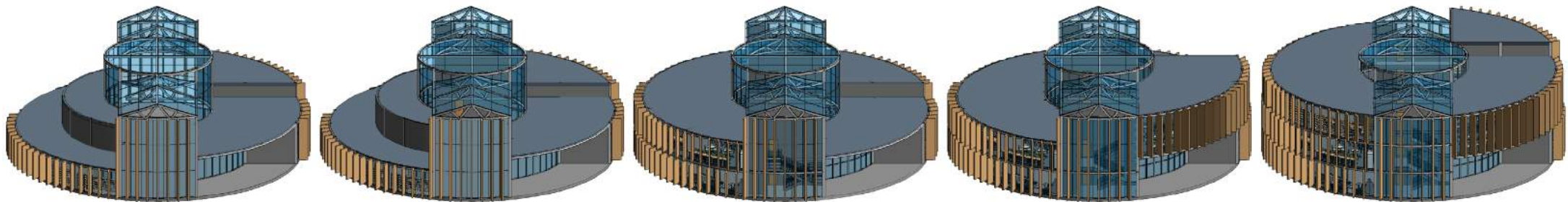


Developing Office Building

-grow with the company's scale

Qirui Liu



Developing Office Building

Qirui Liu

Thesis submitted to the faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of
Master of Architecture

Thesis Committee
David Dugas - Committee Chairman
Kay Edge - Committee Member
William Green - Committee Member

Blacksburg, Virginia
July 11, 2018

Acknowledgment

This book is dedicated to my family for their understanding and consistently support.

I would like to thank to my committee members, Professor David Dugas, Bill Green and Kay Edge for their guidance and encouragement what make me enjoying every moment here.

Also thanks to my friends here, you make this whole.

Abstract

This thesis project is a developing office building, which is located in north part of Washington DC.

The company who use this building is a start-up company, which has only 5 founders at the beginning. With more projects coming in, they hire more and more people. Finally, this company grows with 50 people.

As the architecture, it grows with the employee increasing.

Contents

Introduction	7
Site Analysis	20
Technical Drawing	26
Spacial Expression	45

Introduction

This thesis project is a developing office building, designed for a start-up company. One character of the company is that its main projects serve China, but there are also few local projects. The main goal of this architecture is to provide a convenient and changeable place for this start-up company.

There are a few disciplines during design process:

1. The building has a round shape and blocks add on when it grows.
2. In the middle of the building, it is a fixed courtyard which covered by skylight.
3. The blocks are in modules and the room's function can be changed as needed.
4. The roof at the early stage of this architecture can be used as floors in the future.



Main Office
On the urban edge of
Washington DC

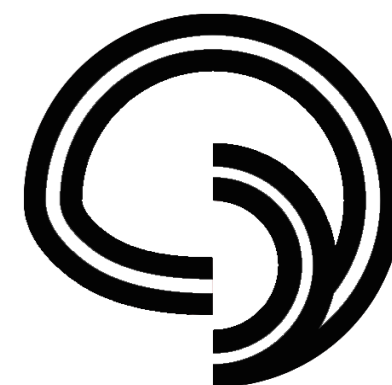
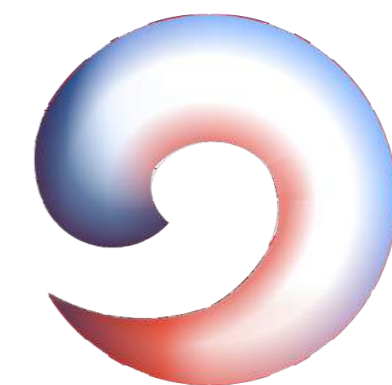
Side Projects
Serve some local office



A To Z Design
From America to Zhongguo (China)



Main Projects
Provide service overseas to China



Logo Design
Inspiration for architecture design

Stage 1
5 Principles



Stage 2
5 Principles
5 Employees



Stage 3
5 Principles
10 Employees



Stage 4
5 Principles
20 Employees



Stage 5
5 Principles
40 Employees



Developing Mode

meeting room

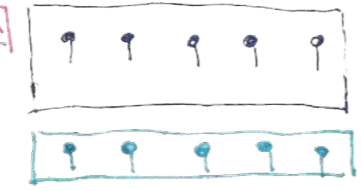
founders room

group office

5 small meeting room



small meeting room



small meeting room



large meeting room



small meeting room



large meeting room



small meeting room



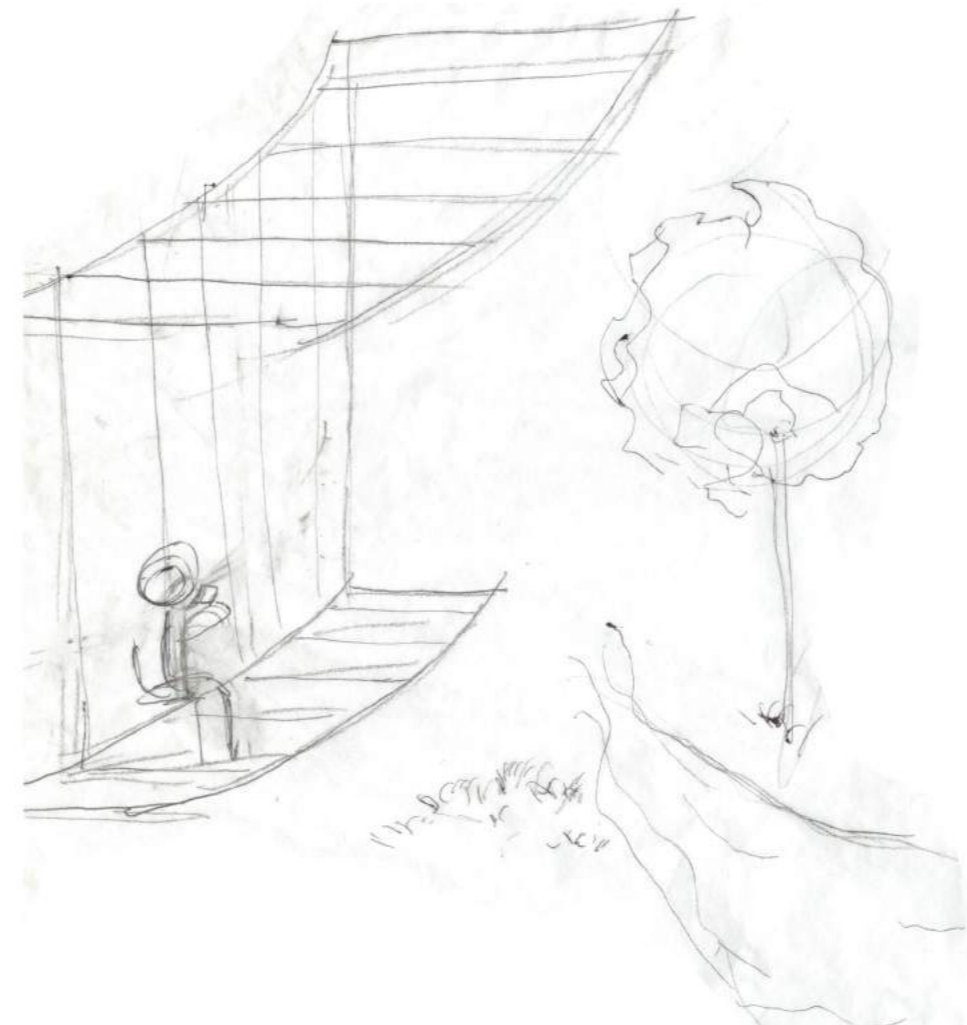
large meeting room



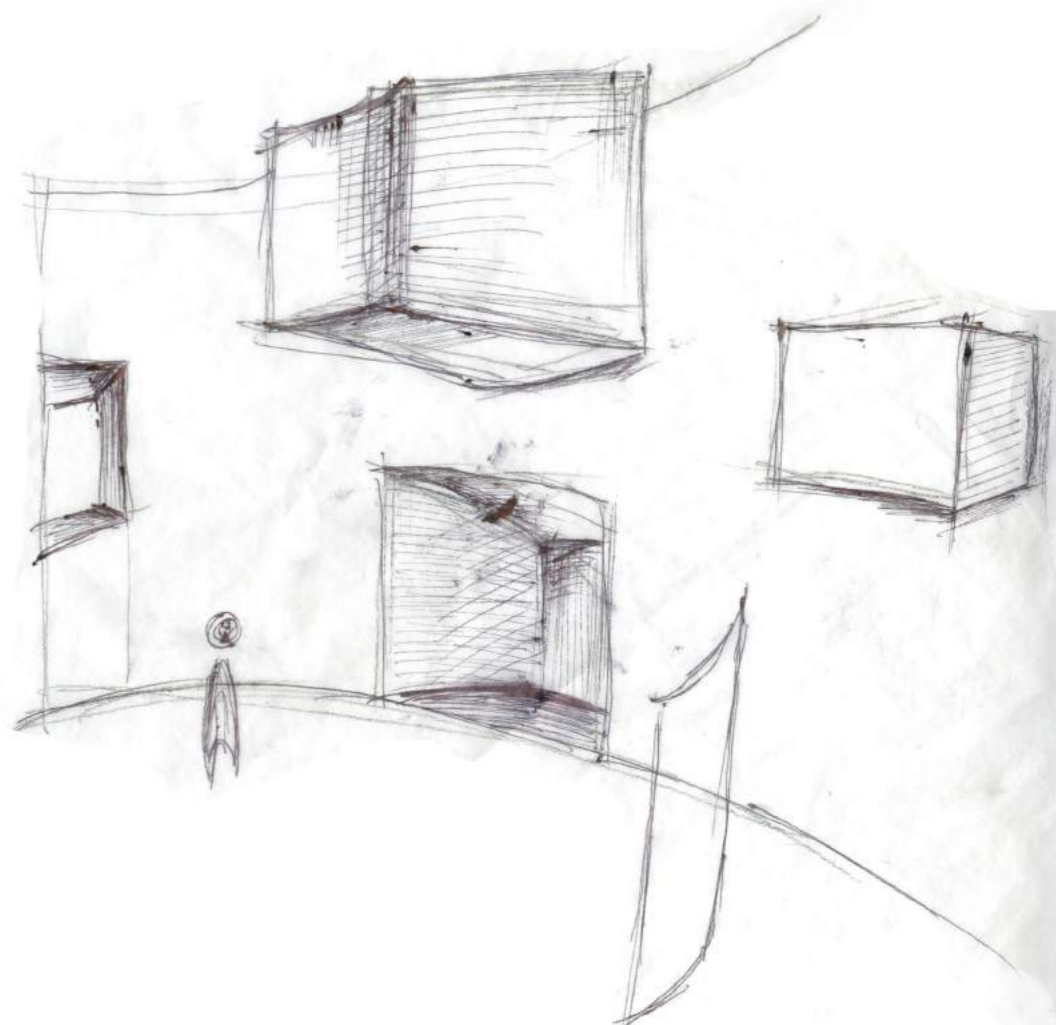
large meeting room



Space Need



Exterior

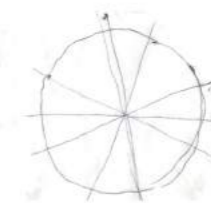
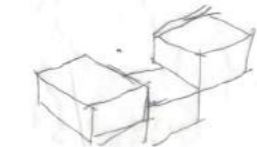
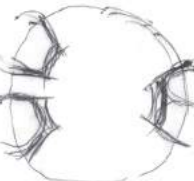
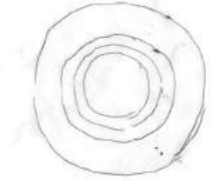
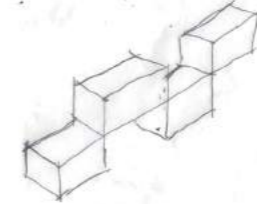
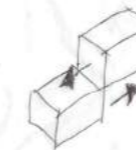
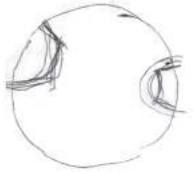
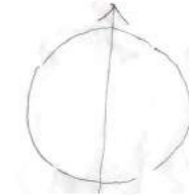
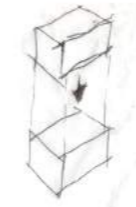


Interior



Half House
Alejandro Aravena
Chile

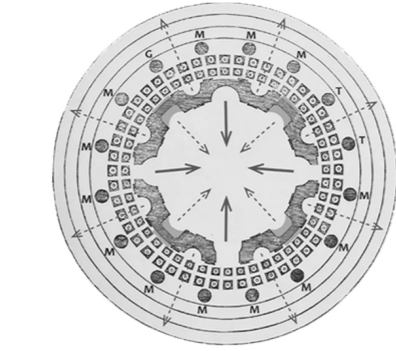
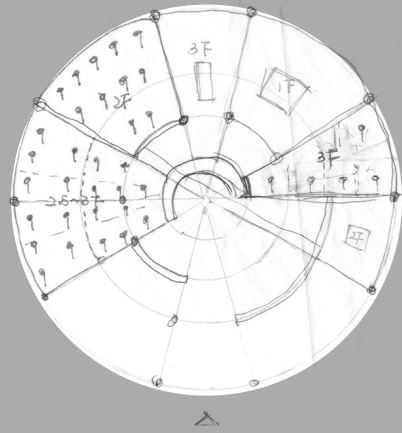
This housing design conceives of as an on-going project. The incremental building inspires incremental housing expert.



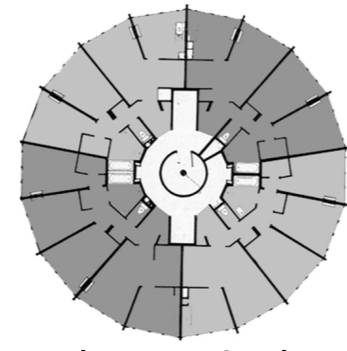
GTU Library
Louis I. Kahn
Berkeley

Because the building fund was not enough to cover the cost, the GTU Board of Trustees decided to build the library in two Phases.





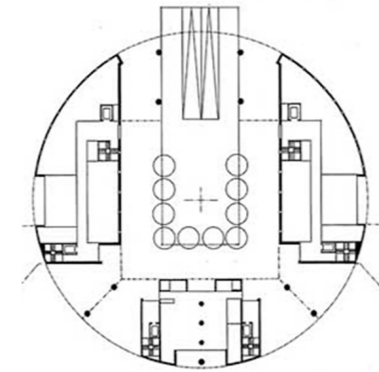
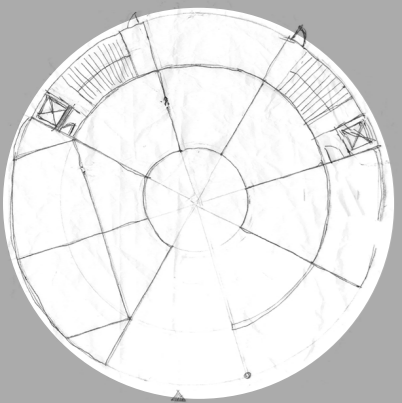
Tempietto of San Pietro



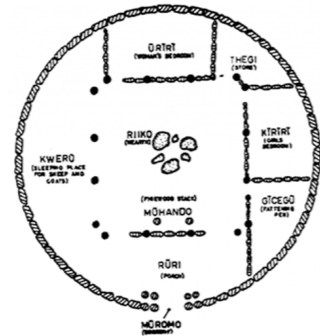
choux créteil



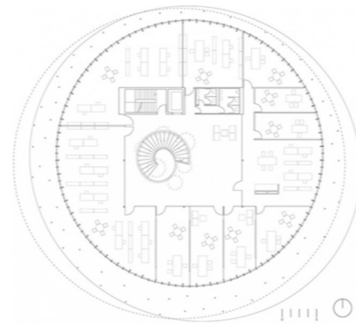
Bayannaer government service examination and approval center



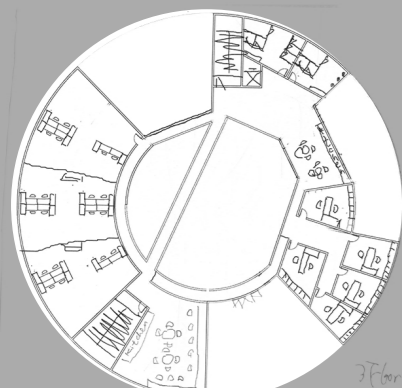
la fortezza office and housi



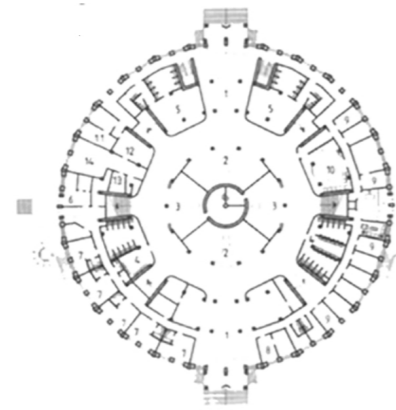
kikuyu house plan



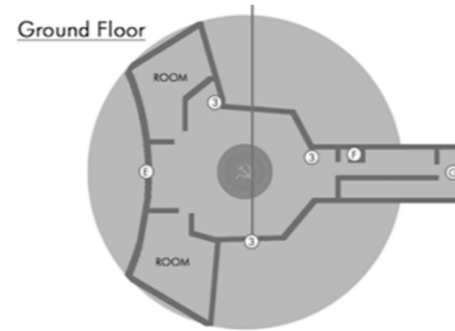
International Motorcycling Federation's main headquarter



Proposed Diagrams



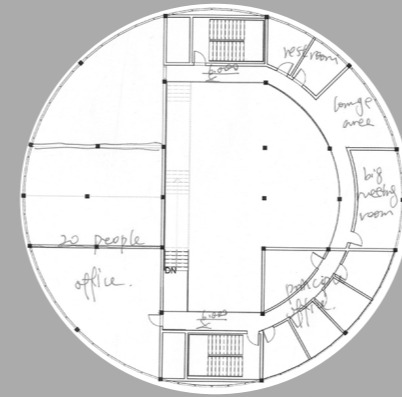
(2) D Tselmaa, Mongolian National Wrestling Palace, plan, Ulan Bataar, 1992-98.



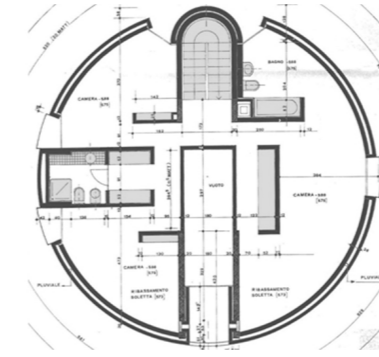
Buzludzha Monument



Doojin Hwang Architects



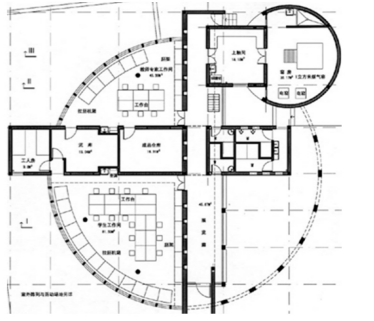
Proposed Diagrams



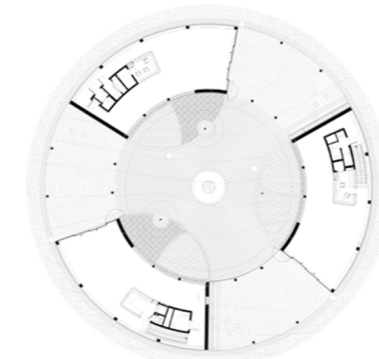
Mario Botta, Casa rotonda, Stabio, Ticino, Switzerland



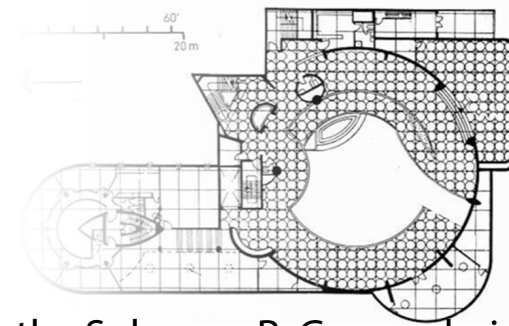
Corporate Office Building for Hispasat Technology Center



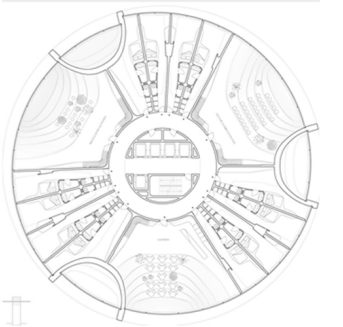
Nanjing teaching university Pottery studio



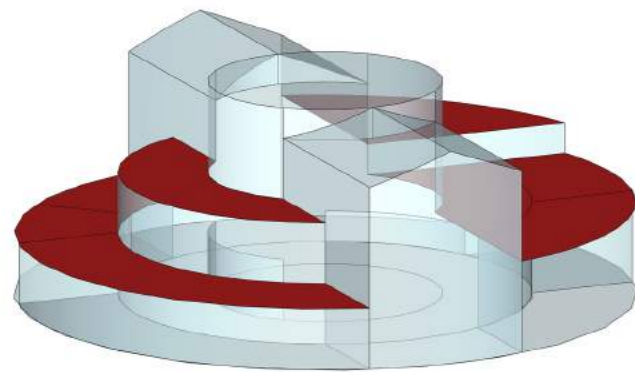
budapest Gomba floor



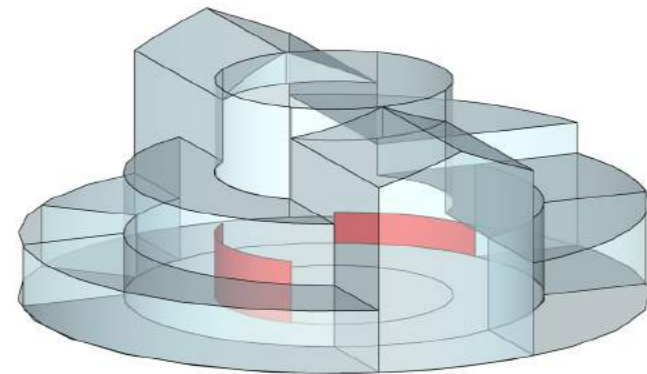
the Solomon R. Guggenheim



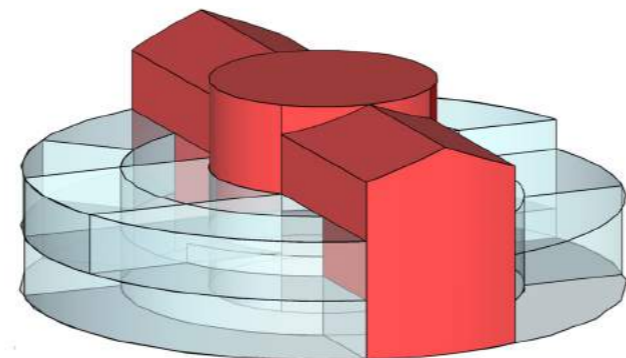
gran mediterraneo tower



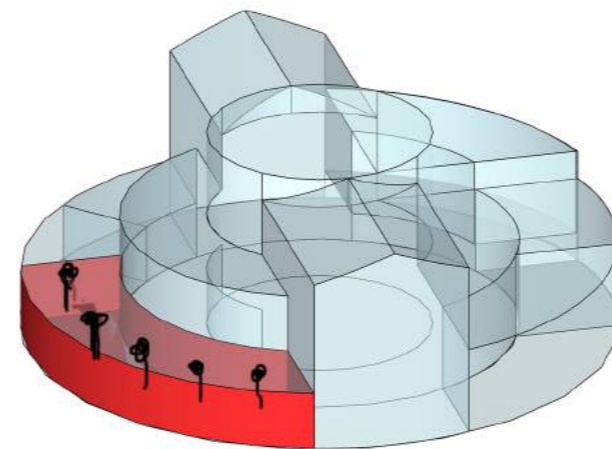
Design the roof as future floor



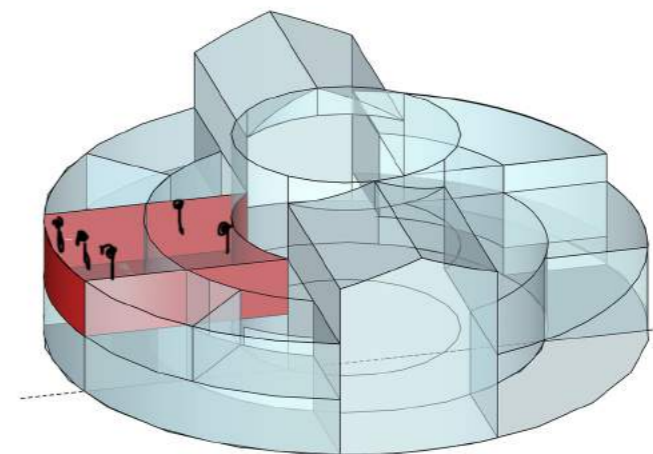
Build walls which create circulation at beginning
And become bearing wall in the future



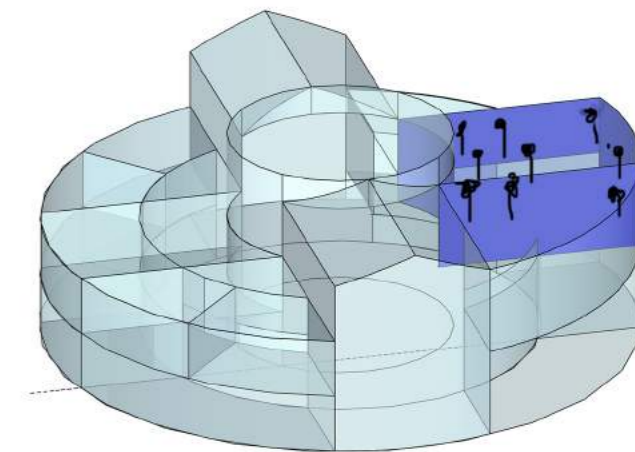
Arrange courtyard and stair cases in center
Put serving room nearby



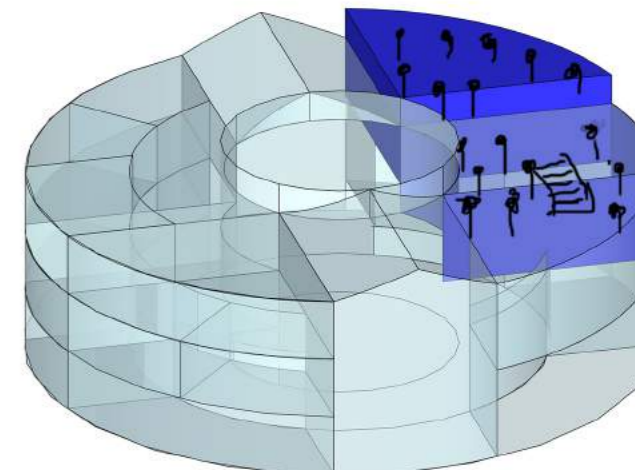
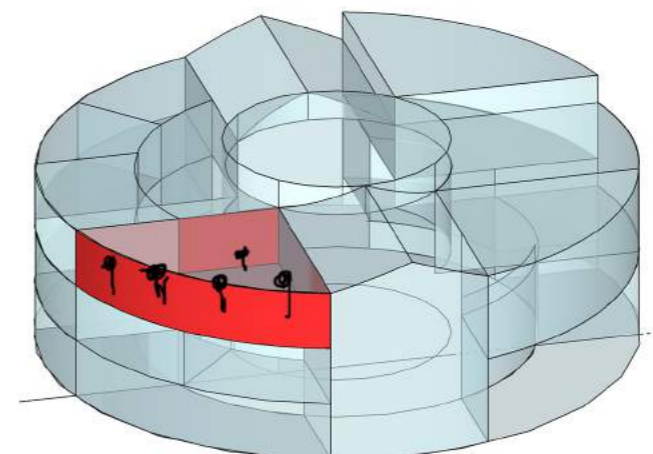
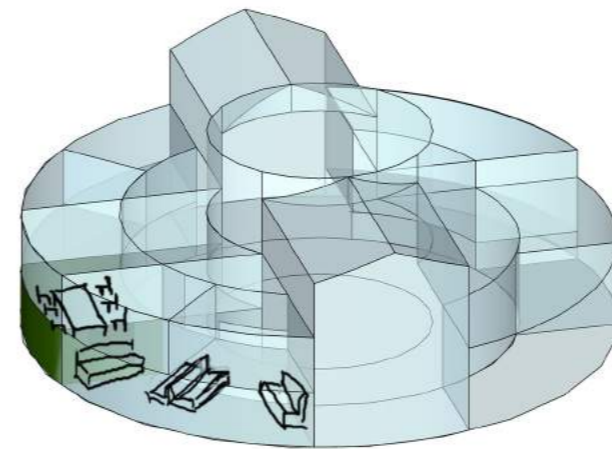
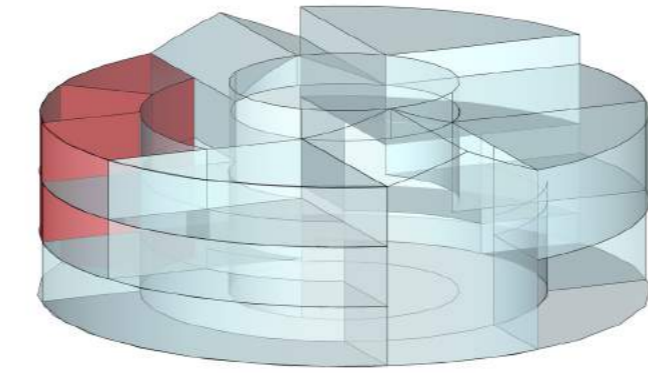
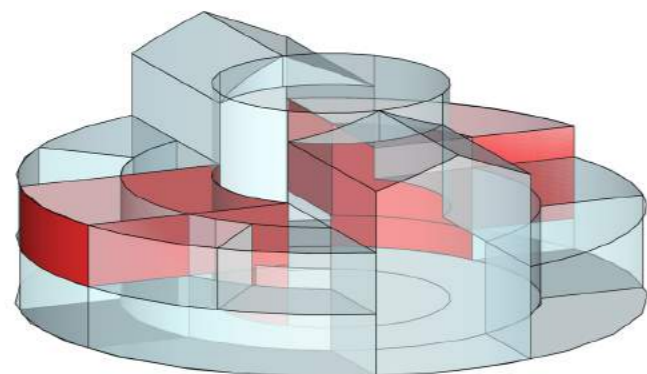
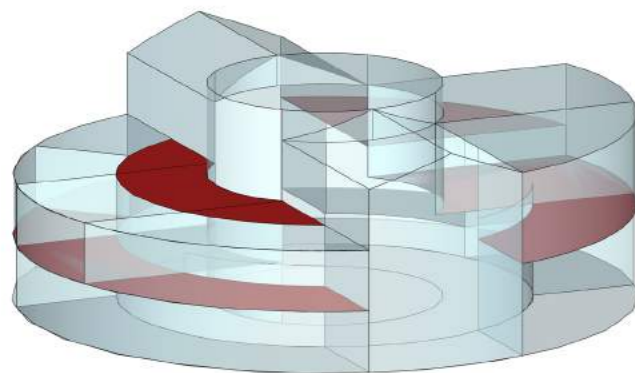
Room function can be changed as need

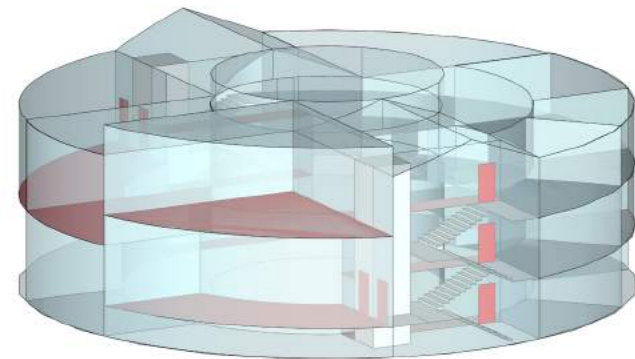


Keep Principle offices on the top to
show hierarchy

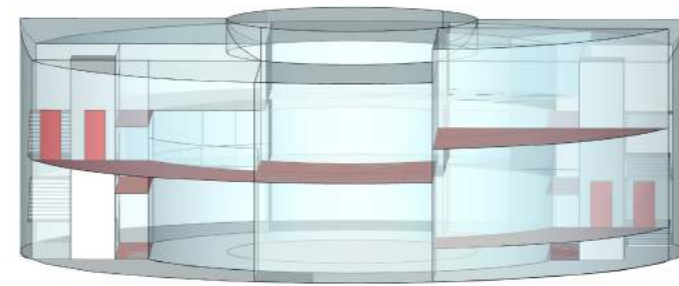


Connect general offices together
with 5' height difference to make larger space

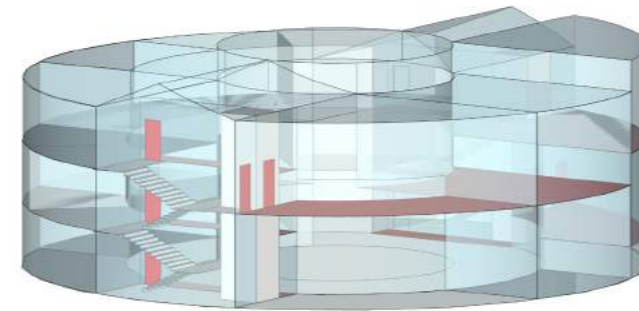




North Elevator
Connect 1 1.5 2 3 Floor



East space
Floor goes 5 feet higher and gets connected



South Elevator
Connect 1 2 2.5 3 Floor



Site Analysis

The site is located in the suburban area of Washington DC, which next to the Rock Creek Park. Surrounding buildings mostly are traditional residential architectures, with sloping roof and brick walls.

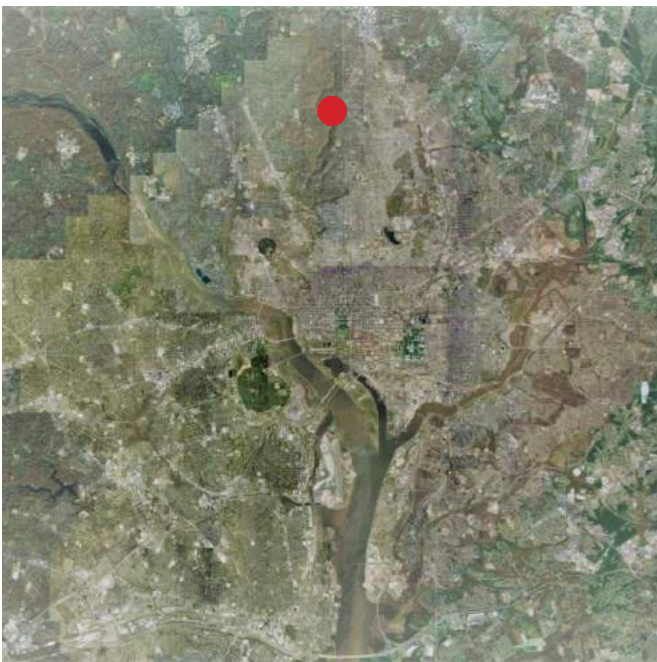
This site is only 3 blocks away from the main street. Therefore, the site can provide an urban context which means clients and employees can easily get into. But people do not need to afford too high price for the land. What's more, people can enjoy a pretty view while working.



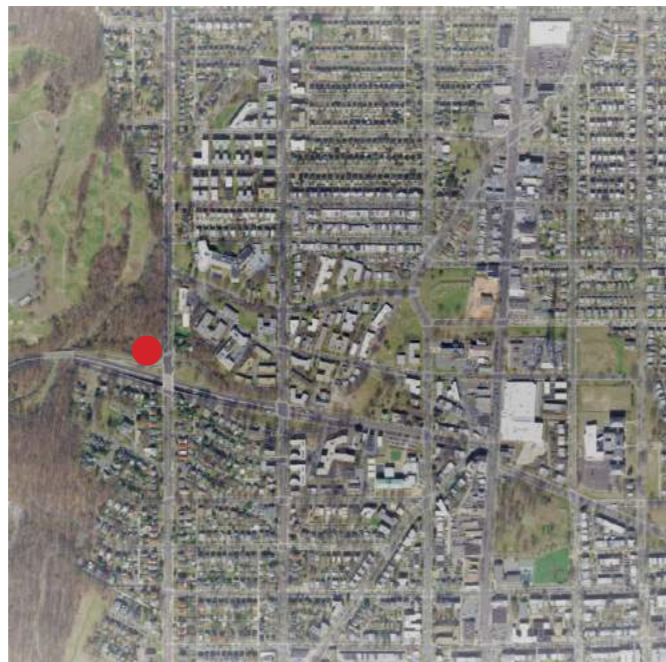
View across the street on South



View across the street on East



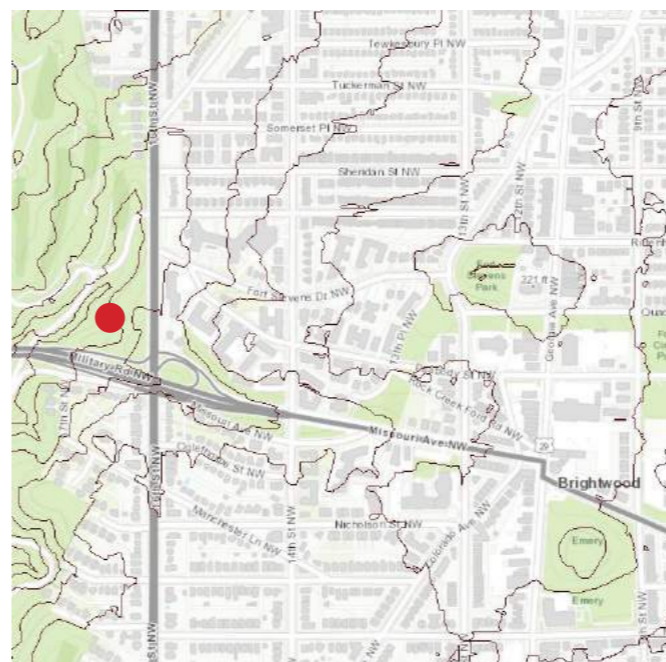
Located in south of DC, suburb area



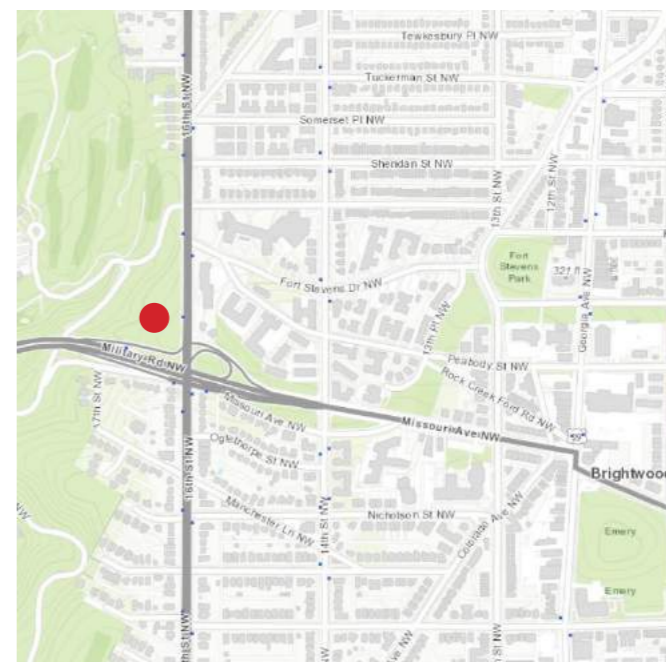
3 Blocks away from main street



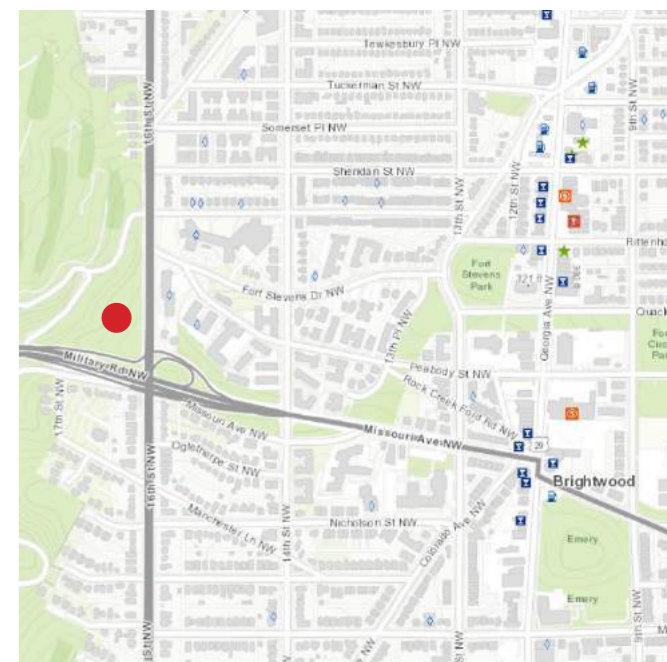
Back to Rock Creek Park, facing toward the city



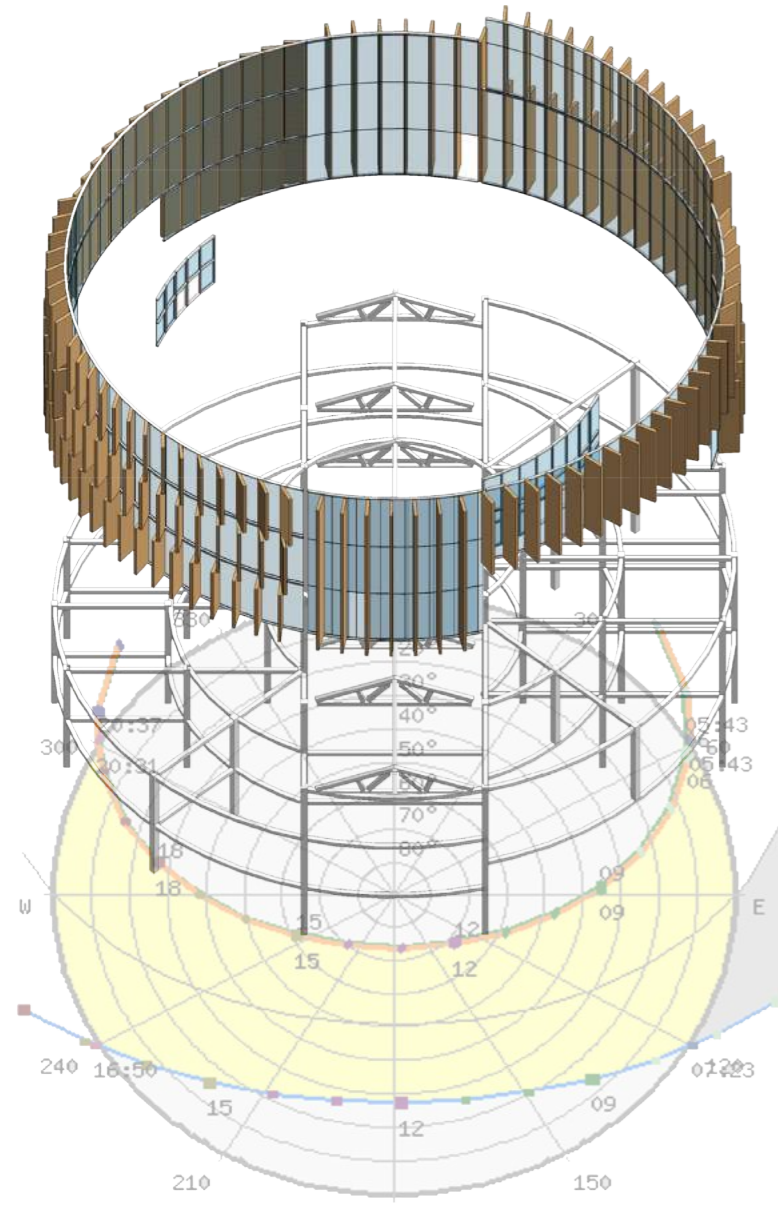
Topography



Bus Stops



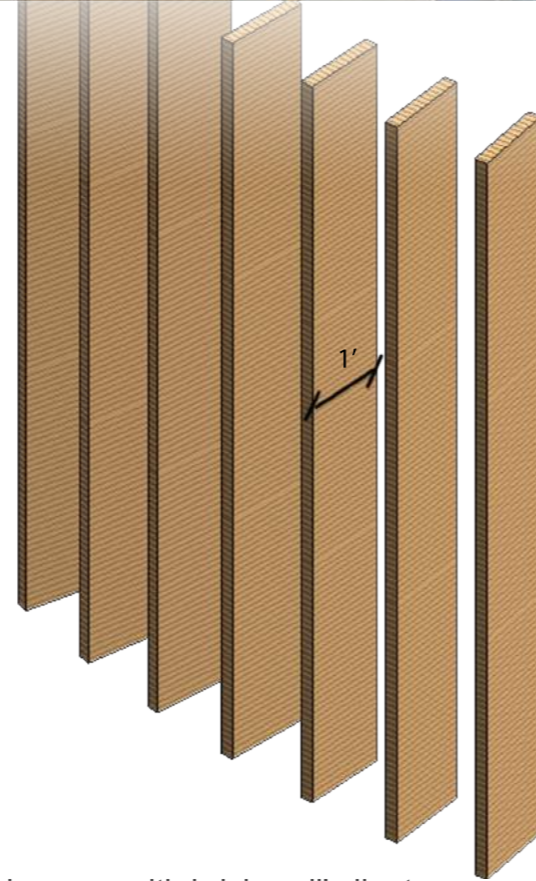
Public Building



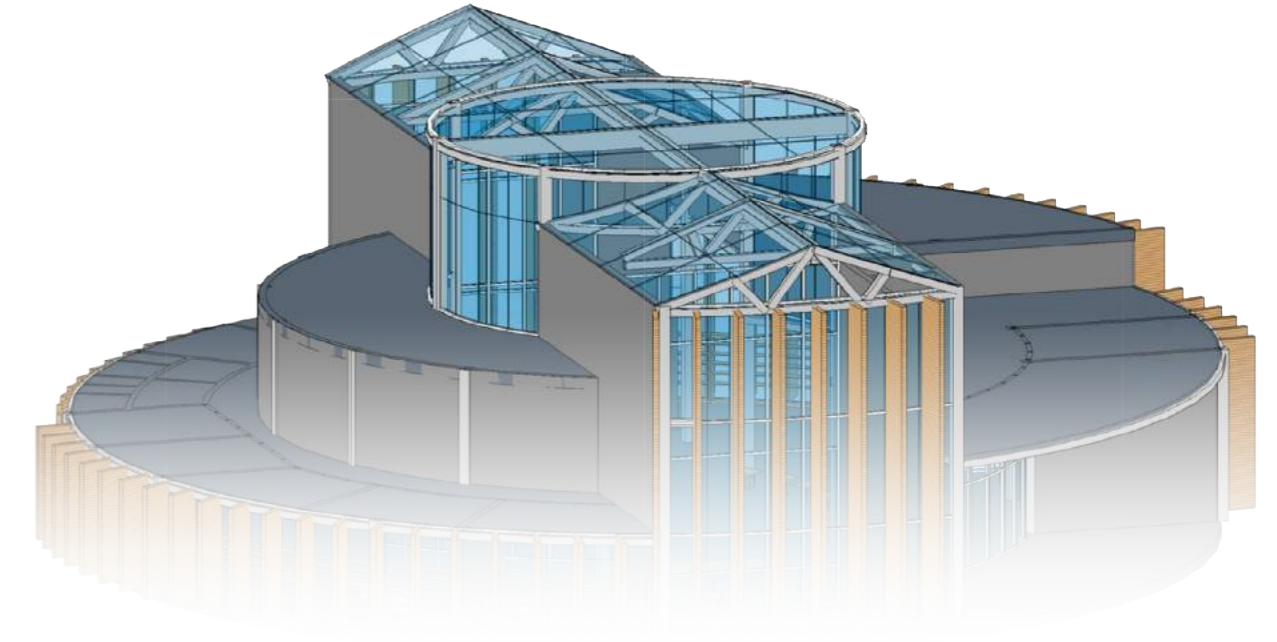
Louvers angle follows the sun orientation



Wood panel's width is same with brick wall's joint



Louvers' material are similar with the park's woods



Sloping roofs from old and new buildings are alike

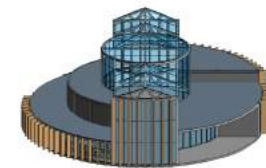
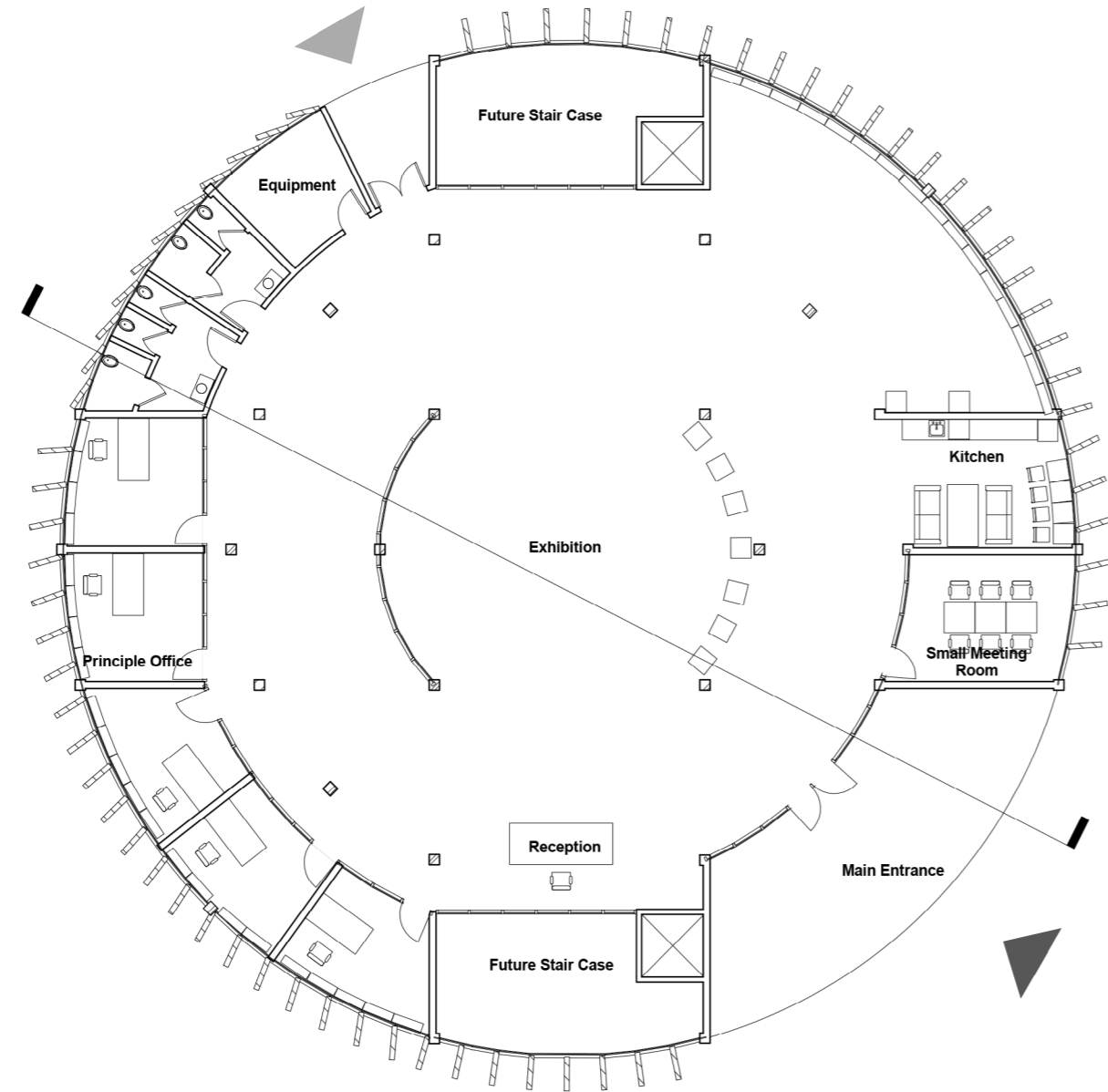
Technical Drawings

This part shows the technical drawings of the final scheme.
with plans, sections and elevations in every phases.
There are also the site plan and one wall section to show the detail.

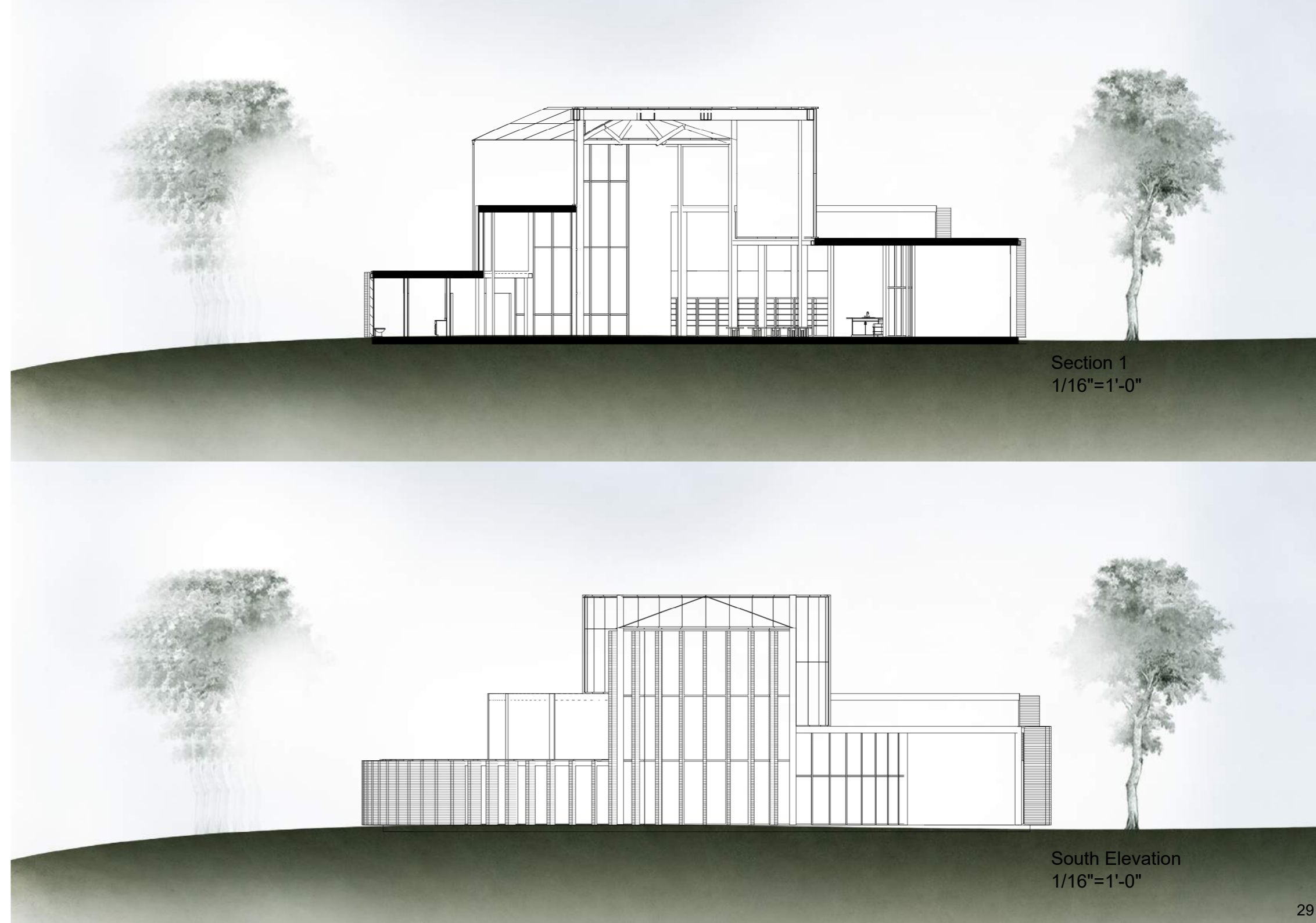


Stage 1

5 Founders



First Floor Plan
1/16"=1'-0"



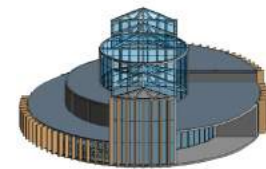
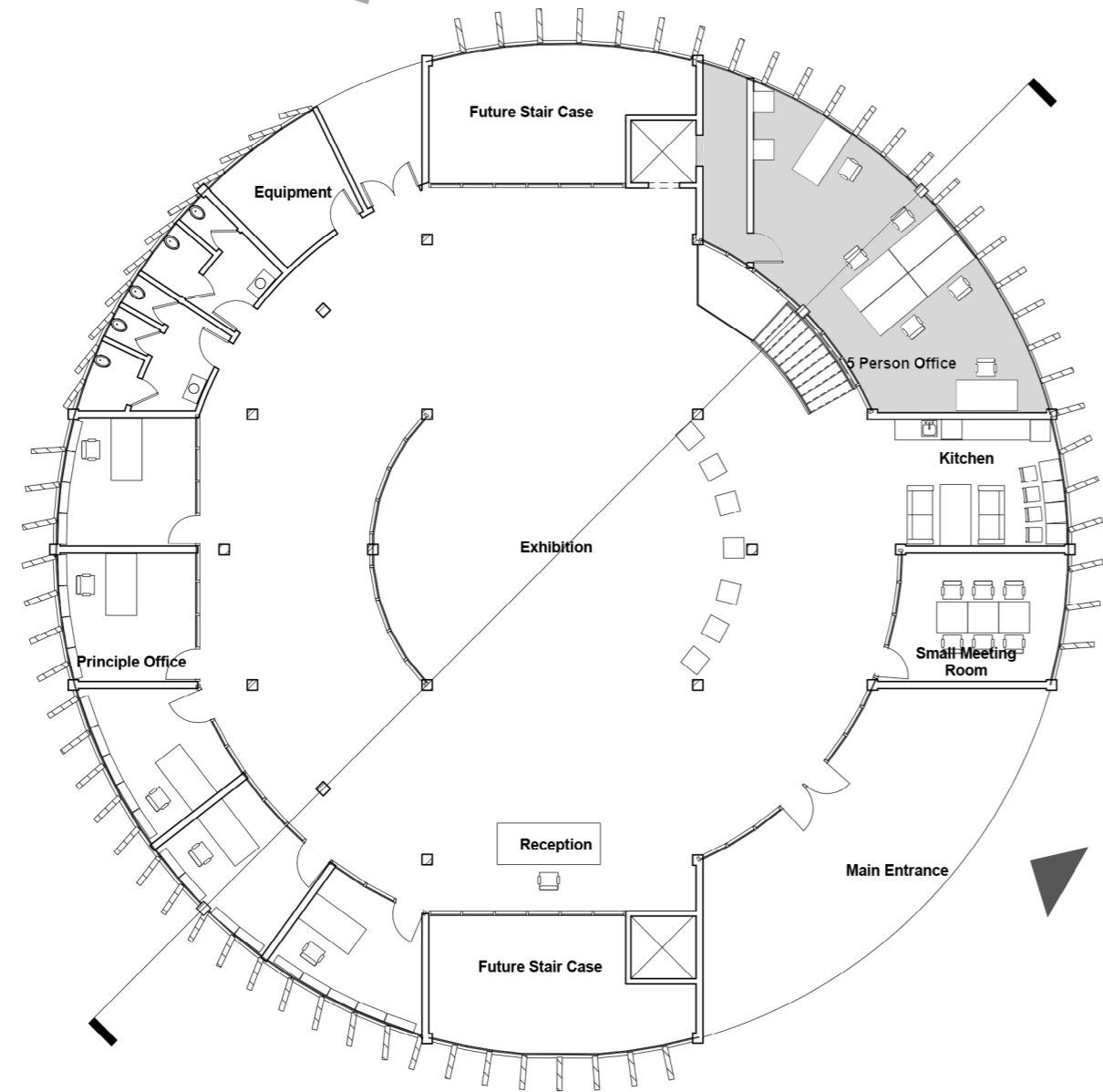
Section 1
1/16"=1'-0"

South Elevation
1/16"=1'-0"

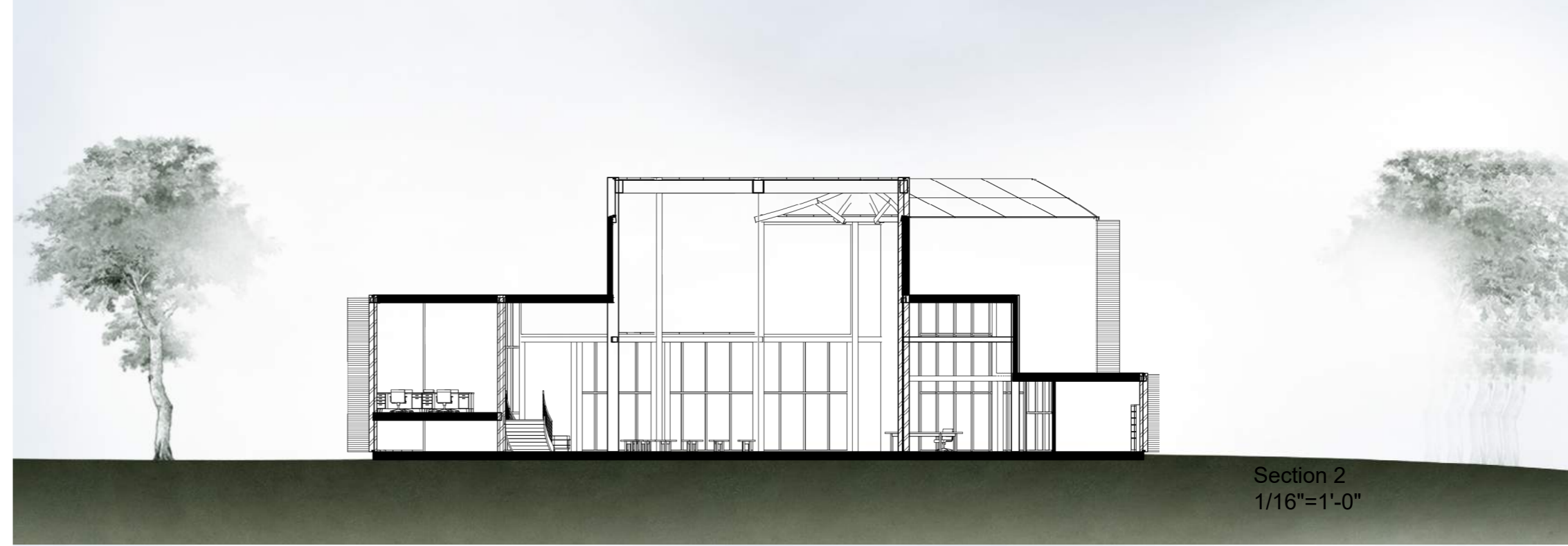
Stage 2

5 Founders 

5 Employees 



First Floor Plan
1/16"=1'-0"



Section 2
1/16"=1'-0"



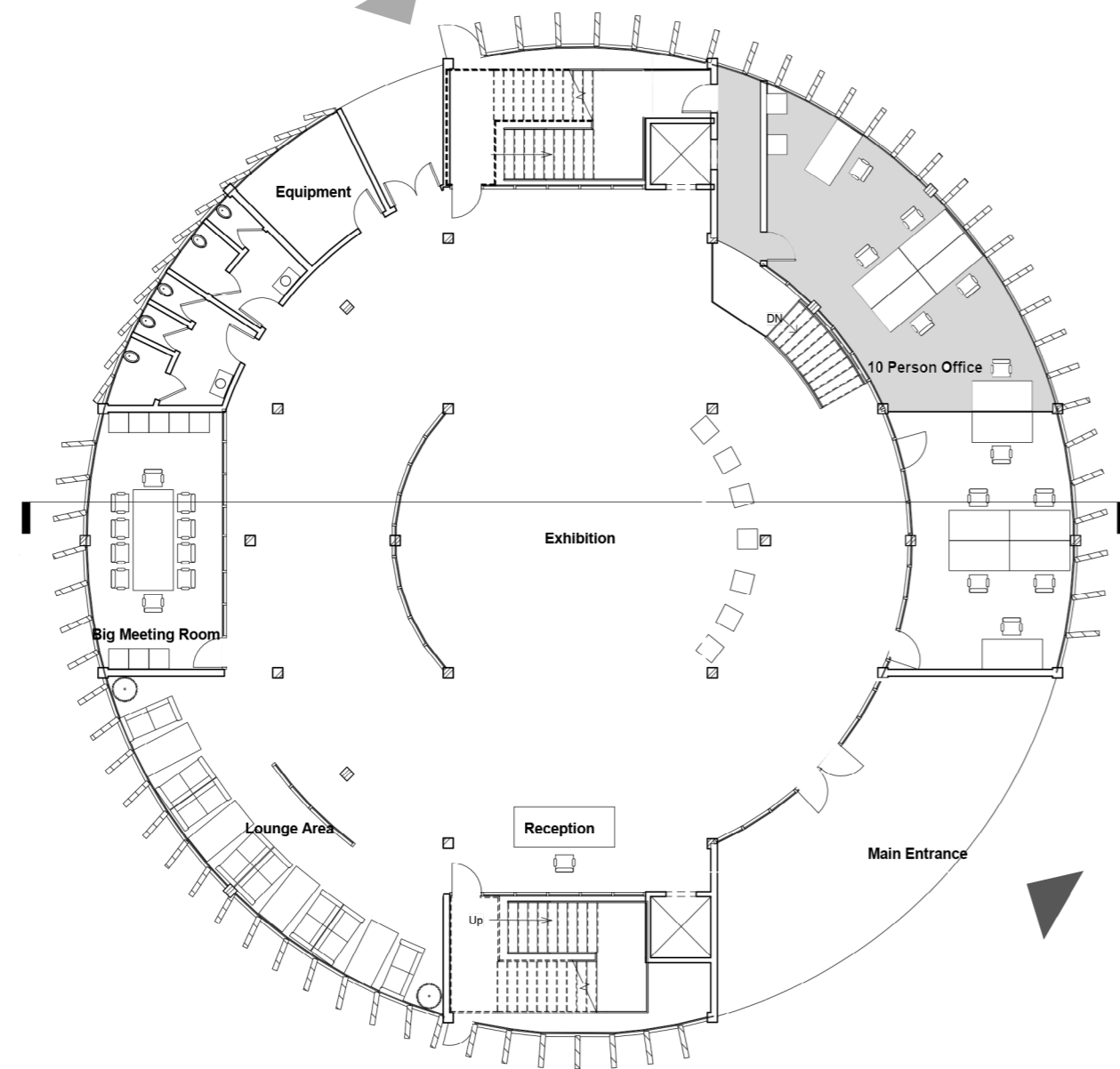
North Elevation
1/16"=1'-0"

Stage 3

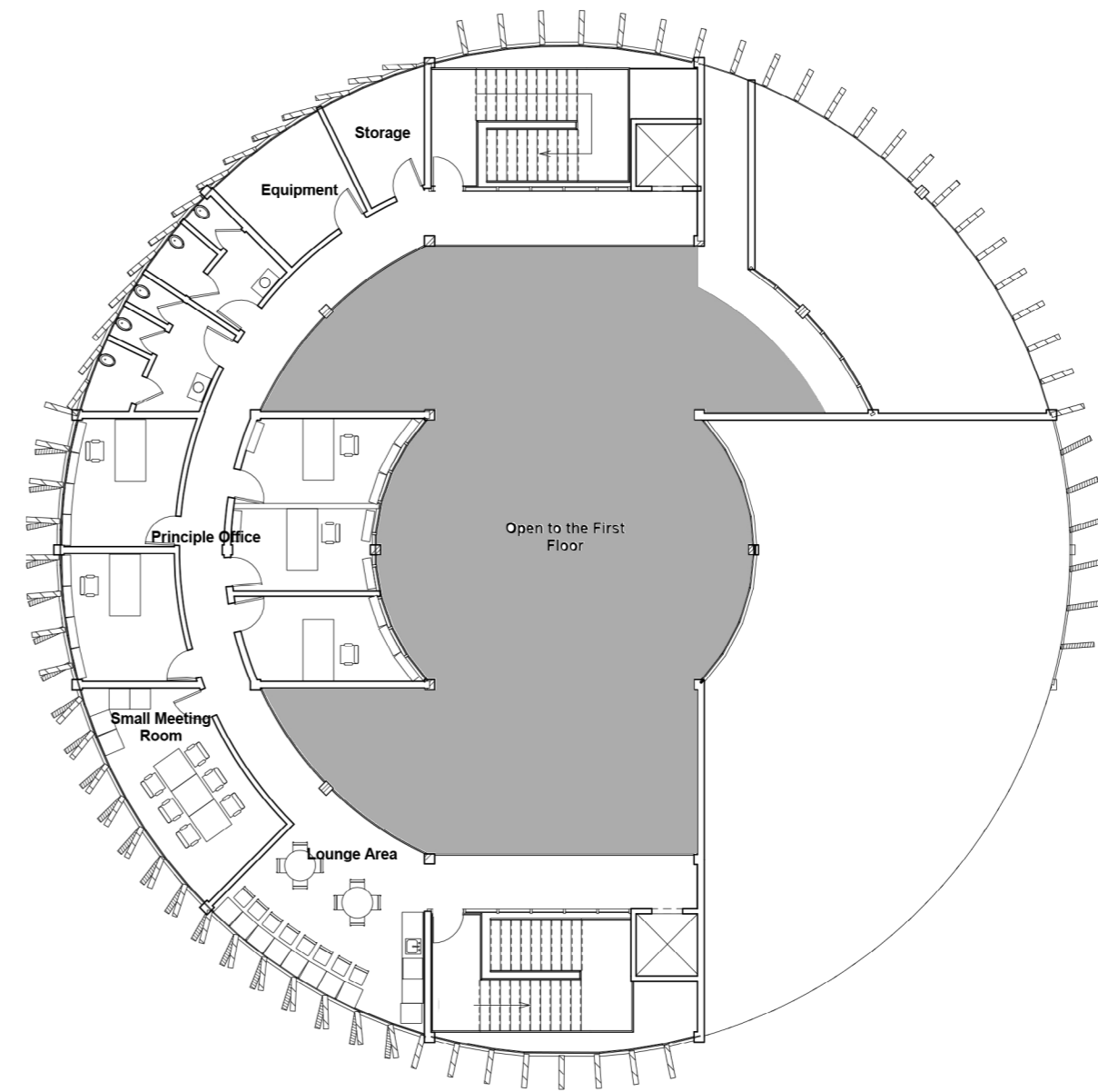
5 Founders



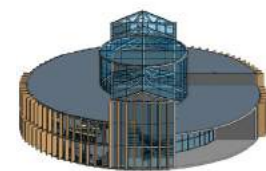
10 Employees





First Floor Plan
1/16"=1'-0"



Second Floor Plan
1/16"=1'-0"



Stage 3

5 Founders 
10 Employees 



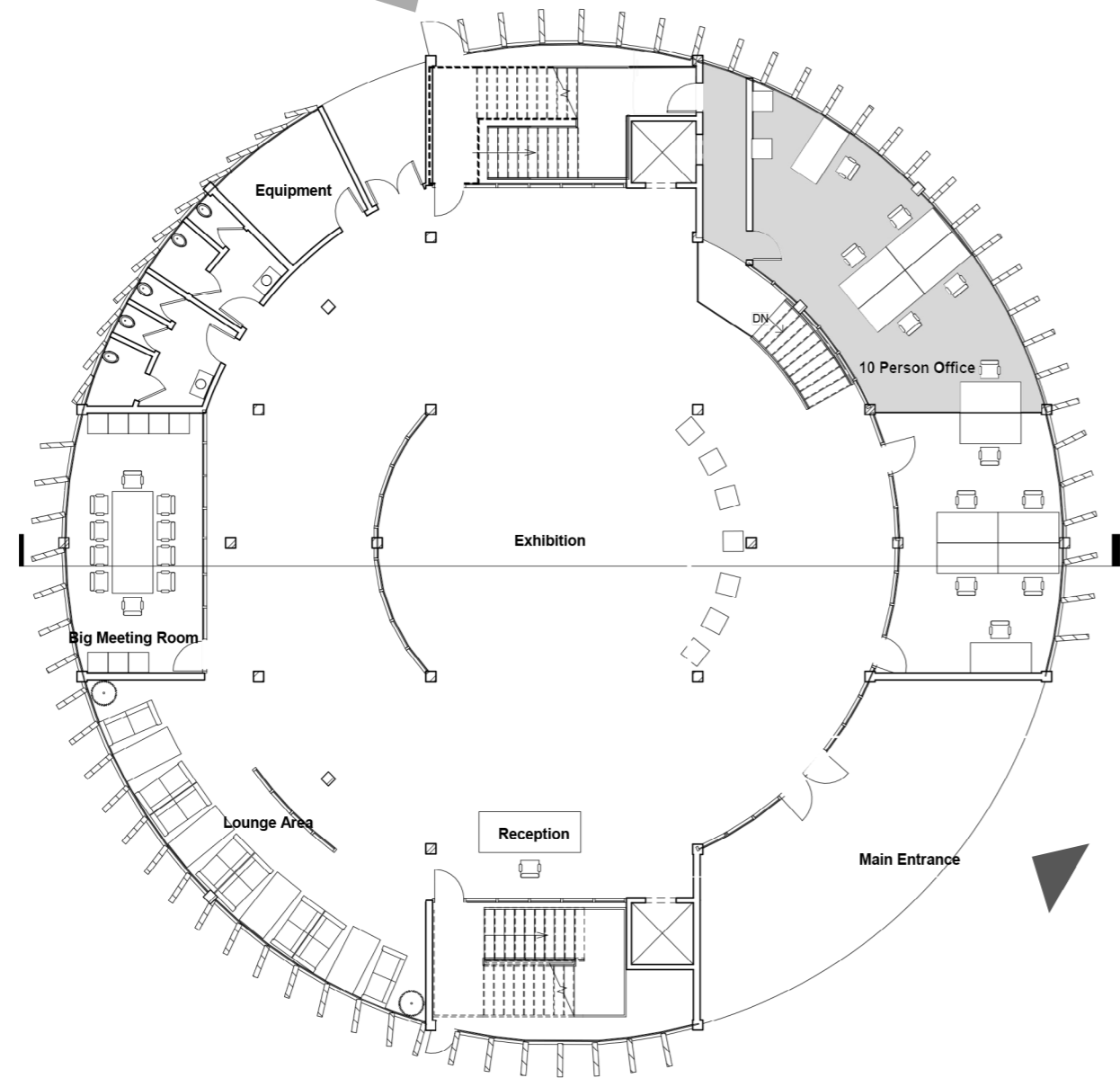
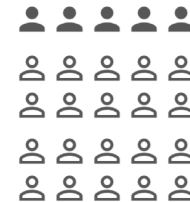
Section 3
1/16"=1'-0"

East Elevation
1/16"=1'-0"

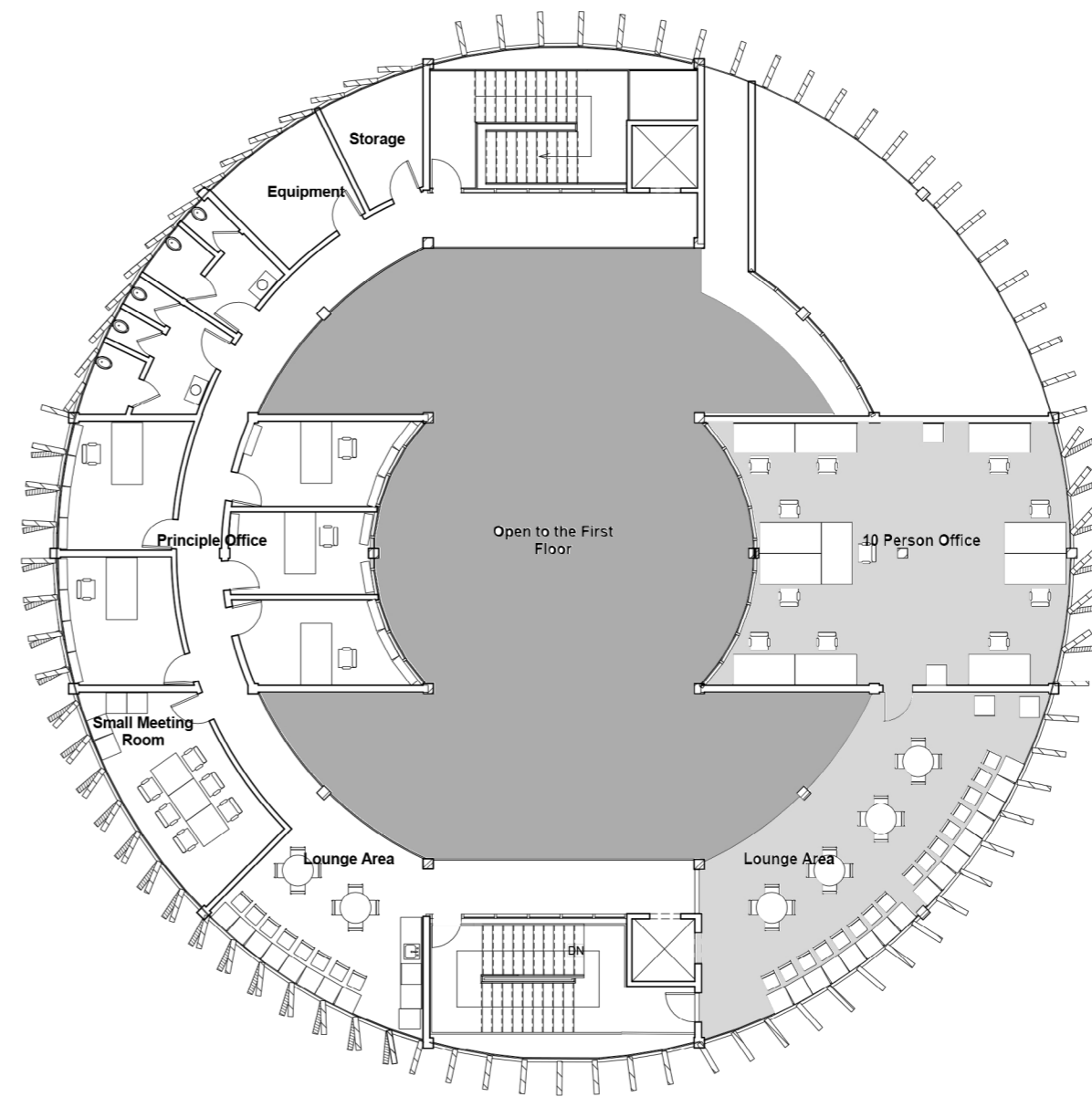
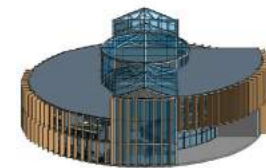
Stage 4

5 Founders

20 Employees



First Floor Plan
1/16"=1'-0"



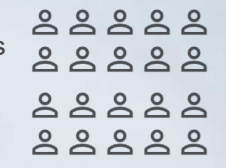
Second Floor Plan
1/16"=1'-0"

Stage 4

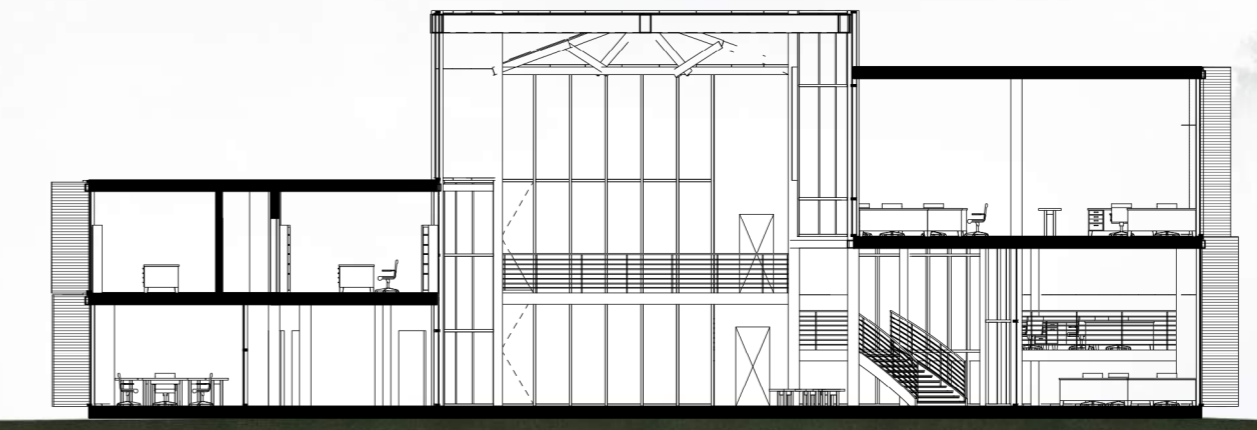
5 Founders



20 Employees



West Elevation
1/16"=1'-0"



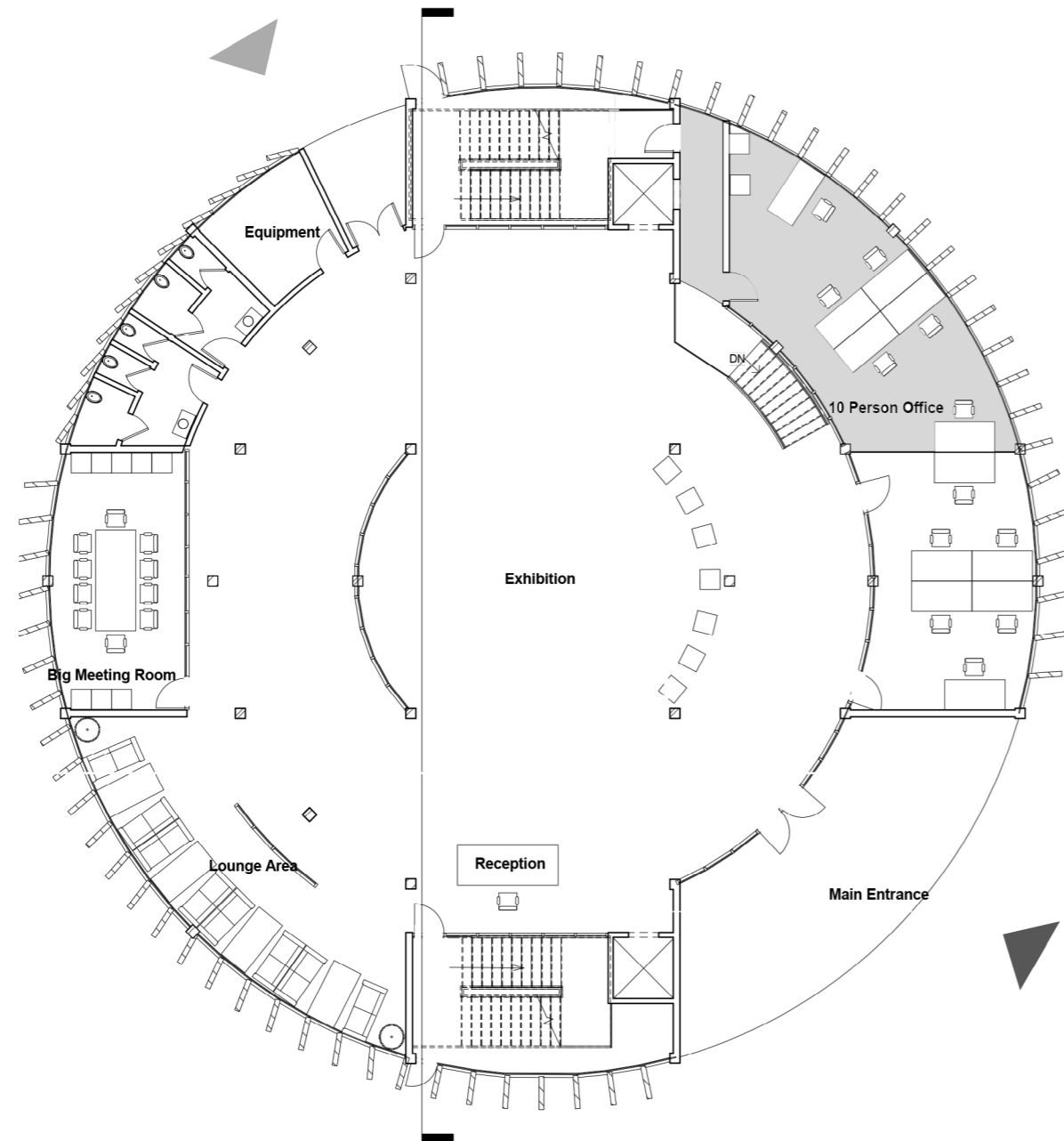
Section 4
1/16"=1'-0"

Stage 5

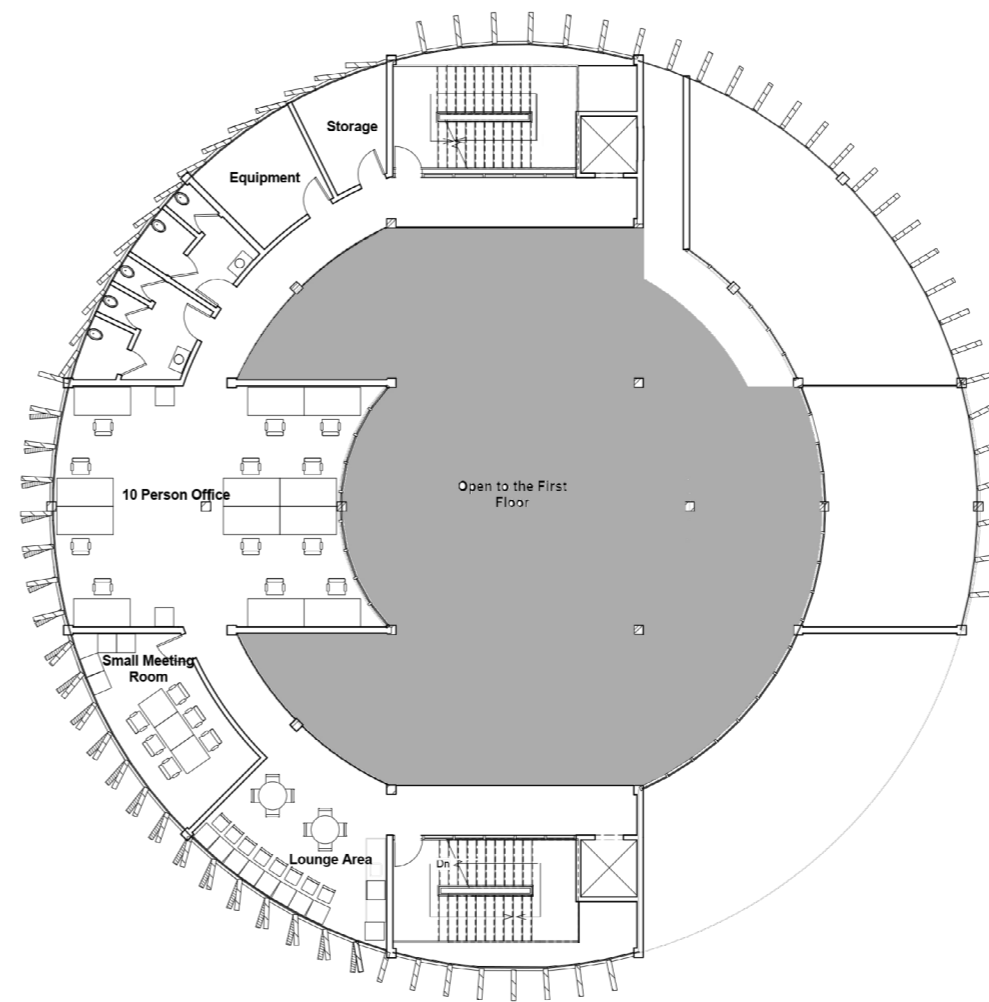
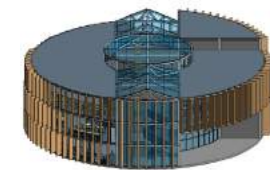
5 Founders



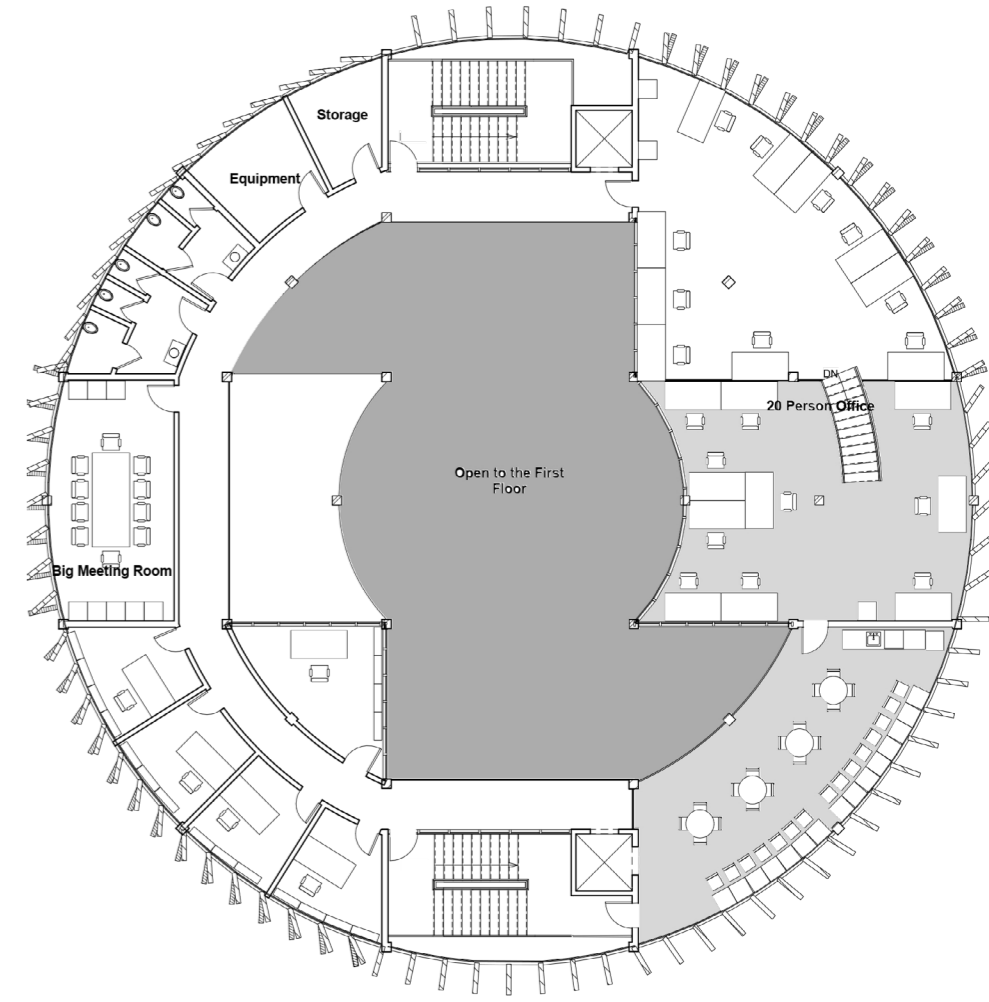
40 Employees



First Floor Plan
1/16"=1'-0"



Second Floor Plan
3/64"=1'-0"



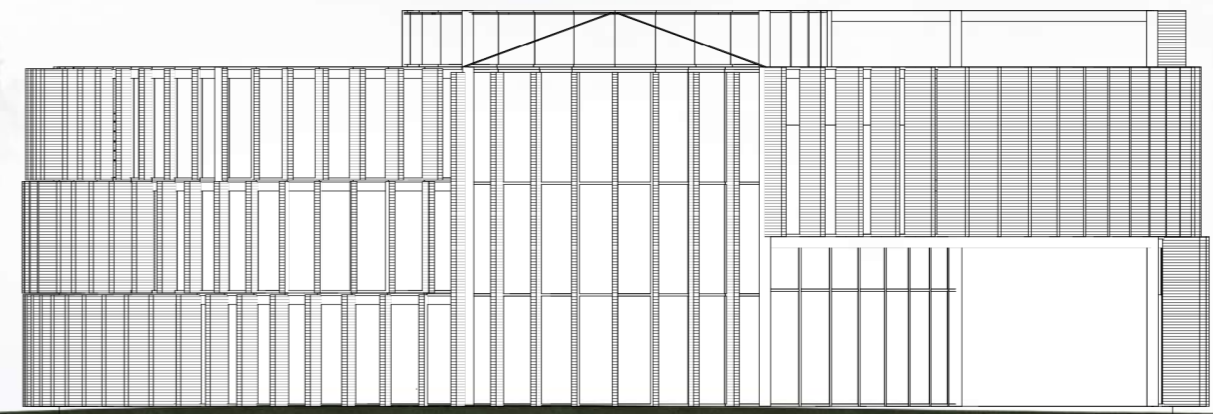
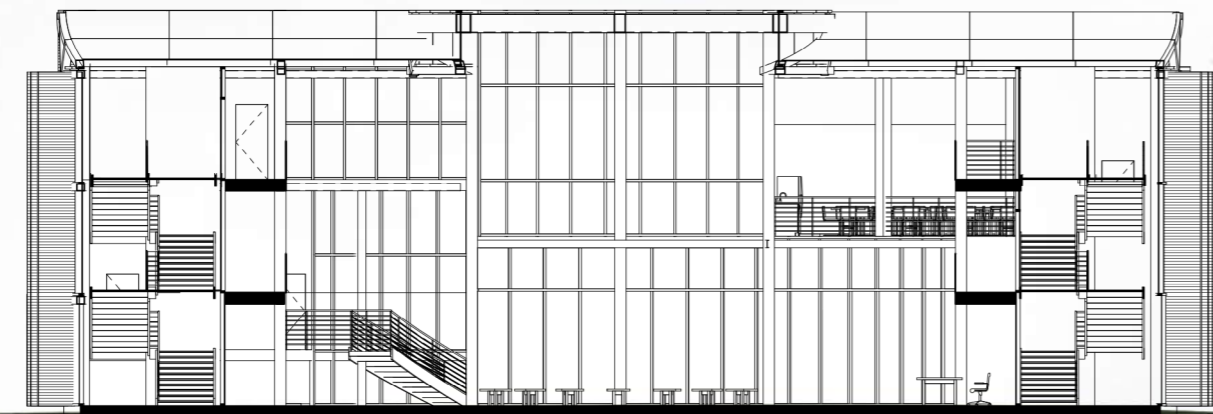
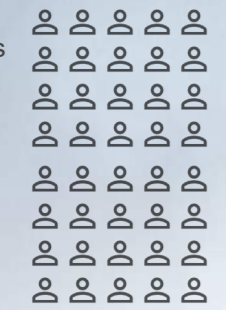
Third Floor Plan
3/64"=1'-0"

Stage 5

5 Founders

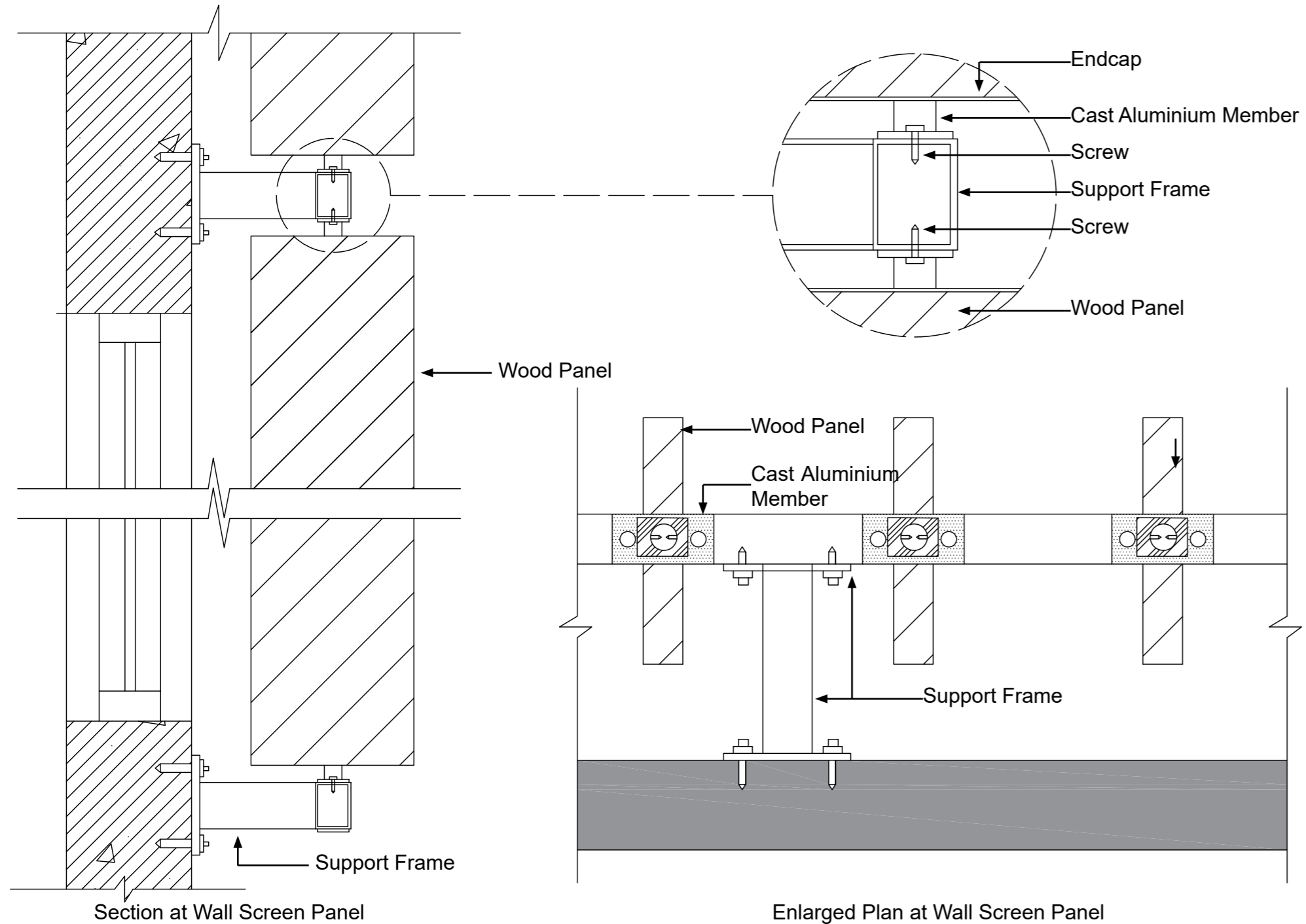


40 Employees



Section 5
1/16"=1'-0"

North Elevation
1/16"=1'-0"



Special Expression

This part shows the different views of the building from the outside and interior space.
 The building has the steel frame as the primary structure and concrete covering for the floor slab.

For the elevation, the adjustable wood panel and curtain walls are used to balance with local sun orientation.

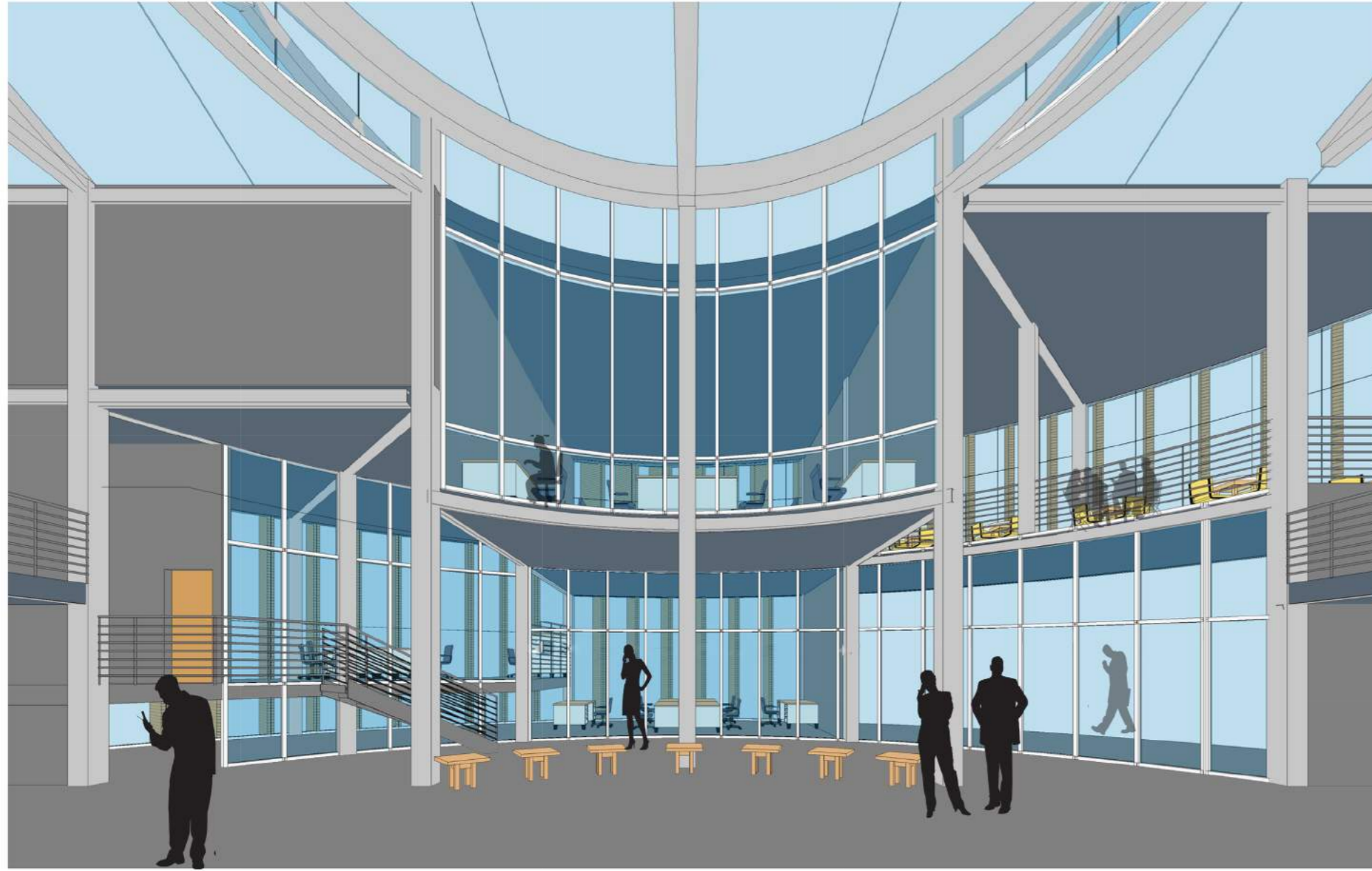




Courtyard Look to North



Courtyard Look to South



Courtyard Look to East



Courtyard Look to West