

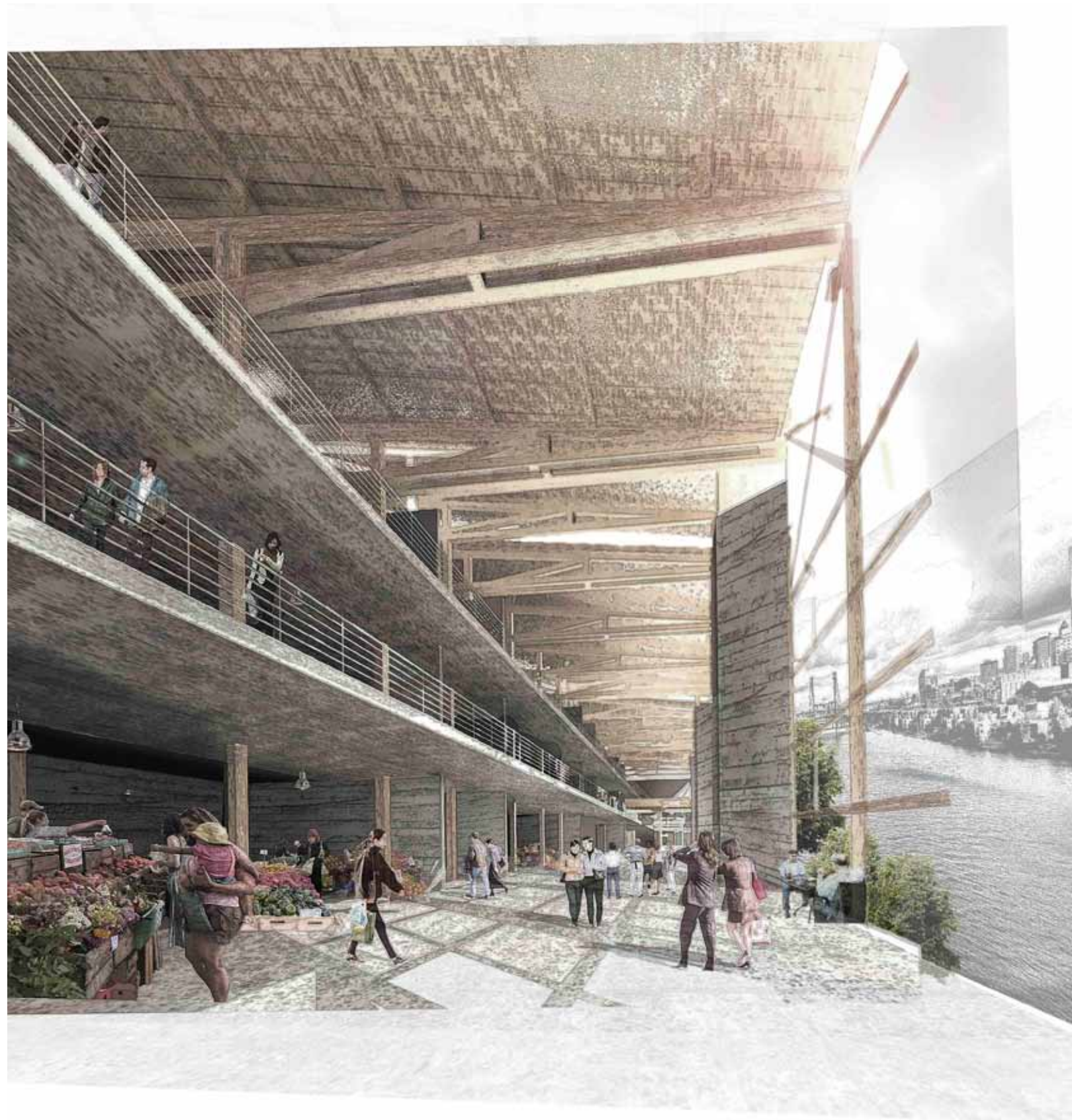


# THE WILLAMETTE MARKET

A THESIS PROJECT

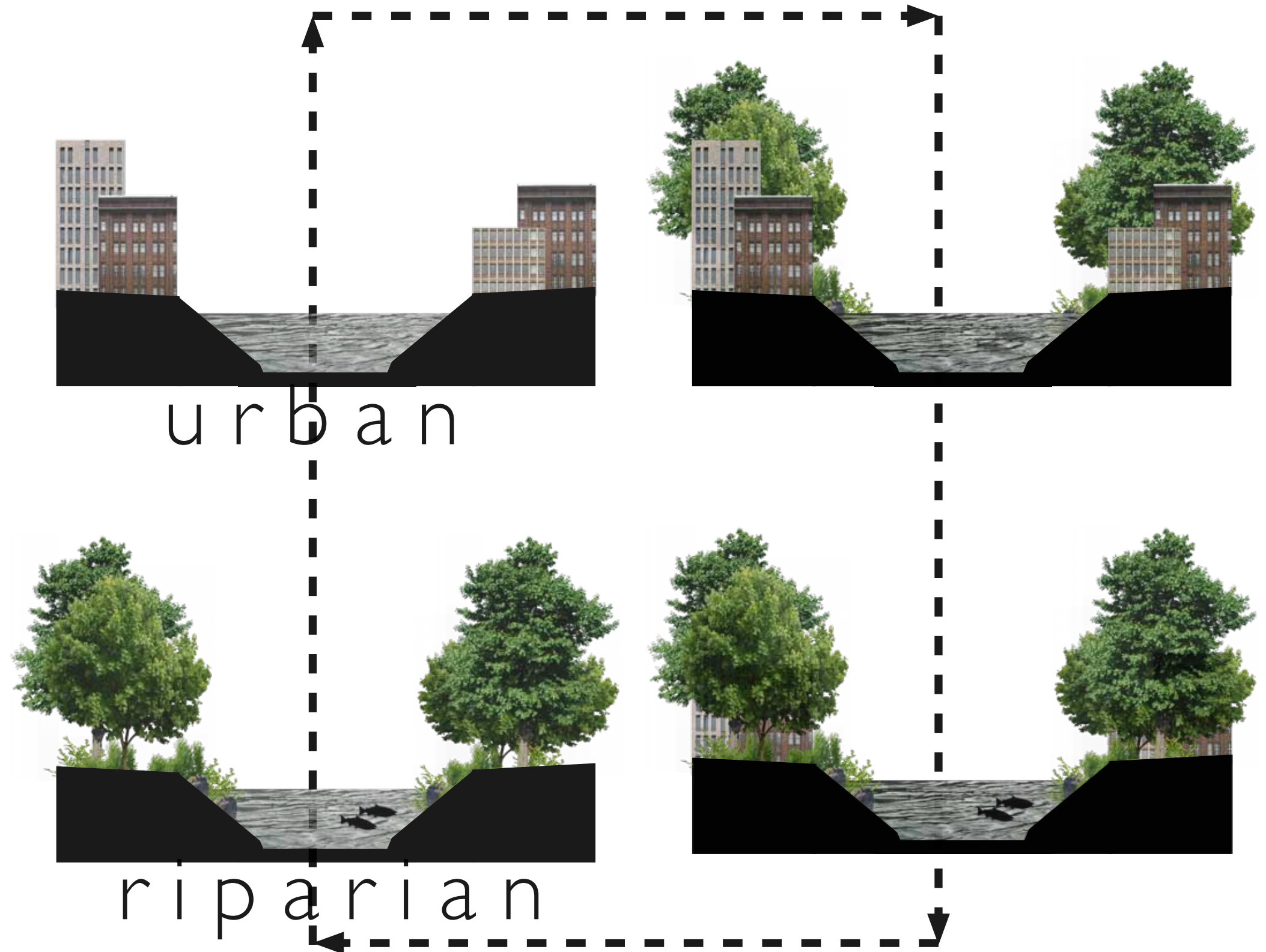
BEN CARSTENSEN

Thesis Project  
Fall 2011 - Spring 2012  
By Ben Carstensen  
Prepared for Nancy Cheng



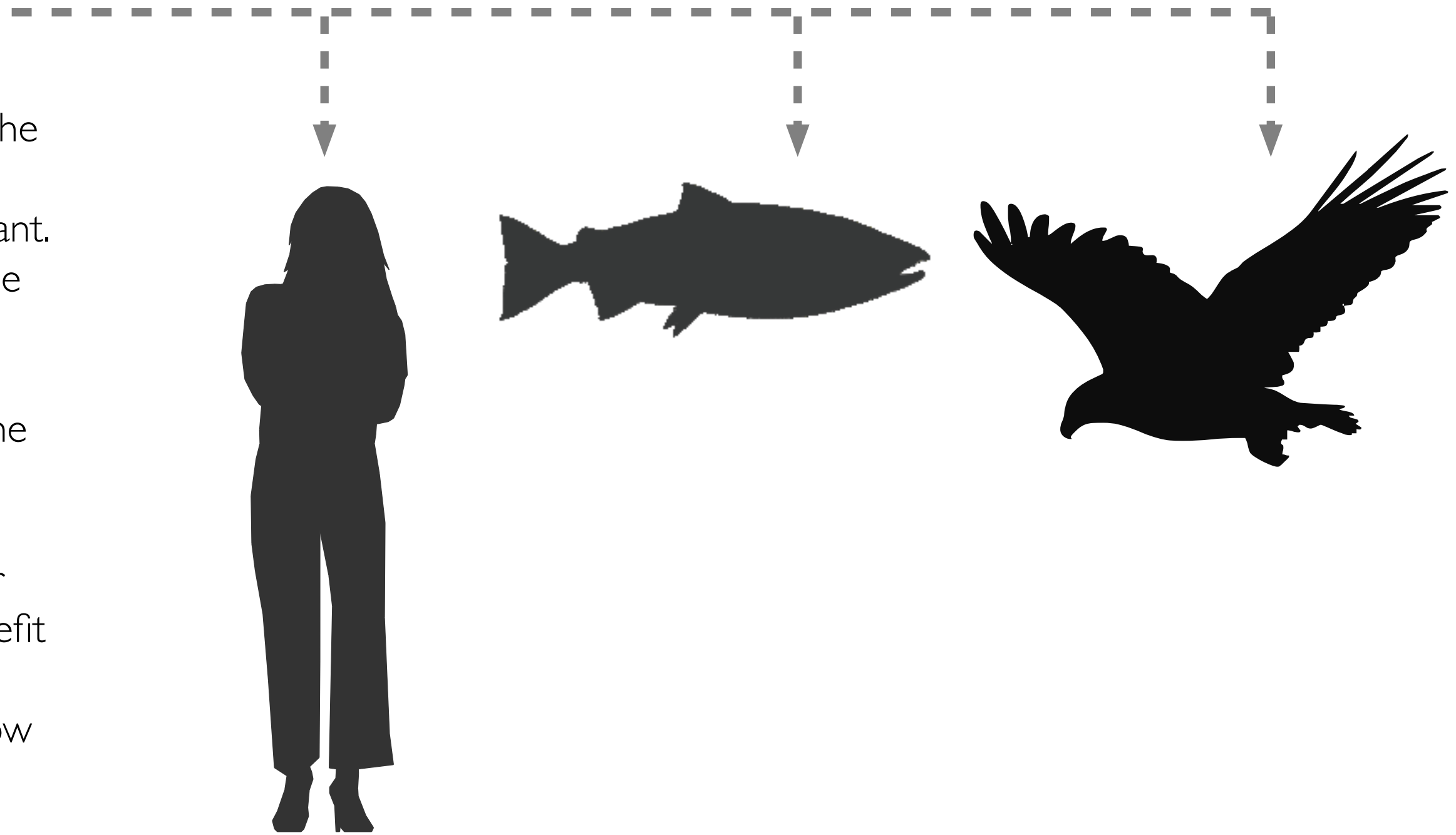
# ABSTRACT

The things that make a city successful are the same things that make an ecosystem successful. An ecosystem finds balance, through diversity. One looks at a riparian ecosystem and sees great diversity and dynamic coordination between all organisms. A successful city engages its inhabitants, and all elements of a city work together in a massive system to benefit each other in a similar way.



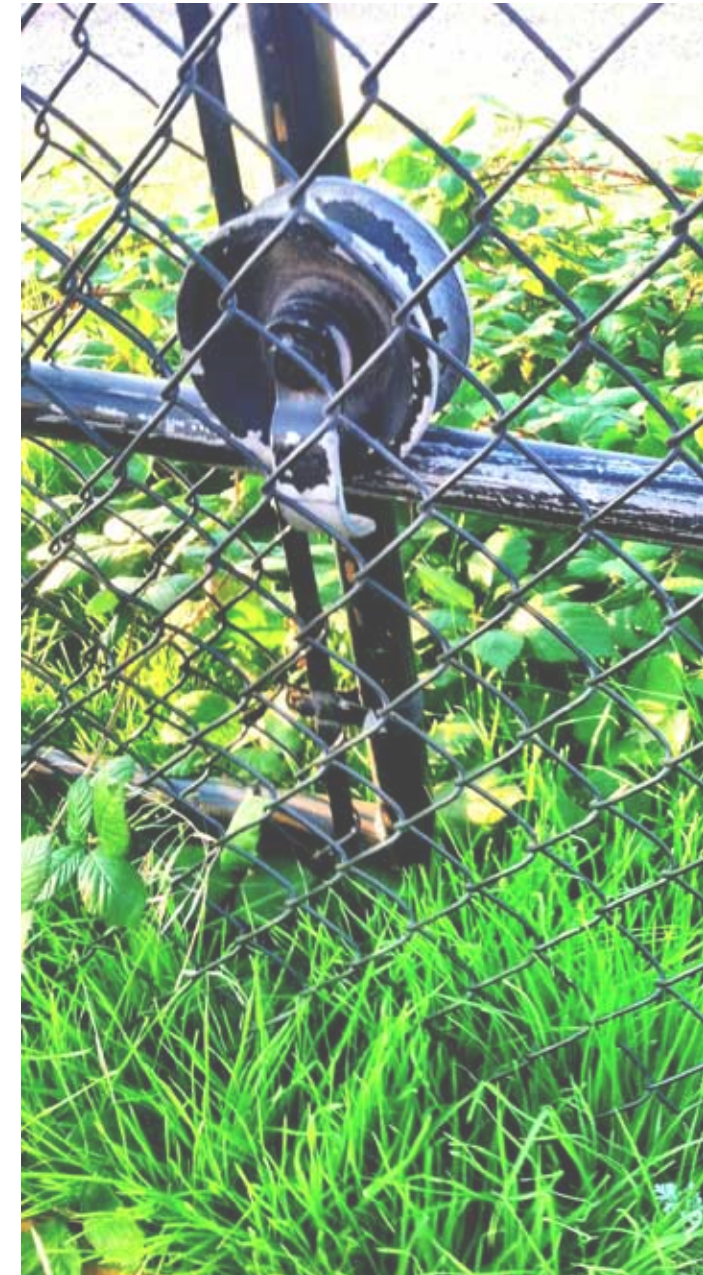
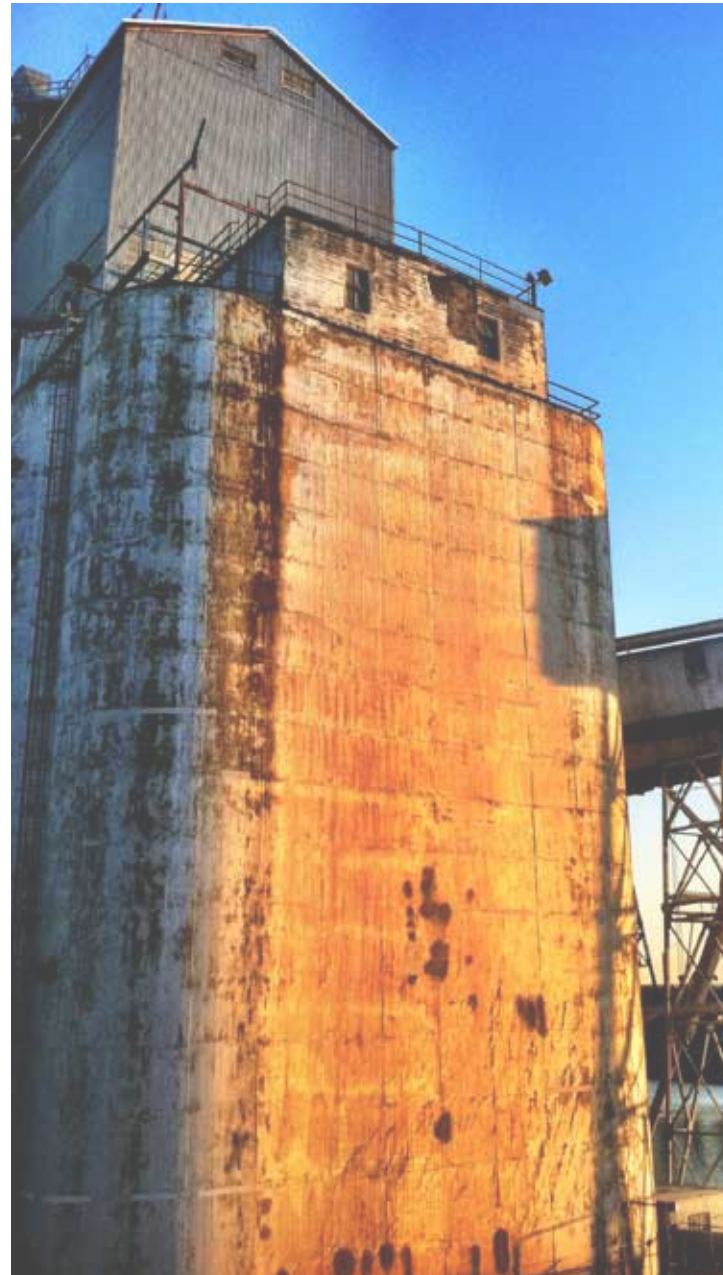
# CLIENTS

The site is at the edge of the Willamette River, so the treatment of the waters edge is incredibly important. I am interested in how the aquatic ecosystem and terrestrial ecosystem can inhabit and enjoy the same space. The design of the water's edge is essential to how people and other terrestrial organisms benefit from water, but it is also important understand how aquatic organisms inhabit those areas as well.



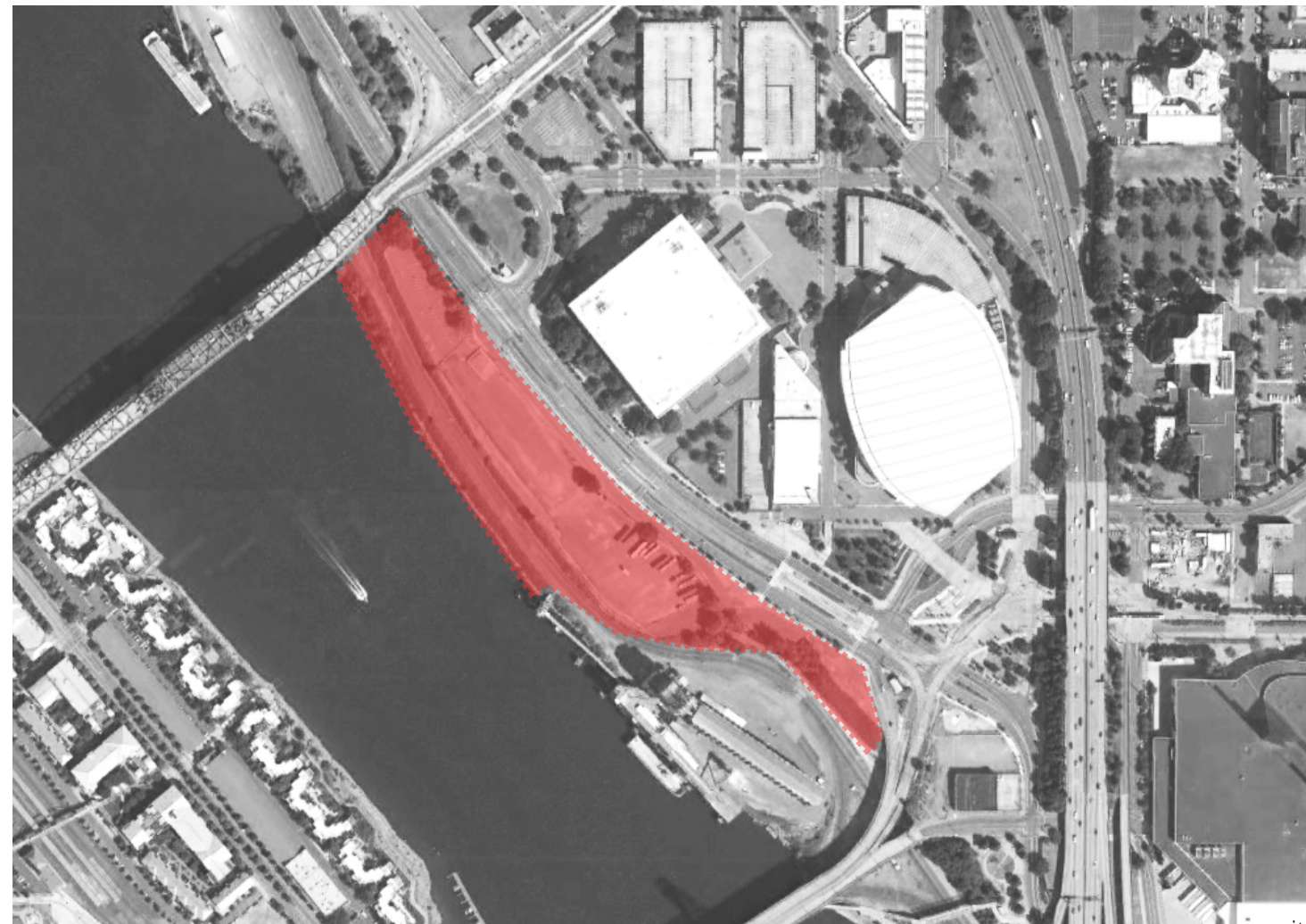
# SITE

The site is located in the Rose Quarter of Portland, and therefore within the boundary of the Lloyd Pilot Eco-District. As of now, the site consists of an overflow parking lot for area attractions (the Rose Garden and the Memorial Coliseum). The site is disconnected from the water by railroad tracks, which will be moved underground. The site provides for beautiful views, and is highly visible from other areas of the city.

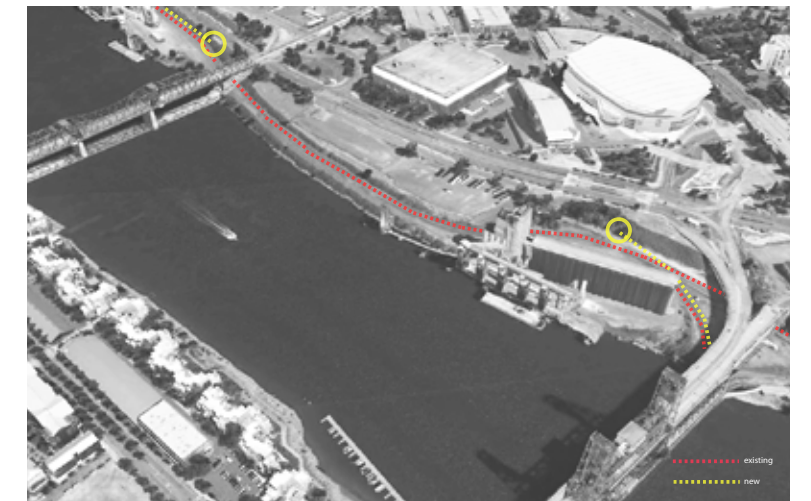


# SITE

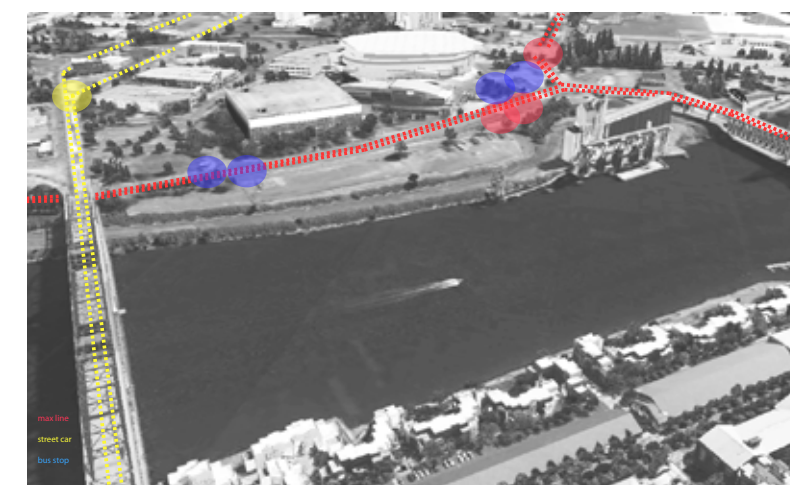
The site provides interesting opportunities for development because of its prominent location in Portland, however it remains disconnected from pedestrian access. It is near hubs for public transportation, but could create stronger connections. Urban planning becomes important to the developments success.



site



rail lines



transit

# SITE

Views to and from the site are extraordinary, and are to be valued. With great visual ties to the surrounding city, the potential for any development is strong. The site is easily seen from both the Steel Bridge, and the Broadway Bridge as one passes over them.

view across willamette to site



view across willamette to site from base of steel bridge



view from site to downtown



# FOUR QUESTIONS

What type of buildings can enrich the urban fabric of Portland's Rose Quarter bringing life to the area?

What large scale design decisions can be made that begin to define a district identity for the area?

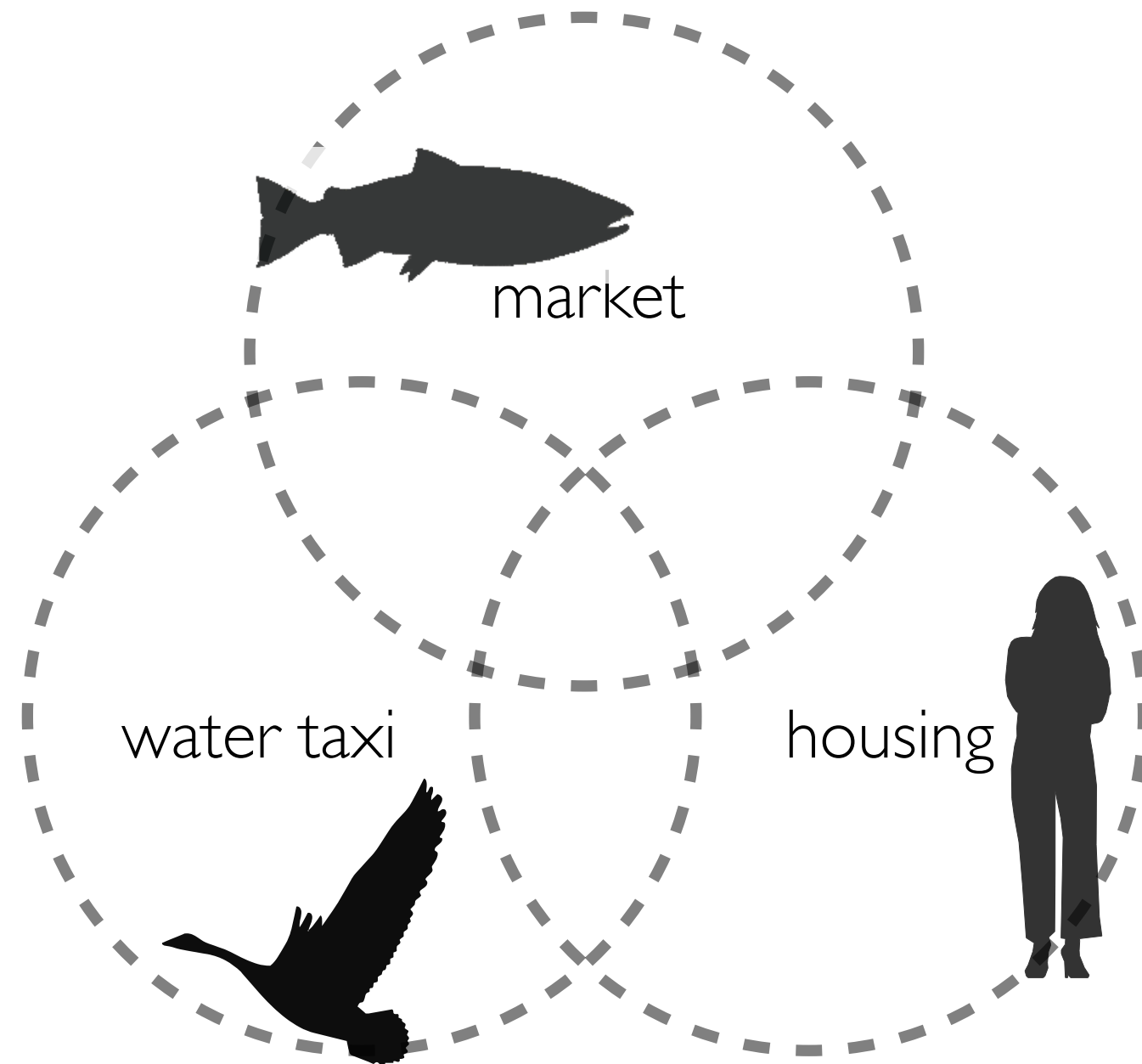
What diverse systems can be implemented into their development that not only help multiple structures become more sustainable, but the systems themselves help others to be more efficient?

How do all organisms within the riparian zone interact with the structures?



# PROGRAM

Thinking about diversity and density in a riparian ecosystem, I am using different program types to activate the site. I intend to develop a public food market for Portland, a water taxi system (designing a terminal on the site), and housing for all incomes. These three programmatic elements will work together like organisms in a riparian ecosystem. Each will support one another, and activate the site.

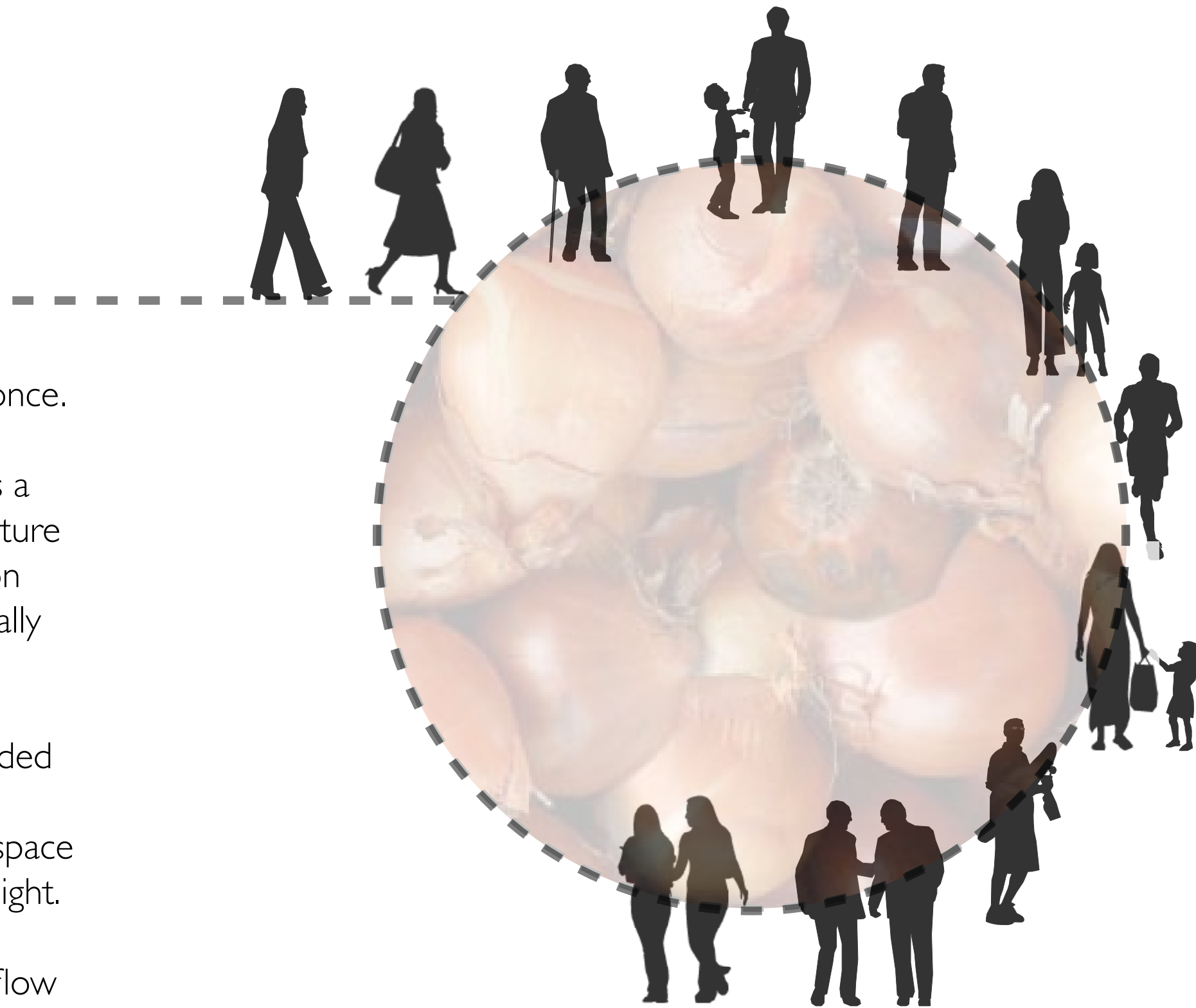


NATURAL FOOD MARKET



# GATHER

A market becomes a place where many can gather at once. Portland has a living room (Pioneer Square), but needs a kitchen. The market will feature organic food from the region including foods found naturally within the Willamette Valley. Multiple restaurants and a micro-brewery will be included in the program, creating opportunities to enjoy the space at all times of the day and night. A strong indoor / outdoor connection allows for easy flow to the water and adjacent green spaces.



# PROFILES

(Granville Island Interviews)

Lindsay (Poultry)



Refrigeration is of great importance as is space to work. Many of the poultry products sold in the stall (sausage, pre-made pot pies, etc.) are made there as well. Work surfaces are more important than a work counter. A refrigerated display case runs around parts of the perimeter of the stall, while a larger walk in is in back. Products are brought to the space by a handcart or man powered forklift.

Jeff (Fishmonger)



Again, refrigeration is the most important aspect for this space to be successful. There is a large walk in freezer in the back adjacent to a loading space where the products are brought in. A refrigerated display case runs down the length of the stall, and taller glass door refrigerators are placed at the end where customers can choose from already prepared products.

Lynn (Produce)



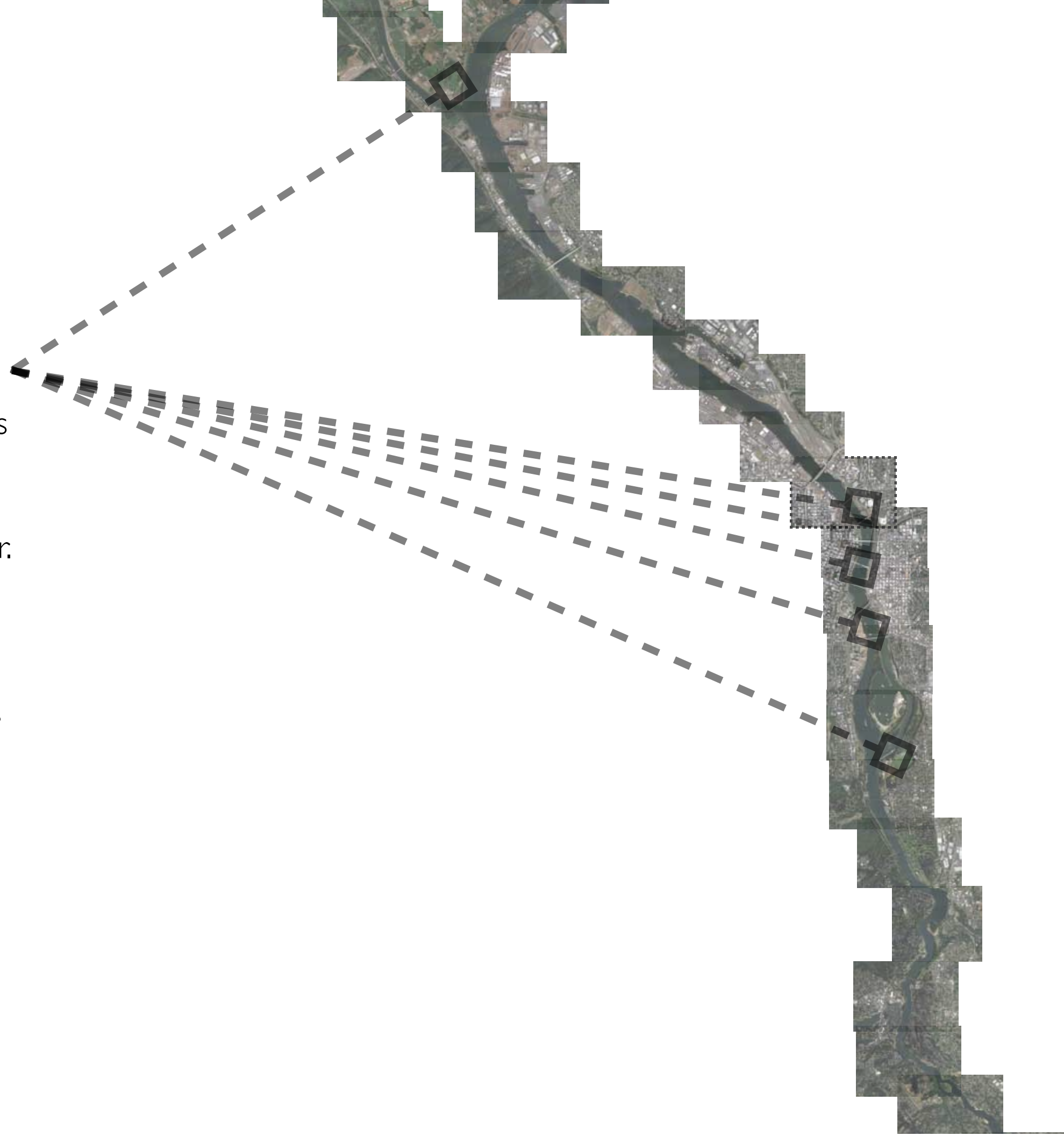
In this centrally located stall, it is all about display. All of the fruit and vegetables are piled high in an eye-catching fashion. All tabletop spaces are covered in product, and there is not much need for prep or refrigerated space. All of the storage occurs under the tables used for display. Fresh fruits and vegetables are brought in in boxes with a handcart.

WILLAMETTE WATER TAXI TERMINAL



# CONNECT

A water taxi system connects the people of Portland to the city's major defining element, the Willamette River. The river is beautiful, but is underutilized. The circulation flow on Portland's many bridges is fantastic, but places people two blocks from the water on both sides. By implementing a new form of transportation, we not only strengthen the market, but also strengthen other waterfront attractions.



# HOUSING



# LIVE

The Lloyd District / Rose Quarter needs housing desperately. By bringing housing to the Thunderbird Site, we increase urban density and therefore increase energy. This housing is to be made available for a range of people from different backgrounds, with different income levels. It is important to bring all types of people to the district to foster different activities offered in the area. People of different backgrounds and age groups activate the site in different ways at different times.





# LIVE

Because this project's implementation will occur in phases, certain elements will be developed in full, while others might be inexplicit in their design development. The housing aspect of the design will be the section of the project that is added as an indication of possible options. These indications will include massing studies and adjacency studies with relation to the market and water taxi terminal.



# PRECEDENT

Granville Island in Vancouver British Columbia is home to the Granville Public Market. Much like the project site, the island once was strictly an industrial site, but has been revived into a thriving area, with a focus on the market. Even the architecture of the market recalls early industrial buildings. A water based transit system connects the island and the market to the rest of this city. All of these programmatic elements function together to create a unique thriving ecosystem. Granville Public Market is sited similarly to the site in Portland. The market has strong visual connections to the city, and can be seen from the Granville Bridge. The structure has strong connections to outdoor spaces along the water's edge. The market works successfully and provides a place for people to gather and enjoy foods that the region has to offer.

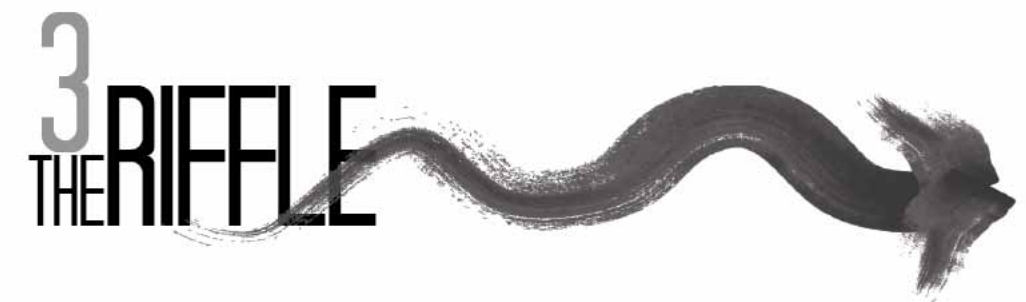
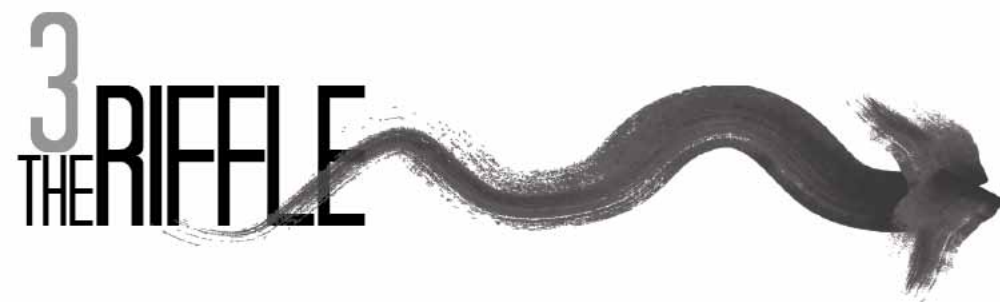


# PRECEDENT PHOTOS



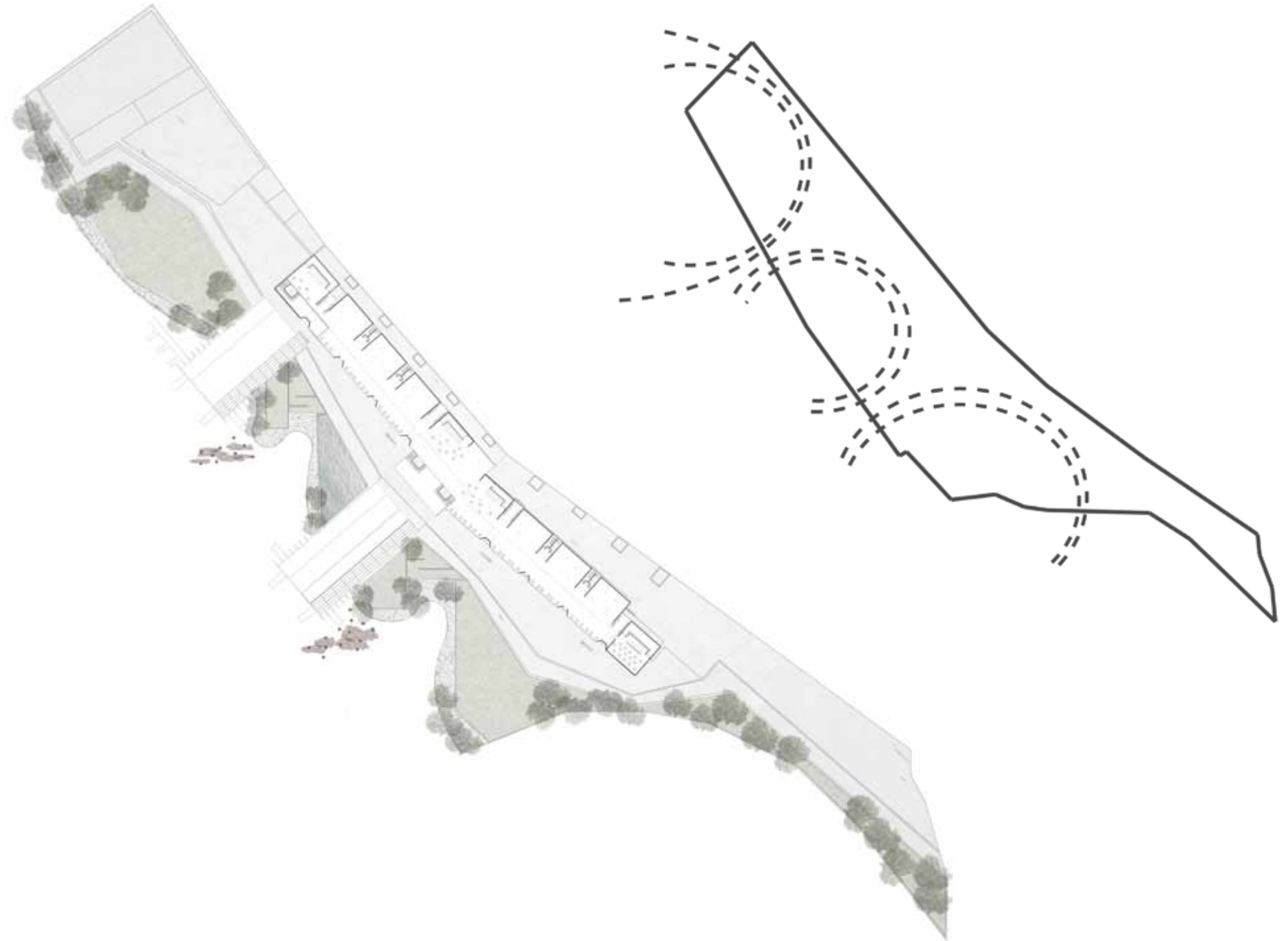
# CONCEPTS

I am using water flow and erosion principles as my design concepts for the project. I looked at four different water flow conditions, and interpreted them to a terrestrial environment. I wanted to translate how the Chinook salmon would use these different special conditions into how humans might use them. These principles were incorporated at different scales throughout the project.



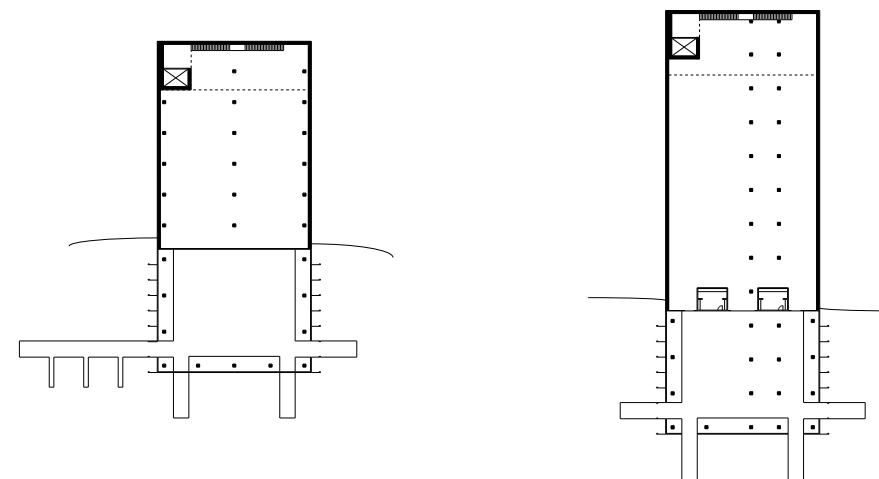
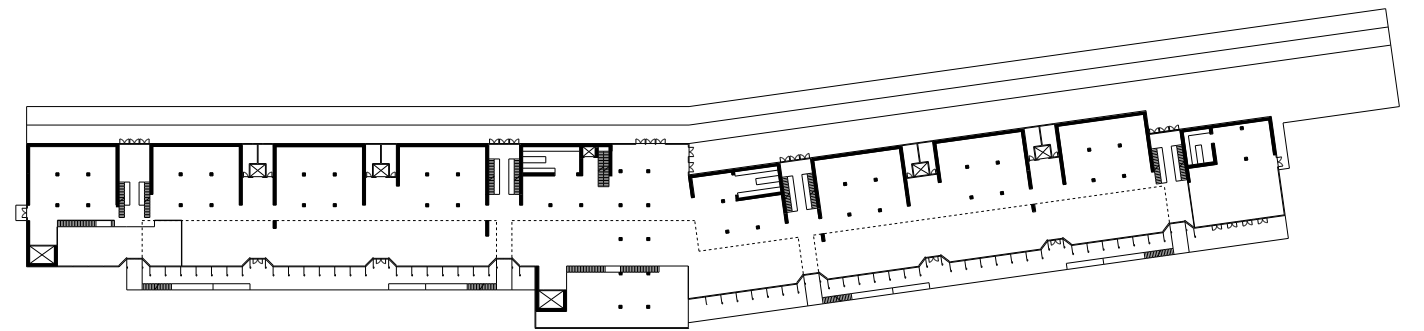
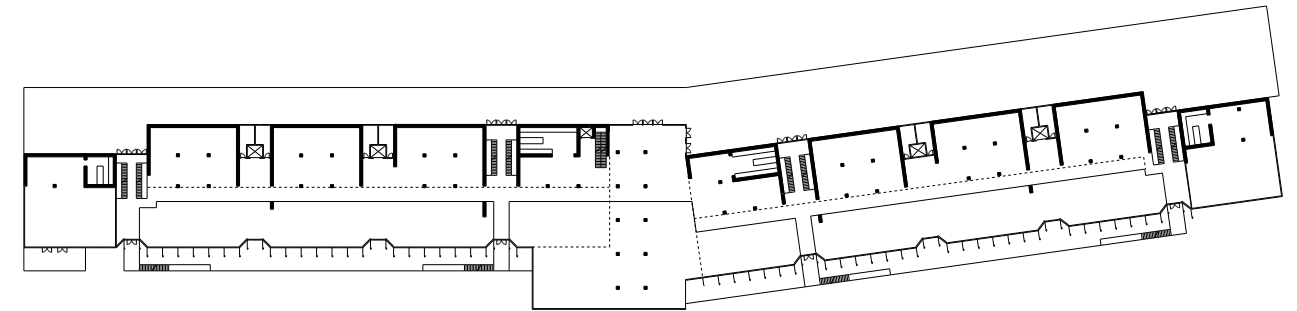
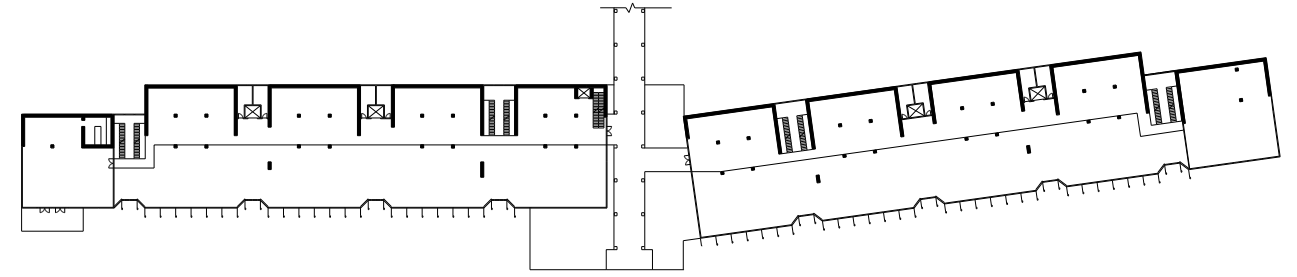
# SITE CONCEPTS

I organized the site using the concepts mentioned before. This plan became about containing two different conditions. The riffle and the cascade describe high energy, quick paced movement, and are therefore relating to the urban edge of the site. The pool and the embayment relate to the waters edge. These create park spaces where people can relax and enjoy the area. I also worked a plan for an extension of the East Bank Esplanade into the plan. Creating connections is incredibly important.



# FLOOR PLAN CONCEPTS

These concepts apply on the interior of the building as well. The building has a clear and deliberate plan, organized into two bars. People move along these bars in the riffle. This describes a somewhat fast paced movement as people move from one market stall to another. People can break off of the riffle into the markets stalls which function like a water eddy. These market stalls then become the embayment. One can also break off of the riffle and sit in bays on the Willamette side of the building. These spaces are the literal translation of the pool. The cascade occurs where people can make a quick connection from Interstate Ave to the park space on the Willamette bank.



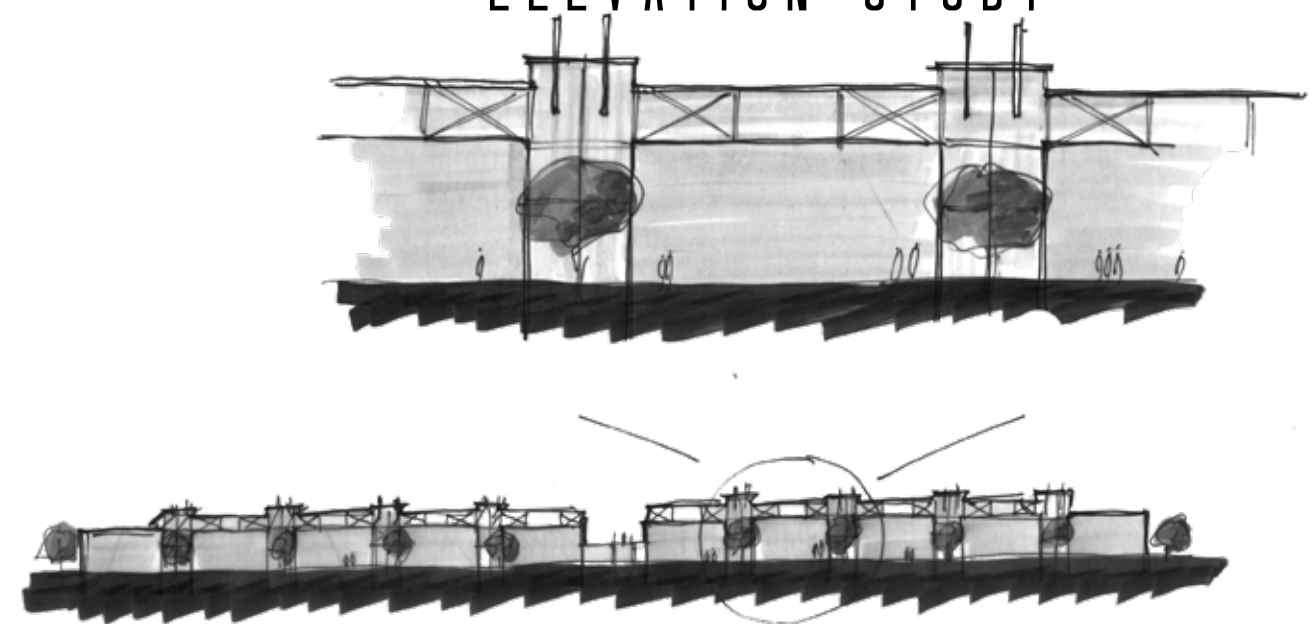
# WILLAMETTE FACADE



# INTERSTATE AVE FACADE



## ELEVATION STUDY





# ROSE QUARTER BRIDGE



# WATER TAXI TERMINAL

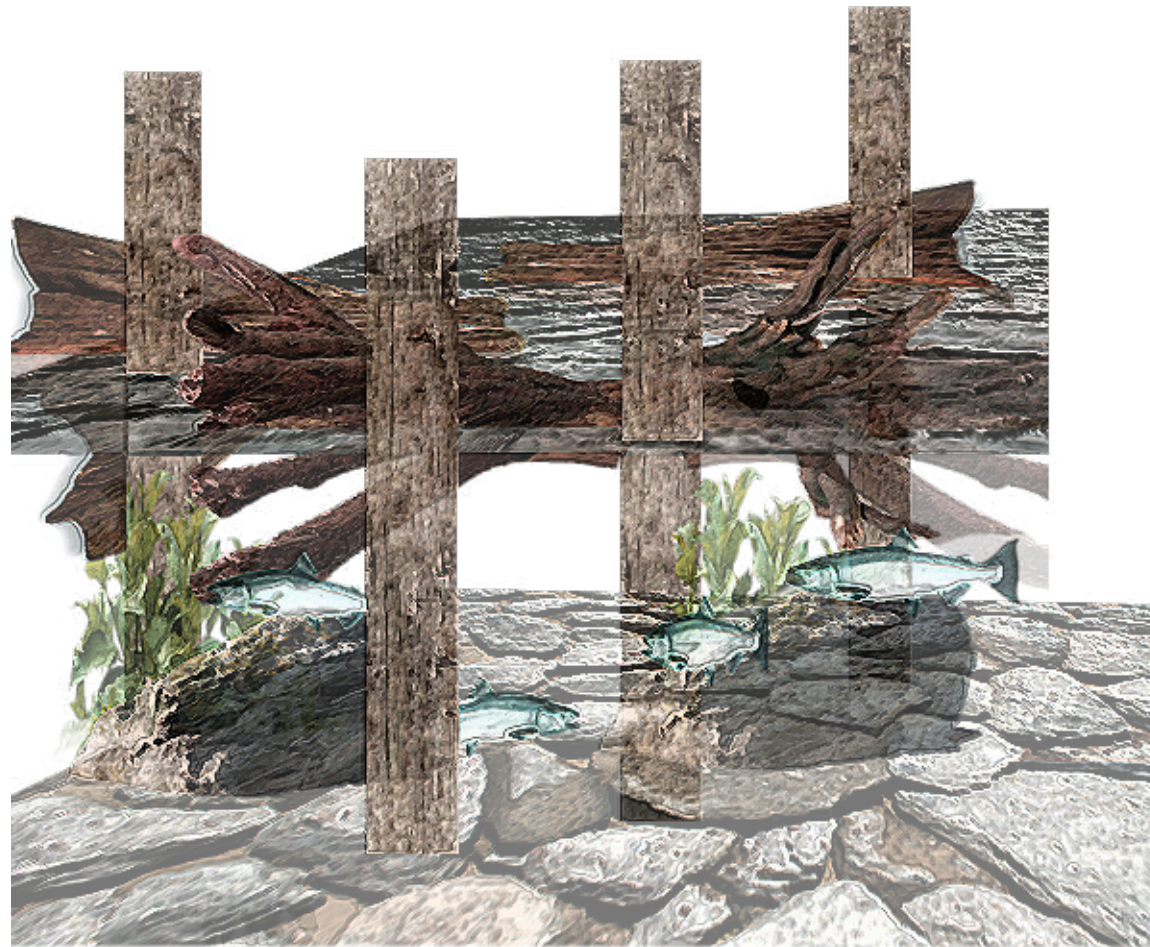




# MARKET HALL

# SALMON HABITAT DESIGN

Pilings are driven into the river bed to catch debris (protecting terminal structure from damage) and create log jams. The logs help divert water flow and create small eddies. Fish and other aquatic organisms inhabit these spaces frequently. Not only do these “structures” create underwater spaces, but are also frequented by terrestrial organisms as well. As log jams reach shore, they divert water and reduce erosion.



# BIRD OF PREY HABITAT DESIGN

The Thunderbird site falls along a major corridor of movement for native birds of prey, between Sauvie Island and Oaks Bottom Wildlife Refuge. One can see a variety of raptors using the numerous bridges in Portland as perches throughout the year (especially in winter). Numerous perches are being incorporated into the site design. Placed in heavily planted areas, but high enough for optimal viewing by users of the market and adjacent park spaces.



# REFERENCES

“James Beard Public Market.” James Beard Public Market - Welcome. Web. 10 Oct. 2011. <<http://www.portlandpublicmarket.com/index.html>>.

This site is examining the process of developing a public market in Portland, and is showcasing the strides that have already been taken to get one started. It speaks to what is necessary to create a market including: preexisting site conditions, the financing, and begins to speak to program in a loose manner. Incredibly helpful. I am using a lot of this information to inform decisions concerning my own project.

“Bureau of Planning and Sustainability.” City of Portland, Oregon. Web. 15 Oct. 2011. <<http://www.portlandonline.com/bps/>>.

I looked at information concerning my area of interest. I used information about “The River Plan” and the “Willamette Greenway Plan” to start thinking about how a waterfront project can form connections to the river and surrounding areas.

Portland Development Commission - Economic Prosperity, Quality Housing, Employment Opportunities. Web. 14 Oct. 2011. <<http://www.pdc.us/>>.

This site is absolutely full of useful information on just about everything in the Lloyd District, from maps to presentations based on what is currently happening. It also speaks to other urban renewal areas in the city. I use information gathered here frequently.

Lloyd Tma. Web. 07 Nov. 2011. <<http://www.lloydtma.org/>>.

This site speaks to the transportation in the Lloyd District, both current and what is being developed. I used it to research all of the transportation opportunities available at my site.

Welcome | Portland Streetcar. Web. 07 Nov. 2011. <<http://www.portlandstreetcar.org/>>.

Looked at the new Street Car circle being added in the area.

“Central Market Hall, Budapest.” A View On Cities. Web. 07 Nov. 2011. <<http://www.aviewoncities.com/budapest/centralmarkethall.htm>>.

Used information from this site while looking at the Central Market Hall for a precedent study.

“Pike Place Market - Project Summary.” Pike Place Market - Home. Web. 07 Nov. 2011. <[http://www.pikeplacemarket.org/renovation/project\\_summary](http://www.pikeplacemarket.org/renovation/project_summary)>.

Used information from this site while looking at Pikes Place Market for a precedent study.

“Island Heritage | Granville Island.” Home | Granville Island. Web. 4 Dec. 2011. <<http://www.granvilleisland.com/discover-island/island-heritage>>.

Used information when developing precedent information.