

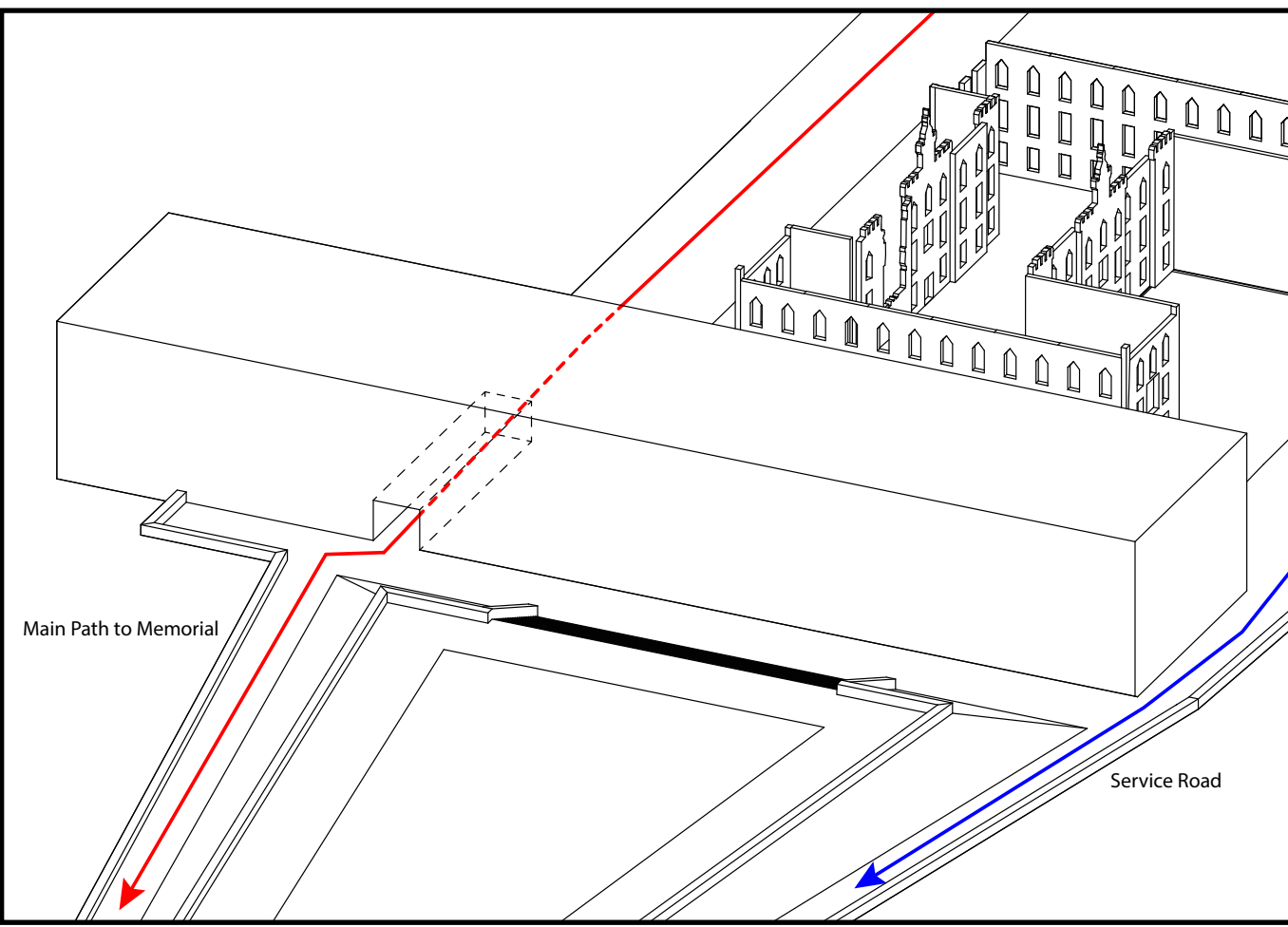
FOUR FREEDOMS CENTER

ALEXANDER LLANTADA

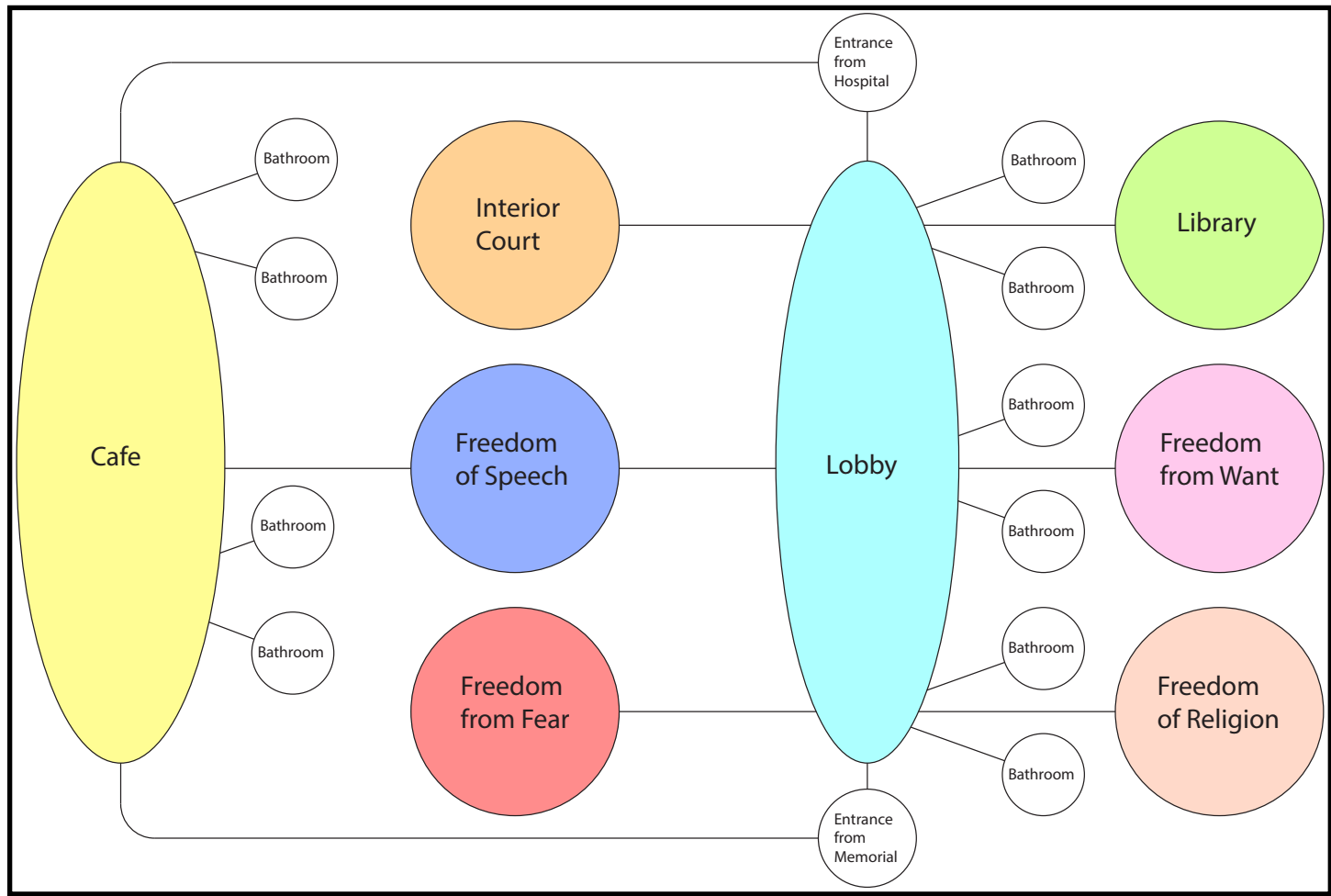
Freedom of Speech means that anyone can freely voice their opinions in public, whether through speech, writing, music, or visual media. The government can't silence anyone for their opinion, even if it is offensive or protests against the government. Just like how everyone can say anything, nobody has to listen to or agree with everything. While conflicts will definitely occur due to differing opinions or even hate speech, these occur among the individuals in society, so it is the responsibility of the government to stay out of it and let the people handle it themselves. Sexual comments and threats are obvious exceptions. The gallery that focuses on Freedom of Speech gives visitors a view of the interior courtyard and any events taking place in it, allowing them to hear the conversations below. Freedom from Want means that everyone should have a life where they are satisfied with what they have. This is a life with all the necessities (food, water, clothes, shelter, etc.). Material possessions do not count. This gallery contains artwork focusing on people who are less fortunate, both around the world and within our country. Freedom of Religion give anyone the right to follow any religion, or not follow a religion at all. This gallery contains artwork related to various religions, commentaries on their effects on society, ideas about God, etc. in the center is a prayer room that relies only on architecture to give a spiritual feeling. There are no religious symbols in the prayer room, so that the room can feel welcoming to all. Freedom from Fear means that no one should have to live in fear of attack from another country. The random columns and narrow passages make this gallery appear unsettling to visitors, representing the fear. At the end is a balcony that frames a view of the United Nations building, telling the visitors that there is nothing to fear as long as the United Nations is still keeping the peace. The art in this gallery promotes world peace and shows the horrors of war.



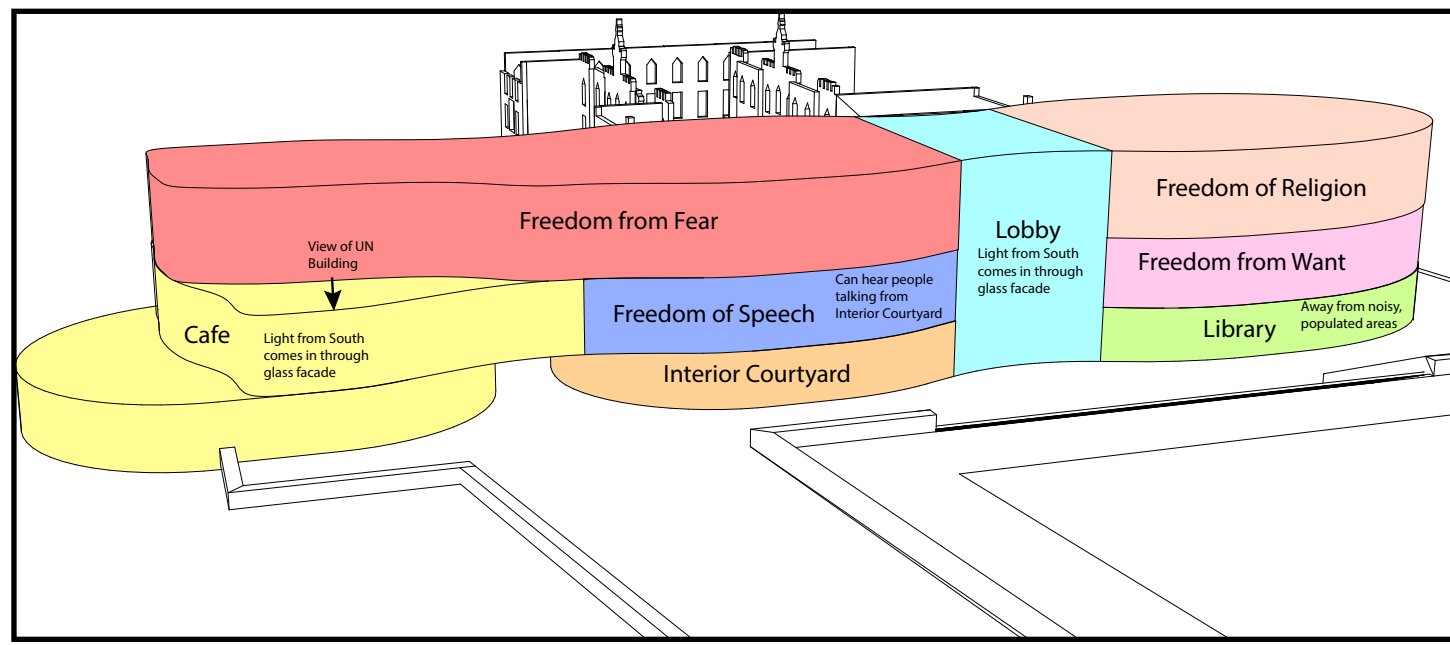
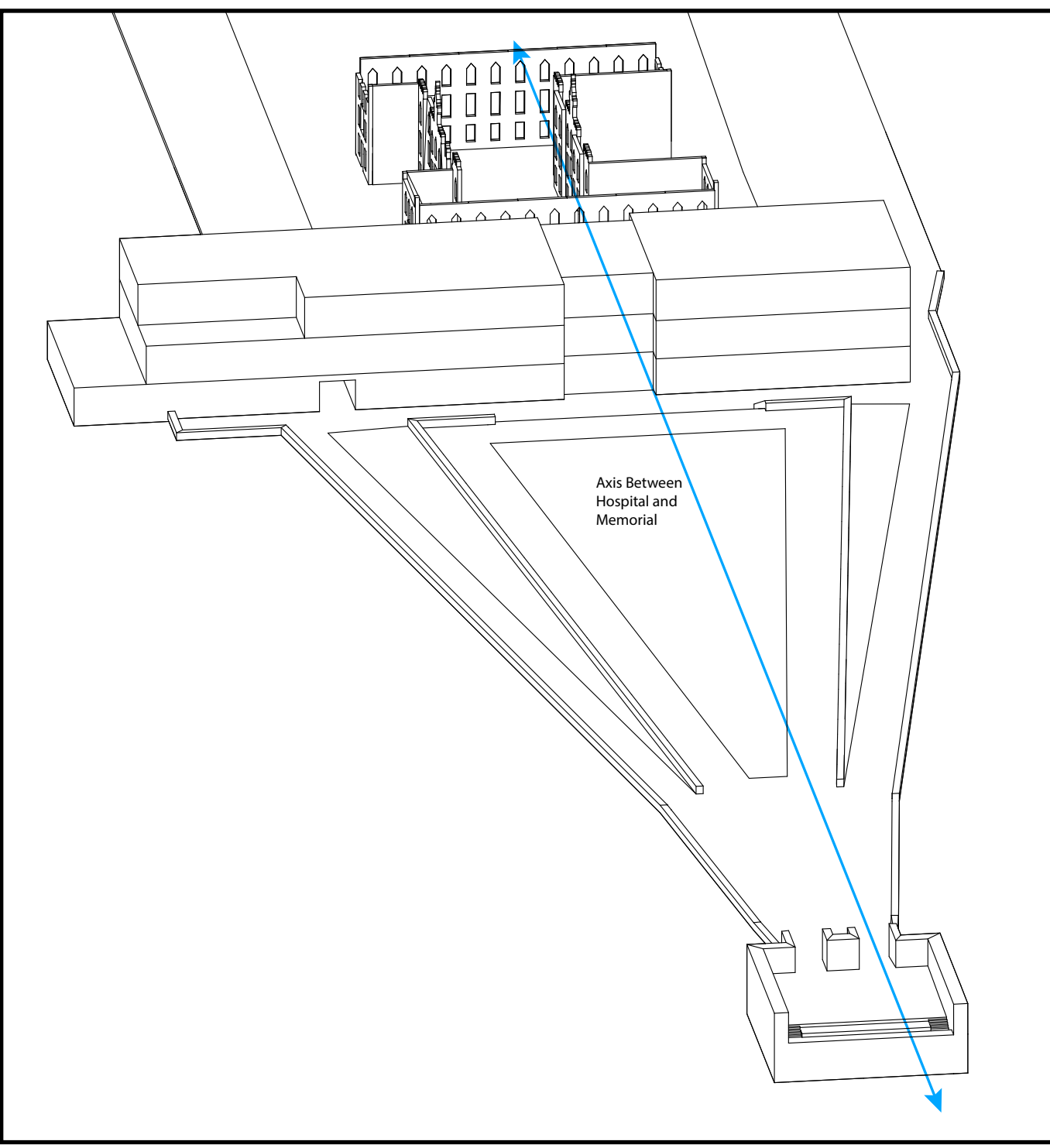
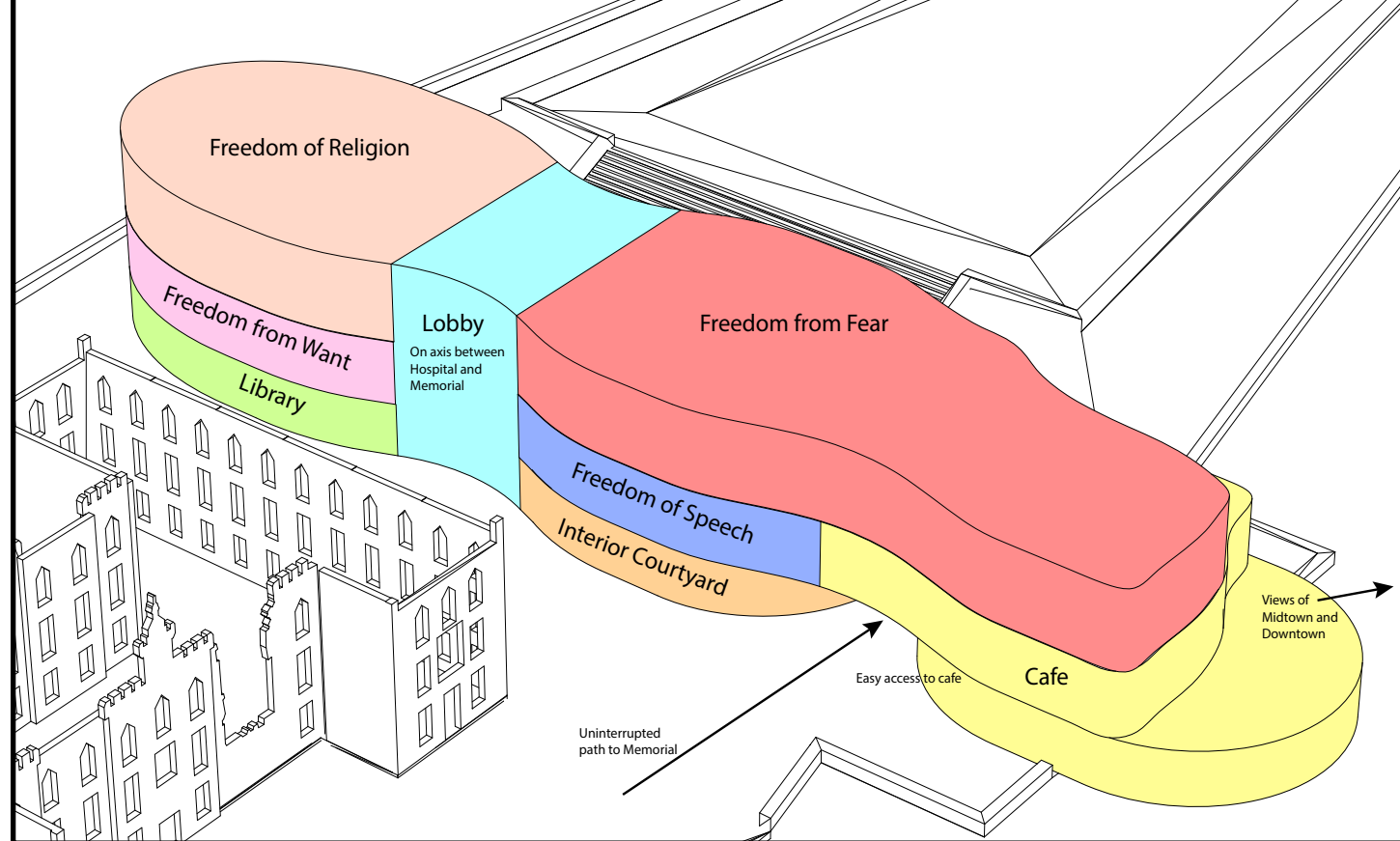
Massing Diagrams



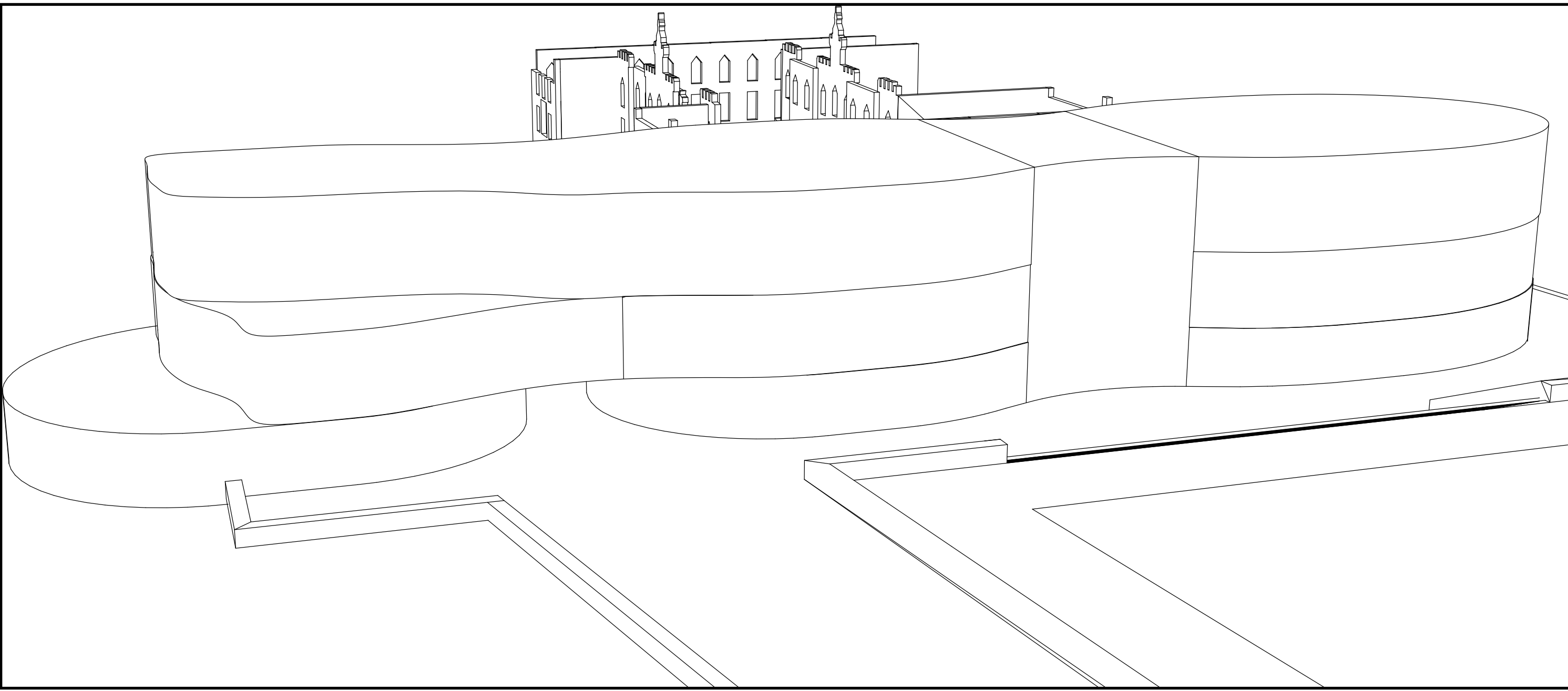
Bubble Diagram



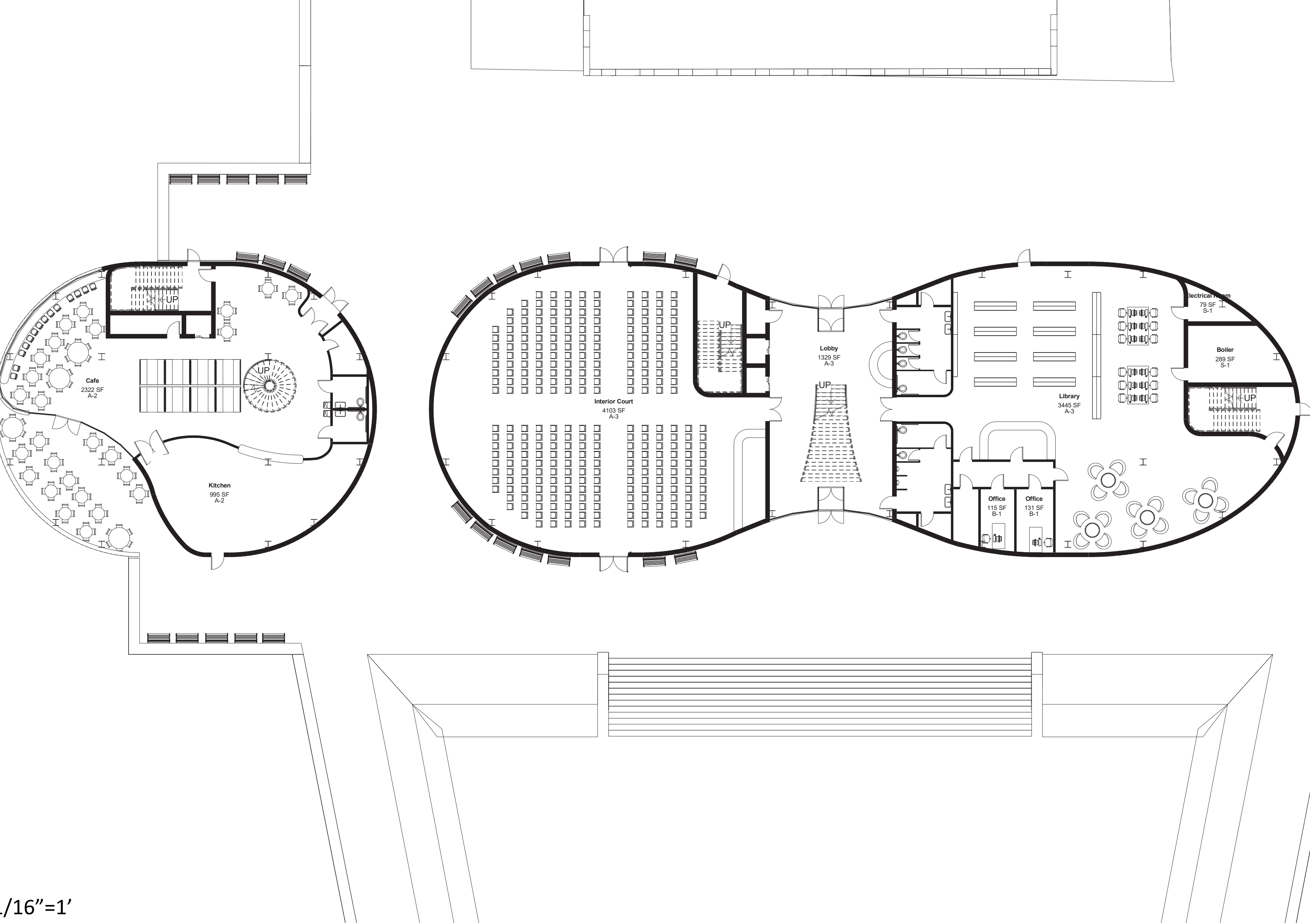
Program Placement



Final Mass

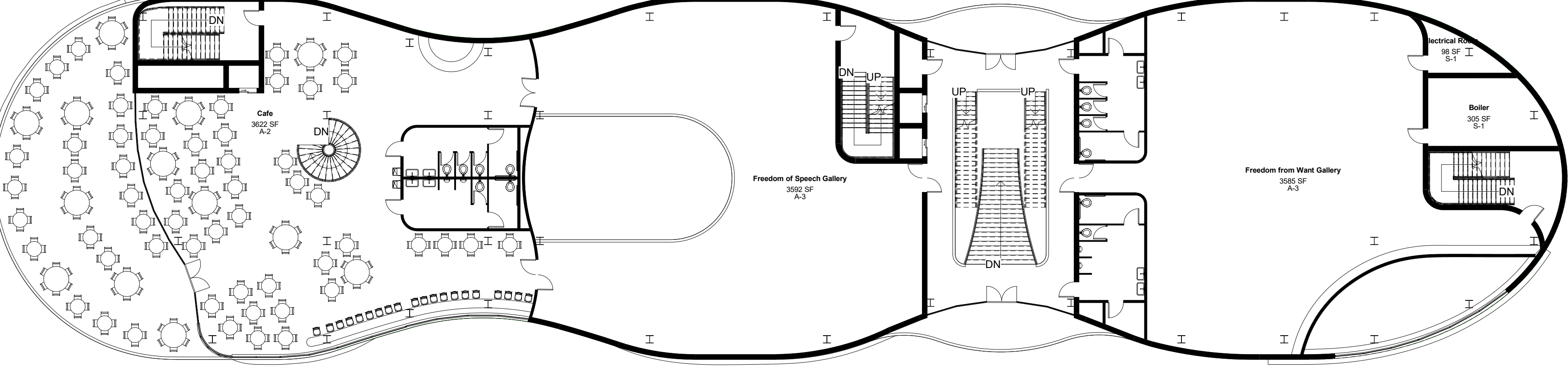


Level 1



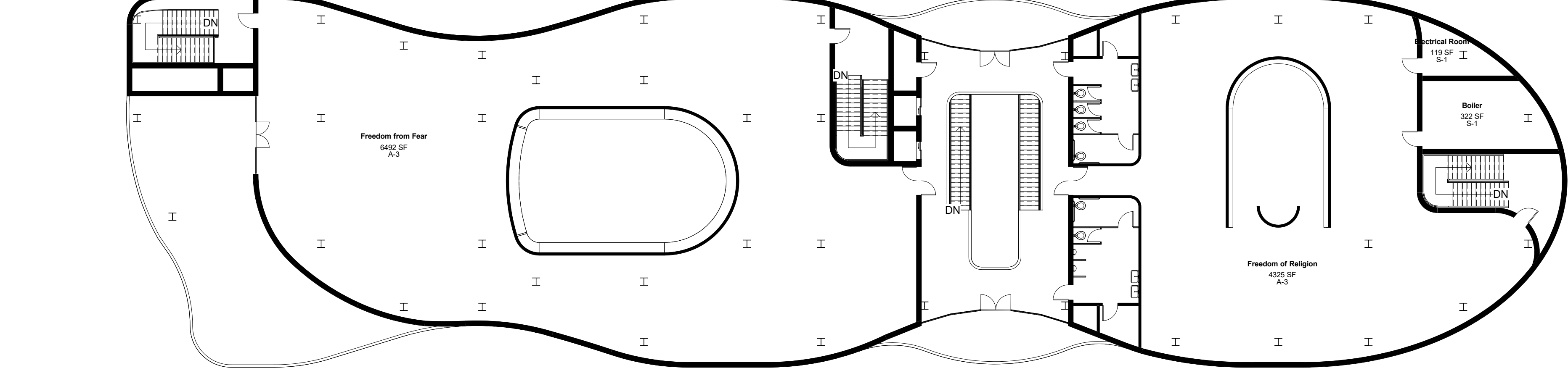
1/16"=1'

Level 2



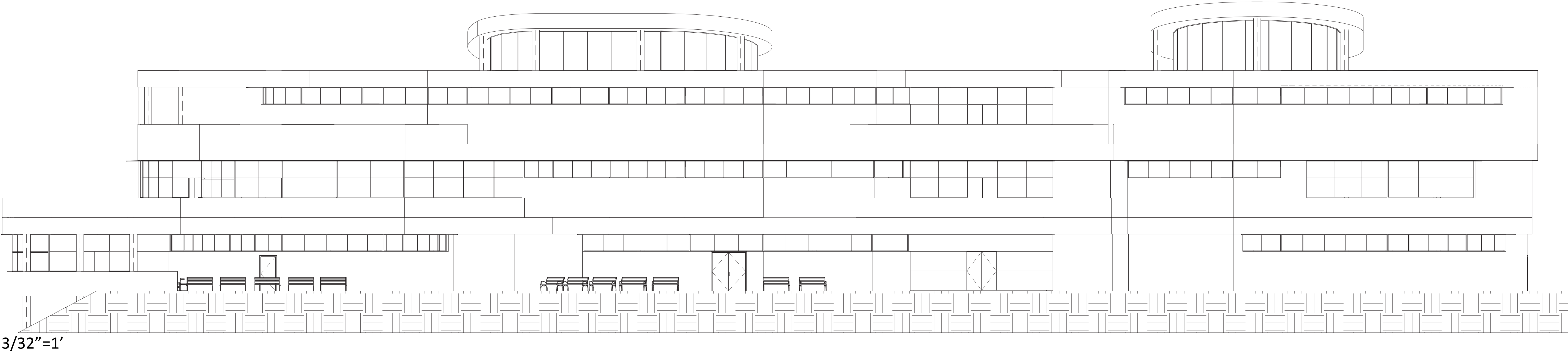
1/16"=1'

Level 3



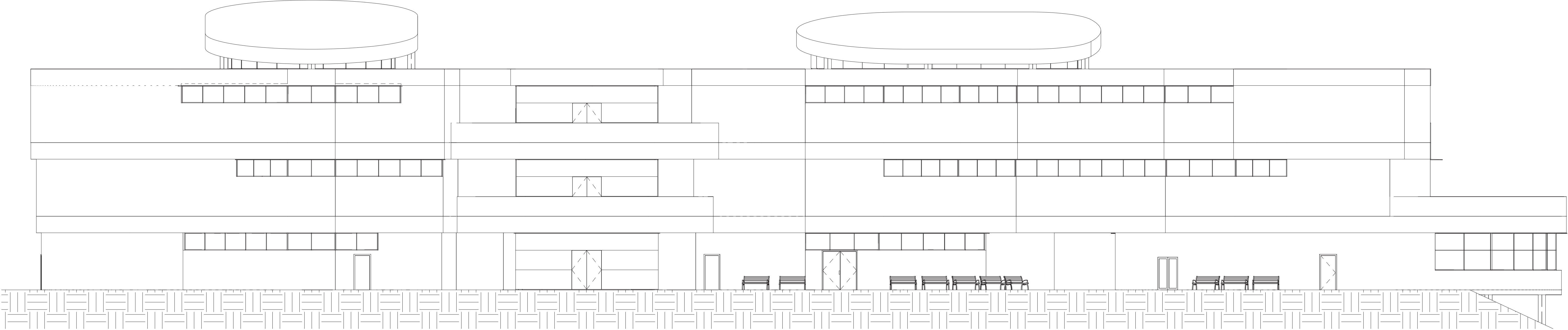
1/16"=1'

South Elevation



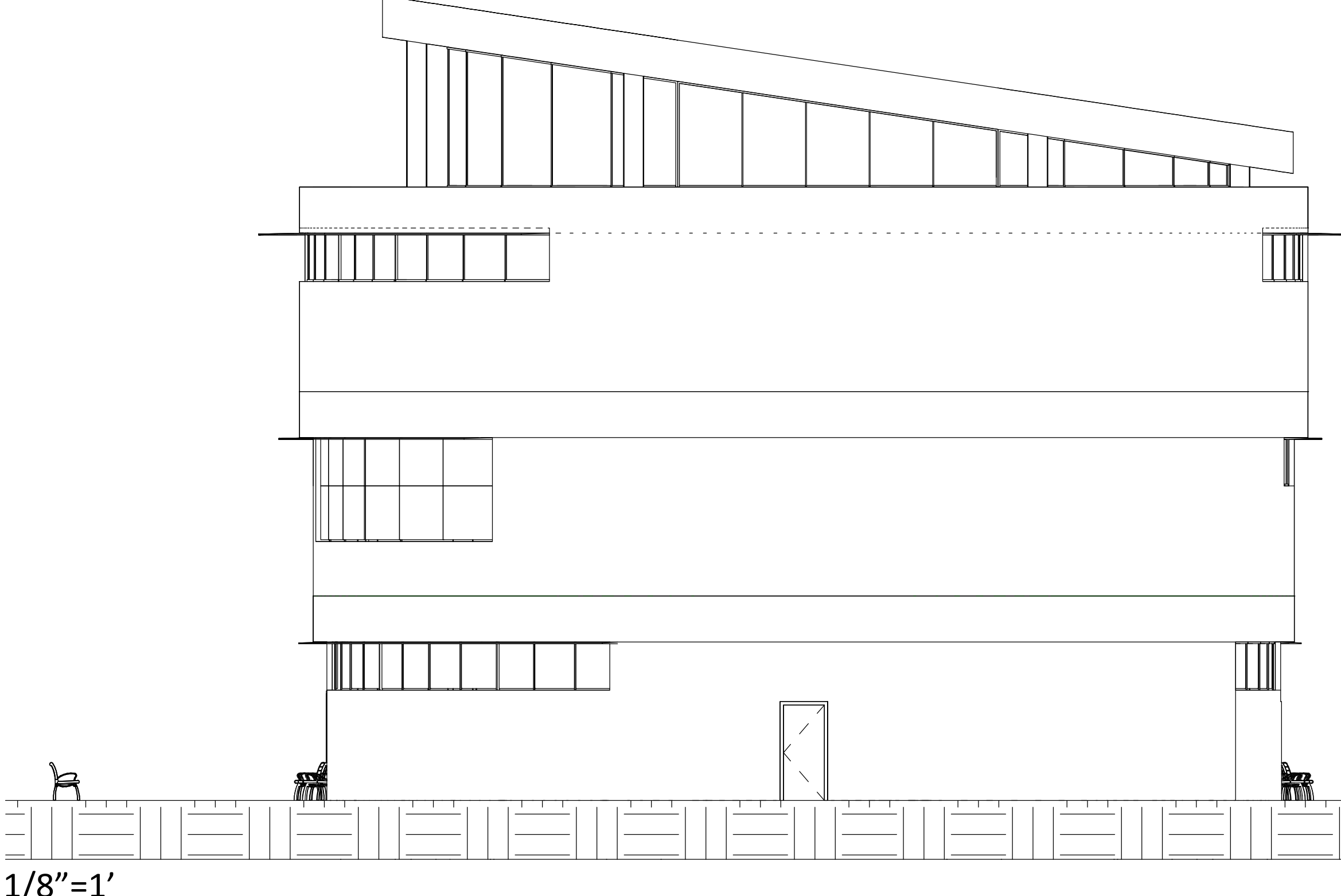
3/32"=1'

North Elevation



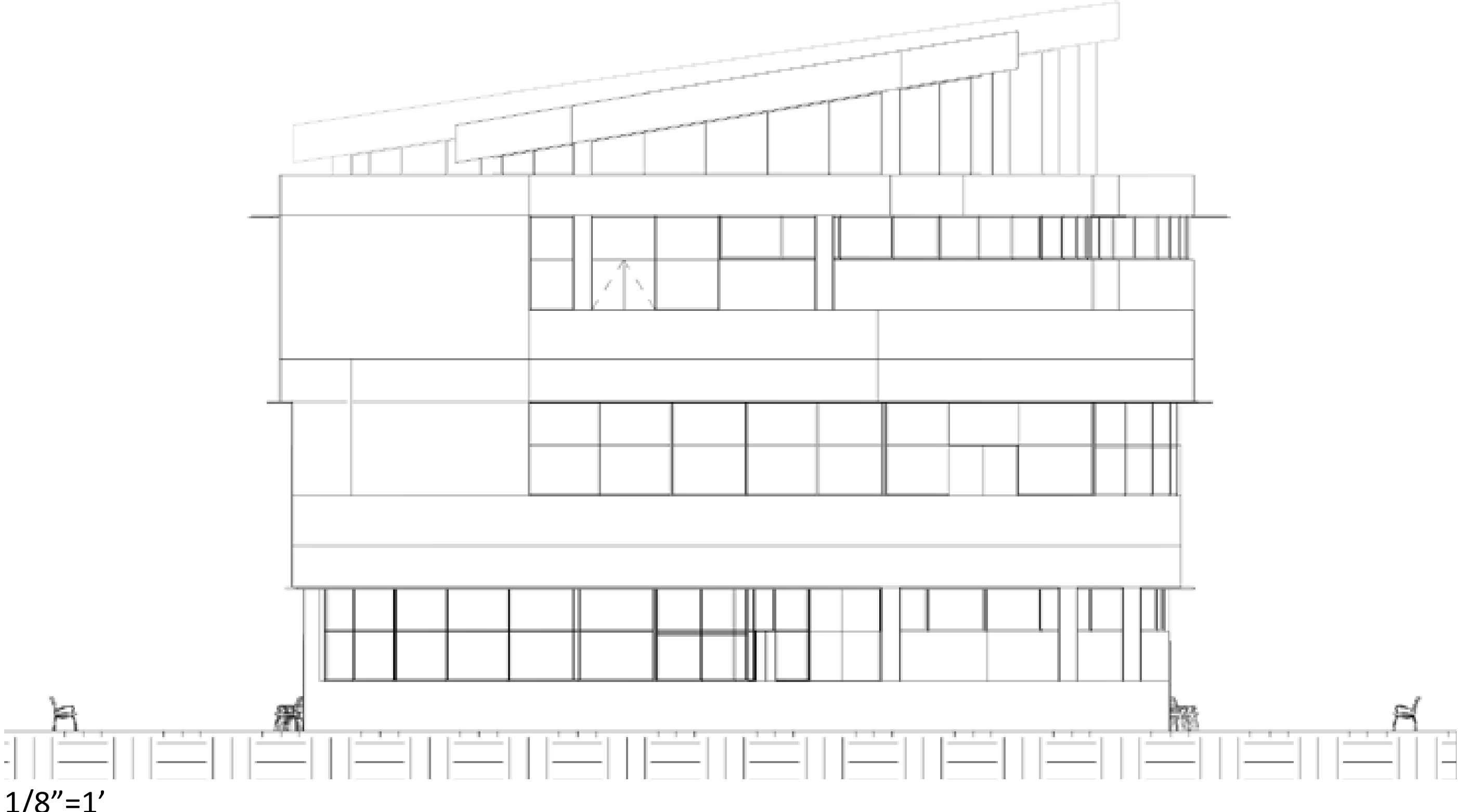
3/32"=1'

East Elevation



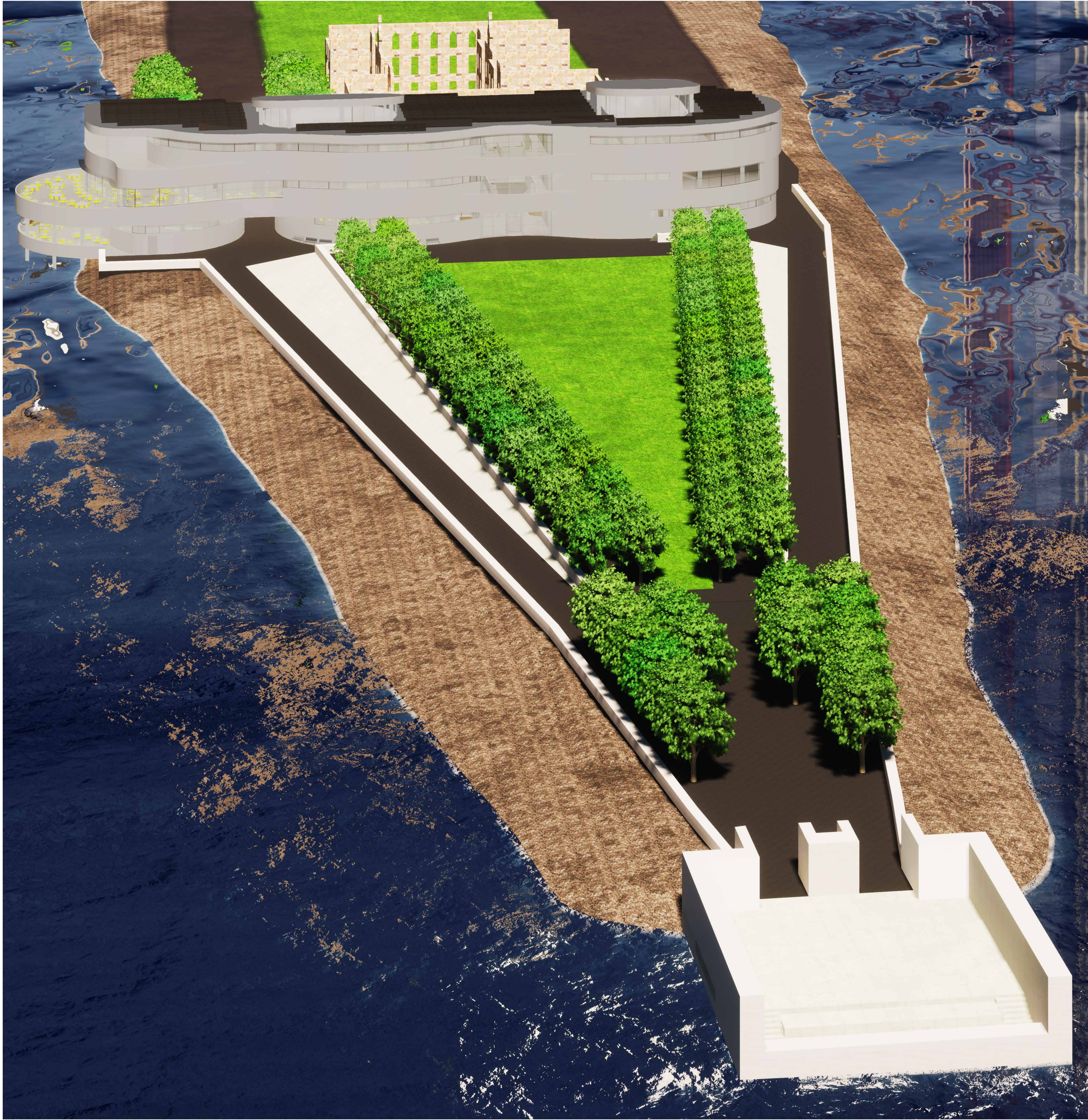
1/8"=1'

West Elevation

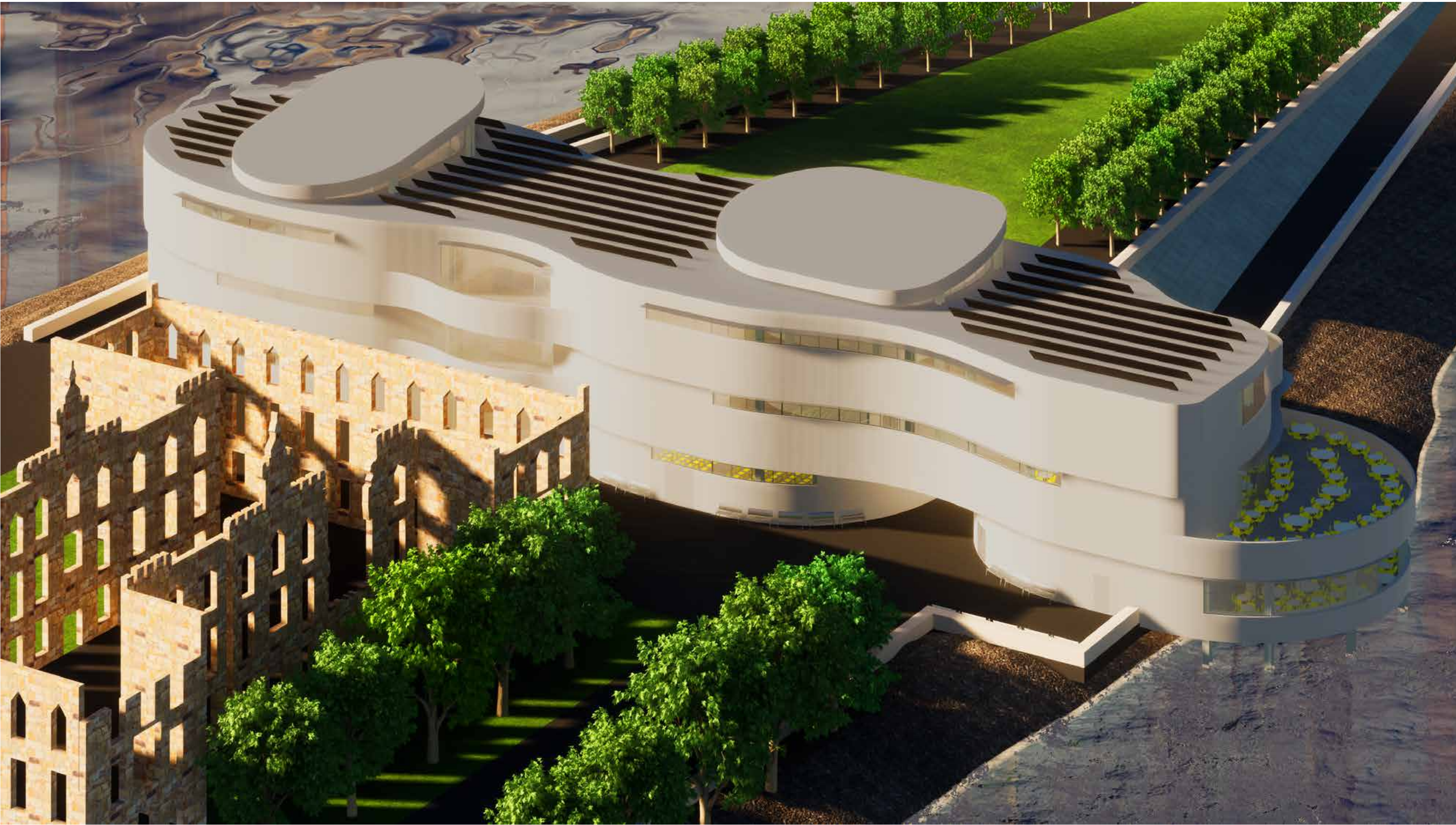


1/8"=1'

3D View 1



3D View 2



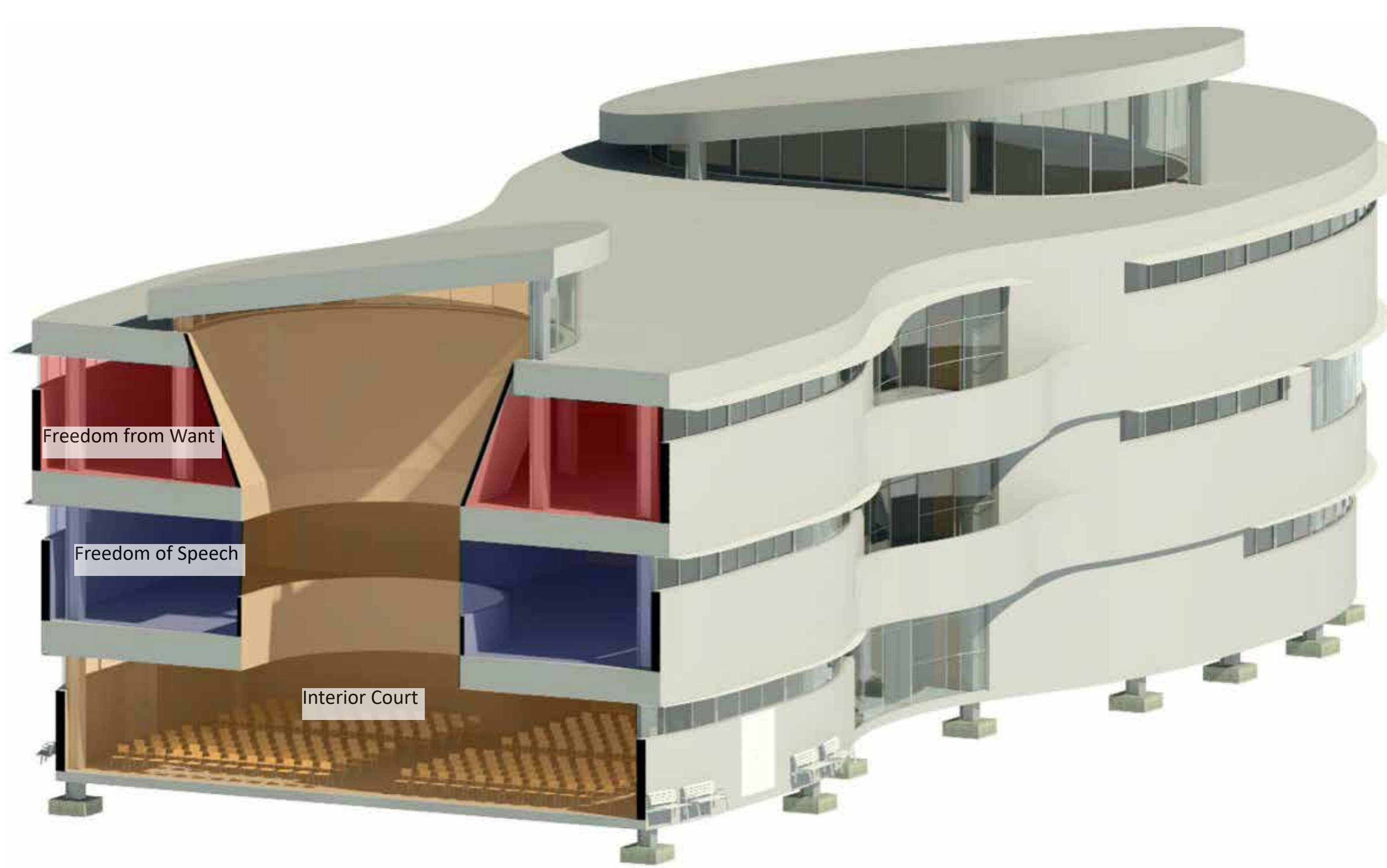
View From East



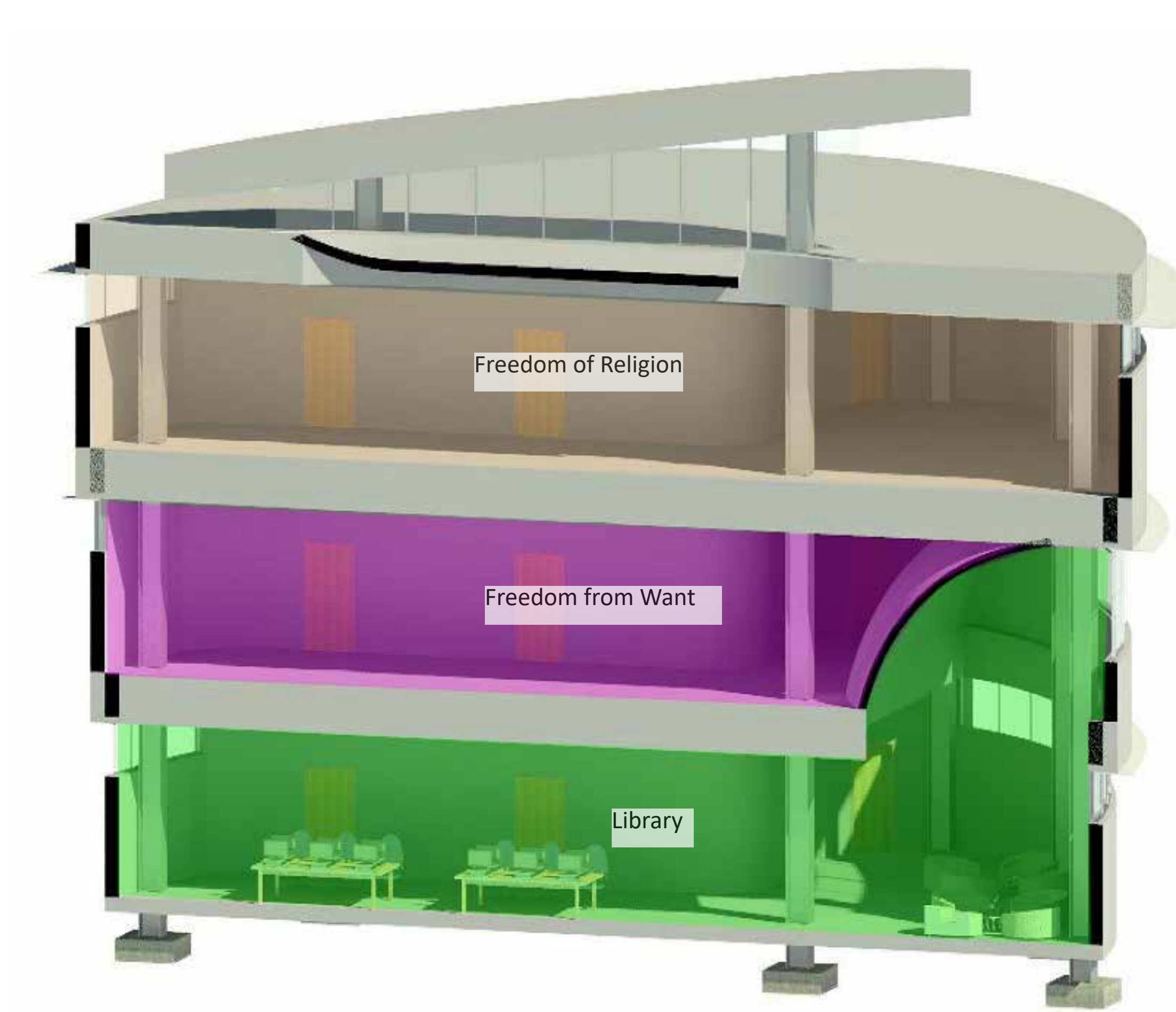
View From West



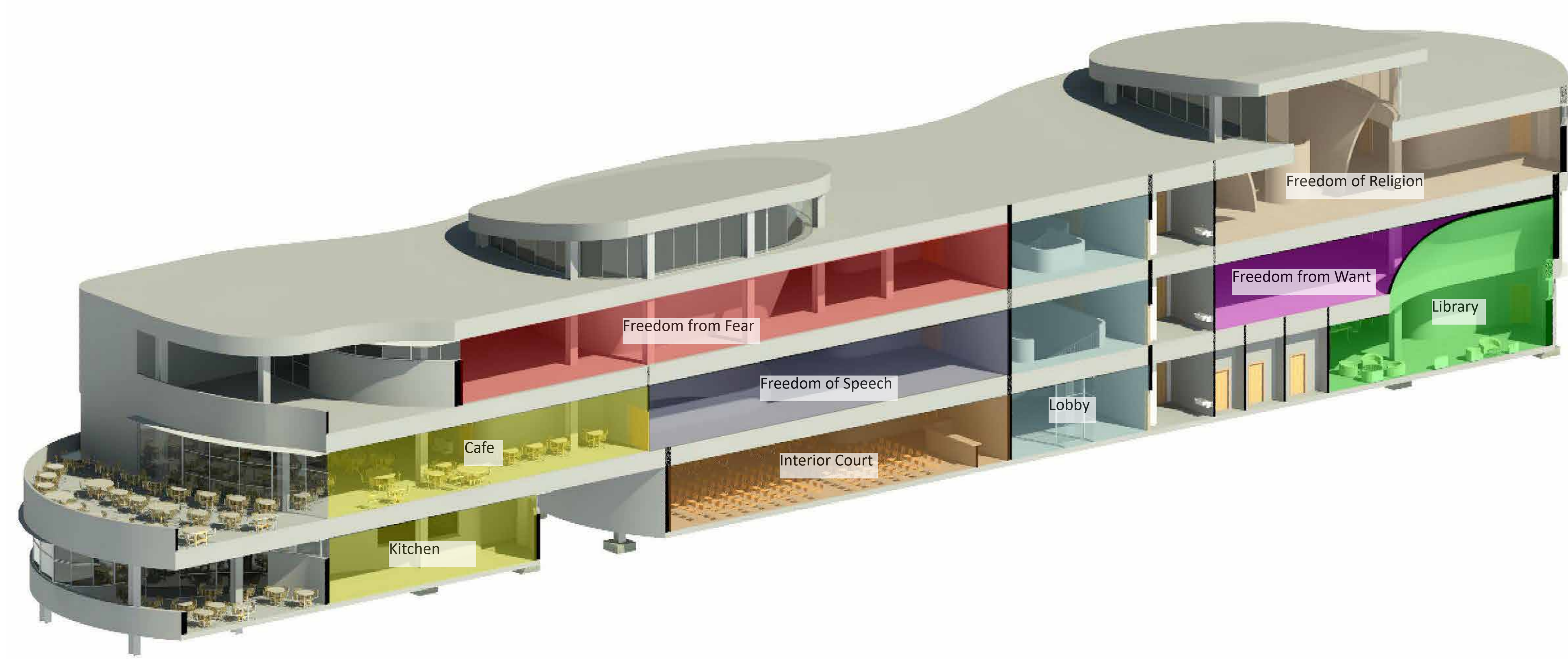
Short Section 1



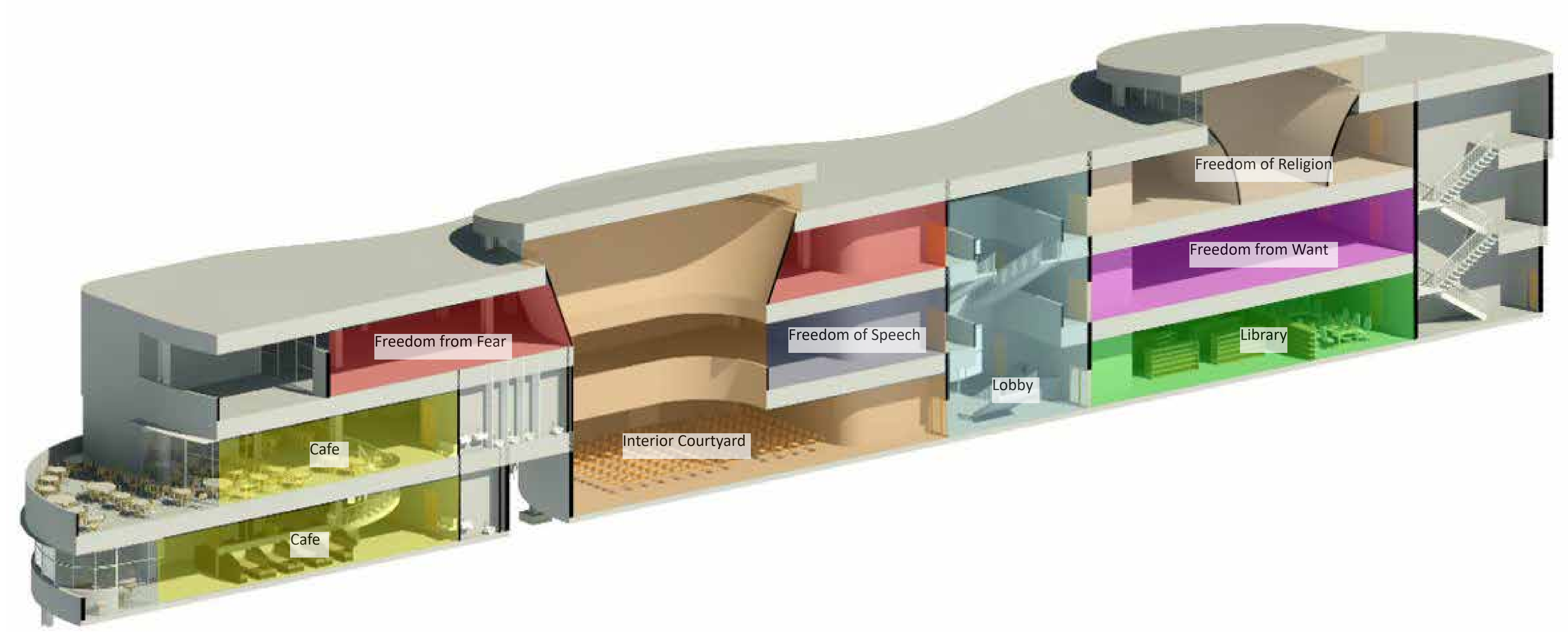
Short Section 2



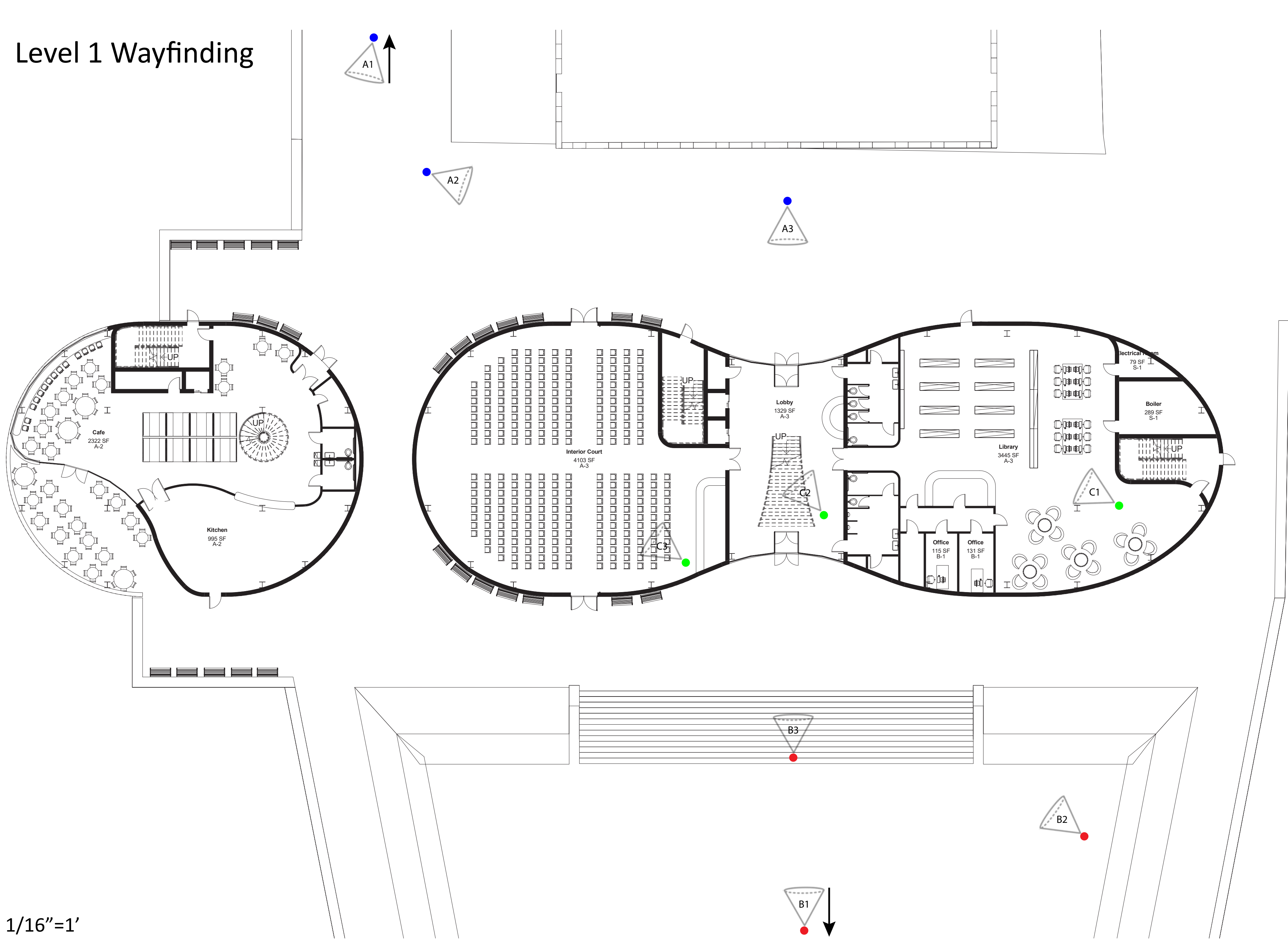
Long Section 1



Long Section 2



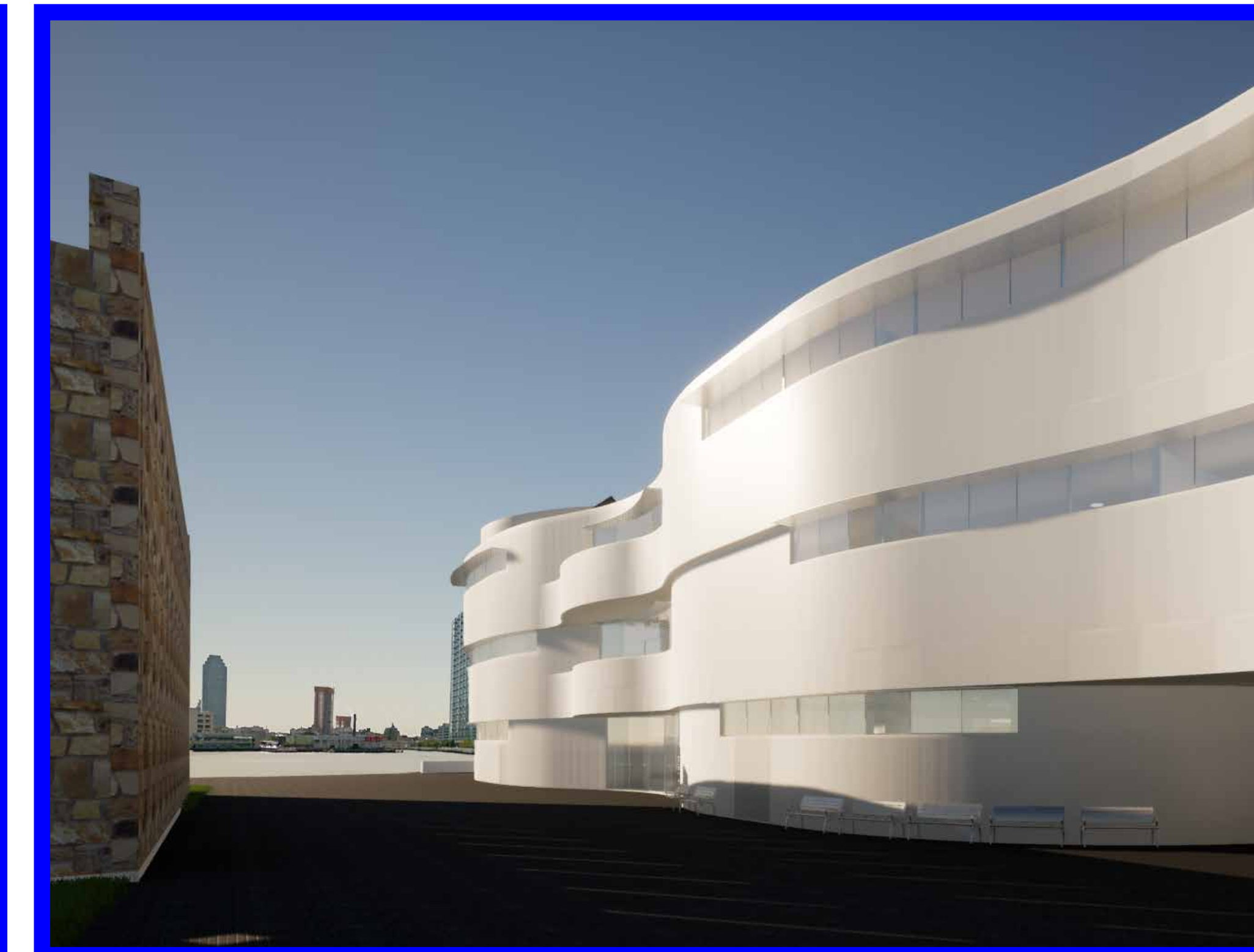
Level 1 Wayfinding



A1



A2



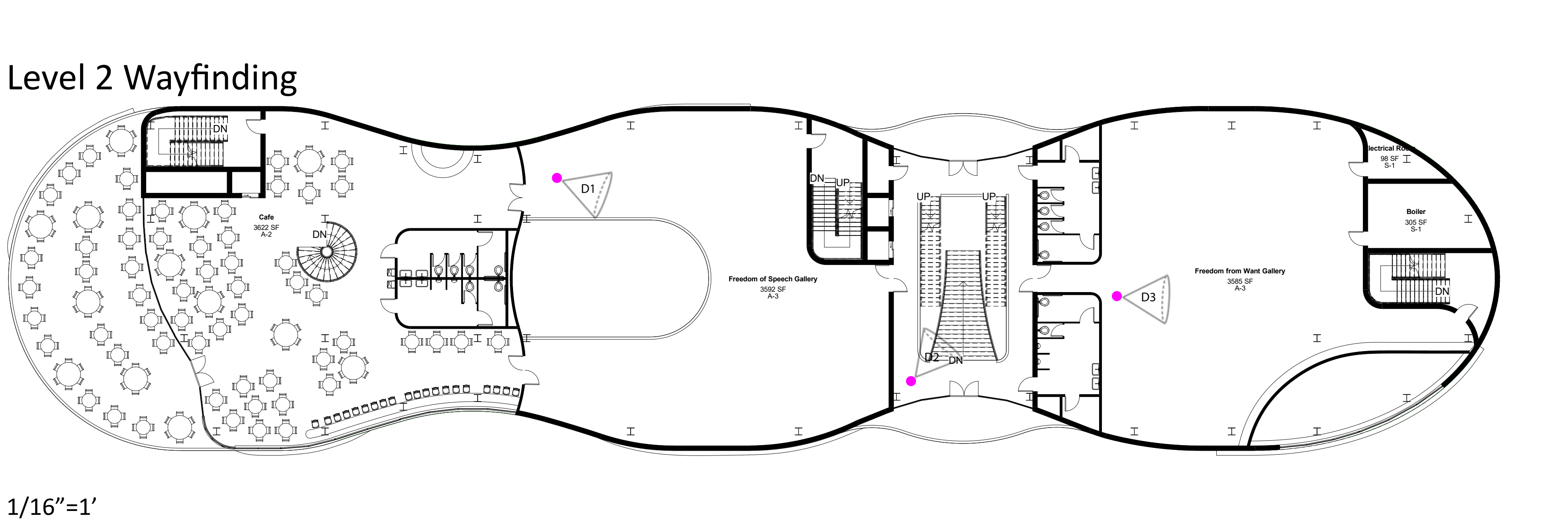
C1



C2



Level 2 Wayfinding



B1



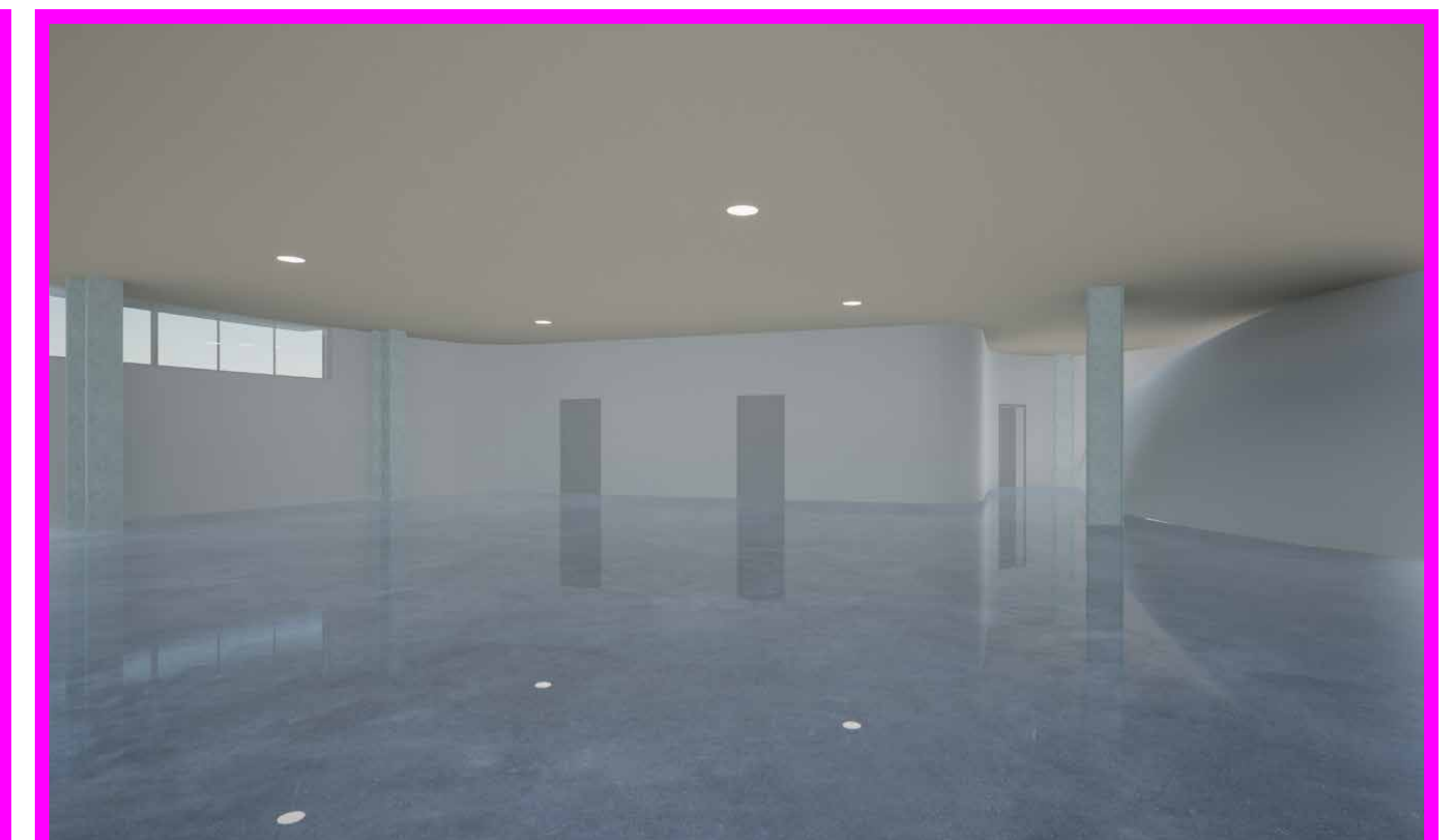
B2



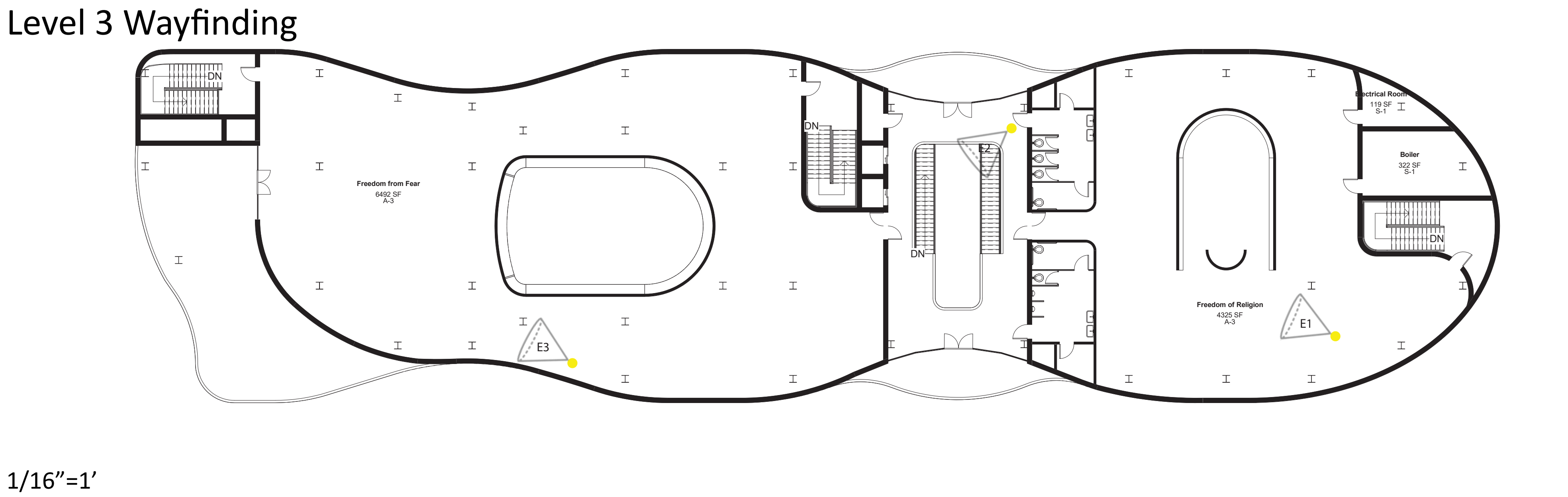
D2



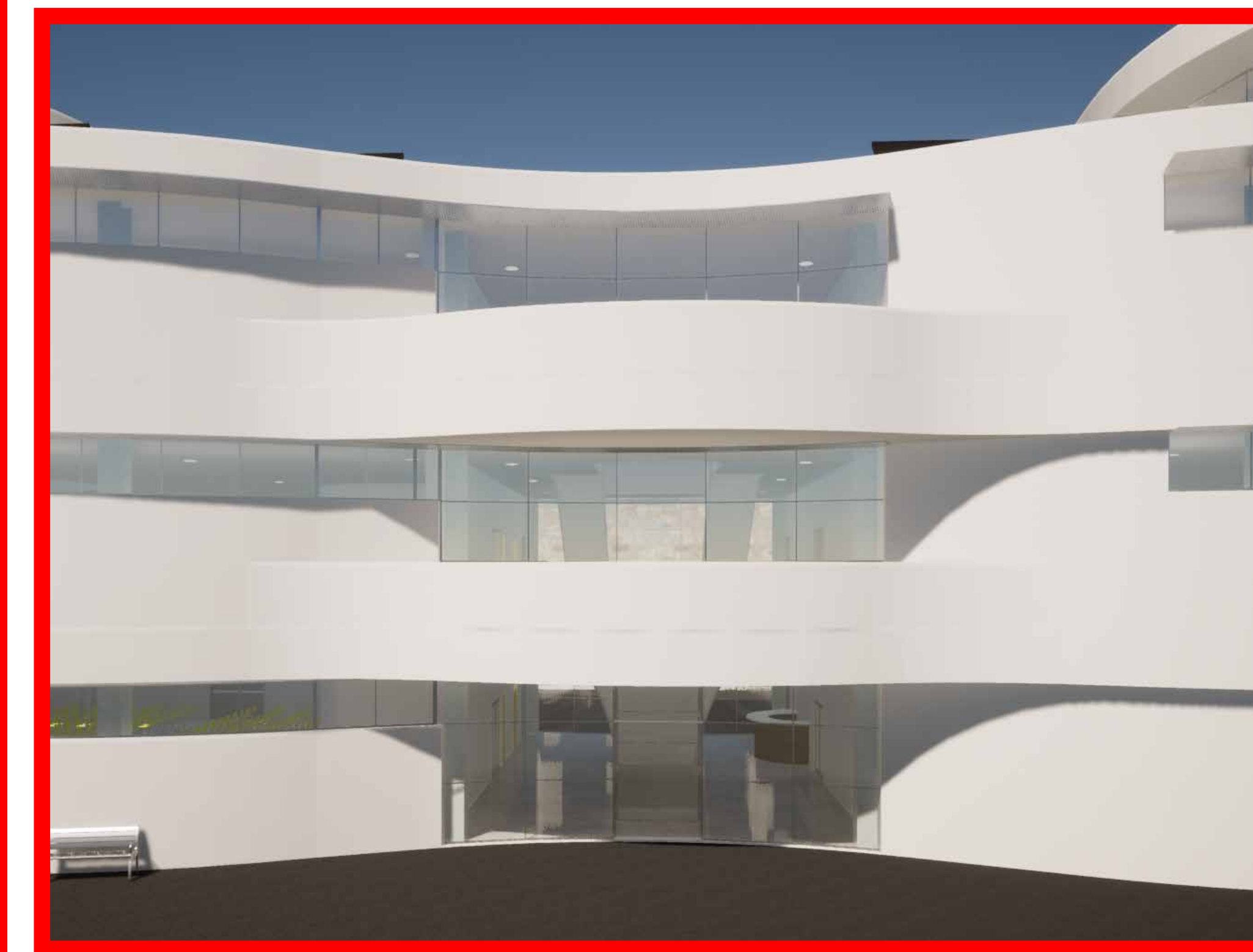
D3



Level 3 Wayfinding



B3



E1



E2



E3



Freedom of Speech



Freedom of Religion



Freedom from Want



Freedom from Fear



Lobby



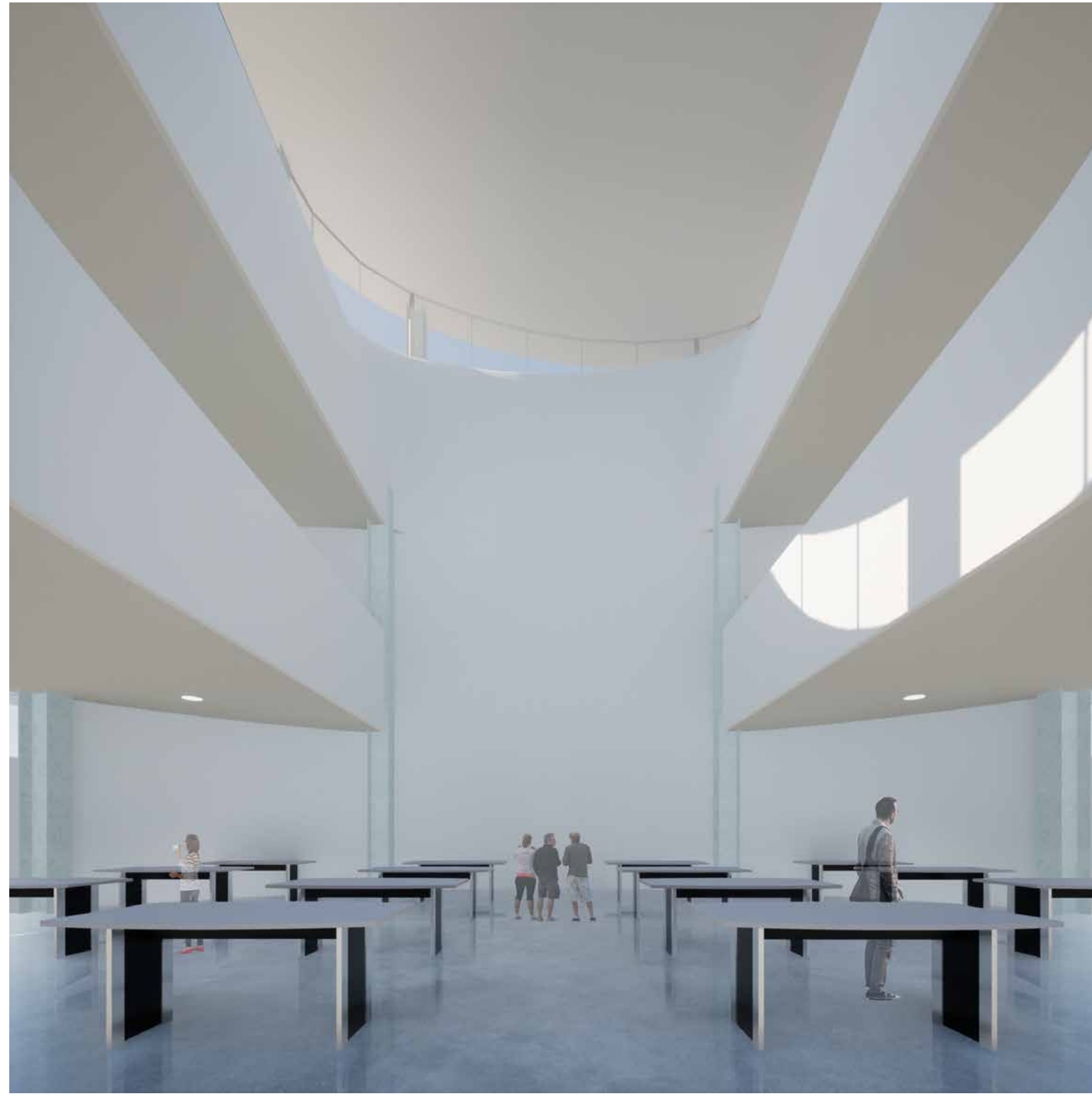
Interior Court Use 1



Interior Court Use 2



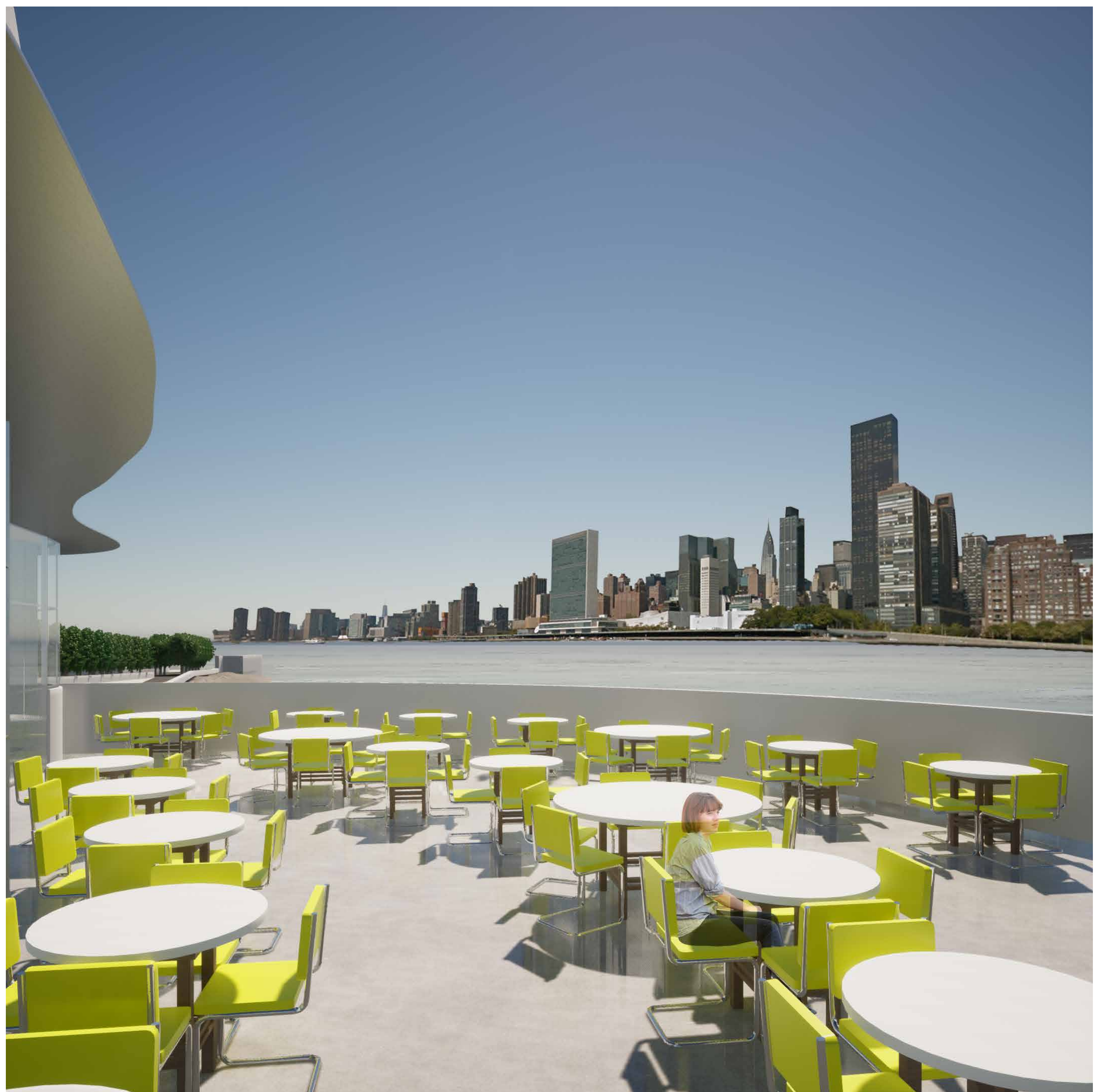
Interior Court Use 3



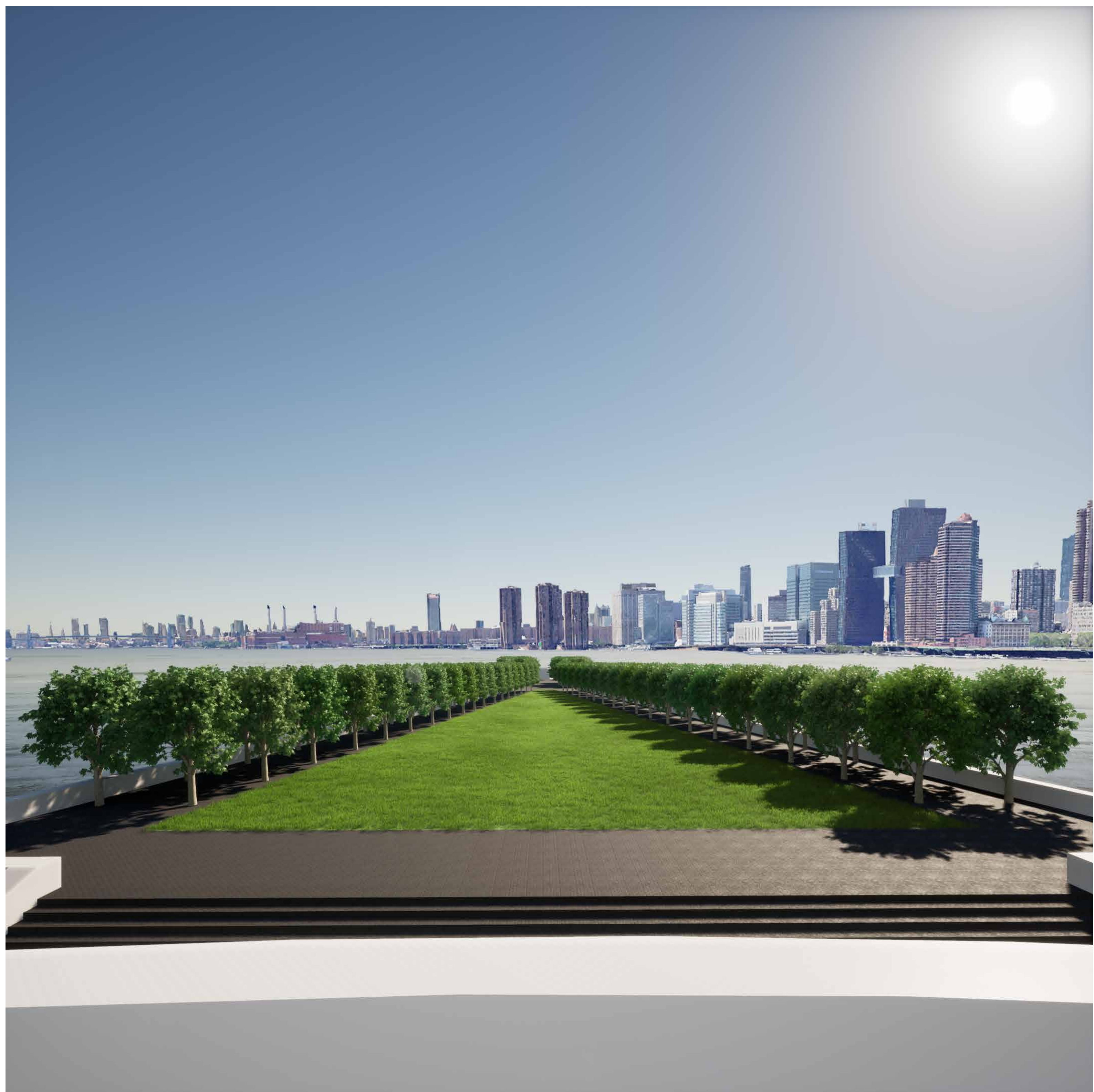
Cafe Views



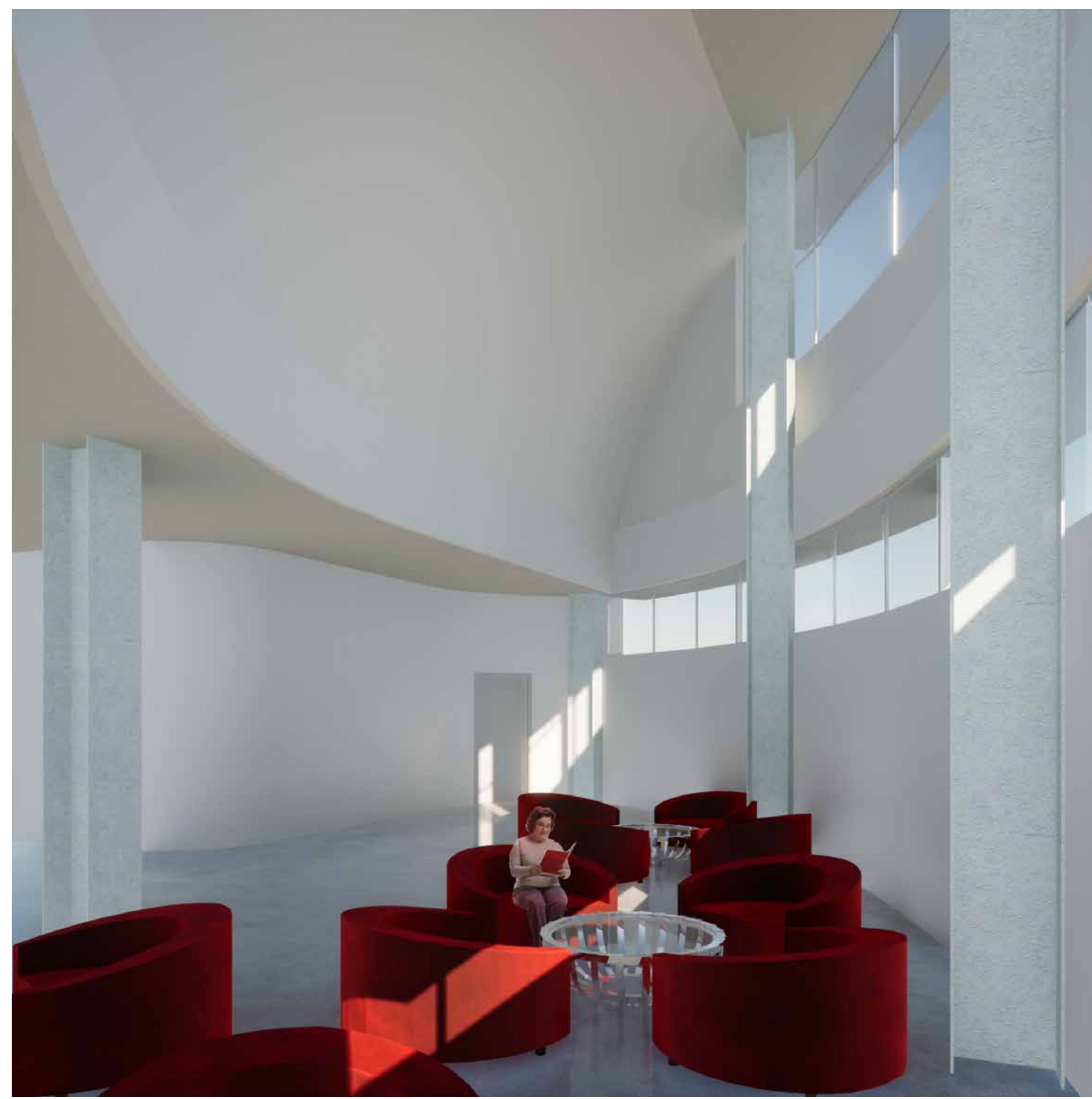
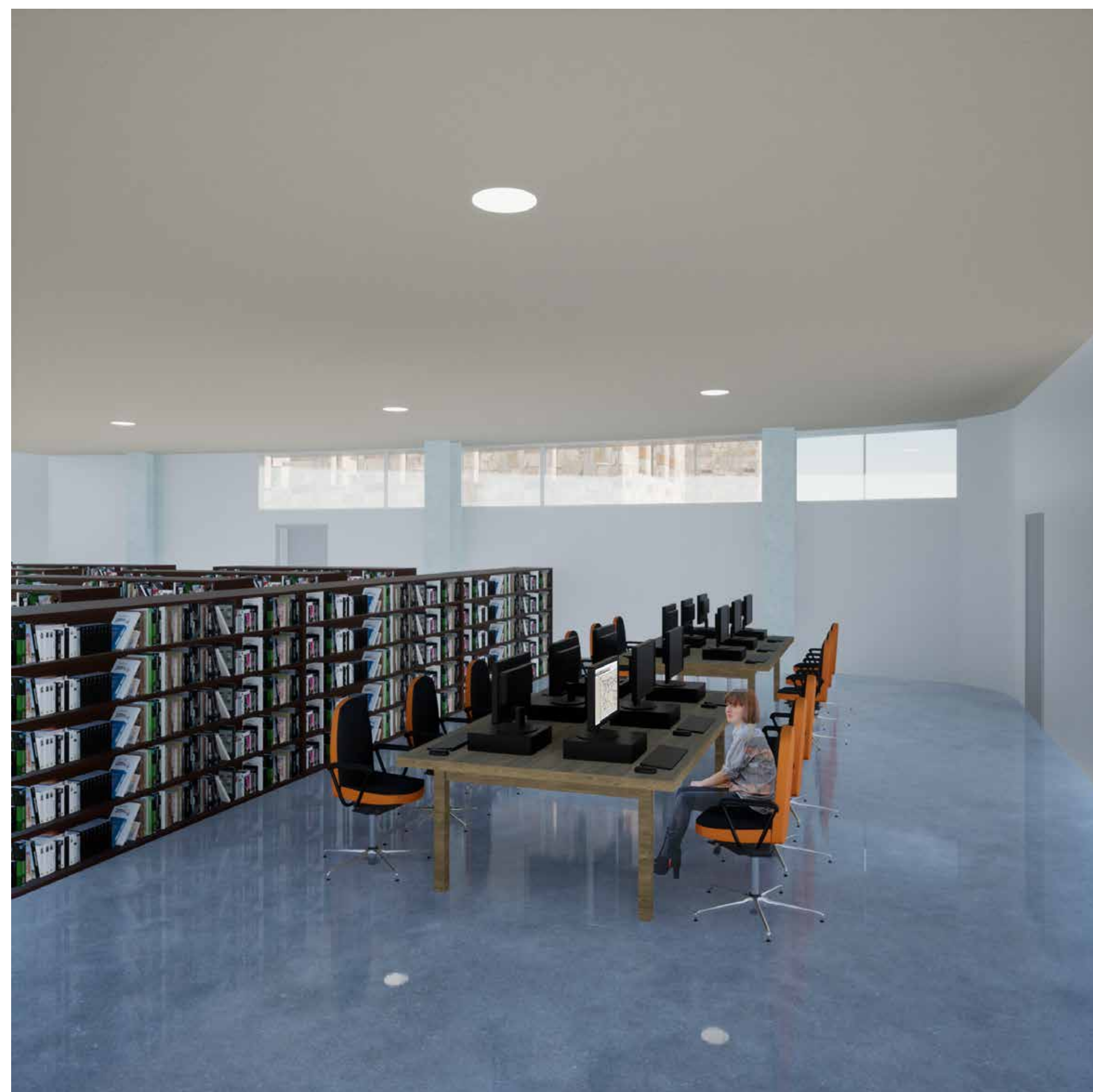
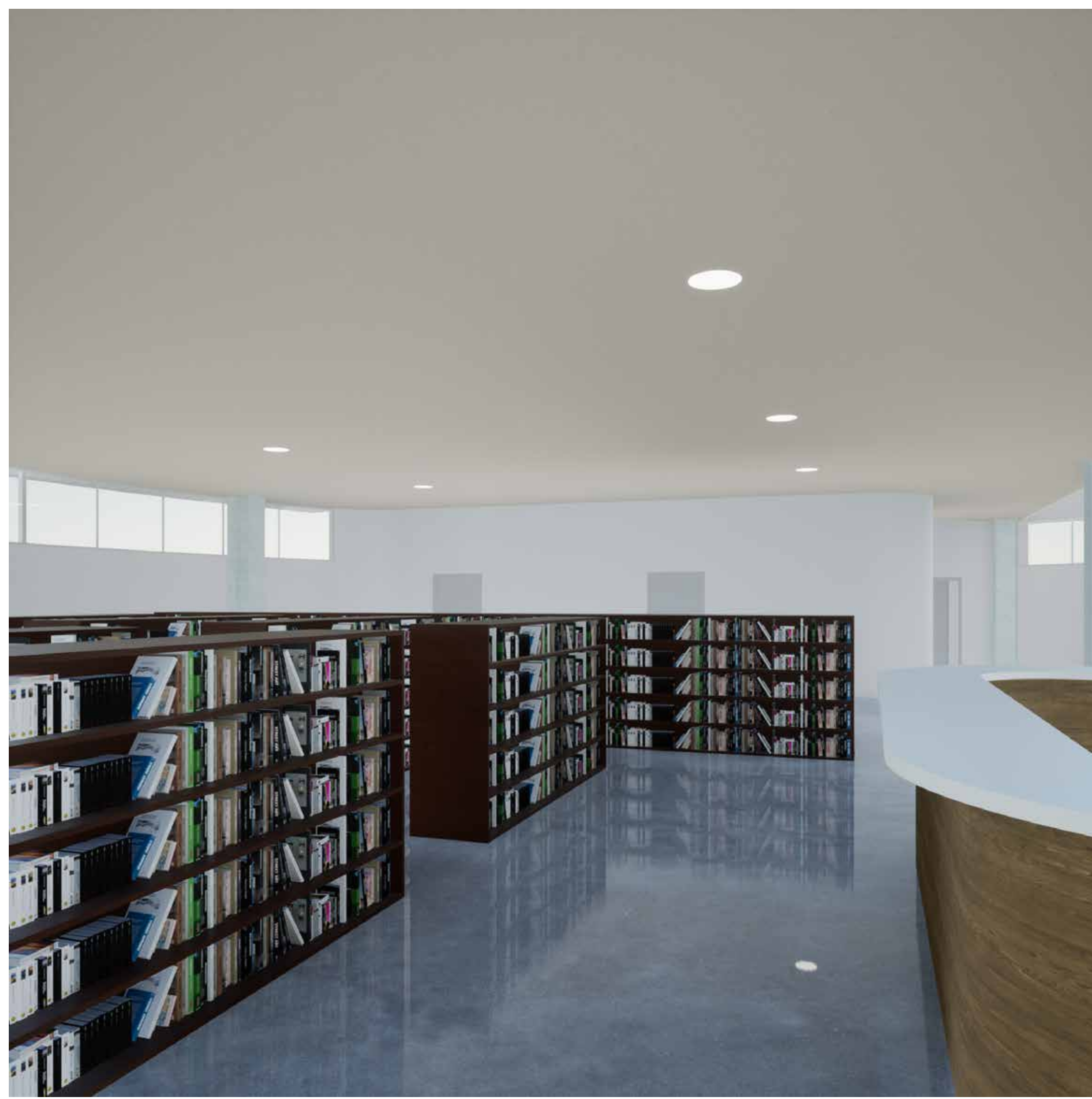
Outdoor Cafe



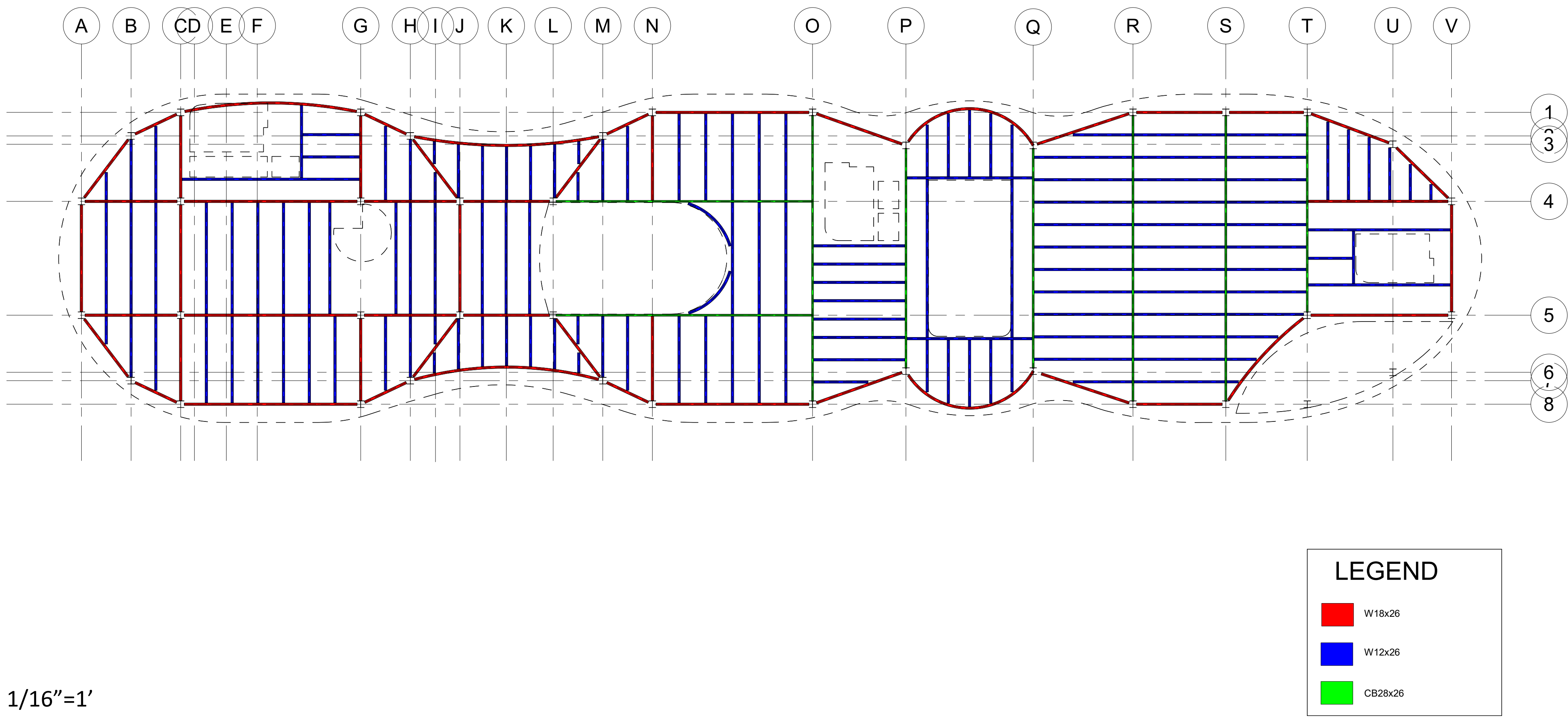
Balcony Facing Memorial



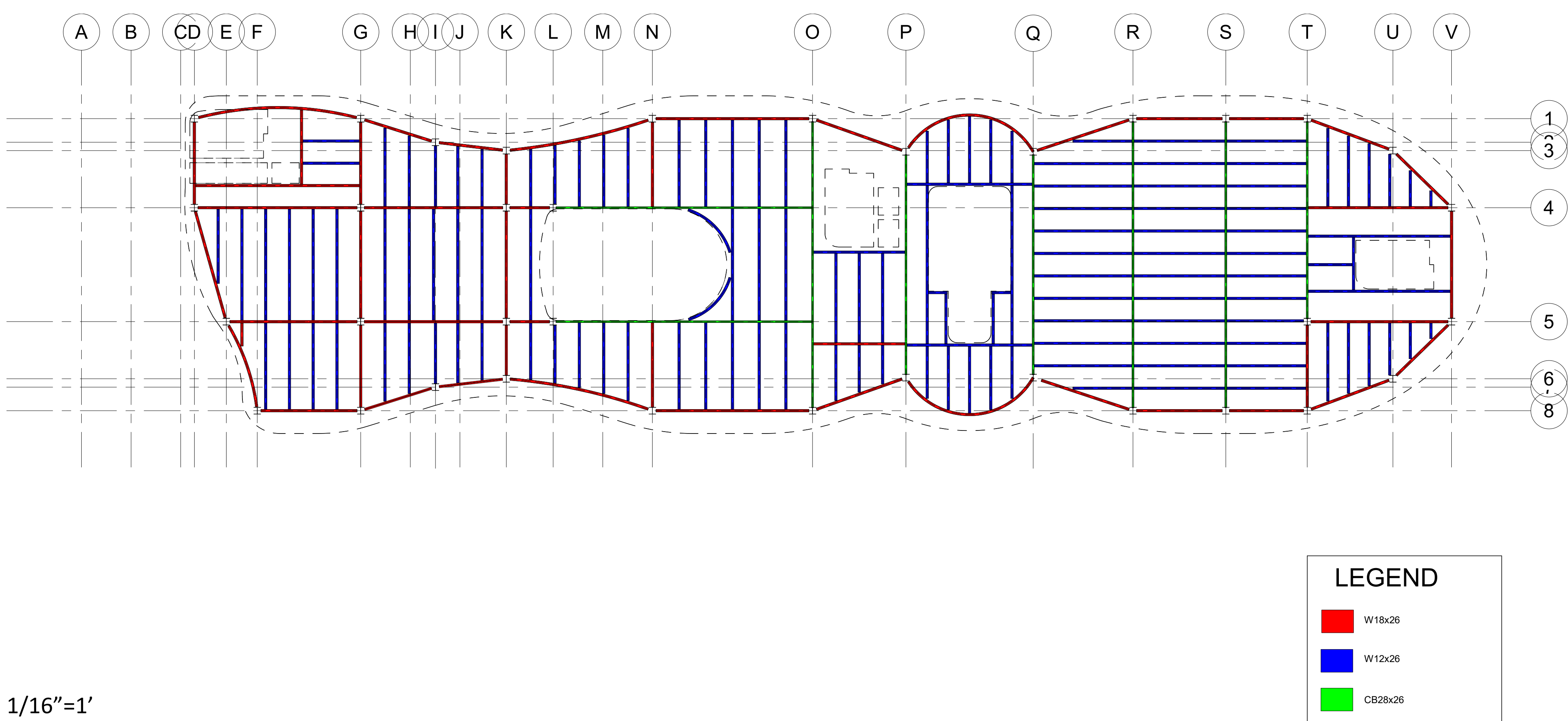
Library Views



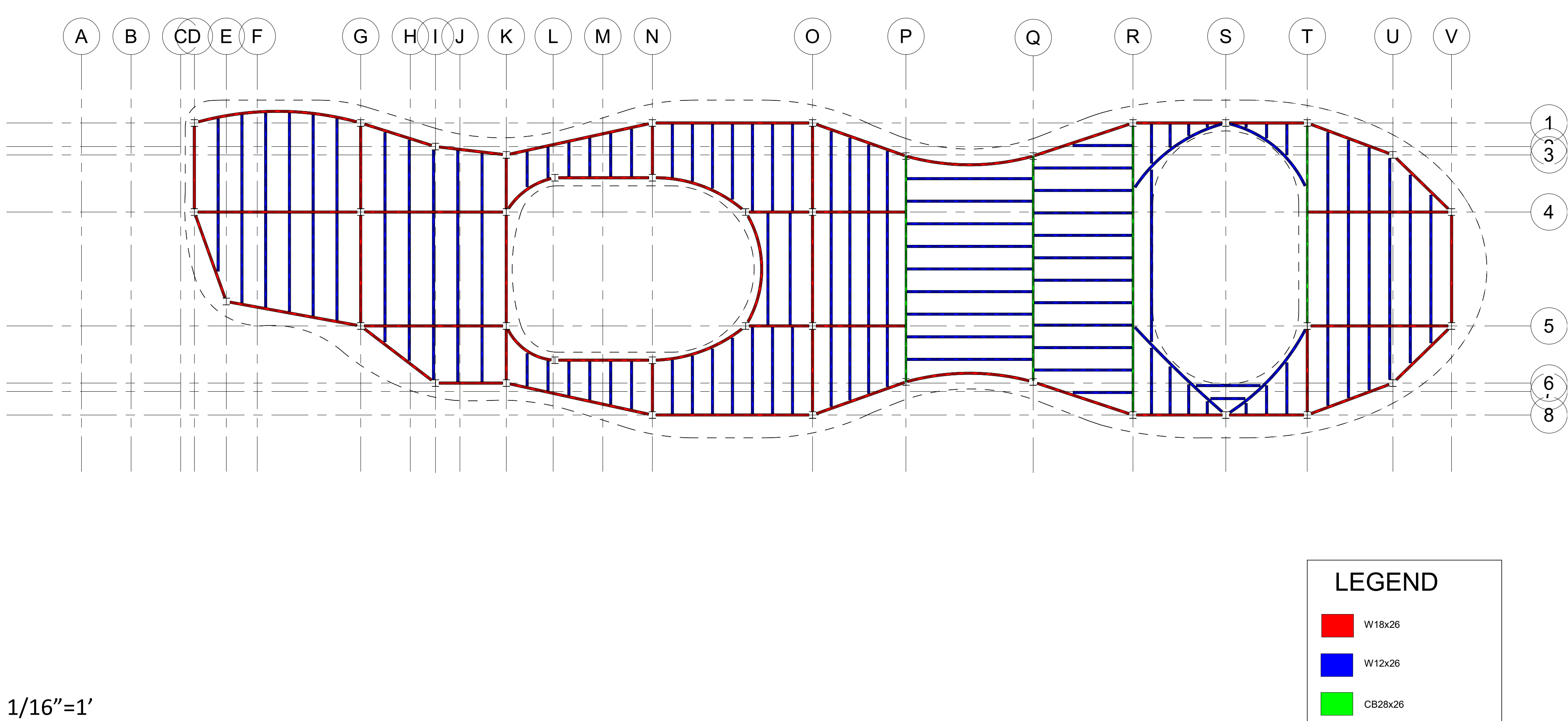
Level 2 Floor Structure



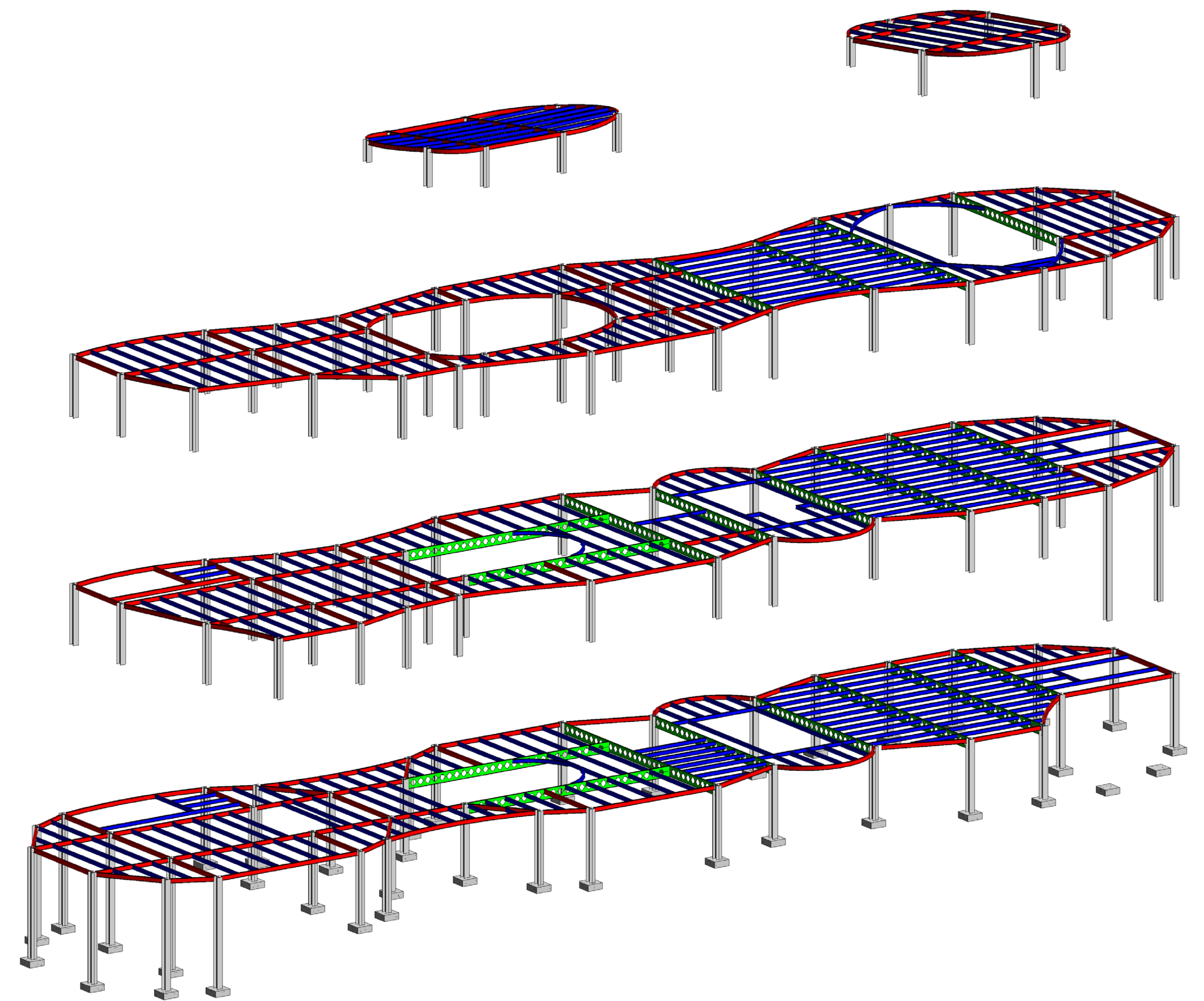
Level 3 Floor Structure



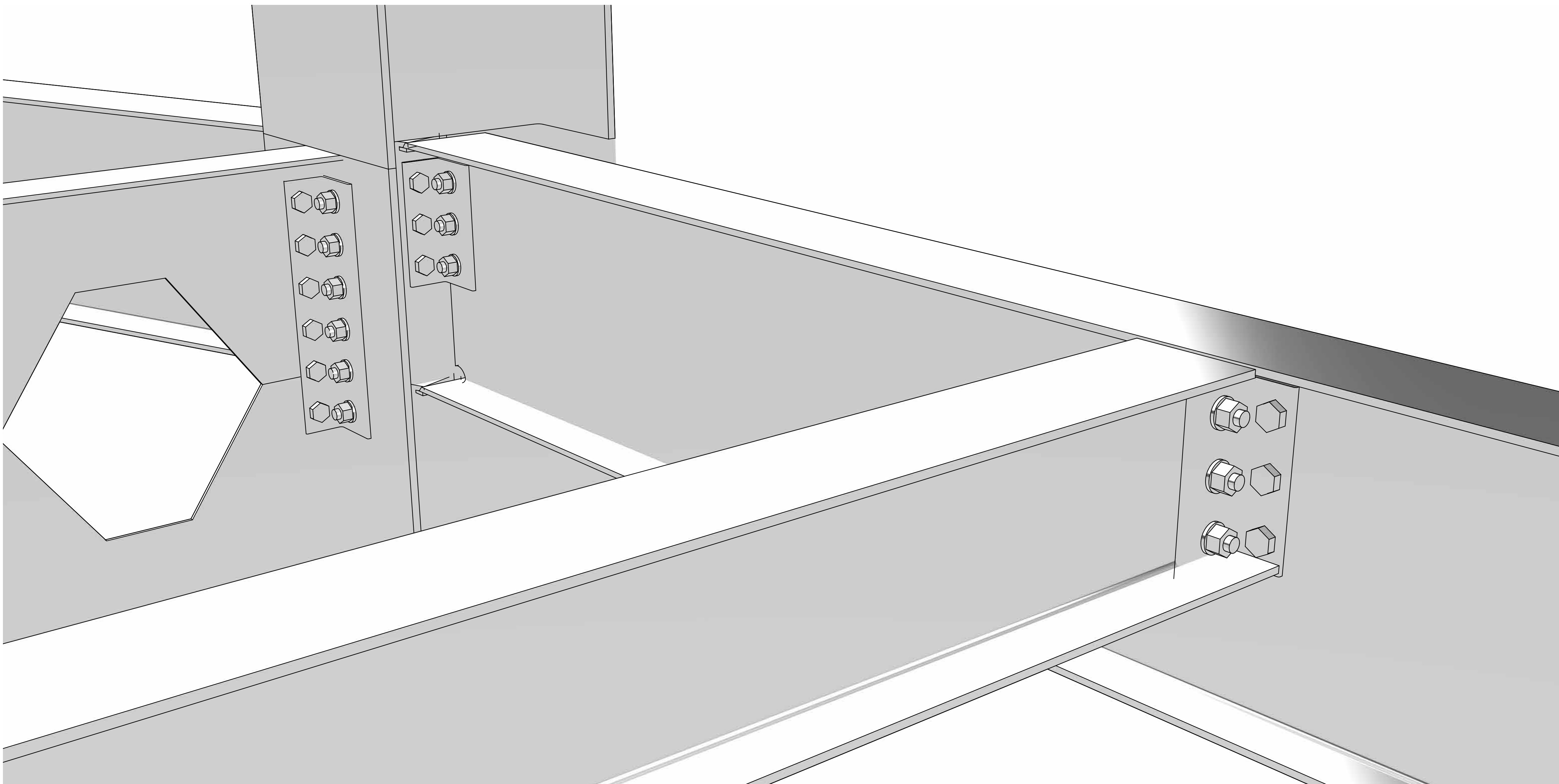
Roof Structure



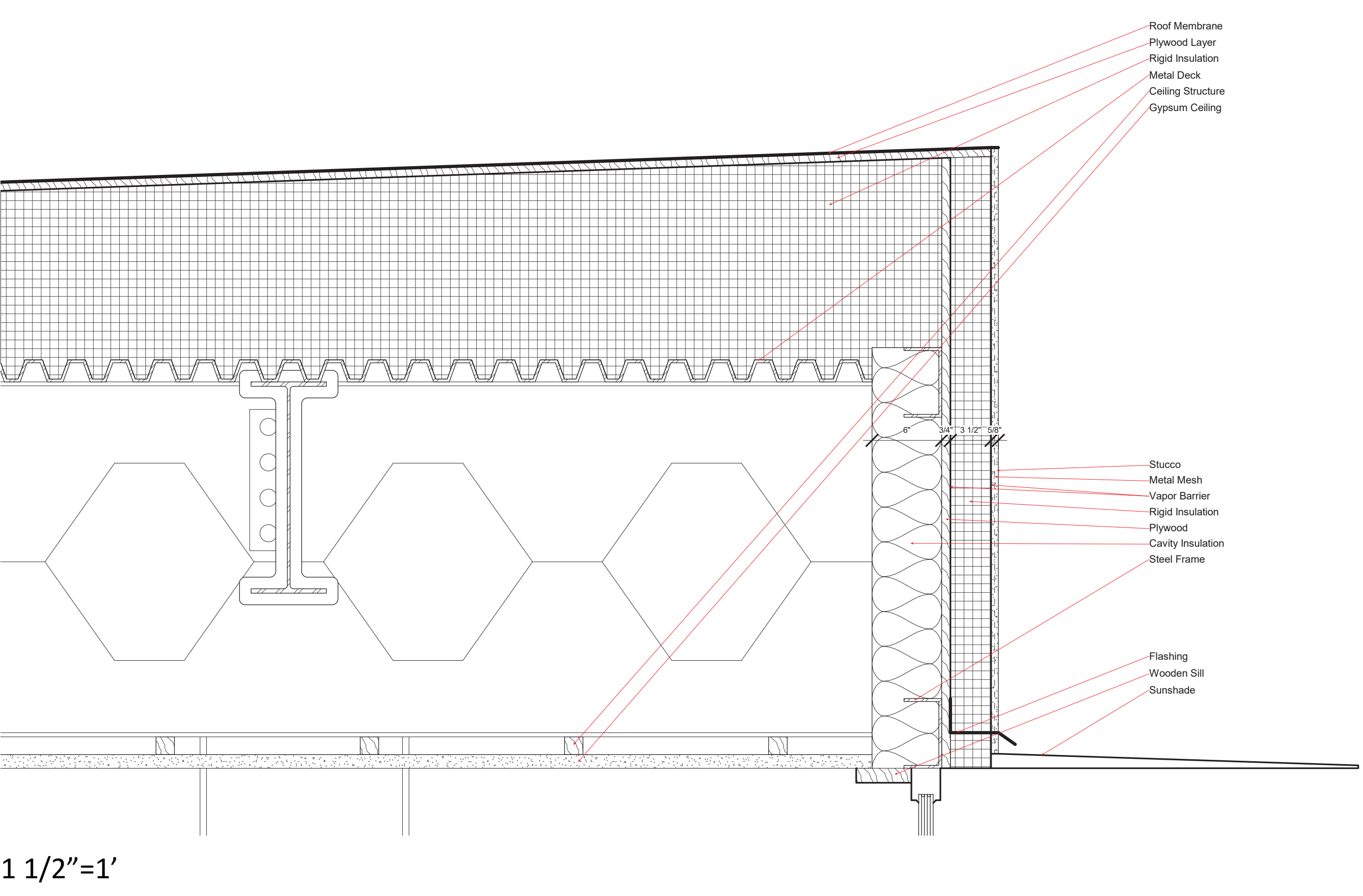
3D Structure



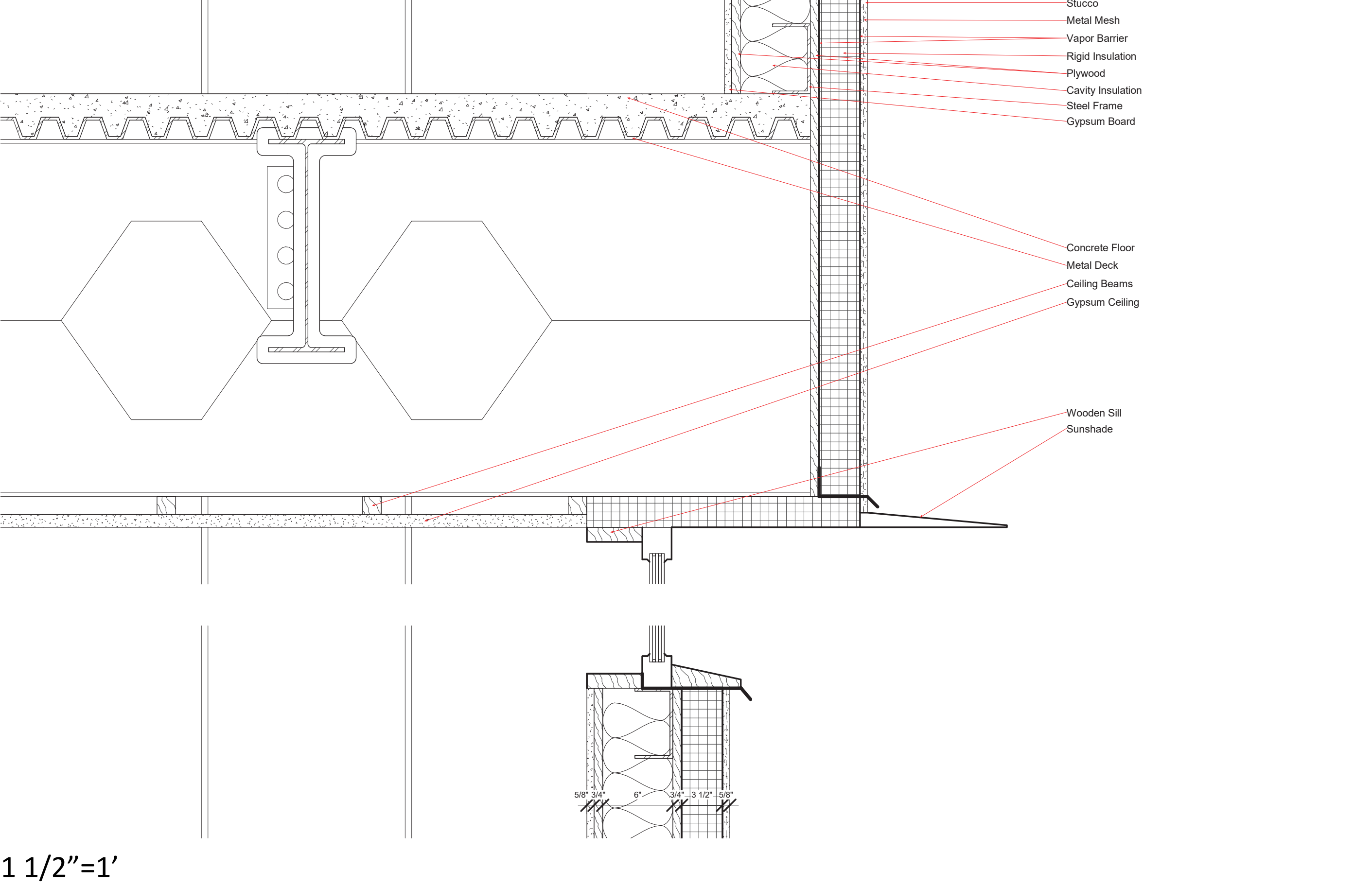
Lateral Bracing



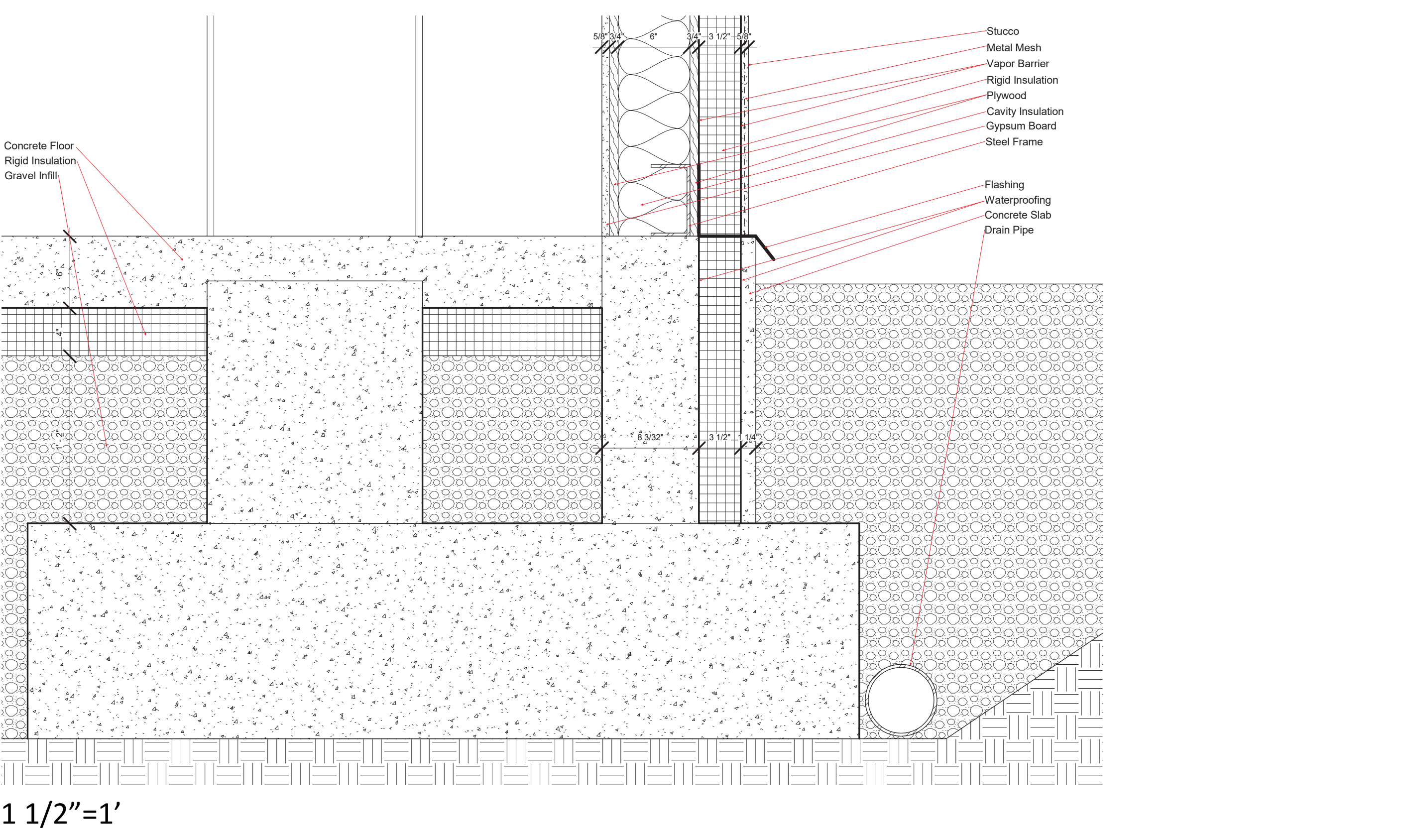
Wall Section Detail 3



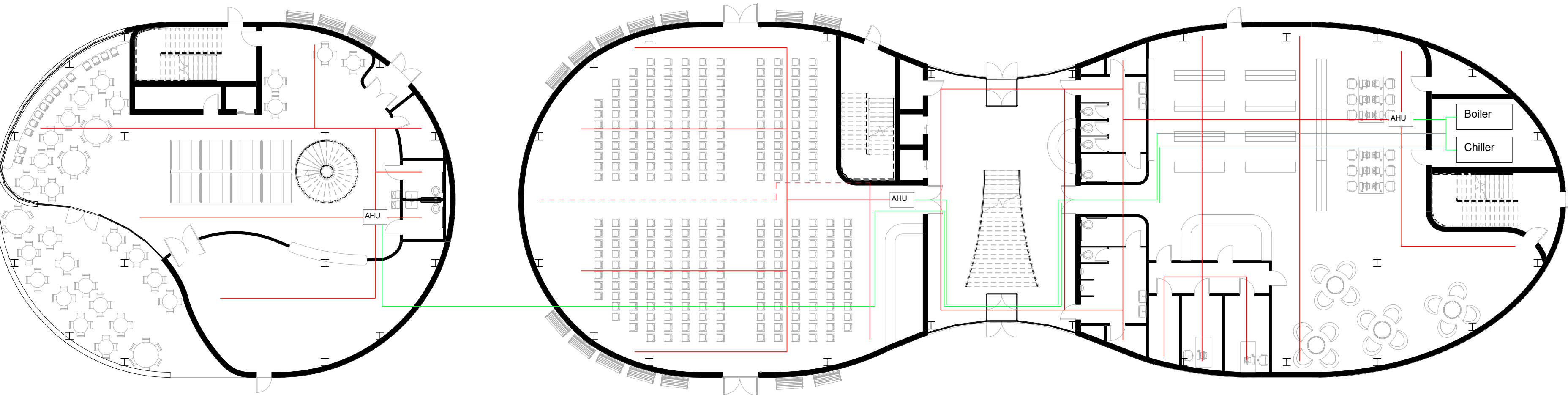
Wall Section Detail 2



Wall Section Detail 1

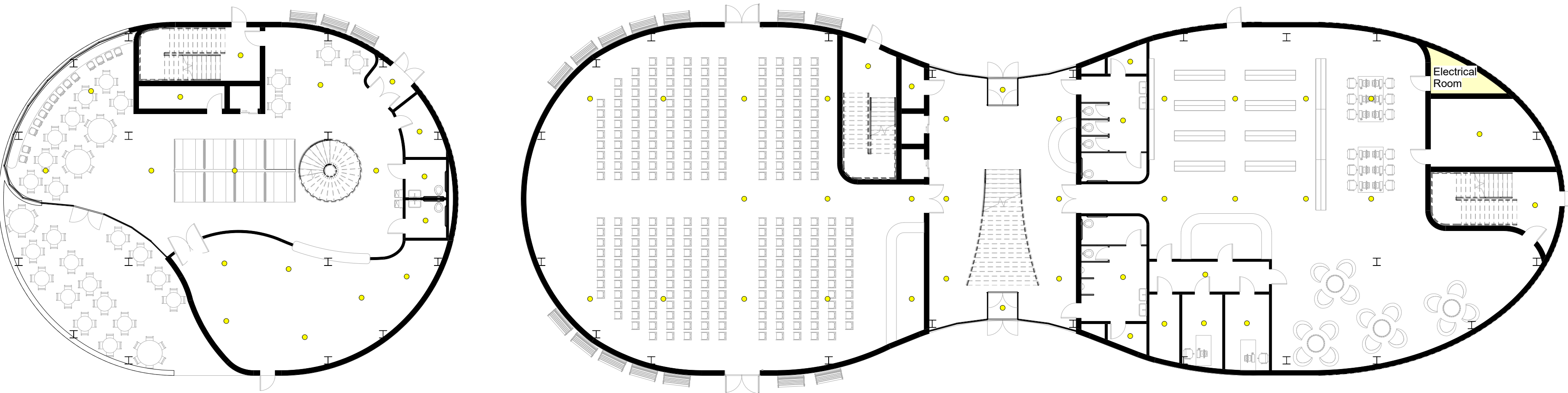


Level 1 HVAC



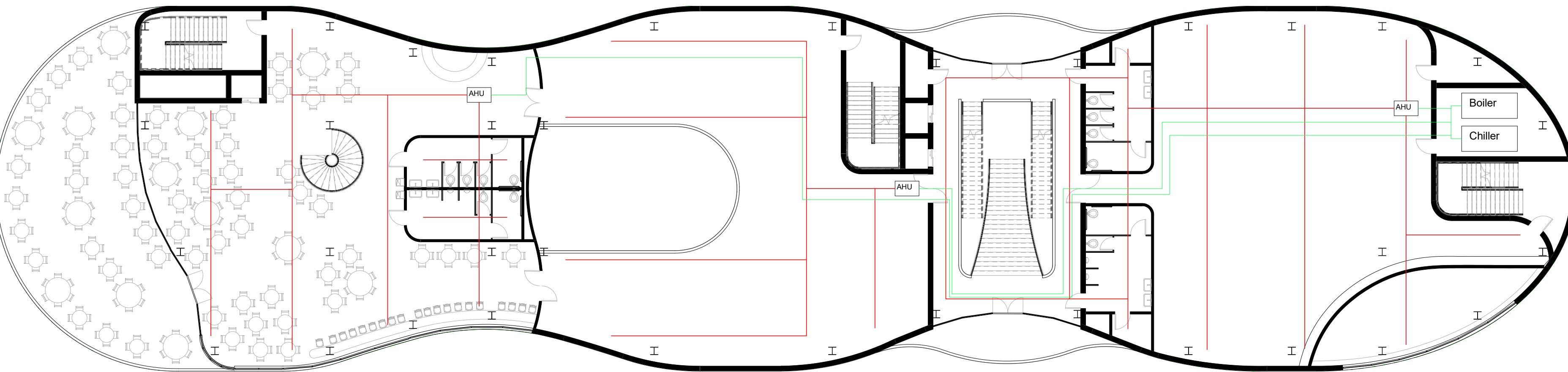
1/16"=1'

Level 1 Lights and Electrical Room



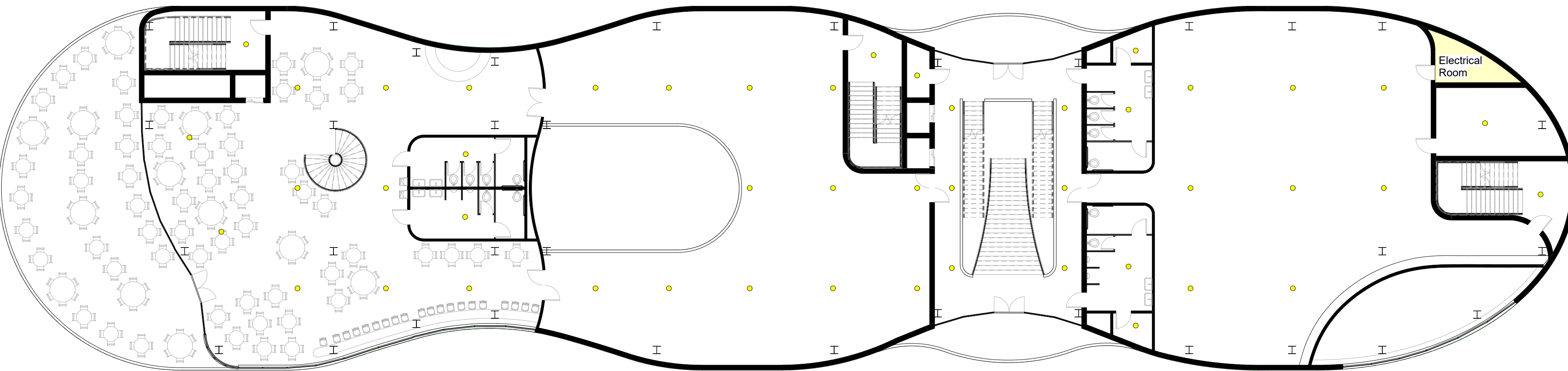
1/16"=1'

Level 2 HVAC



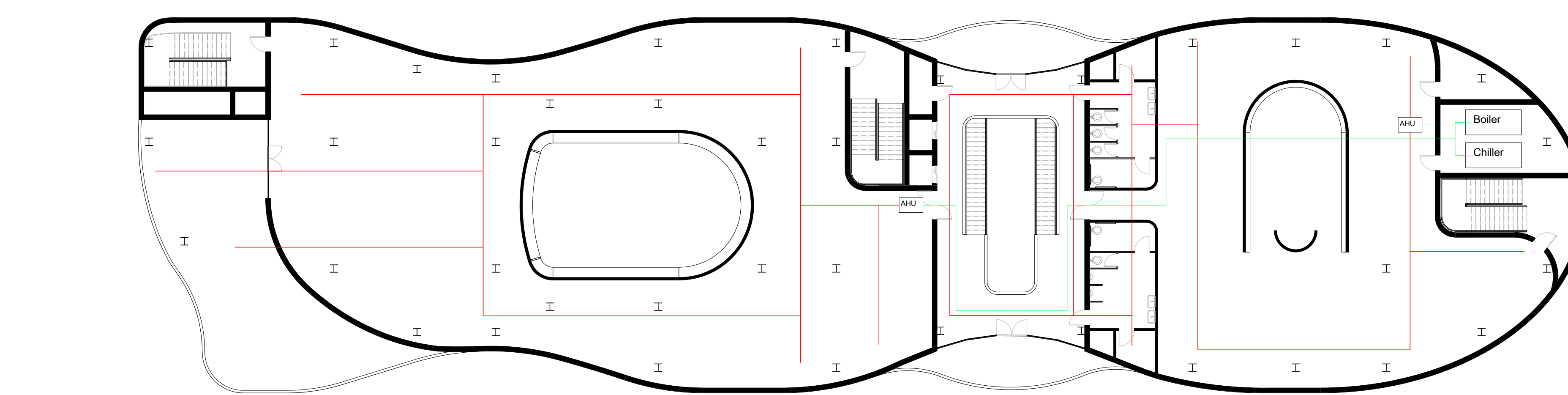
1/16"=1'

Level 2 Lights and Electrical Room



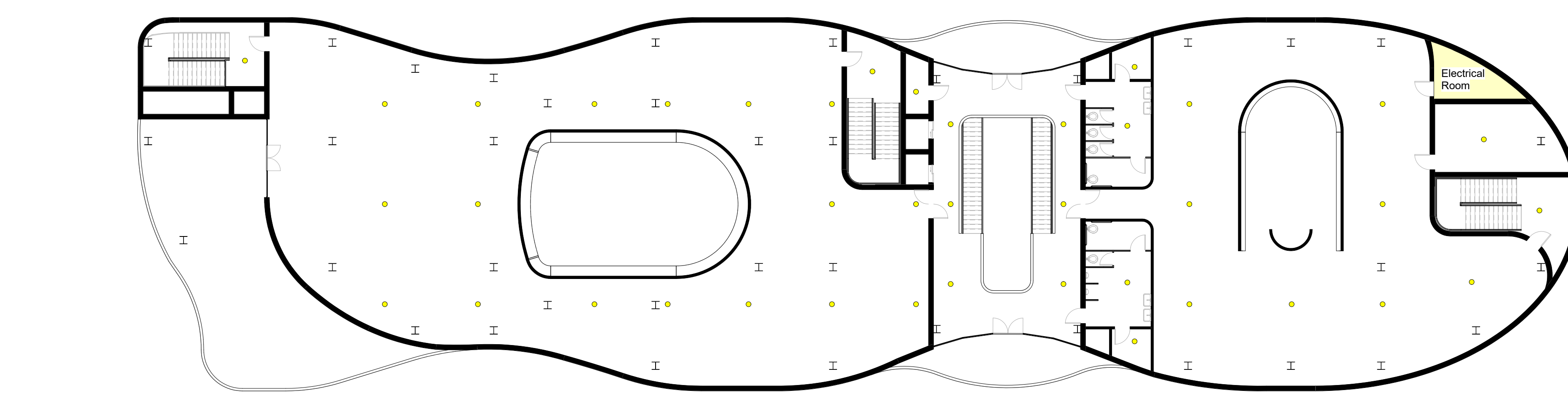
1/16"=1'

Level 3 HVAC



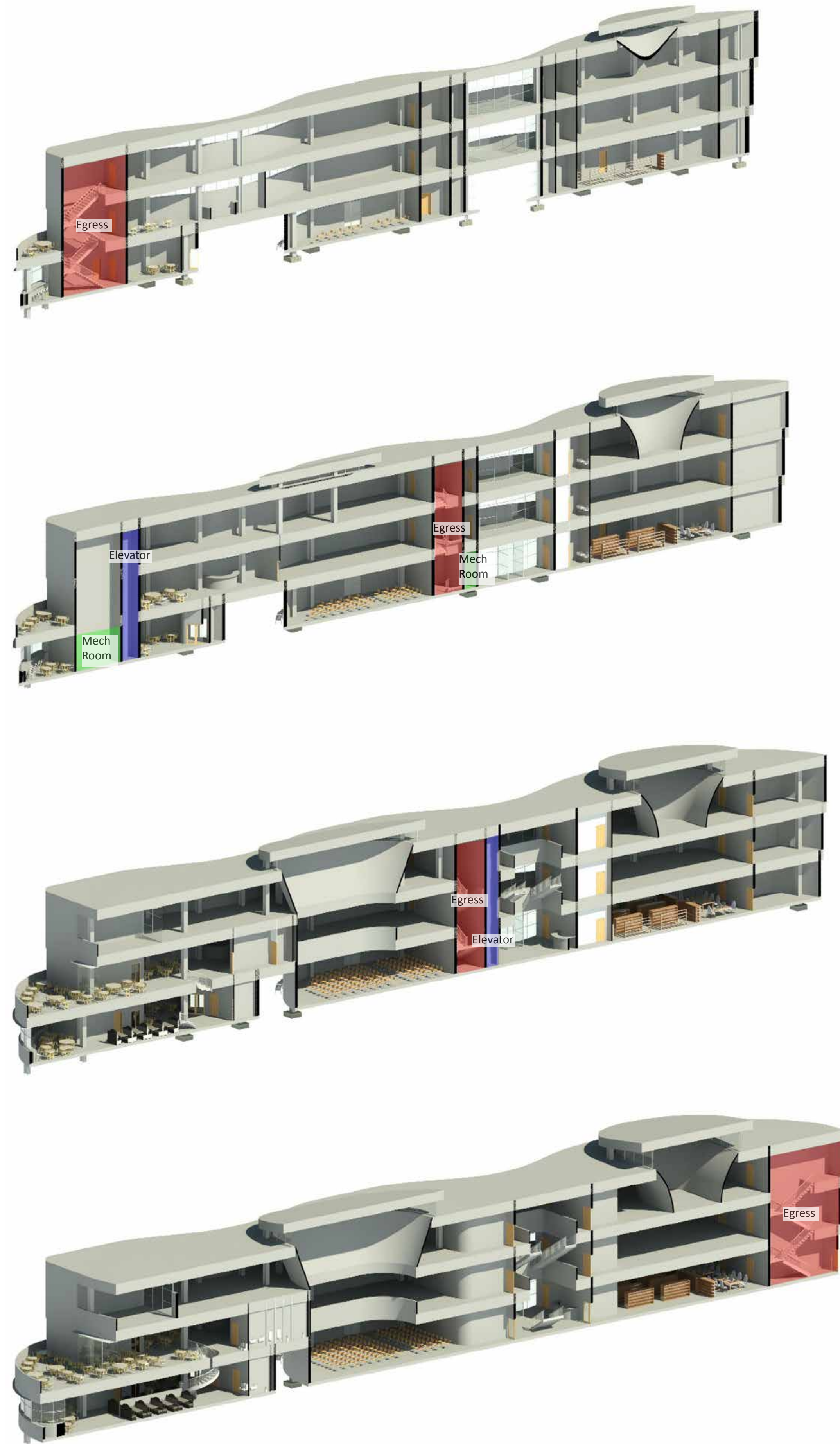
1/16"=1'

Level 3 Lights and Electrical Room

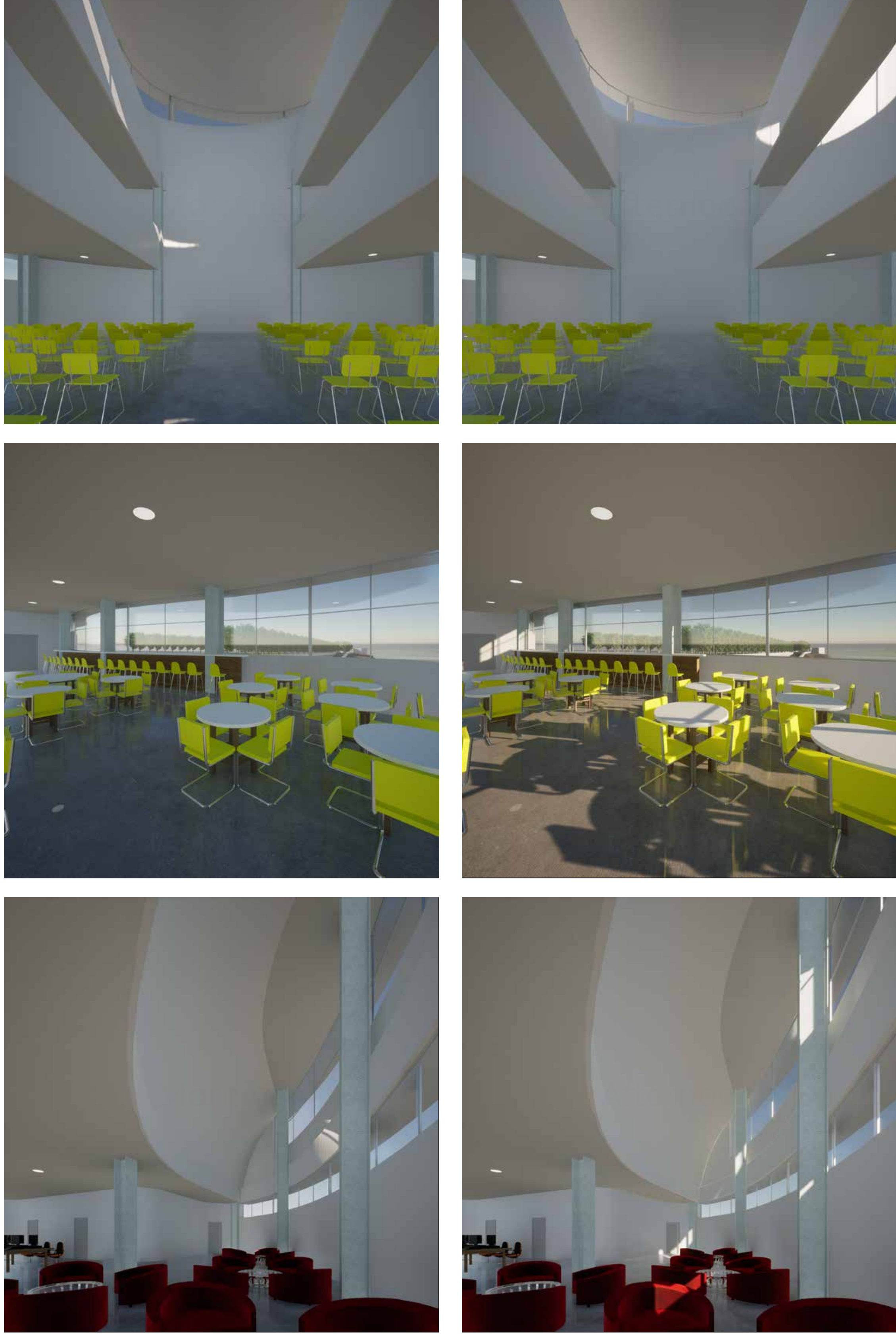


1/16"=1'

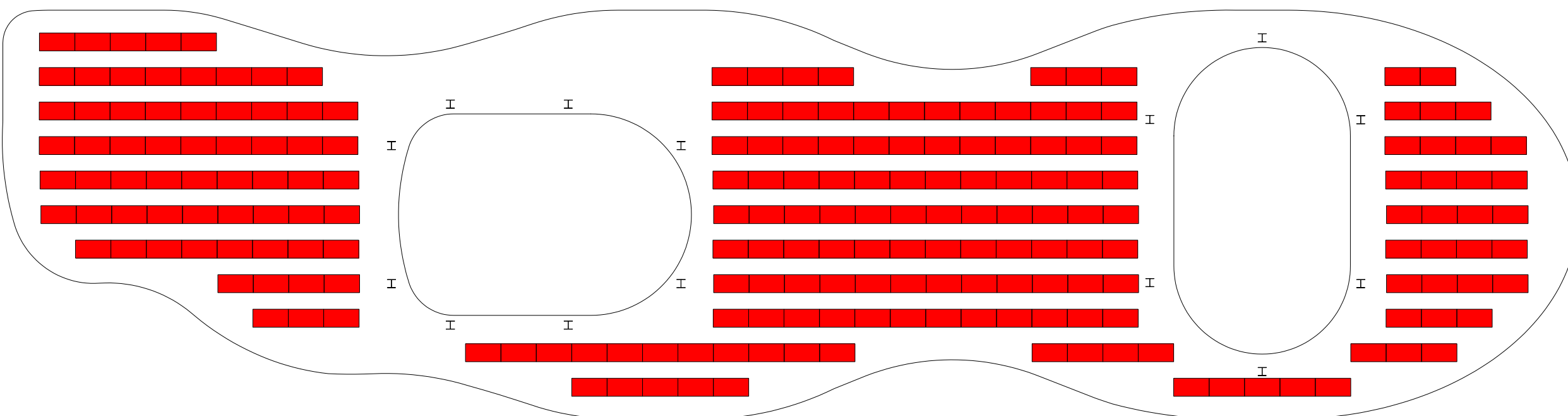
Elevators and Egress



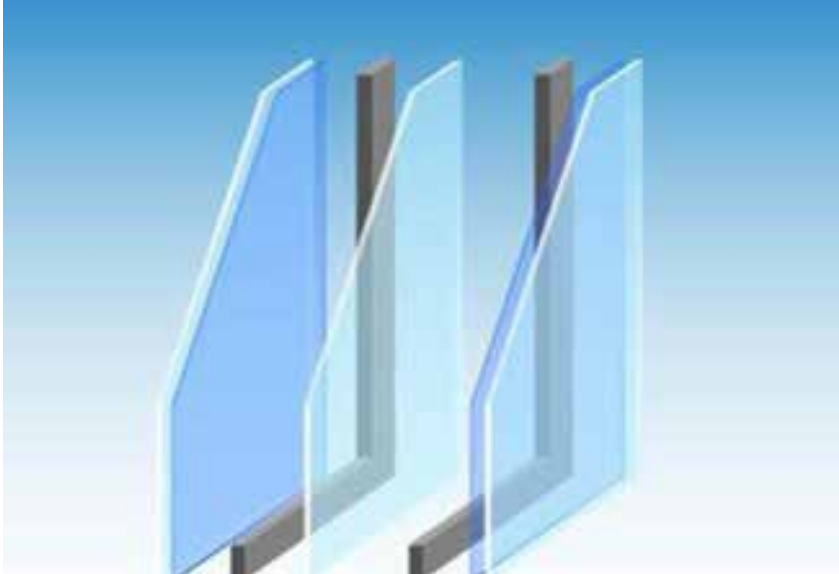
Light Studies



Solar Panels



EPDs



CLIMATOP Triple Glazing

Environmental Impacts
Global Warming Potential: 49.6
Ozone Depletion: 5.56E-5
Acidification Potential: 0.244
Eutrophication Potential: 0.0584
Photochemical Ozone Creation: 0.0151
ADP Elements: 0.000381
ADP Fossil Fuels: 606
Resource Use
Renewable Primary Energy Excluding Raw Materials: 65
Renewable Primary Energy Used As Raw Materials: 0
Nonrenewable Primary Energy Excluding Raw Materials: 674
Nonrenewable Primary Energy Used As Raw Materials: 0
Use of Secondary Material: 2.99
Use of Renewable Secondary Fuels: 0
Use of Nonrenewable Secondary Fuels: 0
Use of Net Fresh Water: 0.198
Waste Categories
Hazardous Waste Disposed: 1.42E-6
Non-Hazardous Waste Disposed: 1.6
Radioactive Waste Disposed: 0.0272
Output Flows
Components for Reuse: 0
Materials for Recycling: 0.841
Materials for Energy Recovery: 0
Exported Energy: 0



BLUE SCOPE Steel Hot Rolled

Environmental Impacts
Global Warming Potential: 1.46212
Ozone Depletion: 5.88E-11
Acidification Potential: 7.104E-3
Eutrophication Potential: 4.61E-4
Photochemical Ozone Creation: 9.72E-4
ADP Elements: 4.14E-8
ADP Fossil Fuels: 16.901
Resource Use
Renewable Primary Energy Excluding Raw Materials: 0.853
Renewable Primary Energy Used As Raw Materials: 0
Nonrenewable Primary Energy Excluding Raw Materials: 0.853
Nonrenewable Primary Energy Used As Raw Materials: 17.027
Use of Secondary Material: 0.17
Use of Renewable Secondary Fuels: 0
Use of Nonrenewable Secondary Fuels: 0
Use of Net Fresh Water: 2.16E-3
Waste Categories
Hazardous Waste Disposed: 2.75E-5
Non-Hazardous Waste Disposed: 0.124
Radioactive Waste Disposed: 9.95E-6
Output Flows
Components for Reuse: 0
Materials for Recycling: 0.89
Materials for Energy Recovery: 0
Exported Energy: 0

Life Cycle Analysis



RESULTS

144,533 kWh/Year*

System output may range from 136,815 to 153,967 kWh per year near this location.

Month	Solar Radiation (kWh/m ² /day)	AC Energy (kWh)	Value (\$)
January	4.71	9,281	1,072
February	6.65	10,025	1,158
March	6.65	12,906	1,491
April	7.20	13,146	1,518
May	7.43	13,847	1,599
June	8.23	14,583	1,684
July	8.47	15,431	1,782
August	7.78	14,035	1,621
September	7.17	12,596	1,455
October	6.04	11,324	1,308
November	5.04	9,496	1,097
December	3.96	7,863	908
Annual	6.53	144,533	\$ 16,693

Location and Station Identification

Requested Location	New York City
Weather Data Source	Lat, Lon: 40.77, -73.98 4.2 mi
Latitude	40.77° N
Longitude	73.98° W
PV System Specifications (Commercial)	
DC System Size	78 kW
Module Type	Premium
Array Type	2-Axis Tracking
Array Tilt	0°
Array Azimuth	225°
System Losses	14.08%
Inverter Efficiency	96%
DC to AC Size Ratio	1.2
Economics	
Average Retail Electricity Rate	0.116 \$/kWh
Performance Metrics	
Capacity Factor	21.2%