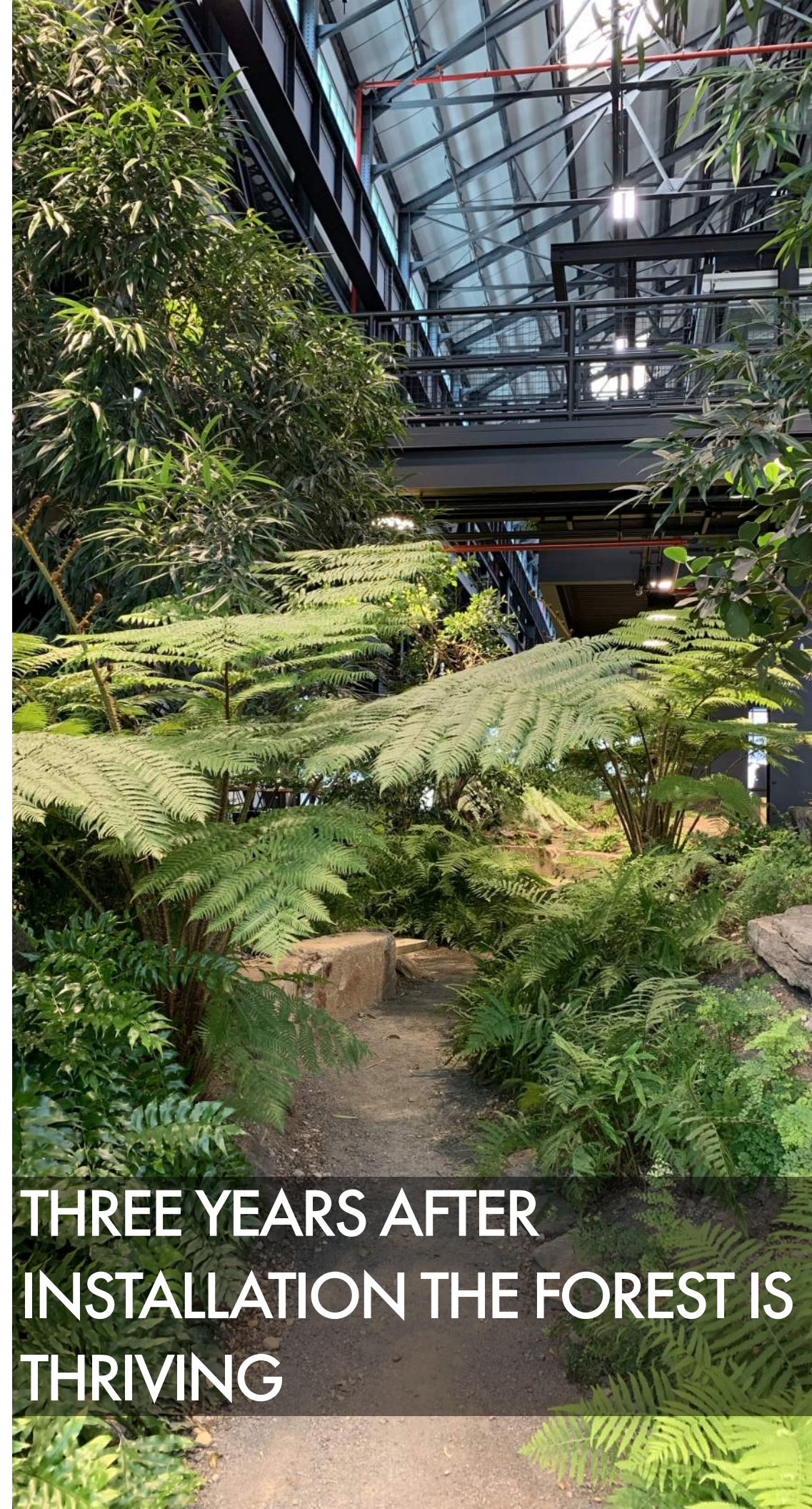


VERDANT

The Enclosed Forest



**THE ENCLOSED FOREST**



**THREE YEARS AFTER  
INSTALLATION THE FOREST IS  
THRIVING**



## PROJECT INFORMATION

CLIENT:  
**Crye Precision**

LANDSCAPE DESIGN:  
**VERDANT**

ARCHITECT:  
**MNDPC**

SIZE:  
**4,800 sf**

LOCATION:  
**Building 128  
Brooklyn Navy Yard,  
New York**

COMPLETED:  
**May 2017**

**A PERMANENT INTERIOR ECOSYSTEM  
SUPPORTED *ENTIRELY* BY LED LIGHTS**



# BROOKLYN NAVY YARD

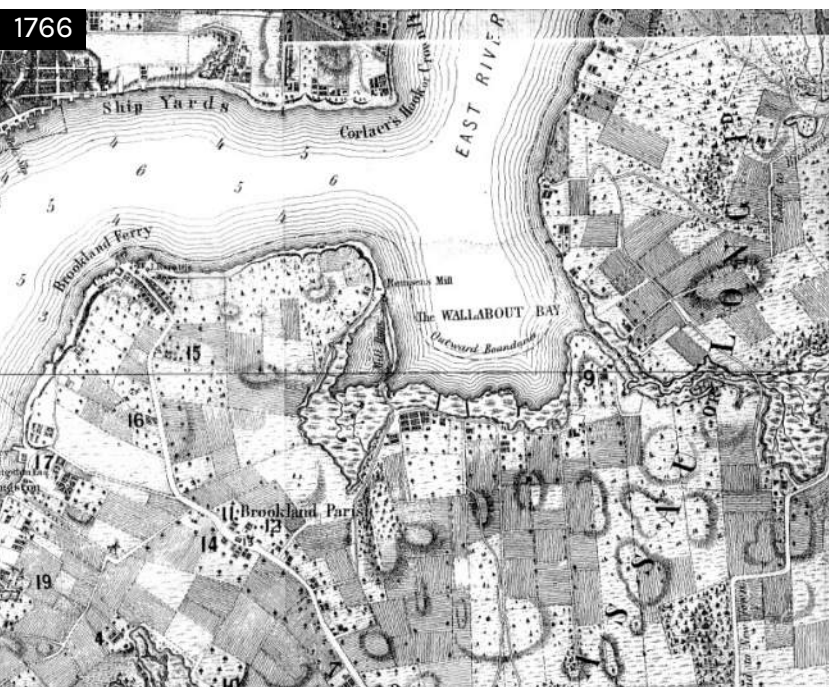
Over the course of three centuries, the site of the Brooklyn Navy Yard endured a massive, human-driven transformation. Historical images have recorded this change—from wetland to industrial. Satellite images reveal a relative absence of plant-life in this area with few patches of green at its property margins.

The highest quality landscapes are concentrated in two areas—one in the south-west (Admiral's Row) and another in the south-east fringes of the Yard. During the demolition of Admiral's Row in 2015, many large old-growth trees were removed, along with dilapidated buildings that were torn down.

With the intervention of plant life into CRYE's headquarters at Building 128, THE ENCLOSED FOREST is a forward-thinking response to urban landscape renewal.



PHOTOGRAPH BY HARRISON BOYCE



BLDG. #128



Located at the entrance Building 128 of the Brooklyn Navy Yard, The Enclosed Forest re-imagines the atrium of a manufacturing headquarters as an immersive botanical experience.



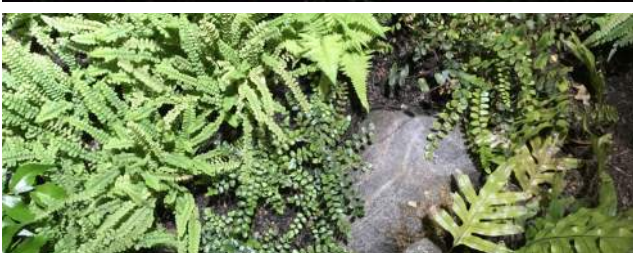
In collaboration with architects MNDPC, and client Crye Precision, **VERDANT** designed and oversaw construction of an oasis of green within a bustling work environment.

In 2017 Crye Precision, manufacturer of premiere military clothing, signed a 20 year lease of a restored ship-building hangar in the Brooklyn Navy Yard. Crye looked to **VERDANT** to design a space that would inspire its workforce within the newly rehabilitated post-industrial hangar.



## THE VISION

Inspired by the characteristics of Northeastern deciduous forests, the design re-interprets the experience of wandering through those outdoor spaces – variable topography, cascading light, and diverse leaf forms– and adapts it to Crye’s industrial workspace.



Top: Precedent Image of abandoned factory building

Below: Forest floor of VERDANT’s studio planting lab.



Olympic National Forest,  
Washington State

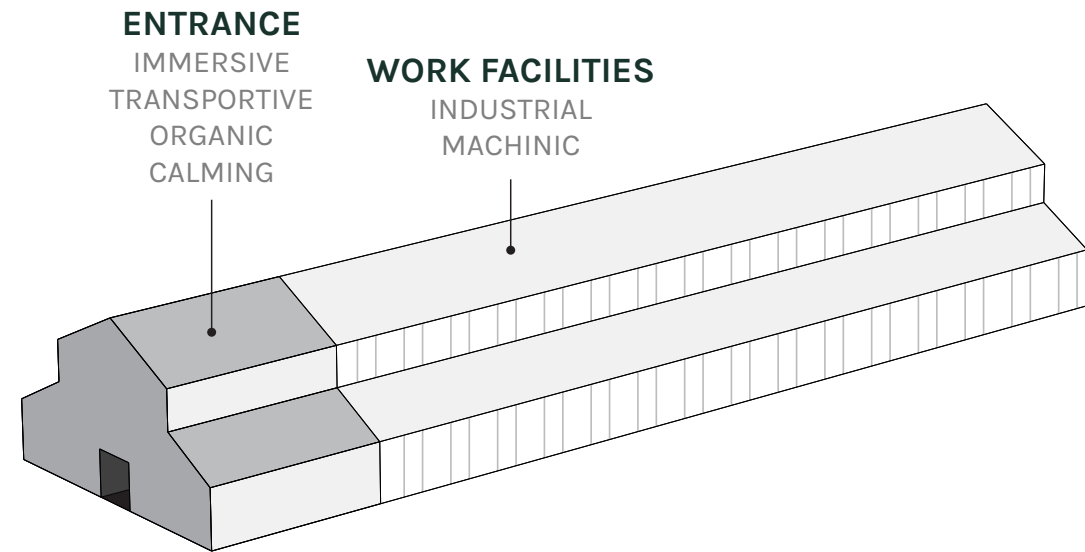
## INSPIRATION - THE ENCLOSED FOREST

"We were drawn to the quiet balance of form and texture found within a deciduous forest floor." - Mac Carbonell, VERDANT

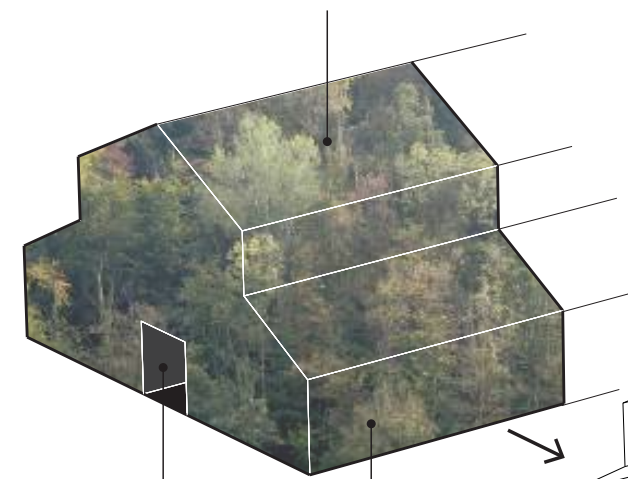


# THE CONCEPT

Upon entering the building, the visitor is given the option of meandering through a series of interconnecting gravel paths within the forest, or proceeding alongside it.

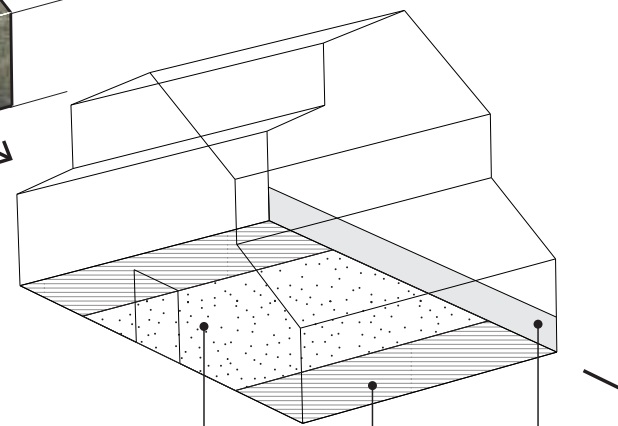


## ENTRANCE AS FOREST FLOOR



**GROUND AS FOREST FLOOR**

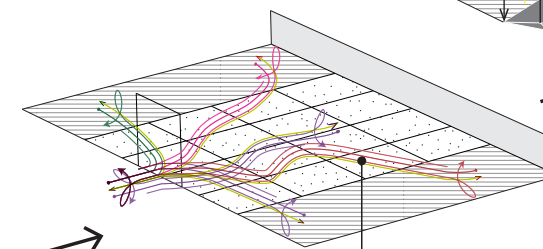
**STRUCTURE AS FOREST CANOPY**



**LANDSCAPE SITE**

**CAFETARIA**

**BOUNDARY FENCE**

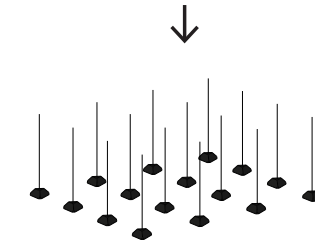


**CIRCULATION**

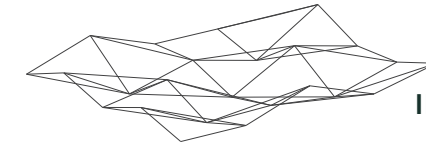
**INFORMS TOPOGRAPHY**



**CEILING FAN**



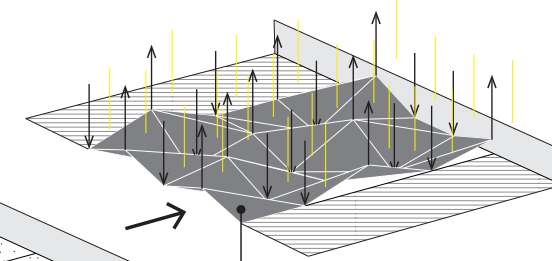
**GROW LIGHTS**



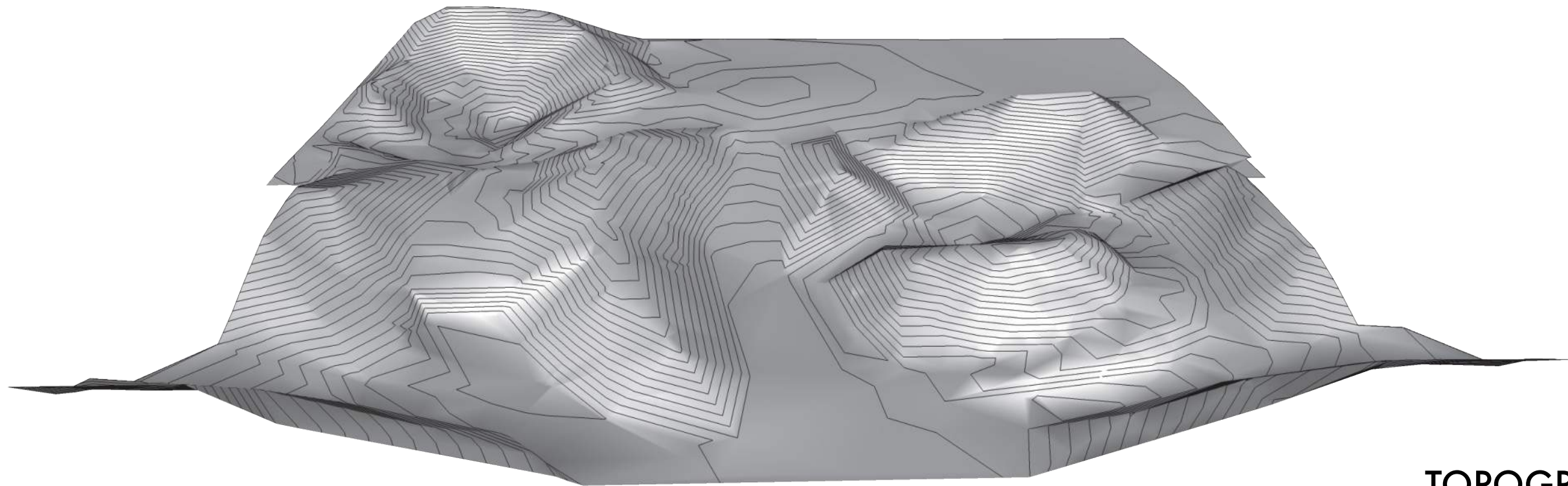
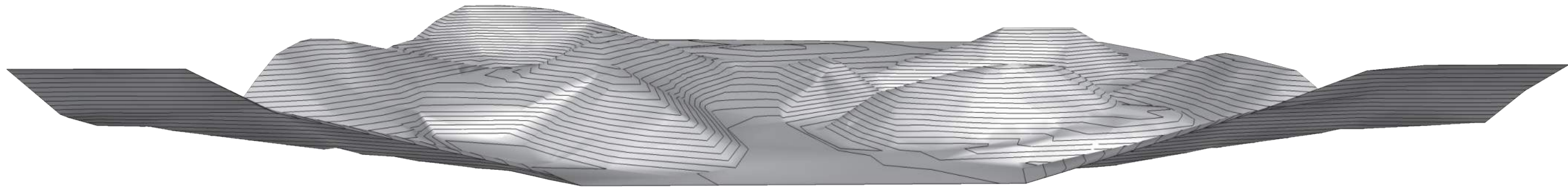
**IRRIGATION**



**PLANTS**







## TOPOGRAPHIC MODELING

Early studies of 3D modeling to define undulations throughout the space.



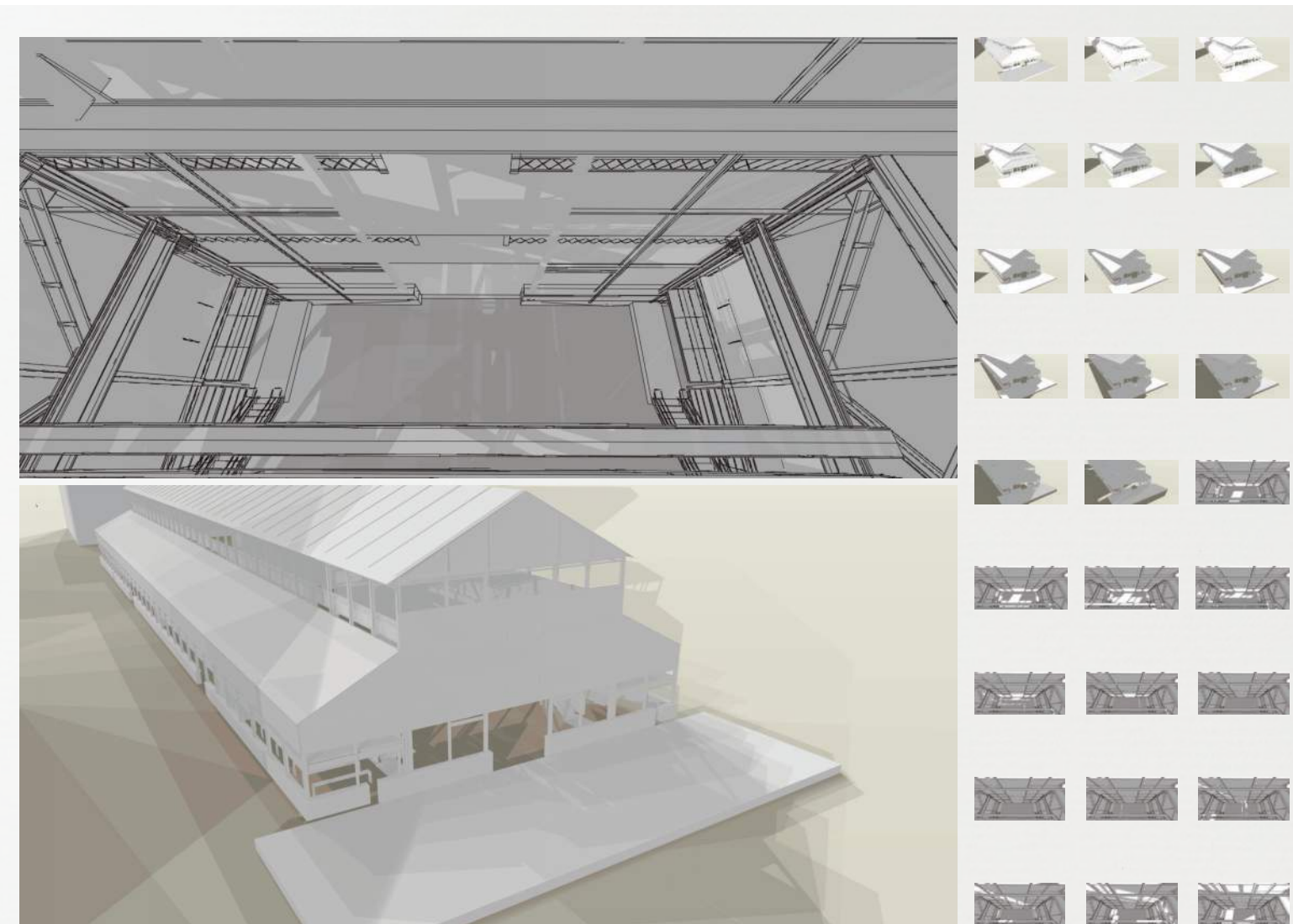
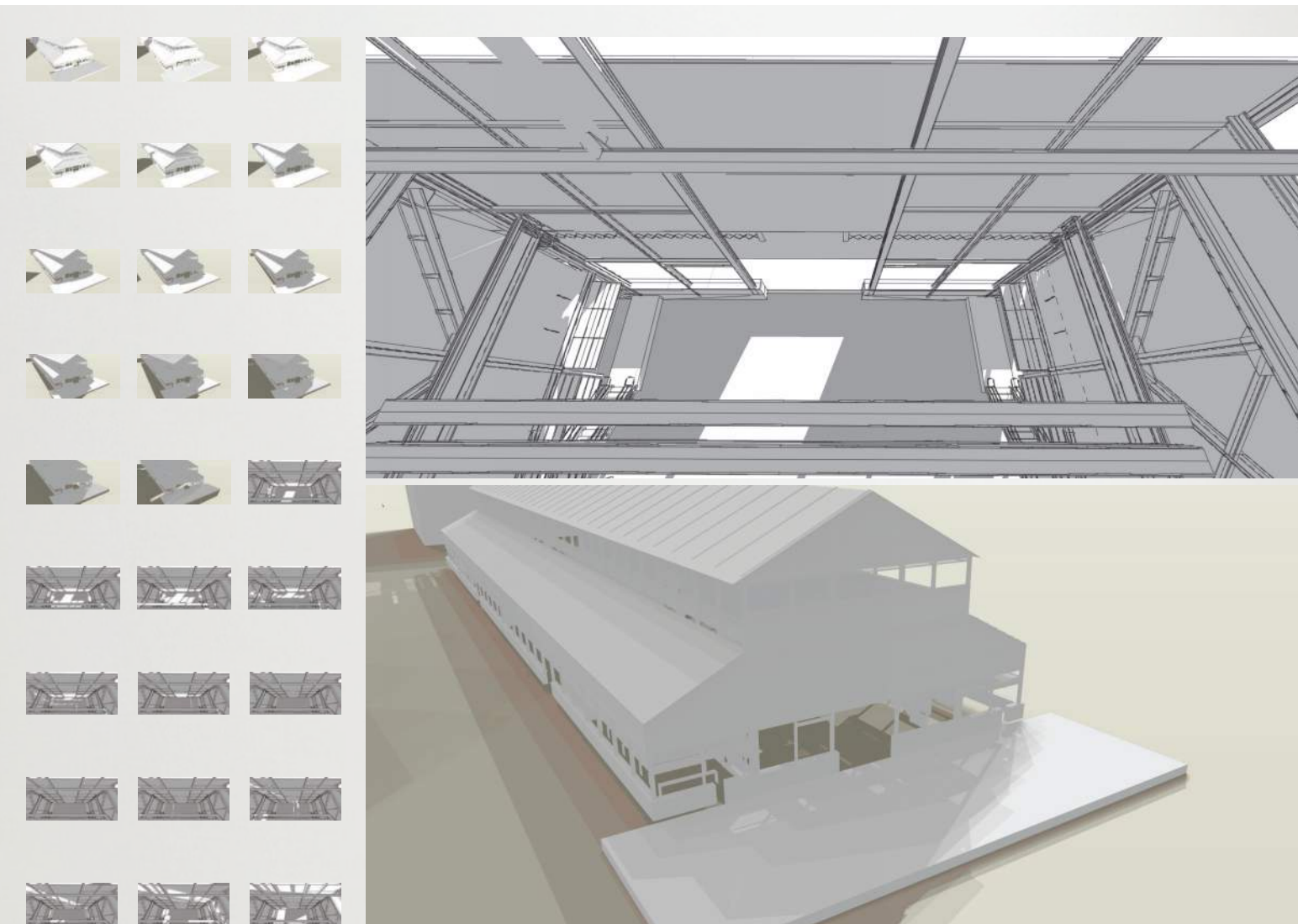


## LIGHT/SHADE STUDY

Inspired by the cavernous space of the building, we looked to define ways to use and introduce light to create an immersive environment.

Through modeling, we assessed the limits of available natural light within the building, and recognized the need for high density grow lights.

We ran tests on a range of LED fixtures, and conducted simulated light studies to help determine the ideal distance of the lights from the plants.

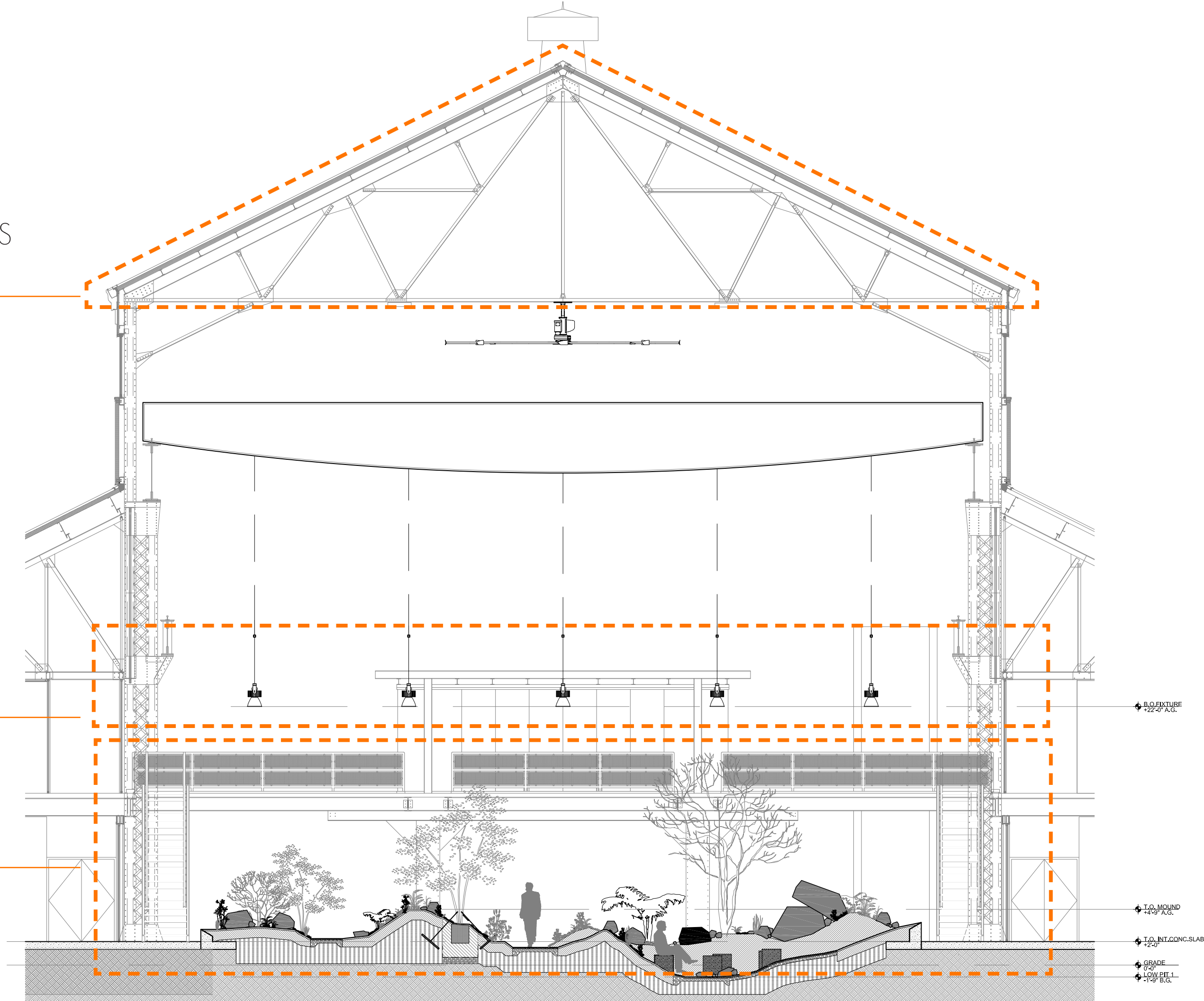




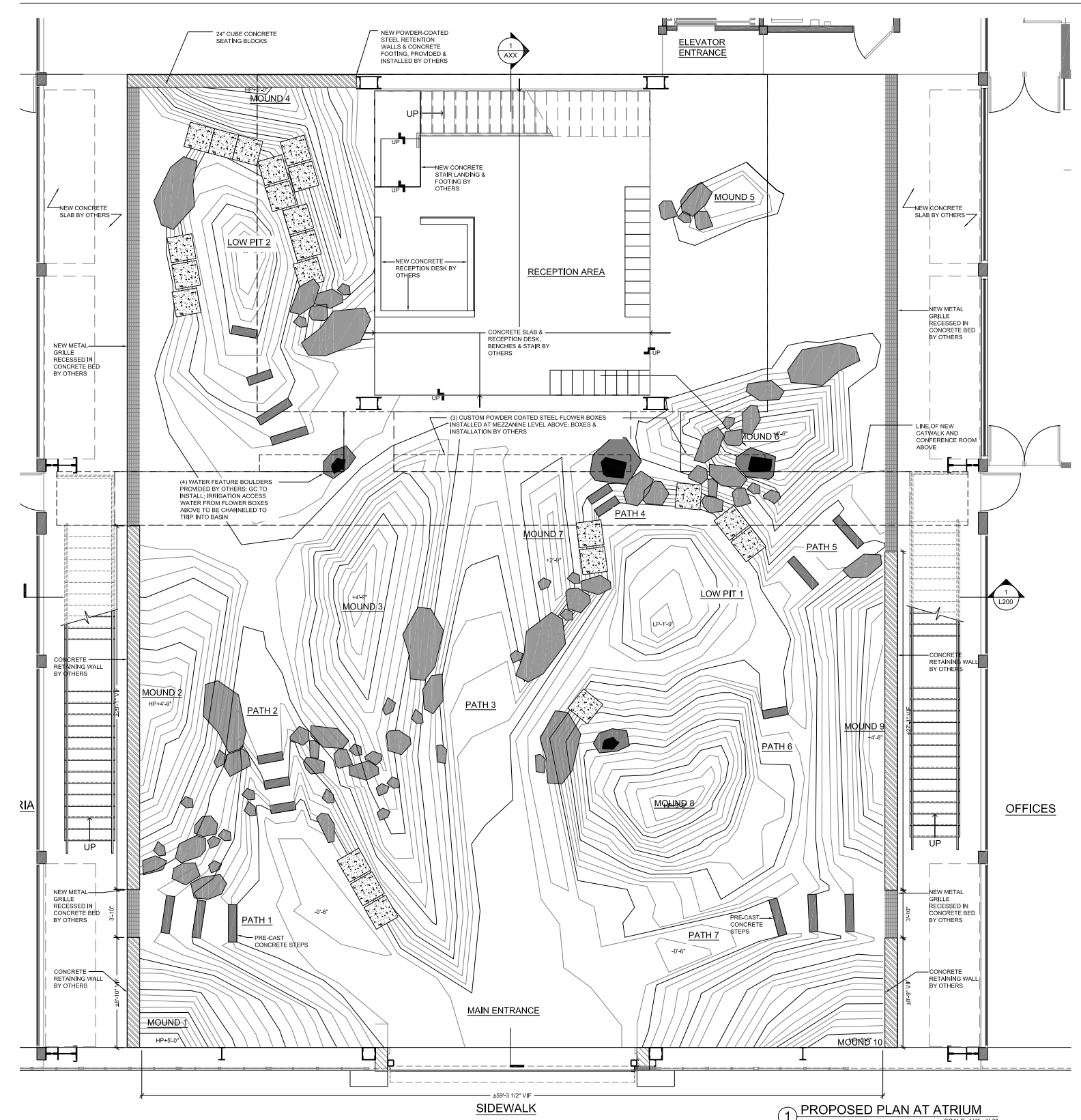
BUILDING STRUCTURE AS  
FOREST CANOPY

LED LIGHTS  
SUPPORTS PLANT LIFE

FOREST FLOOR







1 PROPOSED PLAN AT ATRIUM  
SCALE: 1/4" = 1'-0"



Initial Conceptual Study

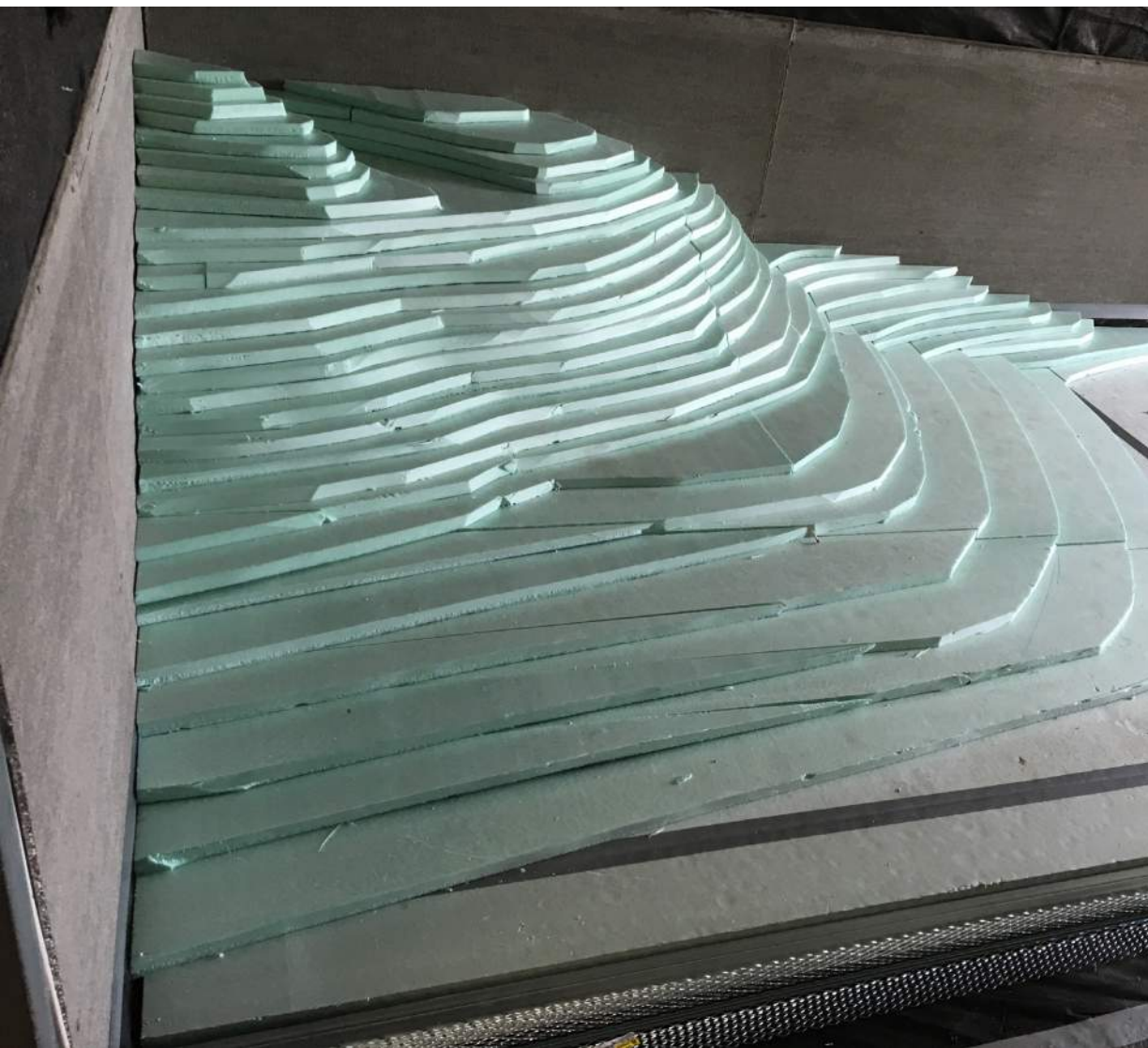






Initial Conceptual Study





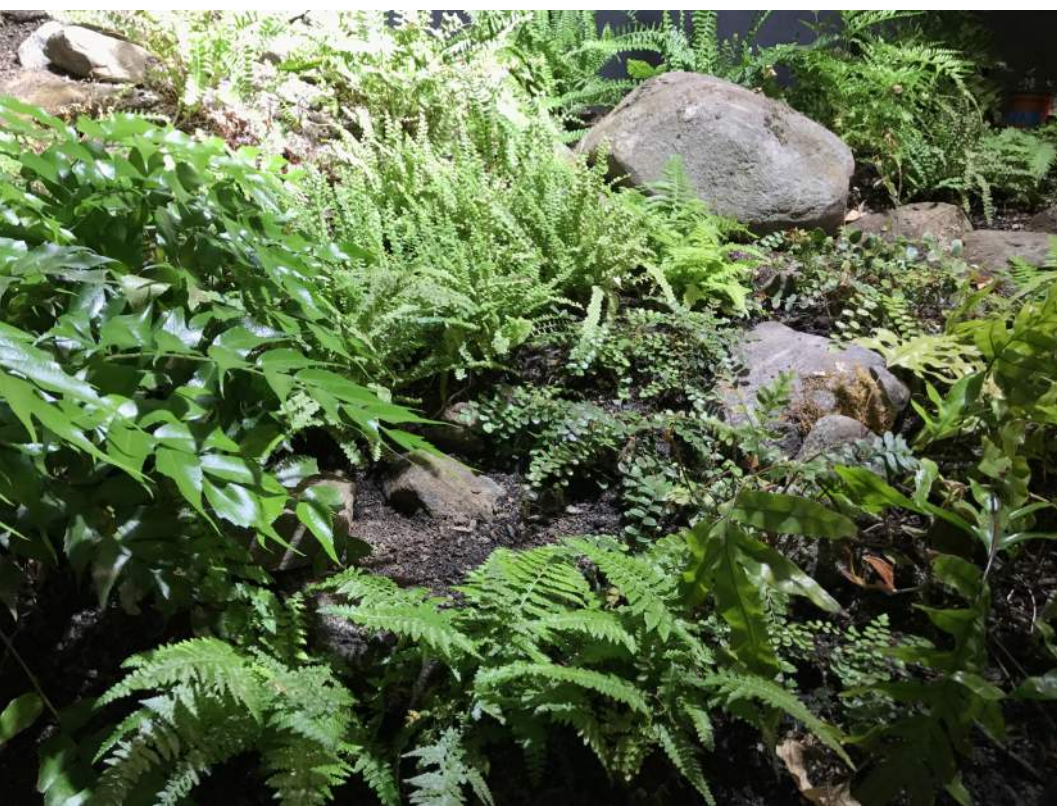
# PLANTING LAB

For one year, we dedicated one of our studio spaces to the study of the anticipated growing condition of the final project.

We created a mock up to test a range of aesthetic and technical considerations as we continued to develop our design.

In order to closely monitor the plants and their changes over time, we installed high density grow lights. This comprehensive mockup enabled the design team to assess specific details such as:

- Soil Composition
- Pest Management
- Drainage
- Humidity
- Long-term Plant Performance





# BLOCKS & BOULDERS

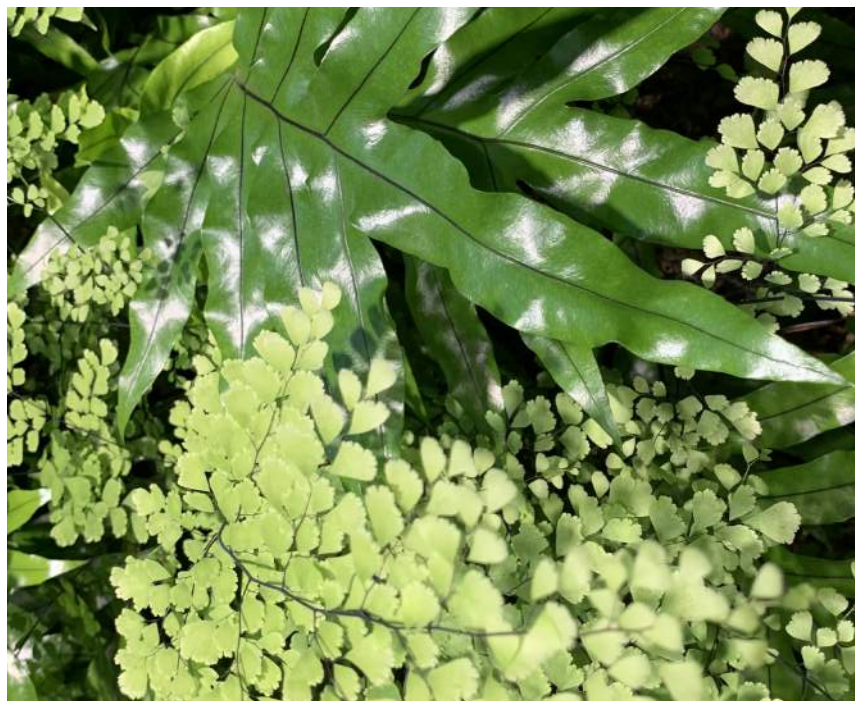
Concrete blocks, previously used as ship ballast, were recovered from the Navy yard and incorporated into the landscape for seating. Boulders were hand selected in western Massachusetts, and installed through the building's main bi-fold door with heavy machinery.



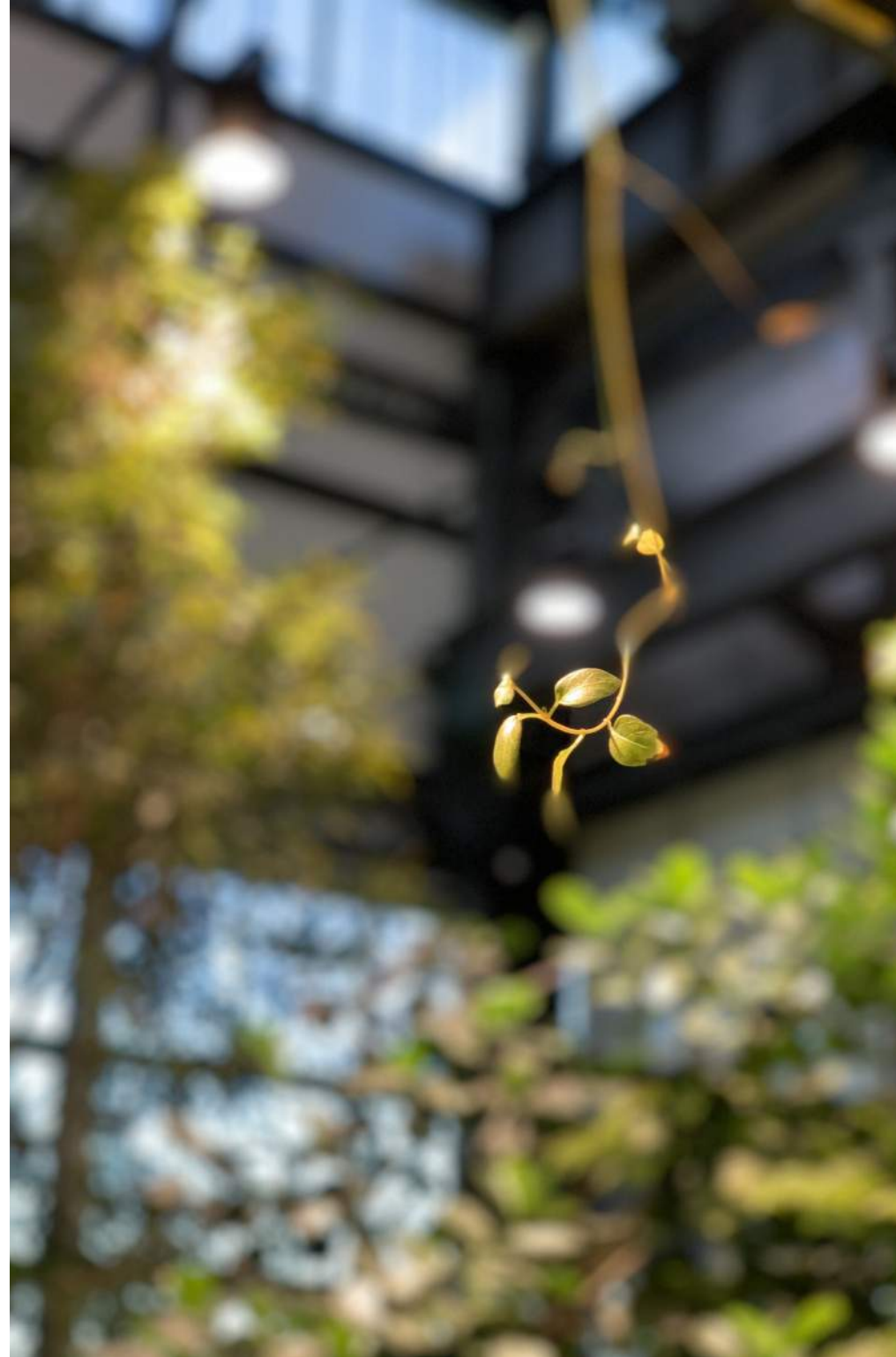


# PLANT SELECTION

A broad range of perennial and tropical ferns make up the planting palette of the forest floor. Tropical trees, up to 25' tall, were selected for their ability to thrive in the interior space, as well as for the interplay of their leaf form.

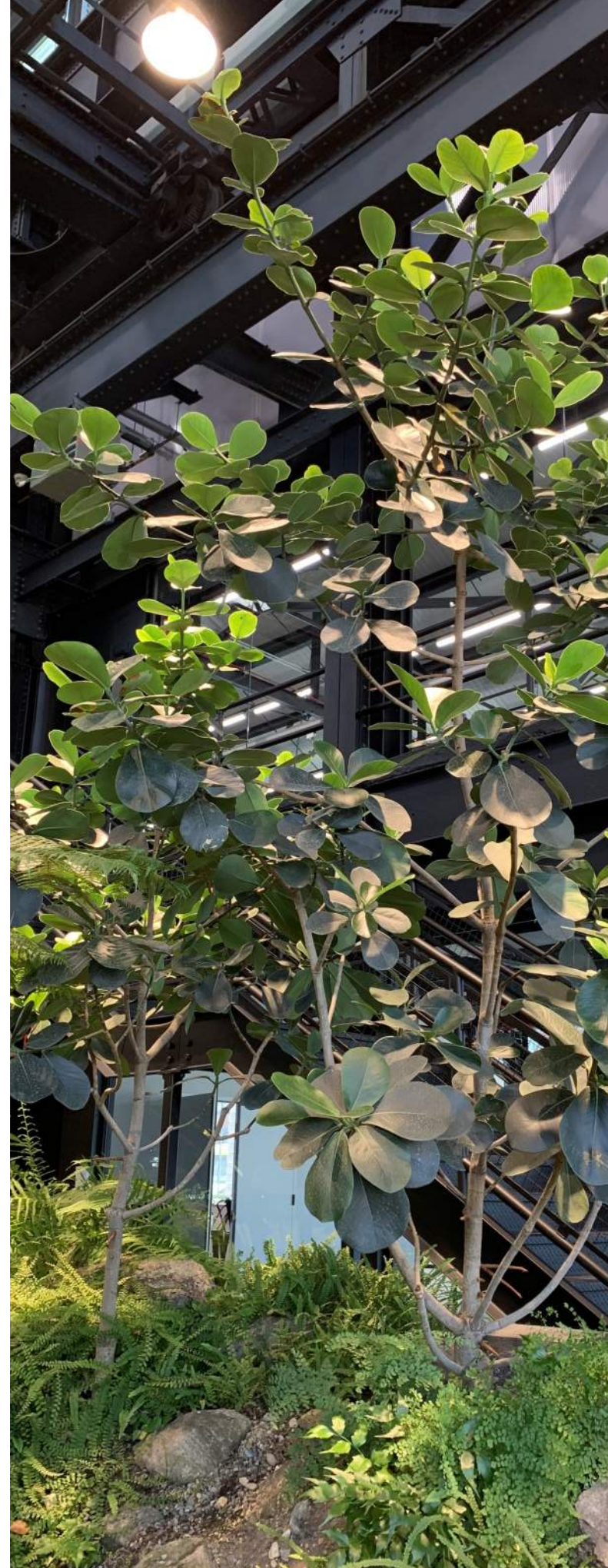






## LIGHTING

Due to the limited natural light in the space, we introduced LED light fixtures, hung evenly above the atrium, and we worked with a commercial light fixture manufacturer to customize output and define the ideal wavelength spectrum for the plants' required growing conditions.







Moss is now propagating on the boulders throughout the space. Temporal water pools, which fill and evaporate, mark the passing of time.







As the landscape matures, plants migrate across the mounds and concrete block seating, occupying areas where soil was previously bare. Seedlings have taken root.





Dynamism permeates the atrium space, evoking both a sense of wonder and tranquility.











