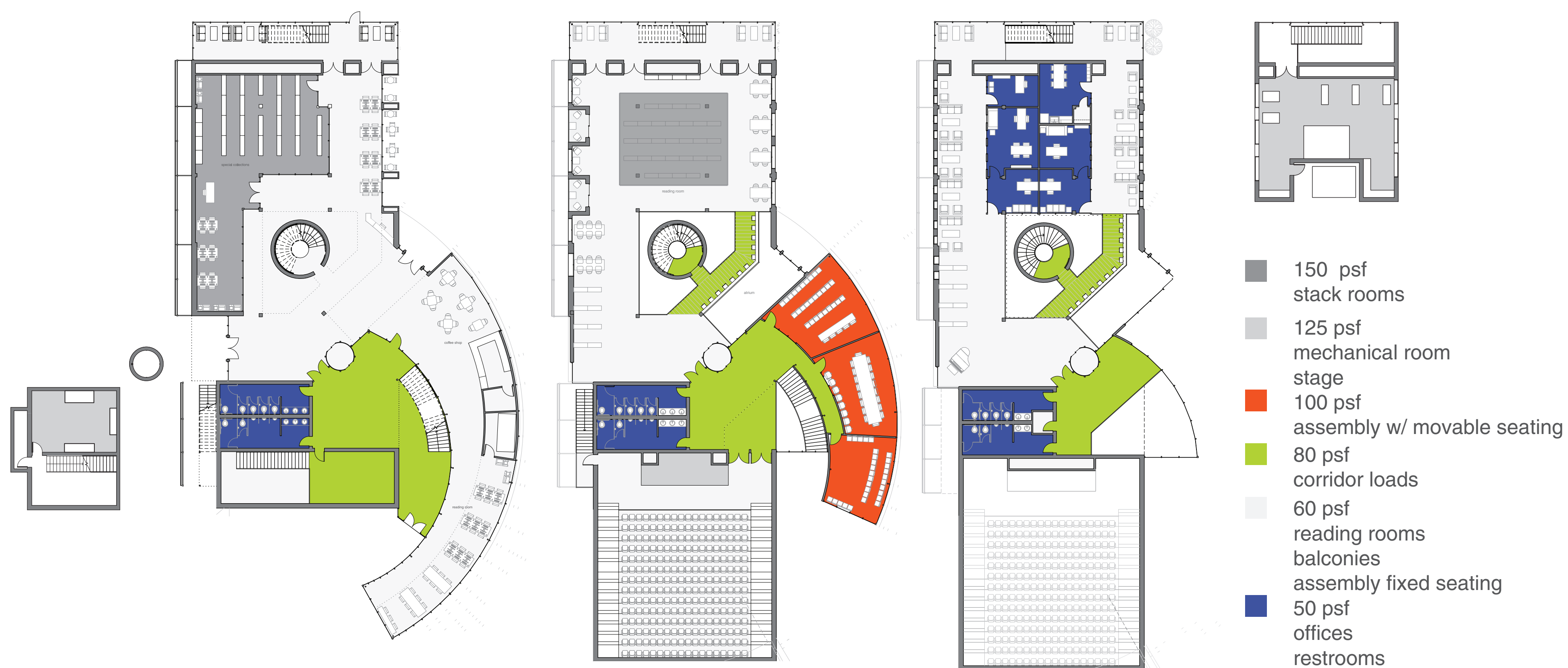
structures

column grid | structural system



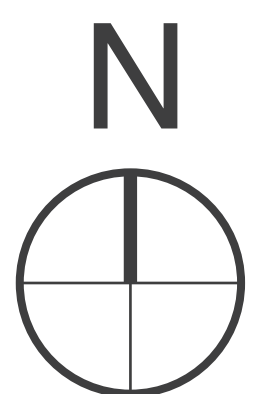
structures

load diagrams | structural grid



14" steel floor beams

14" open web steel joists



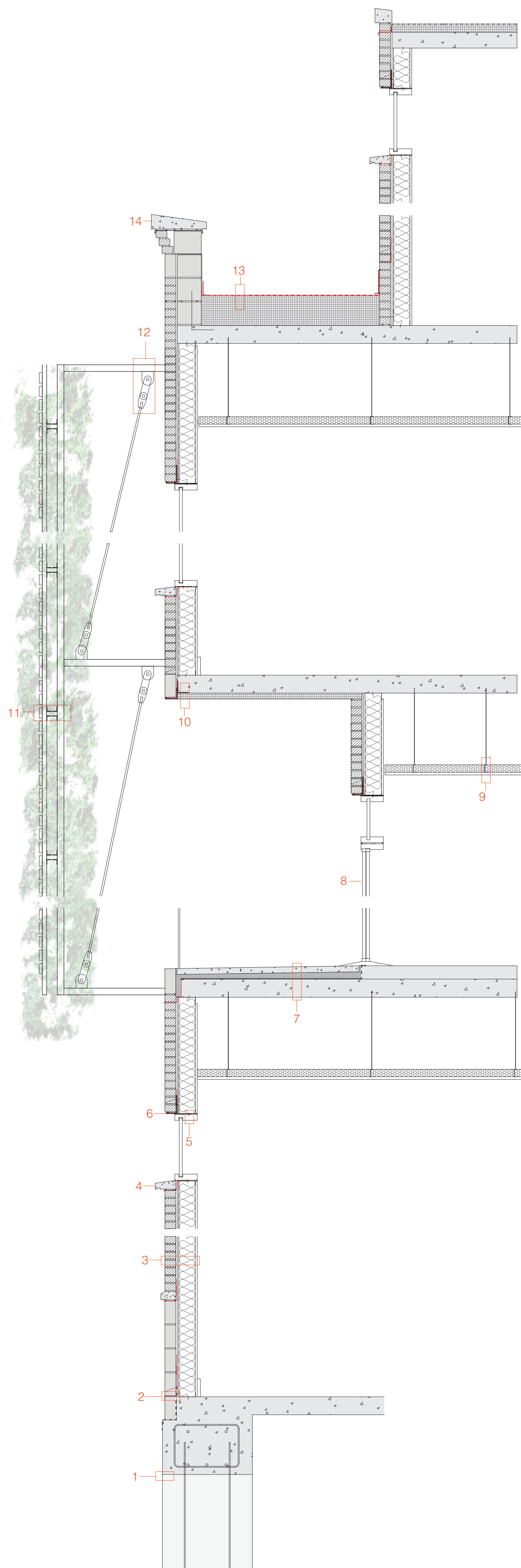
1/8" = 1'-0"

arch 405
integrated studio

justin garrison
carolyn glenn

wall details

west facade brick wall detail

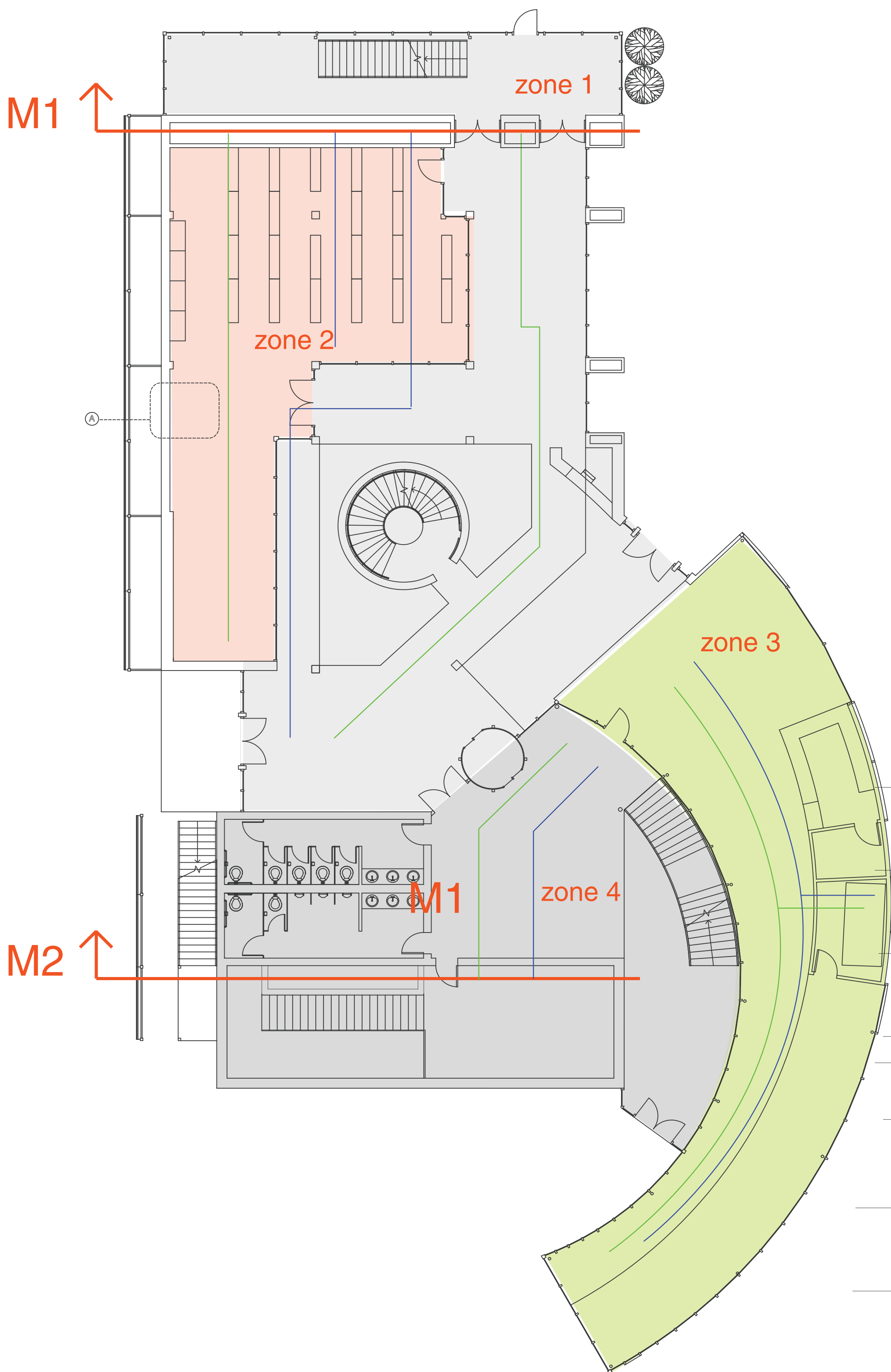


DETAIL A : brick wall construction

- 1 30" concrete grade beam
steel reinforcing
concrete foundation pile
- 2 8" limestone block
metal flashing with adhesive counterflashing
waterproofing membrane
- 3 wall construction:
facing brick with 3/8" mortar joints
wall cavity with drainboard
house wrap
1/2" sheathing
5 1/2" metal stud
R19 batt insulation
5/8" gypsum board
- 4 precast concrete window sill
with drip
- 5 aluminum window frame
3/8" shim plate
5 1/2" metal track
screw connection
- 6 6" x 4" x 3/8" steel angle
- 7 2" sloped concrete topping
rigid insulation
waterproof membrane
6" post tensioned concrete slab
- 8 sliding glass door
- 9 ceiling construction:
tie rods suspended from slab
1 1/2" steel C channel
2 1/2" acoustic insulation
5/8" gypsum board
- 10 6" post tensioned concrete slab
4" x 4" x 3/8" steel angle
rigid board insulation
acrylic stucco finish
- 11 vertical garden support construction:
2" galvanized steel tubes
4" x 4" x 3/8" steel angle
2x4 horizontal wood member
2x4 vertical wood member
3 1/2" horizontal wood planks
- 12 2" galvanized steel metal tube
1/2" diameter rod and clevis diagonal bracing
- 13 waterproof membrane
10" expanded polystyrene (EPS) thermal insulation R30
- 14 precast concrete coping
3/8" mortar joint with rod stock
metal cap flashing
through wall flashing

mechanical plan

mechanical room | duct work



1st floor zoning:

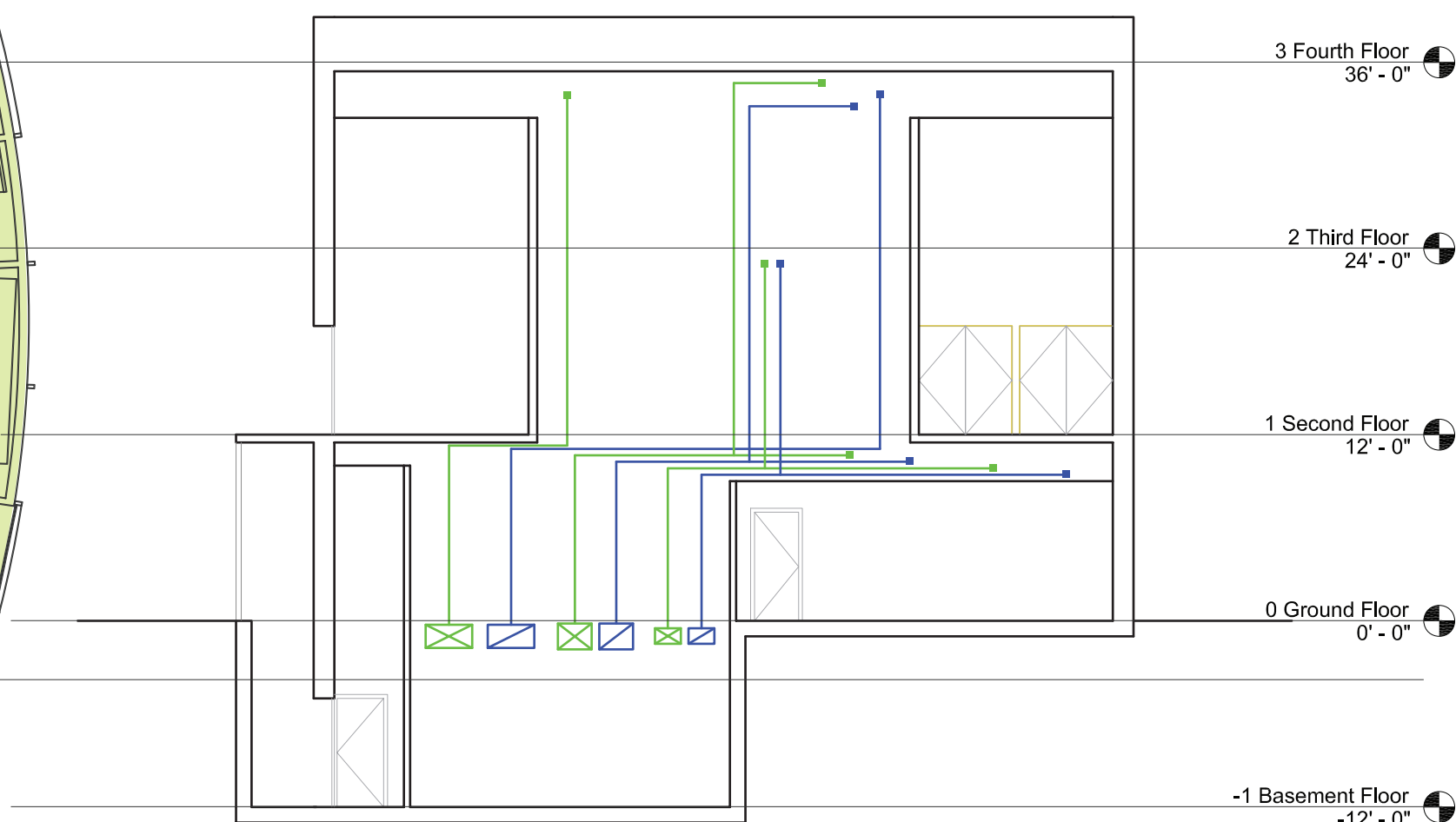
- zone 1: public space
- zone 2: special collections
- zone 3: cafe / public space
- zone 4: after hours atrium / bathrooms

2nd floor zoning:

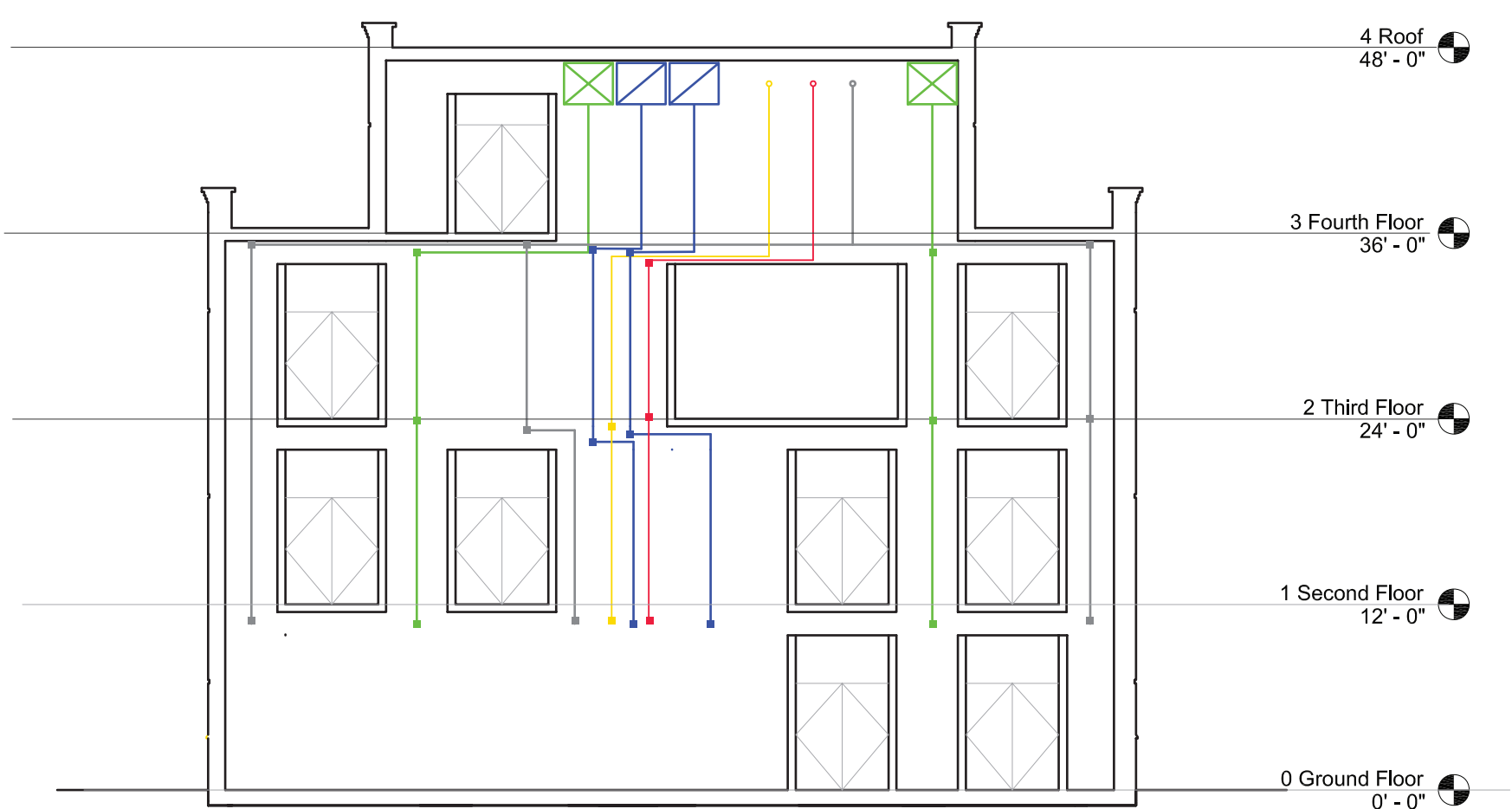
- zone 1: reading room
- zone 2: auditorium
- zone 3: meeting rooms
- zone 4: after hours atrium / bathrooms

3rd floor zoning:

- zone 1: public space
- zone 2: auditorium
- zone 3: offices
- zone 4: after hours atrium / bathrooms



M2 Mechanical Wall Section I Return and Supply Ducts



M1 Mechanical Wall Section I Return and Supply Ducts
I Chiller and Boiler Pipes

- chiller pipes
 - boiler pipes
 - electrical lines
 - return ducts
 - supply ducts
- square indicates change of direction to supply each floor