



DANCE & MUSIC STUDIOS

289 10TH AVENUE NEW YORK, NY 10001

ARCH 4812

SPRING 2022

PROFESSOR: HEIDI THEUNISSEN

DAN ROGERS

TEAM III

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MICHELLE BERBERY

RACHEL MERCEDES

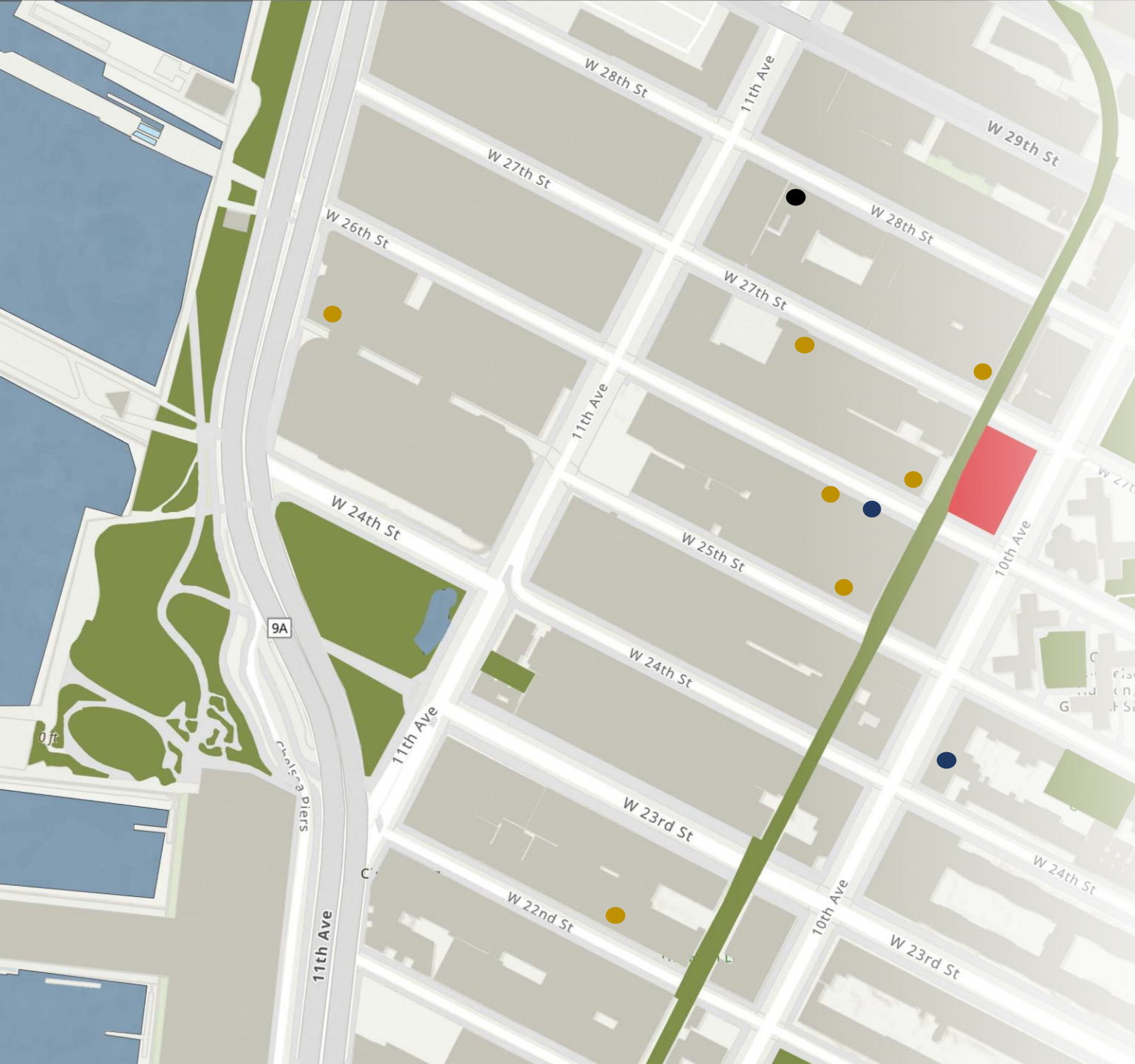
MANIFESTO

The Chelsea art district is one of the most important and influential art districts in New York City. Our site is located within the district on 10th Avenue between 26th and 27th street.

To add to the arts and many galleries around the area we propose to expand the arts with a music and dance studio that will allow people to rehearse and connect to the high line. The high line is a major key point to this project because it will play a major role in the performing space, it will attract attention, interest, and experience to the viewer.

We want to reinforce the art district while embracing the opportunity of the highline which is a performance space itself. We want to provide a space to visually connect these two spaces while bringing together the art and the uniqueness of both. This center will provide a space for all the music and dance studios around to showcase their talent but also to further develop their skill to a professional level.

- We propose an eco-friendly project that will blend in with sustainable approaches to meet our environmental responsibility throughout our design strategies.
- To cultivate a cross-practice approach to design problems.
- Research and understand the life-cycle assessment of the materials used in our project.
- Put in place systems that will make a difference. For example, provide energy and water efficiency.
- Maximize natural light by strategically designing open space.
- Design a project that adapts to a changing environment.
- Enhance indoor & outdoor quality environment while bringing comfort, wellbeing and productivity for users.
- Design green spaces to enhance the environment and support everyday life.
- Create a place that engages with the community.



SITE ANALYSIS

289 10TH AVENUE NEW YORK, NY 10001

SITE – 105'-0" X 200'-0"

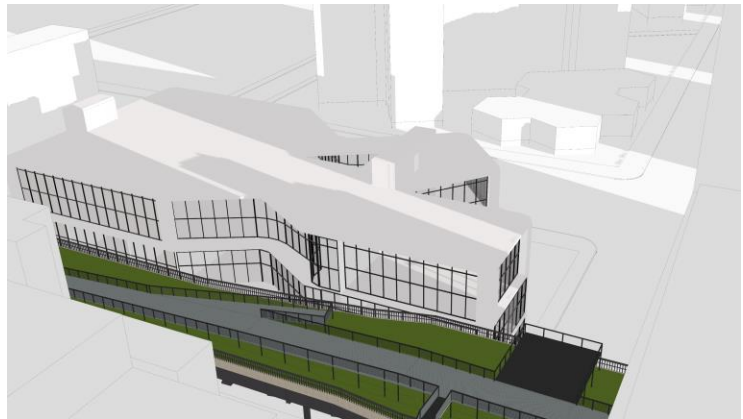
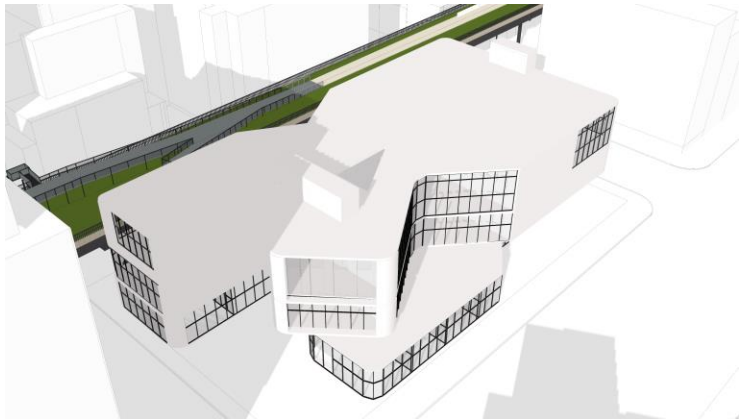
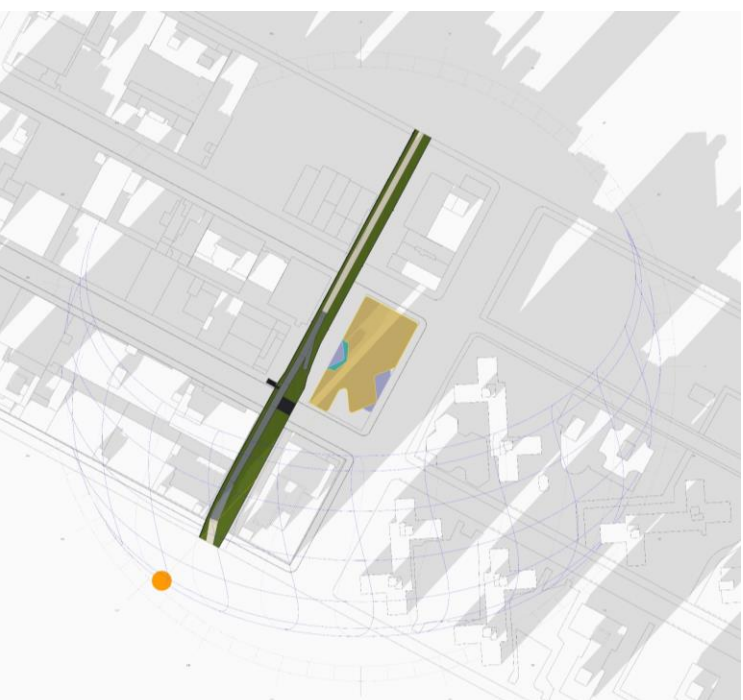
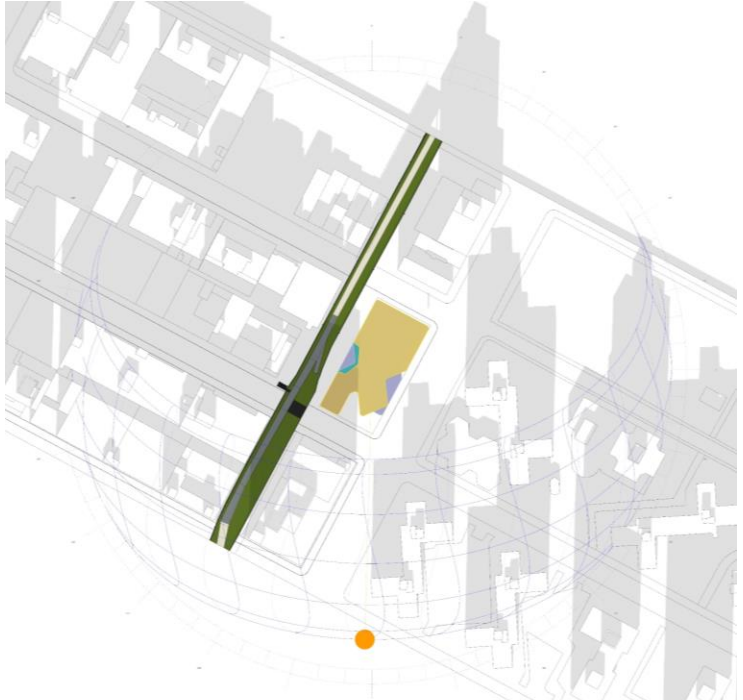
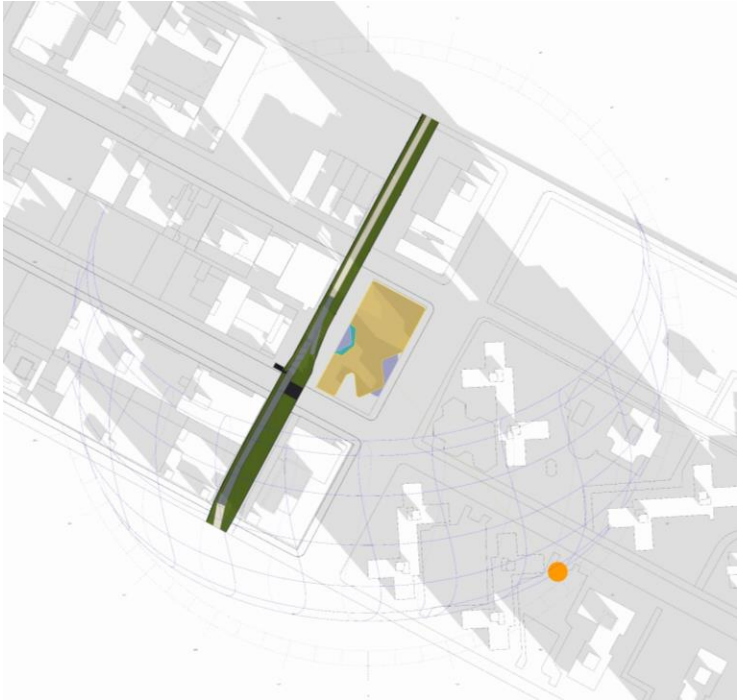
FEATURES

- HIGHLINE
- CHELSEA MARKET
- CENTER OF THE ARTS

- ART GALLERIES
- MUSIC STUDIOS
- DANCE STUDIOS

SUN ANALYSIS

WINTER SOLTICE



09:00 AM

12:00 PM

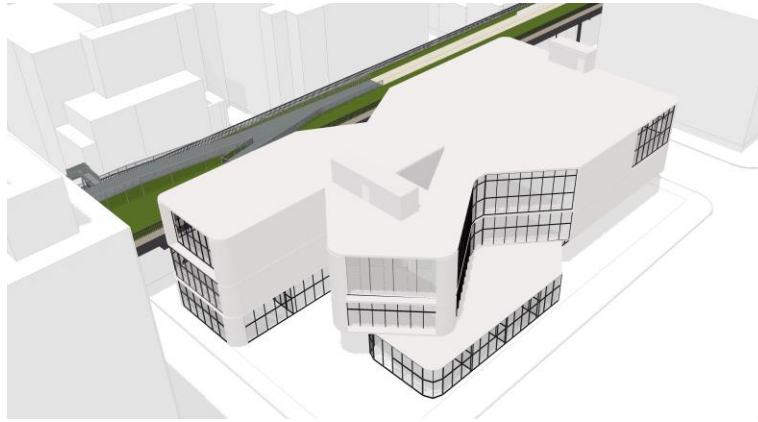
03:00 PM

SUN ANALYSIS

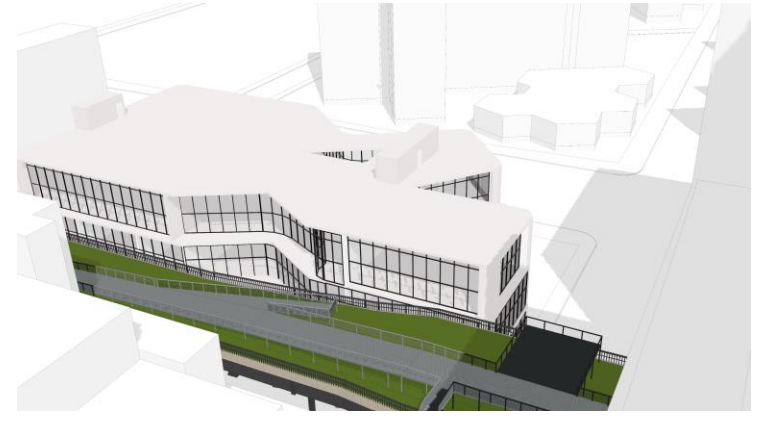
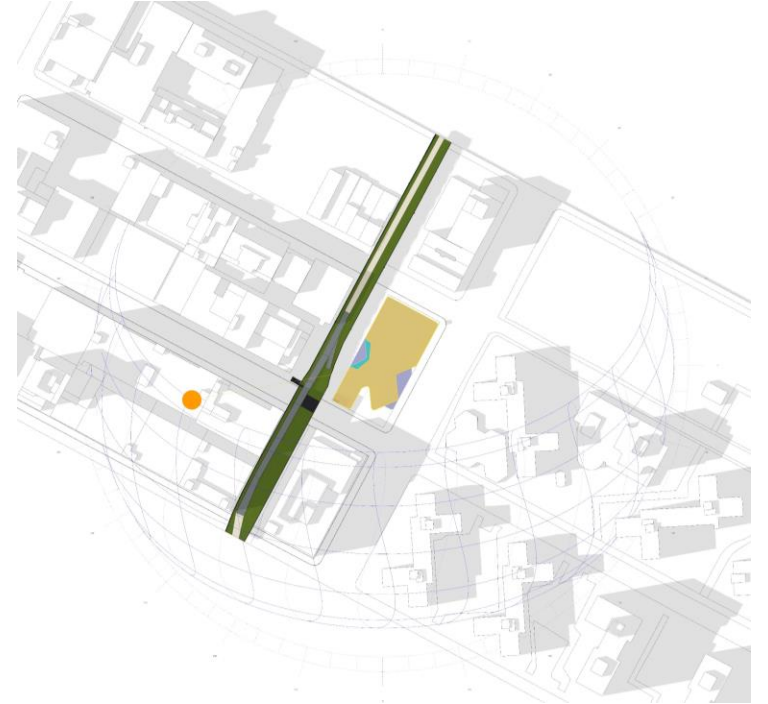
SUMMER SOLTICE



09:00 AM

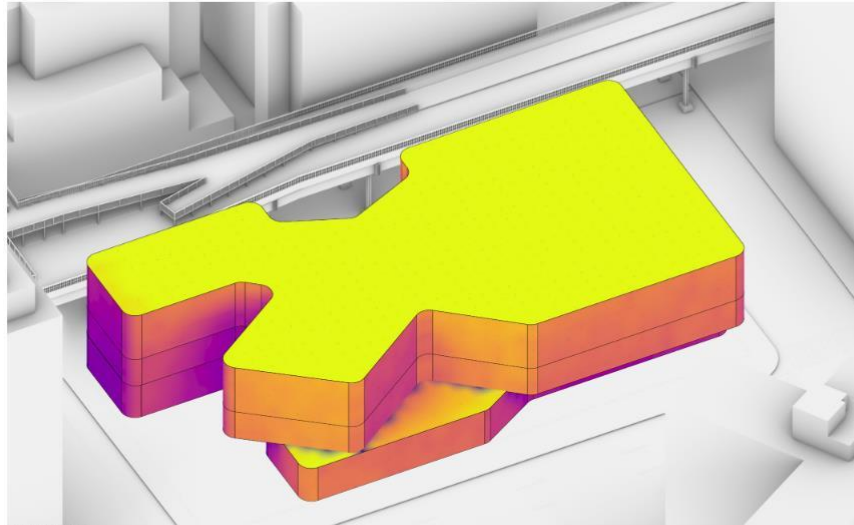


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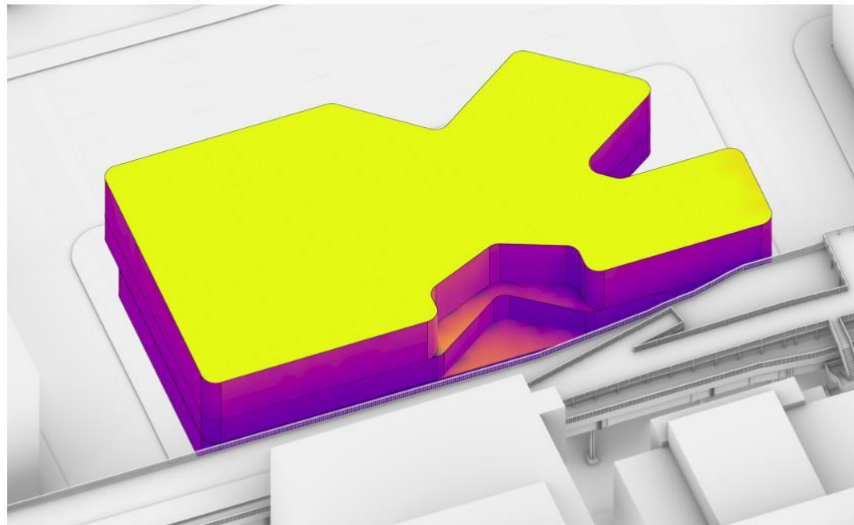


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RADIATION ANALYSIS

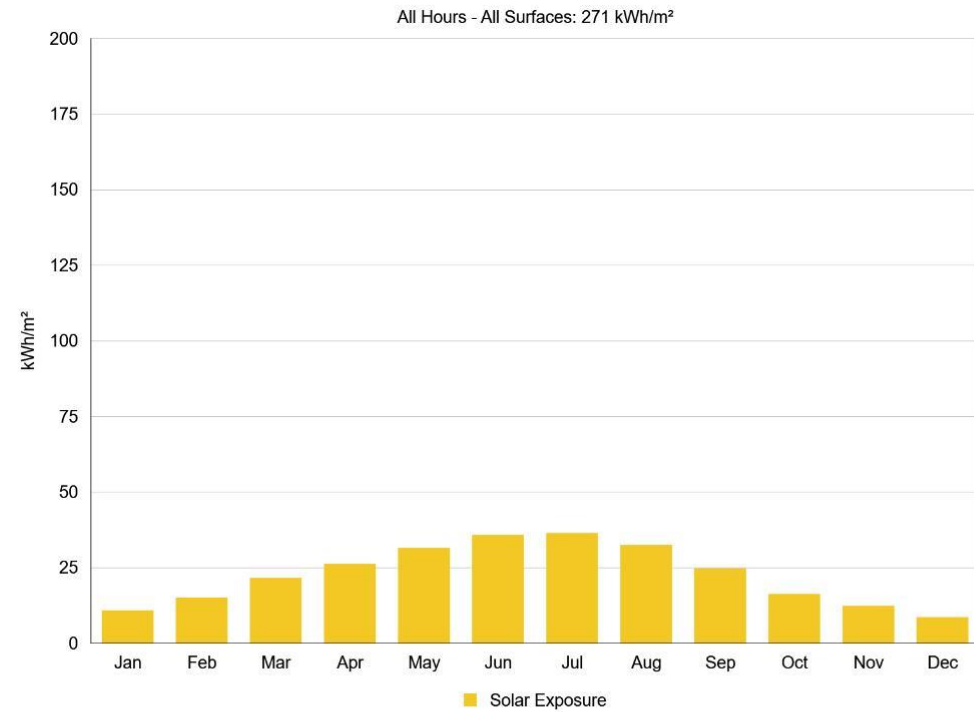


FRONT

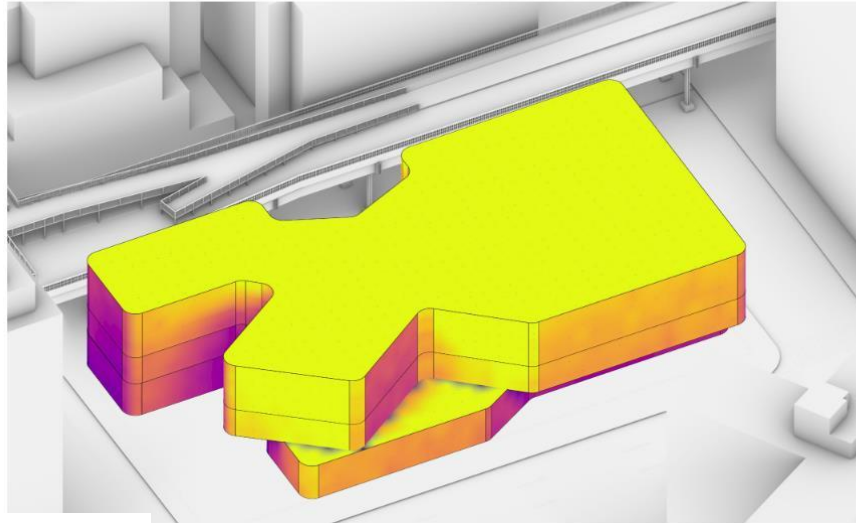


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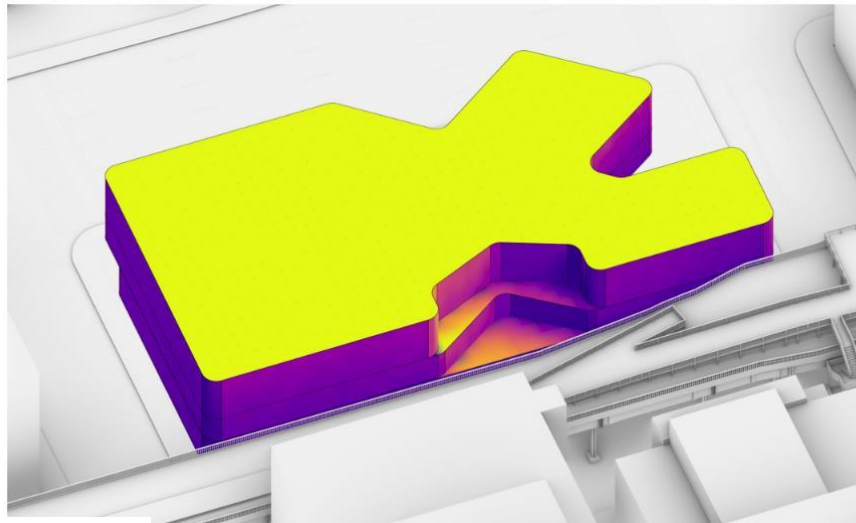
ALL HOURS – TOTAL SOLAR EXPOSURE



RADIATION ANALYSIS

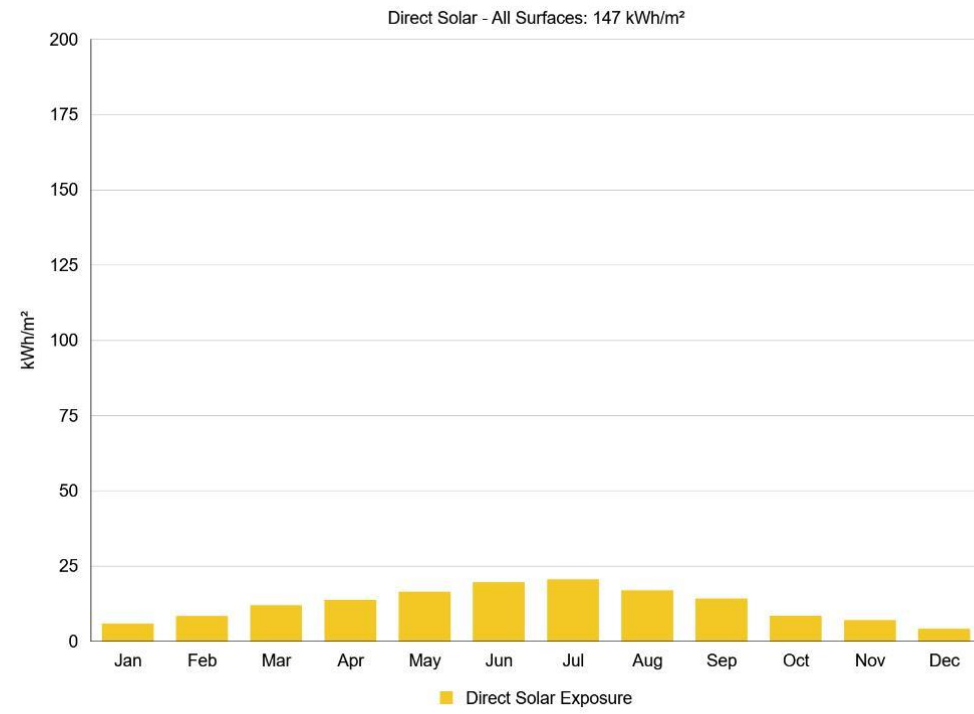


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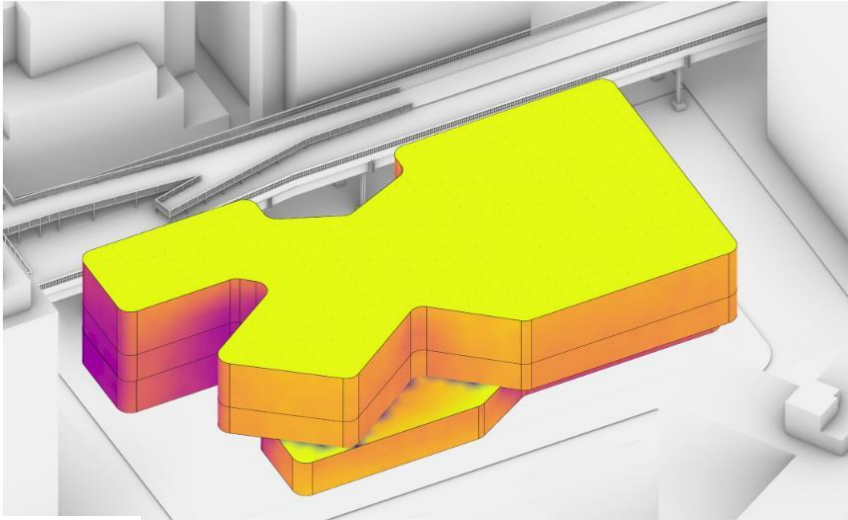


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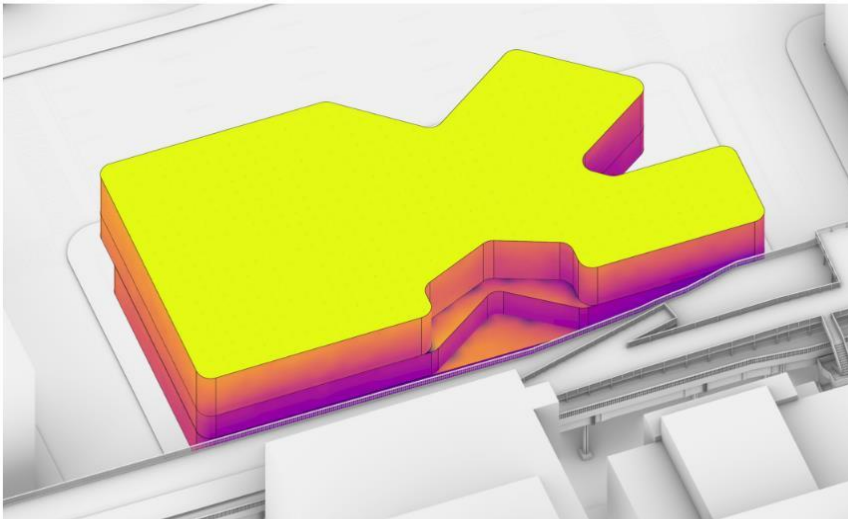
ALL HOURS – DIRECT SOLAR EXPOSURE



RADIATION ANALYSIS

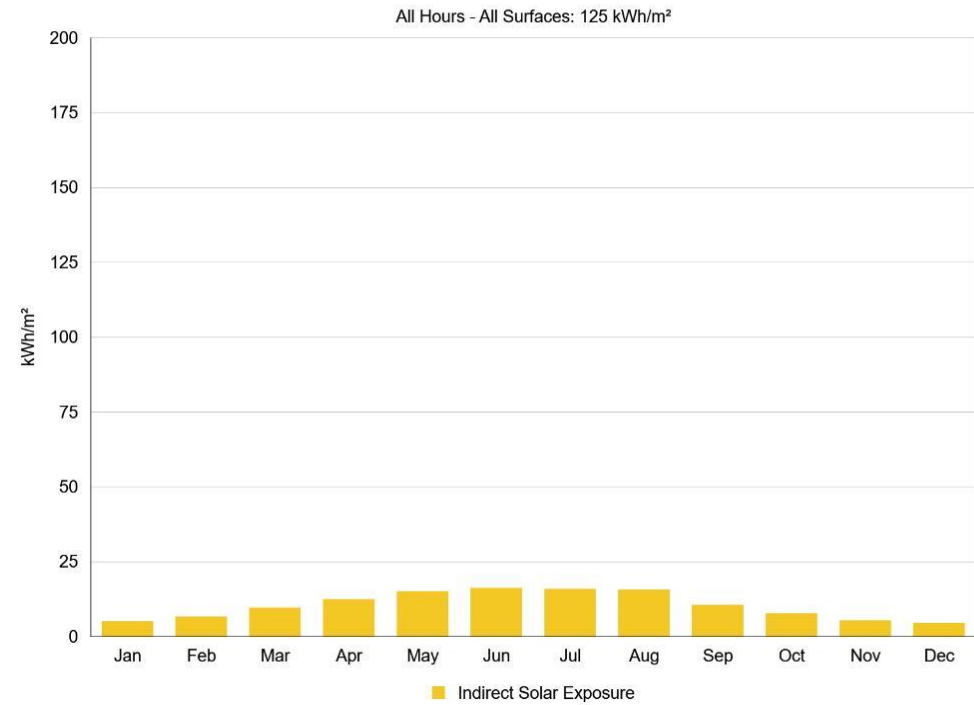


FRONT



BACK

ALL HOURS – INDIRECT SOLAR EXPOSURE

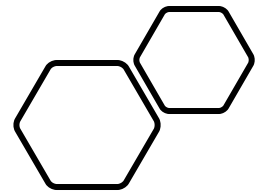




RADIATION ANALYSIS - SOLUTION

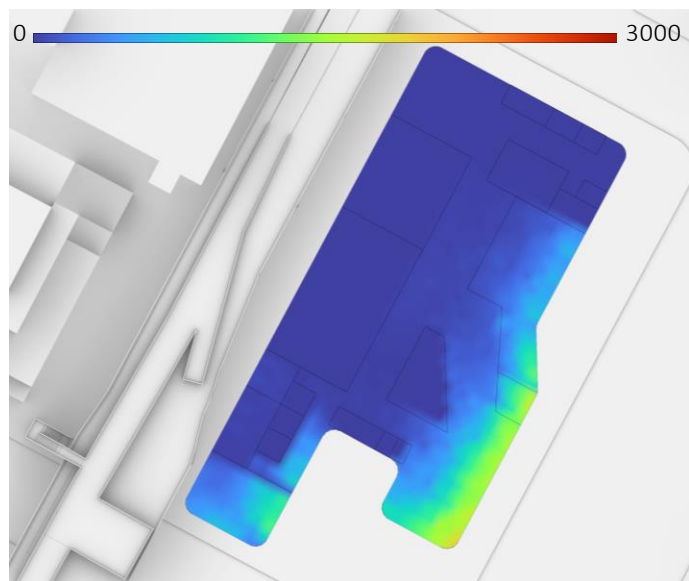
The roof during all hours is receiving solar radiation direct and indirect.

- To take advantage of this, we propose solar panels in the south part of the roof. The panels will be an exchange to power all of the exterior lighting of the building.
- Helps reduce electricity cost
- Helps the environment with climate change
- Reduces air pollution

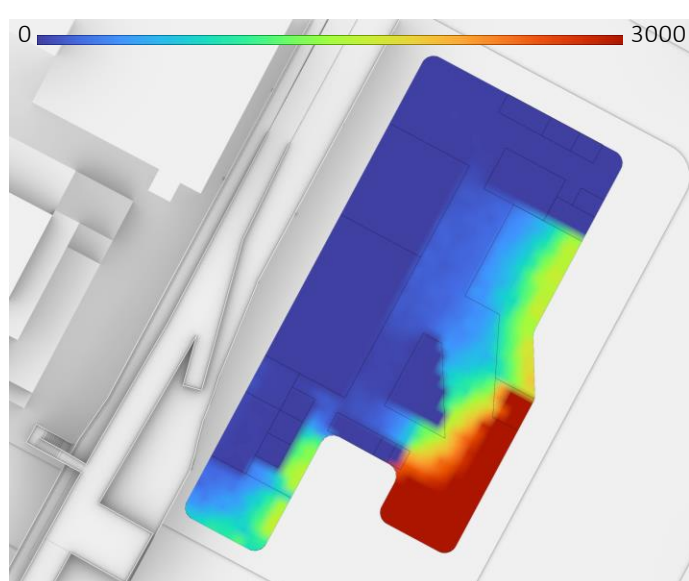


DAYLIGHT ANALYSIS - FIRST FLOOR

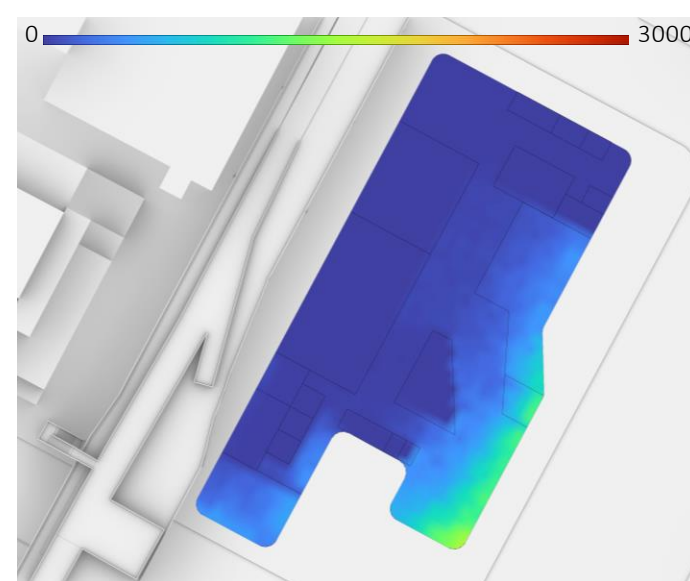
WINTER



09:00 AM

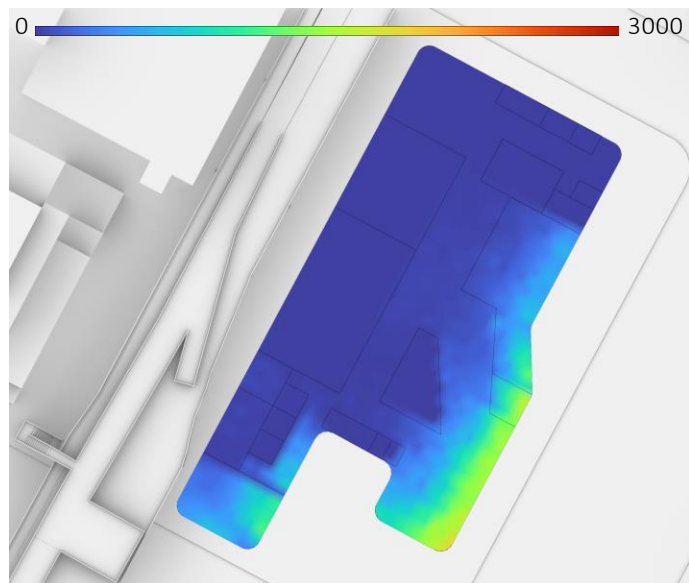


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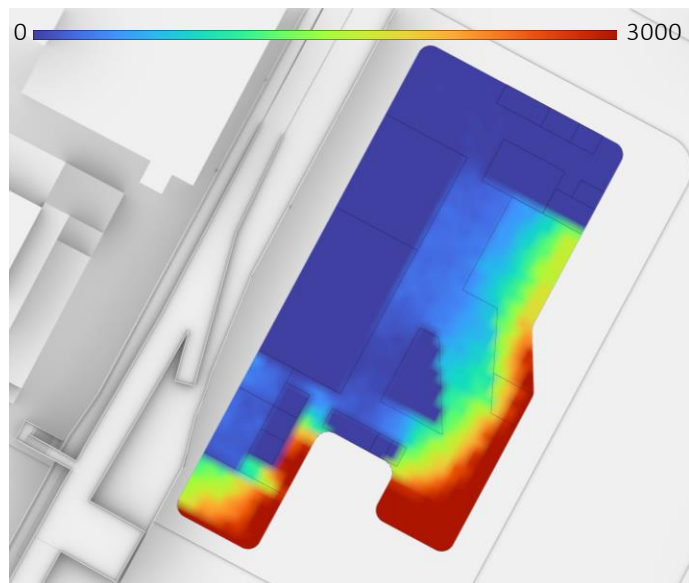


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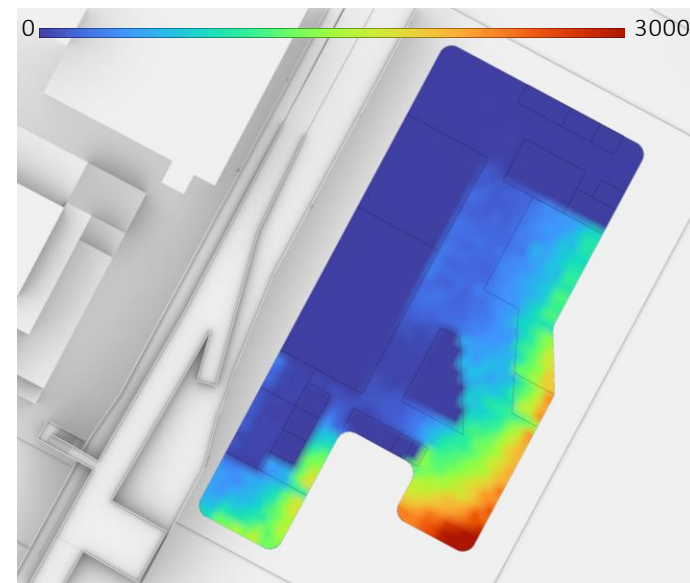
SUMMER



09:00 AM



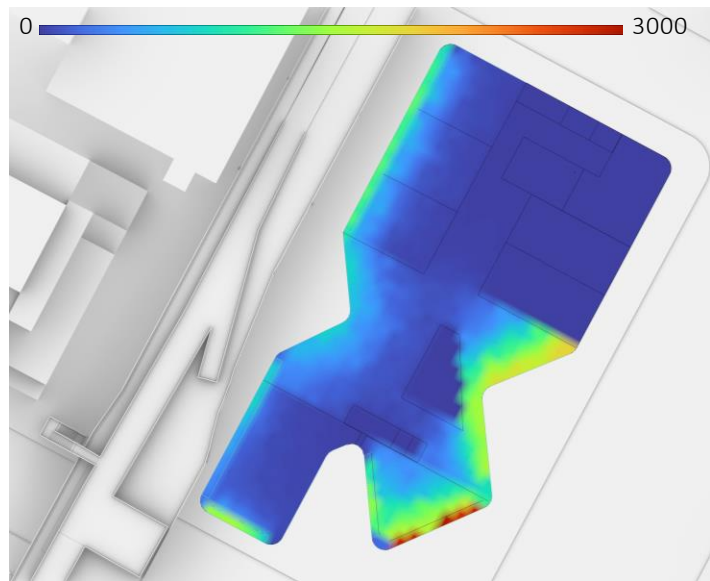
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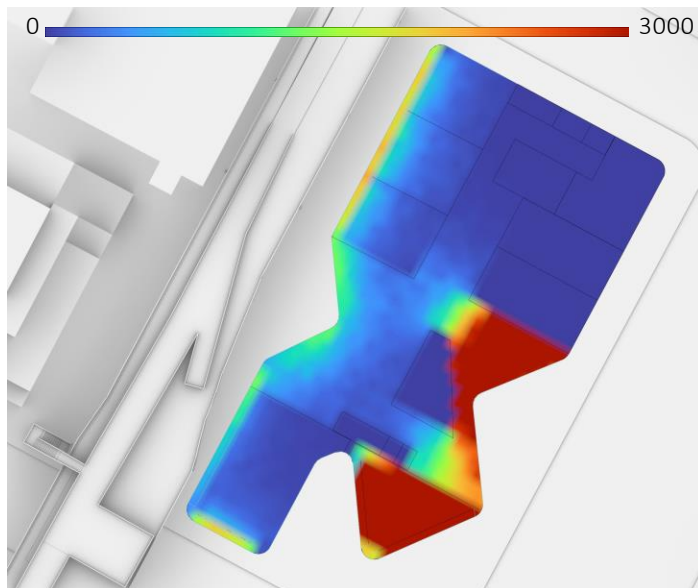
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DAYLIGHT ANALYSIS - SECOND FLOOR

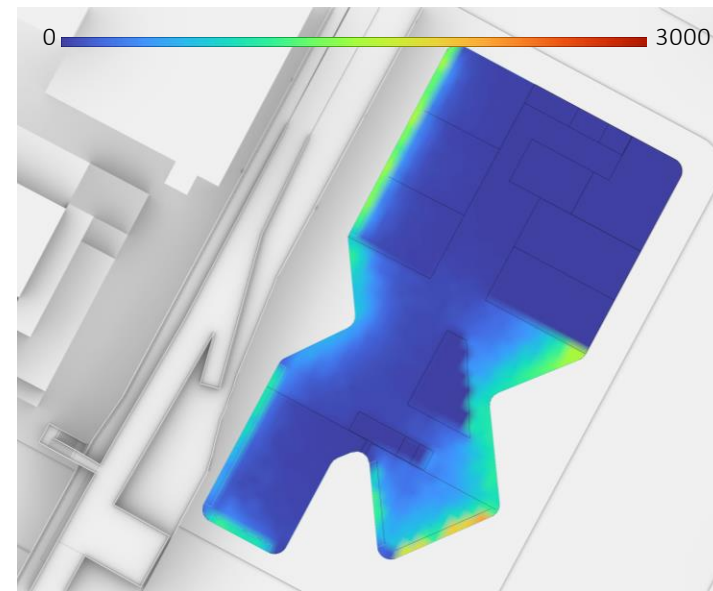
WINTER



09:00 AM

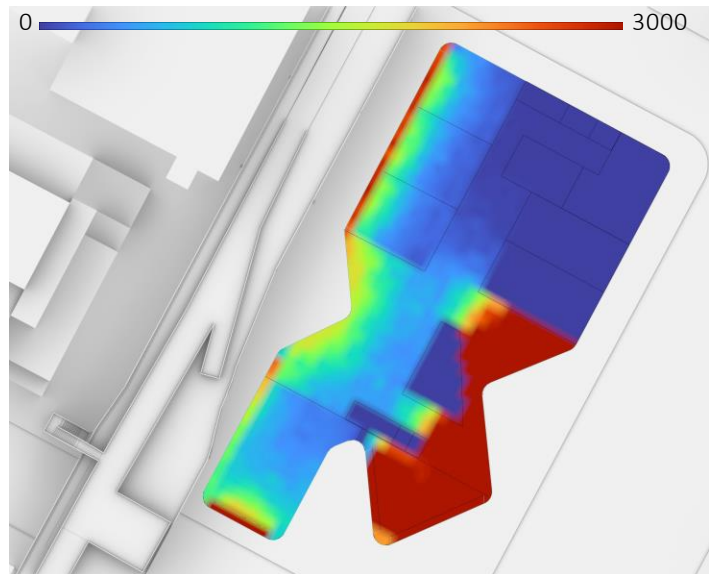


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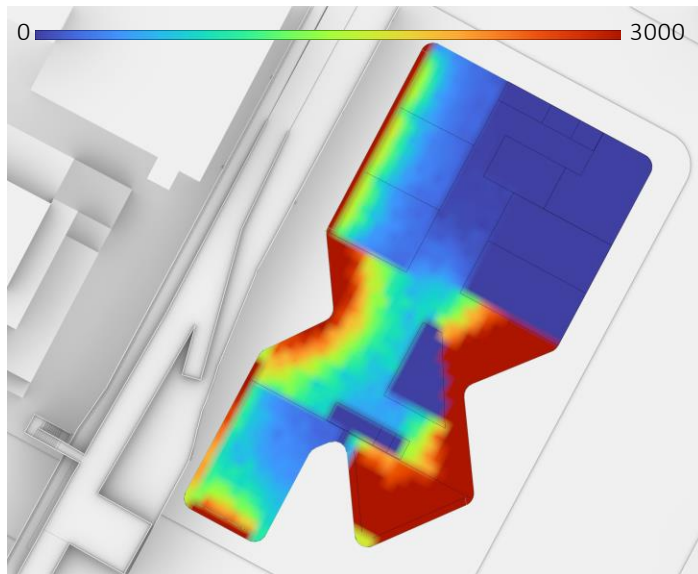


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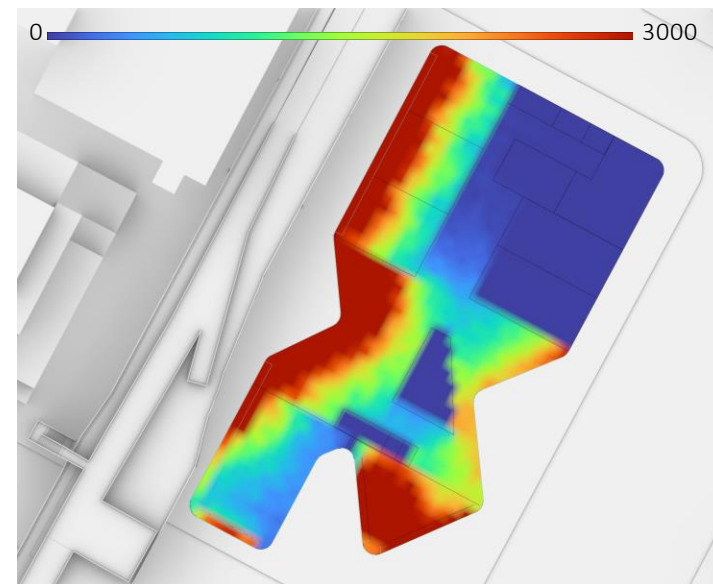
SUMMER



09:00 AM



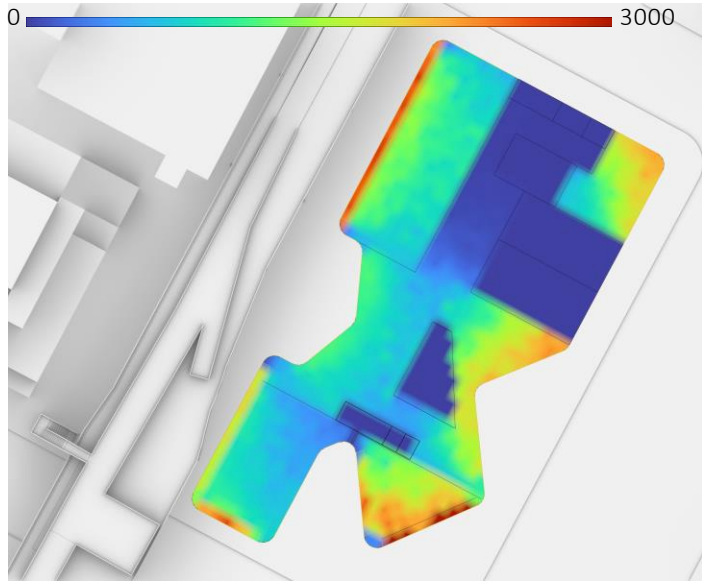
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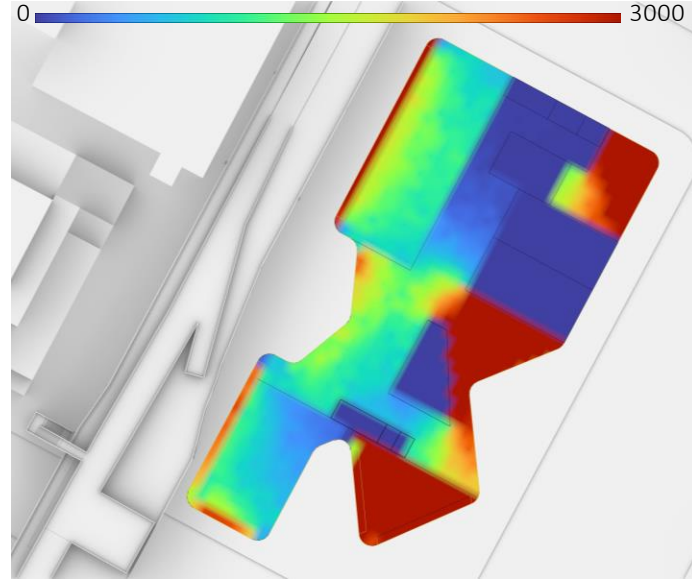
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DAYLIGHT ANALYSIS - THIRD FLOOR

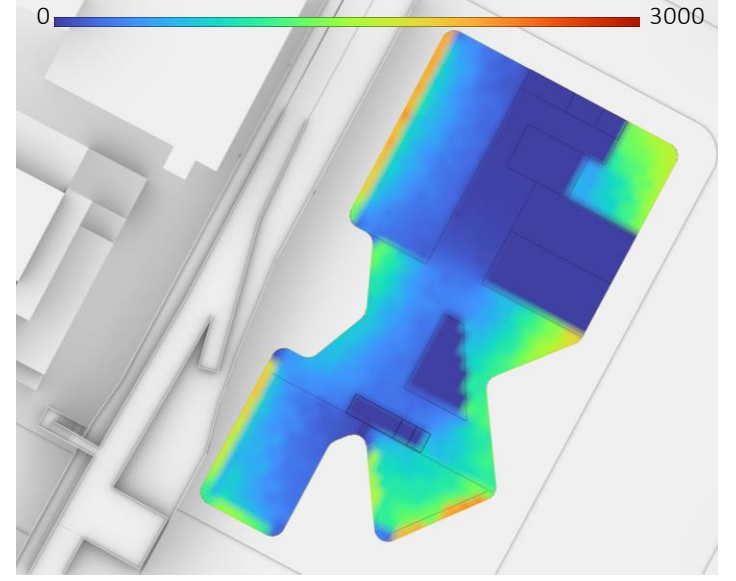
WINTER



09:00 AM

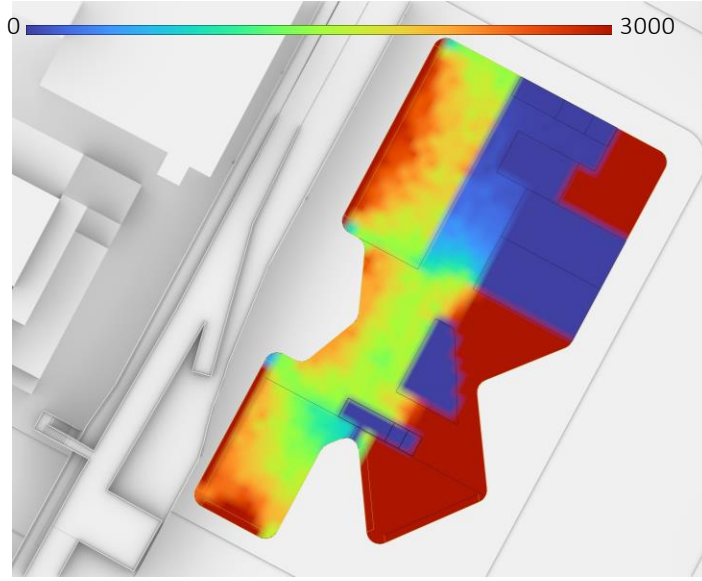


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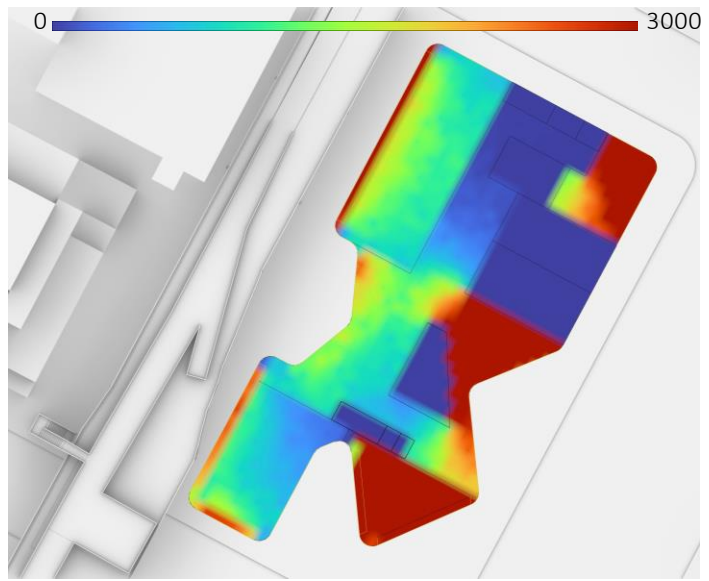


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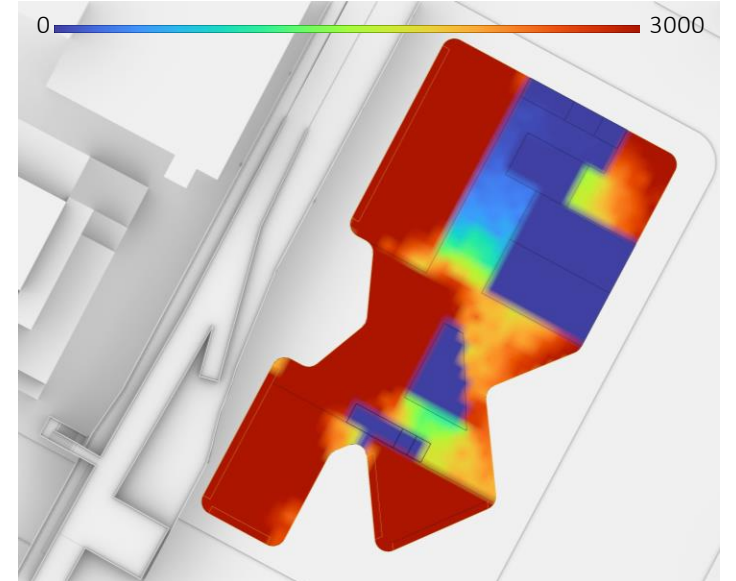
SUMMER



09:00 AM



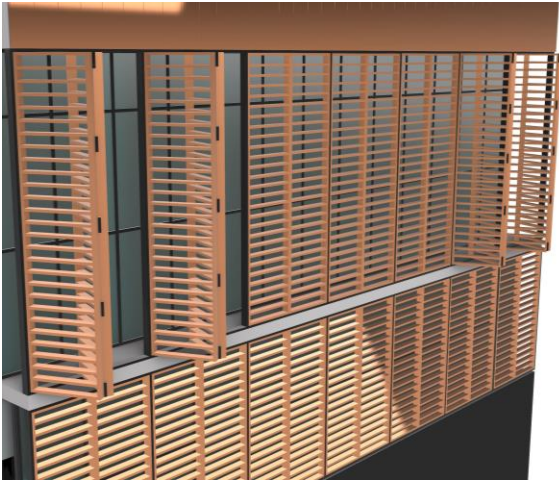
12:00 PM



03:00 PM

DAYLIGHT ANALYSIS - SOLUTION

Shading Vertical Louvers



Vertical exterior shading that folds horizontally and can be operated electronically. It provides sunshade control for a better use of the building. They will be installed on the west and east façade of the second and third floors.



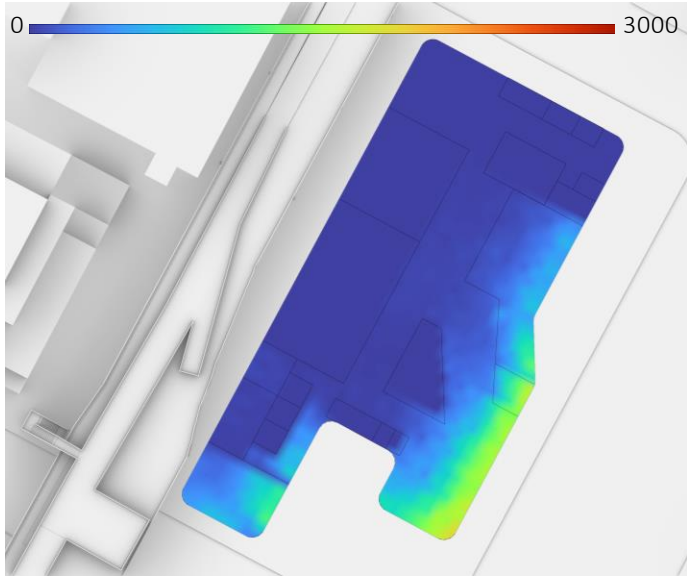
Interior Blinds



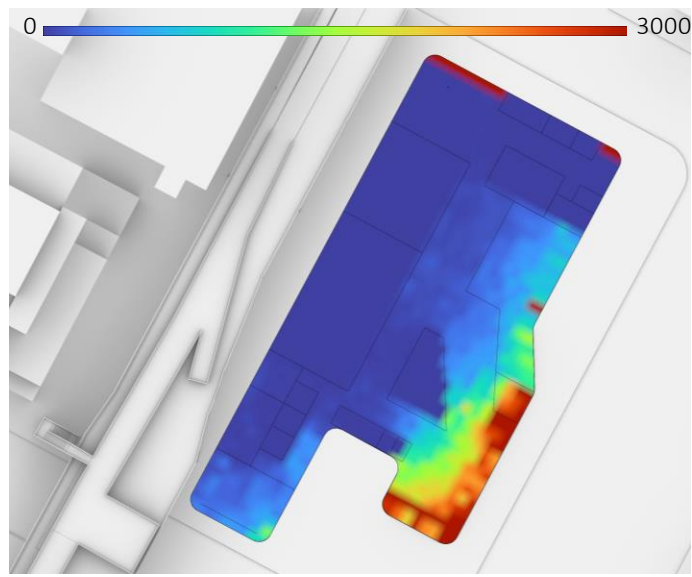
Interior roller blinds that can be operated electronically. They'll be installed on the east and south façade of the ground floor as well as on south façade of the second and third floor.

DAYLIGHT ANALYSIS - FIRST FLOOR - LOUVERS/BLINDS

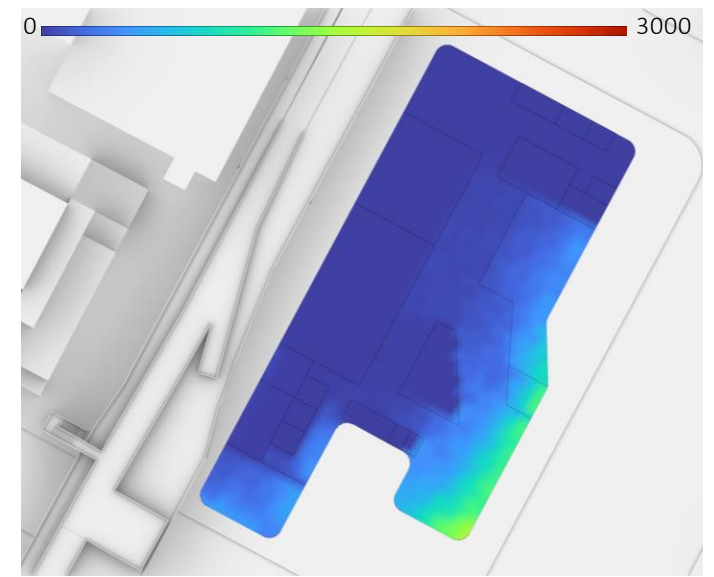
WINTER



09:00 AM

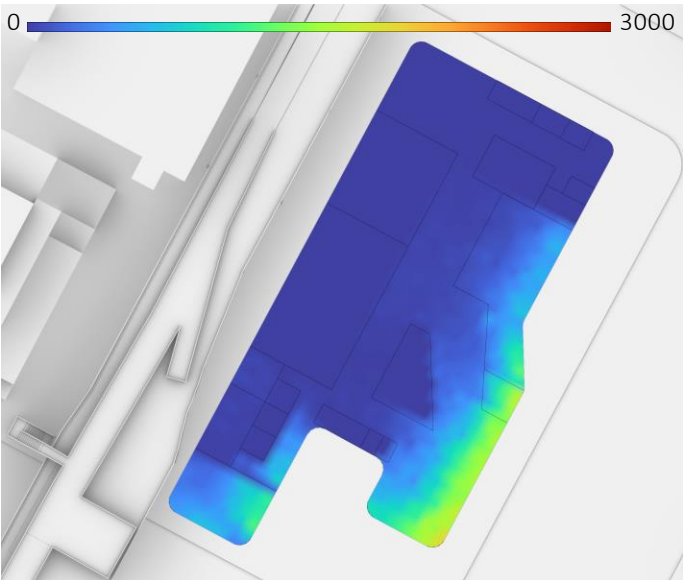


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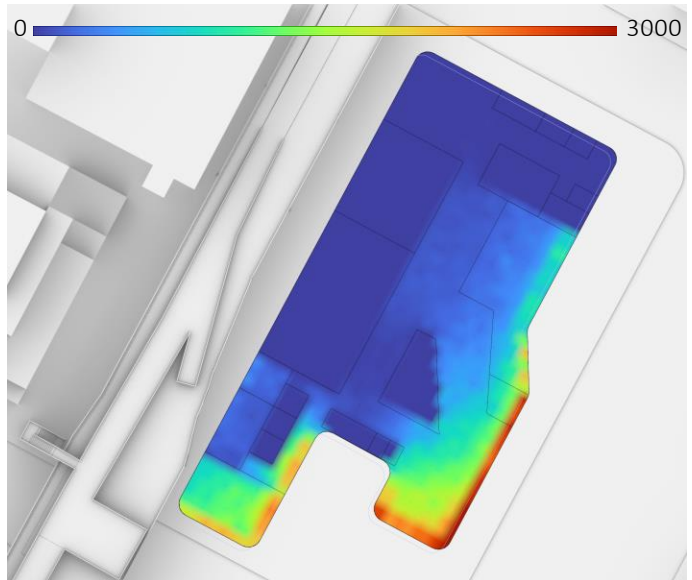


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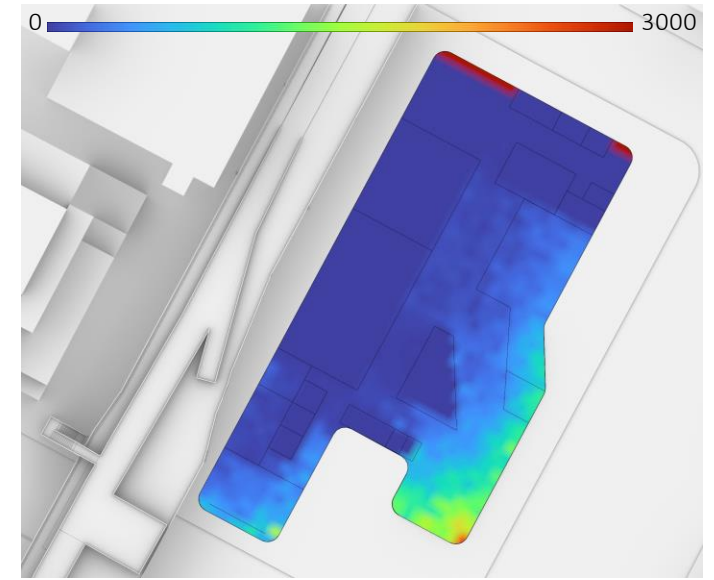
SUMMER



09:00 AM



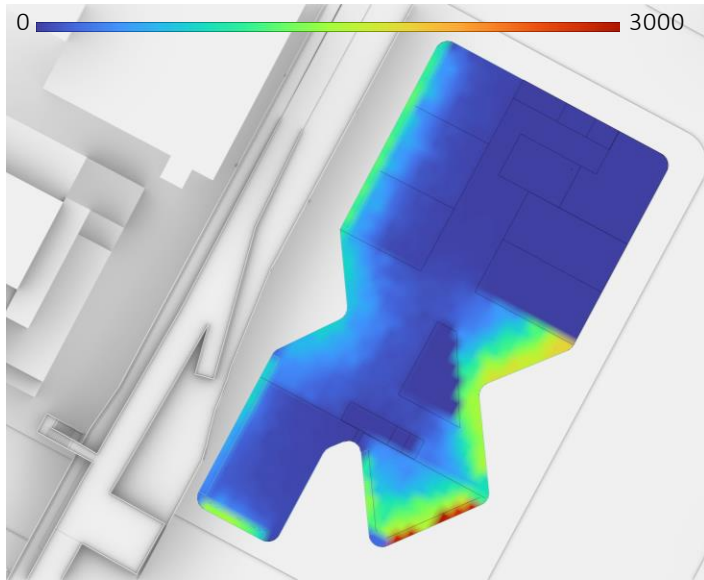
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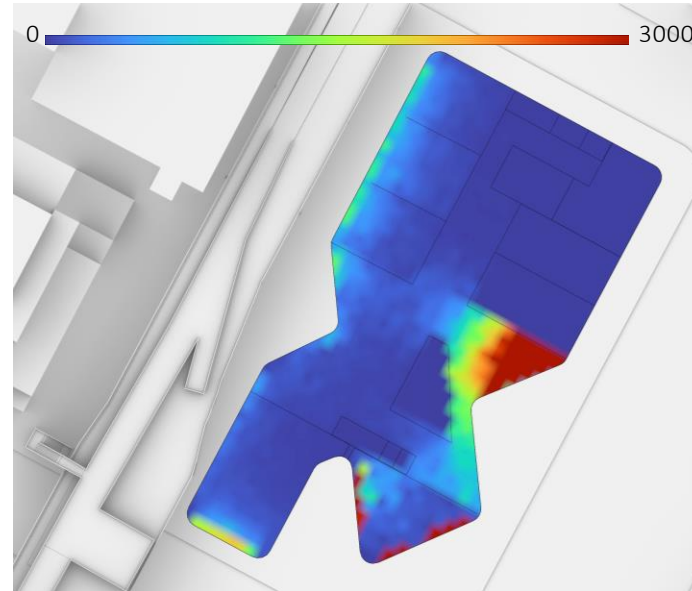
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DAYLIGHT ANALYSIS - SECOND FLOOR - LOUVERS/BLINDS

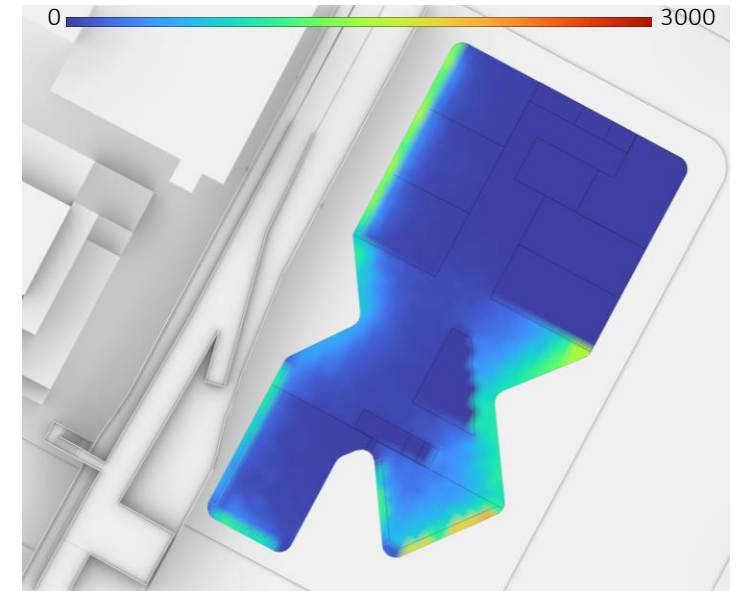
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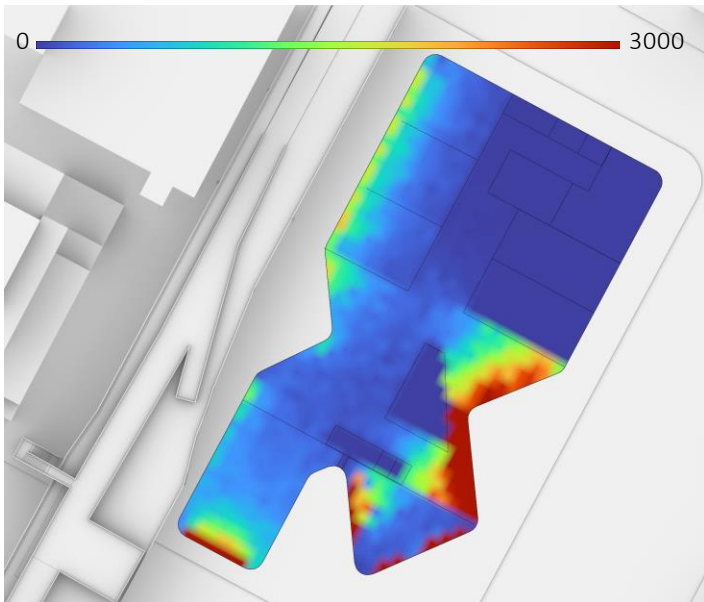


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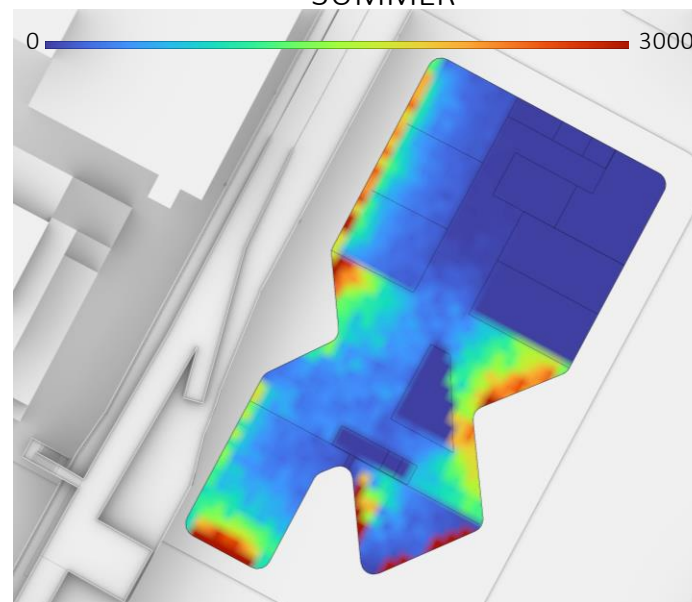


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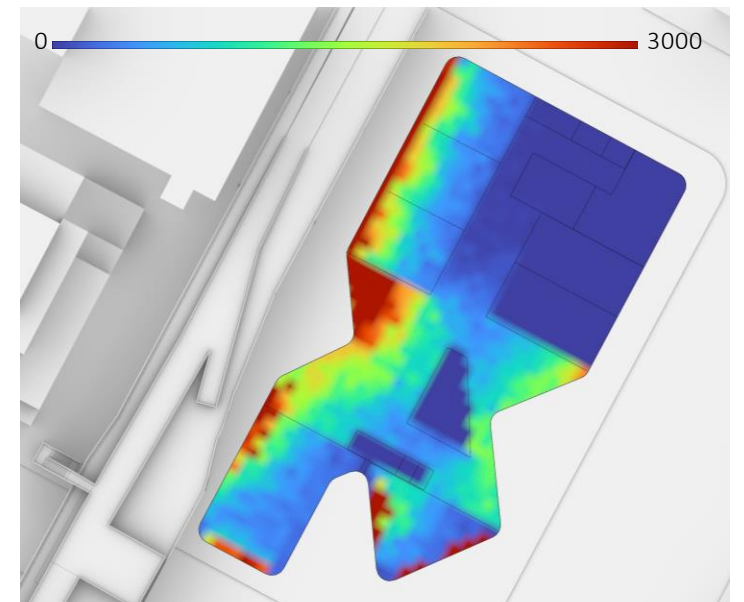
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09:00 AM



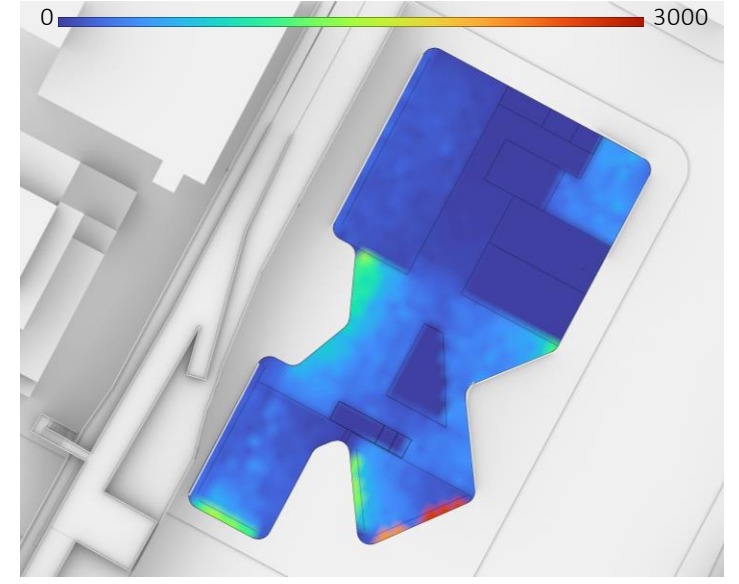
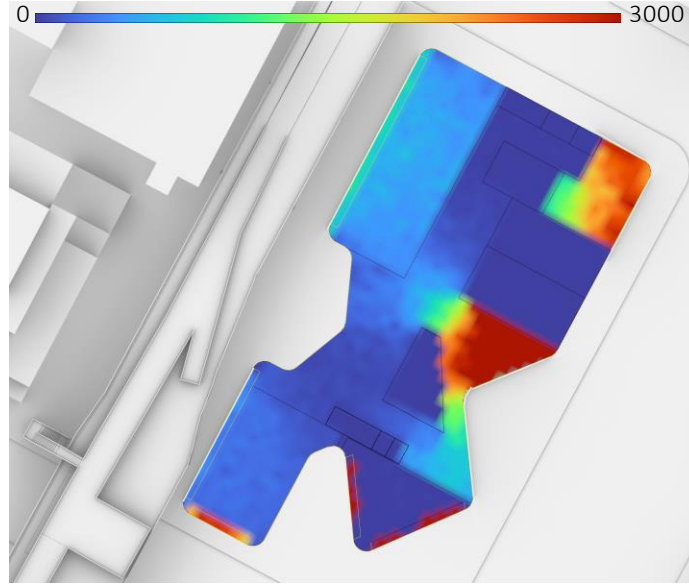
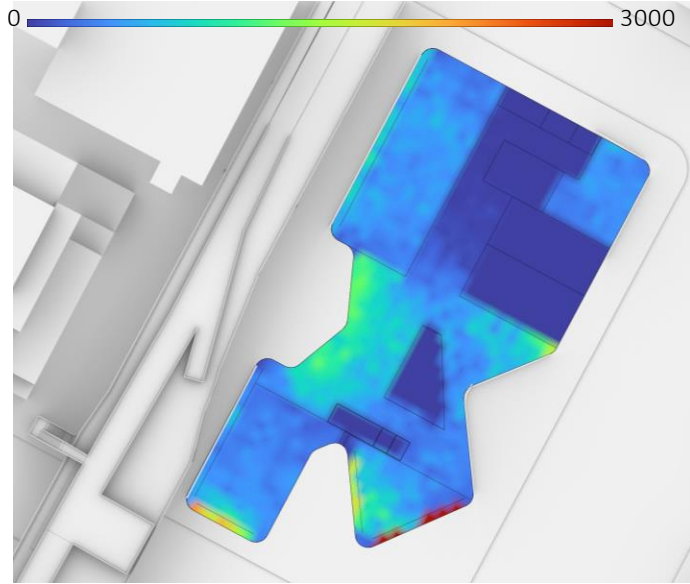
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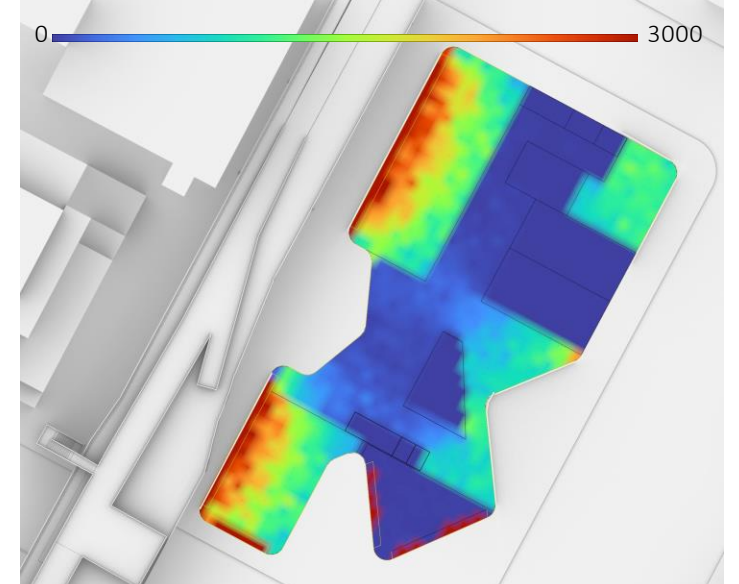
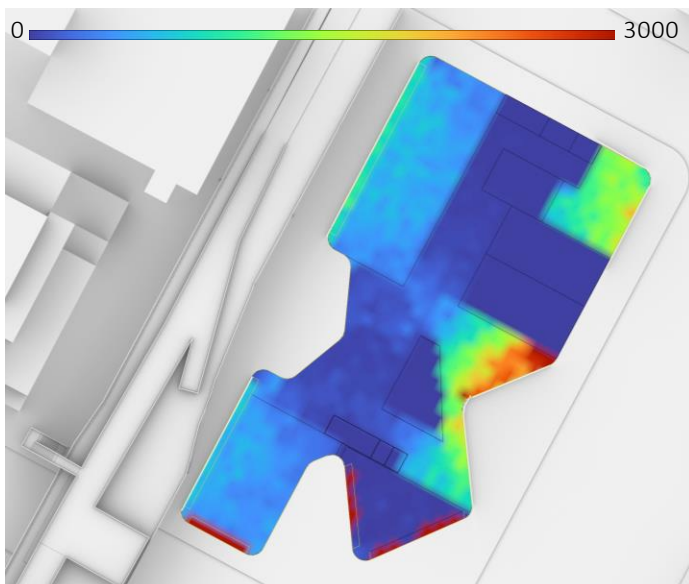
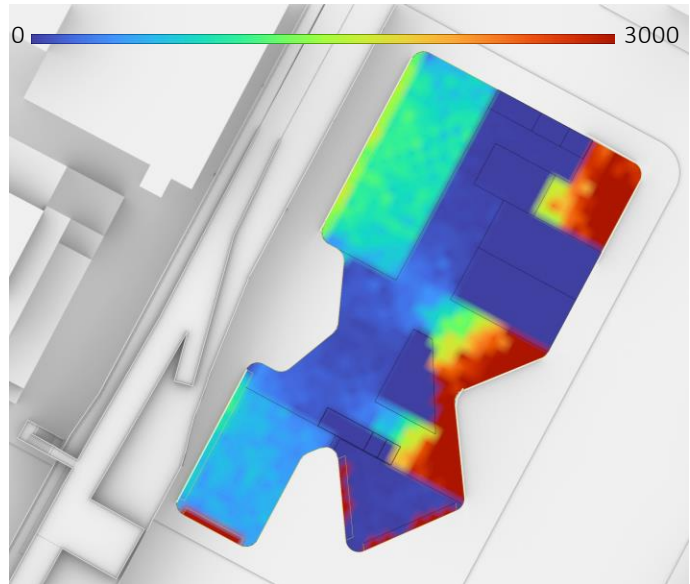
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DAYLIGHT ANALYSIS - THIRD FLOOR - LOUVERS/BLINDS

WINTER

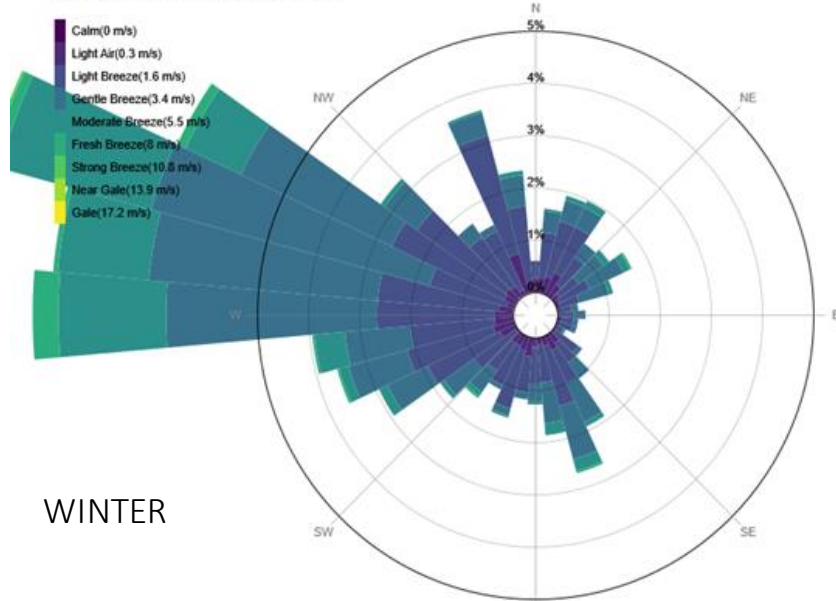


SUMMER



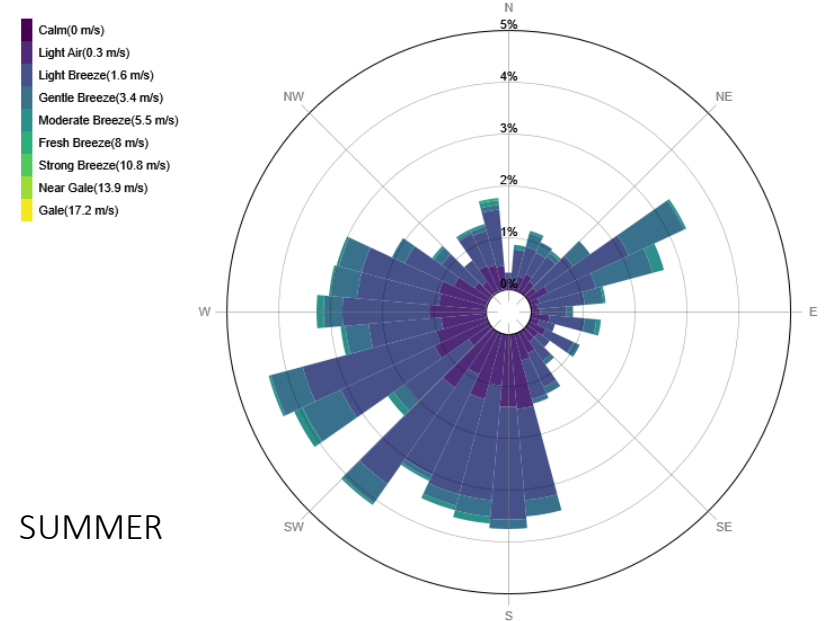
WIND ANALYSIS

Dec 21 - Mar 21 | Whole Day | > Calm 0 m/s | -12 - 37°C | 0% - 100% humidity
Total 2184 hrs | Medium Speed 3.1 m/s
NewYorkCentralParkObsBelvedereCastle



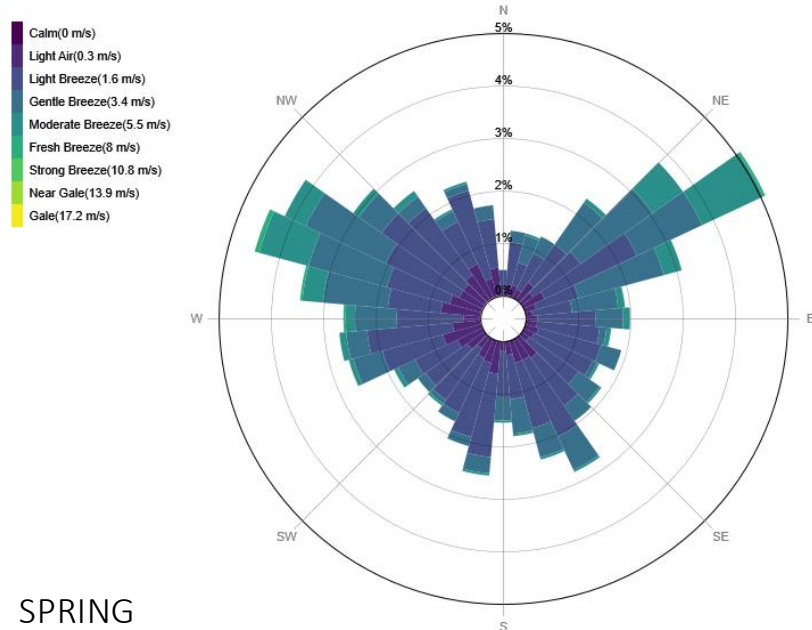
WINTER

Jun 21 - Sep 20 | Whole Day | > Calm 0 m/s | -12 - 37°C | 0% - 100% humidity
Total 2208 hrs | Medium Speed 2.1 m/s
NewYorkCentralParkObsBelvedereCastle



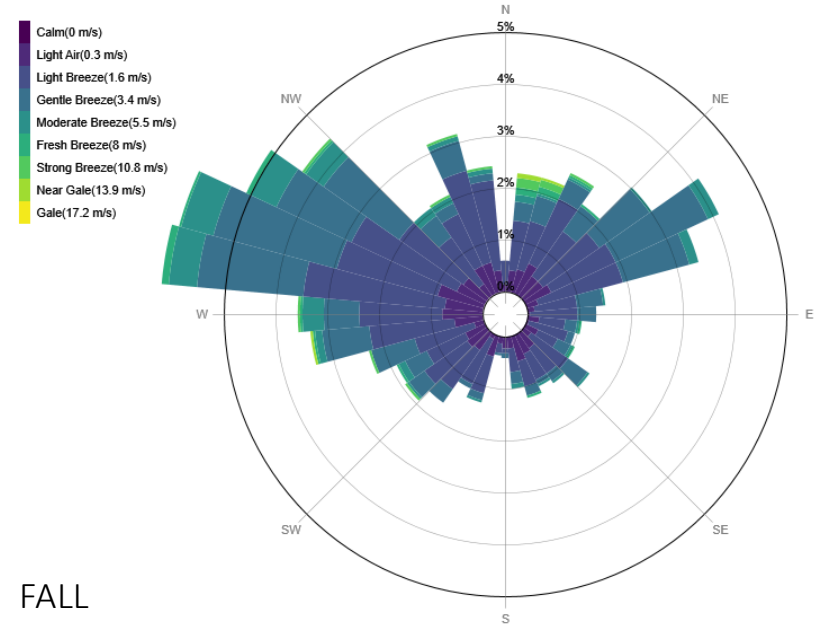
SUMMER

Mar 20 - Jun 21 | Whole Day | > Calm 0 m/s | -12 - 37°C | 0% - 100% humidity
Total 2256 hrs | Medium Speed 2.6 m/s
NewYorkCentralParkObsBelvedereCastle



SPRING

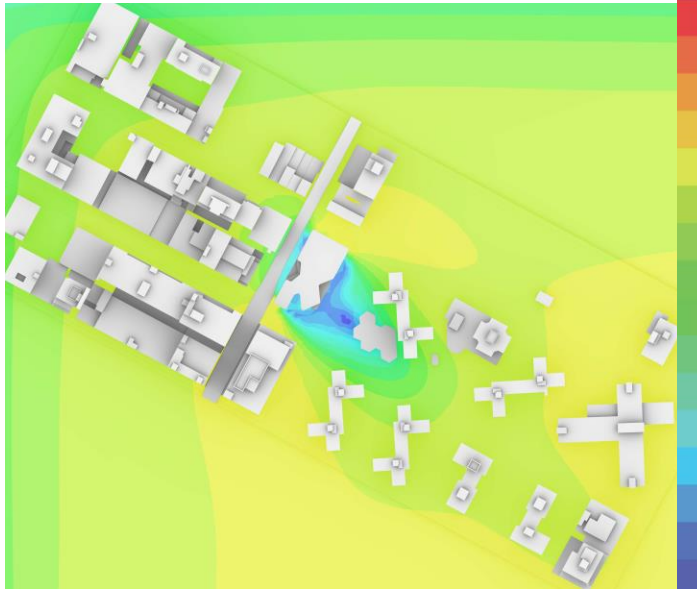
Sep 21 - Dec 20 | Whole Day | > Calm 0 m/s | -12 - 37°C | 0% - 100% humidity
Total 2184 hrs | Medium Speed 2.6 m/s
NewYorkCentralParkObsBelvedereCastle



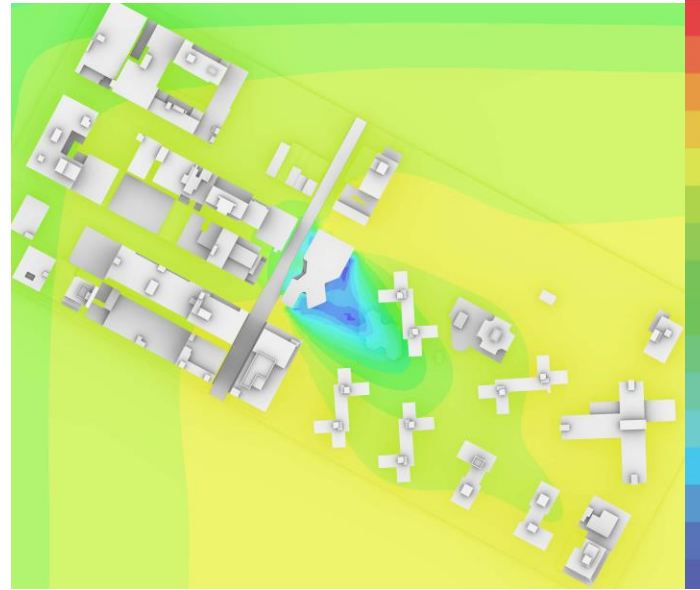
FALL

WIND ANALYSIS

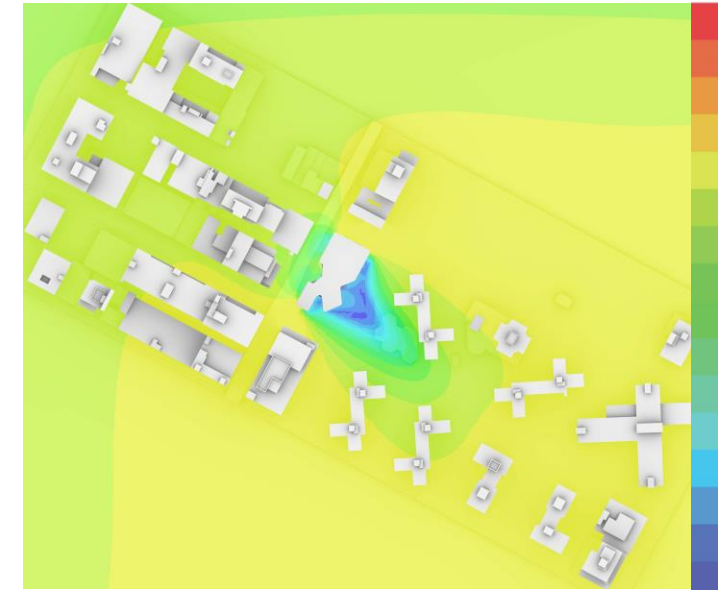
WINTER – NORTH-WEST



FIRST FLOOR

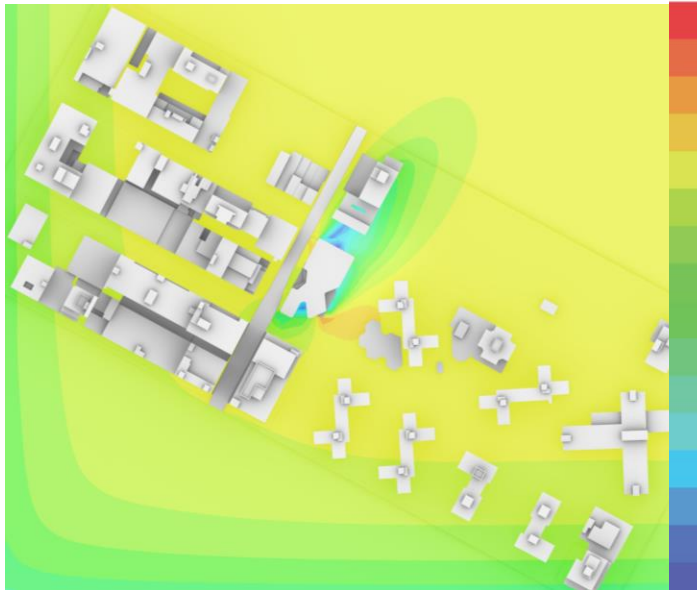


SECOND FLOOR

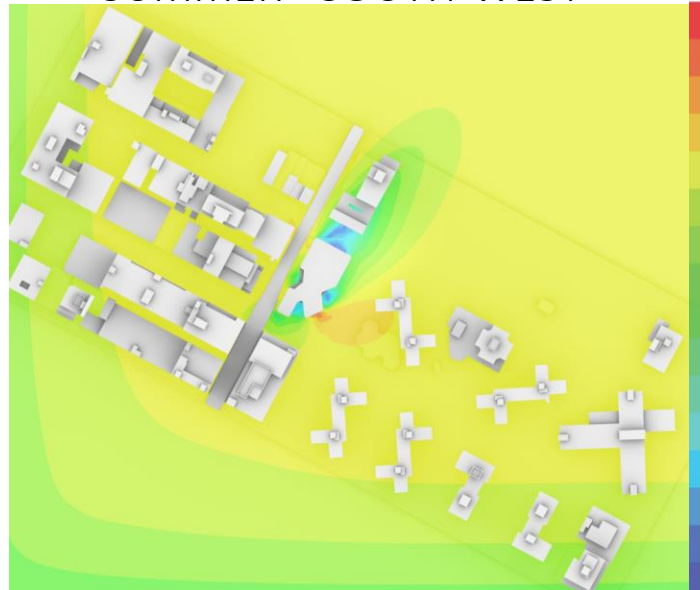


THIRD FLOOR

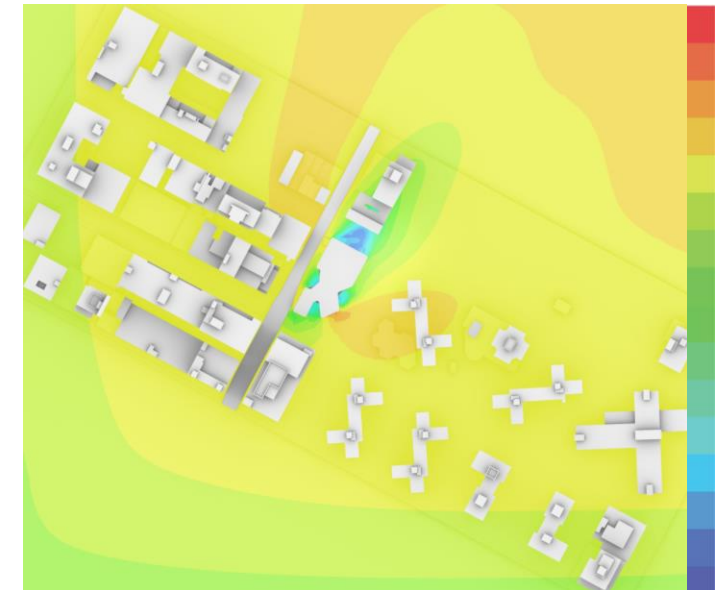
SUMMER – SOUTH-WEST



FIRST FLOOR



SECOND FLOOR



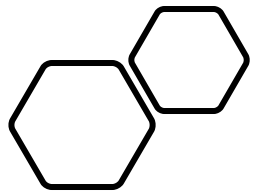
THIRD FLOOR



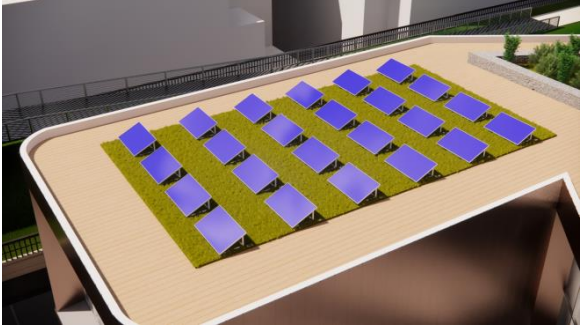
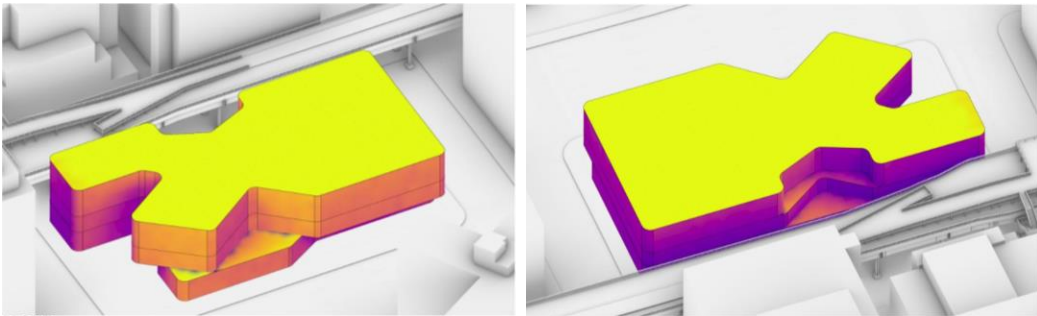
WIND ANALYSIS - SOLUTION

The wind hits the south part of the building during summer.

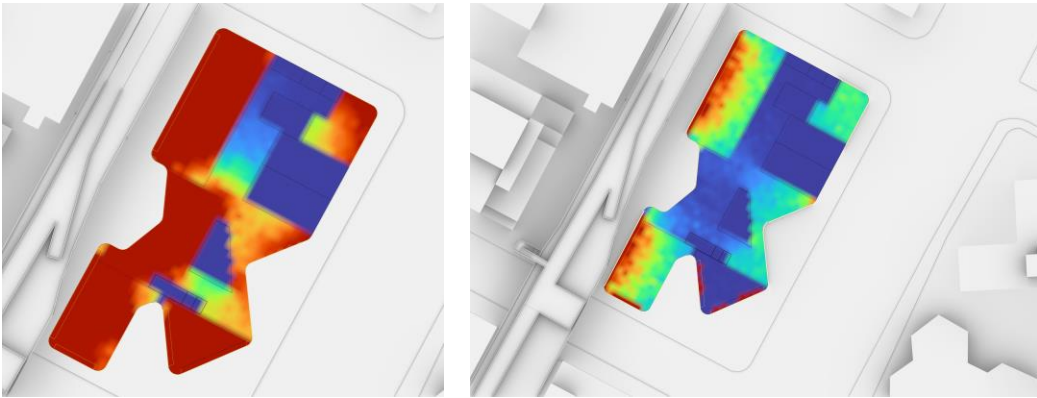
- To counteract this, we placed trees in the same direction of the wind. Also, the parapet was designed in such a way to act as a wind break with a height of 6'.



SOLUTION SUMMARY



RADIATION



DAYLIGHT



WIND



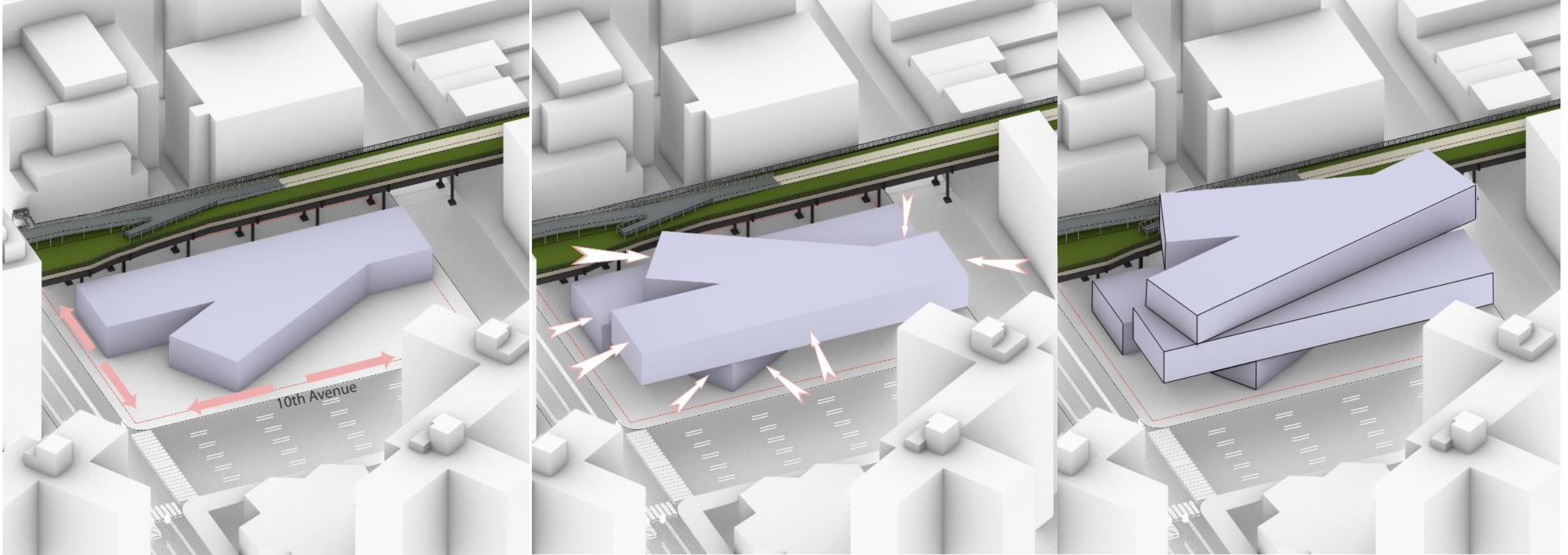
west 27th street

10th Avenue

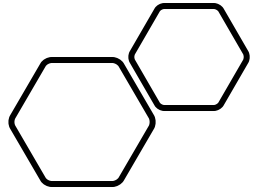
west 26th street

SITE PLAN



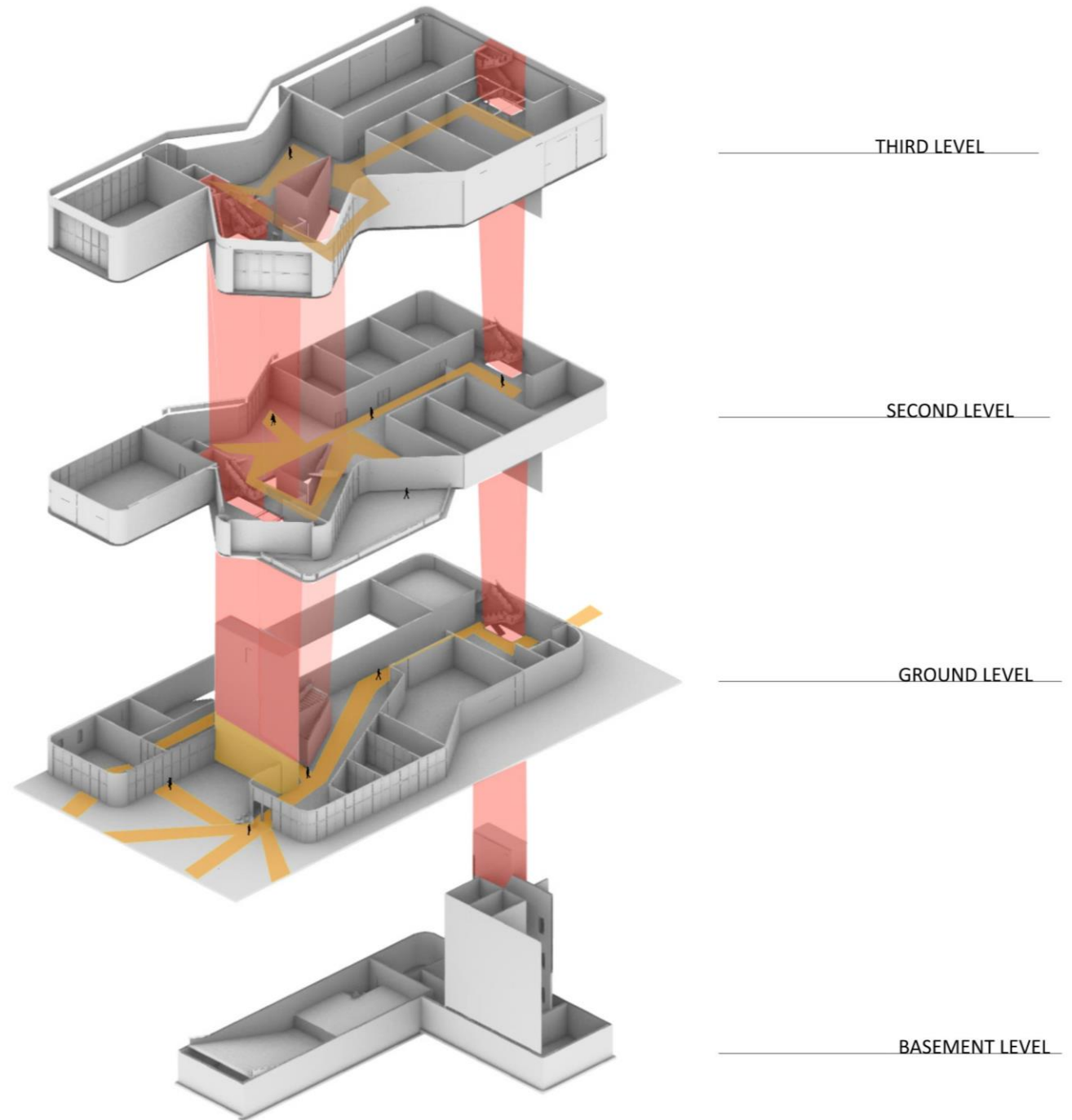


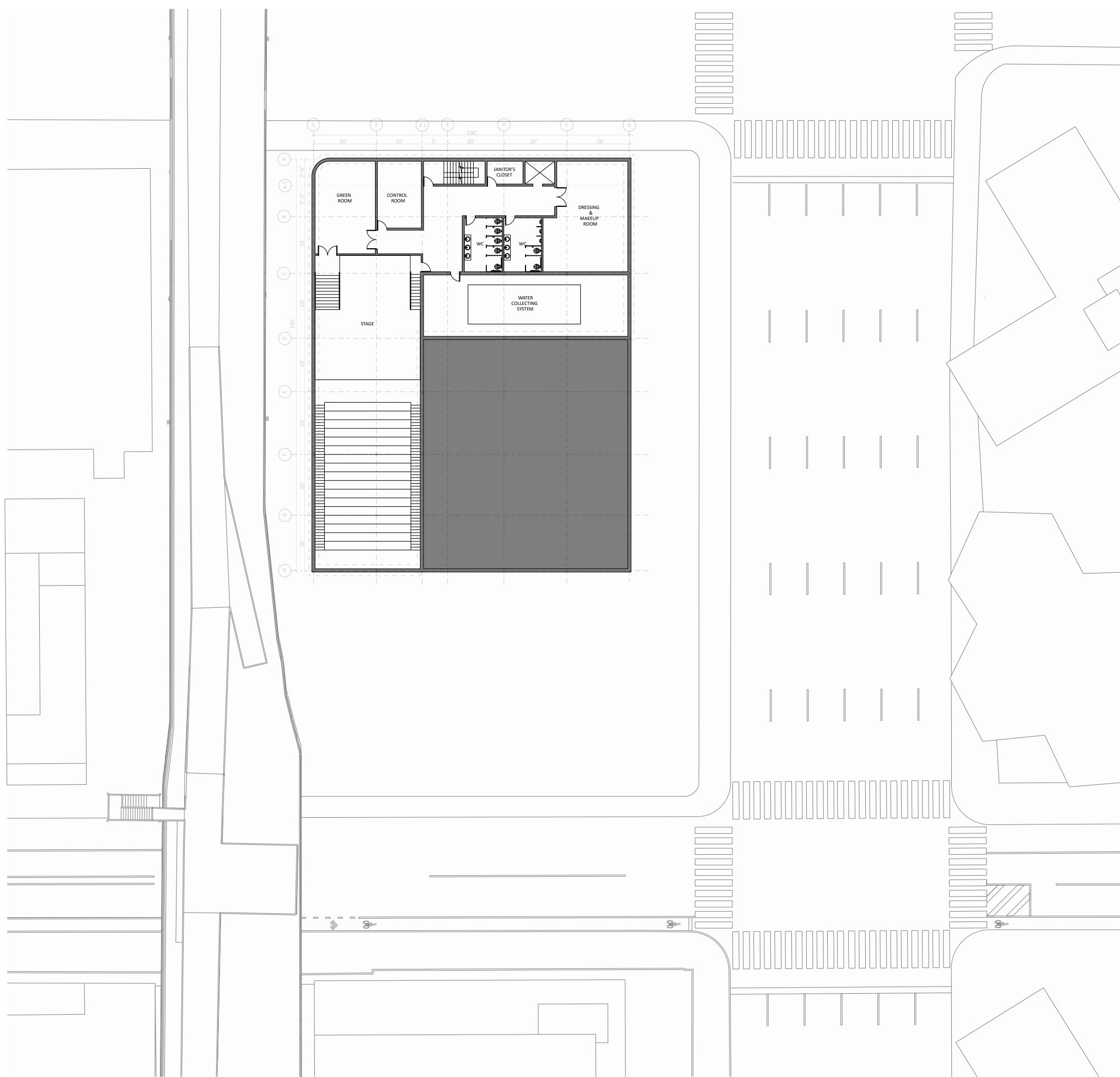
CONCEPT DIAGRAM



CIRCULATION DIAGRAM

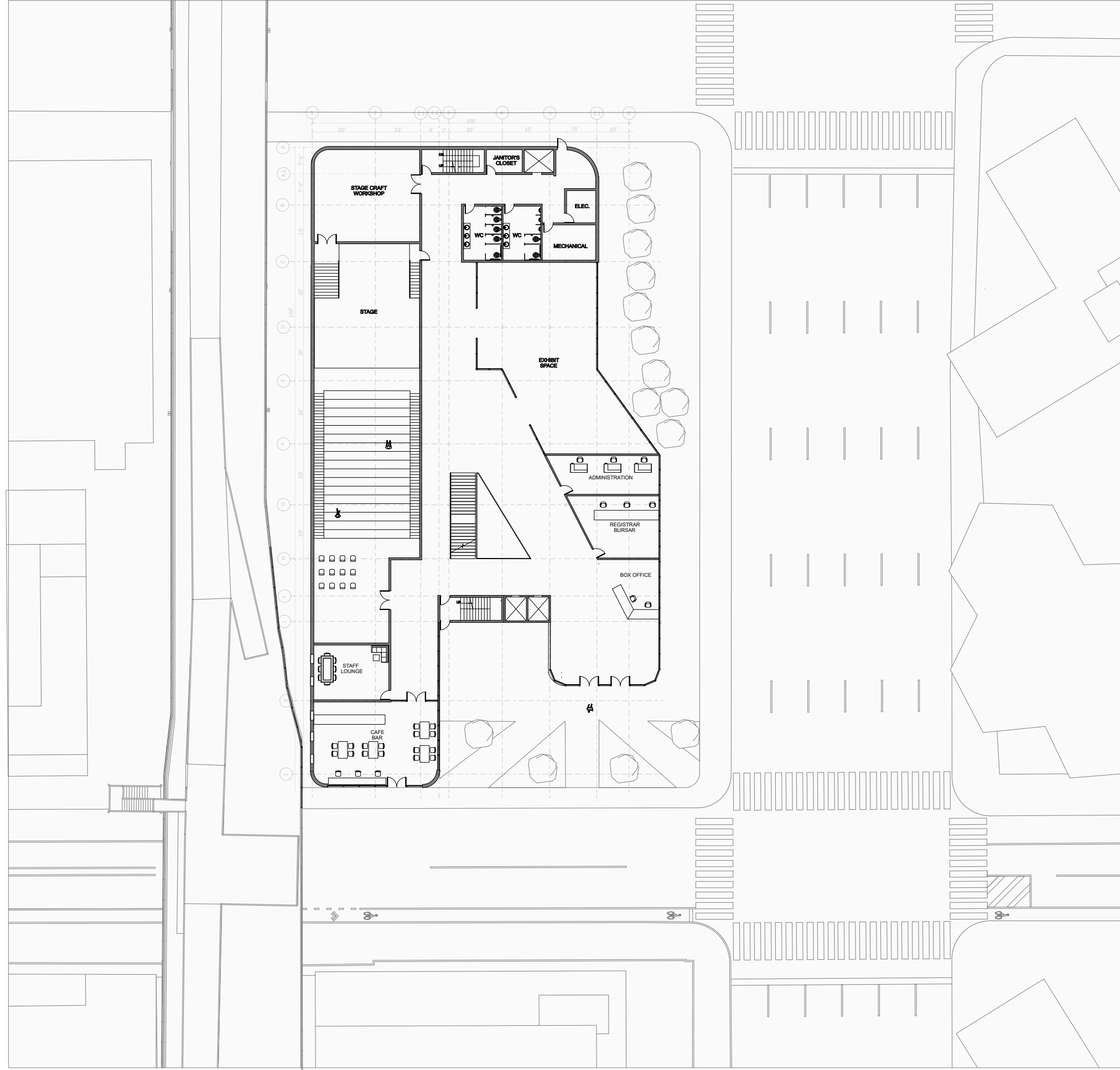
- VERTICAL CIRCULATION
- HORIZONTAL CIRCULATION





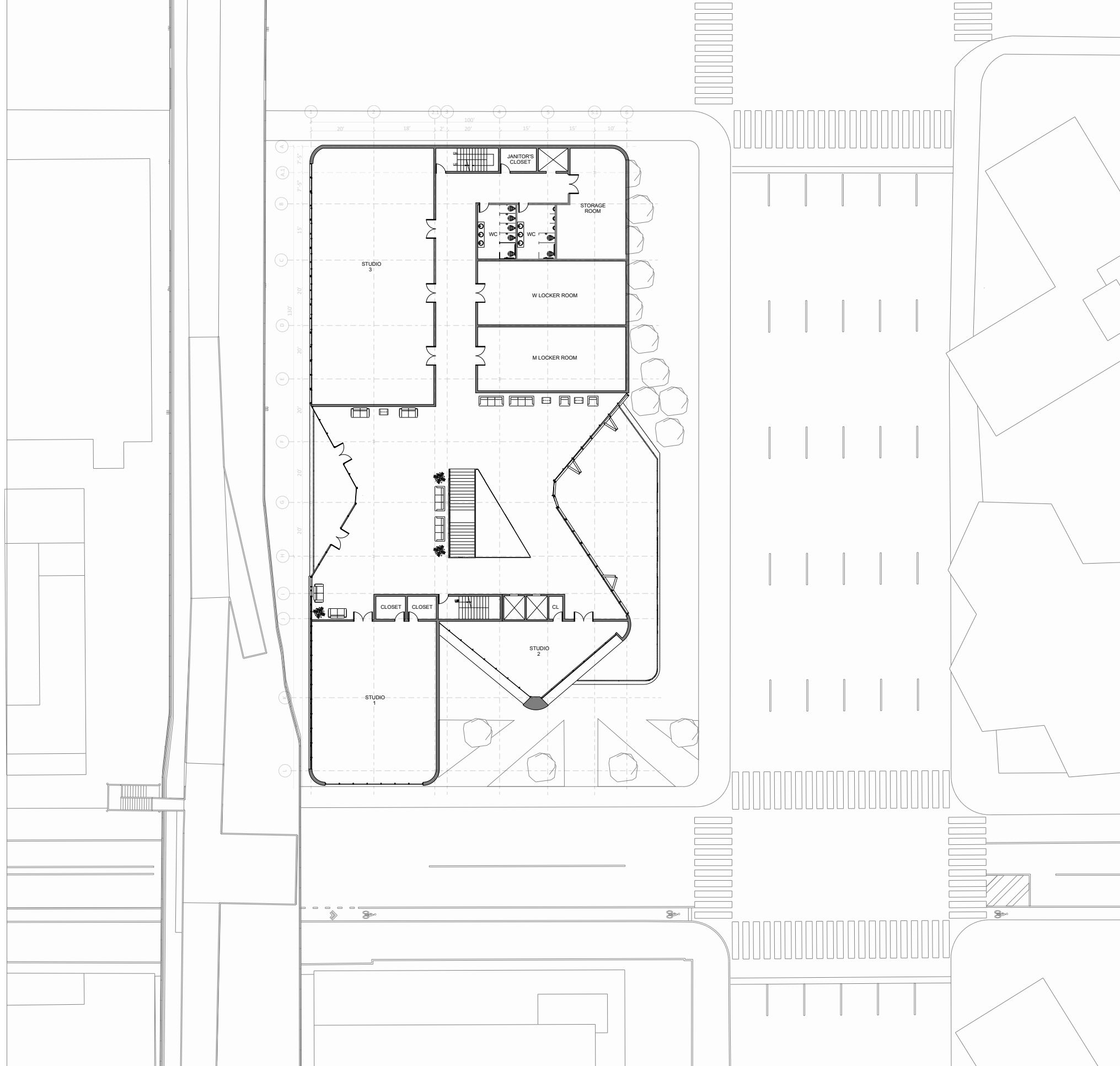
CELLAR FLOOR PLAN





GROUND FLOOR PLAN





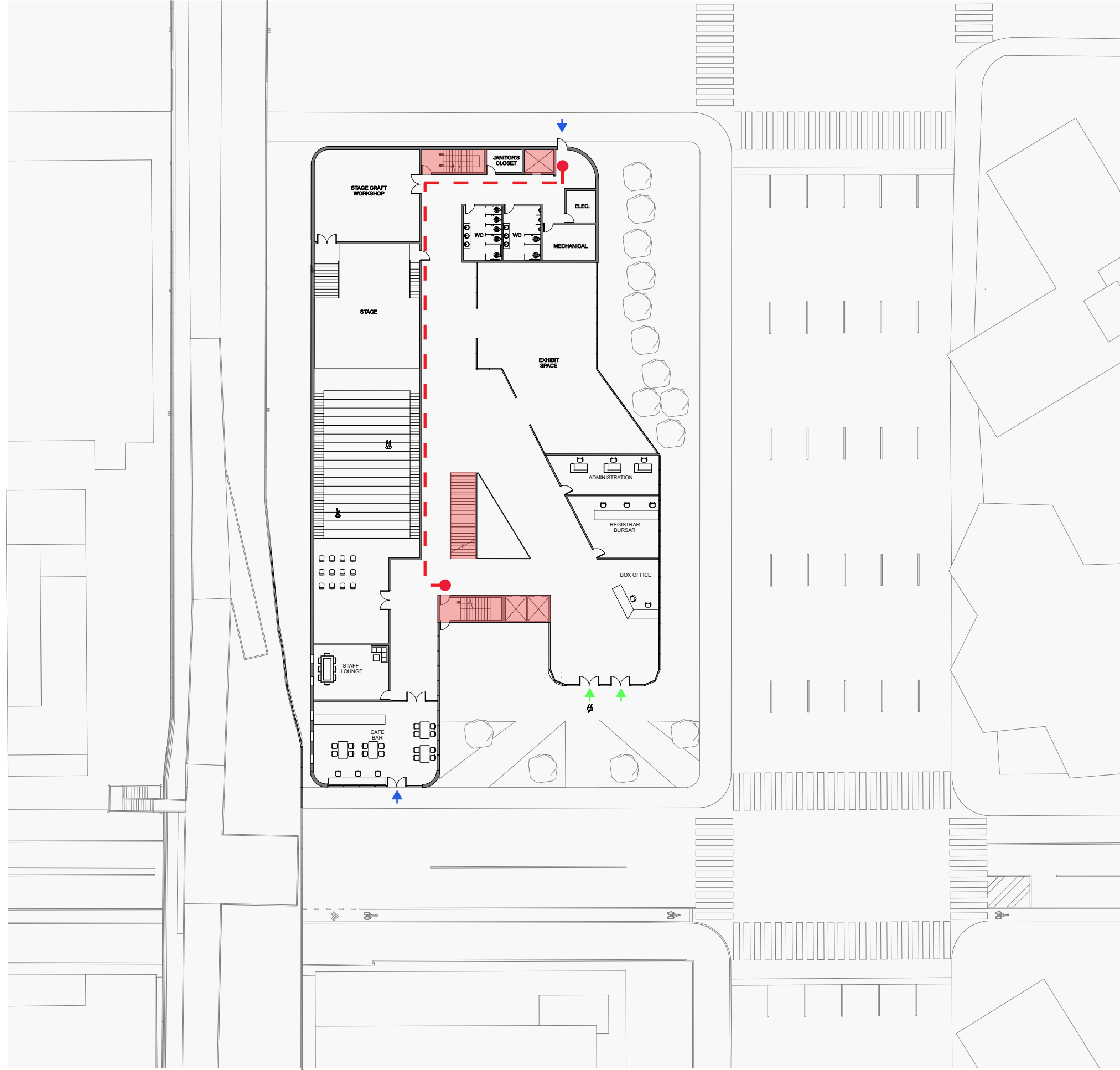
THIRD FLOOR PLAN





ROOF PLAN



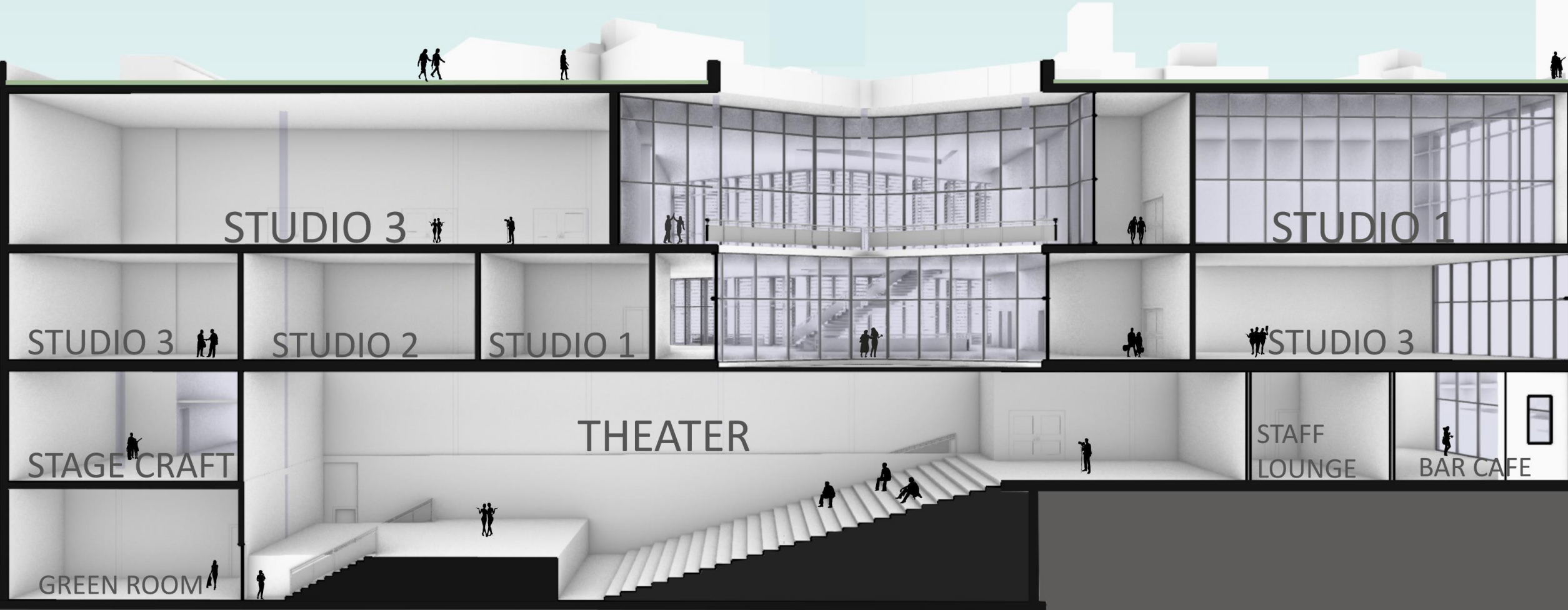


LEGEND	
	CORE (Fire Stairs and Elevators)
	EGRESS TRAVEL DISTANCE
	MAIN ENTRANCE
	SECONDARY ENTRANCE

GROUND FLOOR PLAN/EGRESS



SECTIONS



STUDIO 3

STUDIO 1

STUDIO 3

STUDIO 2

STUDIO 1

STUDIO 3

THEATER

STAGE CRAFT

STAFF LOUNGE

BAR CAFE

GREEN ROOM



GREENROOFTOP LEVEL

MUSIC LEVEL

DANCE LEVEL

EXHIBITION ROOM

LOBBY

THEATER

RAINWATER COLLECTOR

STAGE

PRECEDENT STUDY

Architects: Basalt Architecture

Project: Music Conservatory

Location: Paris, France

Year: 2013

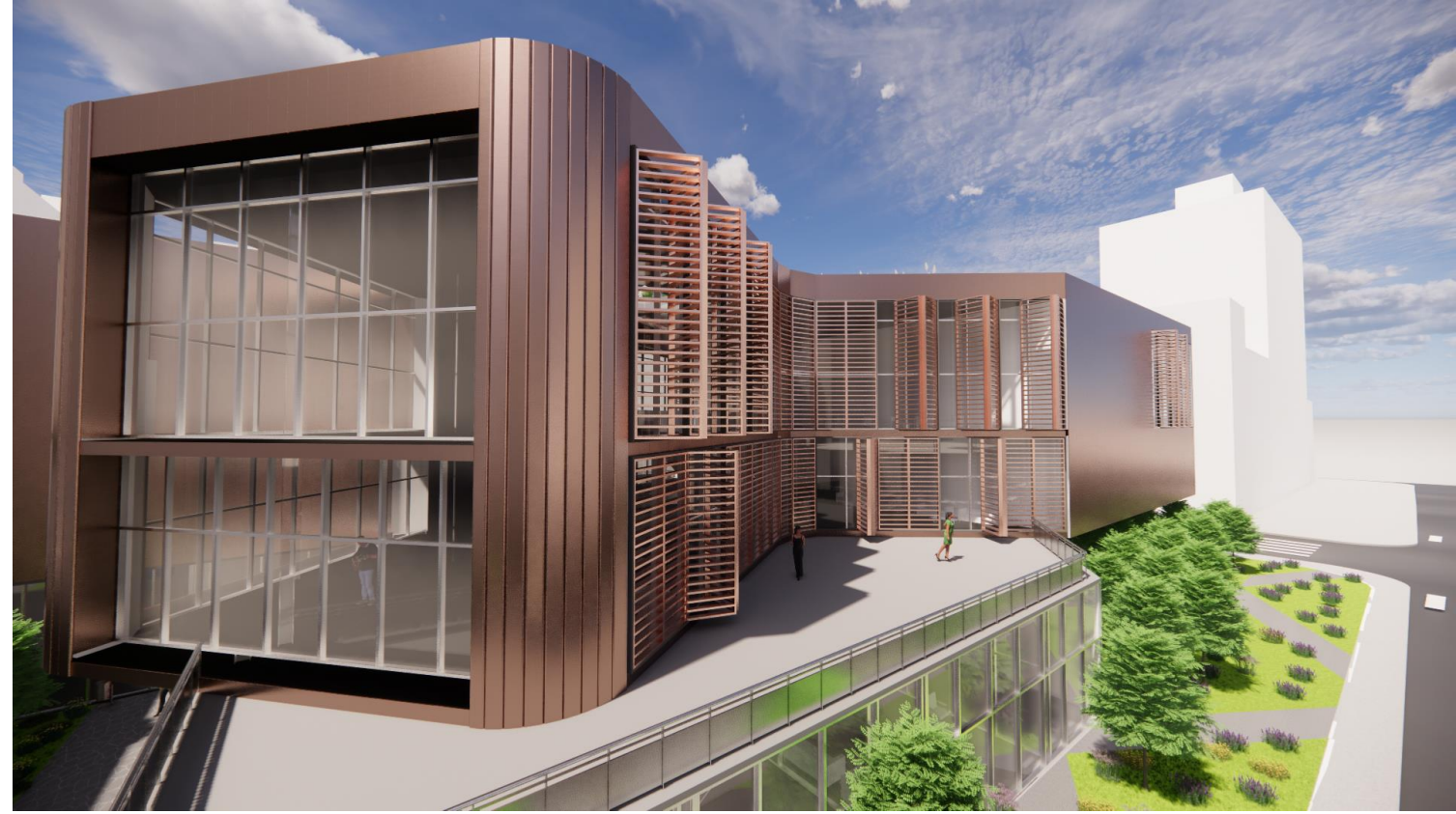
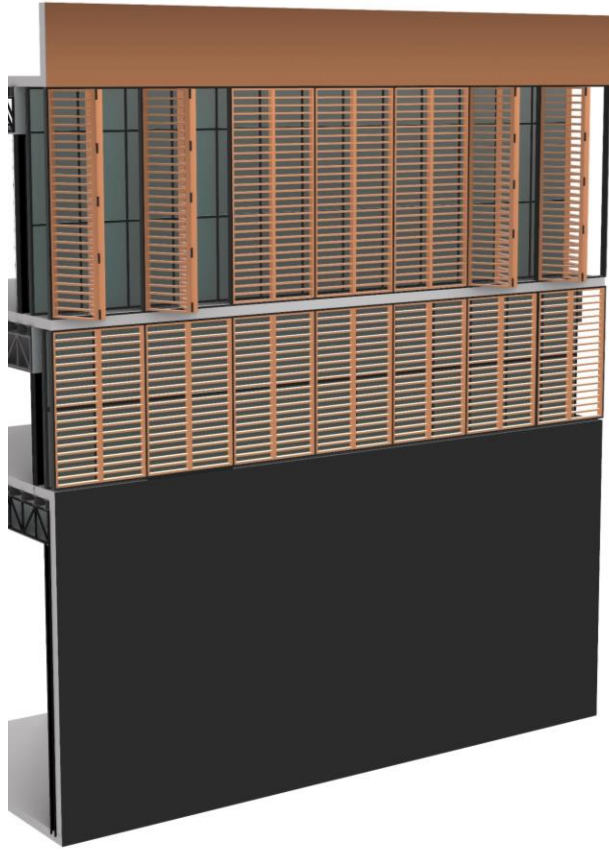
Basalt Architecture designed the Music Conservatory for a site on the edge of the 17th arrondissement, where it sits between classic Haussmann buildings to the south and more recent tower blocks to the north.

The building's pleated skin and its perforations dialogue with the classic Haussmann-style buildings with their sturdy architecture.

The boxes containing the dance studios cantilever from the northern facade and appear to reach towards the nearby residential towers.

Hinged shutters on the facade facing the busy Rue de Courcelles feature perforated patterns which are arranged in different configurations to produce a random effect and to help shade the studios.

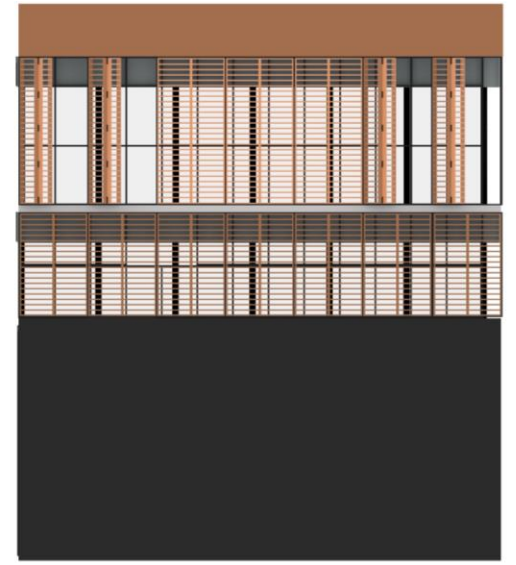
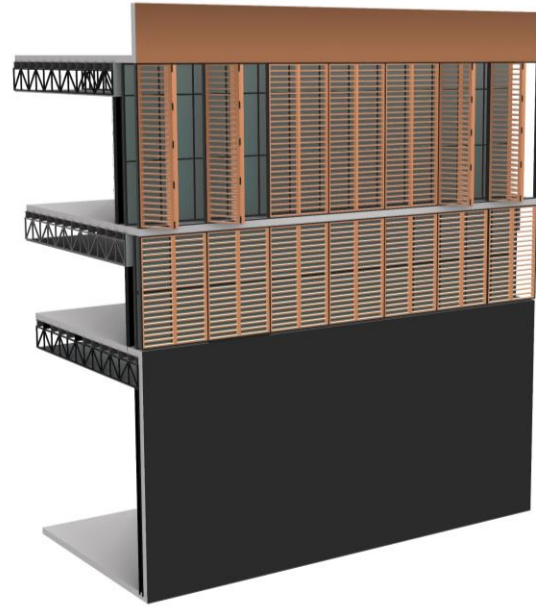
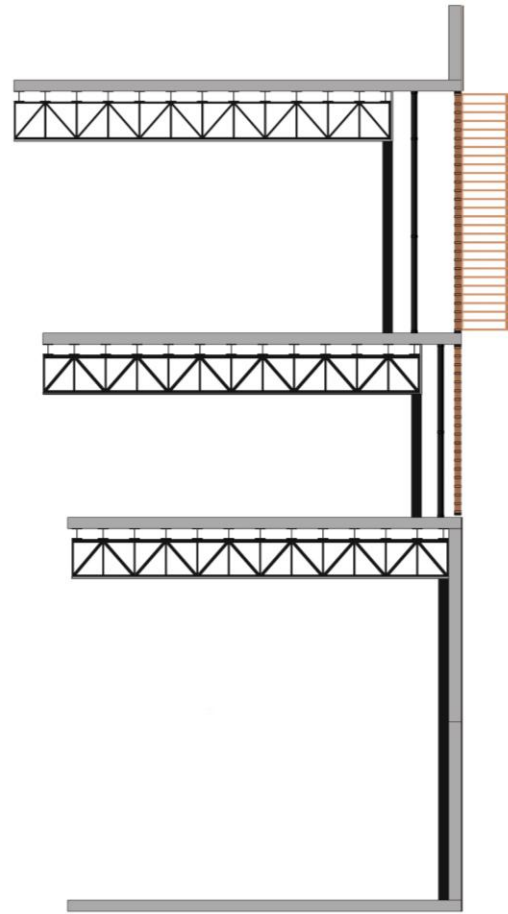
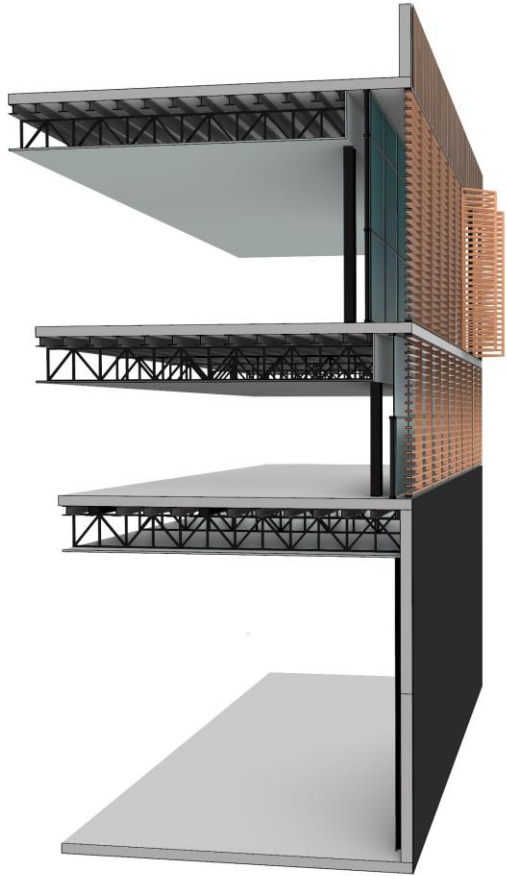




FAÇADE

- The façade of the building is made from copper material, Copper is a 100% recyclable material.
- Across its life-cycle, from extraction to recycling, copper has minimal impact on energy consumption and natural resources, while its use has an immensely positive impact on energy efficiency, indoor air quality and life-cycle cost.
 - It is long-lasting
 - Low maintenance
 - It is naturally produced

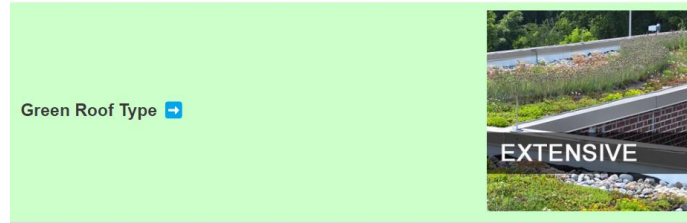
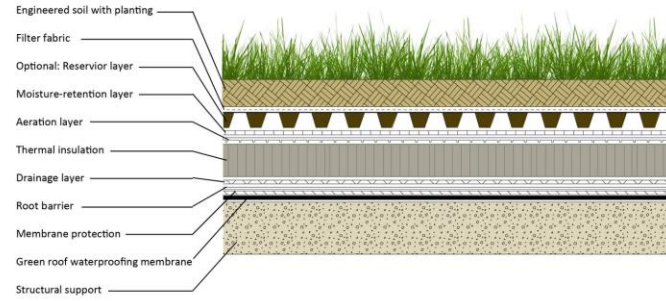
FAÇADE DETAIL



GREEN ROOFTOP

EXTENSIVE GREENROOF

- Low maintenance
- With solar panels
- Accessible to users
- Vegetation collects Rainwater
- Removes heat from air



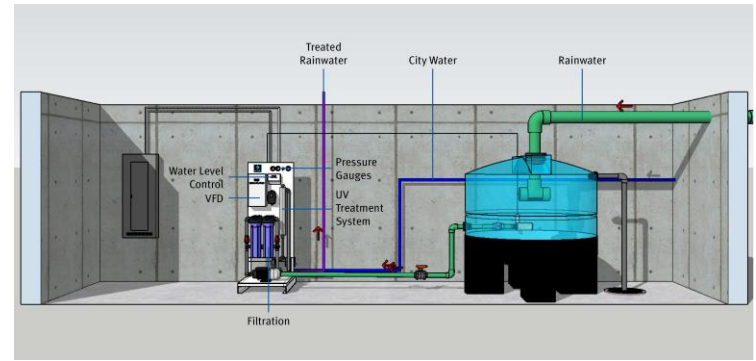
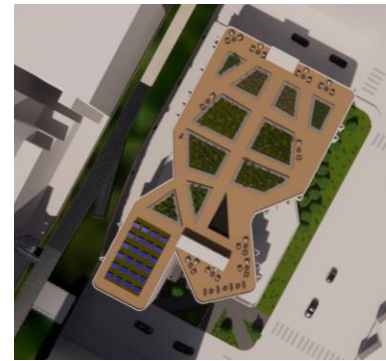
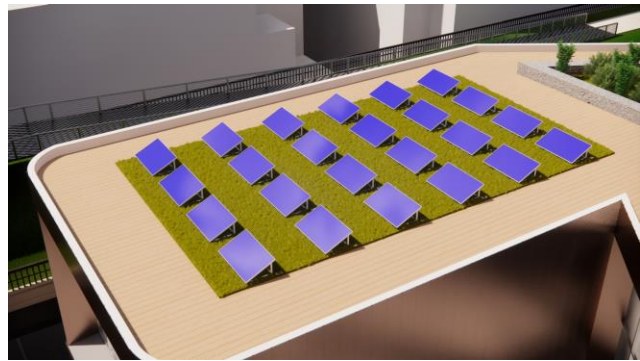
Purpose

Stormwater Mitigation

Vegetation	Moss-Herbs-Grasses
Overall Depth	100-200mm 4 to 7 inches
Weight Range	100-200 kg/m ² 20-40 Lb/sf
Ecological Compensation	
Max. Rain Event	50-100mm 2"-4"
Cost	
Irrigation System	not recommended
Solar Garden Roof	yes, optional with high ROI
Blue Green Roof	optional



SUSTAINABLE FEATURES



SOLAR PANELS

- Crystalline silicone type
- Ballasted system (no holes on roof)
- 20-25% efficient for electricity (reduces cost)
- Improves health
- Helps fight climate change
- Reduces air pollution

COPPER FAÇADE

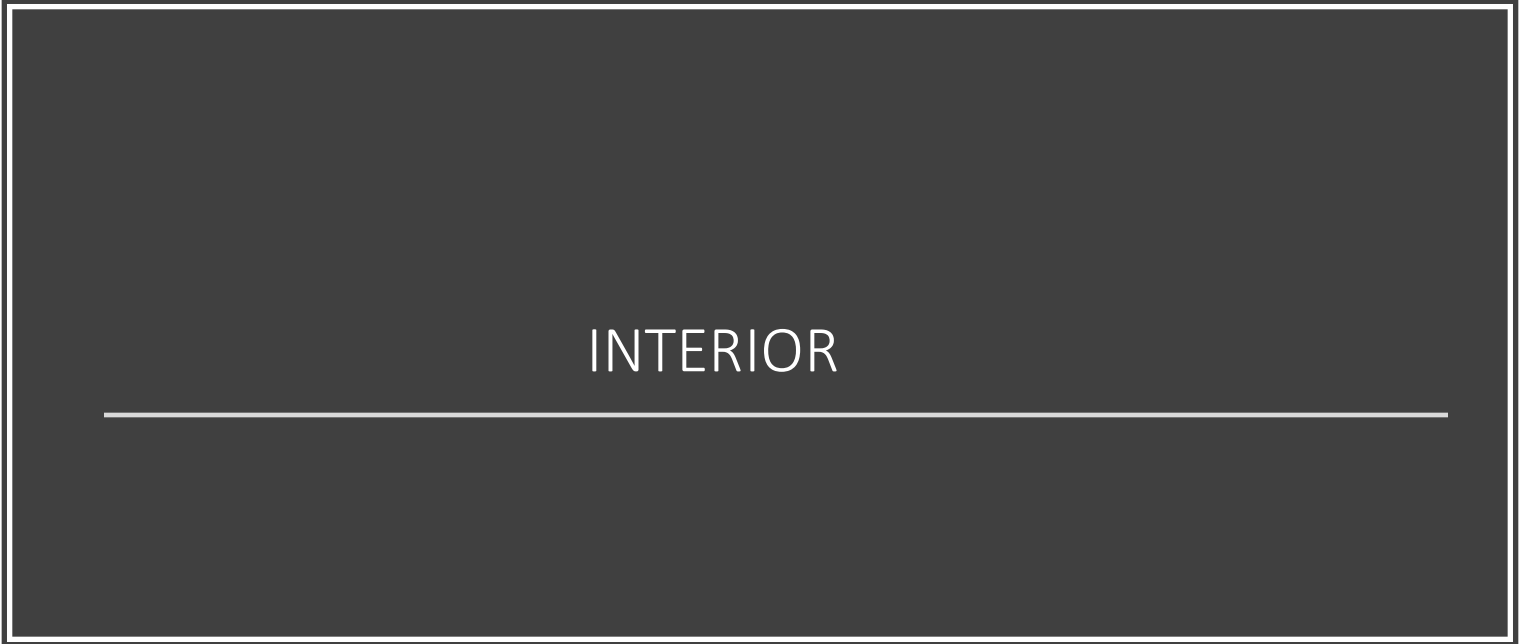
- 100% Recyclable
- Low maintenance
- Minimal impact on energy consumption
- Naturally produced

EXTENSIVE GREENROOF

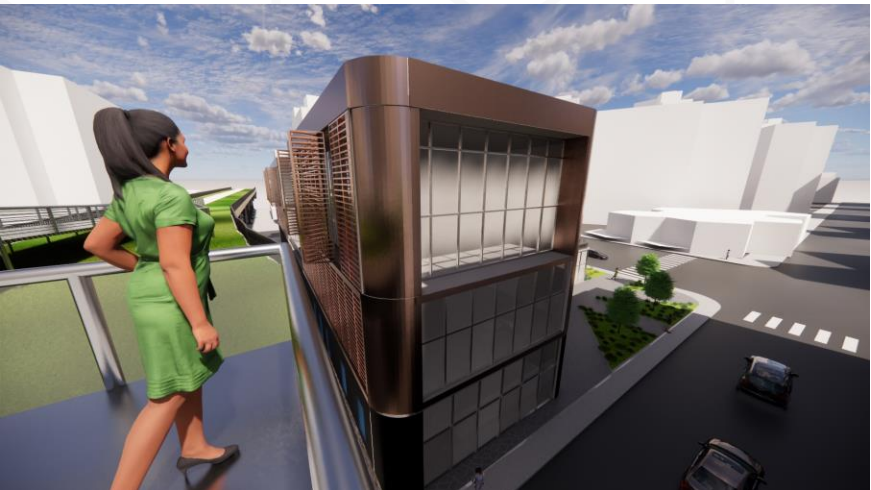
- Low maintenance
- With solar panels
- Accessible to users
- Vegetation collects Rainwater
- Removes heat from air

RAINWATER COLLECTOR

- Collects rainwater from rooftop to basement
- Reused water
- Useable for toilet rooms and drinking water



HIGHLINE





EXTERIOR





THANK YOU