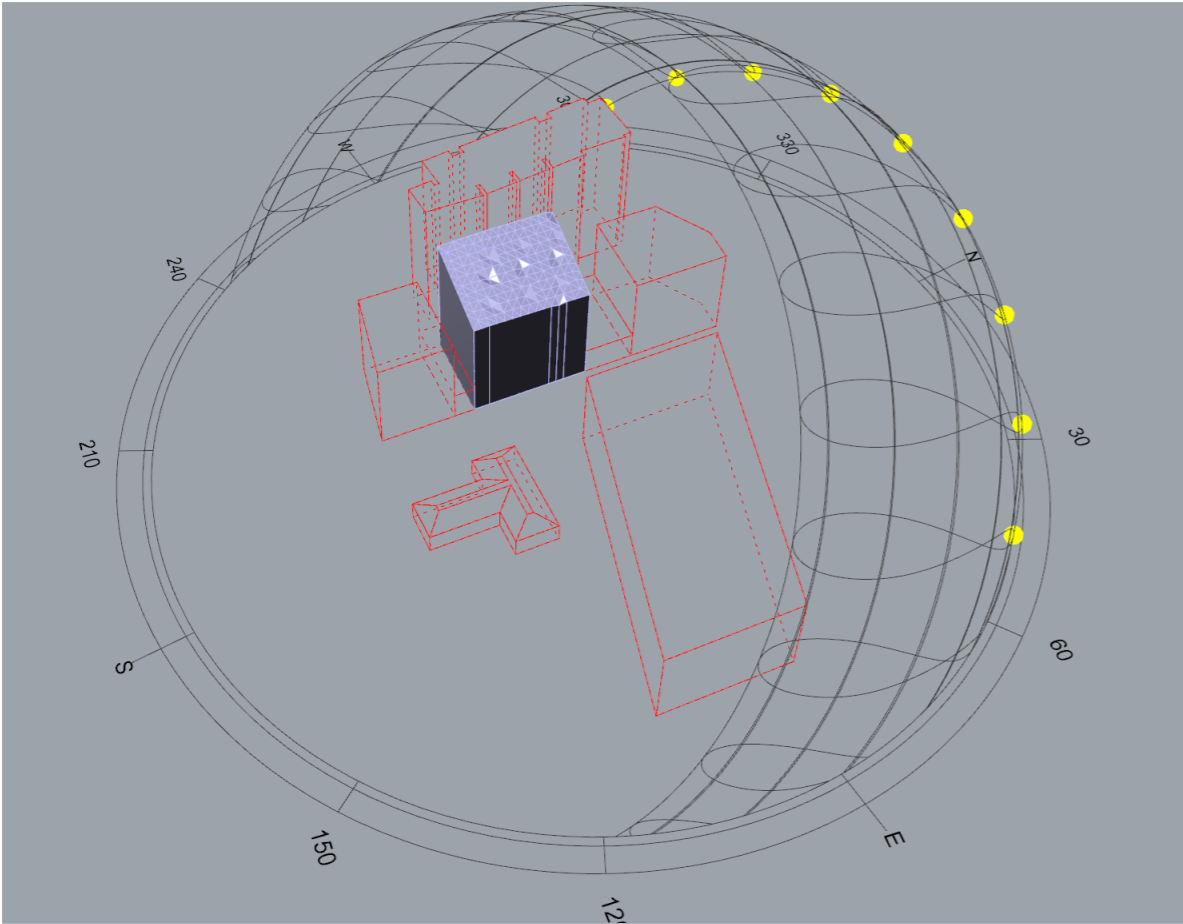
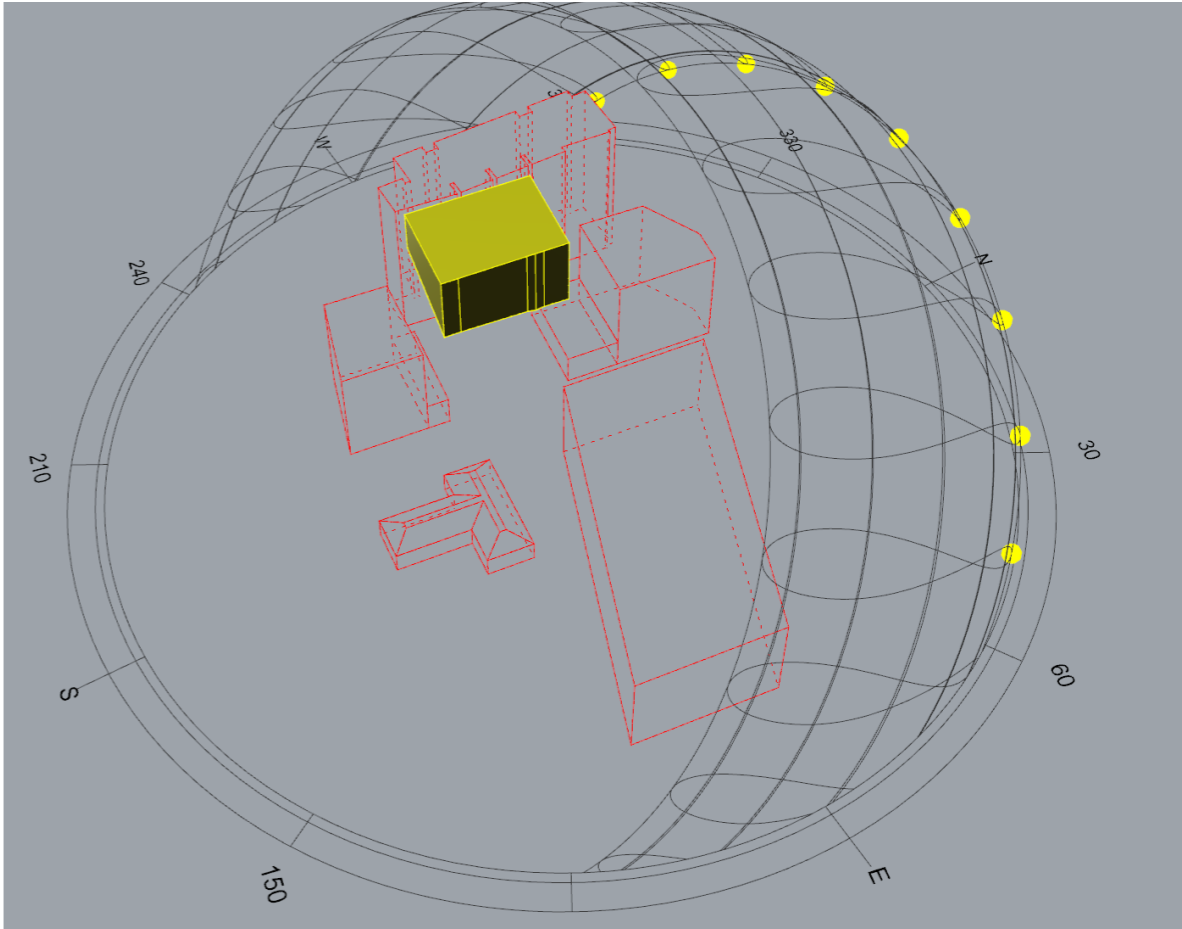


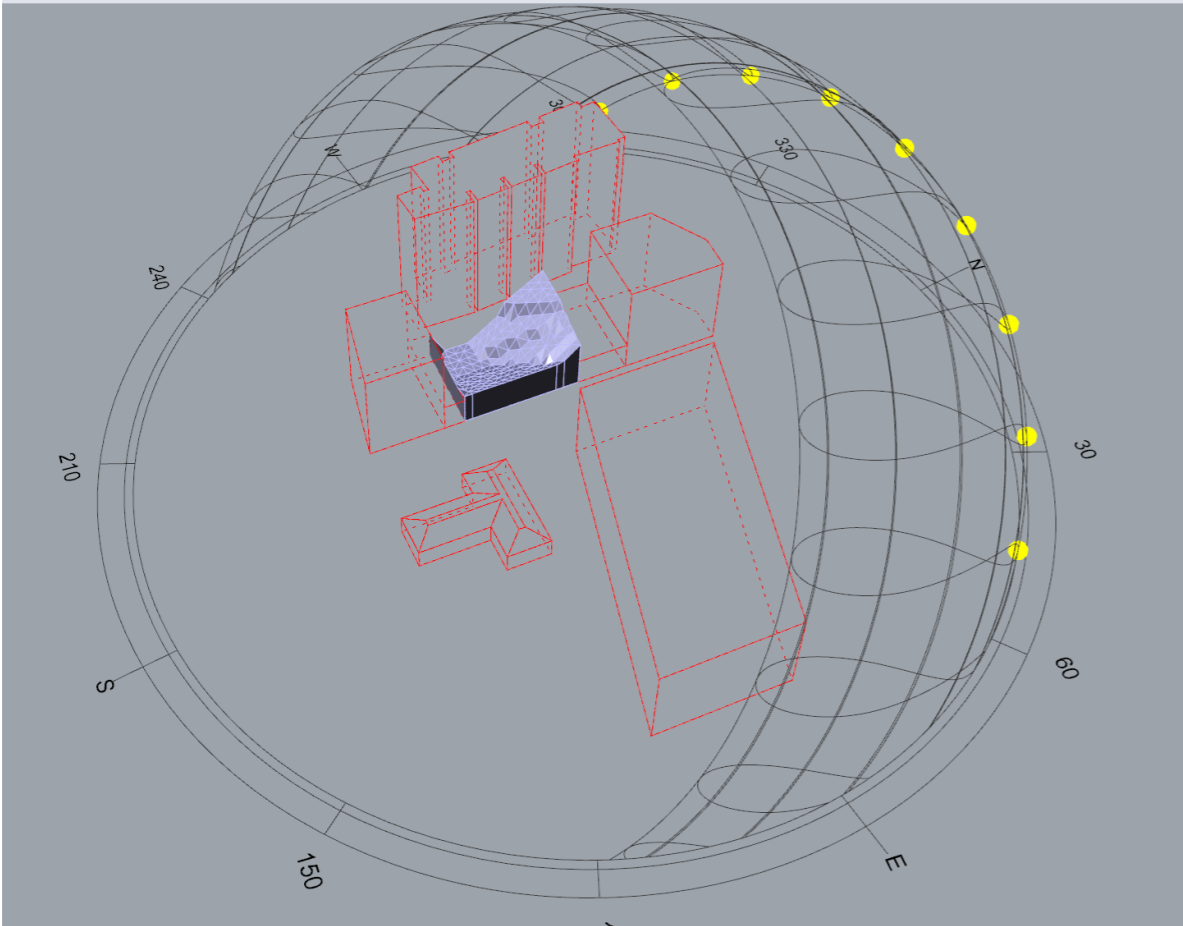
Task A - Solar Analysis. (Trying to Catch the Sun)



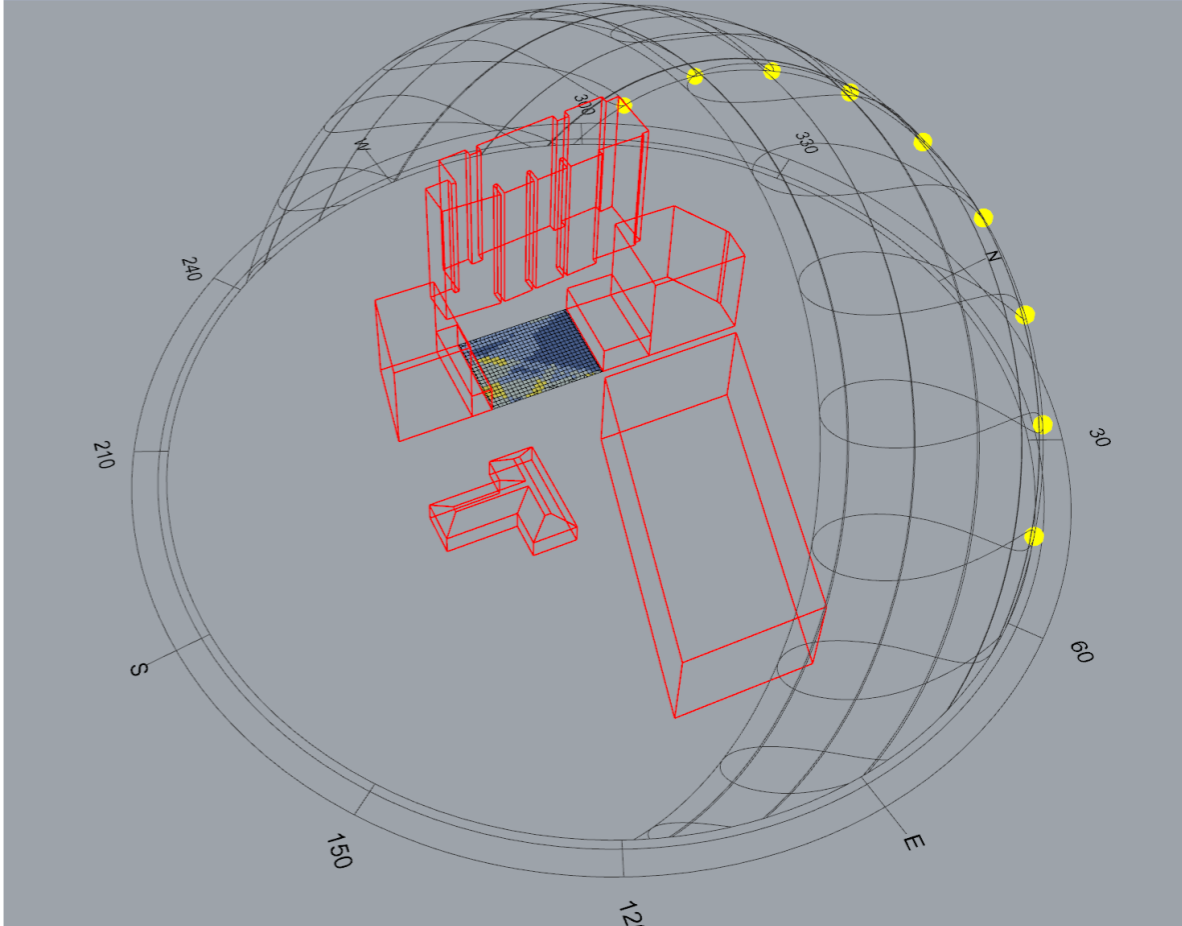
Solar Envelope from 8 am to 8 pm Overshadowed.



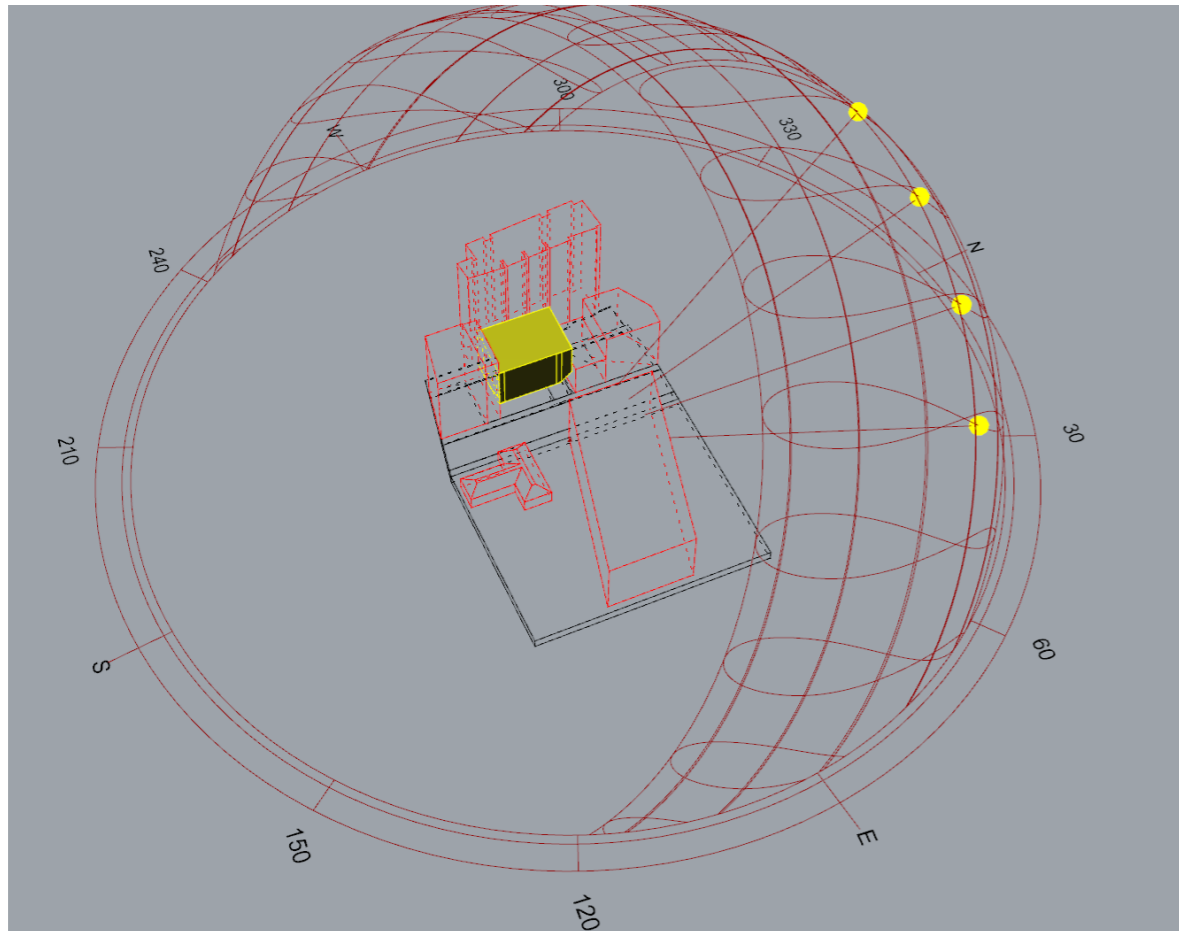
Sunlight Hours from 8 am to 8 pm Not Overshadowed.



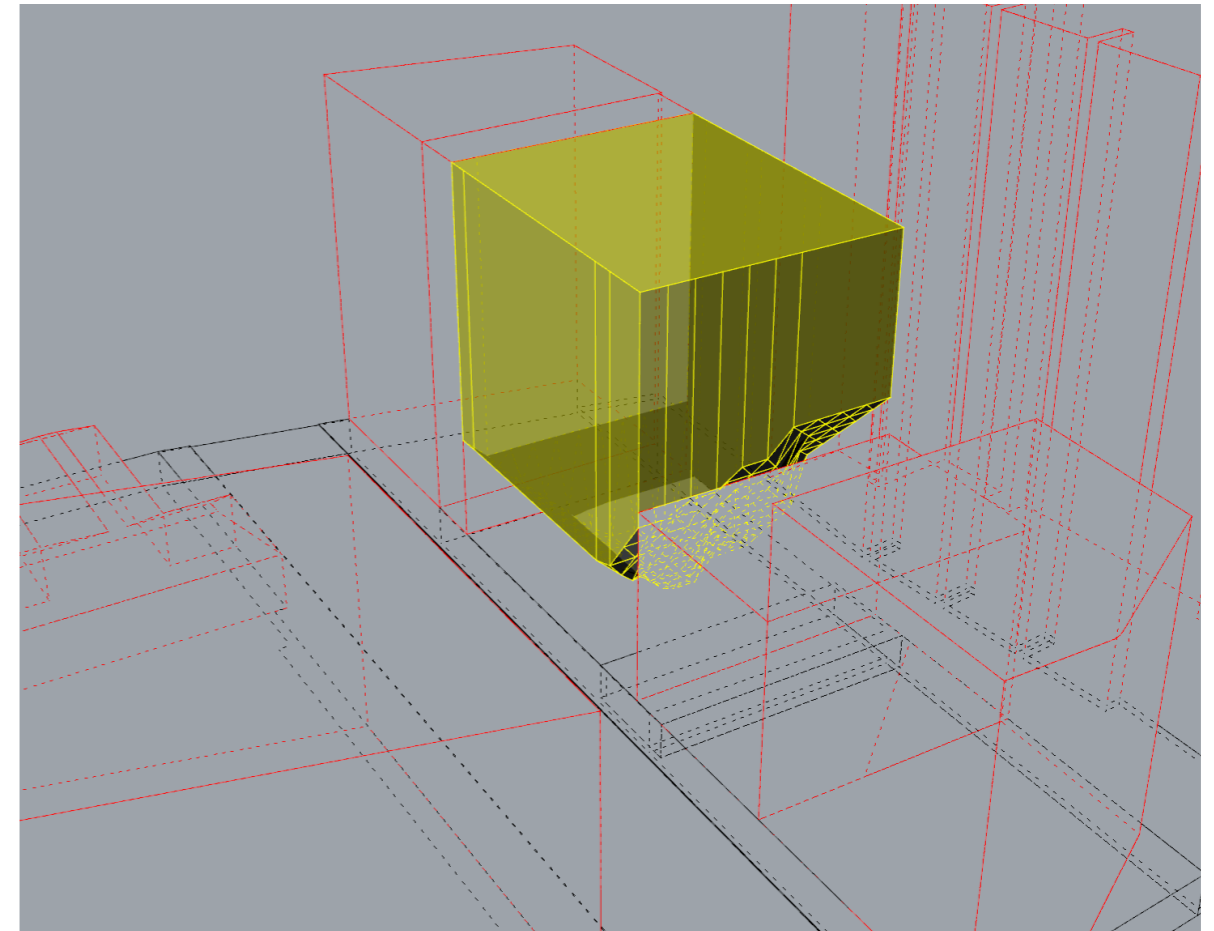
Solar Envelope from 9 am to 12 pm Overshadowed.



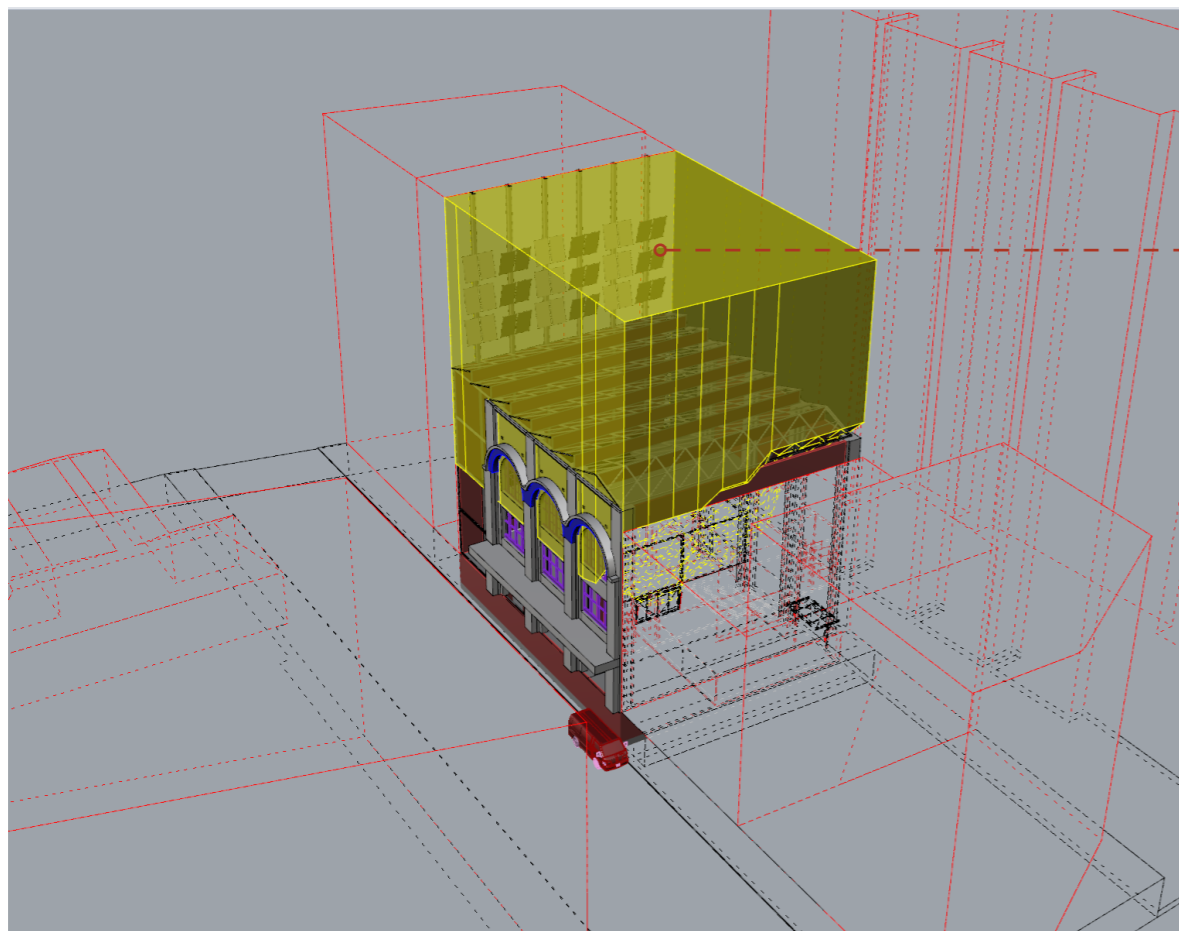
Sunlight Hours from 8 am to 8 pm



Solar Envelope from 9 am to 12 pm Not Overshadowed.



Sunlight Hours from 9 am to 12 pm Not Overshadowed.



Solar Envelope from 9 am to 12 pm Not Overshadowed. (With 3d Model.)

----- This analysis shows where we can catch the sun and reflect it back to our building using large movable heliostats. Solving the overshadow issue surrounding buildings cause. Using Central Park as a reference in how it bounces light into areas that are never gets any sunlight. This method also lessens the solar radiation and intensity compared to direct sunlight. With movable heliostats we are also able to recalibrate their rotations depending on each season all year long.

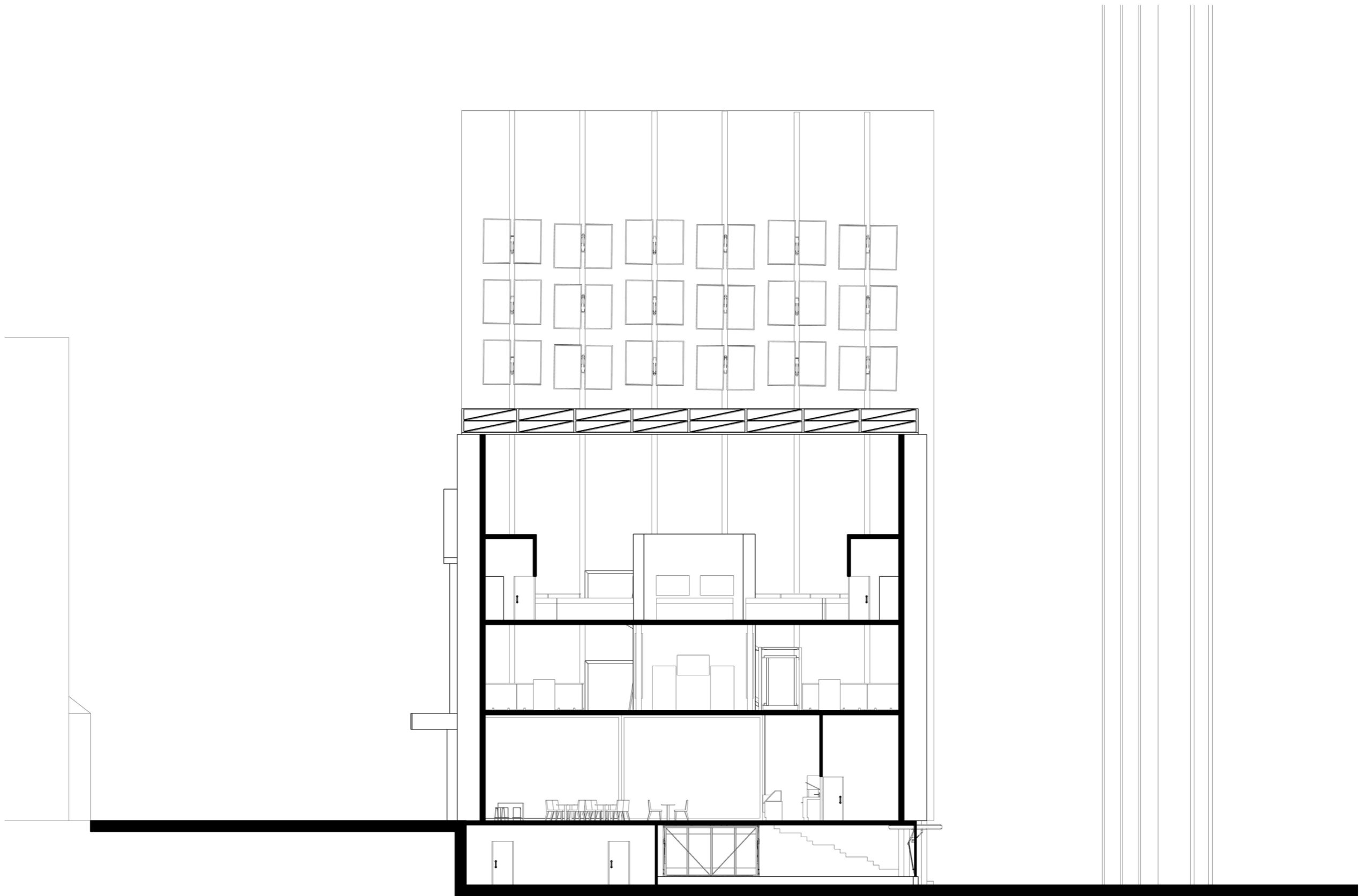
We have then integrated a glass roof for the office to receive natural sunlight. Another central design we have implimented is the “Glass Box”. This box leads all the way to the basement so that all floors can benefit from the heliostats.

Task A - *Elevations & Sections.*



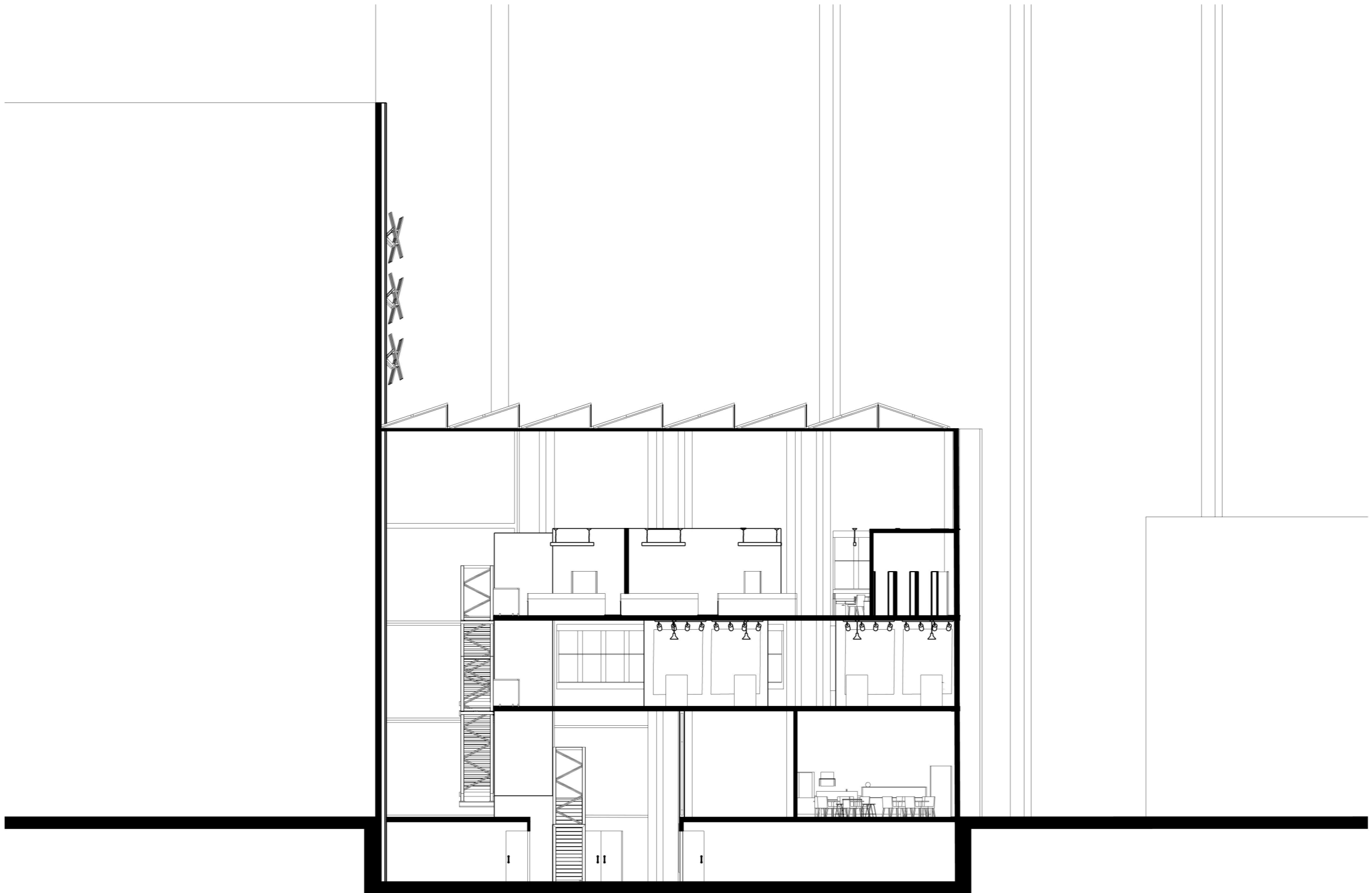
Front Elevation

Scale 1:150



Side Section

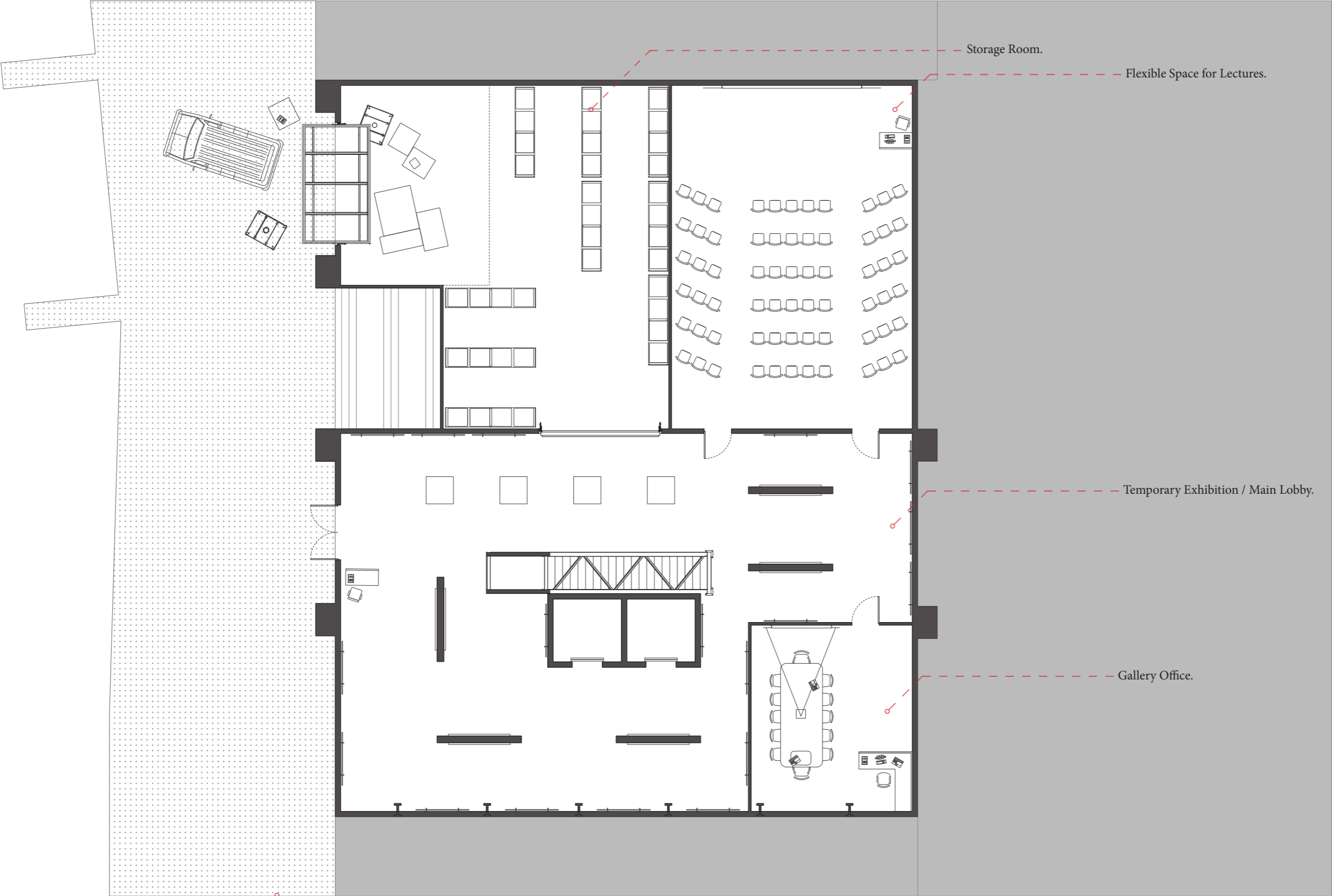
Scale 1:150



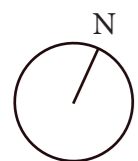
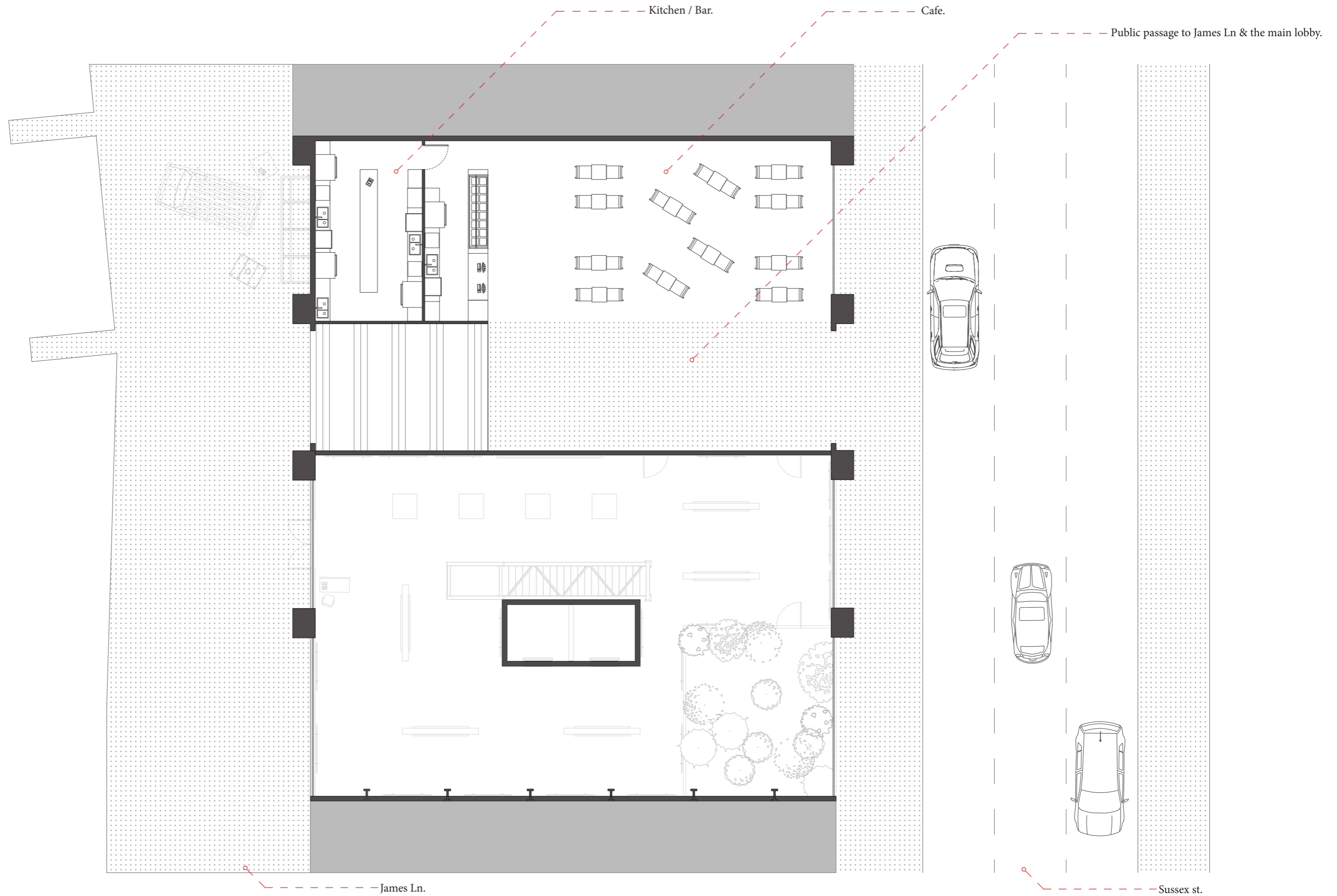
Front Section

Scale 1:150

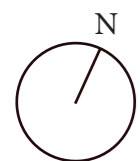
Task A - Floor Plans



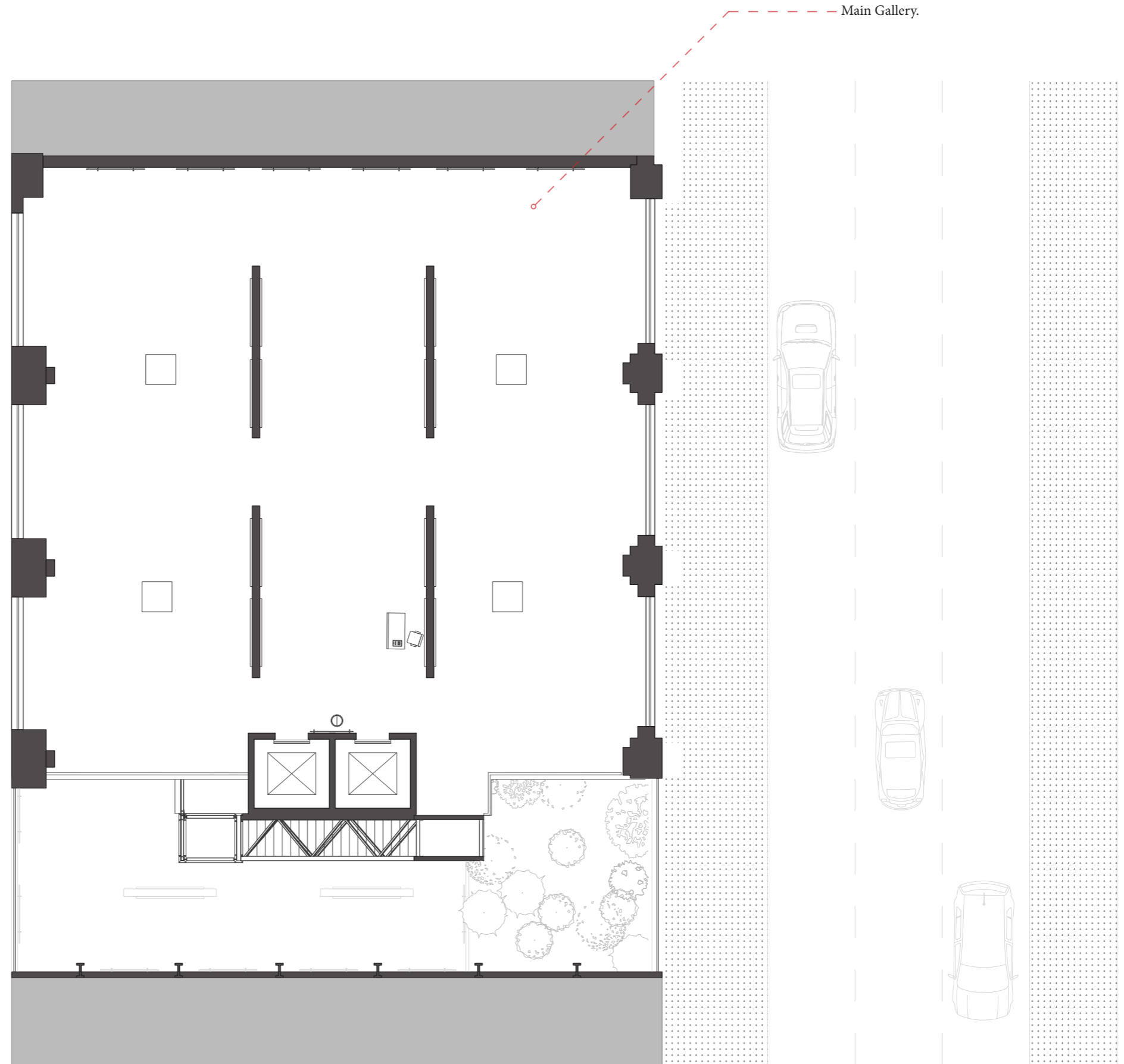
N
Basement Floor plan
Scale 1:150

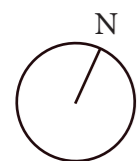


Level 1 Floor plan
Scale 1:150

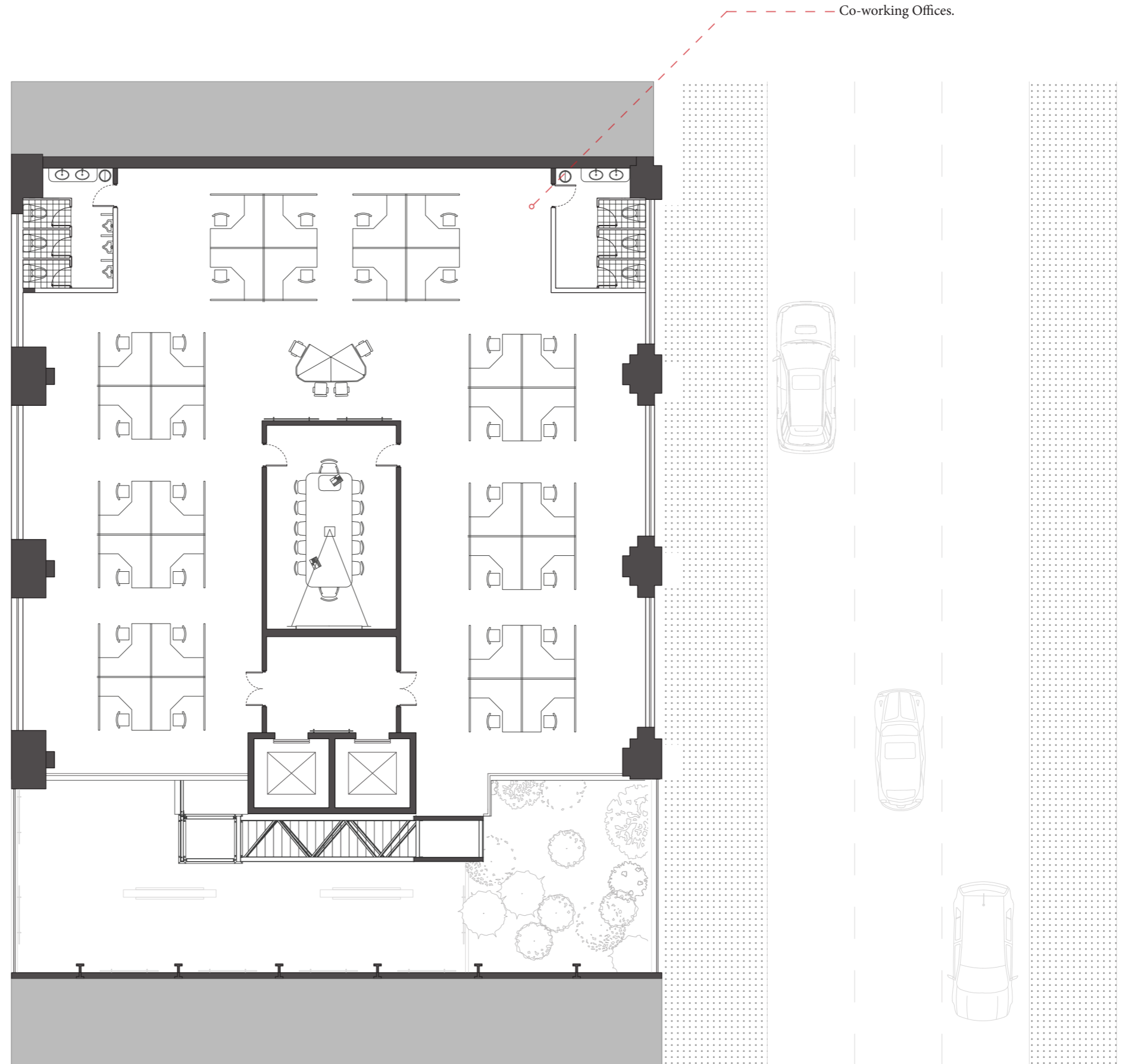


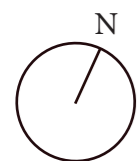
Level 2 Floor plan
Scale 1:150



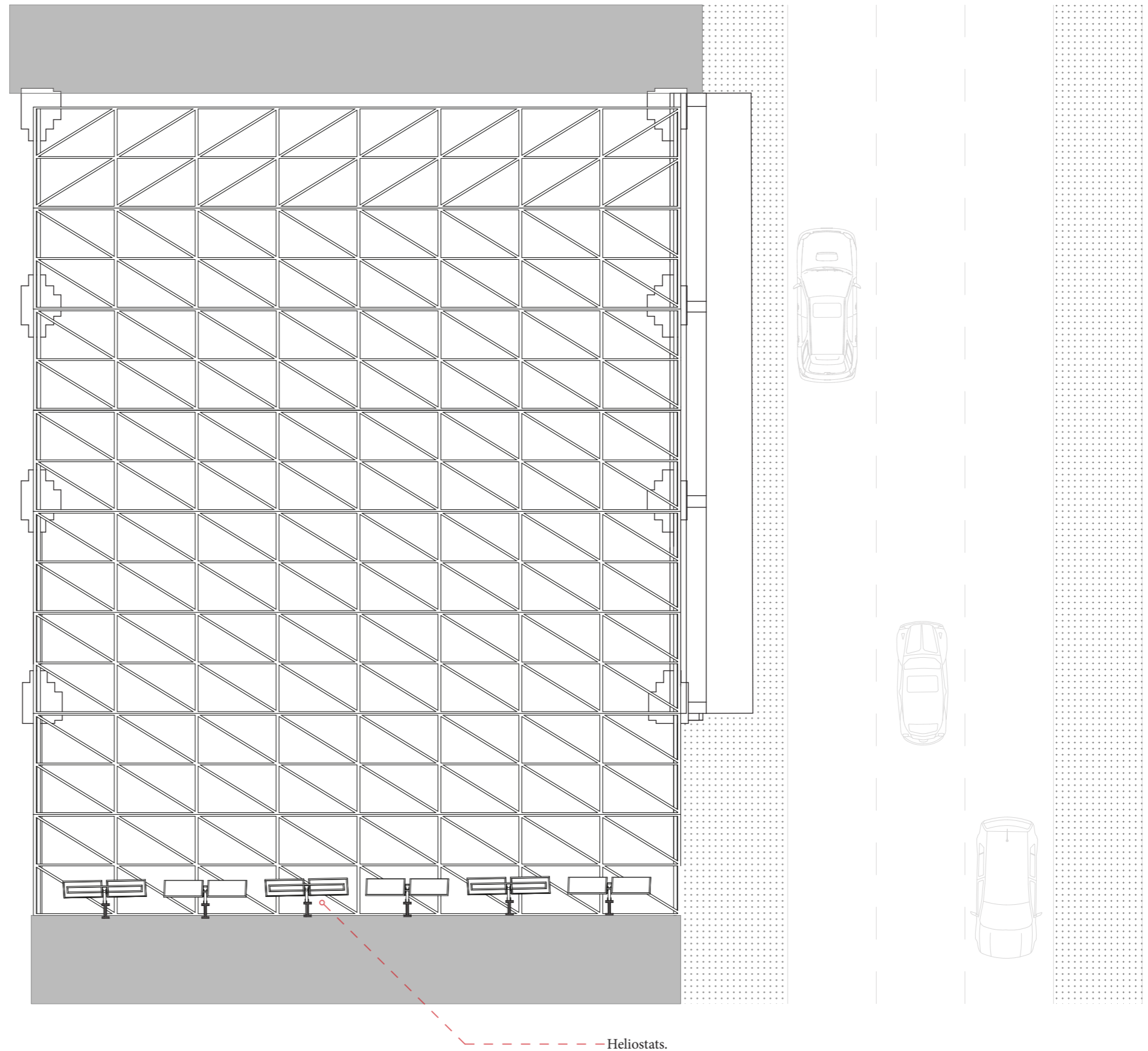


Level 3 Floor plan
Scale 1:150

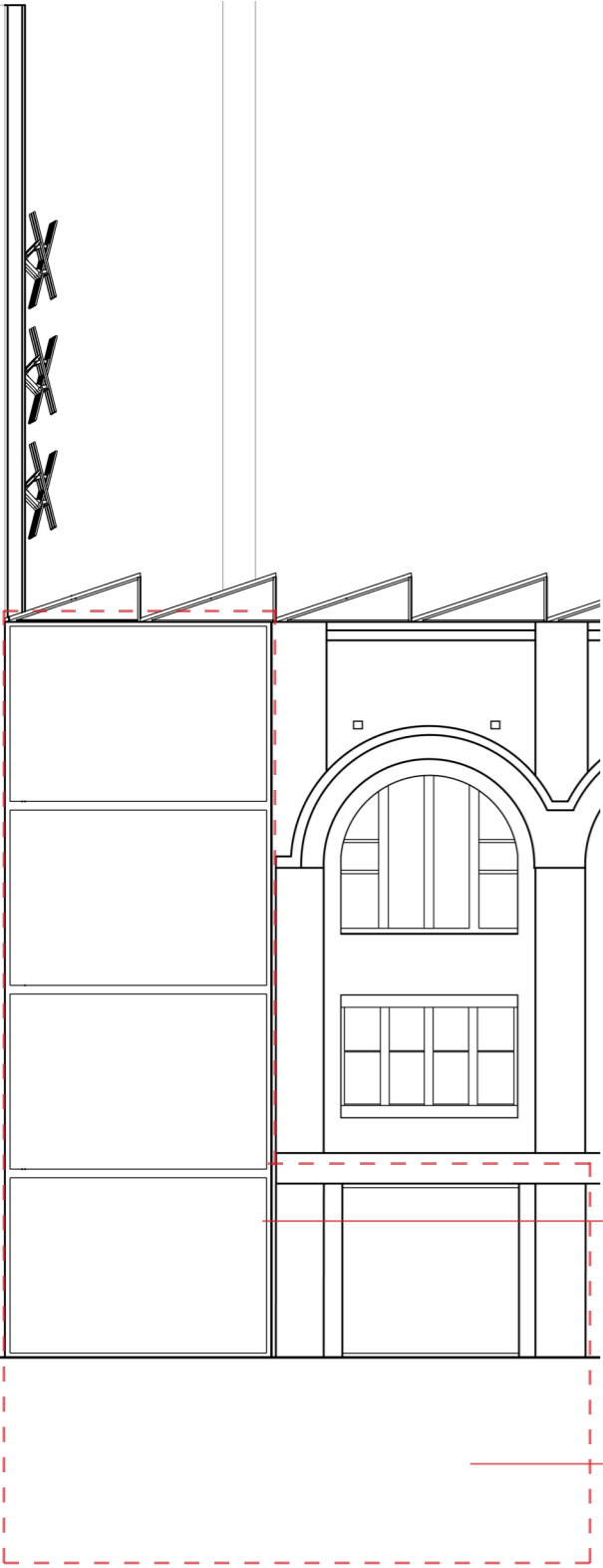




Roof plan
Scale 1:150



TASK B - *TEMPORARY EXHIBITION / MAIN LOBBY*
 Jemuel Herrera 12962813



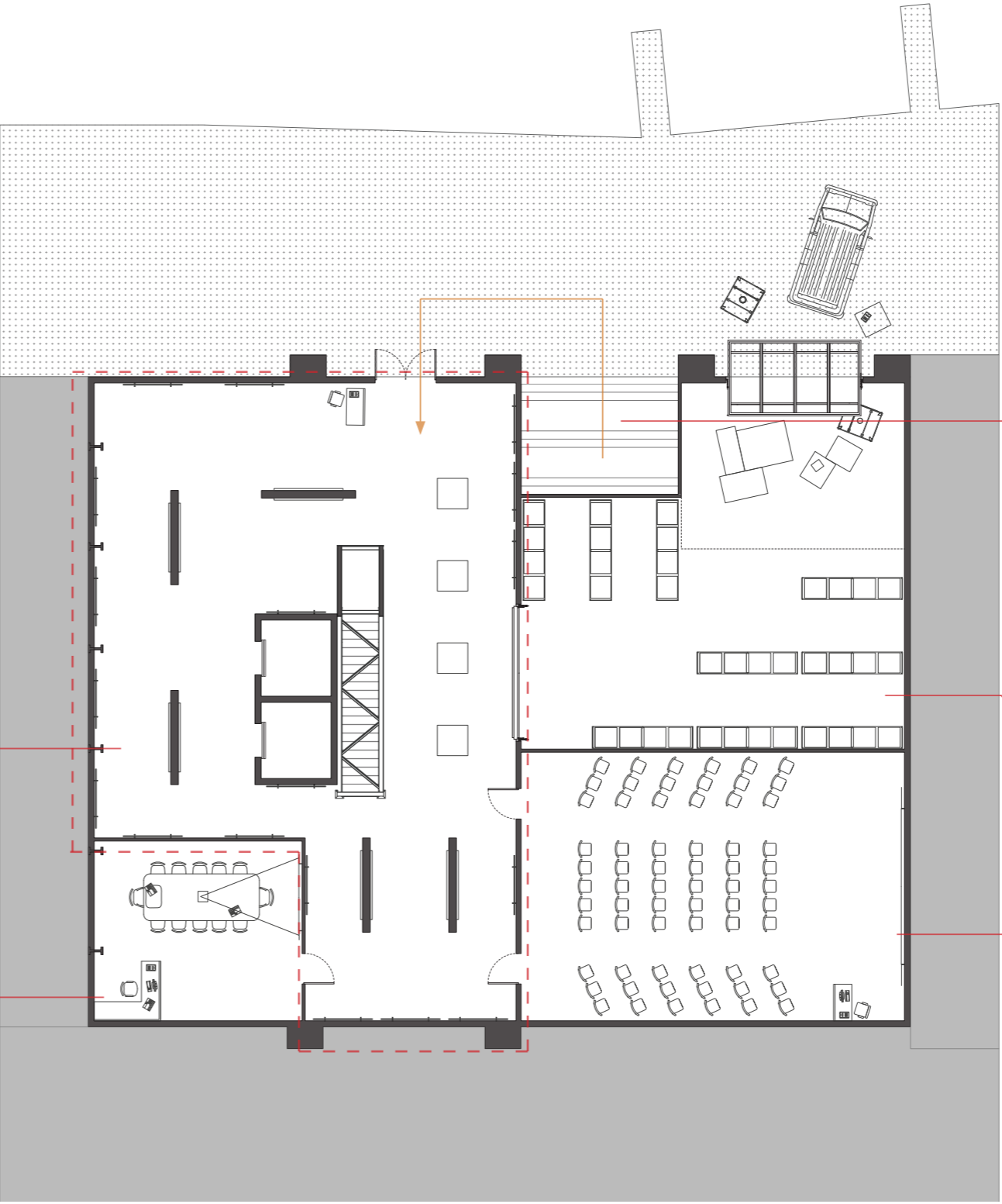
Front Elevation
 Scale Not to scale

Space location Temporary Exhibition / Lobby.

Space opens up to the roof “The Glass Box”

Space location (Basement)

Gallery Office.



Main Entry route.

Gallery Storage.

Space for Lectures and group Seminars.

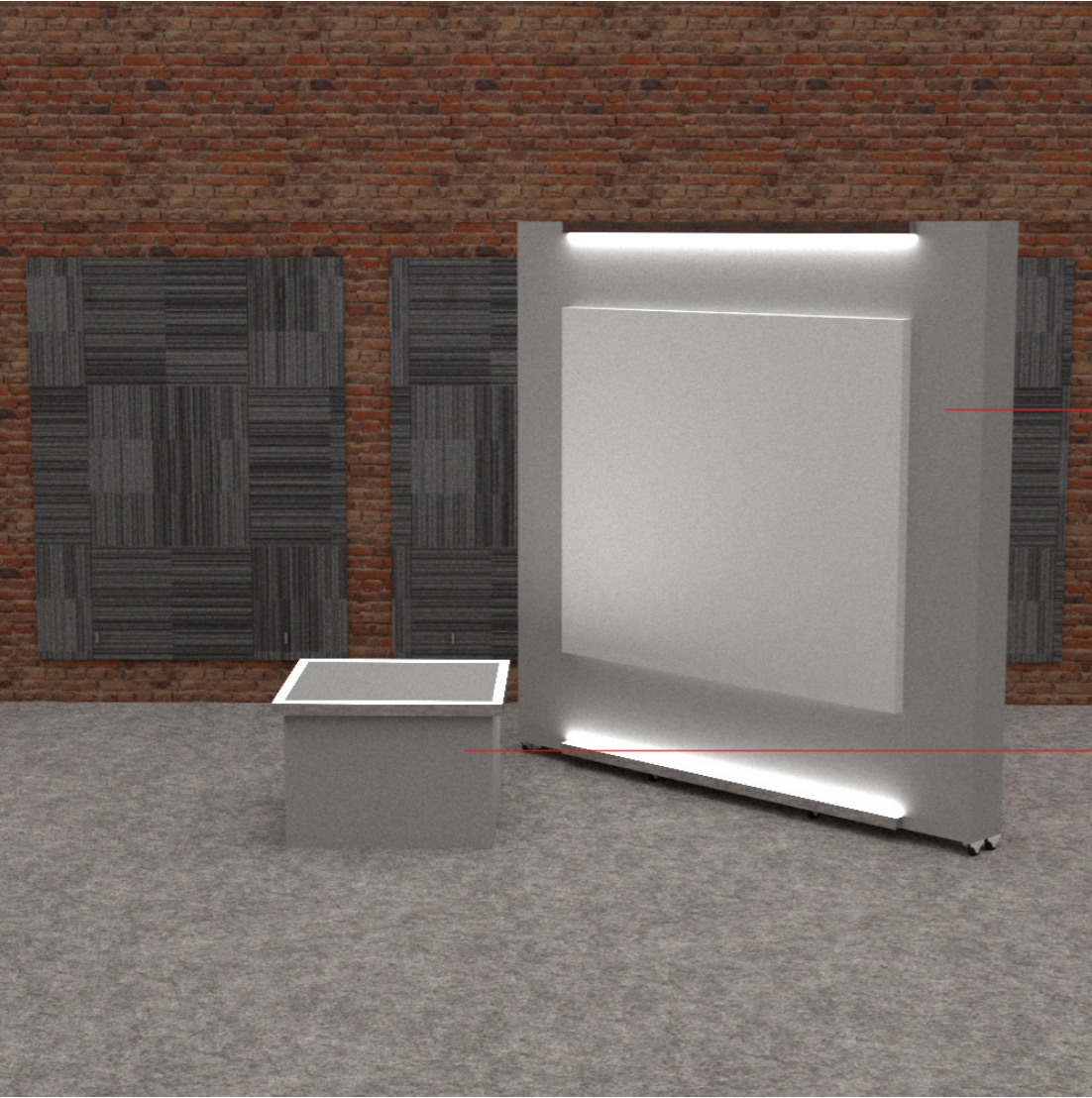
Basement Floor plan
 Scale Not to scale

B1. *Lighting Concept & Design.*

CONCEPT

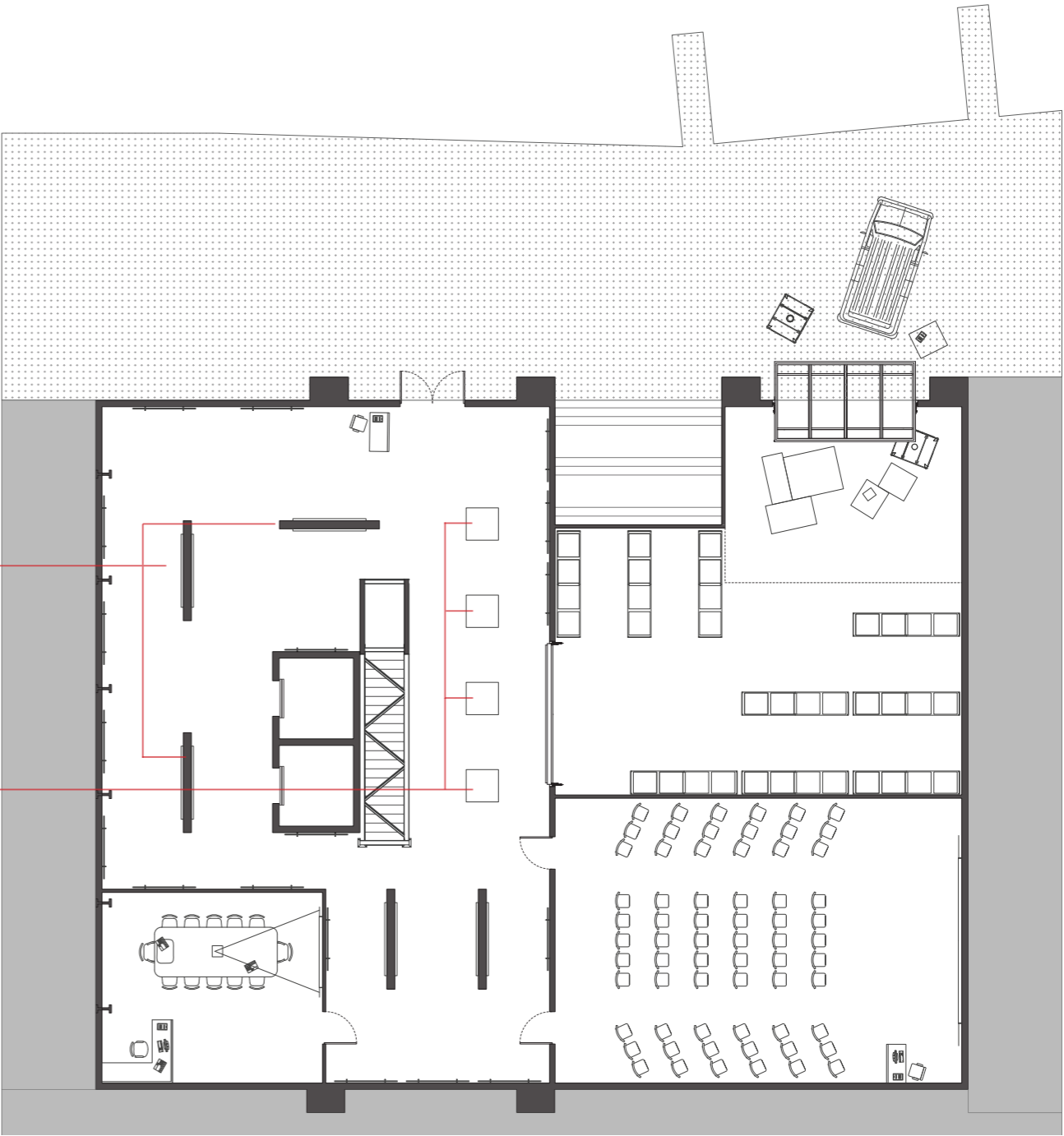
LIGHTING. *Goals*

- Flexible Lighting system that moves with the exhibition.
- Multi - purpose Lumens.
- Receives ample amounts of both natural light paired with artificial lighting during the day.
- Make use out of our heliostats on the roof to catch natural lighting for the basement.
- Provide natural light throughout the entire building.
- Use higher Lux levels to design a “light walkway” that serves as a hallway that leads to other spaces.
- Use a lower Lux levels in lounge areas.



Movable walls for paintings. For a more flexible space and flexible lighting.
White paint to bounce light.

Movable podiums for models and sculptures.



RENDERED LIGHTING QUALITIES. *Day & Night Comparisons*

Day time Gallery

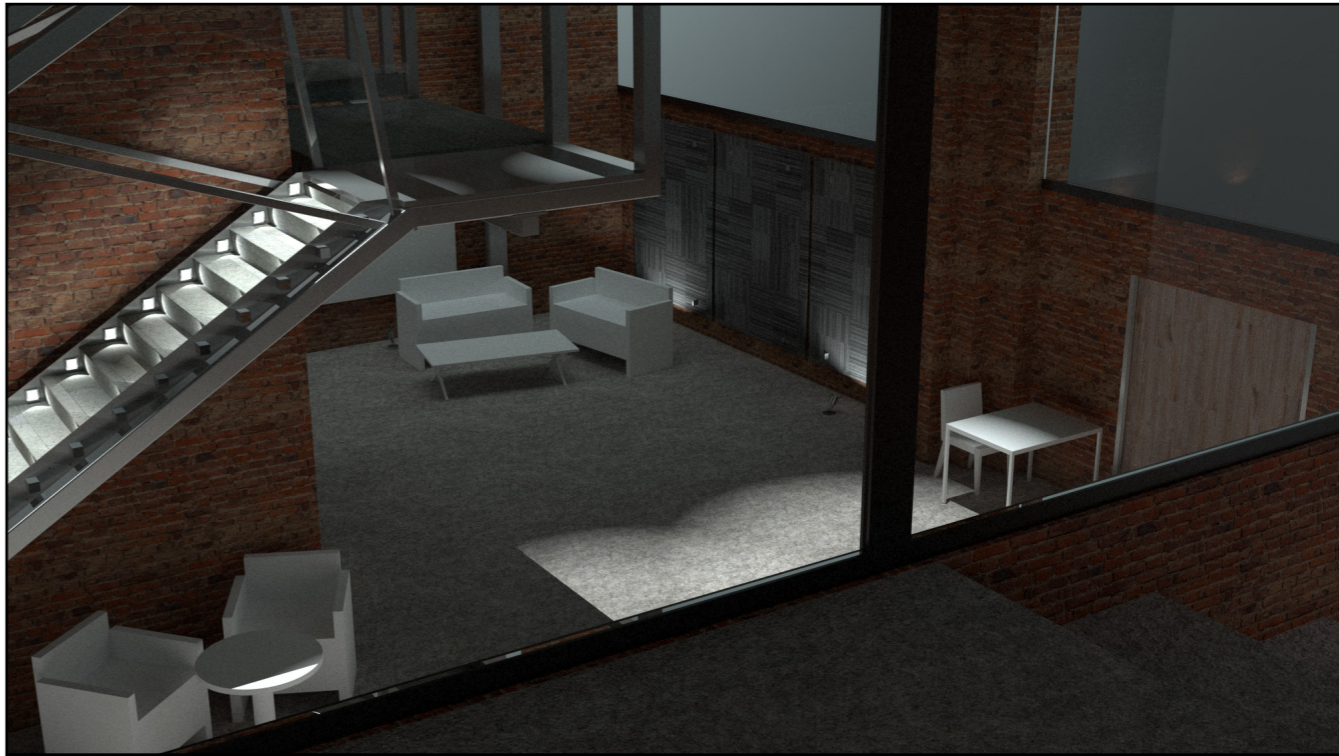
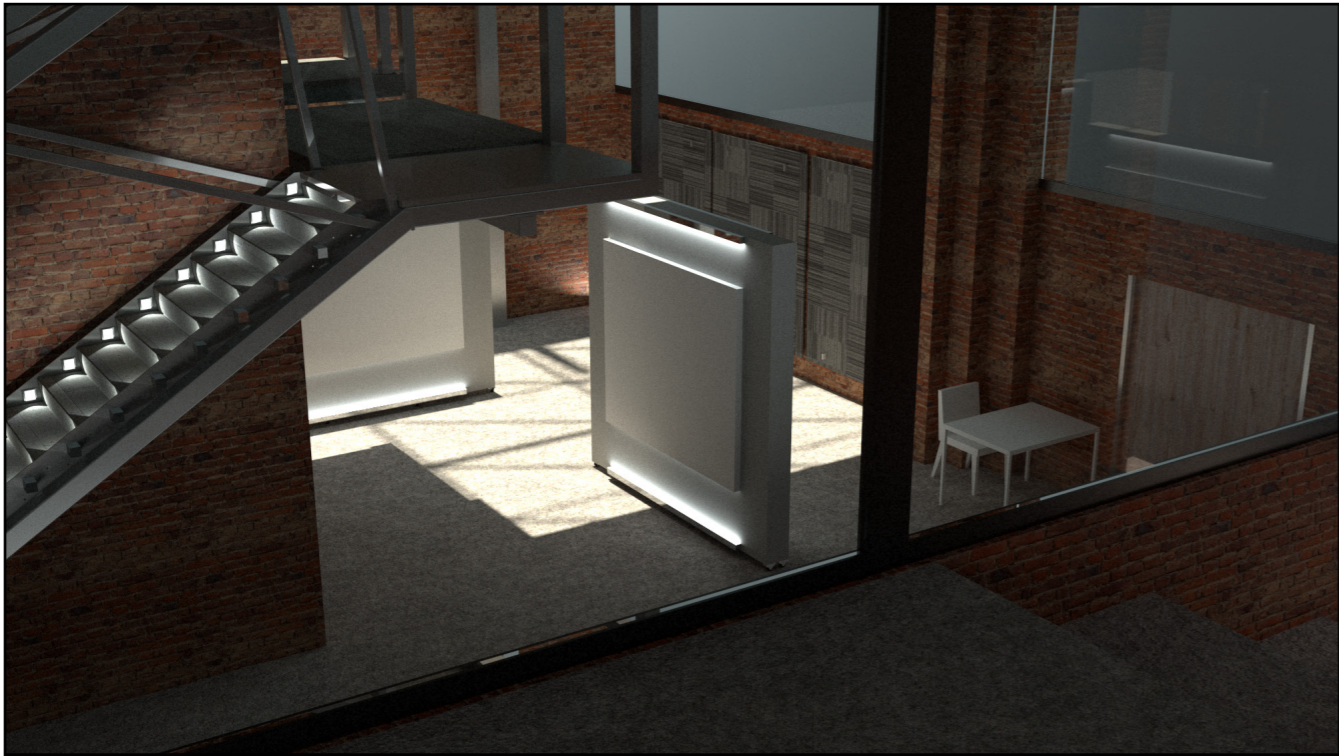


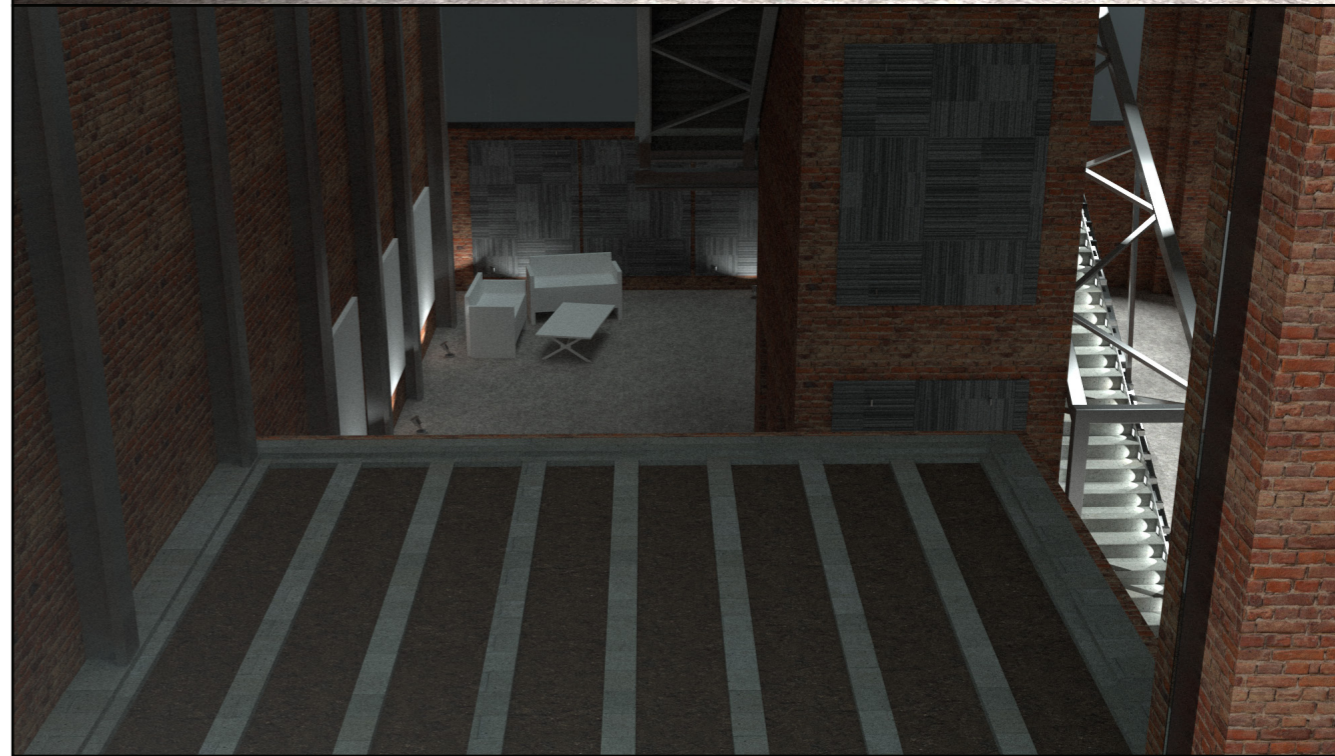
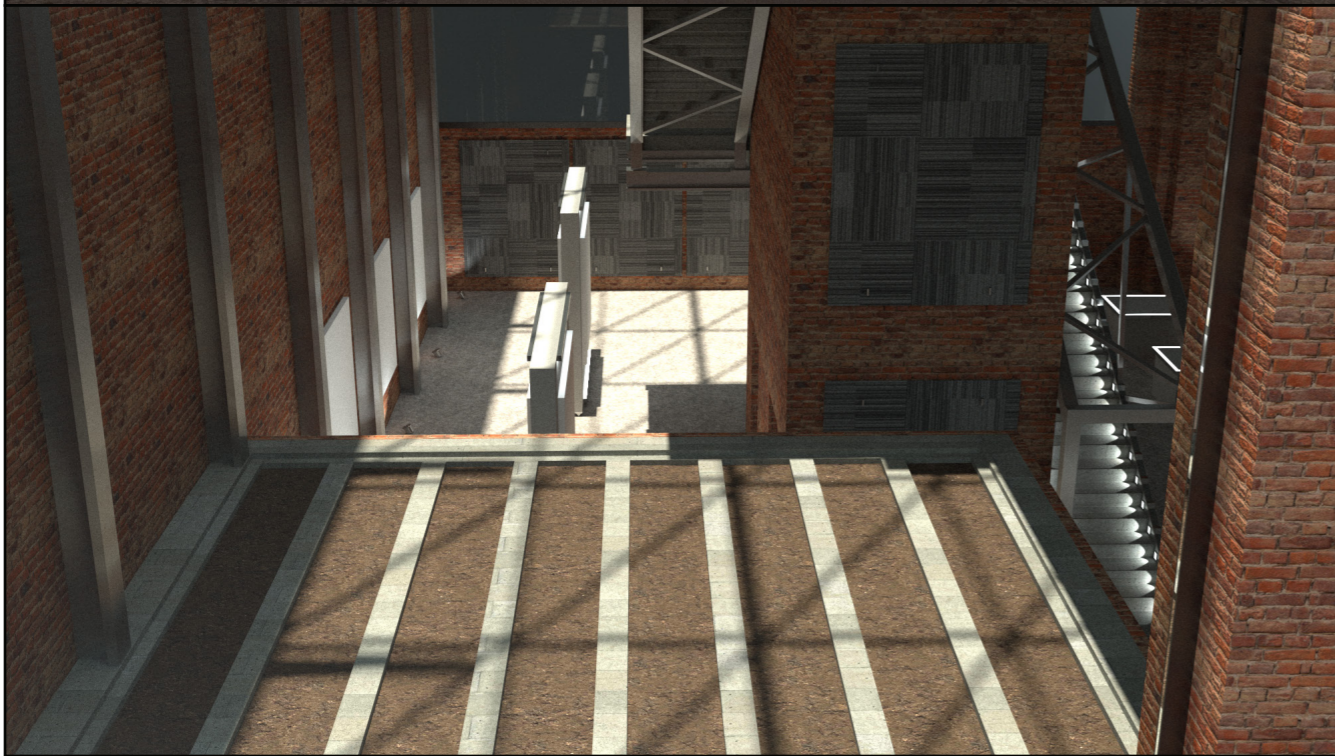
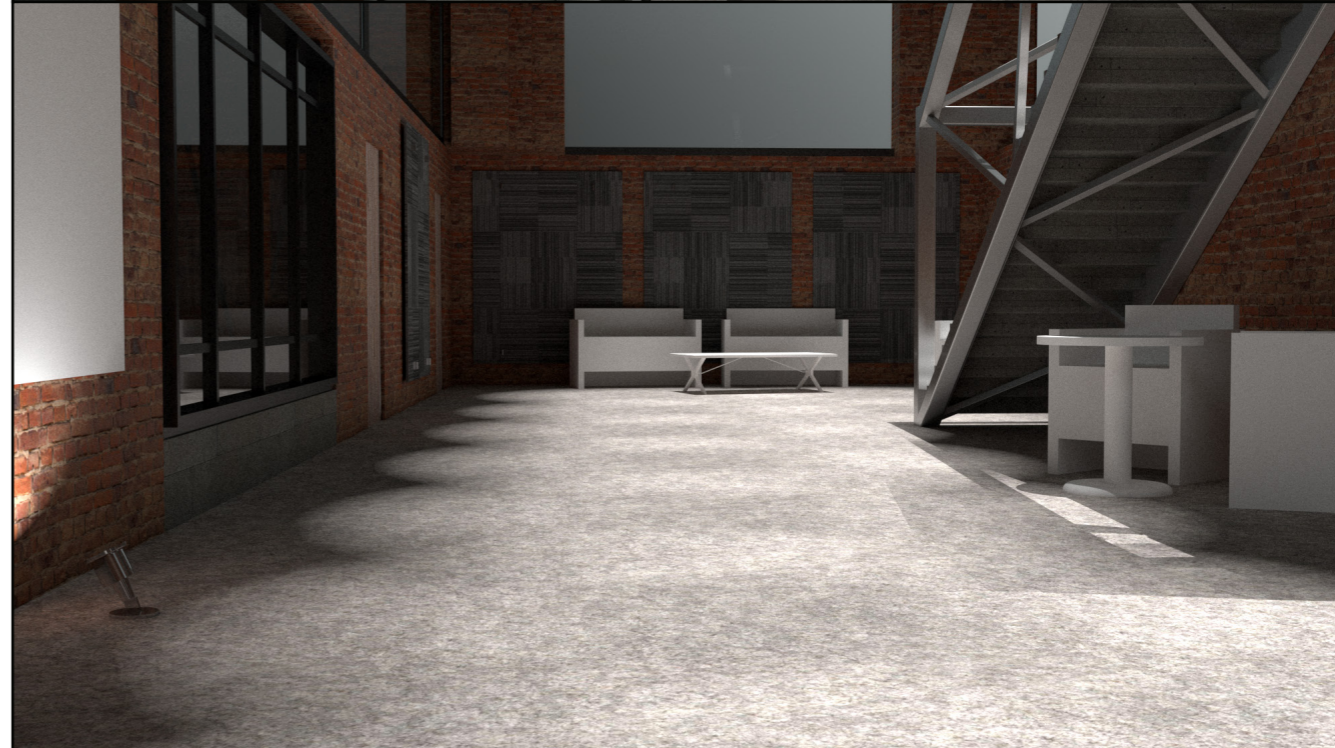
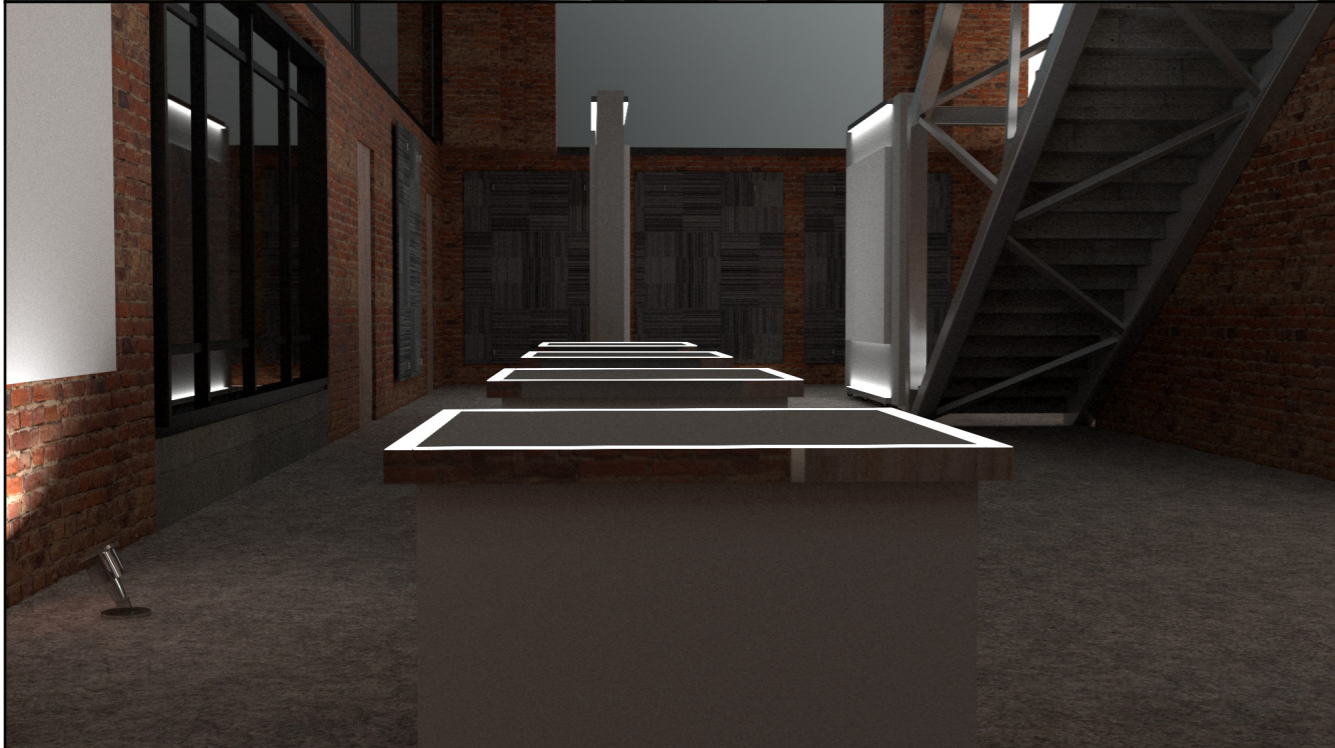
Natural light from heliostats.

Night time Lobby

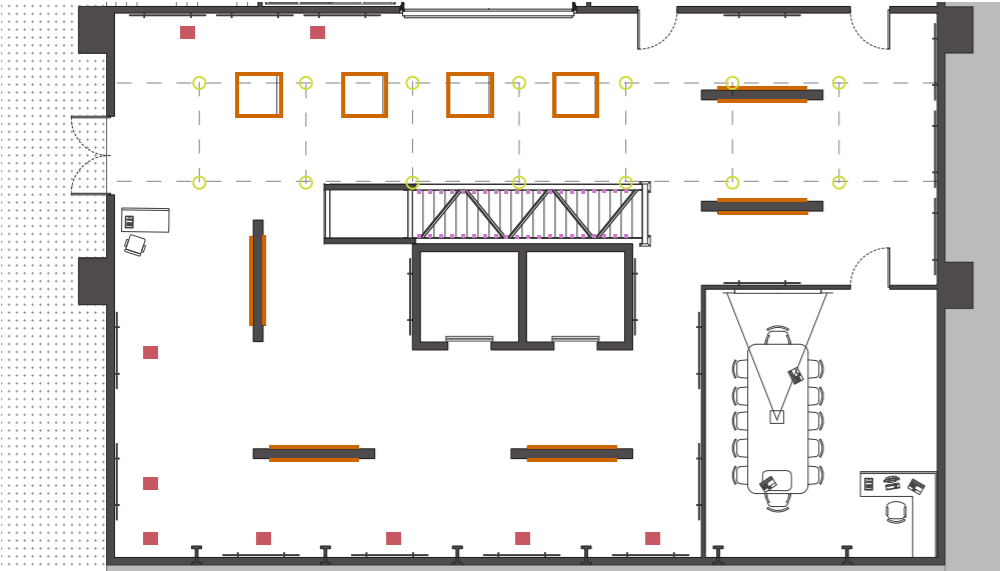


Light walkway.

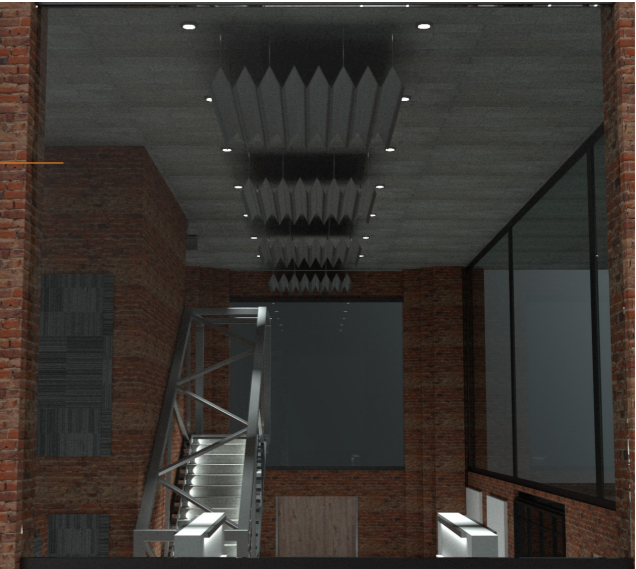




B2. Lighting Details.



Ceiling lights & Chilled beams.



Ceiling Lights.

Product data sheet

FIXED DOWNLIGHT
ERD661W_FX391N_RB574C
ENDO



- Send to DIALux
- Add to productlist
- Data sheet (PDF)
- Contact manufacturer
- Additional link
- Recommend

Wall Spotlights.

Product data sheet

INGROUND ADVANCE MONO XL AG R - WW
L171A6XR
PROLED (MBN GMBH)



- Send to DIALux
- Add to productlist
- Data sheet (PDF)
- Contact manufacturer
- Additional link
- Recommend

The PROLED INGROUND ADVANCE MONO series is designed for floor integration and offers various design possibilities in architectural illumination. Due to the swivel function the light beam can be tilted by +/- 20° - dimmable and controllable via DMX 512, DALI, KNX, 1-10V, CASAMBI, RF by MULTI power supplies or PRO CONTROLLER - incl. PVC plastic mounting sleeve - In the AG Version (anti glare) the built in anti glare grid reduces the glare effect.

Staircase floor lights.

Product data sheet

WALKLIGHT
RE20065BCB
GRUPO CONSTRULITA



- Send to DIALux
- Add to productlist
- Data sheet (PDF)
- Contact manufacturer
- Additional link
- Recommend

WALKLIGHT 6W 3000K 127-277V

Exhibition lights.

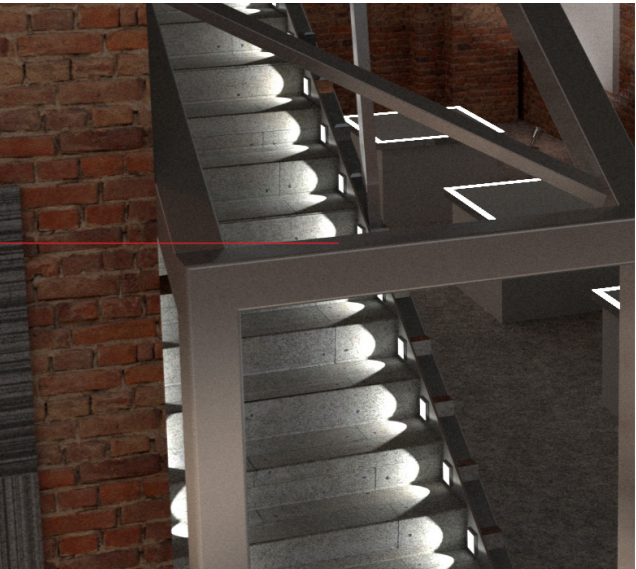
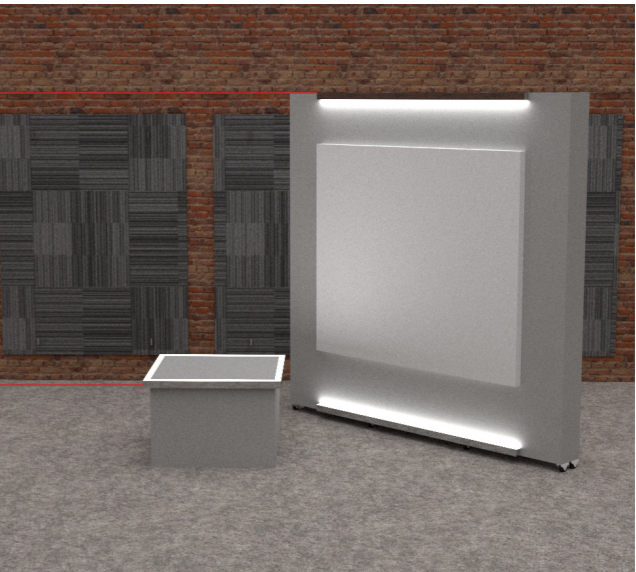
Product data sheet

KRION-IN - 342MM MEDIUM 26° - 15W
0781021A-840
ARCLUCE



- Send to DIALux
- Add to productlist
- Data sheet (PDF)
- Contact manufacturer
- Additional link
- Recommend

Extruded aluminium body Die-cast aluminium caps (EN 47100). Double layer polyester powder paint resistant to corrosion and salt spray fog. Silicone-rubber gaskets. A/G: 316 stainless steel external screws. PMMA lenses for LEDs. Screen made of 8mm thermal-shock resistant tempered glass. 1000kg static load capacity. Can be walked over. It complies with standards EN 60598-1 and EN 60598-2-13.



TECHNICAL DETAILS

DOWNLOADS

Light output 1

Available equipment	• Nominal lamp power:	• Lamp flux:	• Luminous efficacy:	• CCT:	• CRI:	•
1x LED	14.3 W	1923 lm	134 lm/W	3000 K	94	
			LOR	79%		
			Total flux	796 lm		
			Total power	14.3 W		

Mounting mode

Ceiling recessed

Shape and measurements

Height: 116 mm

Diameter: 85 mm

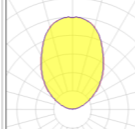
Adjustability

Fixed

Electric

System power: 14.3 W

TECHNICAL DETAILS		DIMENSIONS		DOWNLOADS	
Light output 1 (integrated)					
Lamp type	◆ Nominal lamp power	◆ Total flux	◆ Luminous efficacy	◆ CCT	◆ CRI
LED	29 W	11750 lm	405 lm/W	3000 K	80
				LOR	100%
				Total power	29 W
Mounting mode		Electric			
Floor recessed		System power: 29 W			
		Voltage: 24 V DC			
		Controller: Dimmable 1..10V, DMX, DALI			
		Appliance Class: III			
Shape and measurements		Protection			
Height: 233 mm					
Diameter: 300 mm					
Weight: 7.7 kg					

TECHNICAL DETAILS		DOWNLOADS	
Light output 1 (integrated)			
Lamp type	Nominal lamp power	Total flux	Luminous efficacy
	3.1 W	142 lm	46 lm/W
		LOR	100%
		ULOR	100%
		Total power	3.1 W
			
Mounting mode		Adjustability	
Wall recessed		Fixed	
Shape and measurements		Electric	
Length: 120 mm		System power: 3.1 W	
Width: 65 mm		Protection	

TECHNICAL DETAILS

DOWNLOADS

Light output 1 (integrated)

Lamp type	• Nominal lamp power	• Total flux	• Luminous efficacy	• CCT	• CRI
LED	15 W	1300 lm	87 lm/W	4000 K	90
				LOR	100%
				Total power	15 W

Mounting mode

Floor recessed

Shape and measurements

Length: 342 mm

Width: 69 mm

Height: 142 mm

Electric

System power: 15 W

Appliance Class: I

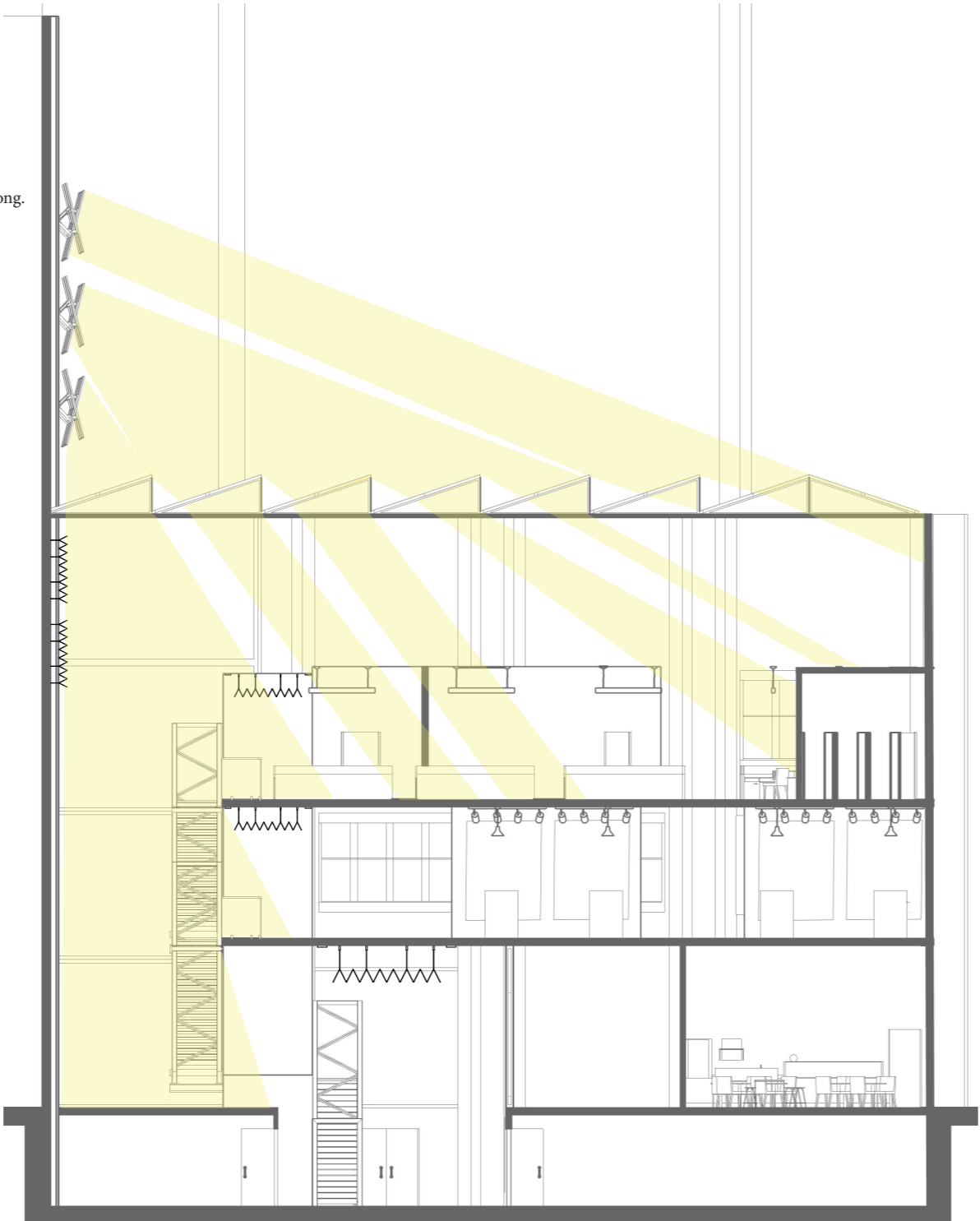
Protection

IP: 67

IK: 10

Solution to get natural light into the basement.

Movable heliostats to catch light for all seasons all year long.



Render of the natural lighting reflected from the suspended heliostats.



B3. Acoustics Concept & Design.

CONCEPT

ACOUSTICS. *Goals*

- Sound proof walls especially against medium traffic surrounding the site. Preferably 30 dB to 40 dB (Less distractions)
- Medium reverberation time throughout the building. Preferably 1 KHz to 1.5 KHz.
- Low intruding sounds.
- High or Medium reverberation time. (Spacious atmosphere)
- Low intruding noise + Spacious atmosphere, for an “Escape” from the urban environment.

Materials.

Double Brick Veneer
Window Double Glazing
Concrete - Grey
Carpet - Grey
Carpet Wall Panels - Black x 13

Reverberation Calculation. Total Reverberation time - 1.3 seconds

Room Volume m³

	Surface Name	Material	Area, m ²	NRC
▶	walls	Brick	156	0.04
	windows	Glass > 4mm	156	0.04
	Ceiling	Thick pile carpet on spo	120	0.51
	Floor	Thick pile carpet on spo	238	0.51
	Carpet panels x 13	Thick pile carpet on spo	65	0.51
	People	Person in upholstered se	100	0.45

Reverberation Time:

125 Hz 250 Hz 500 Hz 1 KHz 2 KHz 4 KHz

Room Noise Calculation. Total noise in the space - 30.5 dBA.

Peak Level

Background Sound Sources

Medium Traffic LAeq 65.0

Air-conditioning - air only LAeq 20.0

Foreground Sound Sources

Restaurant Patrons LAmax 70.0

Sound Paths

Parlton: 10mm / 100 / 6mm; AI frame LAeq 30.1

Diffuse source LAeq 20.0

Parlton: 10mm / 100 / 6mm; AI frame LAmax 17.2

ROOM

LAeq 30.5 dBA

Reverberation Time, seconds:

125 Hz 250 Hz 500 Hz 1 KHz 2 KHz 4 KHz

3.7 2.4 1.5 1.3 1.1 1.1

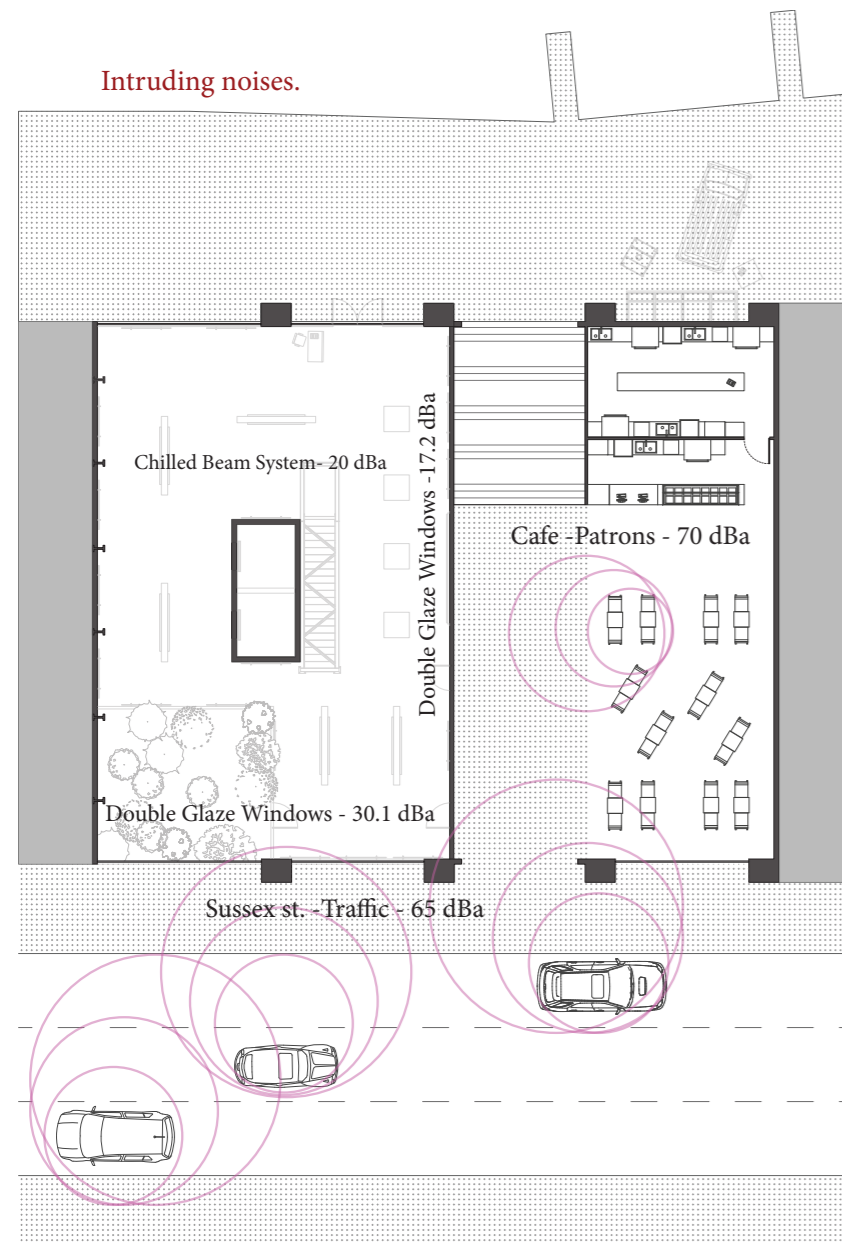
Room Dimensions:

Length: 21.275 m Width: 14.200 m

Height: 8.1 m

Simulation Accuracy: 5

Calculate Reverb. Time

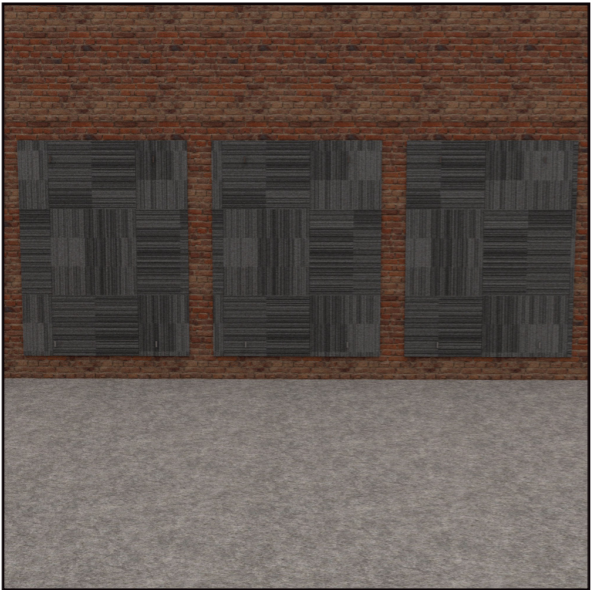


B4. Acoustics Detials.

Materials.

Carpet Wall Panels - Black
To compensate and reduce the reverberation time.
(Refer back to B1 Renders to see the locations)

Floor Carpet - Grey
To compensate and reduce the reverberation time.

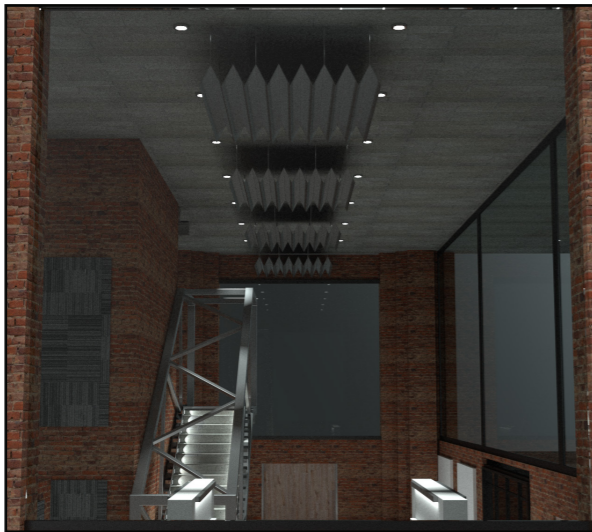


Double Brick Veneer Wall
Keeping the original structure.
While reducing intruding traffic noise.

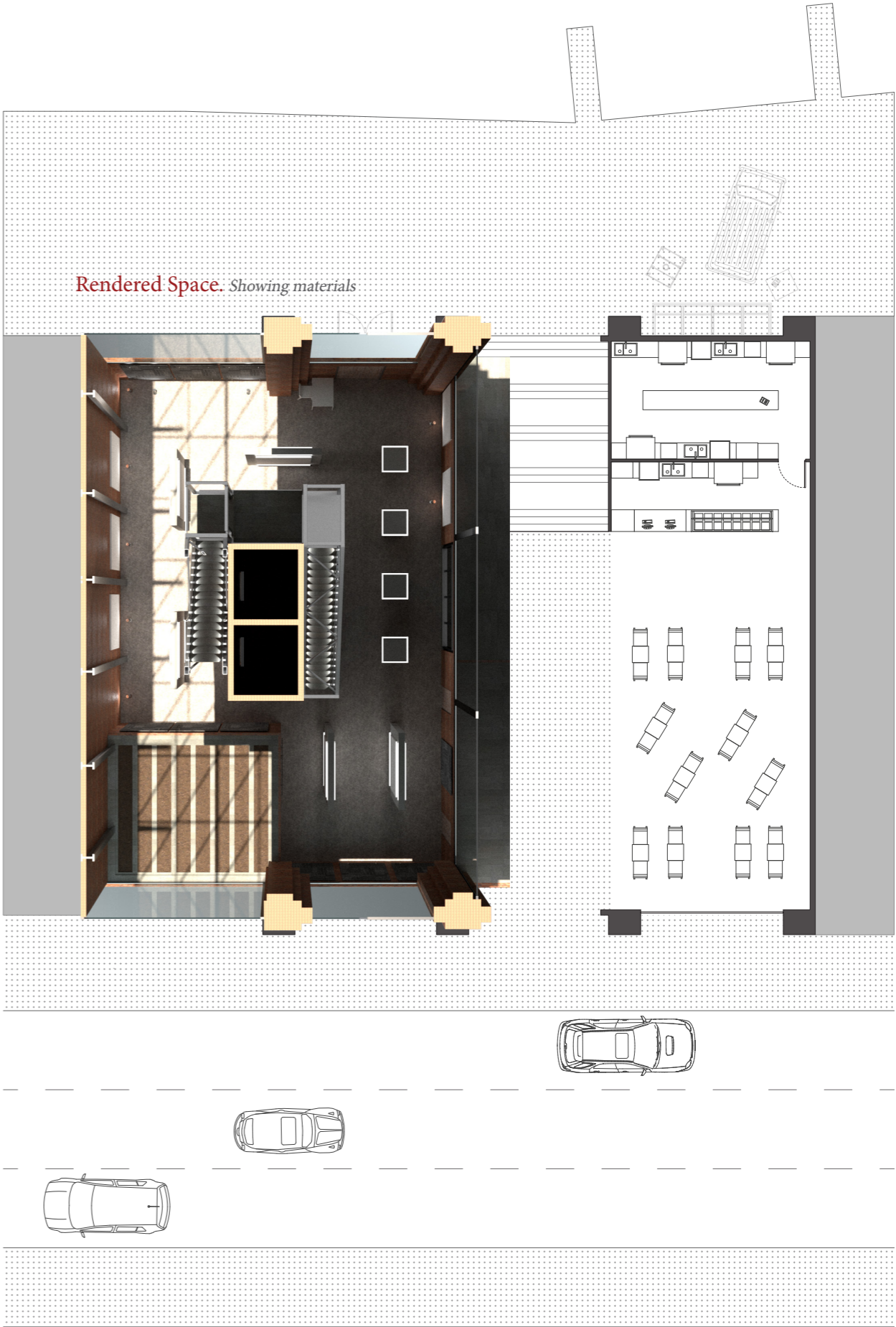
Concrete Ceiling - Grey
Keeping the original structure.
While reducing 2nd floor intruding noise.

Window Double Glazing
Reduces intruding noises from the cafe patrons and Sussex st. traffic.

Chilled Ceiling Beams.
Lower background noise through-out the space. Compared to normal airconditioning.



Rendered Space. Showing materials

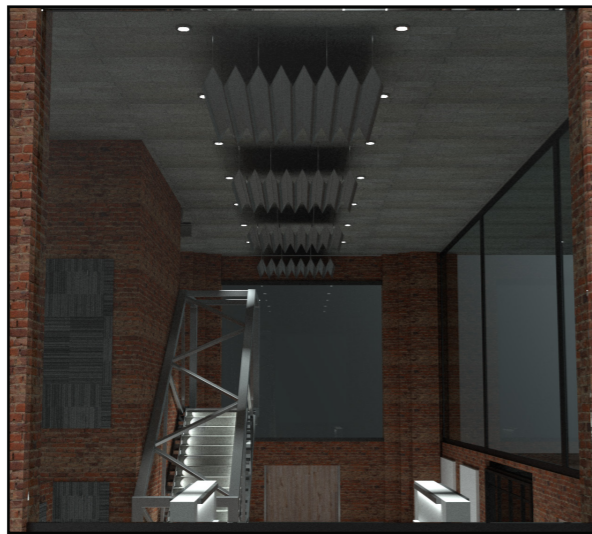


B5. Thermal Detials.

THERMAL. Goals

- Create a closed space thermal system to compensate for the glass box.
- Make use of the glass box to to expel rising heat from the space.
- Expose thermal system in the outer envelope following the “unwrapped” architecture language throughout the building.

Chilled Ceiling Beams.
Catches hot air rising from the space.



High ceiling connecting to all floors.

Distributes rising hot air throughout the building. At the same time cold air dispensed from the chilled beams flow down to the chosen space.

