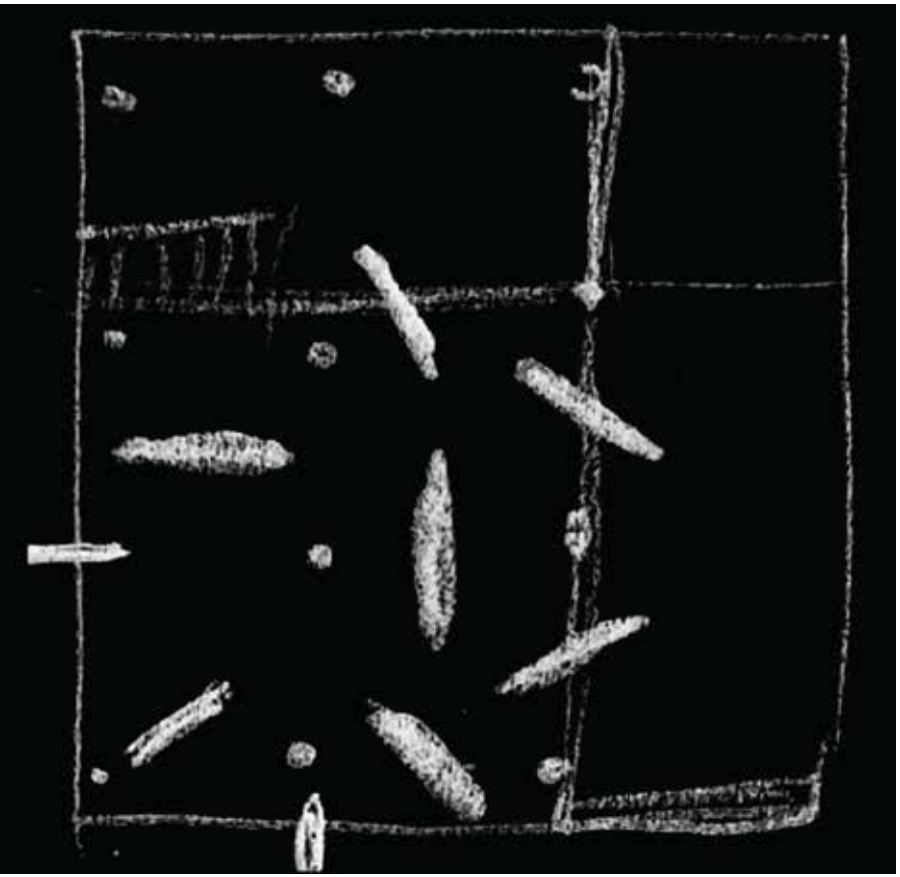


STEFANY OROZCO

ARCHITECTURE PORTFOLIO

CONTENTS

Stefany Marlene Orozco

I am a California native who graduated from the University of Oregon with a Bachelor of Architecture degree and a minor in Landscape Architecture Fall of 2022. I am also a Certified Passive House Consultant as of 2021.

Throughout the course of my educational career, I have felt a growing sense of urgency to create architecture that is environmentally conscious, incorporates native plant species, and promotes community building. Although I know architecture alone is not a solution, the impact it can have on individuals and their communities cannot be ignored. For this reason, I am more excited than ever to contribute my skills and strengths to a firm that I can expand my knowledge and grow into the licensed architect I have always dreamed of becoming.

Contact

209.496.7212

stefany.marlene1@gmail.com

www.linkedin.com/in/stefany-orozco-b395371a9

stefanyorozco.com

Skills

SOFTWARE SKILLS

- Autocad
- Photoshop
- Revit
- Illustrator
- Rhino
- Indesign
- Sketchup
- Microsoft Excel
- Lumion
- Microsoft Word

PERSONAL SKILLS

- Avid Learner
- Effective communication skills
- Collaborative
- Adaptable
- Organized

LANGUAGES

Spanish; Fluent

English; Fluent

Education

BACHELOR OF ARCHITECTURE
MINOR IN LANDSCAPE ARCHITECTURE — **June 2022**

University of Oregon | Eugene, OR

Experience

ARCHITECTURAL INTERN — **Summer 2021**

Kembcon Engineers | Burlingame, CA

- Created construction details using Autocad
- Collaborated with engineer to draft floor plans and structural plans
- Prepared documents for city submital

CONSTRUCTION OFFICE ASSISTANT — **Summer 2020**

ORConstruction | Modesto, CA

- Prepared construction documents for city submital
- Created spreadsheets using microsoft excel for bidding
- Managed timesheets for workers

STUDENT QUALITY ASSURANCE TESTER — **2018 - Present**

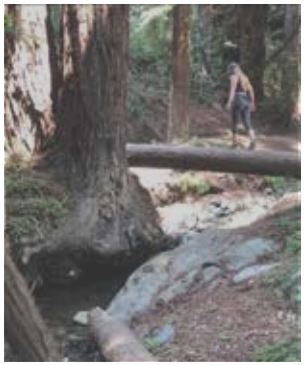
IntoCareers | Eugene, OR 97401

- Lead and trained student employees
- Conducted quality assurance tests on websites
- Implemented Basic HTML updates using dreamweaver
- Created animations using Adobe Aftereffects
- Translated documents + Created translation audio
- Awarded Student Empoyee Certificate of Excellence 2021

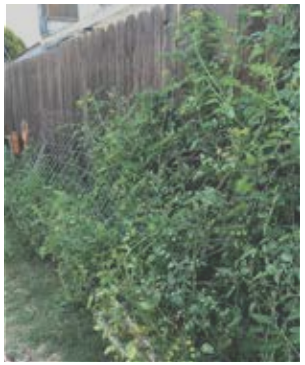
Other Interests

Travel

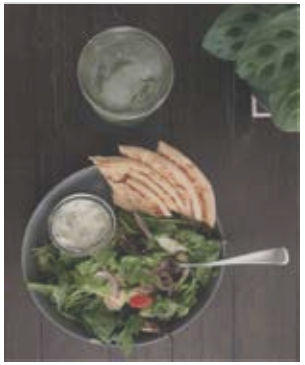
Art



Hiking

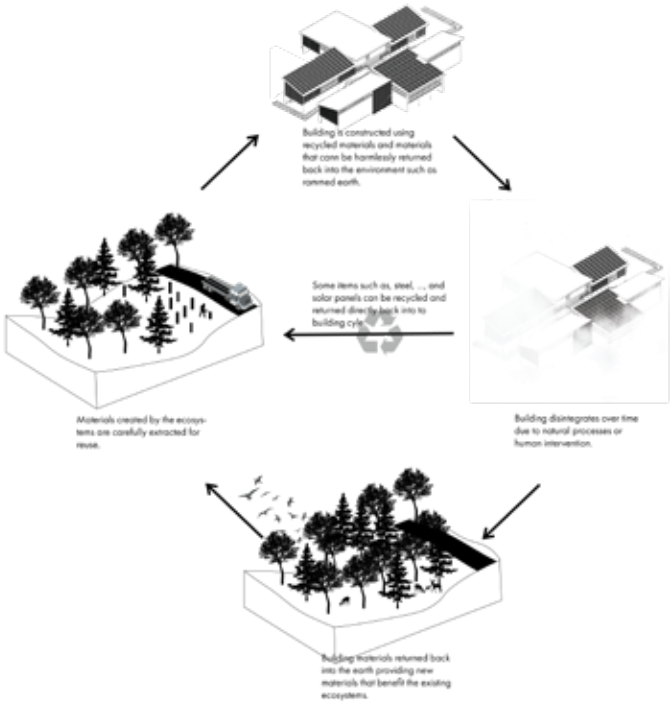


Gardening



Food

Furniture Flipping



Bridge: Wetland Mitigation and Exploration Center

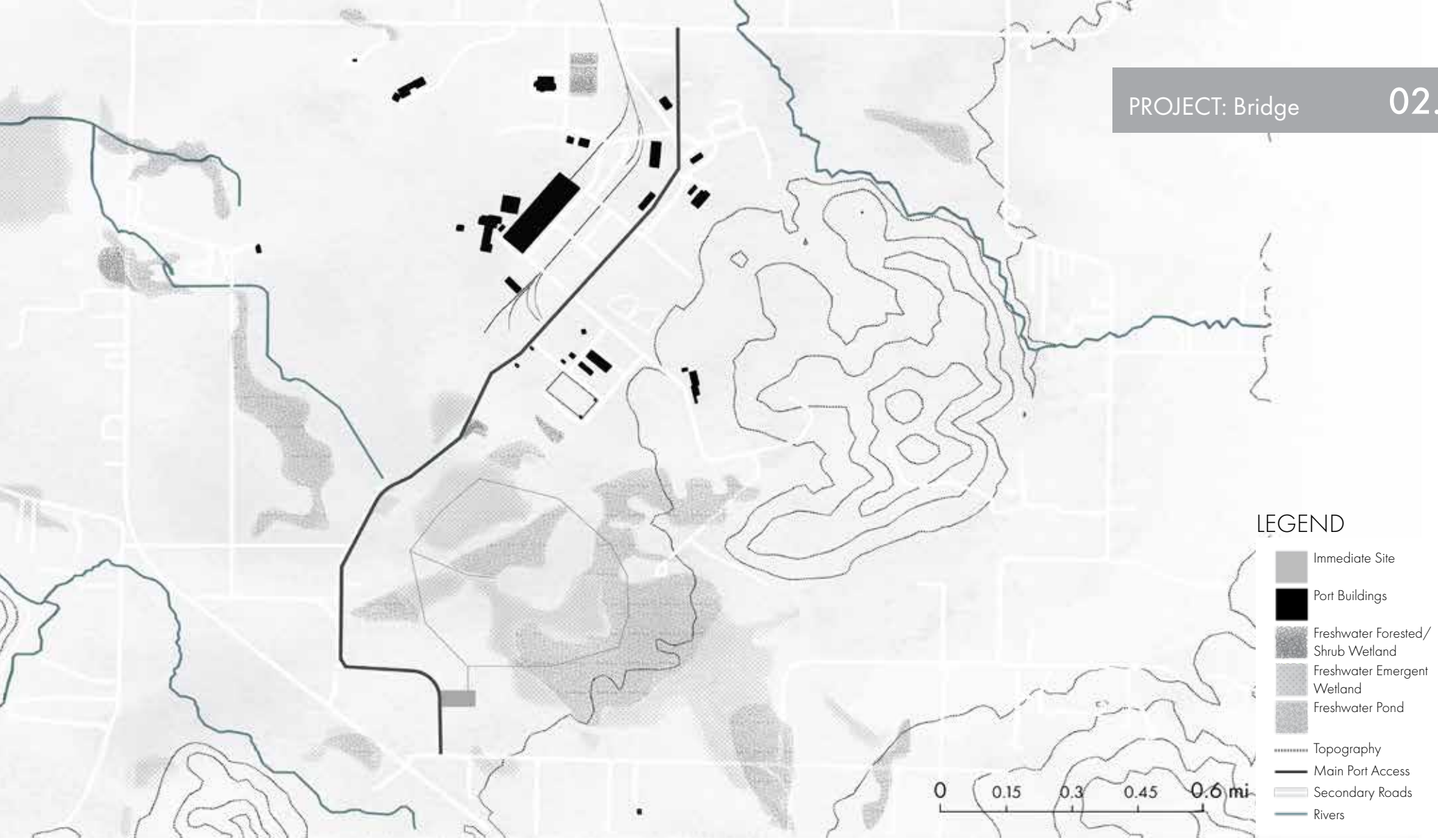
Project Type: Individual
Location: Port of Tillamook Bay, Tillamook, OR
Designers: Stefany Orozco

Description:

After analyzing the Port of Tillamook bay, and the surrounding area, every individual in our studio was asked to create a vision for what we believed the port needed in the future. From there, each student designed their own project and program.

My initial vision came after creating different postcards for different activities that may take place in the port to benefit the community of Tillamook. However, after visiting the Port and doing a bit of research it became apparent that the southern end of the area contained different types of freshwater wetlands. After a brief discussion with the Port manager, I learned that the plan for the area was to infill the wetlands and construct more buildings on it. With the knowledge of how precious resources such as these will become with the changing climate, I decided to create a program for a Wetland Mitigation and Exploration Center. The goal of this building is to expose and inform the surrounding community on the importance and beauty of wetlands while also teaching users how to mitigate the area and even arm them with tools and apps to do so in their own community. The building itself is also constructed using materials that could carefully be either recycled or decomposed back into the wetlands in a harmless way when the time comes.

PROCESS

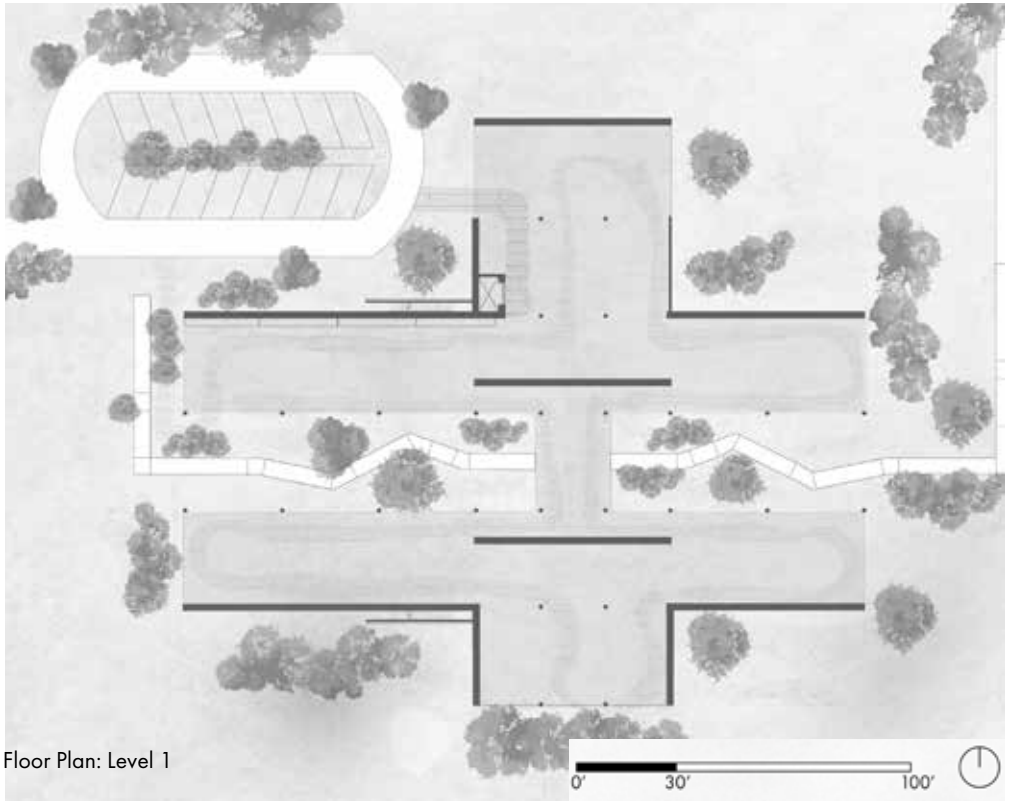


Site Conditions

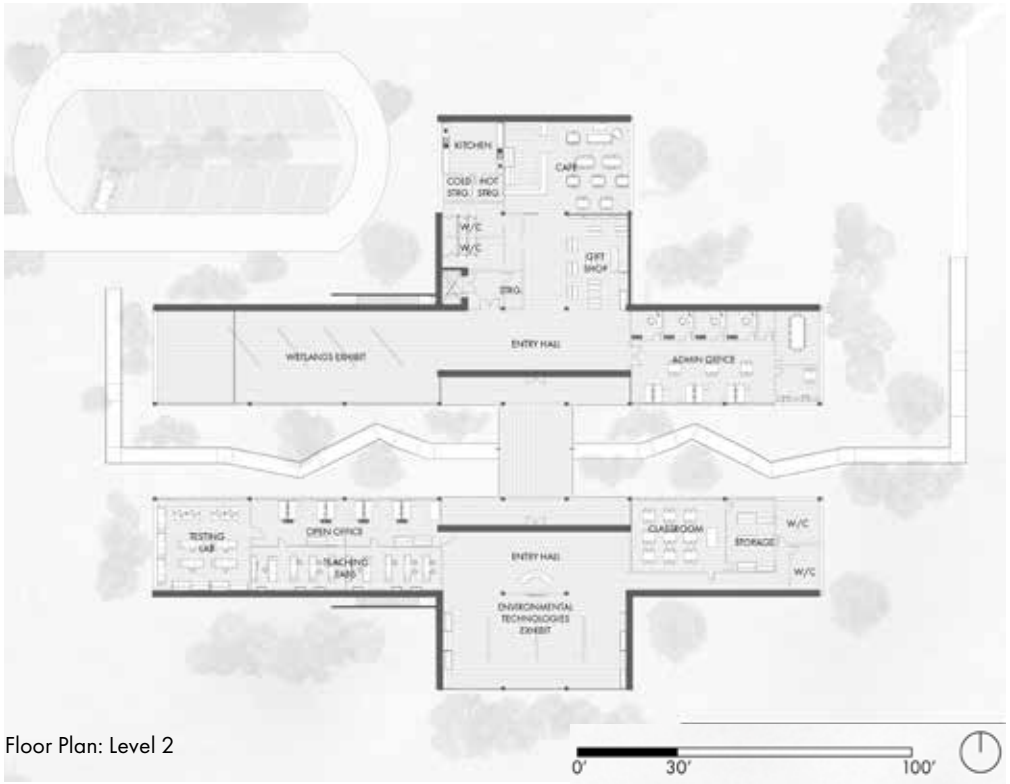
LOGISTICS. The Port of Tillamook is located on the southern outskirts of Tillamook city proper. The area is zoned as M-1 Industrial and as it stands now there are very few buildings on the site. The main buildings on the northern end of the site are the Hampton Lumber Mill, a Digester, the Port Offices, and the massive Tillamook Air Museum which is the main attraction of the port.

CLIMATE. The city of Tillamook and the Port are accustomed to constant flooding during the rainy seasons. So much so that the locals are used to constant road closures and flooded buildings within the city during these times.

PEOPLE. There is hardly any colleges or forms of higher education within the city itself. The locals here need forms of education that may draw more people/ tourists into the city and better the area.

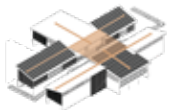


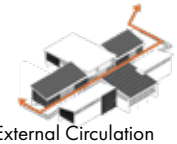
Floor Plan: Level 1

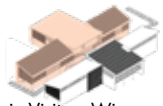


Floor Plan: Level 2

Massing Strategies

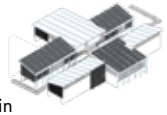

Internal Circulation

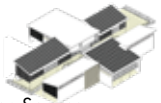

External Circulation


Main Visitors Wing


Main Research Wing


Solar Access


Rain


Green Spaces


Flood Resistance


Disintigration

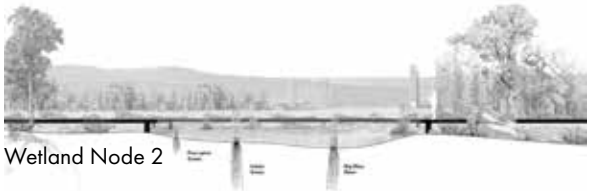

North-South Section Looking East Cut 1


East-West Section Looking South

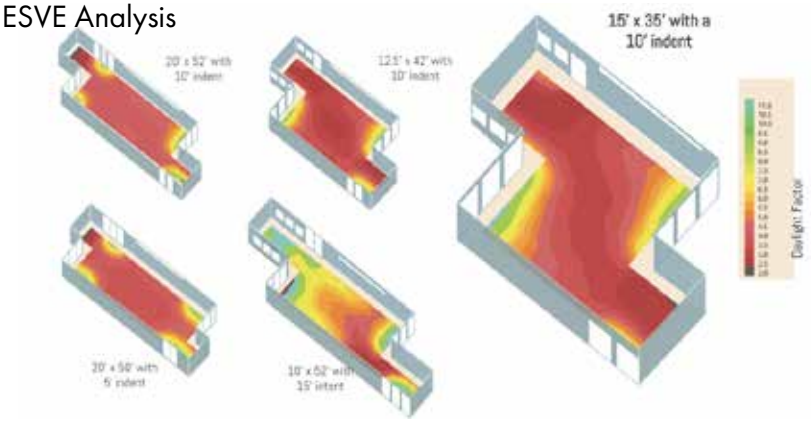

Wetland Node 1


North-South Section Looking East Cut 2

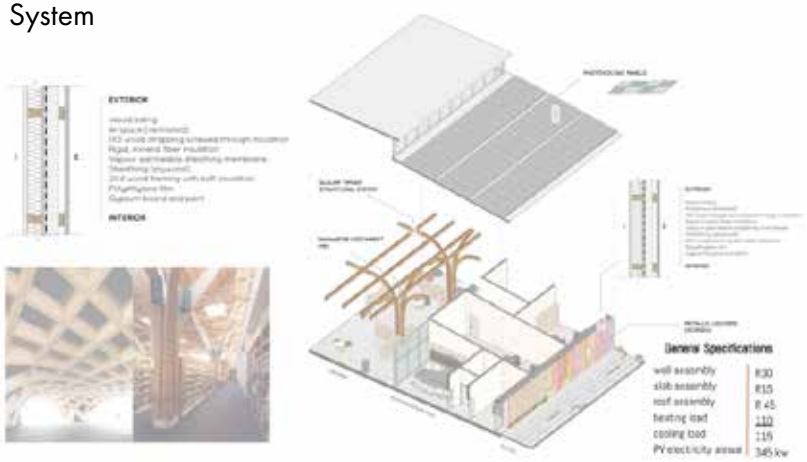

East-West Section Looking North


Wetland Node 2

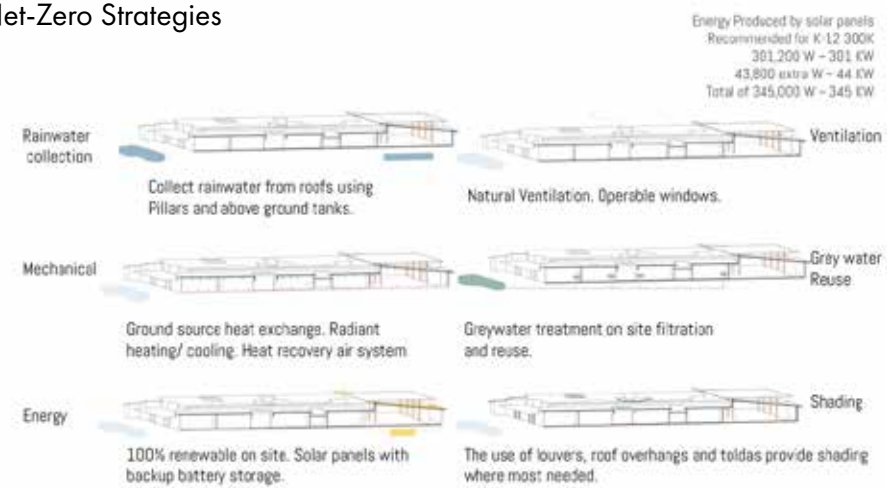
IESVE Analysis



Building System



Net-Zero Strategies



PROCESS

MLK Jr. Elementary School: Montessori Net Zero Elementary

Project Type: Group
Location: Albina District, Portland, OR
Designers: Anapaola Araujo Tupayachi, Christina Carval, Donia Hooshmand, Stefany Orozco

Description:

The Martin Luther King Jr. Elementary School is located in the predominately black Albina district of Portland Oregon. The Albina district lacks accessible, walking distance community services such as, communitity spaces, adult education classes and food access. The community currently relies on the current Martin Luther King Jr. Elementary School for such services but at it's current state, it is evident that the current school must be torn down.

Through the redesign, my team and I aimed to perserve and build on these community resources as well as provide a safe and immersive learning environment. We researched sustainable design strategies and studied the montessori model of learning before designing in order to achieve our net zero goal.

After this, we began our design by studying various classroom shapes and the different daylighting strategies these shapes would have using IESVE, an integrated analysis tool for the design and optimization of buildings. We were able to compare the different daylighting factors and carefully select the appropriate model for a positiveearning environment.

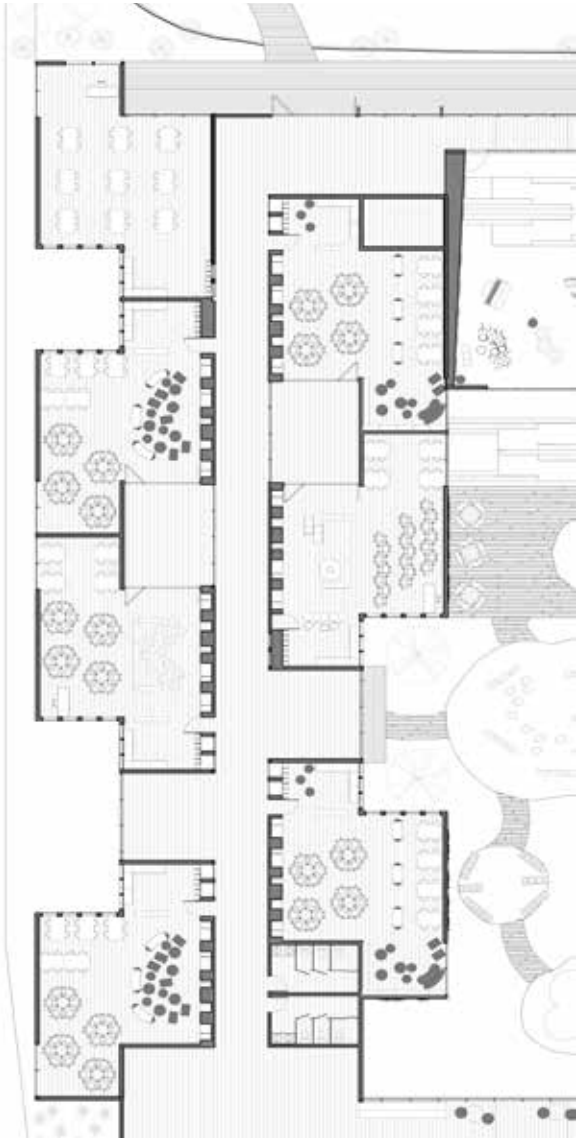
Courtyard Perspective
Render By: Stefany Orozco

Courtyard Design

After realizing our classroom shape, we then began to organize the building around this classroom model, implementing different design strategies that overall complimented our theme of Montessori and sustainable learning. We ended up with a courtyard building where the central axis acted as a learning and play garden where students could interact with the different plant species all while activating different learning opportunities. The goal through this design was to have this garden act as a safe and enclosed space for the students to learn and grow.

Site Conditions

After carefully analyzing the different weather conditions in the site that may affect the comfort and performance of the design (such as; solar axis, wind conditions, and precipitation patterns) my team organized the program of the building to best suit these conditions. For example, the orientation of the roofs and solar panels, align with what would be best to produce the most solar energy to achieve our net zero goal.

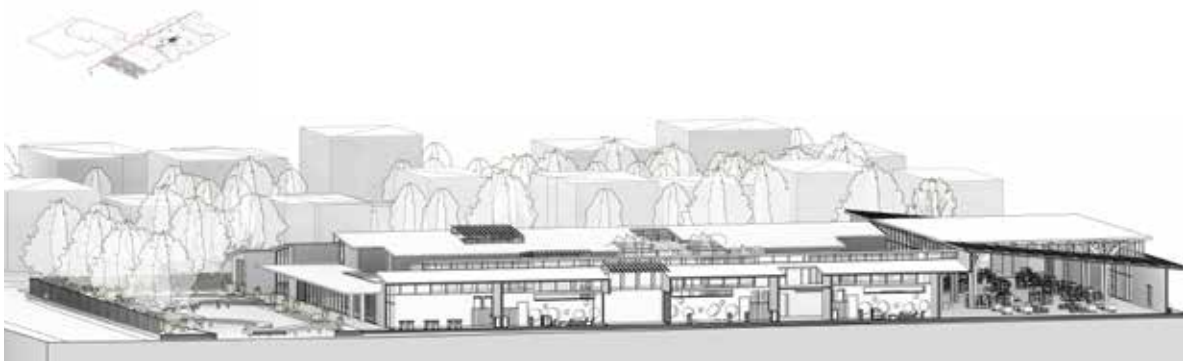


The Classrooms

Above is the overall floor plan of the site as well as a zoomed in portion of the classroom units. The classroom organization, the main driver of the design, was done in a way to create different sections of learning. Within the classroom itself, there are different out-coves which teachers would be able to customize to fit their teaching style. On the outside of the classrooms, a communal space is created in the spaces between each of the classrooms. This is done to facilitate joint teaching opportunities between the different classrooms. Then on the inner courtyard, another out-cove is created where learning and play entwine.

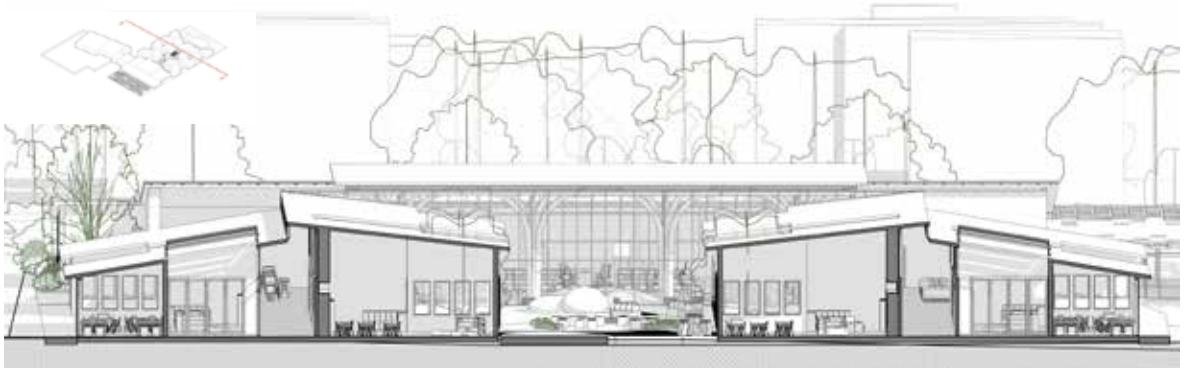
East West Section Perspective Looking North

East West Elevation Perspective Looking North
Elevation By: Anapaola Araujo



North South Section Perspective Looking East

North South Elevation Perspective Looking East
Elevation By: Christina Carval



East West Section Perspective Looking South

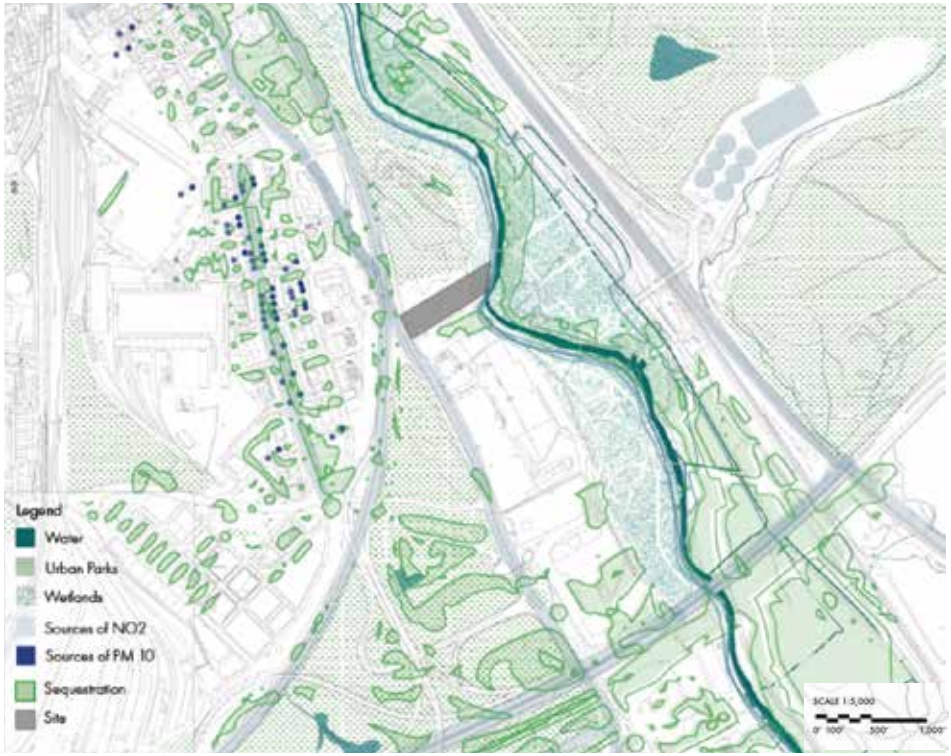
East West Elevation Perspective Looking South
Elevation By: Christina Carval

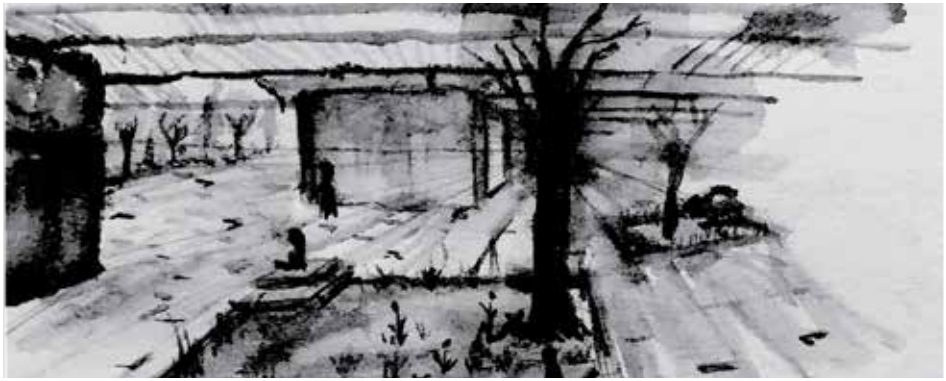
Music Room Perspective
Render By: Anapaola Araujo

Wetland Perspective
Render By: Stefany Orozco

Classroom Perspective
Render By: Donia Hooshmand

Library Perspective
Render By: Stefany Orozco





PROCESS

El Nido: Sociocultural Center

Project Type: Individual
Location: Madrid, Spain
Designer: Stefany Orozco

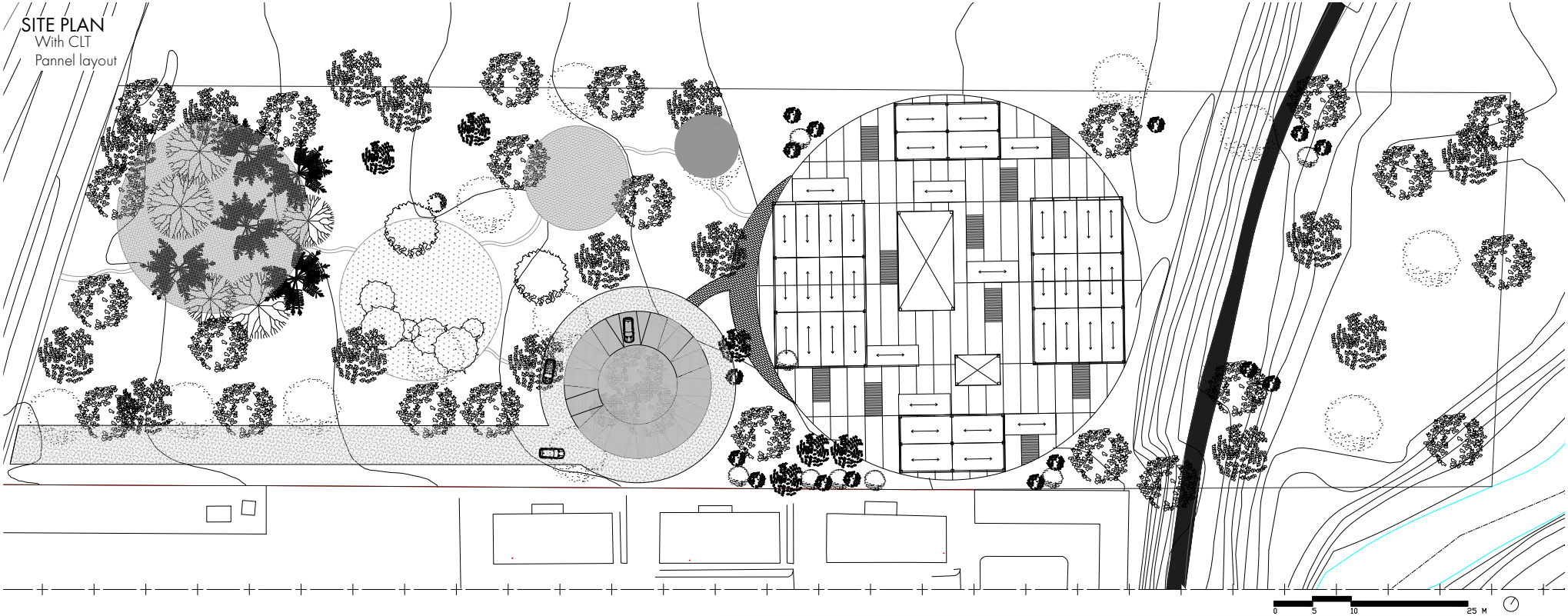
Description:

During the span of 6 weeks, we were asked to analyze the existing conditions of a site near Madrid in Spain. After analyzing the site, we were asked to design a sociocultural center for the area that would connect to the surrounding environment while also bettering the surrounding community through it's program. After this, we had a remaining 3 weeks to design our program and complete the building we had envisioned.

After a few water color vision sketches of what the space could feel like, I came up with the idea of creating 4 individual buildings containing the necessary program elements all completely covered by a round super roof structure supported by the four buildings and additional wood posts.

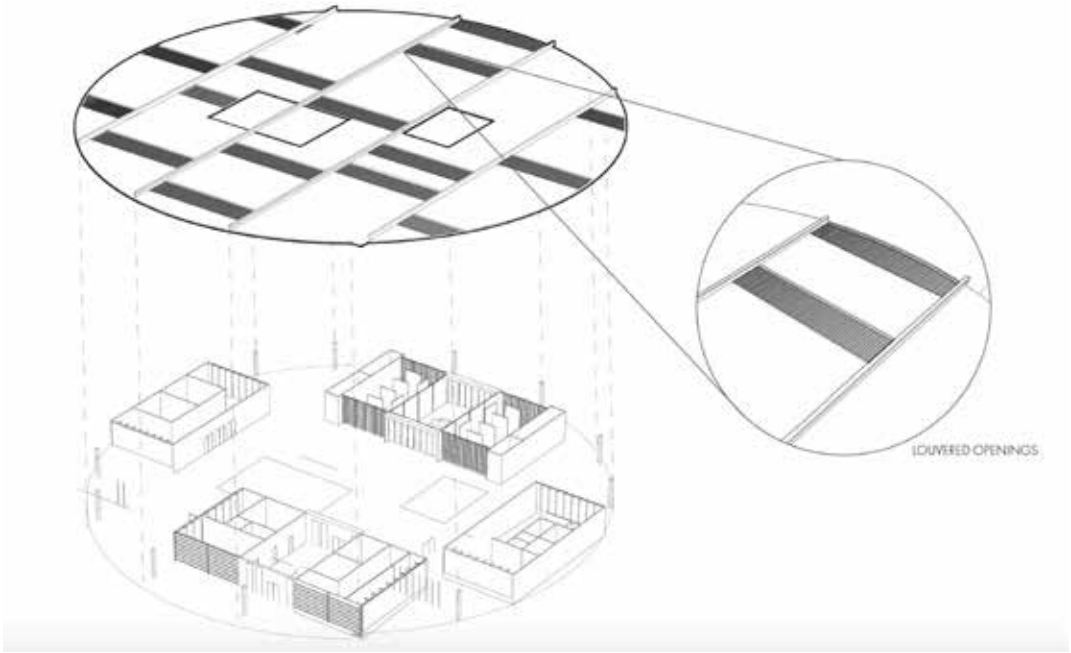
Site Conditions

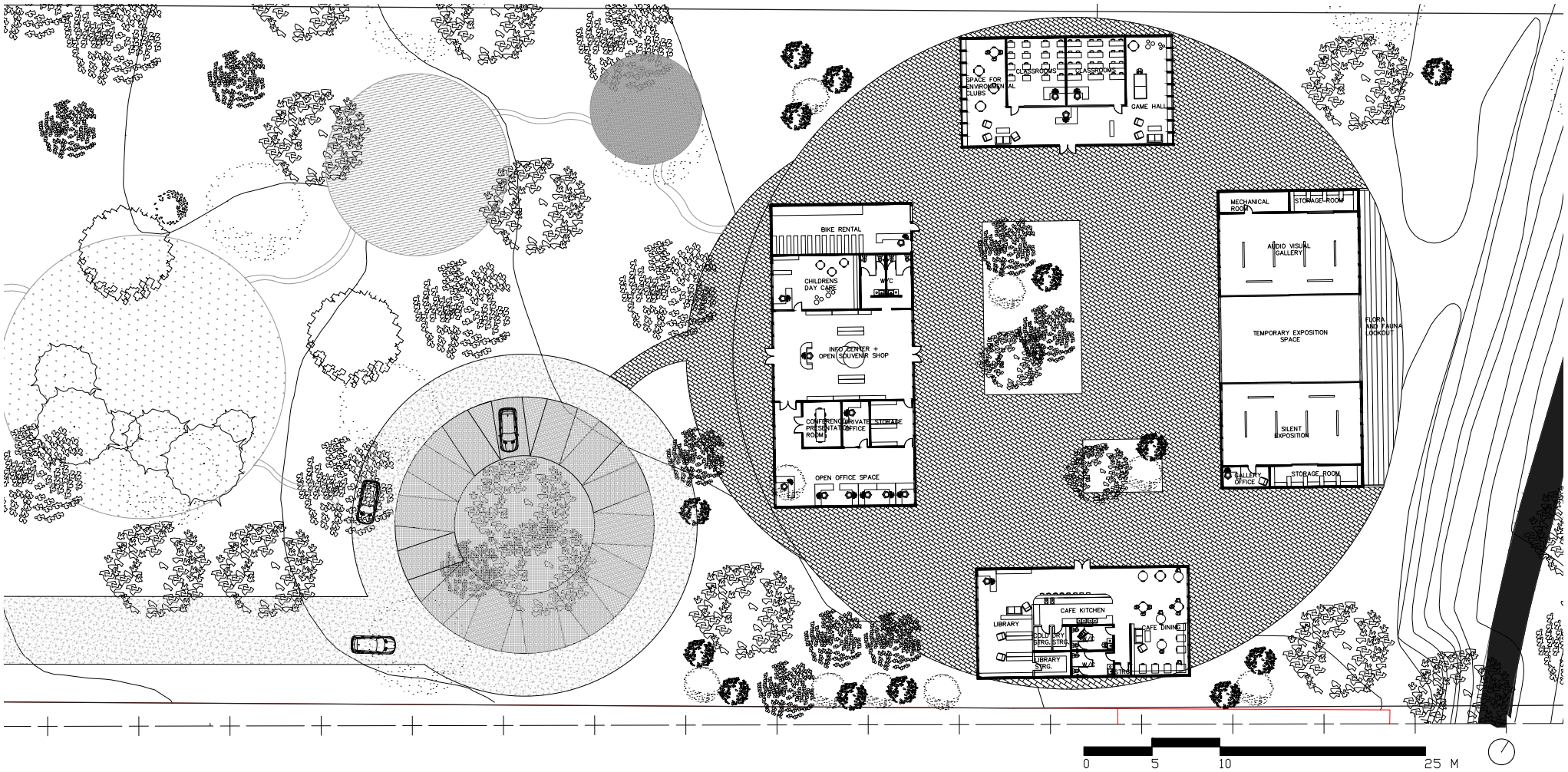
LOGISTICS. The site is currently zoned for a sociocultural center which provided a great start for the project. The current lot is completely empty and the larger site near the river is planned to be a soccer stadium and equestrian center.
CLIMATE. Madrid Spain has very harsh and dry summers which make it very difficult for locals to be comfortable when outdoors when no shade is present. The Rio de Manzanares which is located on the North-Eastern end of the site, provides great opportunity for recreation.
PEOPLE. The closest neighborhood near the site contains and elementary school as well as a few lower income housing. This project is important for this area as it is expected to be a resource and asset for the surrounding neighborhoods.

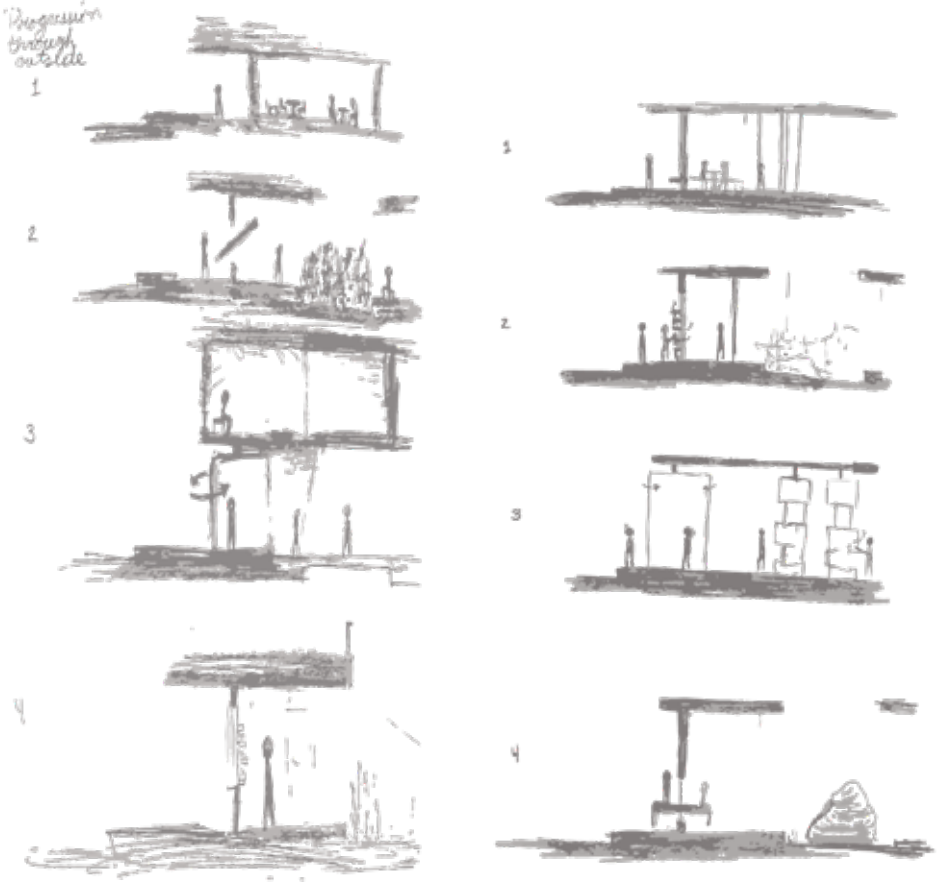


Site Plan

For the site, I wanted to incorporate the existing landscape as much as possible. The circular pockets on the plan highlight different nodes where patrons are able to enjoy the area without disturbing the existing landscapes. As for the building, after figuring out the massing, I analyzed the site using various tools on rhino such as grasshopper and ladybug. After reviewing my findings, it became clear that the roof needed to be protected and if indoor outdoor activities were to take place, a super roof would be needed to shield the people and the building from the harsh summer sun.




SPACE FOR ENVIRONMENTAL CLUBS
CLASSROOMS
CLASSROOMS
GAME HALL
BIKE RENTAL
CHILDRENS DAY CARE
W/C
INFO CENTER + OPEN SOUVENIR SHOP
CONFERENCE PRESENTATION ROOM
PRIVATE OFFICE
STORAGE
OPEN OFFICE SPACE
MECHANICAL ROOM
STORAGE ROOM
AUDIO VISUAL GALLERY
TEMPORARY EXPOSITION SPACE
FLORA AND FAUNA LOOKOUT
SILENT EXPOSITION
GALLERY OFFICE
STORAGE ROOM
CAFE KITCHEN
LIBRARY
STORY STORG. STRG.
LIBRARY STRG.
W/C
CAFE DINING
0
5
10
25 M



The Marayah Center: A Womens Homeless Transitional Shelter

Project Type: Individual
Location: Old town China Town District, Portland, OR
Designers: Stefany Orozco

Description:

The Marayah Center is a mixed use transitional women and youth shelter, aiming to blur the lines between housed and unhoused individuals. The idea developed through the existing site conditions: The House of Louie, a landmark abandoned building in the old town china town district of Portland Oregon sat abandoned for years. It was gated off and many houseless individuals set camping tents in front of the abandoned building. This happened for a while until local community activists took their paintbrushes and left their mark on the building. The murals created by the community showed how a group of individuals could better their neighborhood and how they could come together through the medium of art. For this reason, this project aims to do three things:

1. Better the neighborhood.
2. Create a sense of community.
3. Help the unhoused and housed youth and women of Portland.

These three goals are achieved through 1.The introduction of new community facilities, 2. The use of the interactive art gallery on the first floor, 3.By creating a new safe haven for the transitioning population on the second through fourth floors.

PROCESS

Site Conditions

LOGISTICS. The site is currently located in Old Town China Town in Portland Oregon. The area is known to be riddled with homelessness and crime. The current building on the site was taken over by local neighborhood activists who drenched the old walls of the decaying building in murals.

CLIMATE. Portland Oregon falls under a Mediterranean climate. This means that winters consist of frequent rainfall for many months a year and summers are warm to hot and sunny.

PEOPLE. There is a mixed population in the area. I chose to focus on house-less women and youth in the neighborhood due to the fact that it becomes very dangerous for such individuals to live on the streets. The hope is to rehabilitate and provided them with the necessary tools to move on to better housing circumstances.

GROUND FLOOR PLAN

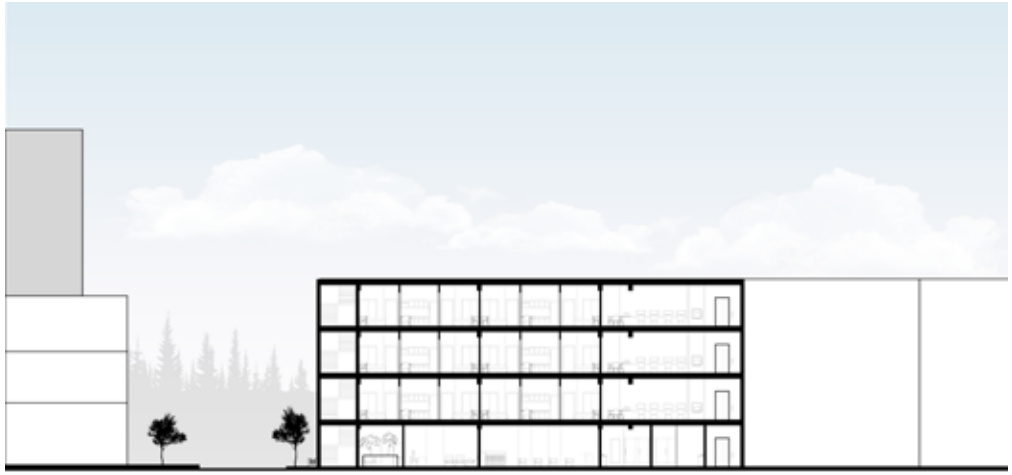
0′ 5′ 15′ 35′

FLOOR PLANS 2-3

0′ 5′ 15′ 35′

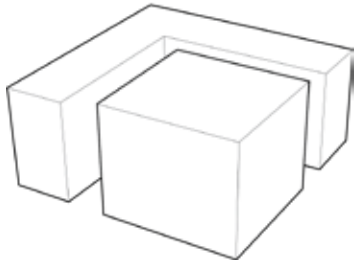
EAST WEST SECTION

0′ 10′ 25′



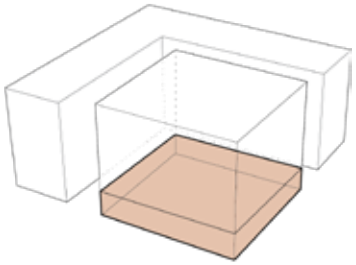
NORTH SOUTH SECTION

0′ 10′ 25′



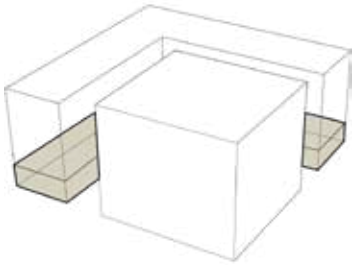
Overall Massing

The two seemingly separate buildings support one another and connect with veins of circulation. This configuration also gives all units ample and appropriate daylight, comfortable circulation spaces, and opportunities for casual experiences.



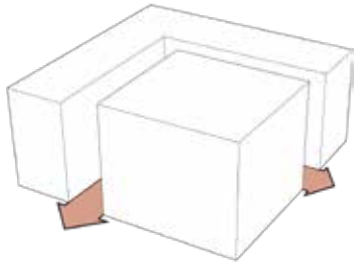
Comunal Art Museum

The ground floor of the building that is more directly exposed to the street and sidewalks edge contains an open, communal art gallery with movable panel walls that act as doorways.



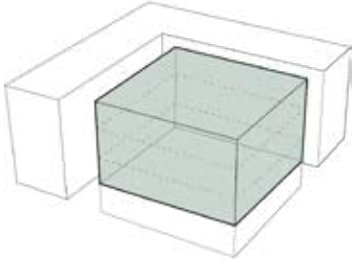
Community Resource Spaces

The more private tucked in spaces of the L shaped building act as resources for the unhoused and housed populations as well as a cafe that can serve and employ both the housed and unhoused people in the area.



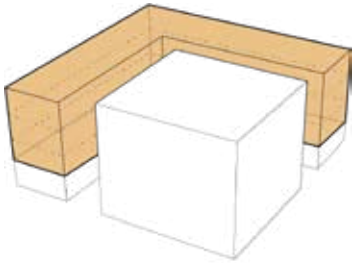
Exterior Circulation

The exterior walkway between the two buildings acts as a connection between not only the two buildings but also for the community members who want to explore the building.



Short Term Housing

Above the art gallery, the short term housing consists of four floors. Each floor has the potential to house up to twenty women and children.



Long Term Housing

To accommodate the potential PTSD that comes from living on the streets for an extended period of time, the long term housing is located in the more private area of the L shaped building. Here those identifying as women and children have time to get back on their feet.

Some Passive Strategies

Using Organic Shading When Possible

Appropriate Windows With Appropriate R-Value for Climate

Airtight and Moisture Resisitant Enclosure

PROCESS

Passive House

Project Type: Individual
Location: Fargo, ND
Designers: Stefany Orozco

Introduction:

In order to obtain the passive house consultant certification, one must passive a comprehensive written and design exam. For the design exam, there is a new prompt every year where the applicant must meet certain performance standards in order to pass. This involves multiple calculations and detail drawings to be produced during a 4 week deadline.

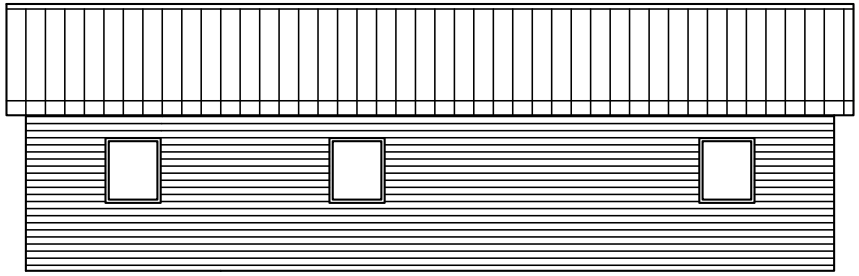
For my prompt, I was asked to design a small disaster relief housing unit that meets Phius CORE 2021 certification in Fargo, North Dakota. The Shelter employed the following strategies to help it achieve certification:

- Compact form to allow for continuous insulation and airtight barrier
- Airtight design to minimize air leakage and maximize efficiency
- .5 SHGC based on the southern orientation

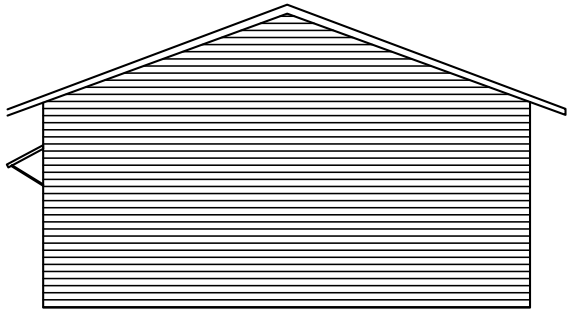
In addition to this, the design is a meant to be ship-able size that can be easily transported to the location.

Project Given Information:

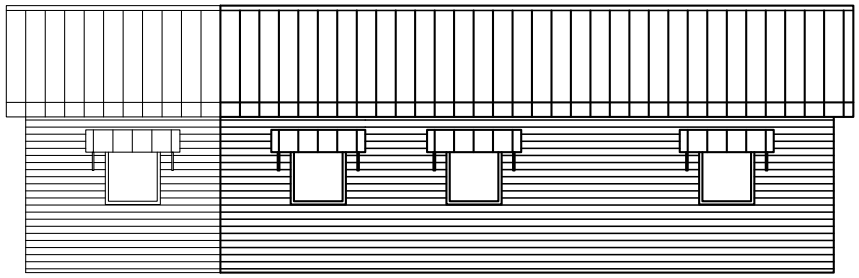
- Average temperature in January is 5.9 °F and in July it is 70.7 °F. Though very cold, the climate has very good solar potential, January solar radiation vertical for the south is 30.1 kBTU/ft^2 month, for the north 7.3 kBTU/ft^2 month.
- Electricity and water connections will be provided separately when the units are dispatched to a disaster location. A parking space is not required.



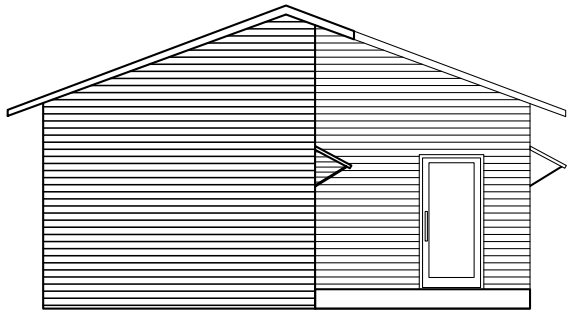
1 North Elevation
SCALE: 3/32" - 1'



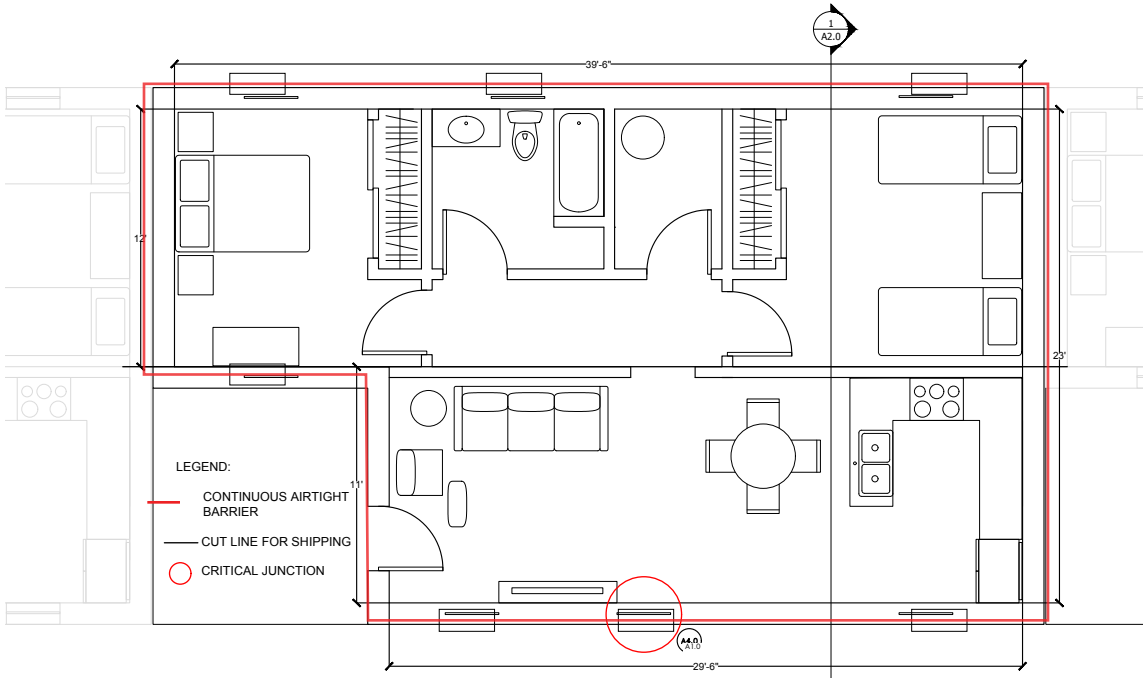
2 East Elevation
SCALE: 3/32" - 1'



3 South Elevation
SCALE: 3/32" - 1'



4 West Elevation
SCALE: 3/32" - 1'



ICFA: 800 SQFT

1 Floor Plan
SCALE: 3/16" - 1'

N

BALANCE VENTILATION

SUPPLY:		EXHAUST	
CFM/PERSON	54 CFM	BATHROOM	24 CFM
LIVING ROOM	20 CFM	KITCHEN	35 CFM
		MECHANICAL ROOM	15 CFM
TOTAL:	74 CFM	TOTAL:	74 CFM

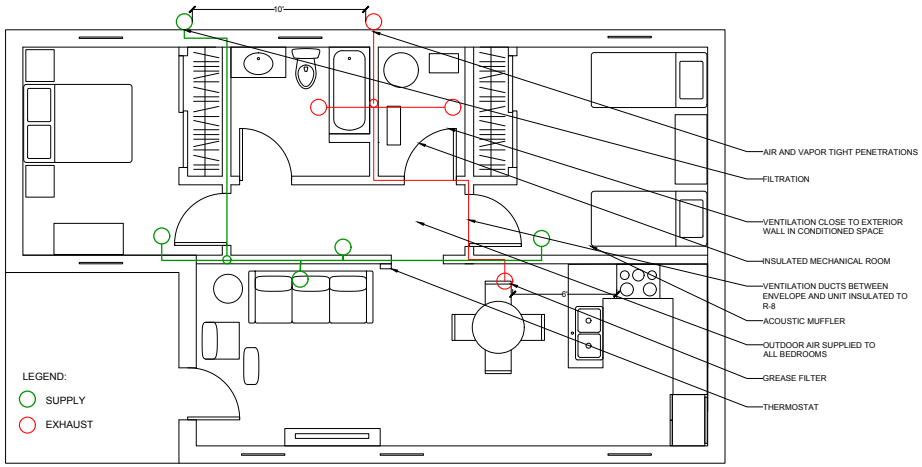
ERV

ZEHNDER ComfoAir160 ERV

CAPACITY OF
70% EFFICIENCY
OPERATED WITHFROST PROTECTION OF DOWNSTREAM HYDRAULIC HEATER COILS

MECHANICAL NOTES:

1. MINIMUM VENTILATION AIR TEMPERATURE AT 62F FOR COMFORT
2. VENTILATOR CLOSE TO EXTERIOR WALL IN CONDITIONED SPACE
3. ACOUSTIC CONCERNS: INSULATED MECHANICAL ROOM
4. VENTILATION DUCT PENETRATIONS TO BE AIR AND VAPOR TIGHT THROUGH ENVELOPE
5. INTAKE/EXHAUST ARE SEPARATED BY 10' OR GREATER ON EXTERIOR
6. VENTILATION AIR INLETS AND OUTLETS HAVE CRITTER PROTECTION HOODS AND ARE PLACED AT 5' (SNOW LEVEL 4')
7. VENTILATION DUCT SIZE: 6"
8. COMPACT AND SMOOTH STRAIGHT DUCT RUNS
9. SUPPLY/OUTDOOR AIR SUPPLIED TO ALL BEDROOMS
10. SUPPLY AIR GRILLES PLACED INSIDE ROOM AND HIGH UP ON WALL JUST UNDER CEILING TO UTILIZE COANDA EFFECT
11. EXHAUST GRILL IN KITCHEN LOCATED 6' FROM STOVE WITH WASHABLE GREASE MESH FILTER

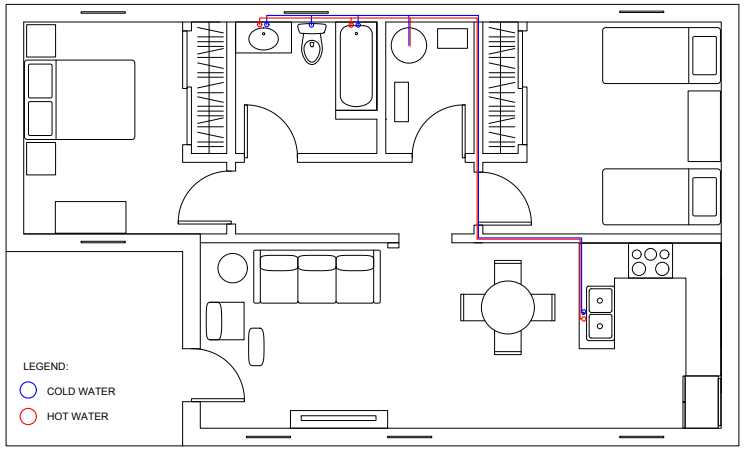


Mechanical and Ventilation Strategy
SCALE: 3/16" - 1'

N

WATER NOTES:

1. DHW SYSTEM: RHEEM PERFORMANCE PLATINUM HYBRID ELECTRIC (40 GALLON CAPACITY)
2. WATER LINES INSULATED
3. ALL PENETRATIONS AIR AND VAPOR TIGHT



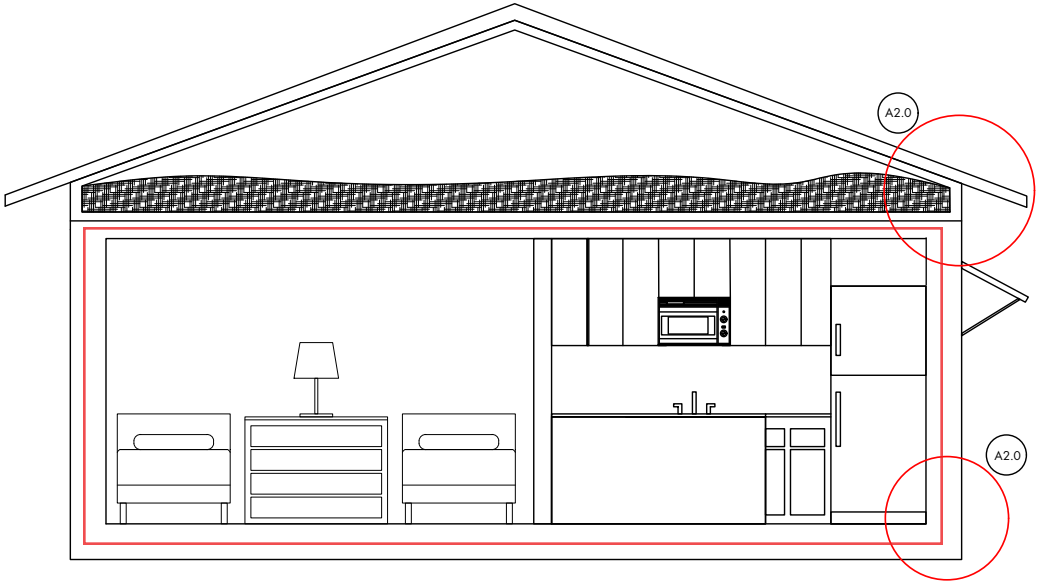
Water Distribution
SCALE: 1/8" - 1'

N

LEGEND:

CONTINUOUS AIRTIGHT BARRIER

CRITICAL JUNCTION



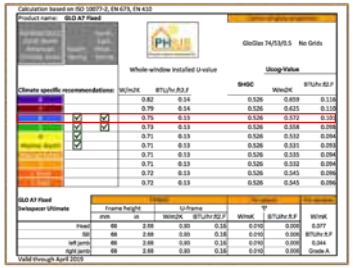
1 North - South Section

SCALE: 1/4" - 1'

N

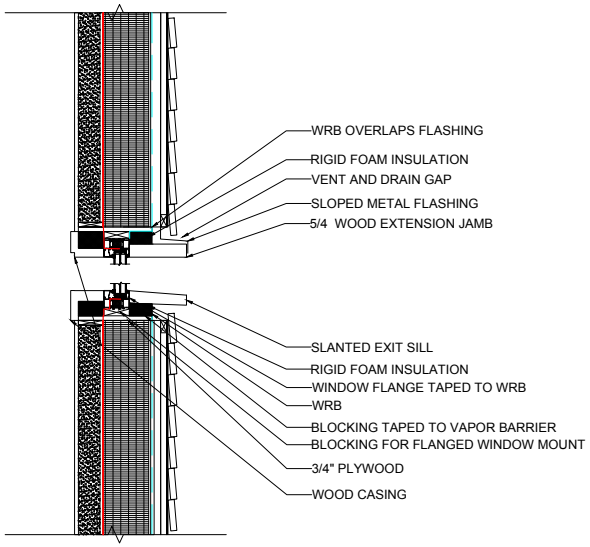
*ALL DETAILS THERMAL BRIDGE FREE
<0.006 BTU/hr.ft.F

WINDOW SPECS AND DETAILS



CLIMATE ZONE 6A SOUTH FACING WINDOW REQUIREMENTS

U-WINDOW INSTALLED: < 0.13 BTU/hr.ft2/
CENTER OF GLASS U < 0.12 BTU/hr.ft2/
SHGC > .5



A4.0 WINDOW HEAD AND SILL DETAIL

SCALE: 1" - 1'

R-VALUES

ROOF; R-63

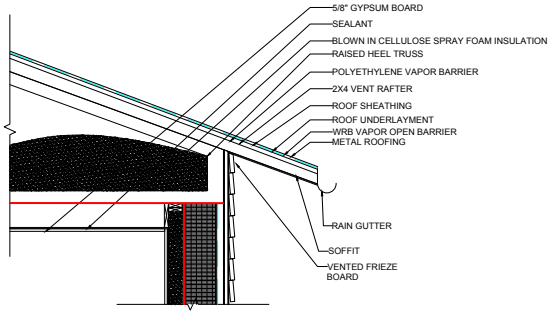
- 18" - 24" SPRAY FOAM INSULATION R-3.5/in

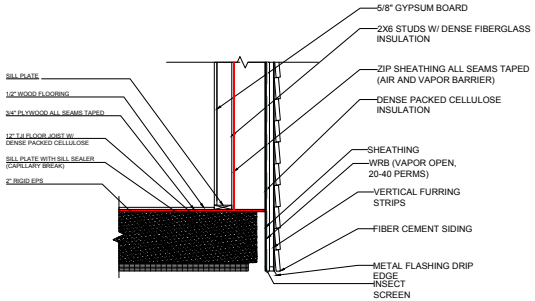
WALL; R-48.5

- 2X6 DENSE FIBERGLASS INSULATION
- 8" DENSE PACKED CELLULOSE INSULATION R-3.8/in

SLAB EXPOSED TO AIR; R-52.8

- 12" DENSE PACKED CELLULOSE R-3.8/in
- 2" RIGID EPS R-3.6/in





A5.0 Foundation + Roof Detail

SCALE: 1/2" - 1'

[redacted]