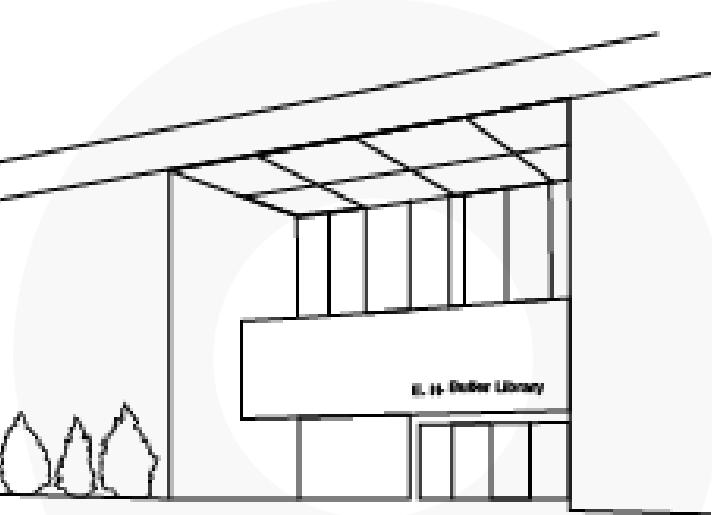






ex.pe.ri.ence

an event or occurrence that leaves and **impression** on someone.



1300 Elmwood Ave, Buffalo, NY, 14222

The E. H. Butler Library was built in May of 1950. Two years after construction, in 1952, the library was officially dedicated. It was dedicated in memory of the founder of the Buffalo News, Edward Hubert Butler Sr. and officially took the name "E. H. Butler". The building underwent renovations in August of 1966, and has since seen modifications and updates in accommodations up until current with the large scale renovation underway, 2018. The library houses over 500,00 printed library books, and holds even more, ever increasing amounts of digital references. The seating capacity is set at 2,000 persons and exists as a centralized resource for all students, and professors who are part of the SUNY Buffalo State College community.



THE

PROBLEM

E. H. Butler Library at Buffalo State College lacks experience within its design.

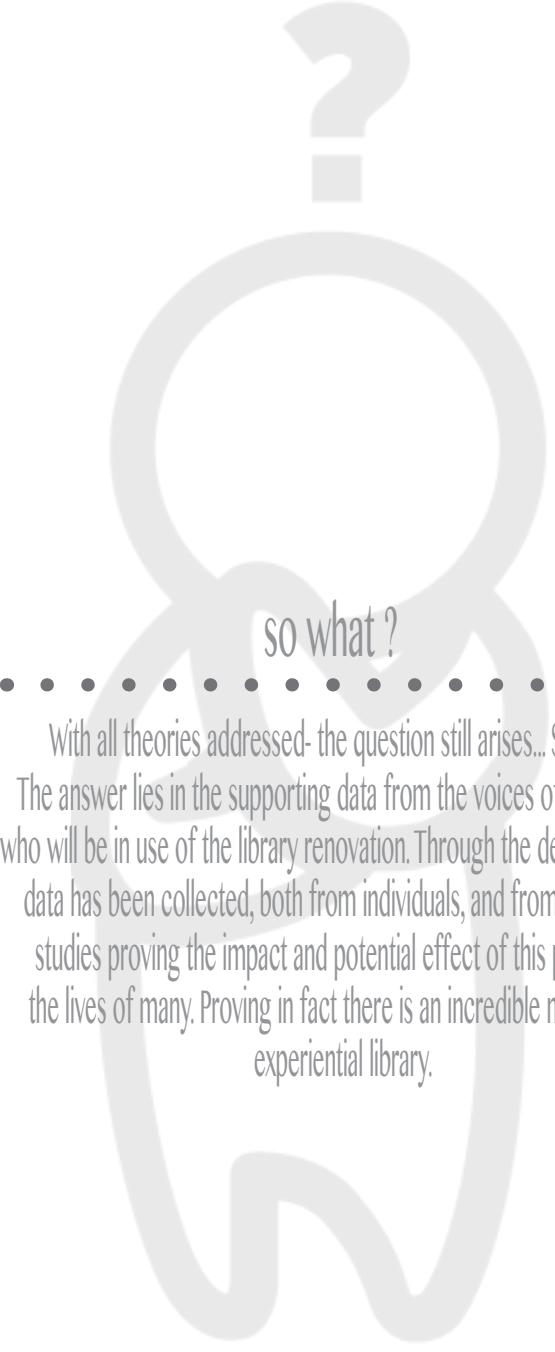
The importance of experience within a space has never been more important than it is today. Being a stimulated user is critical for a multitude of reasons. These reasons range from productivity to entertainment. In the instance of a College Campus Library, such that as SUNY Buffalo State's E. H. Butler Library, a need for stimulation is especially critical. The diverse user base combines the needs of many to reach these productive and/ or entertained states. After-all, majority of the users are attending or working for Buffalo State College and therefore have work to attend to. With these needs understood, it becomes evident that the current facilities do not meet these needs. Combating this lack of experience builds this thesis. Let's bring life into Butler Library once again, and Ignite a sense of productivity and source of entertainment.

THE C O N C E P T

Bringing a sense of experience into E. H. Butler Library through design.



Exploring the root of what drives individuals not only to a location, but to return to a location is founded in a sense of self-identification within this location. In other words, individuals look for a sense of experience in their spaces to best connect with them. This experience should be something changeable, sharable, and personalized. How can this be accomplished in E. H. Butler Library? The answer lies in accommodation of needs, versatility, and the ability to customize. Developing these ideals through a parti focusing on workspace design, volume, and natural light in turn provides the sense of experience the people need. This, coupled with a harmonious relationship with current technological advances brings the contemporary solution and experience the modern library deserves.



so what?

With all theories addressed- the question still arises... So what? The answer lies in the supporting data from the voices of the people who will be in use of the library renovation. Through the design process, data has been collected, both from individuals, and from precedent studies proving the impact and potential effect of this project on the lives of many. Proving in fact there is an incredible need for an experiential library.

EVIDENCE BASED DESIGN



Highlights from project surveys + interviews that helped to aid in the project's design.

75%
of people surveyed primary
or secondary reason for
coming to the library is to
use the workspaces.

“I find that no one is using
the books in the Library.
The books need more
attention for more use.
There is a complete lack of
inspiration from books.”

87.5%
of people surveyed claim
that they irregularly or
never check out books from
the Library.

P R E C E D E N T S T U D I E S

The New York Public Library

476 5th Ave, New York, NY 10018

Seattle Central Library

1000 4th Ave, Seattle, WA 98104

Tianjin Binhai

Tianjin, China



THE

PART I

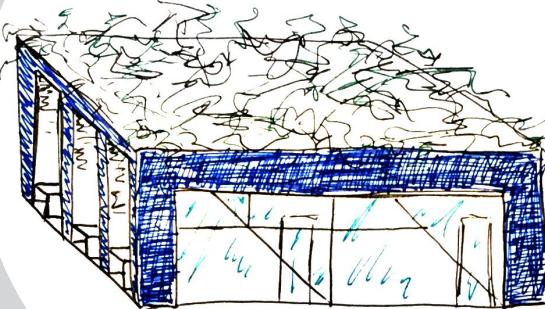
Ignite will be a workspace focused, multi-functional, naturally lit, explorable library.

• •

Contemporary workspace design values will be implemented within the library to cultivate the versatile nature of the design. Bringing the power of natural light into all productivity spaces within the library will enhance the success of those working within them. Developing circulation that aids to clear way-finding will encourage exploration of all of Ignite's resources, and in turn, lead those exploring to new resource based discoveries. The volume of each space and its function will directly correlate and in turn provide the appropriate intimacy or openness. Important details such as color, scale, and elevation will be taken into direct consideration while developing each intended perspective brought on with each space- heightening the overall experience. The result will be a workspace focused, multi-functional, naturally lit, explorable library.

WORKSPACE DESIGN

In a variety of studies, ranging from personal interviews to peer-reviewed articles, and observational sit-ins the importance of educated workspace design has become evident. In a world that daily develops more innovative and technological ways to work the demand for a versatile and change-supporting space becomes imperative. The discoveries are as follows- variety, versatility, and customize-ability are needed in a present-day workspace. It also has become evident that natural light, greenery, and access to power must be present at any workspace intended to support the functionalities and productivity needs of a happy user. These demands bring about a new kind of efficient, healthy, and fresh work areas that will bring expectations for future progress.



THE STUDY QUAD

IMPORTANT DESIGN FEATURE

The value of The Study Quad is vast. Being a small volume in this project, it houses a certain level of intimacy. This kind of space is incredibly suited for close-knit group work, or discussion. In addition, the form of the Quad allows for booths to be embedded within two of the support walls, while allowing for glass to frame the other two opposing sides. These glass pieces, also add to the beauty of the Quad. The glass facades and glass central divider orient themselves toward the windows of the actual exterior of the structure. By doing this, the natural light is able to pass through toward the heart of the library with little obstruction. The final piece has two benefits- the moss 'roof'. Bringing greenery into the library is incredibly important. It is proven to bring joy and productivity. However, this moss has the additional bonus of being sound absorptive.

Design Influence Spotlight

"The largest function of the library is using it for **workspace**- not for books."

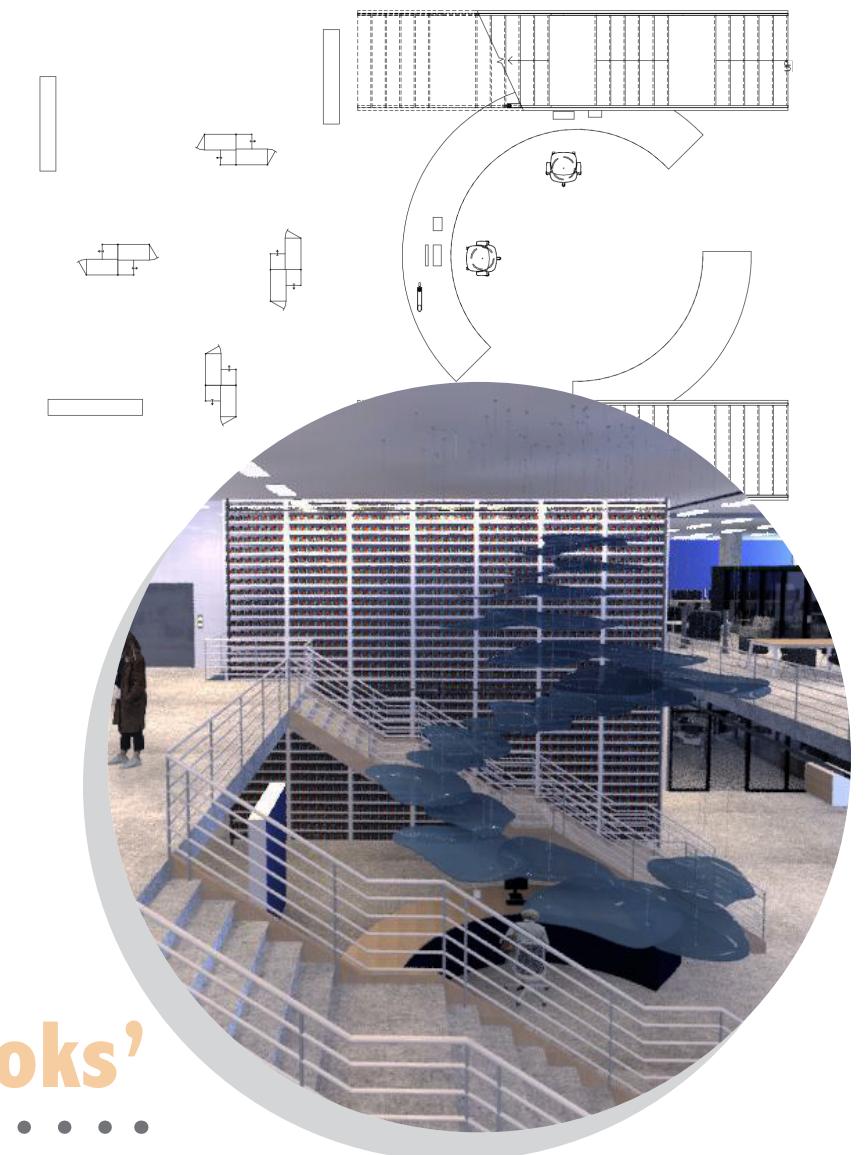
Lillian Reynolds



WHERE DO WE PUT



THE BOOKS?

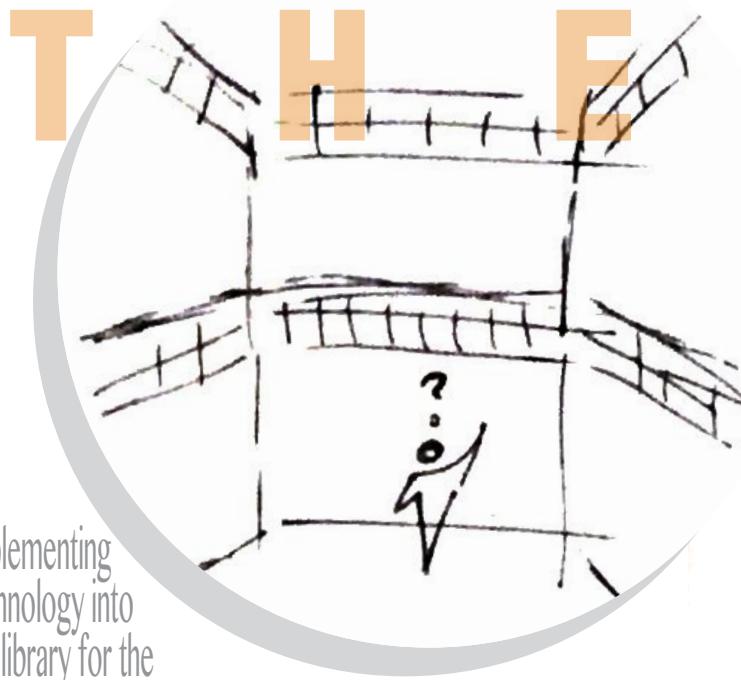


Important Design Feature

‘The Walls of Books’

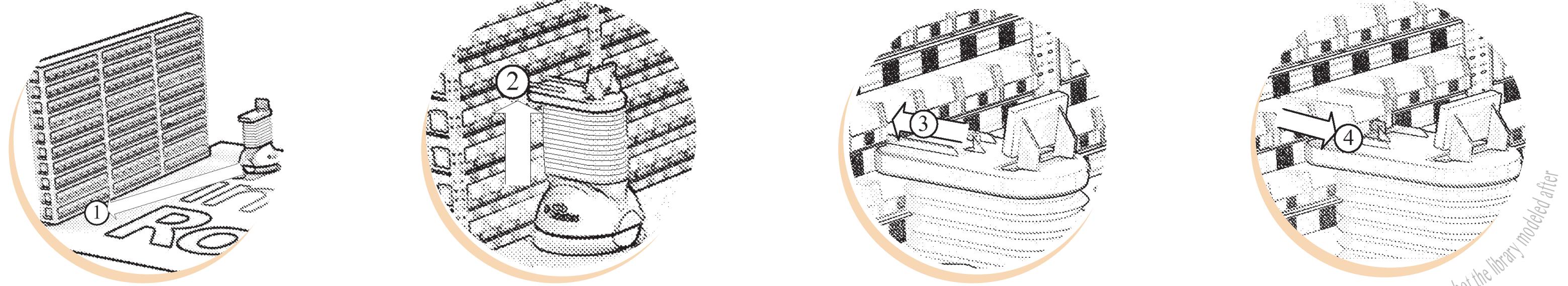
The importance of books in a library has become a spotlit topic of current conversation when it comes to library design. The statistics and surveys say that the books have become something of secondary value to the typical present-day user. Often times this jumps the conclusion of their elimination, but this design challenges that jump and gives a bit more depth in the solution. Remove the stacks- but don't remove the books. Turning the books into a sort of functional decoration becomes possible in a day and age in which technology can be used to retrieve these items from any location. This highlights the resource instead of eliminating it, and brings a sense of freshness and experience back into encouraging use of these fantastic resources.

ACCESSING THE BOOKS



Implementing technology into the library for the sake of accessing the books that have been placed out of reach of the average user implies a need for a retrieval system. This system will be digitally run by a few algorithms, and physically by a few small retrieval robots. These robots will run along tracks attached to the ceiling, so as to not become obstacles for the users, and will respond to commands given through a computer system run at the librarian's station. When tasked, one robot will run along the tracks, able to communicate to the others for sake of fluidity of functionality, and recover the requested books to then return to the librarian station. This sort of vending machine activity will bring a visually entertaining, and interactive element to the library. When not directly tasked, these robots will collaborate through several programs to reorganize the books in various entertaining ways.

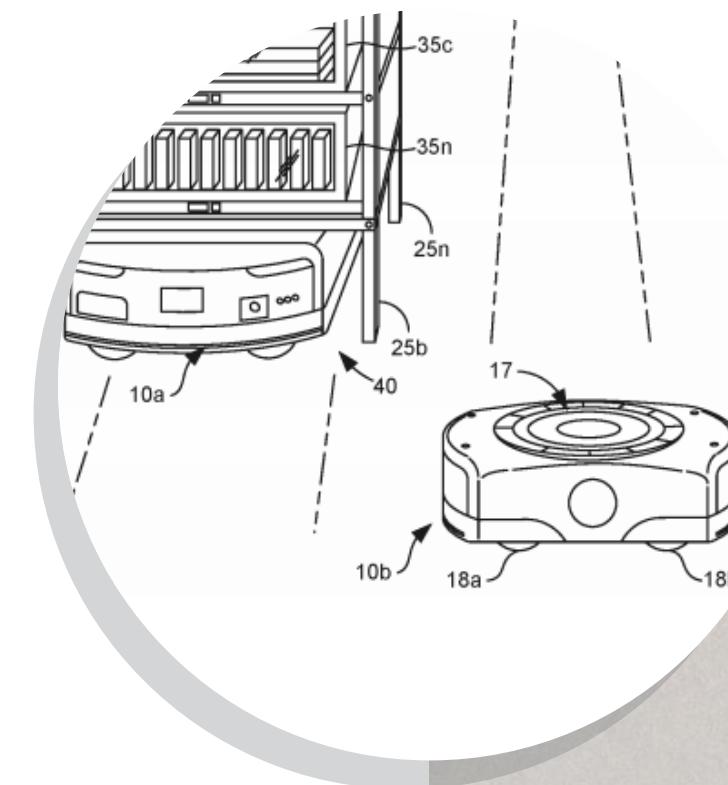




A retrieval robot the library modeled after

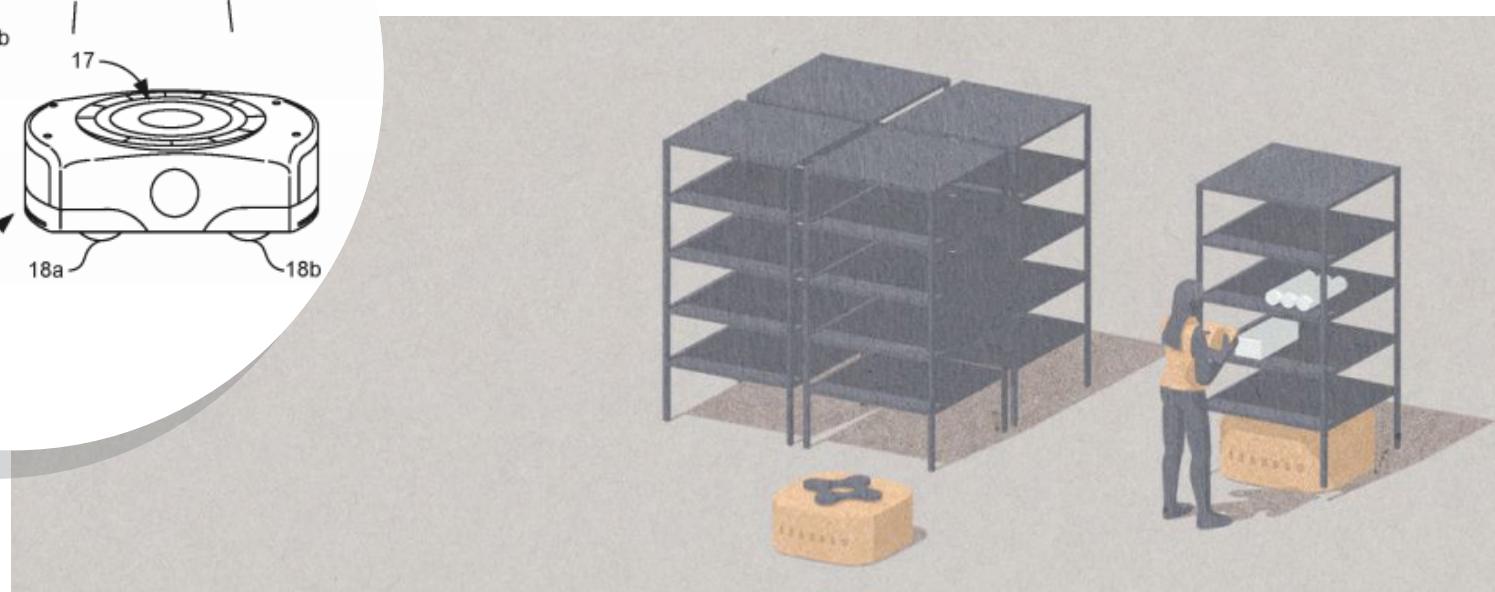
THE ROBOTS

The Amazon storage warehouse is one facility that has adapted the notion of automation. The warehouse is heavily run by the help of small KIVA robots. These robots run along the floor of the facilities, communicating by radio to each other, completing retrieval tasks of large towers of items. These towers are brought to human workers, whom select desired items directly from the tower, and then task the robot with returning the tower to an available location within the facility. This system is efficient for the human workers, and simple for the robots as they receive and complete organization and retrieval tasks throughout their day.

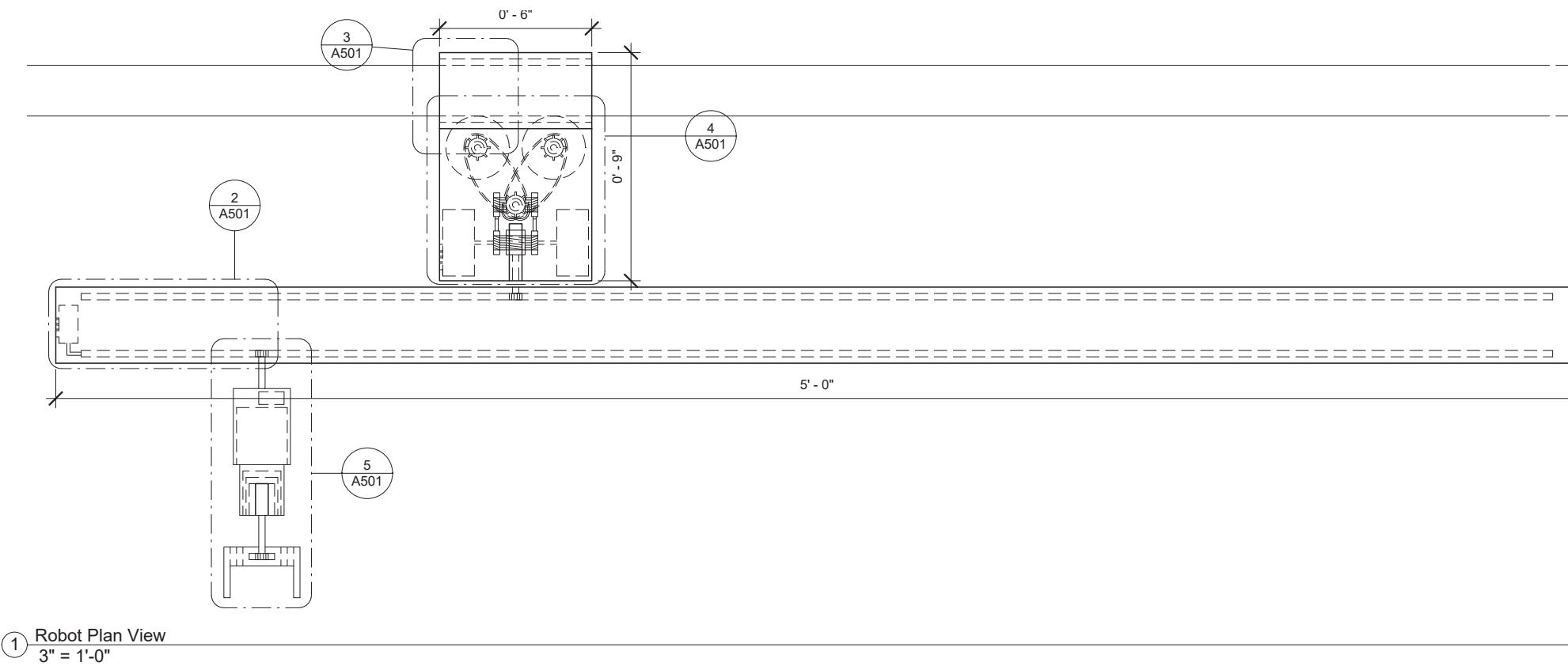


Precedent Study - Amazon

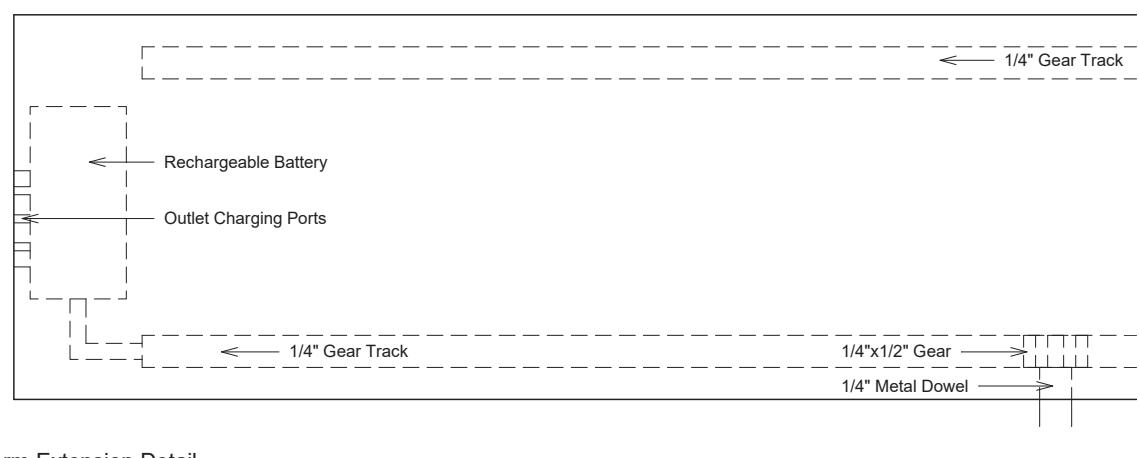
'The KIVA robot'



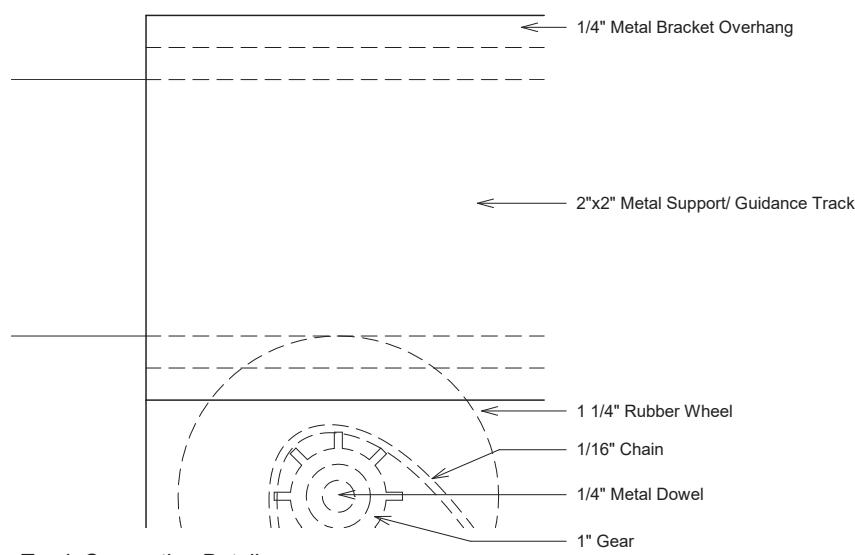
S T O R A G E



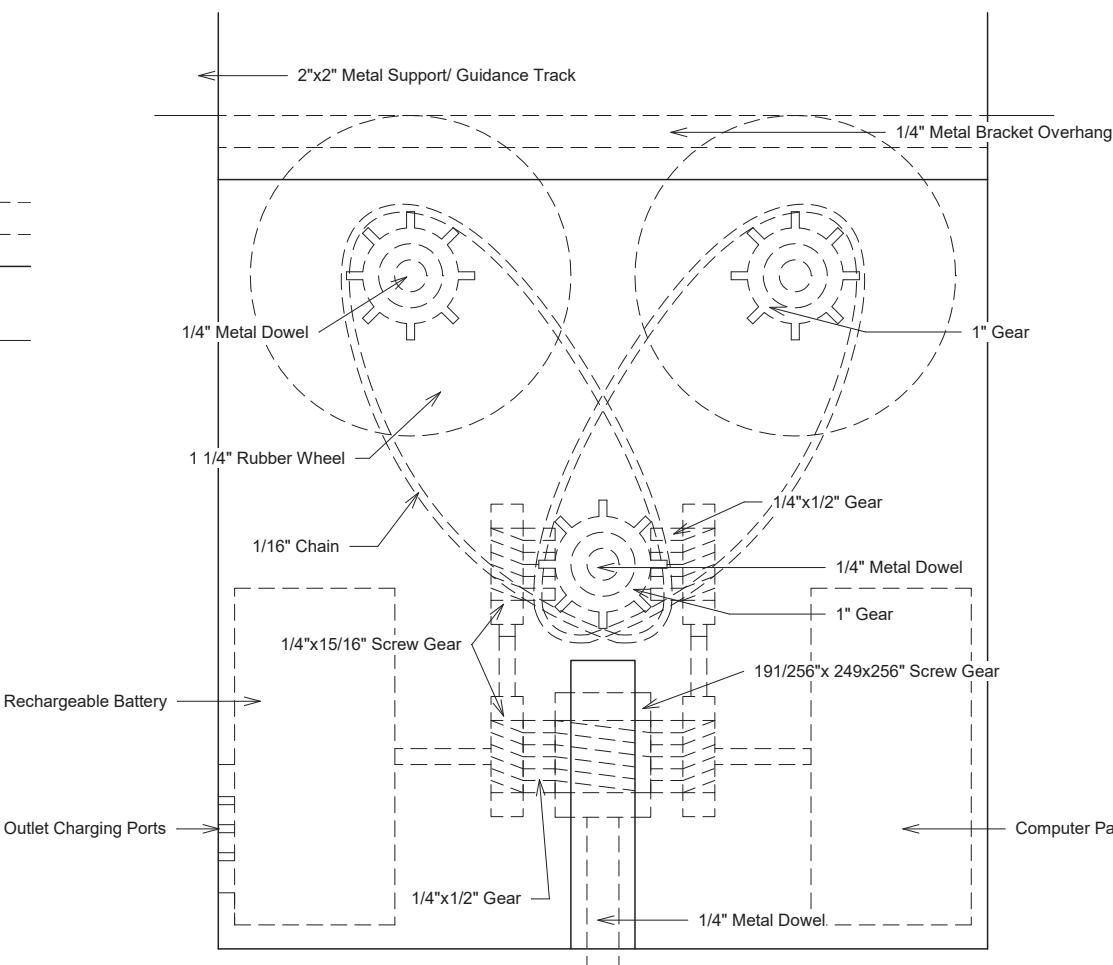
1 Robot Plan View



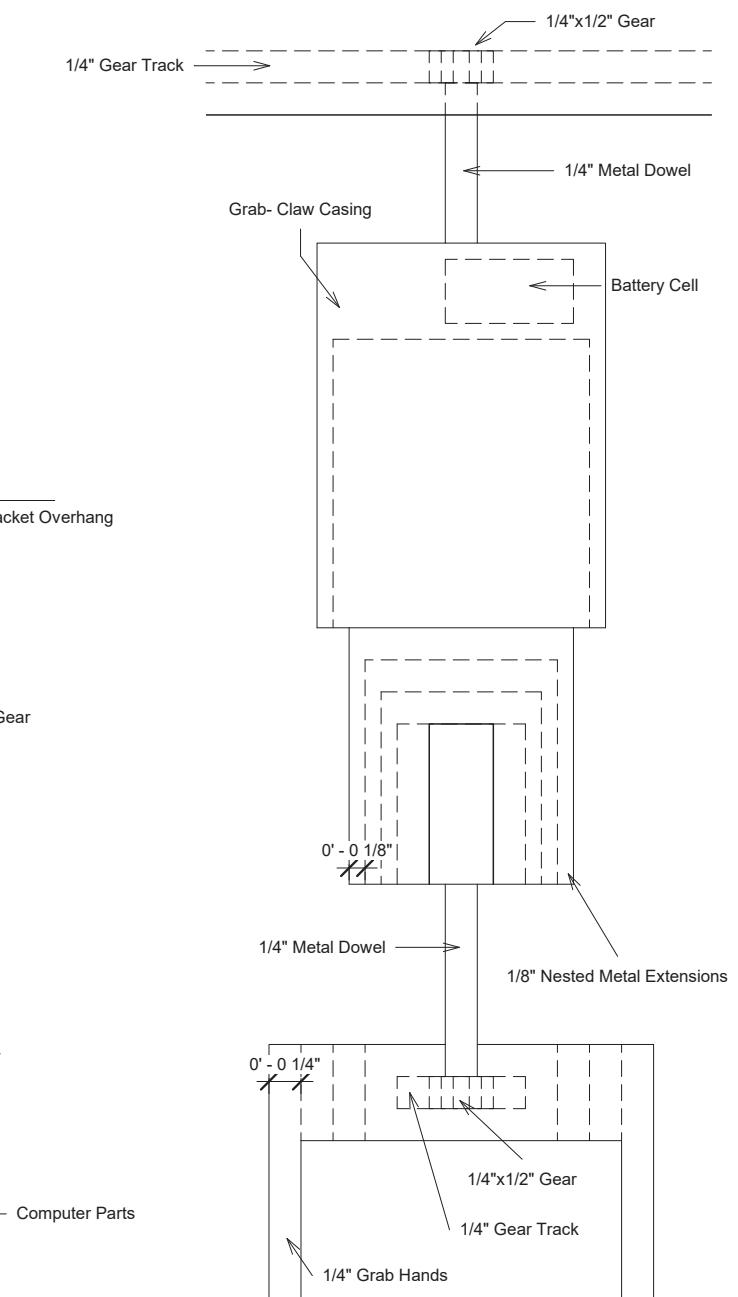
2 Arm Extension Detail
12" = 1'-0"



3 Track Connection Detail
12" = 1'-0"



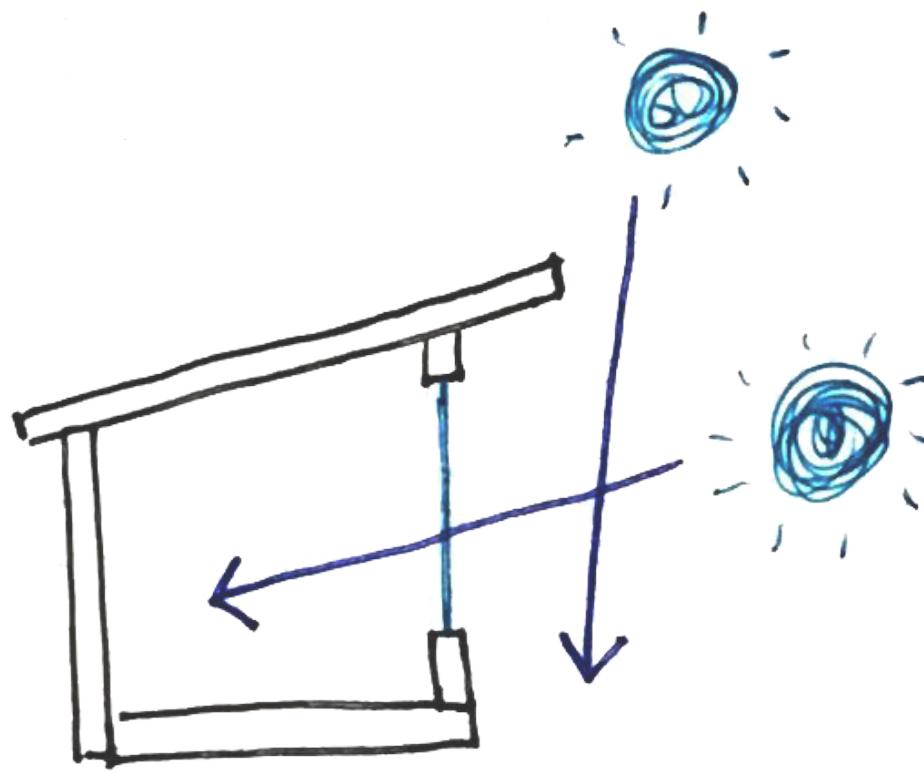
4 Gear Box Detail
12" = 1'-0"



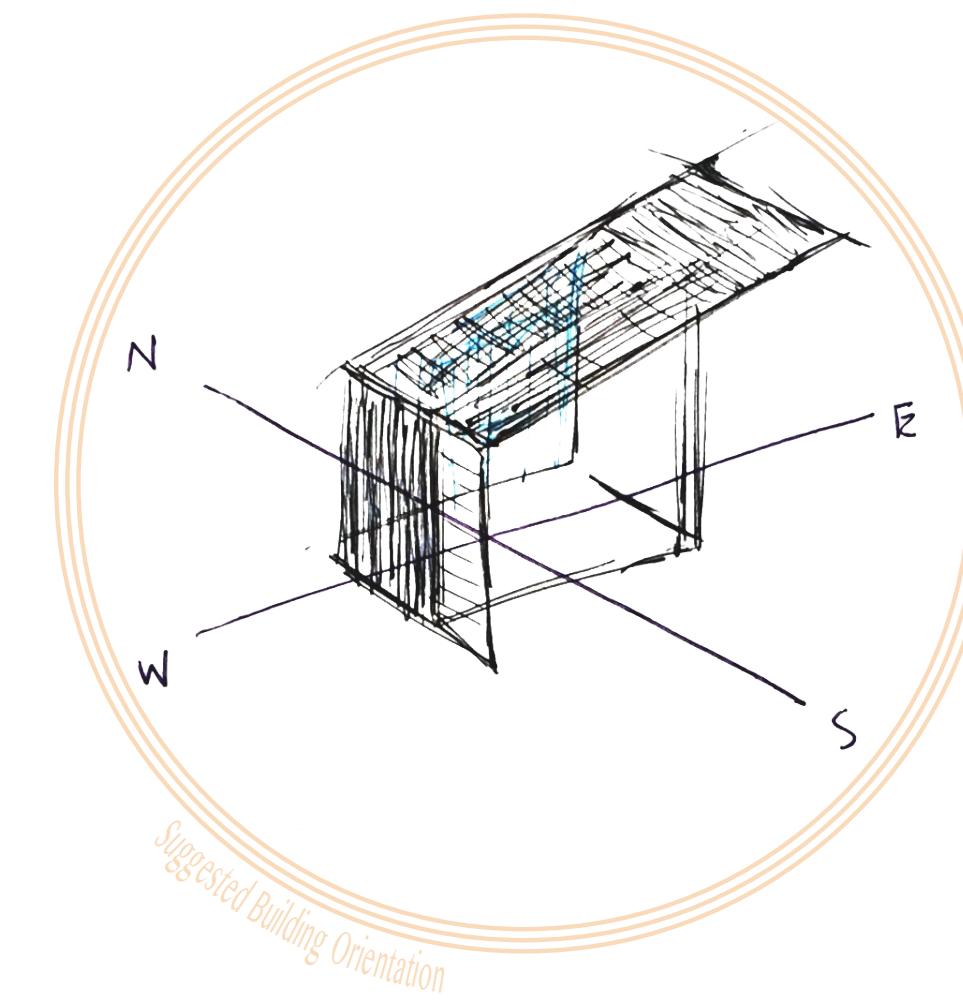
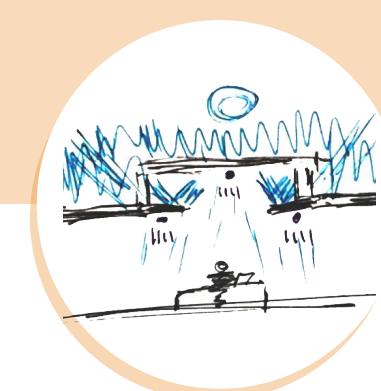
5 Grab Claw Detail
12" = 1' 0"

NATURAL LIGHT

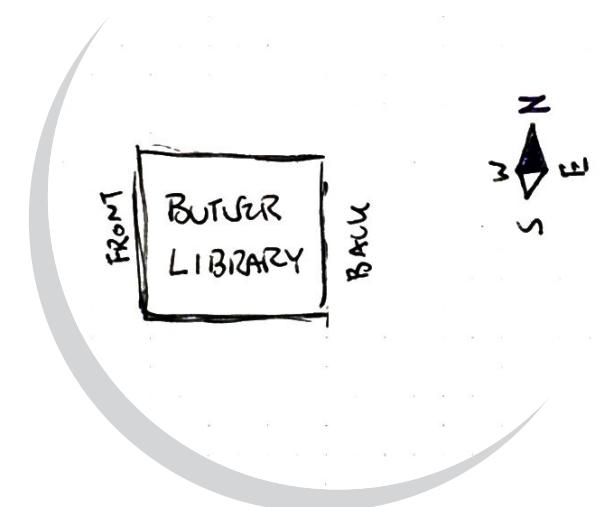
Peer-reviewed articles, as well as personal accounts suggest the gravity of the impact natural light plays on the human mind. The way a space is illuminated plays an incredibly important role on productivity, efficiency, and mental-health of a user. However, the kind of natural light is also significant; meaning the angle and intensity at which it reaches the user. South-facing rooms allow most winter sunlight, but little direct sun during the summer. North-facing rooms admit relatively even, natural light, and almost no unwanted summer heat. While East + West facing rooms receive harsh light for different portions of the day. Planning for the best kind of light to be allowed in while filtering harsh light allows for a strong design.



Sun Orientation

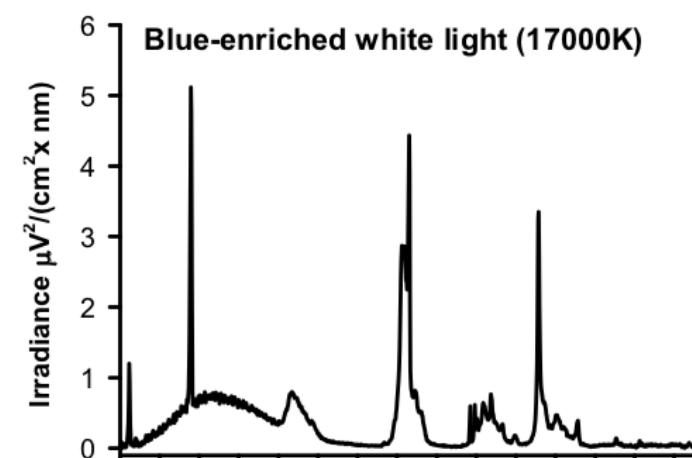
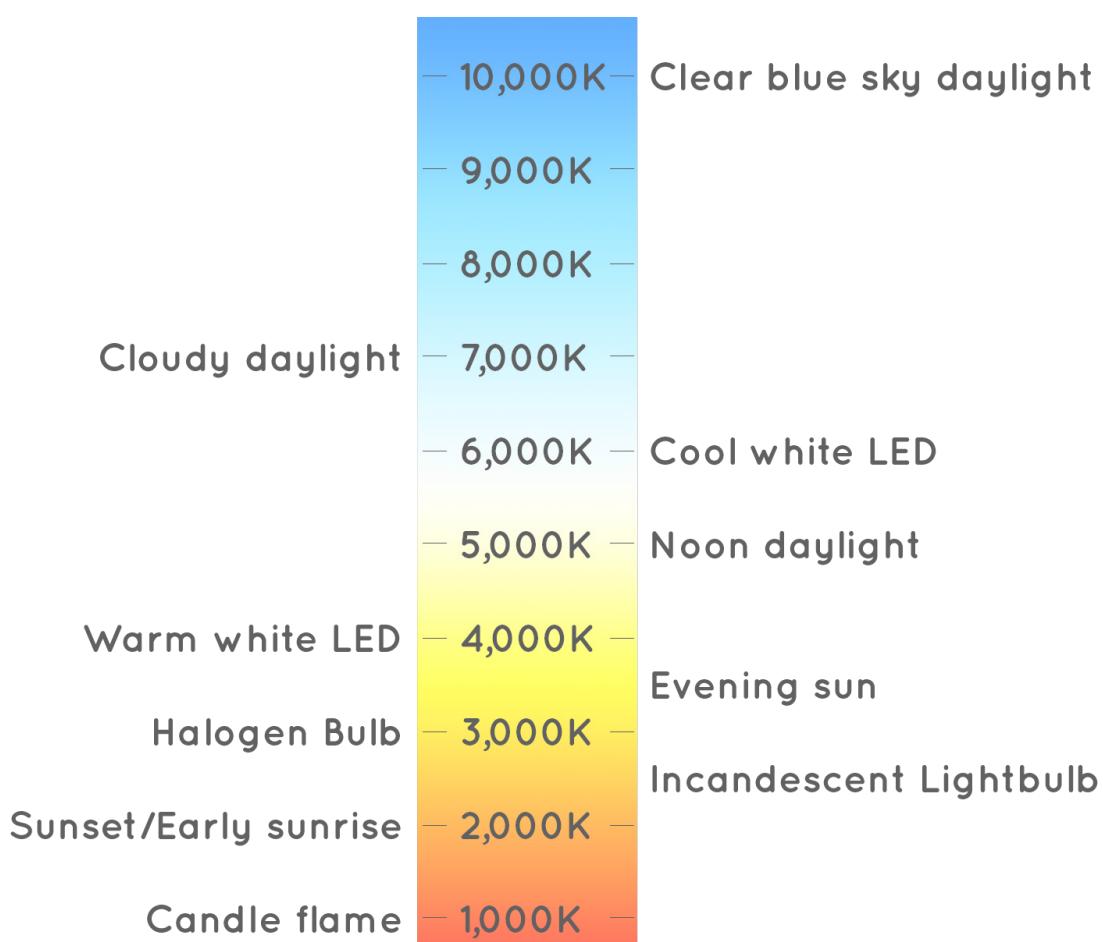


Building Orientation Sketch

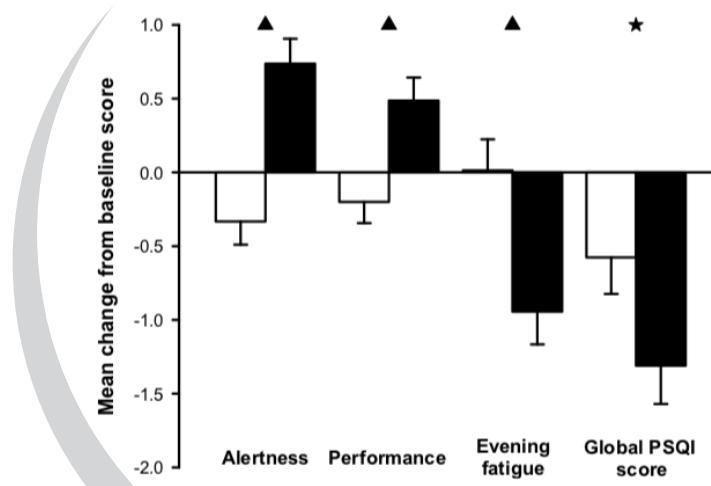


ARTIFICIAL LIGHT

Lighting design and control holds an incredibly significant value in workspace design. The amount and type of light the user is exposed to makes a large impact on the user's ability to work productively and efficiently within a space. This doesn't simply mean providing light, but also begs the importance of the color temperature of the light, and its ability to properly render an object or item to the viewer (ie. Color render index). This value in quality of light is a heavy focus within this library design, as it drastically impacts the experience a user has within the library.



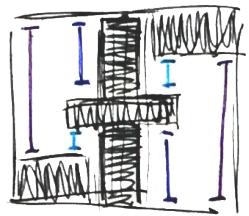
Precedent Study - Color Temperature



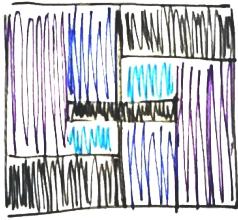
‘Blue-Enriched White Light’

Color temperature of light is an important characteristic for how a user feels and works within a space. Studies have shown that natural light is of dramatic importance for attitude of a user, which begs the question of artificial light's ability to mimic natural light. Through time, within studied application, blue light that tends towards white light exposure allows for the best mimicry of natural light, and exposure to an artificial light that best imitates this temperature has been found to have severely positive impacts on the user. These impacts are found in both increased productivity, and long-term positive impacts such as improved sleep patterns and quality of sleep for those submerged frequently within it. Allowing this not only in the evening, but throughout the day as well shows even stronger trends and positive effects.

VOLUME



Circulation
+ Perspective



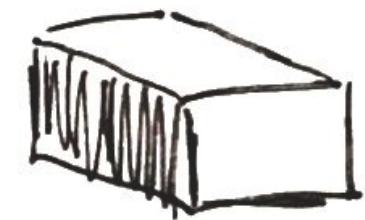
Translating a hierarchy of space into an experience within the Butler Library renovation comes with identifying the function of the different volumes of space. In this design, **function follows volume**. What this means is that the sense of intimacy brought with the perceived scale of each space will determine what each space is used for. In this same way, varying volume places individuals at varying heights and presents them with aided way-finding abilities, which influence circulation, and improved perspectives of the entire space.



Function

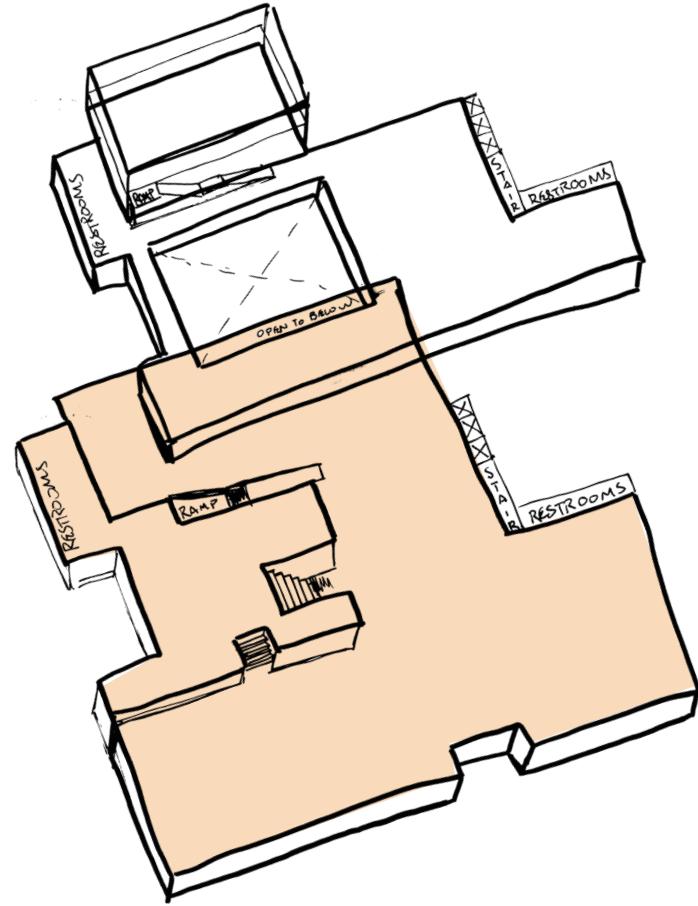
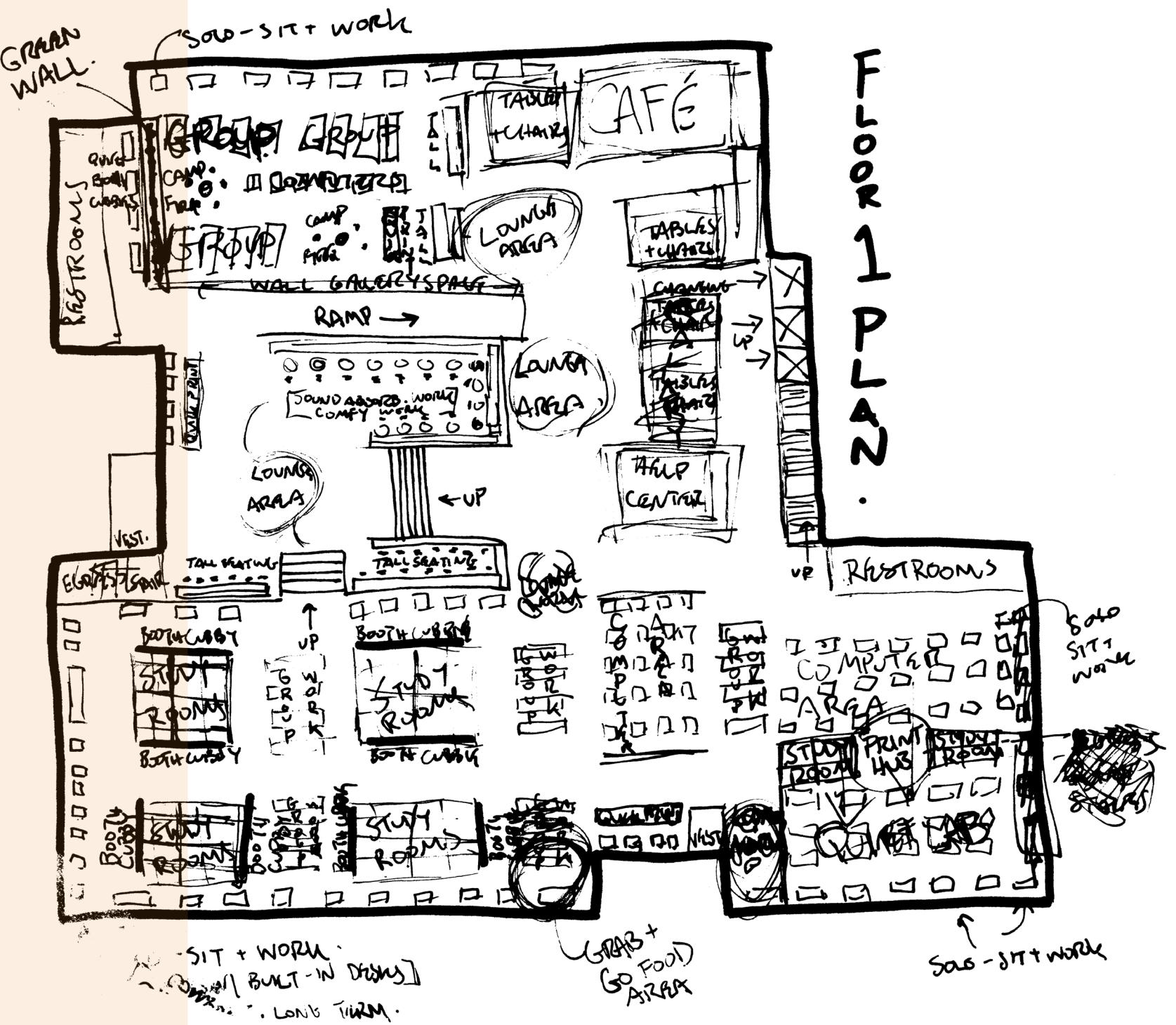


Follows

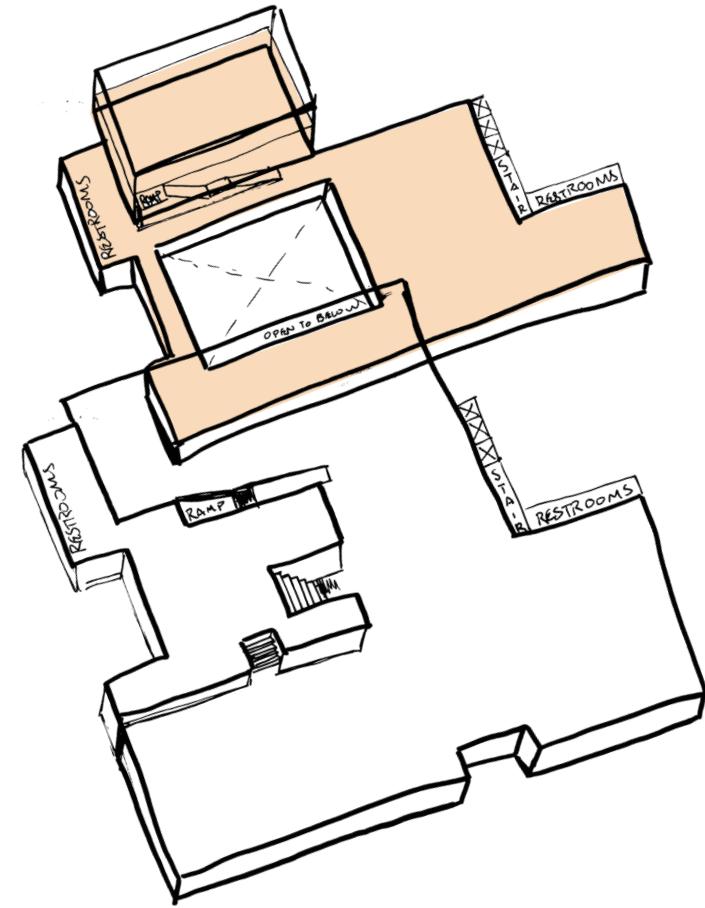
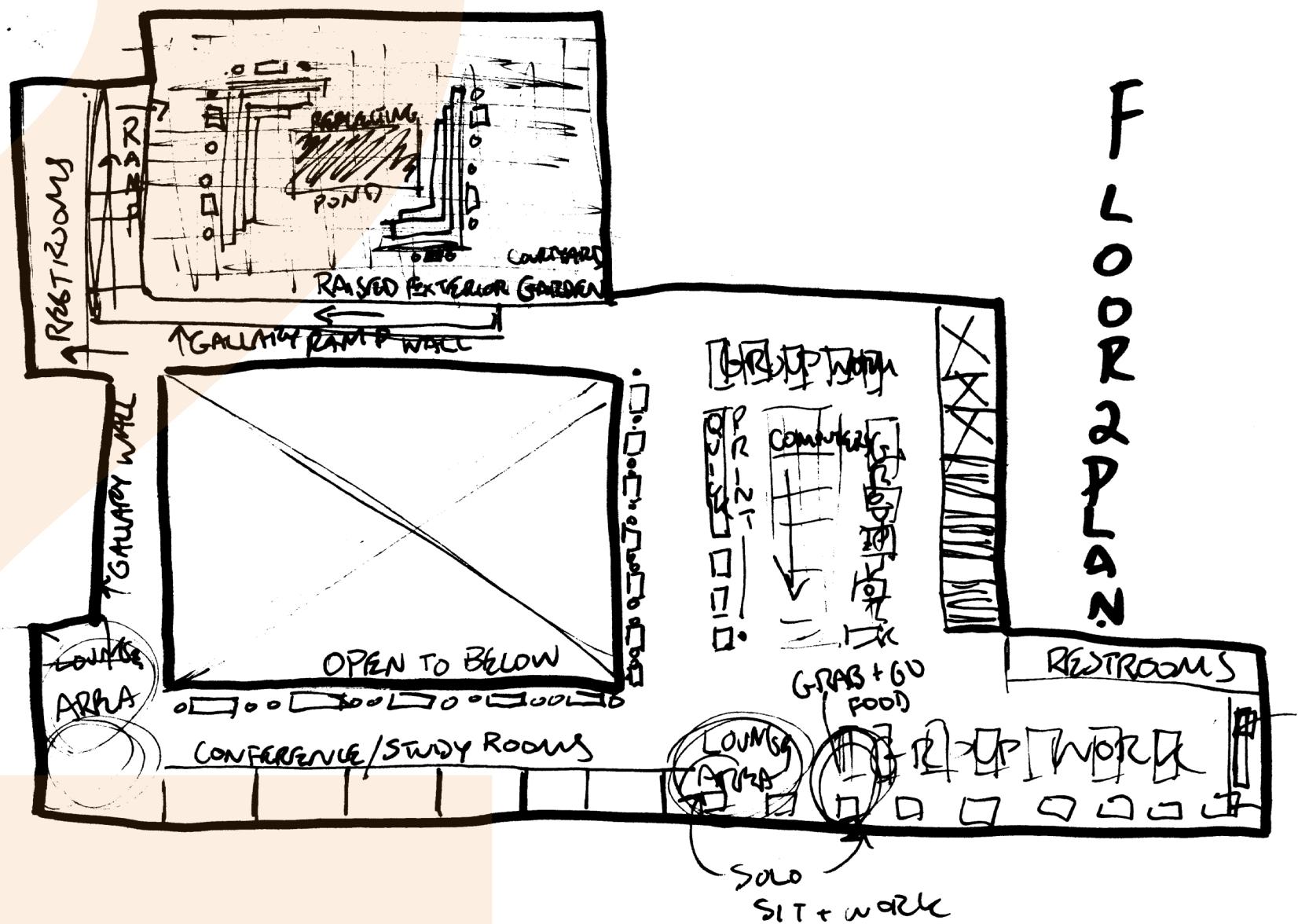


Volume

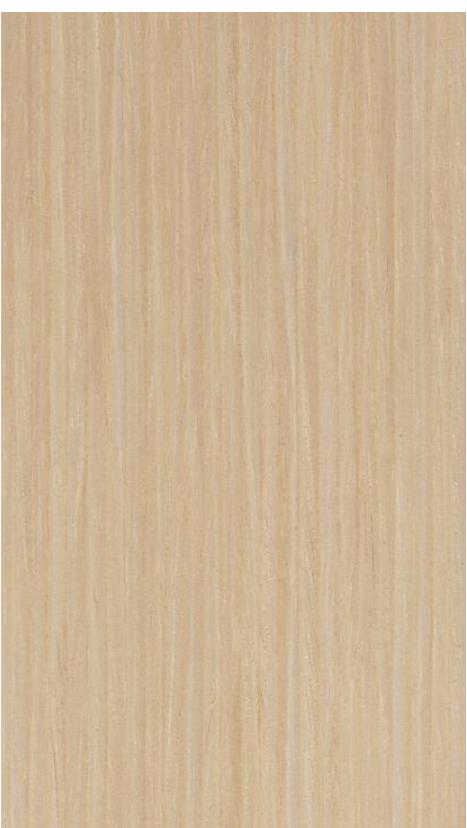
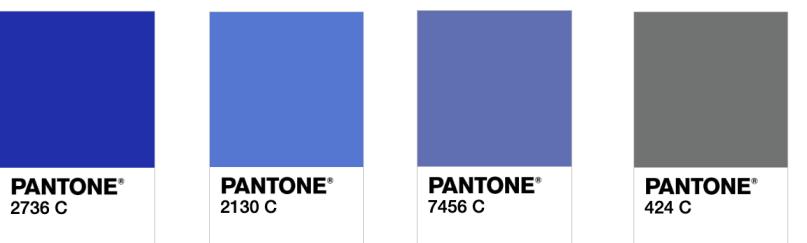
FLOOR 1 PLAN



FLOOR 2 PLAN



M O O D B O A R D



PROPOSED FINISHES



DURABILITY

Furniture with high-traffic rated, durable fabric will act as the furniture coverings. Attention to choosing easy-to-clean and easy-to-repair items will be taken.



GREENERY

Inclusion of both green building materials and physical greenery within the space will aid in diminishing the footprint while aiding in the rejuvenation of the design.



ACOUSTICS

Due to the space containing a high volume of people special attention will be taken in implementing sound absorptive elements in loud areas.

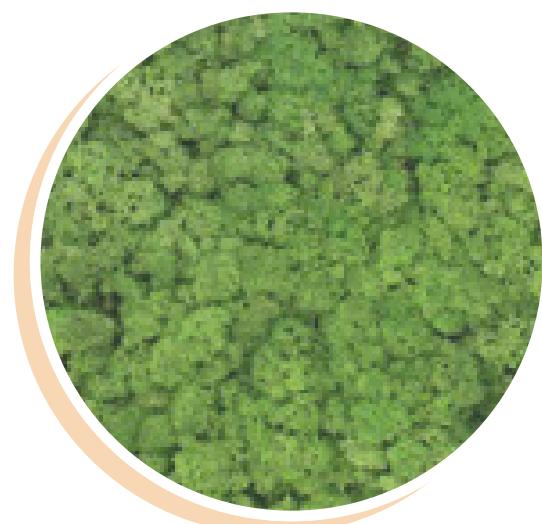


LIFE-CYCLE

An important element in the creation of a largely used public space is being able to keep it functioning relatively effortlessly for years to come.

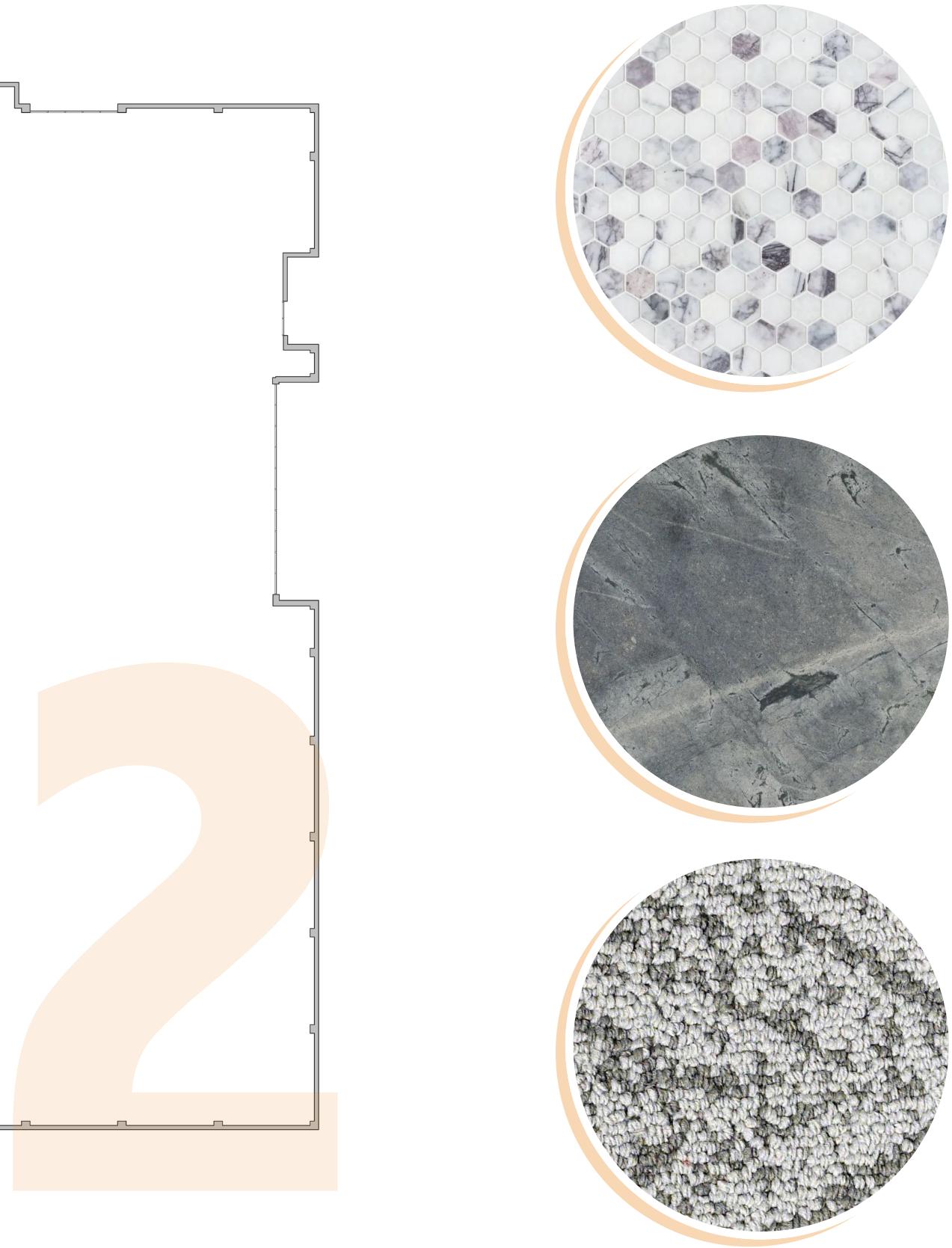


First Floor Rendered Plan

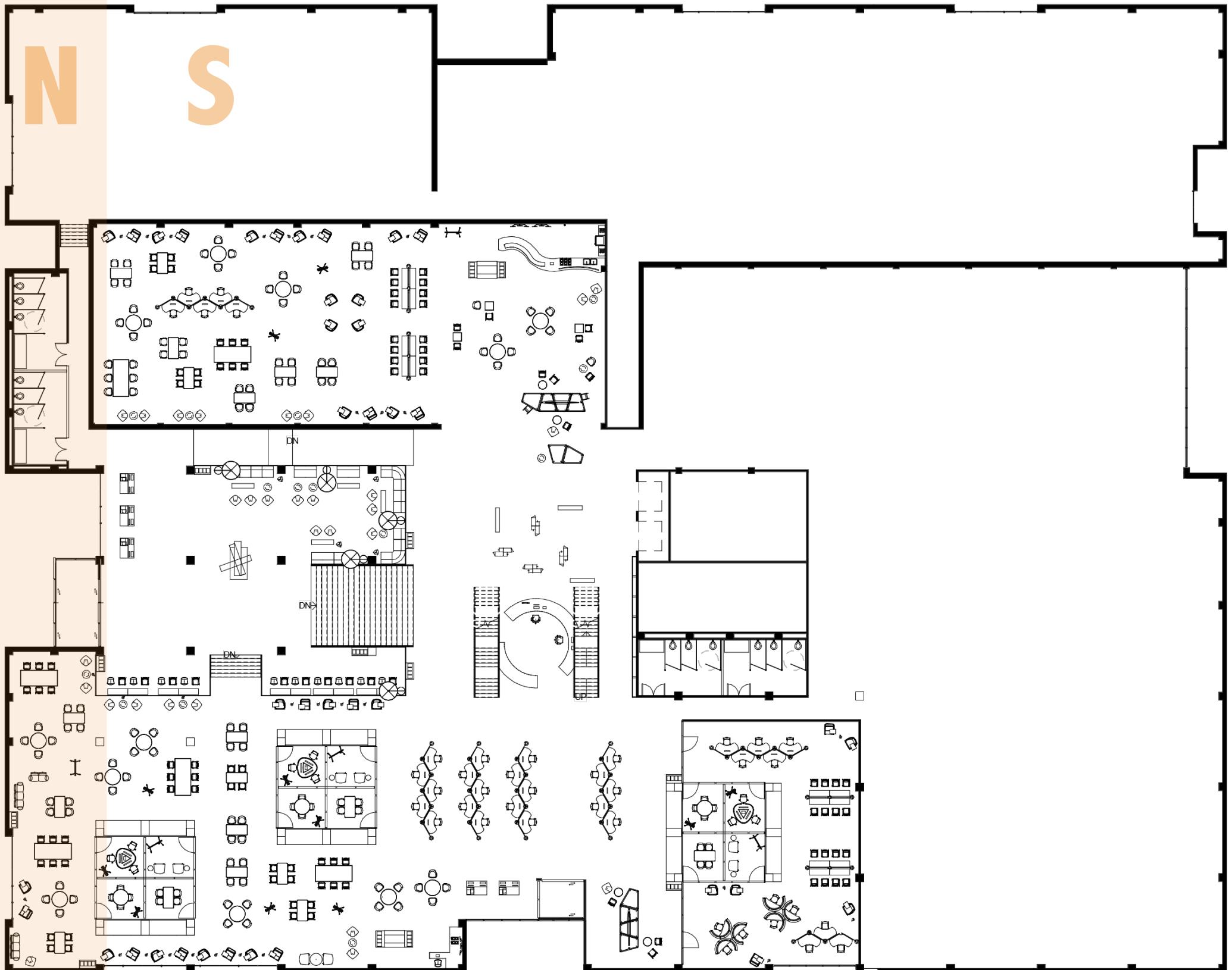




Second Floor Rendered Plan

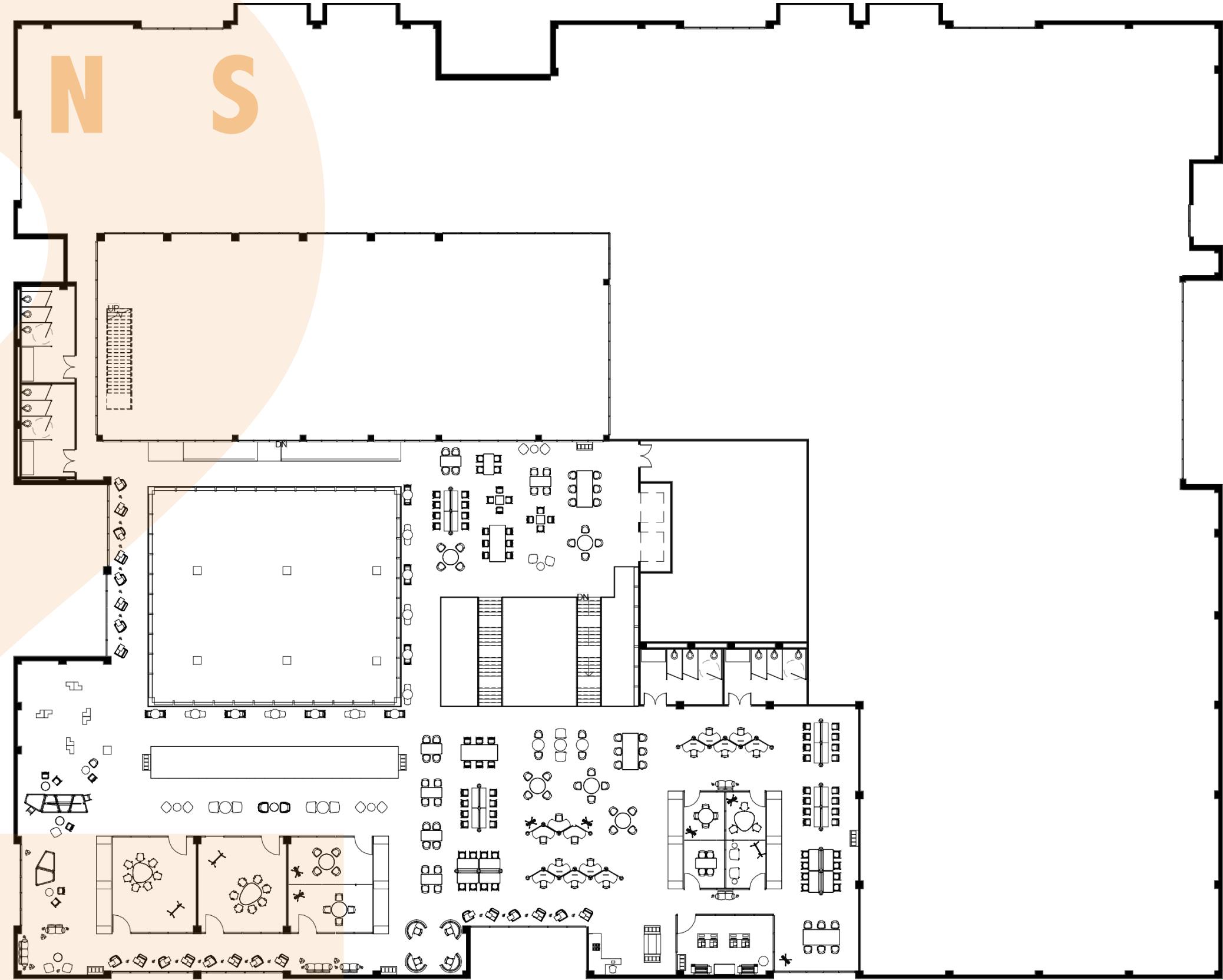


FURNITURE PLANS



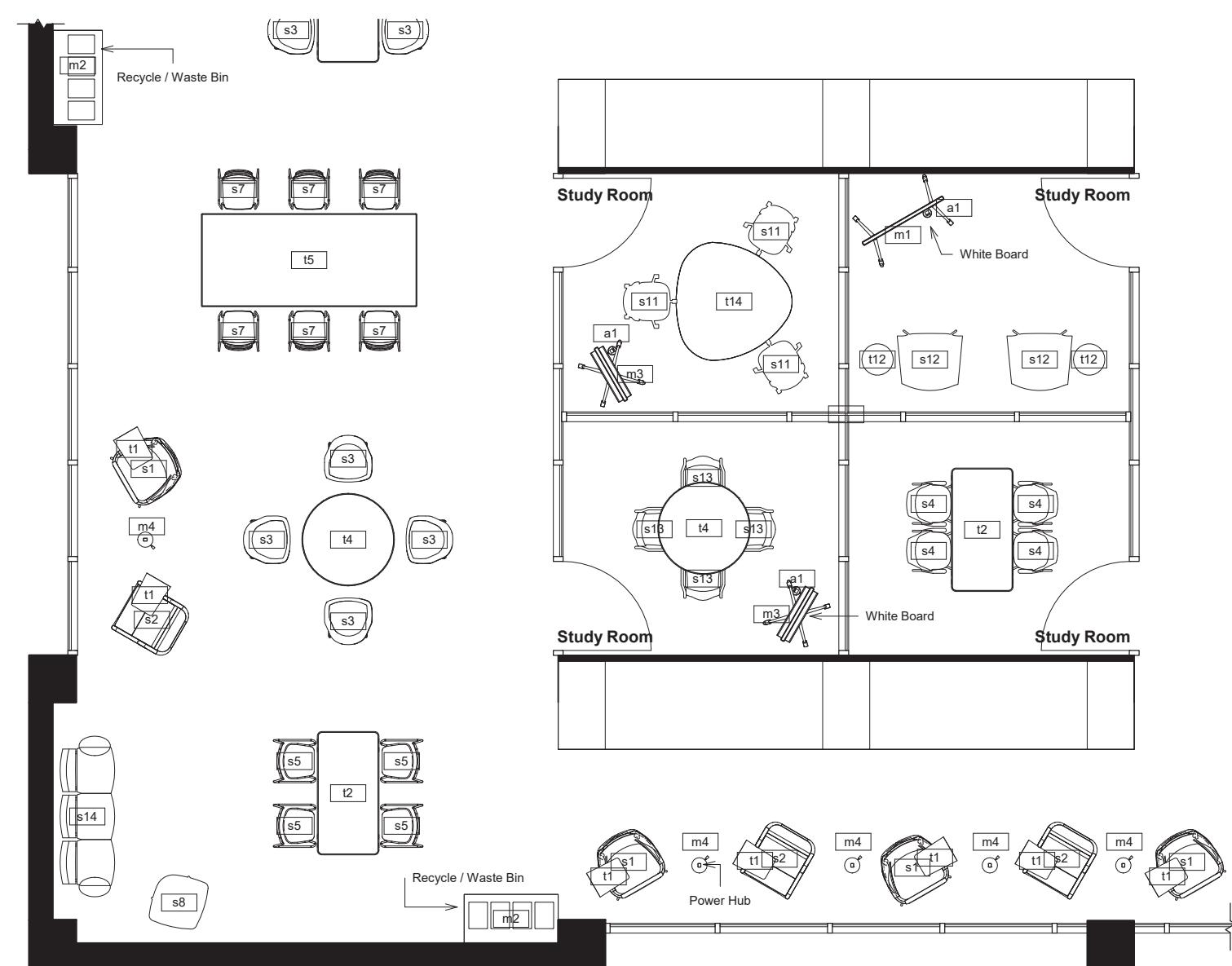
① Level 1 - Furniture Plan
1/16" = 1'-0"

FURNITURE PLANS

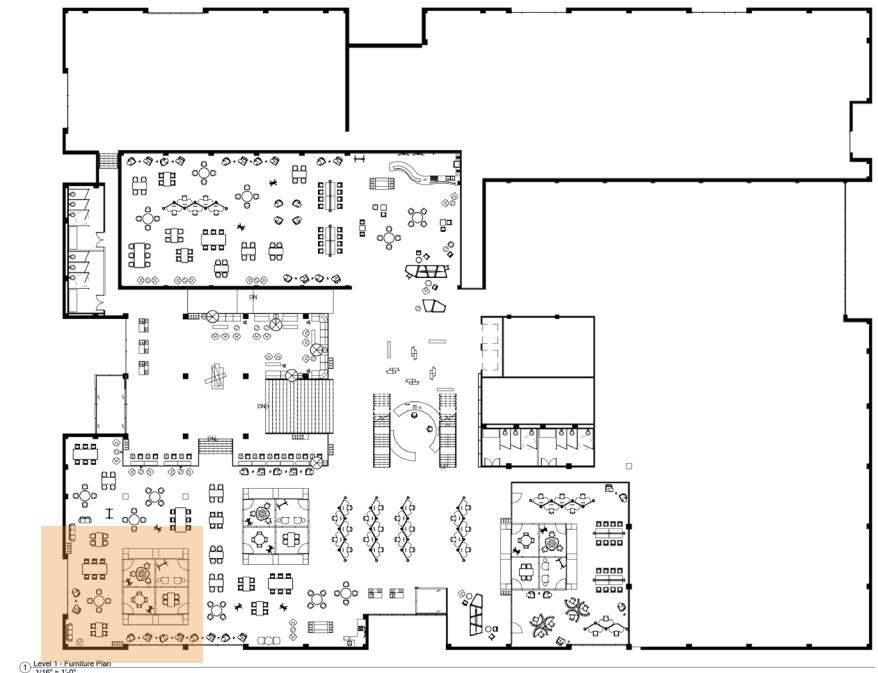


① Level 2 - Furniture Plan
1/16" = 1'-0"

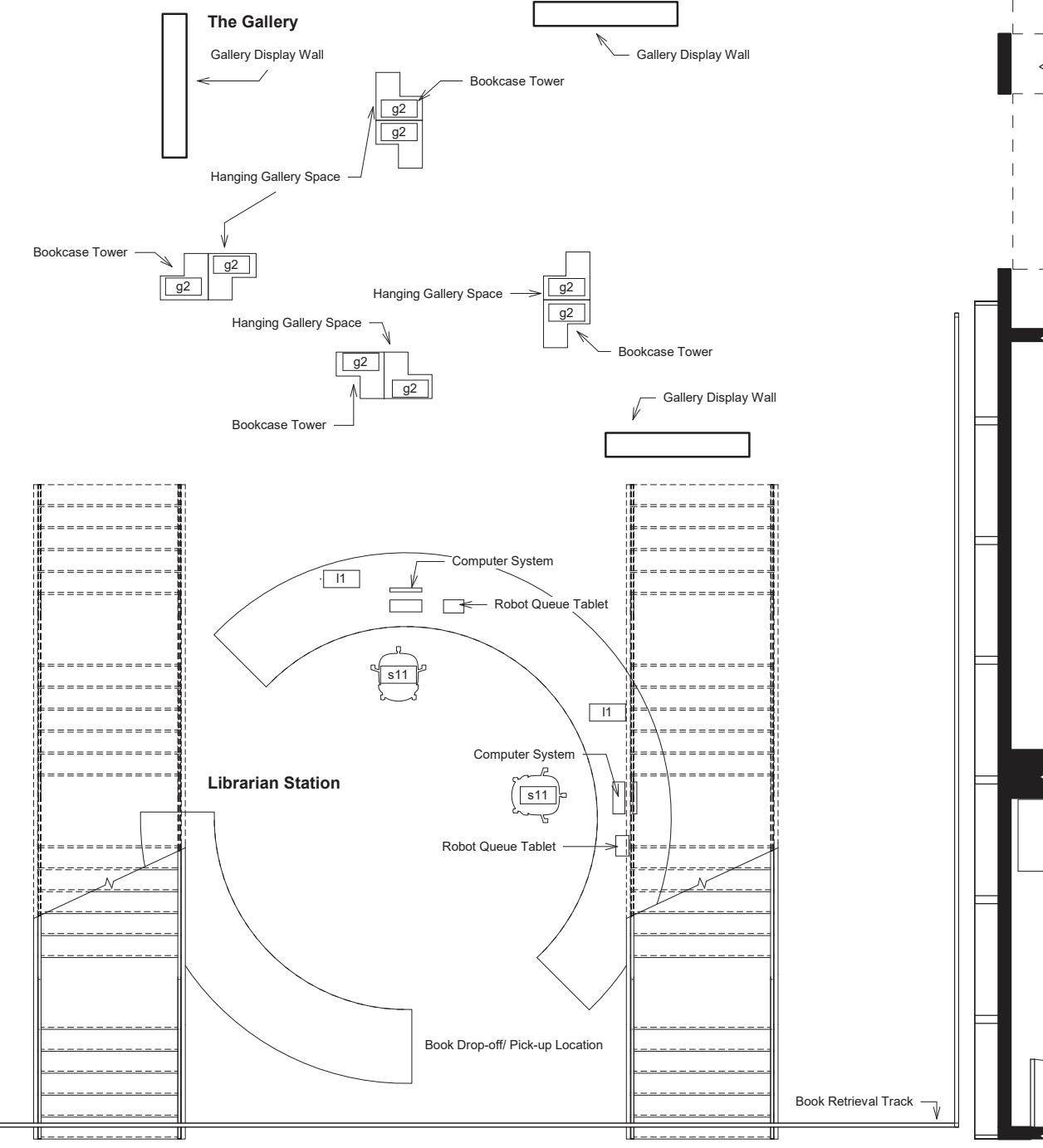
ENLARGED PLANS



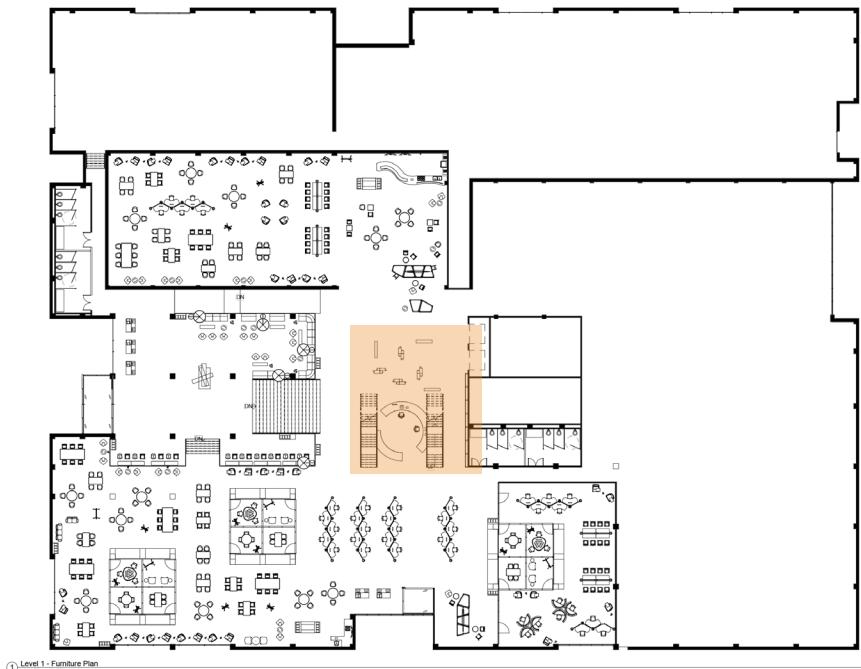
Level 1 - Enlarged Furniture Plan -
Workspace
1/4" = 1'-0"



ENLARGED PLANS



Level 1 - Enlarged Furniture Plan - Librarian Hub
 1/4" = 1'-0"



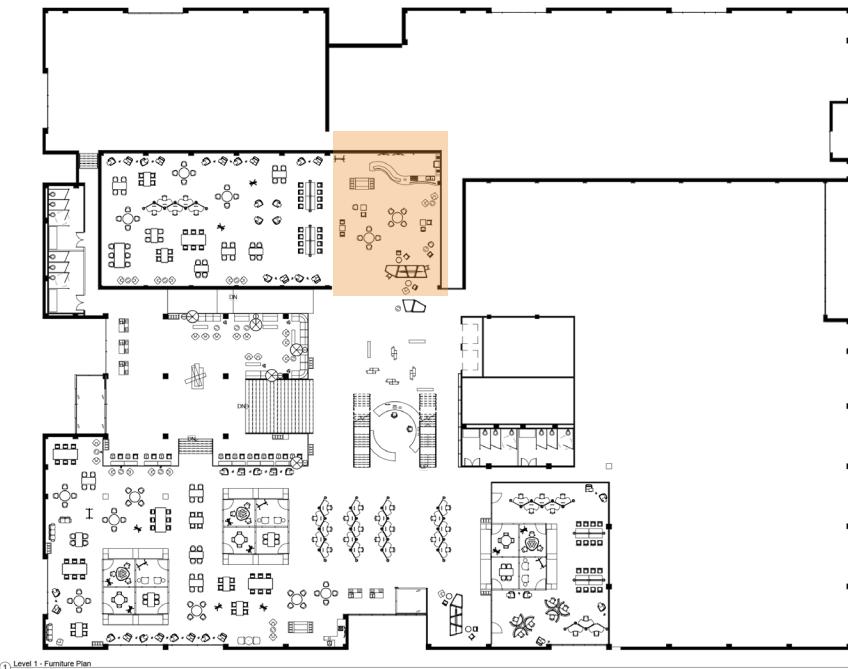
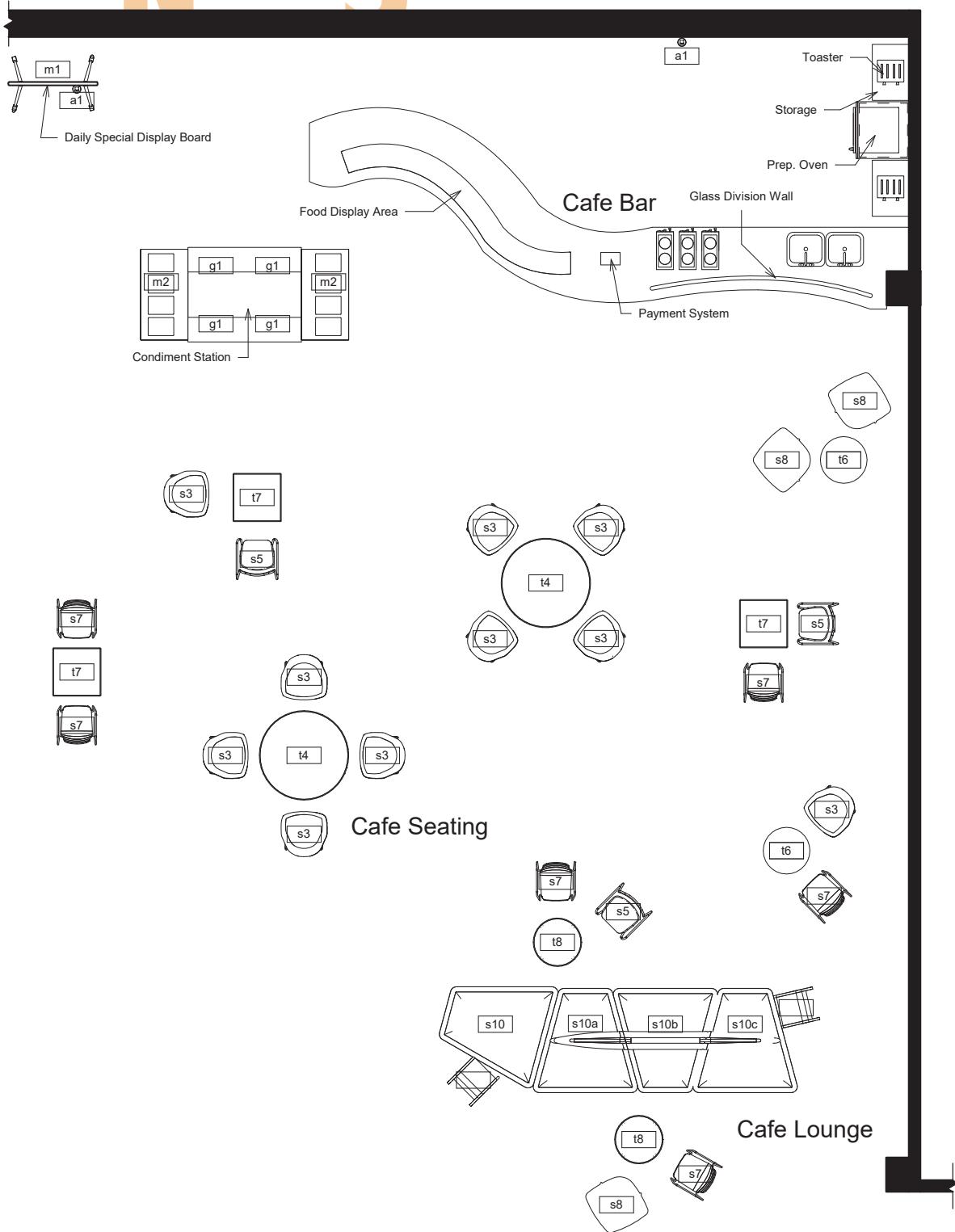
① Level 1 - Furniture Plan

1

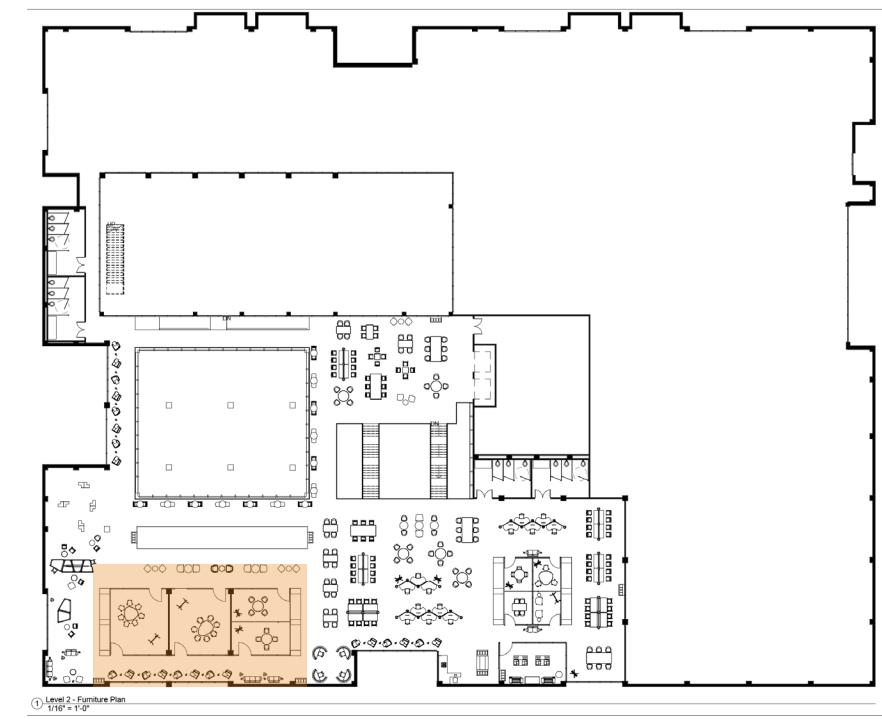
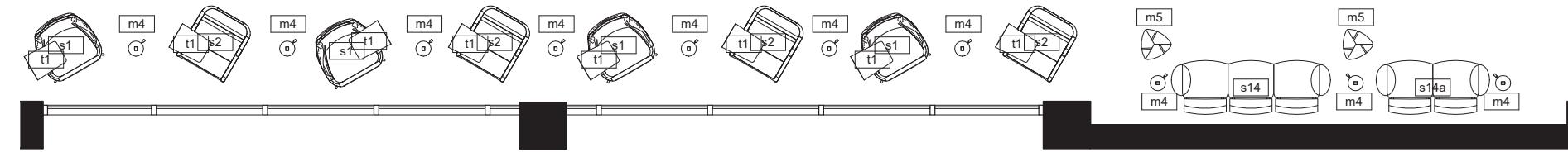
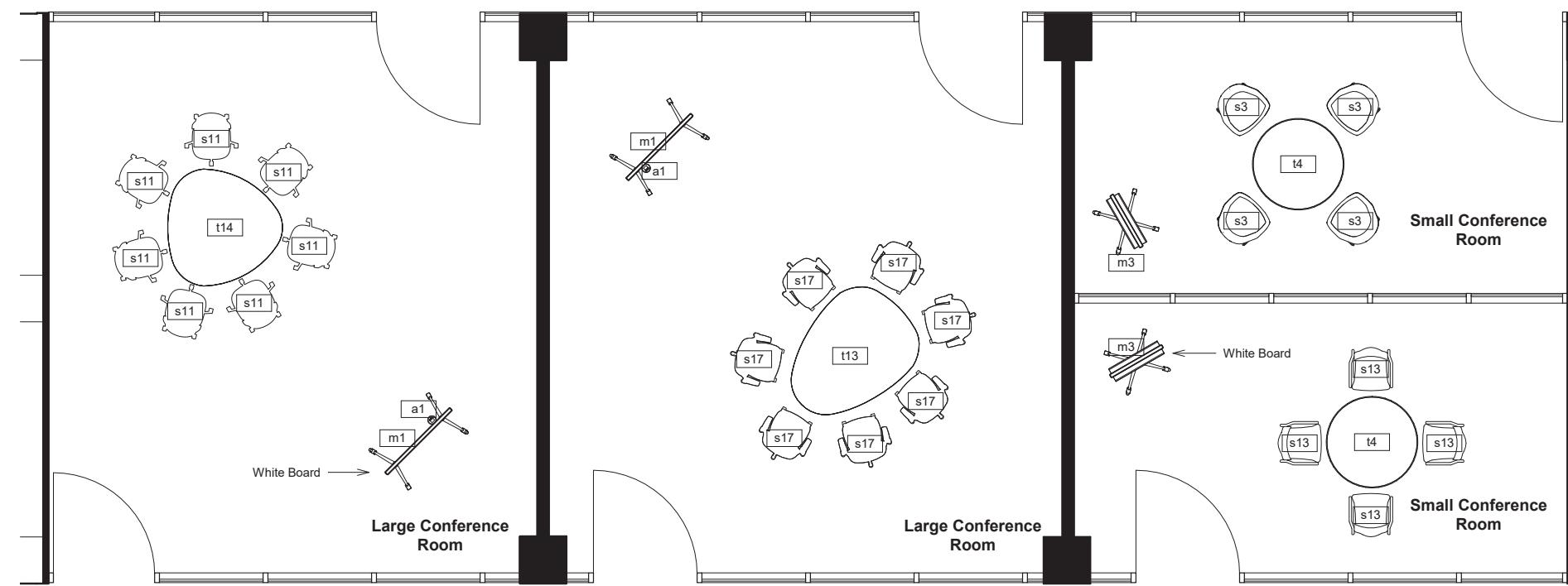
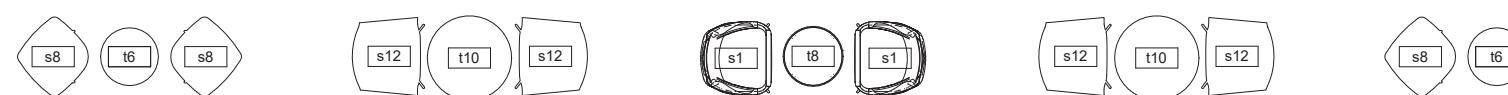
1/4"

= 1'-0"

ENLARGED PLANS



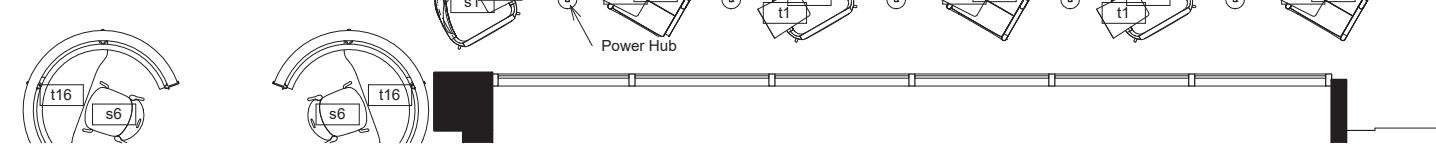
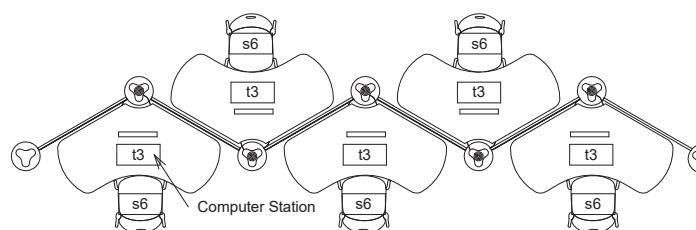
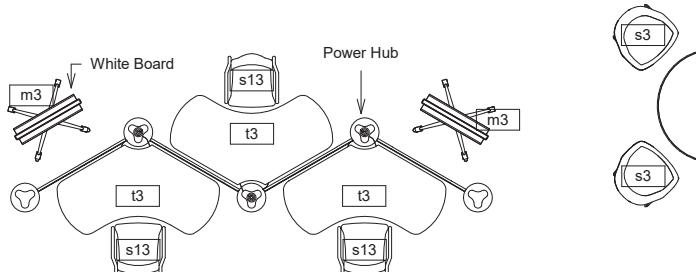
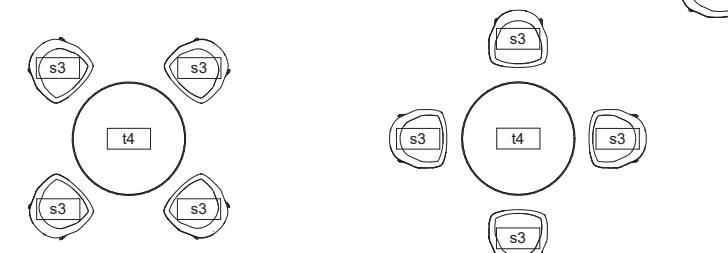
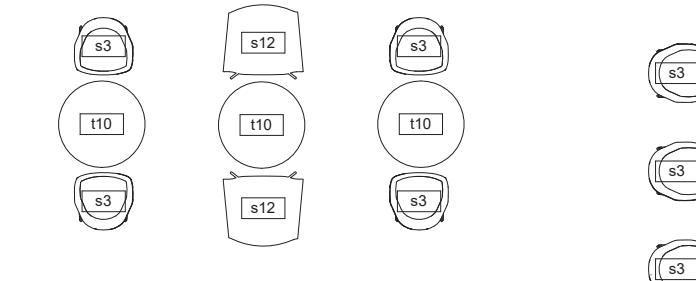
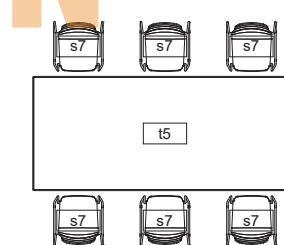
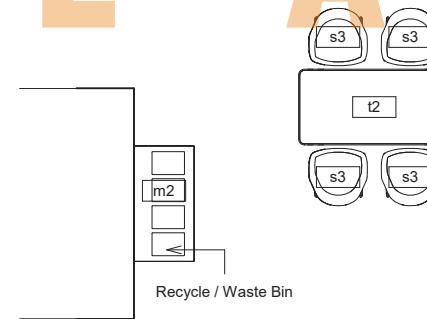
ENLARGED PLANS



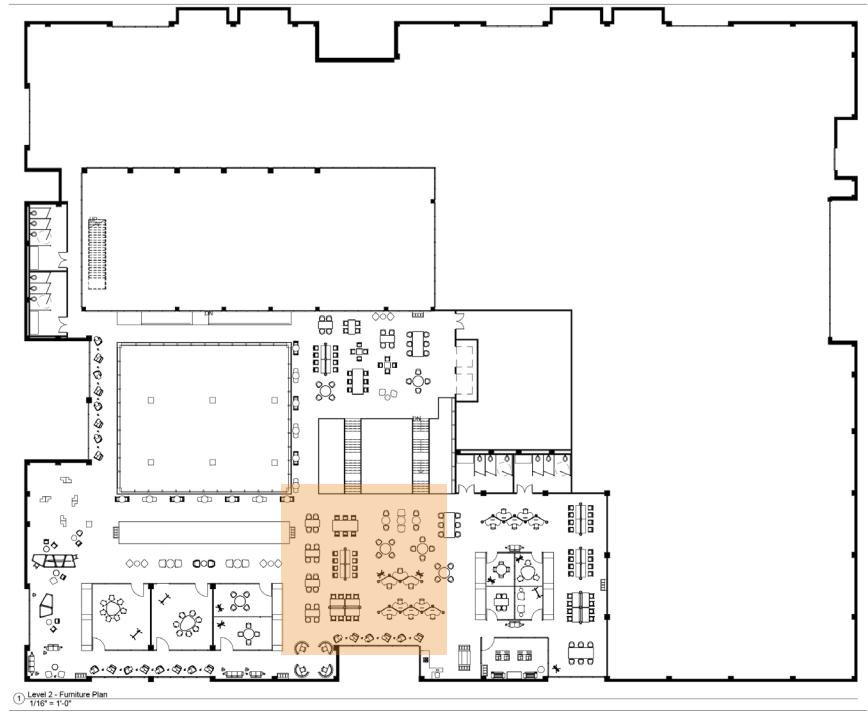
Level 2 - Enlarged Furniture Plan -
Conference Center
1 1/4" = 1'-0"

ENLARGED

PLAN



Level 2 - Enlarged Furniture Plan -
Collaboration Hub
1/4" = 1'-0"





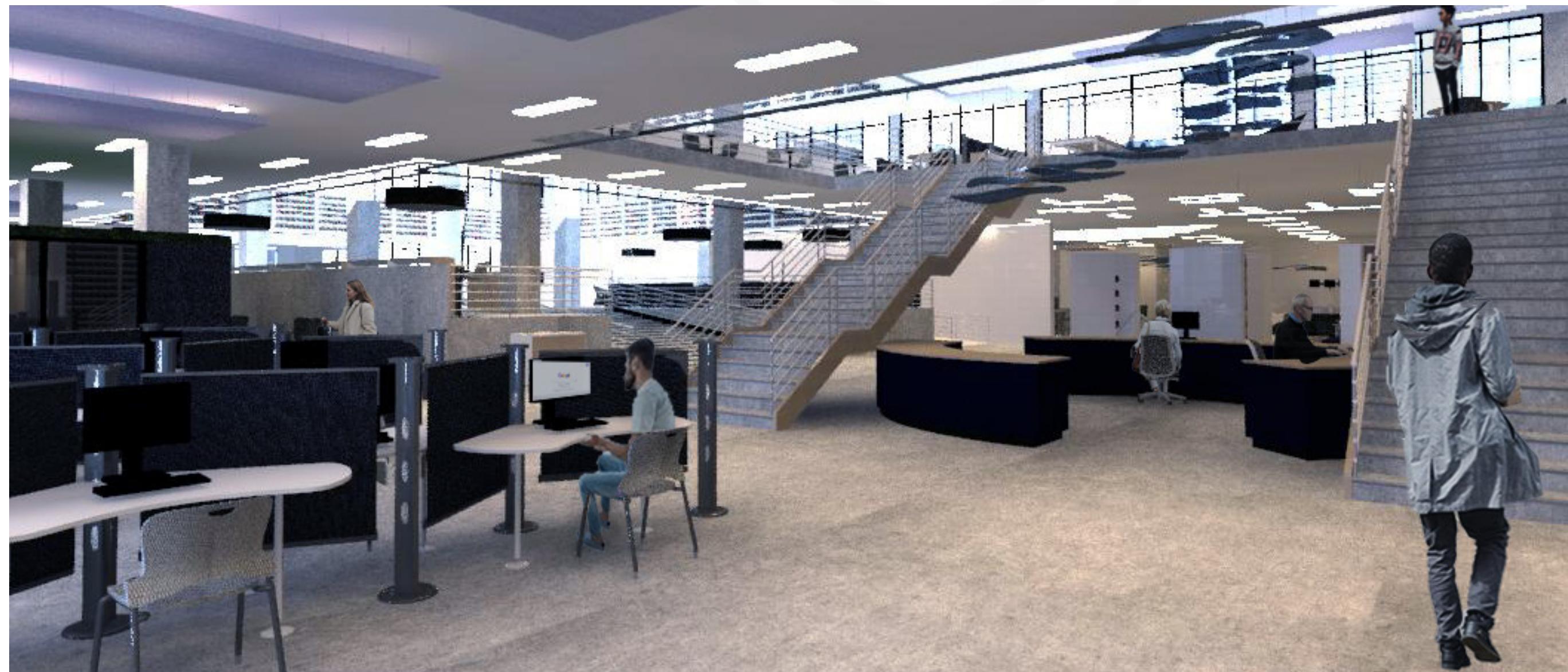
E X P E R I E N C E
T H E F U T U R E O F L E A R N I N G

DISCOVER

THE IMMENSE RESOURCES



D E F I N E
T H E W A Y Y O U W O R K



G
N



T
E



THE STUDENT OF TOMORROW

