

# Restore

Veteran Support Facility



Casey Tabert

In what ways can healing be achieved through architectural experience?



## Project Typology

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Veteran support facility for service members returning from war and for their families

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## Claim under investigation

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Architectural experience can influence a positive change in service members and their families who have been affected by the repercussions of war and deployment.

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## Supporting Premises

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Architectural experience can have lasting effects on the way people live and interact with each other and their surroundings. The proper design of architectural spaces can evoke feelings of safety and belonging in service members who are in transition back into civilian life.

Positive change can be influenced by experience. An understanding of emotions experienced by service members and their families as well as the psychological effects of architecture are necessary for change to be effective.

Through experience in properly designed spaces, service members can achieve a higher quality of life and restore a sense of belonging. National Center for Post-Traumatic Stress Disorder and Walter Reed Army Medical Center (2004) found that including families in the experience can reduce long-term problems and aid in support.

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## Theoretical Premise/Unifying Idea

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In order for positive change to occur, it is important to provide a facility where the emotional and psychological effects of architectural experience are researched, understood, and implemented. The result of this experience will improve the quality of life and restore a sense of belonging in service members and their families.

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## Project Justification

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People are affected every day by traumatic events such as war. Service members who are returning from war find themselves in a very difficult situation. They are left to deal with many issues mentally, physically, and emotionally. This design will provide a transitional facility for service members returning from war and for their families.

## Key Words

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**Restore** - to bring back to a state of health, soundness, or vigor. to give back; make return or restitution of.

**Heal** - to make healthy, whole, or sound; restore to health; free from ailment. to free from evil; cleanse; purify: to heal the soul.

**Transition** - movement, passage, or change from one position, state, stage, subject, concept, etc., to another; change.

**Quality of life** - your personal satisfaction (or dissatisfaction) with the cultural or intellectual conditions under which you live.

**Service members** - any person who is a part of the United States Armed Forces (Army, Navy, Marine Corps, Air Force, Coast Guard).





## Questions going into research

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In what ways can architecture provide an environment where users can harness negative emotions and channel them into positive outcomes?

By providing a transitional facility with the proper care for returning service members and their families, can we help them safely transition back into civilian life and restore a sense of belonging in their home?

What kind of impact psychologically do traumatic events have on service members?

How is the military dealing with this issue already?



## Theoretical Premise/Unifying Idea Research

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### User:

“War is something shared by many, but few understand its aftermath” (Cantrell, Dean 2005).

Service member values vs. average U.S. citizen values

Seeking treatment

Family’s role in healing process

### Statistics:

- 30% of U.S. troops develop serious mental health problems within 3-4 months of returning home (From Iraq)
- As high as 30% of Iraq soldiers have PTSD
- In 2003, only 23-40% of soldiers returning from Iraq who suffered from post-traumatic stress disorder sought professional help, most typically because they feared it would hurt their military careers
- Returning vets who had PTSD one month after returning home from Iraq: 4%
  - ...four months after returning home: 9%
  - ...seven months after returning home: 12%
- Portion of veterans making up total U.S. suicide population: 25%
- In 2009, nearly 23% of soldiers fighting in Iraq claim that they planned to divorce or separate after returning home

### Architecture:

“Positive experience can be transformational, memorable, personal, and healing. (Huelat Parimucha, 2001).

What is out there today?



## Case Study #1



### Rehabilitation Centre Groot Klimmendaal

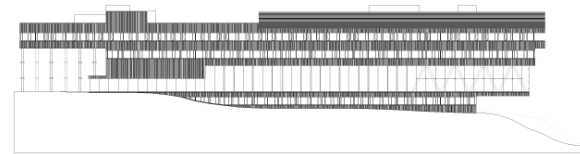
**Project Type:** Rehabilitation Center

**Architect:** Architectenbureau Koen van Velsen

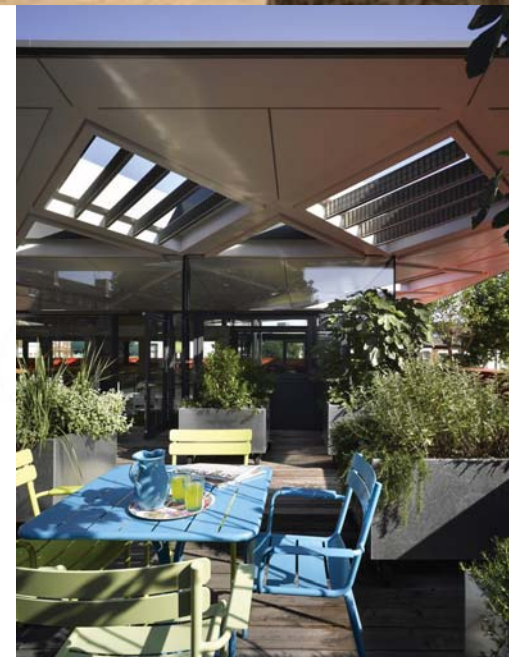
**Location:** The Netherlands

**Size:** 14,000 sqm

**Year Built:** 2011

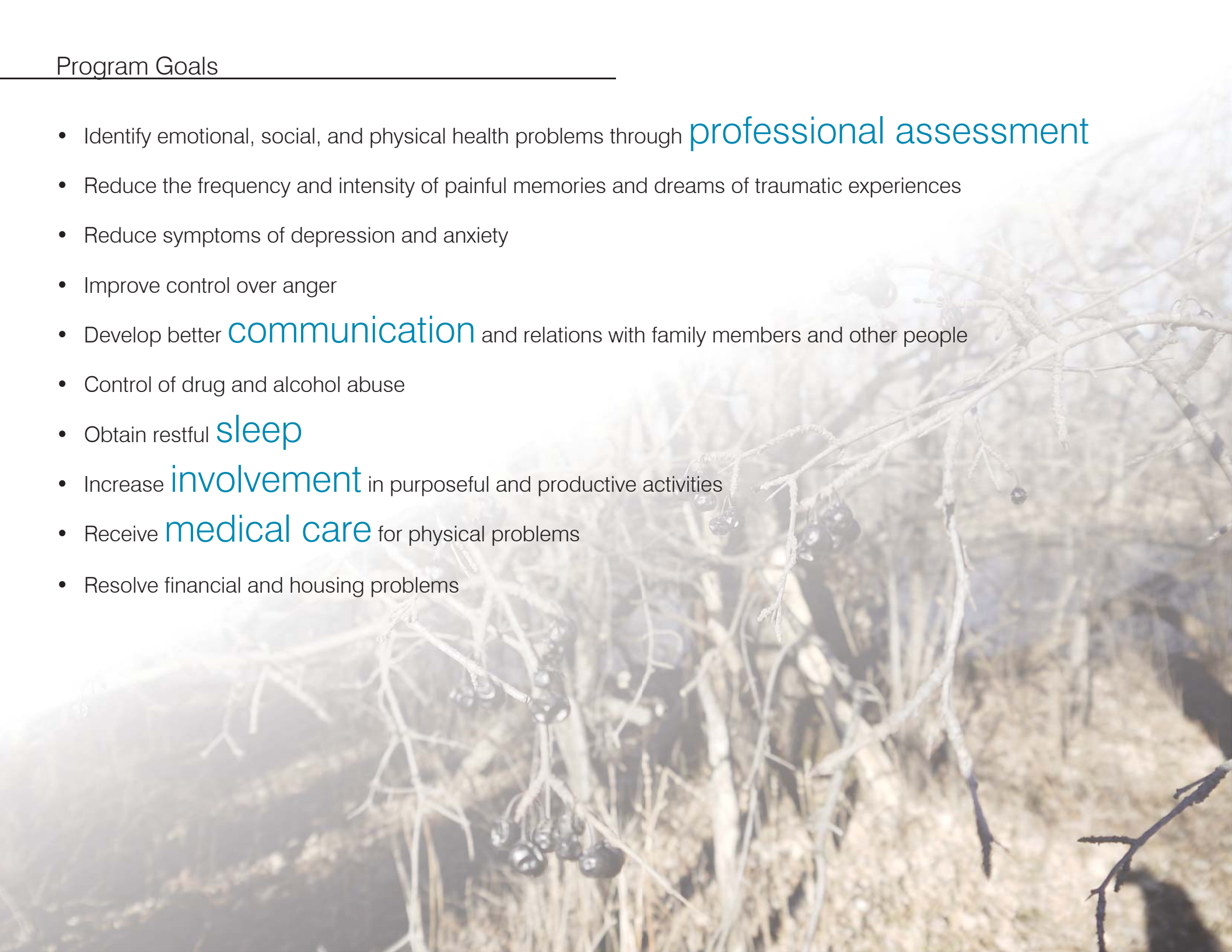


## Case Study #2



## Program Goals

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- Identify emotional, social, and physical health problems through **professional assessment**
  - Reduce the frequency and intensity of painful memories and dreams of traumatic experiences
  - Reduce symptoms of depression and anxiety
  - Improve control over anger
  - Develop better **communication** and relations with family members and other people
  - Control of drug and alcohol abuse
  - Obtain restful **sleep**
  - Increase **involvement** in purposeful and productive activities
  - Receive **medical care** for physical problems
  - Resolve financial and housing problems
- 

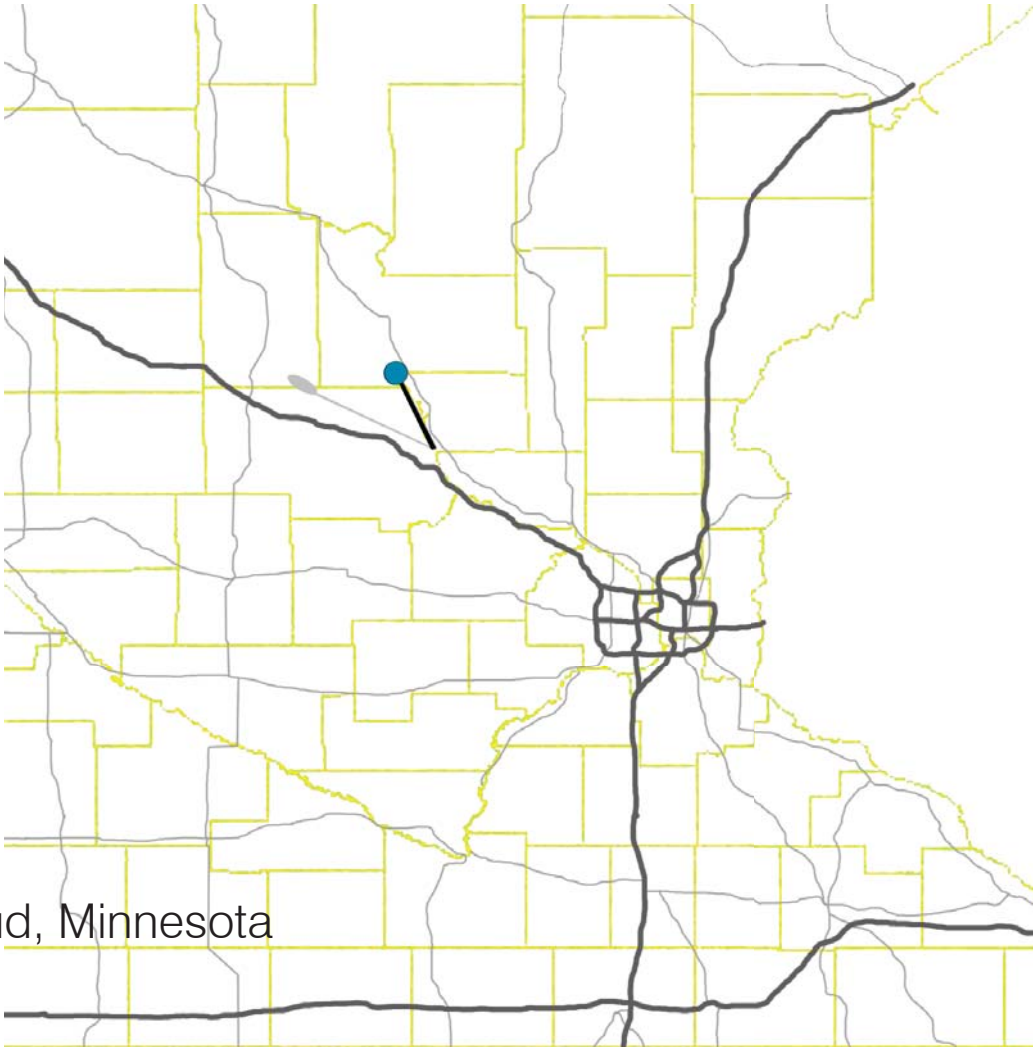
## Design Goals

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- Create a design that will change a users **outlook** on life and experiences that will **restore** them back to a higher quality of life
- Design with users **needs** in mind
- Warm , comforting, **healing** material palette
- Create a design that utilizes **sustainable** practices throughout design, construction, and occupancy. Environmentally conscious design.
- Raise awareness and **inspire** others in the community that this is an issue that needs to be recognized and understood by all members of the community. It is our duty as citizens to take care of our service members.



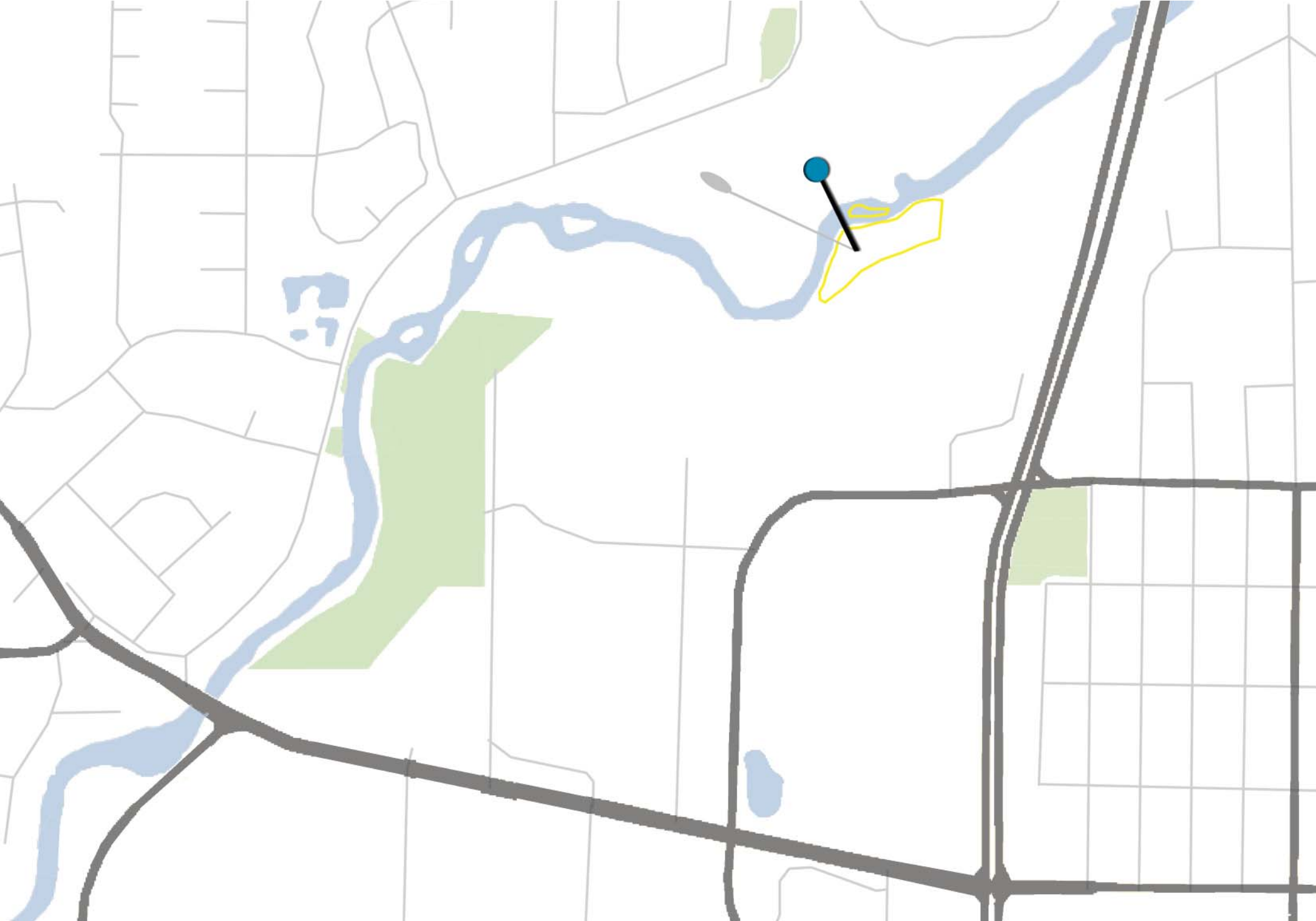
Region: Midwest



City: St. Cloud, Minnesota



Site Selection



Site Selection



Site Photos

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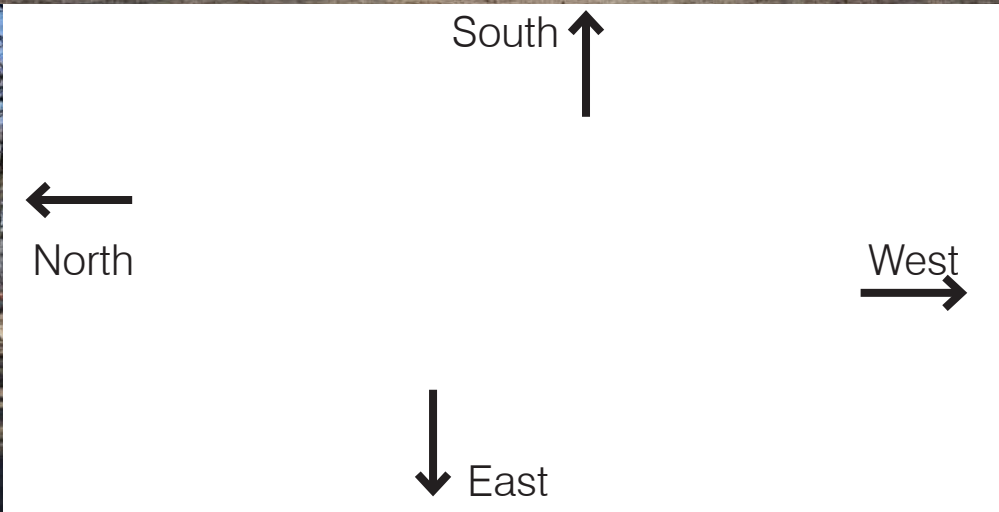


Site Photos

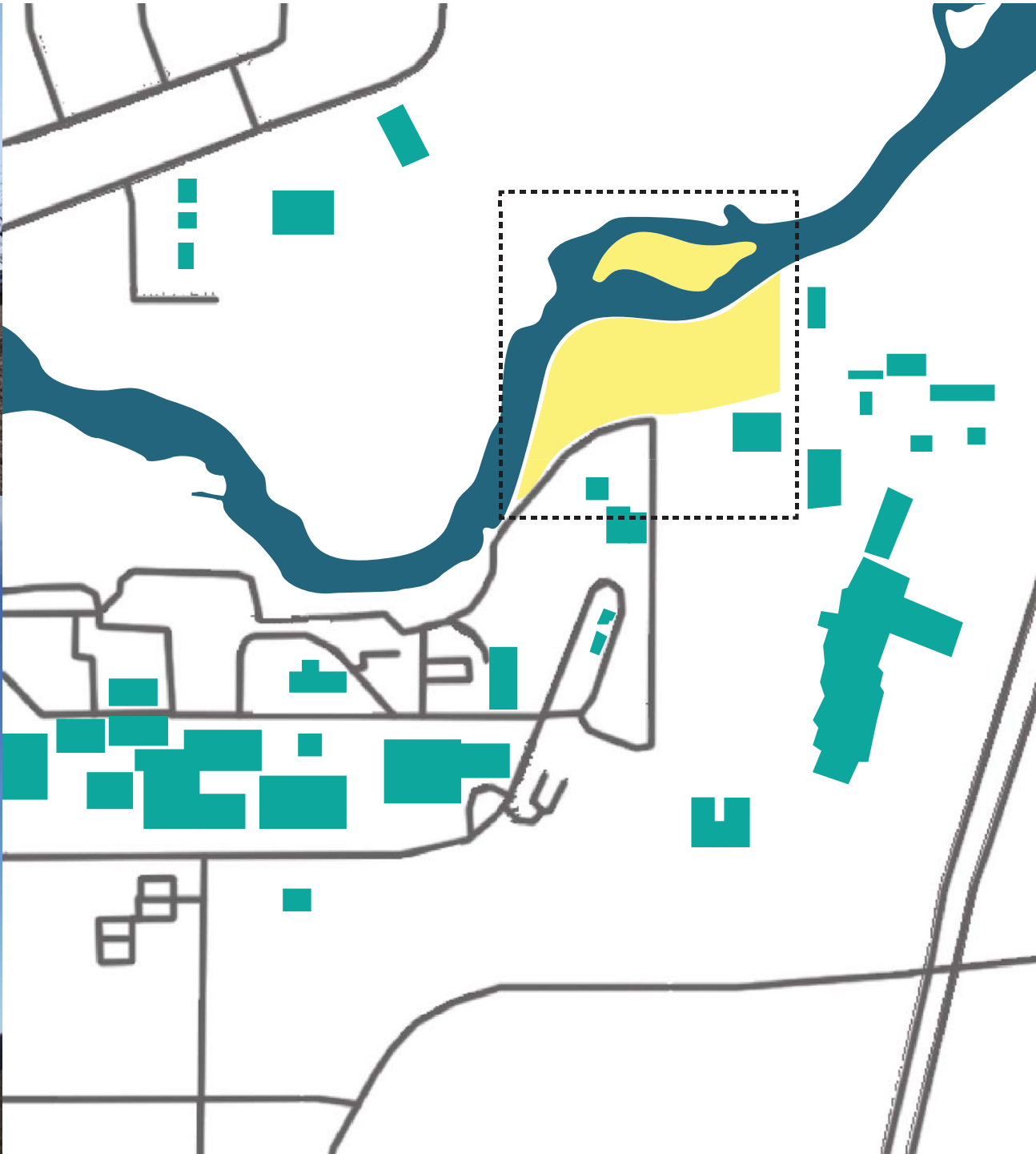
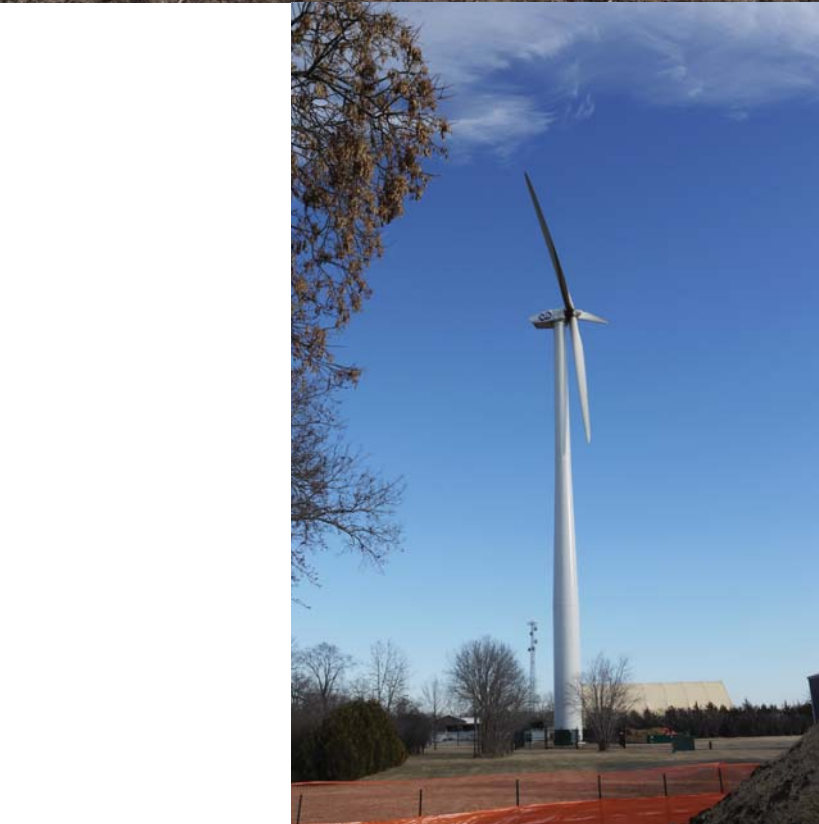
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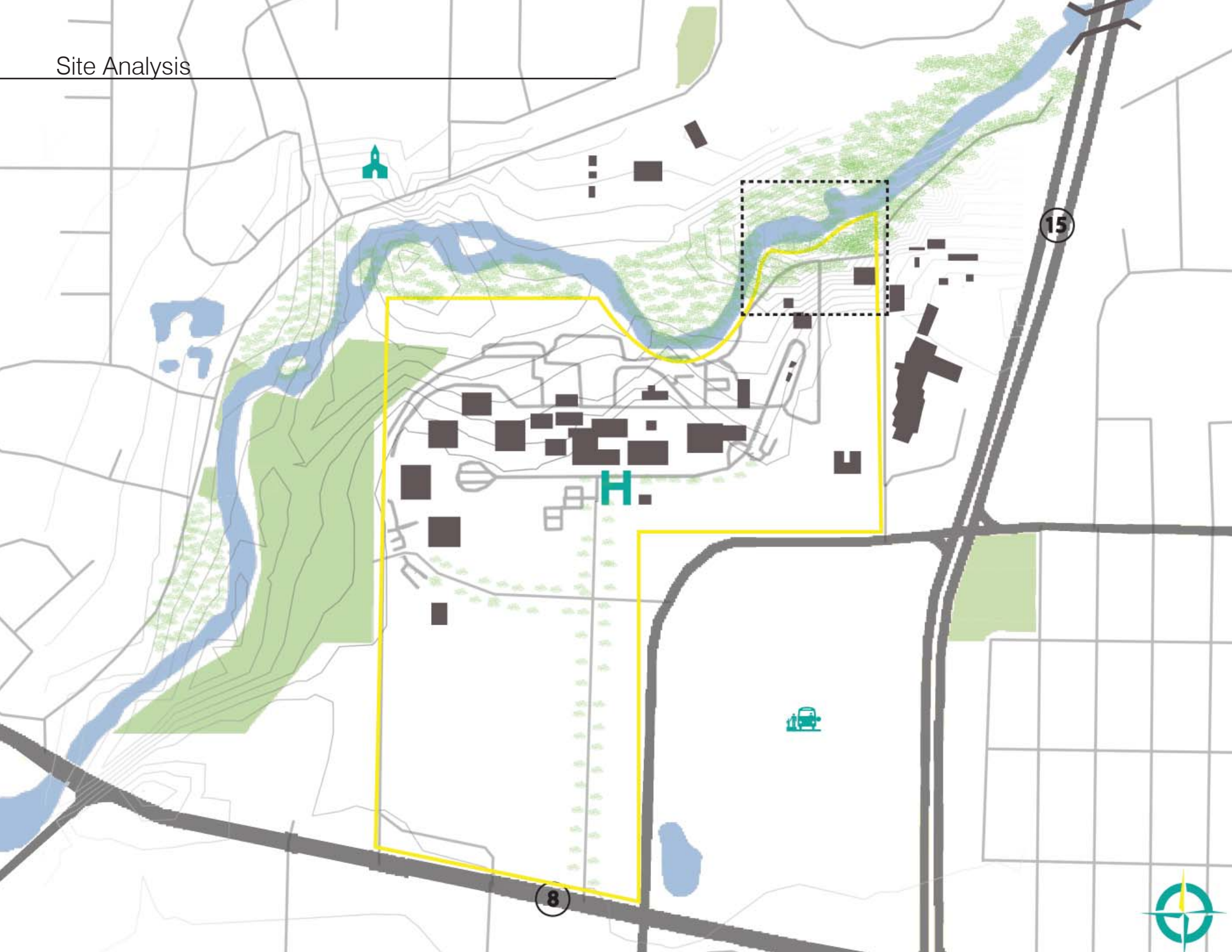
Site Boundaries



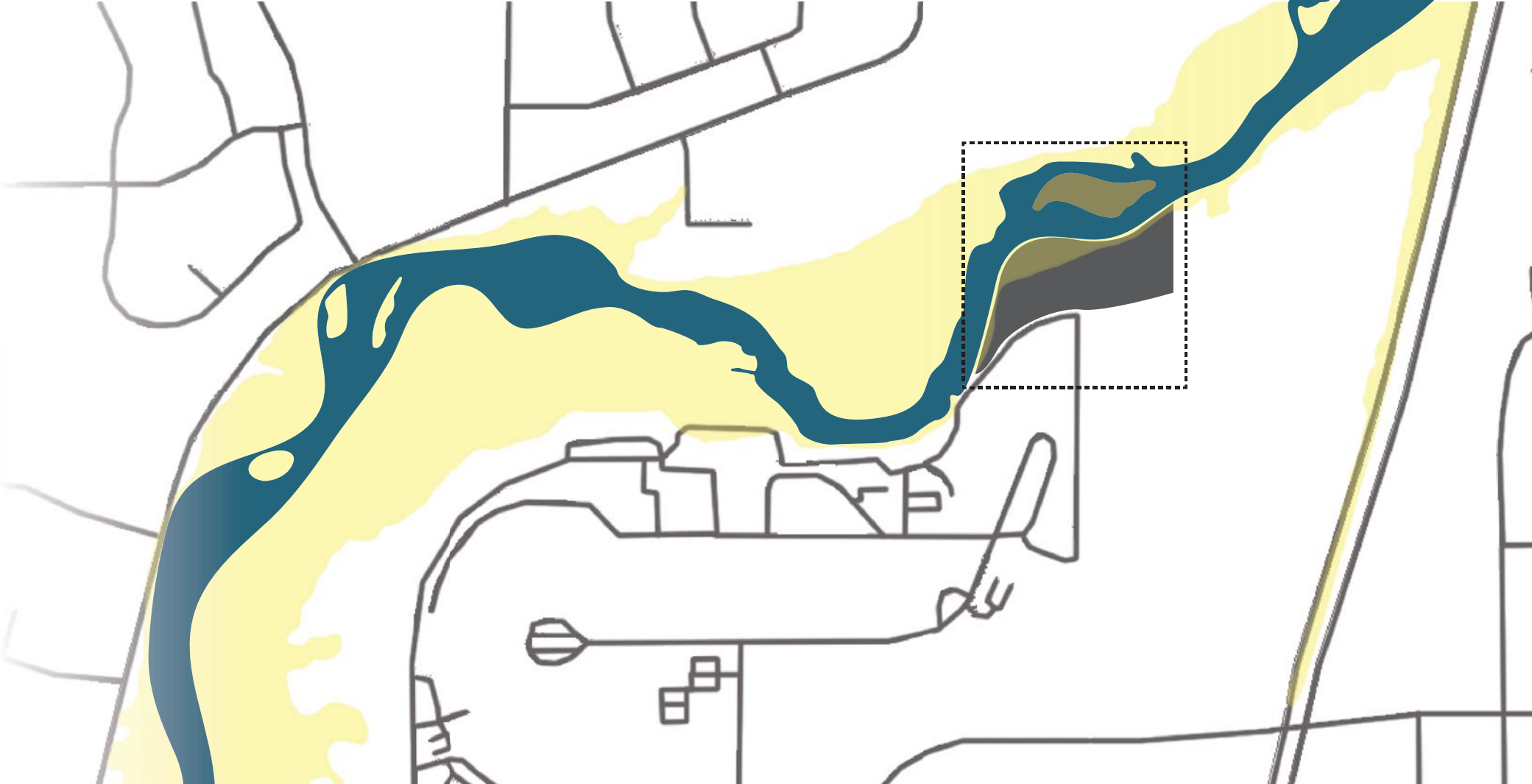
Site Analysis - Existing Structures



Site Analysis

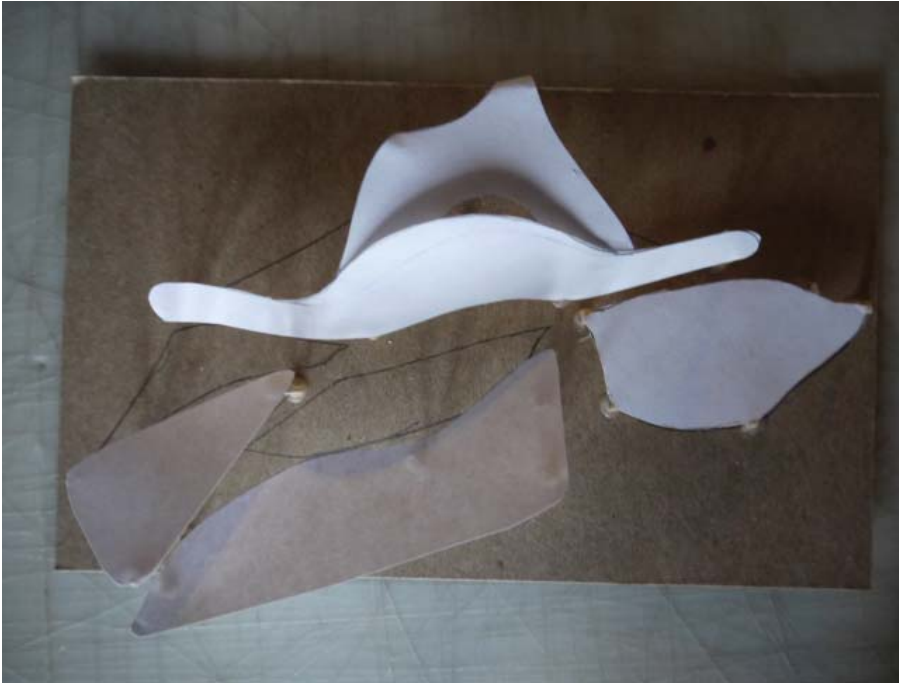
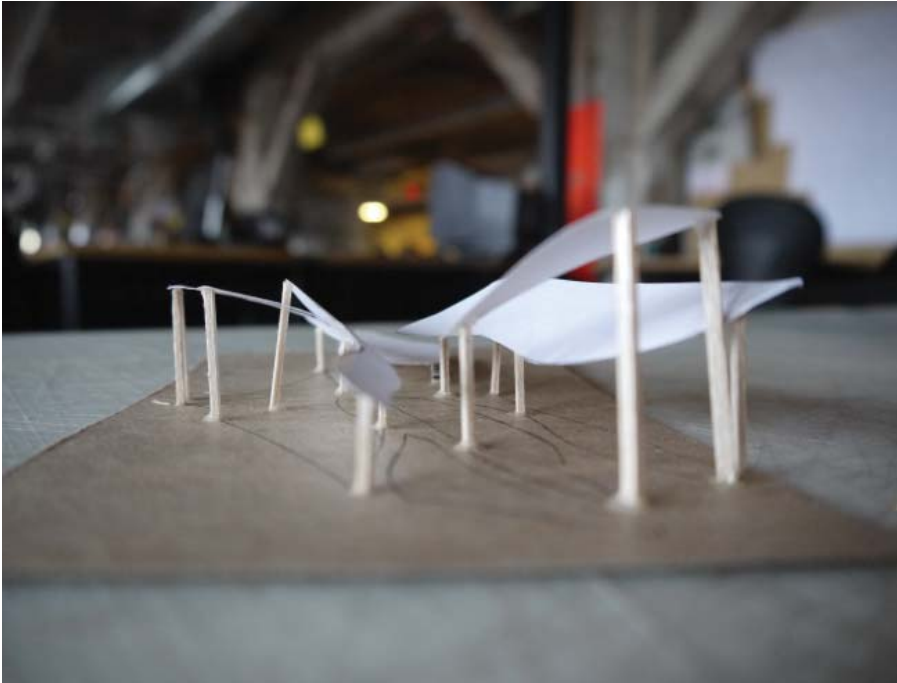


Site Analysis - Flood Plain

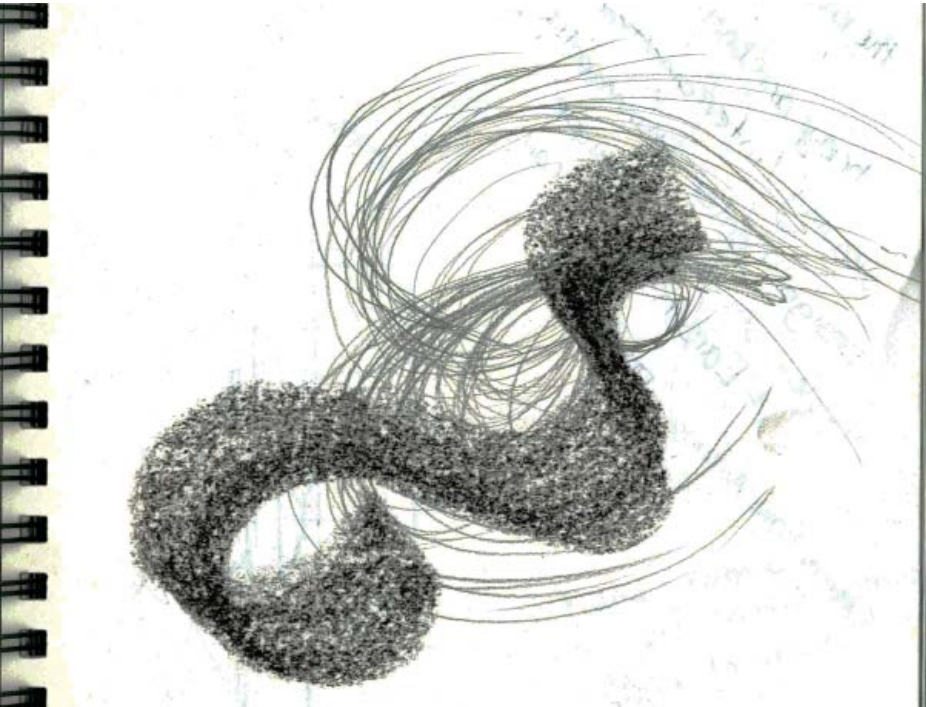
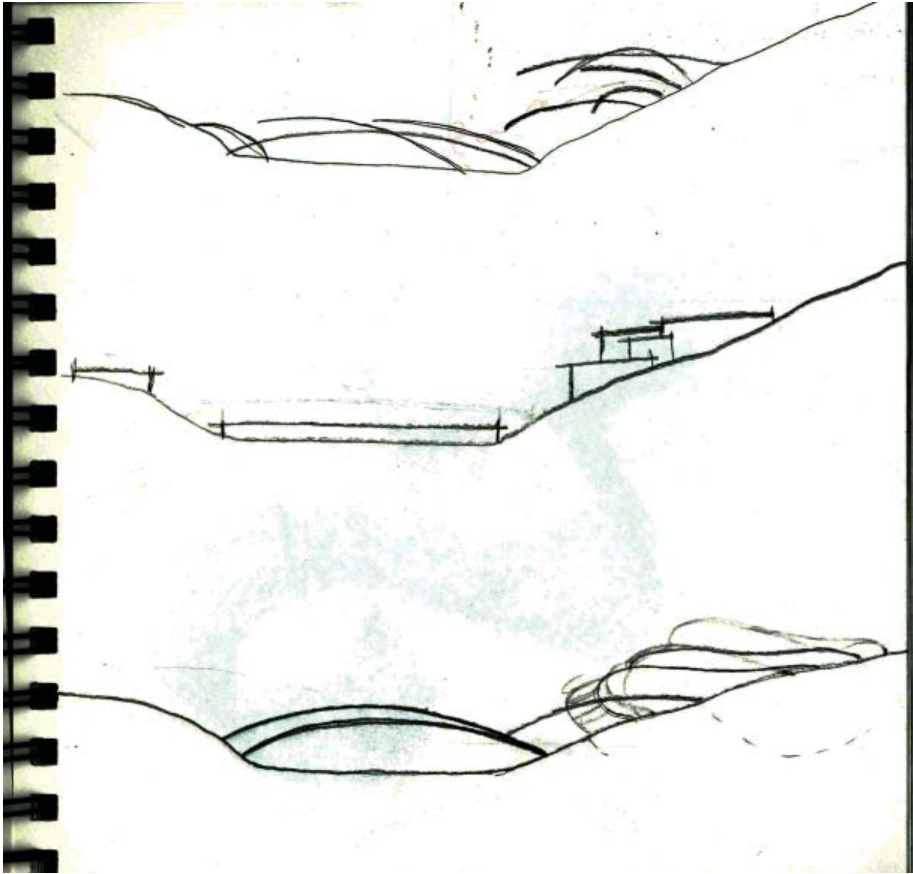




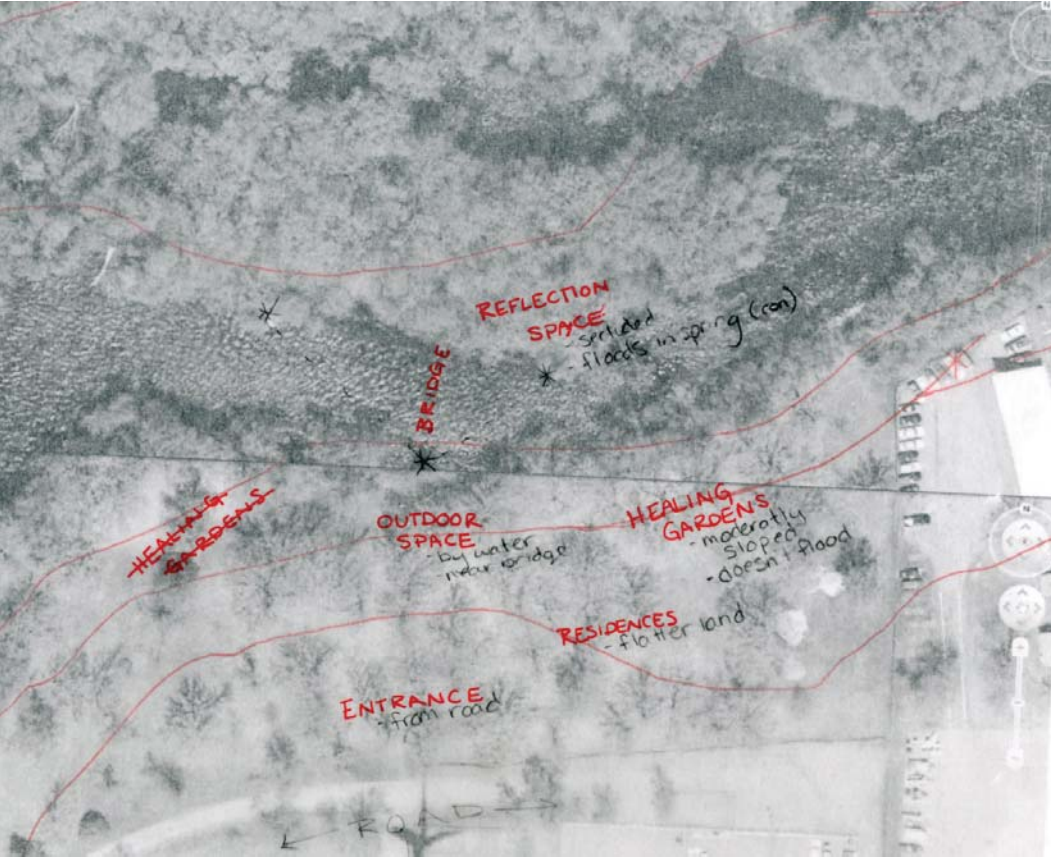
Conceptual Analysis



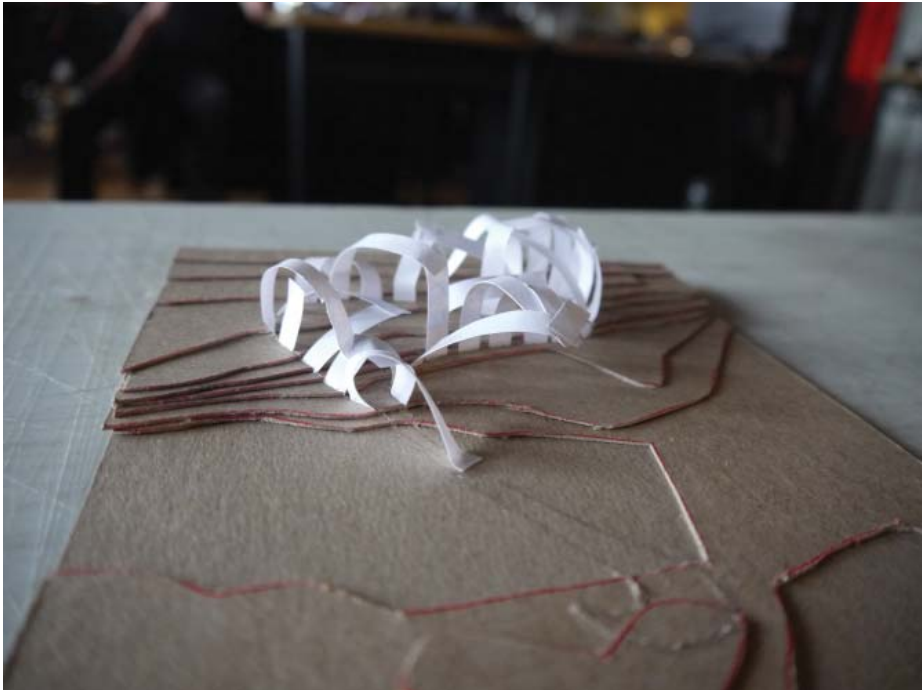
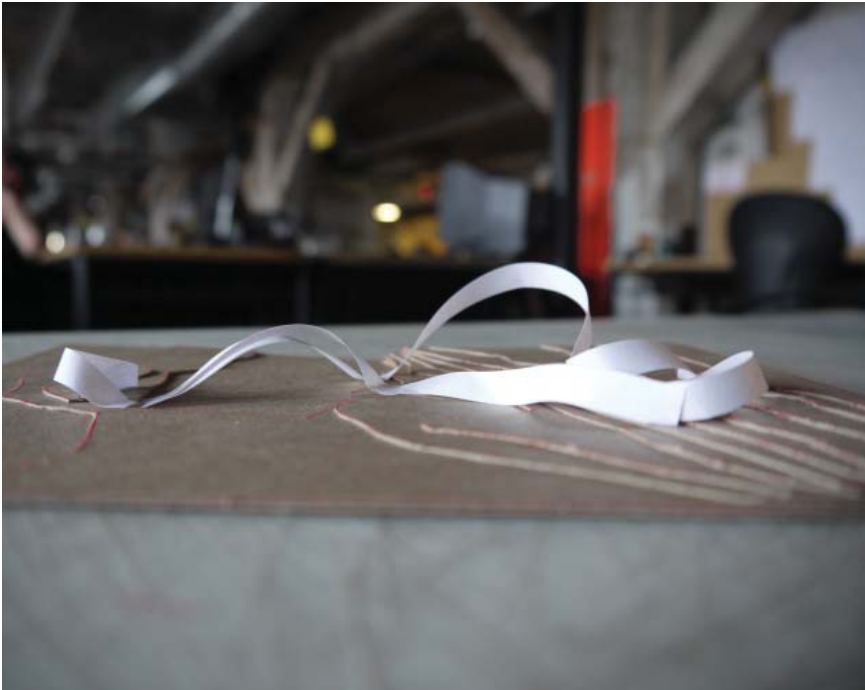
Conceptual Analysis



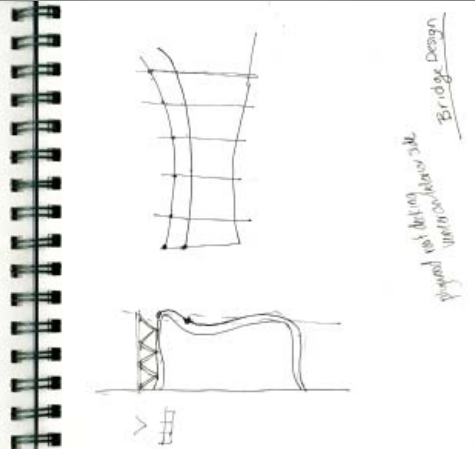
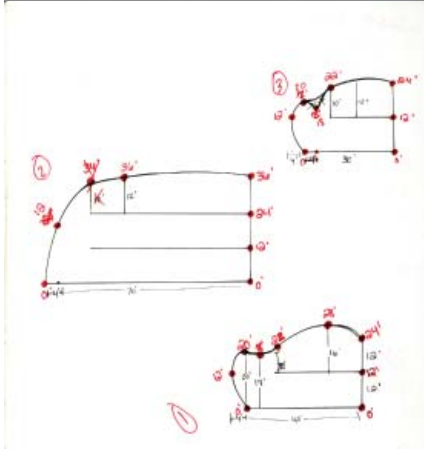
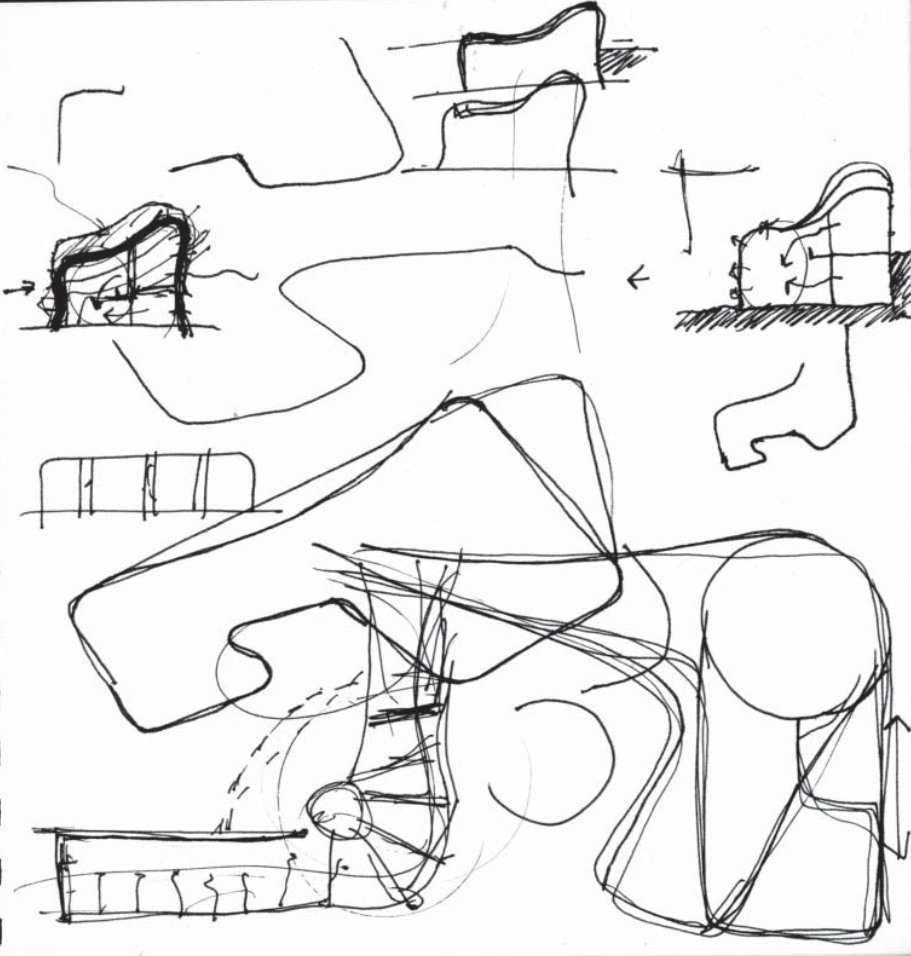
Spatial Analysis



Process

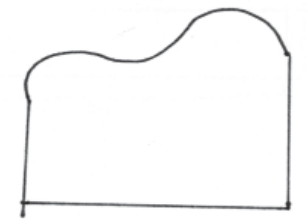
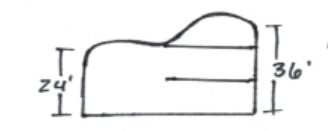
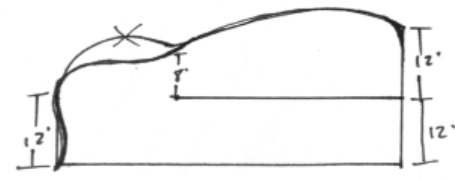
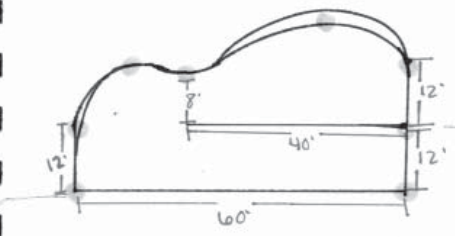
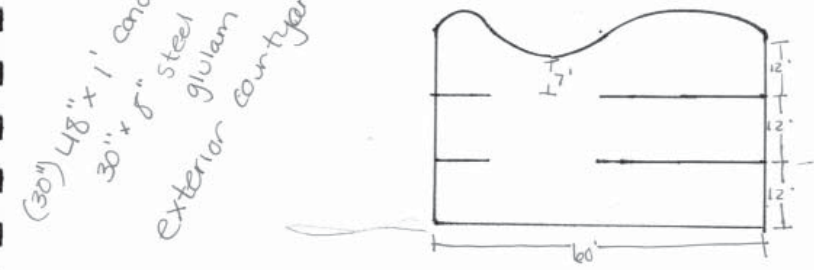


Process

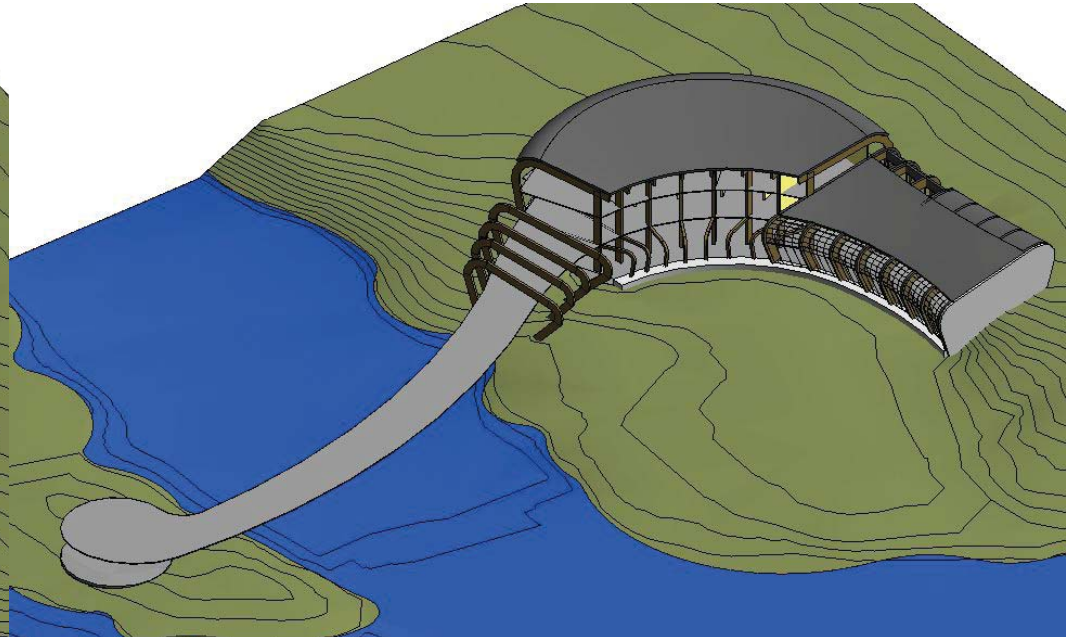
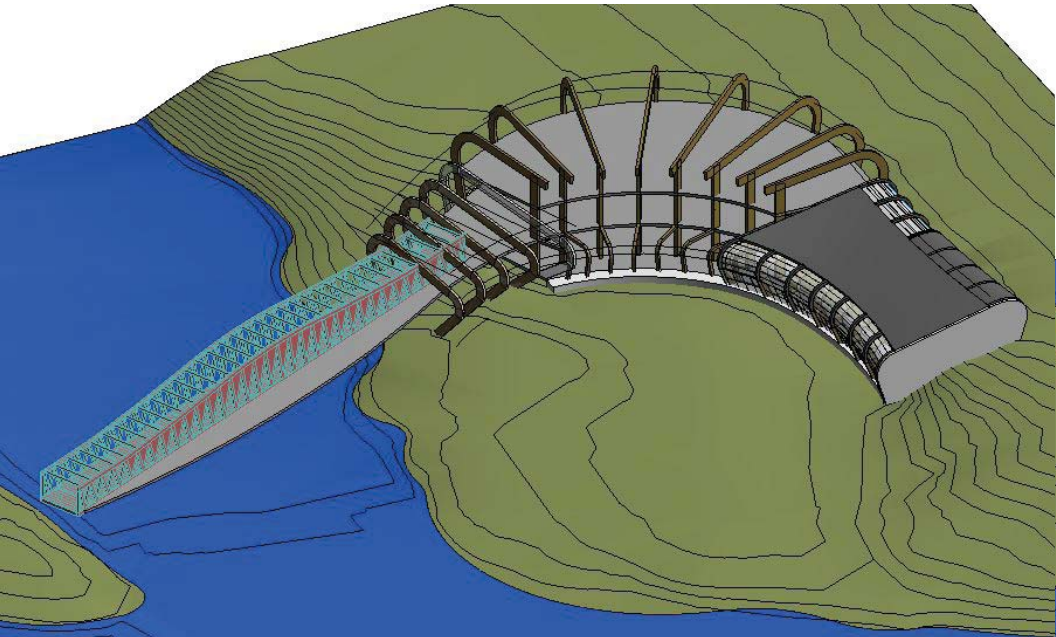
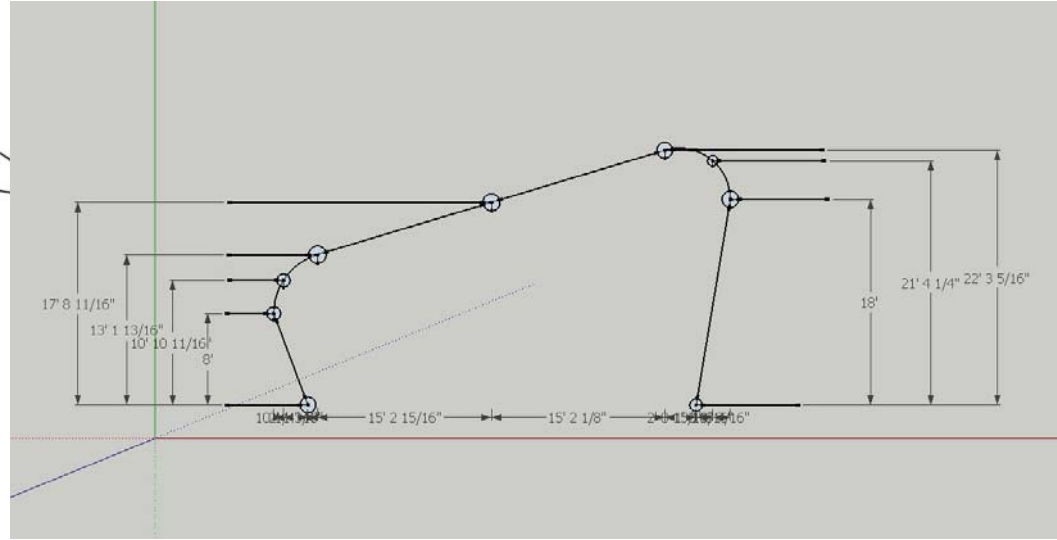
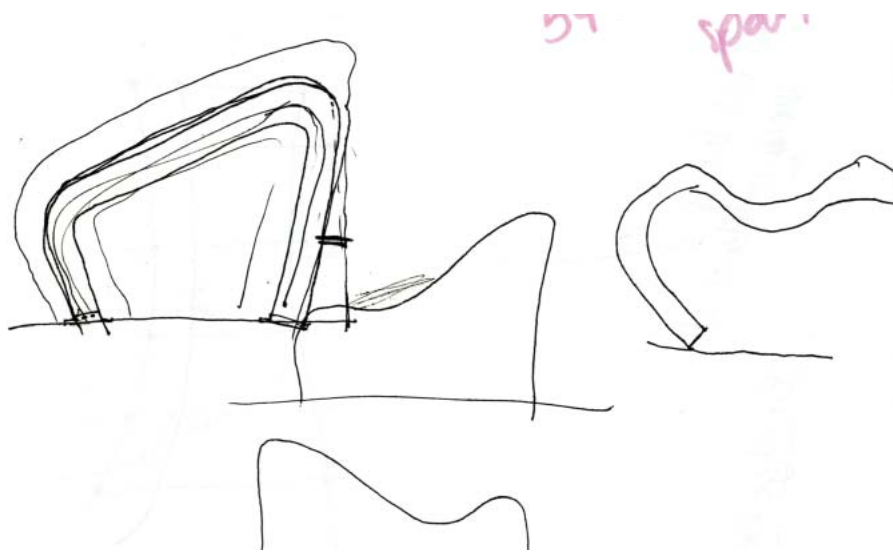


physical and digital model  
 Bridge Design

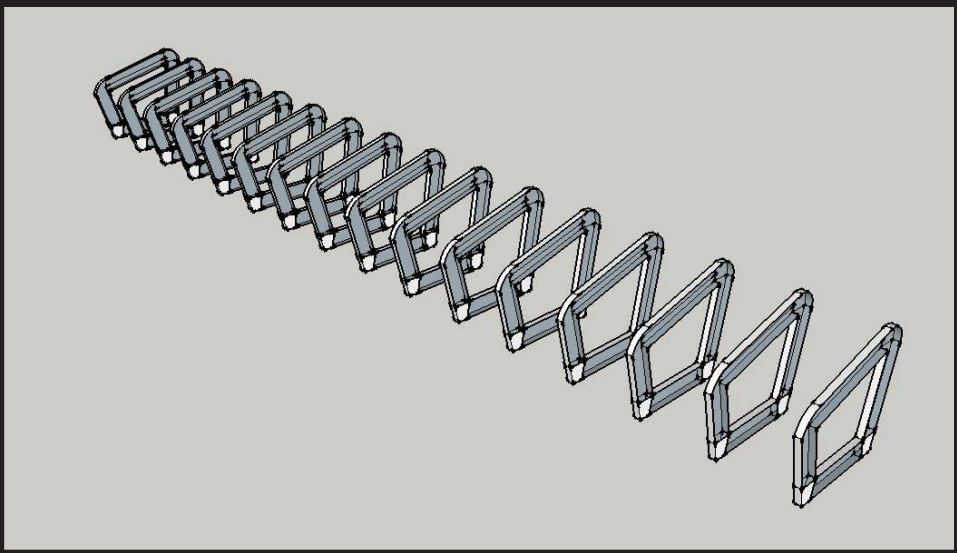
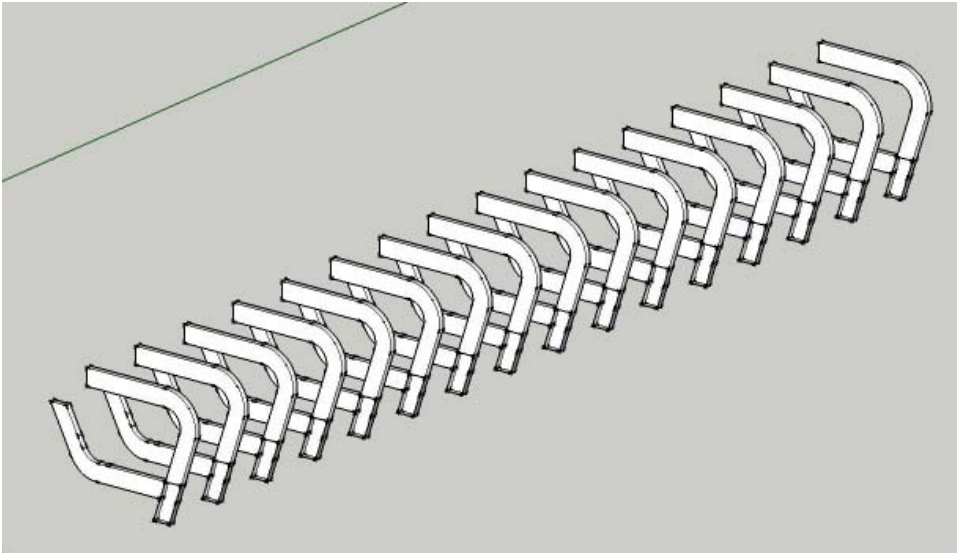
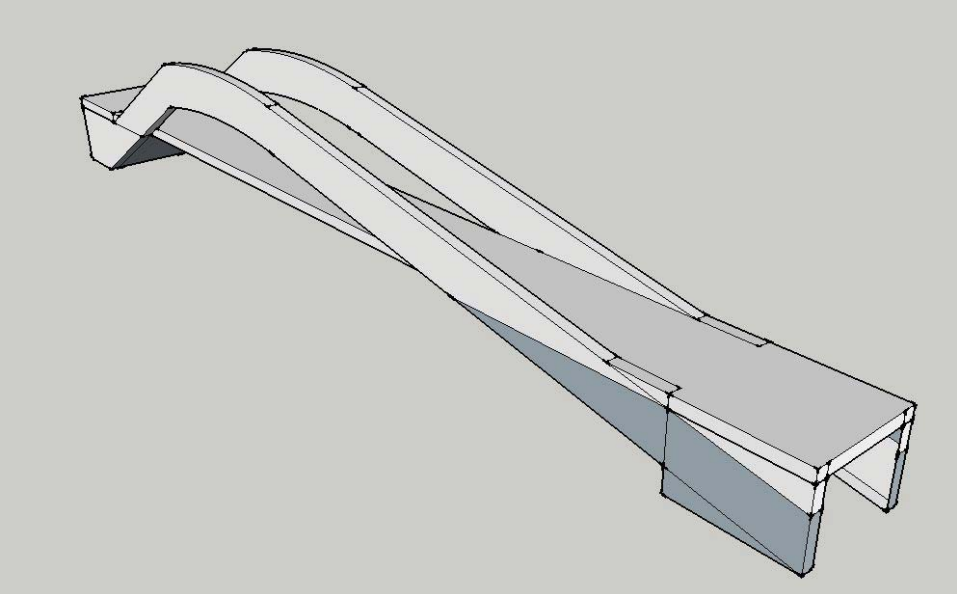
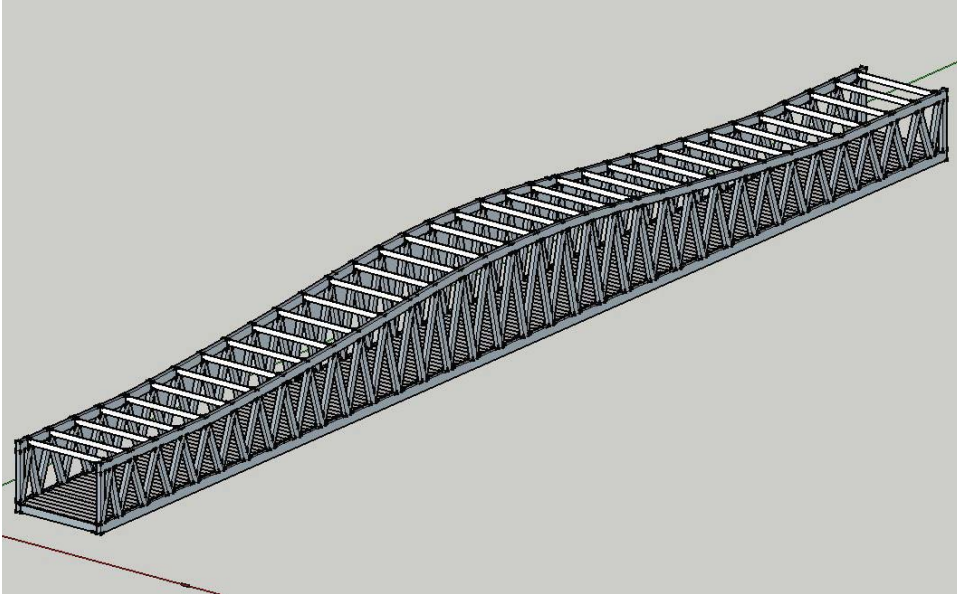
(30") 48" x 1' concrete  
 30" x 8" steel  
 exterior  
 glulam 36" → 60"



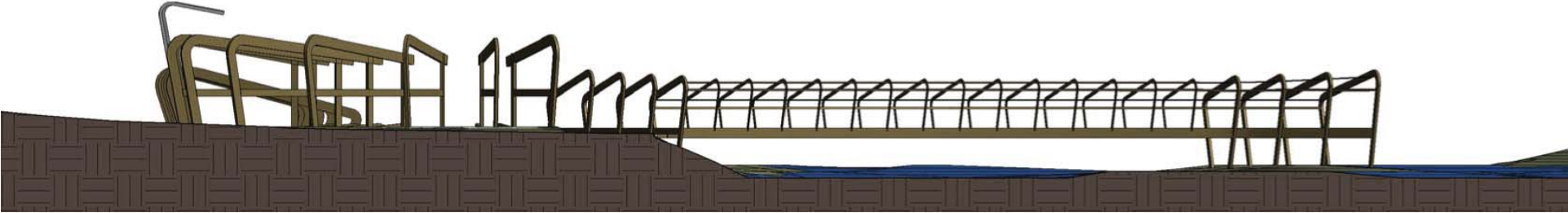
# Process



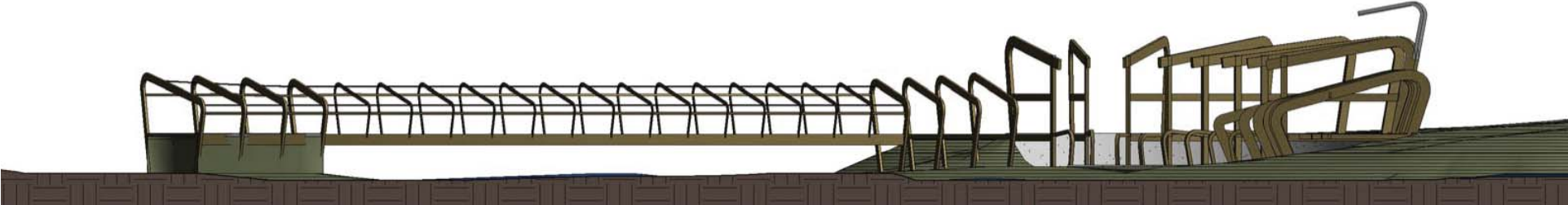
Process



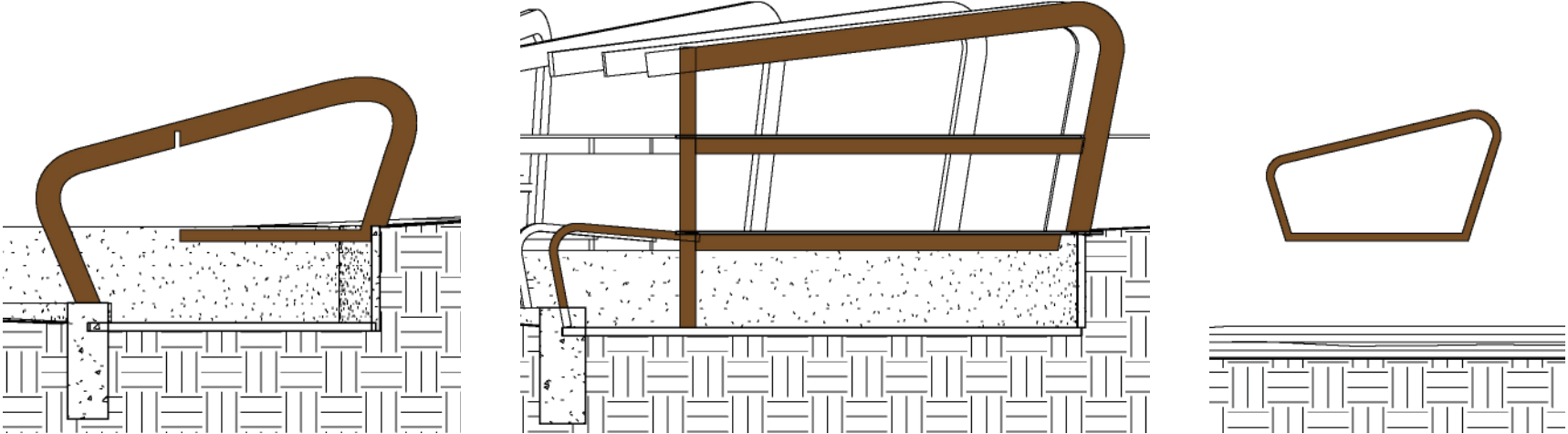
Midterm Process



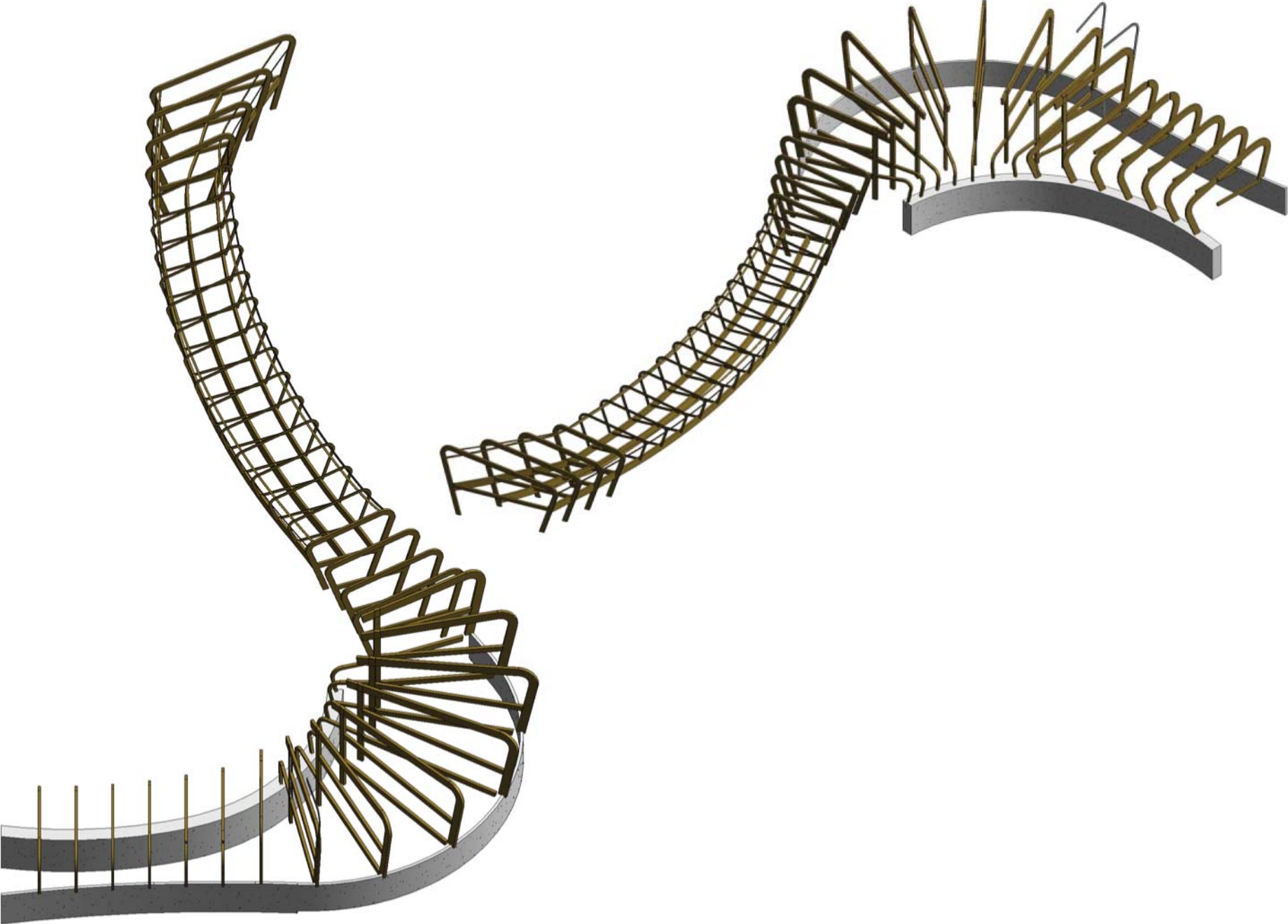
Structure - East Elevation



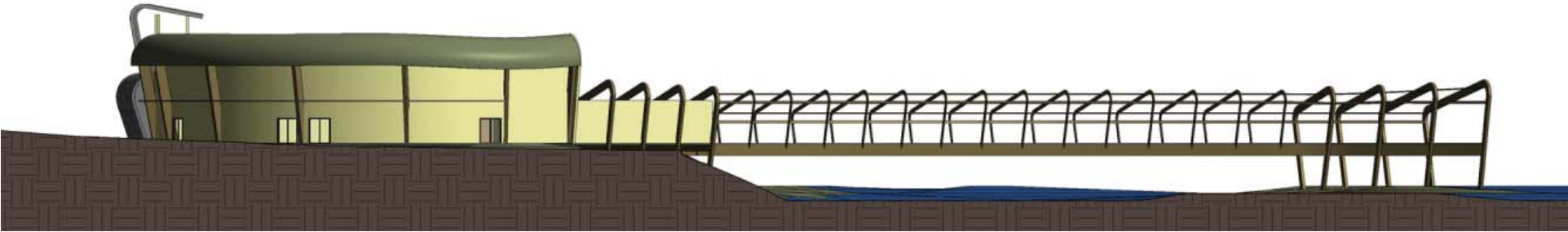
Structure - West Elevation



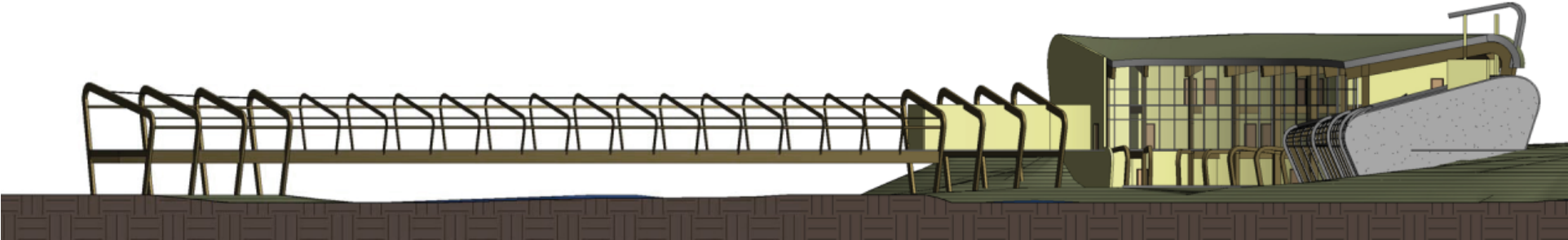




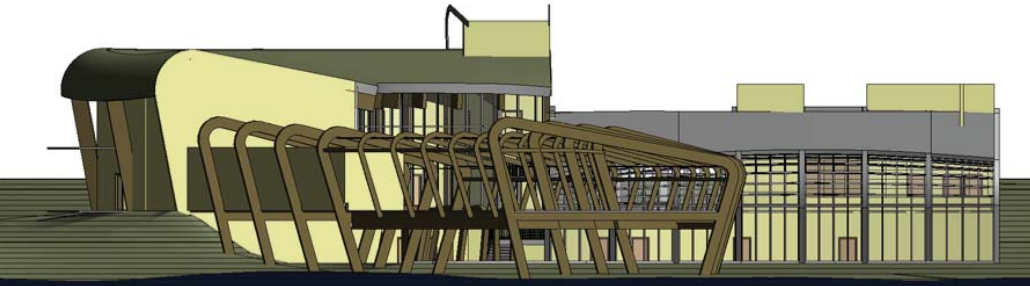
Midterm Process



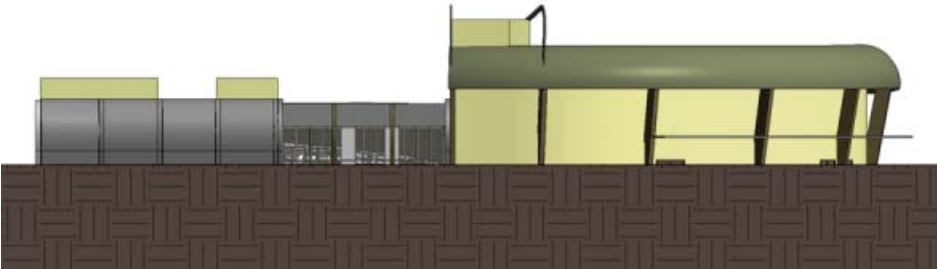
East Elevation



West Elevation



North Elevation



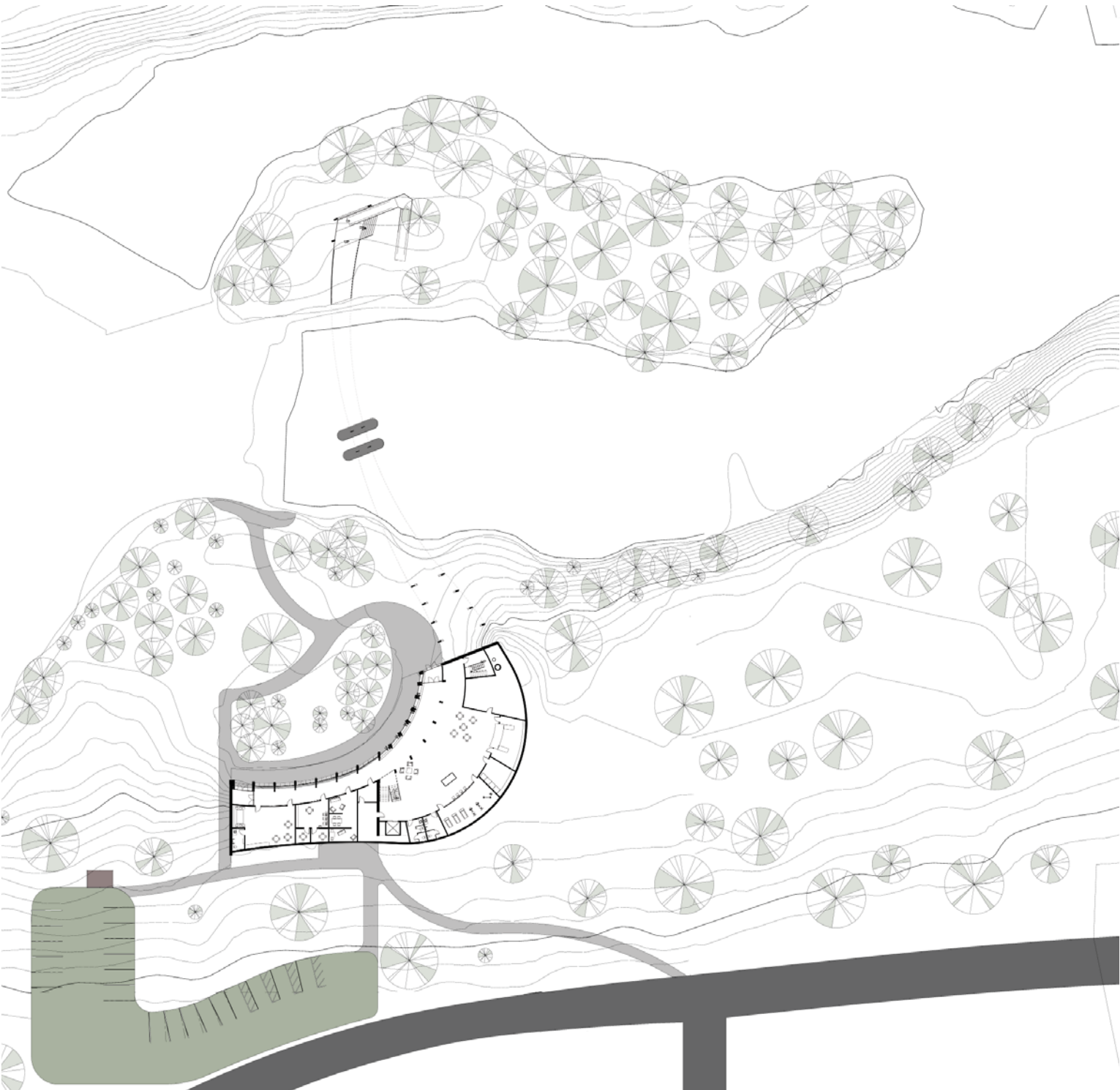
South Elevation

Final Design

Birds Eye View

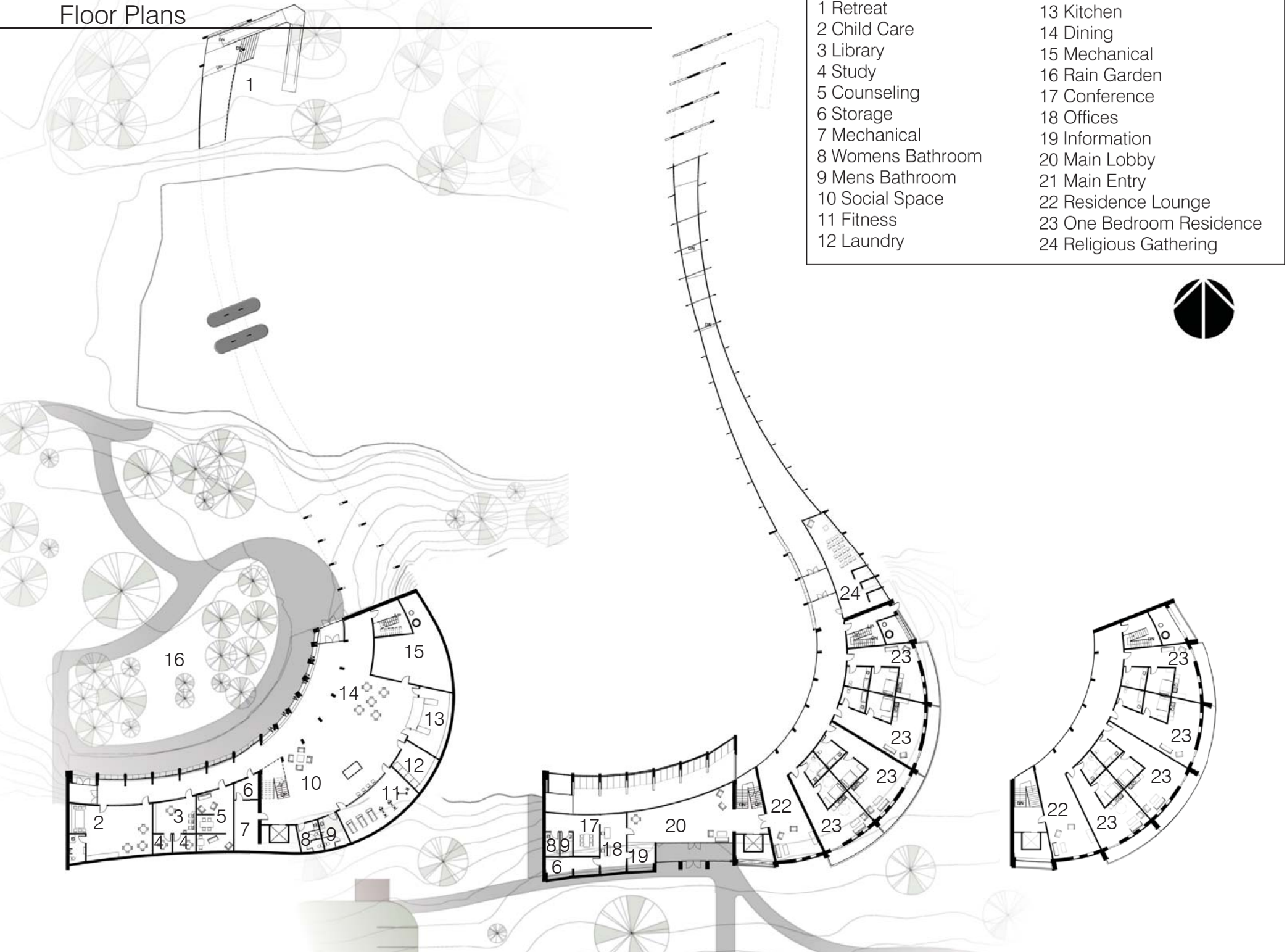


Site Plan

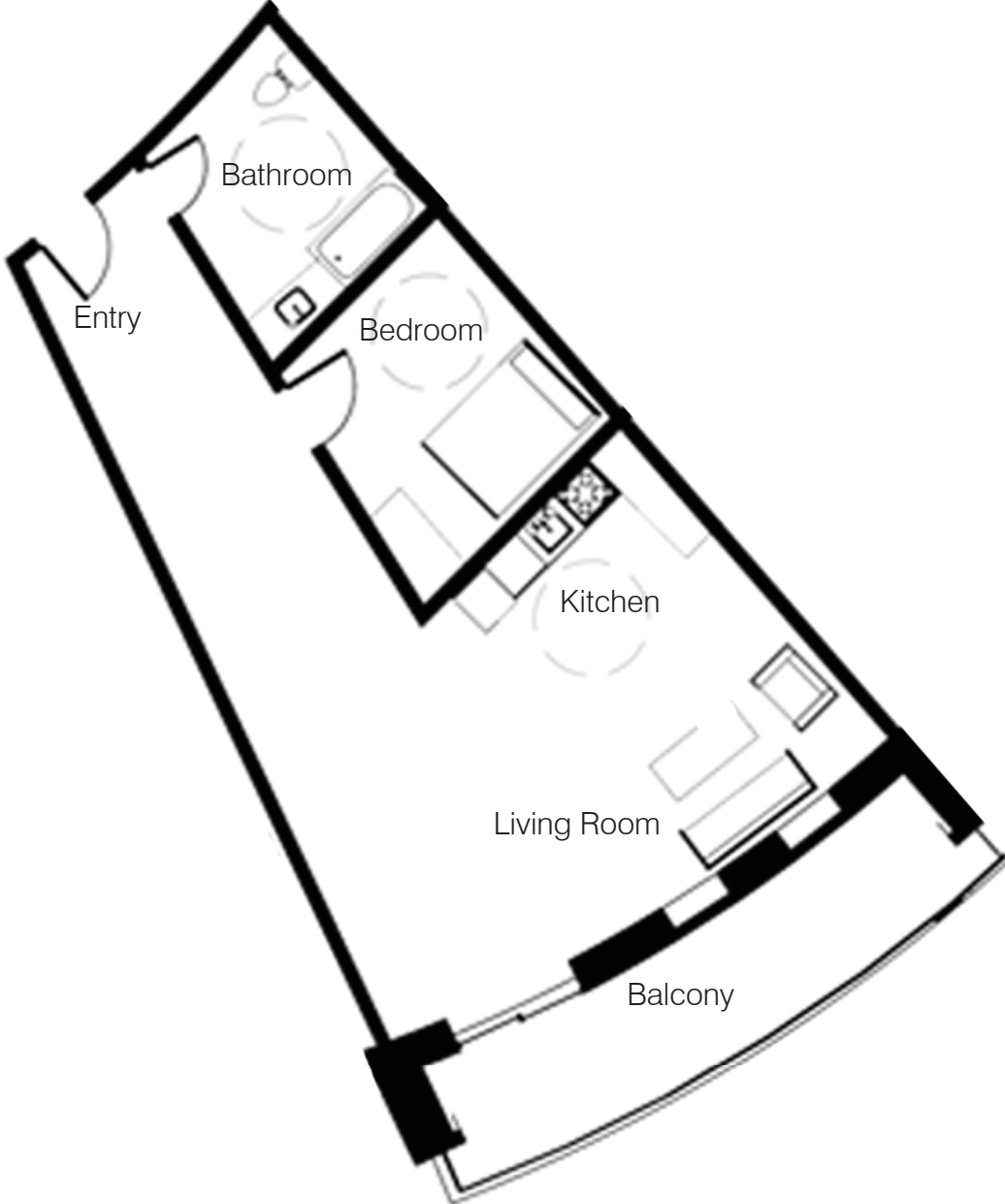


# Floor Plans

- |                   |                          |
|-------------------|--------------------------|
| 1 Retreat         | 13 Kitchen               |
| 2 Child Care      | 14 Dining                |
| 3 Library         | 15 Mechanical            |
| 4 Study           | 16 Rain Garden           |
| 5 Counseling      | 17 Conference            |
| 6 Storage         | 18 Offices               |
| 7 Mechanical      | 19 Information           |
| 8 Womens Bathroom | 20 Main Lobby            |
| 9 Mens Bathroom   | 21 Main Entry            |
| 10 Social Space   | 22 Residence Lounge      |
| 11 Fitness        | 23 One Bedroom Residence |
| 12 Laundry        | 24 Religious Gathering   |



Residential Unit Plan



# Materiality

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Glue-Laminated wood superstructure

Channel glass system

Reinforced concrete footings and foundation wall

Extensive green roof

8" stone wall

Standing Seam Metal Roof

Horizontal tongue and groove cedar exterior siding

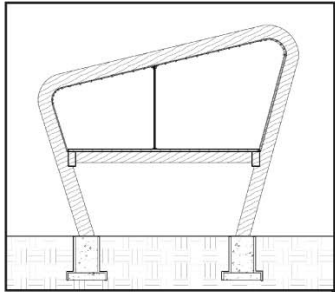
2"x 2" Wood louvers

Vertical tongue and groove cedar exterior siding

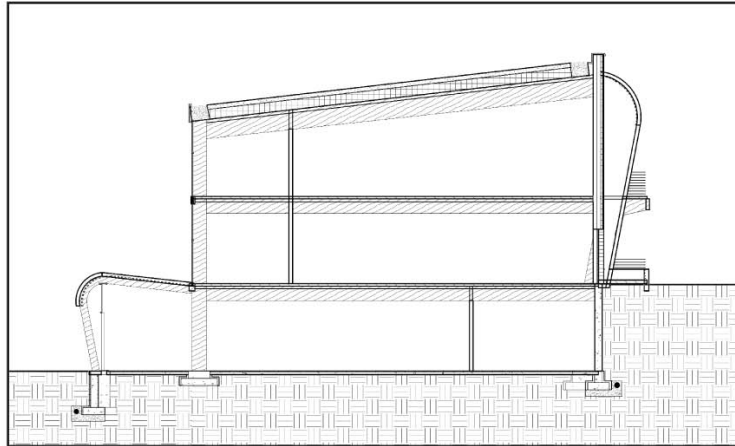




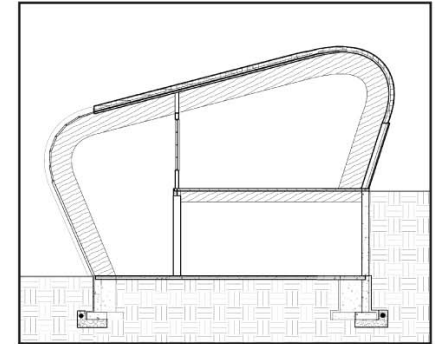
# Section Details



- Glue-laminated superstructure
- Channel glass system
- Tongue and groove wood flooring
- Reinforced concrete footing



- Reinforced concrete footings and foundation wall
- Glue-laminated superstructure
- Tongue and groove wood flooring
- Tongue and groove wood ceiling
- 8" stone wall
- Horizontal tongue and groove cedar exterior siding
- Exterior curtain wall system
- Extensive green roof



- Reinforced concrete footings and foundation wall
- Glue-laminated superstructure
- Tongue and groove wood flooring
- Tongue and groove wood ceiling
- Horizontal tongue and groove cedar exterior siding
- Exterior curtain wall system
- Standing seam metal roof



Sustainable Strategies



Permeable Pavers

Extensive Green Roof

Operable Windows

Grasscrete Parking Lot

Rain Garden



Social Gathering Space



Religious Gathering Space



Outdoor Gathering Space



Residential balconies

# Thank You

Questions?