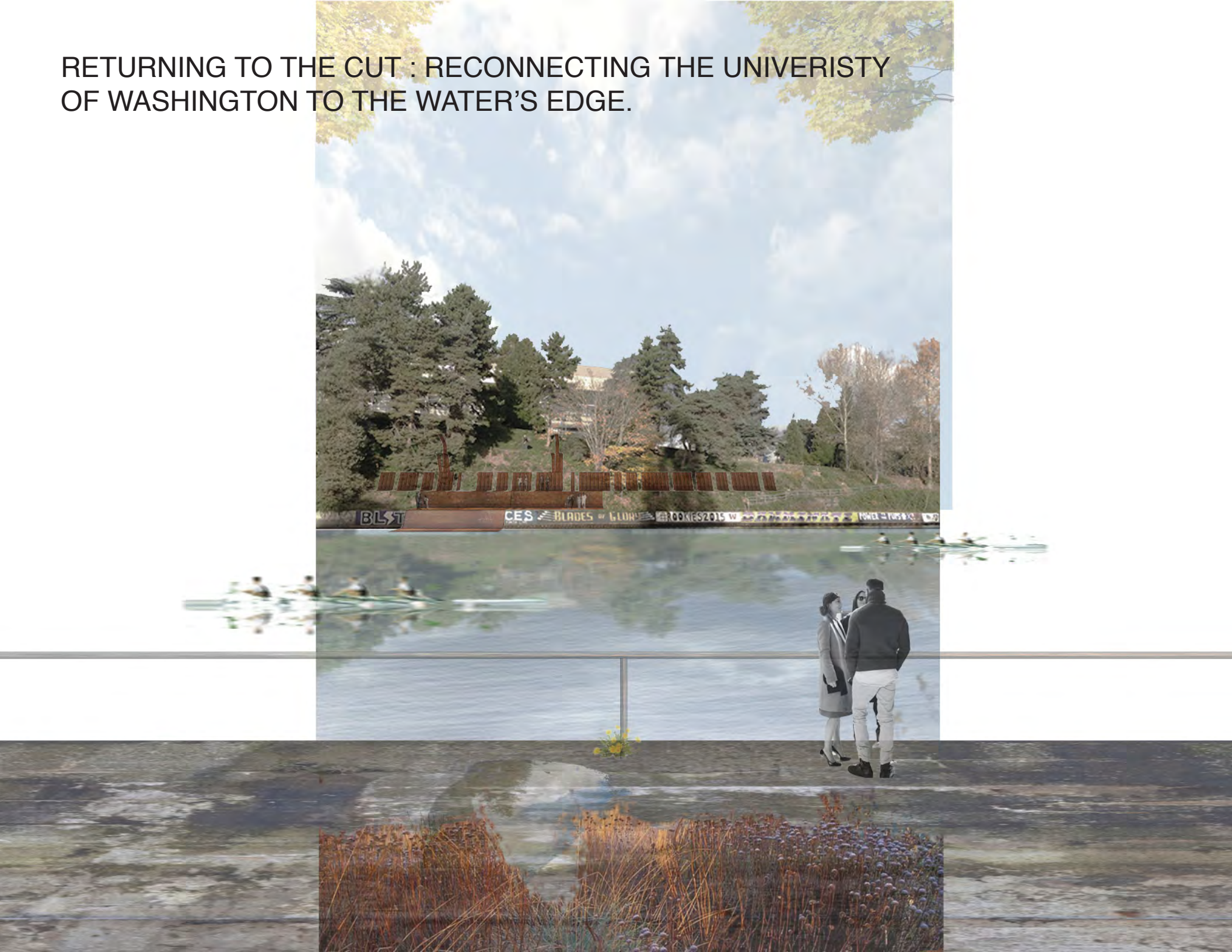
RETURNING TO THE CUT : RECONNECTING THE UNIVERISTY OF WASHINGTON TO THE WATER'S EDGE.



Returning to the Cut :
Reconnecting the University of Washington to the Water's Edge

Takeru S. Stewart

A thesis
submitted in partial fulfillment of the
requirements for the degree of
Master of Architecture
University of Washington
2013

Committee:

Elizabeth Golden
Rick Mohler
Gundula Proksch

Program Authorized to Offer Degree:
Architecture

TABLE OF CONTENTS

00. No Finer Site
Vicinity map showing location of the UW Campus between two urban lakes.

01. INTRODUCTION

The University of Washington was built upon the shores of Lake Washington and Lake Union in 1896 when it moved from its original downtown Seattle location. Given its riparian setting, the University historically maintained a close relationship to its water's edge. Historical campus plans show a university campus set within natural surroundings comprised of trees, shoreline and forest. The following quotation from the *Pacific Wave* newspaper written a year after the campus established its current location describes this relationship well.

"No finer site for a University can be imagined than the present campus of our Alma Mater. Bounded on the one side by far reaching Lake Washington, on the other by Lake Union, it lies like a gem in a setting of silvery waters..." [1]

Much of what we currently perceive to be part of the University's shoreline is in fact artificial, most of which consists of the Montlake Cut. "The Cut" as it has come to be known was created in 1908 to connect Lake Washington and Lake Union to facilitate growing demands for establishing a formal commercial waterway in Seattle. This herculean engineering effort did what its name entails, it cut away at the earth to connect the two once

01. Reunion
One of many UW crew reunions that take place on Union Bay.

disconnected bodies of water. As a result Lake Washington dropped by some nine feet in elevation and forever altering Seattle's hydrology.[2] An equally impressive but opposite operation also helped shape the Montlake Cut's immediate vicinity to the north.

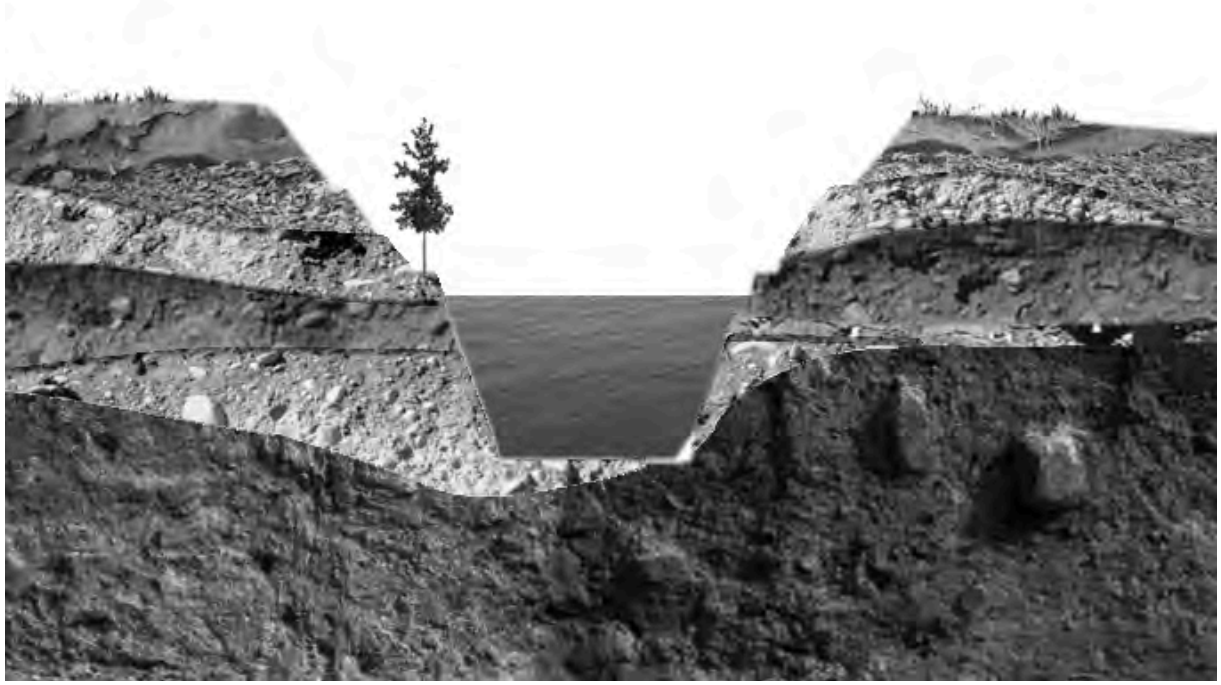
The Montlake Dump began around the same time as the construction of the canal and operated into the late 1940's as a means for Seattle to dispose of its garbage. Much of the dirt removed from the construction of the Cut also ended up here as fill.[3]

02. PROBLEM STATEMENT

Over the course of its one hundred fifty year history, the University of Washington campus developed and grew to accommodate a growing population and overall development as an institution of higher learning. What began as a campus comprised of a handful of buildings, eventually grew to what it is today – an urban campus with dormitories, office buildings, sports facilities and a power plant.

As a result of this growth, the University's connection to the water's edge waned, and at parts disappeared altogether. While

02. Layers
A section through the Montlake Cut showing its geological make-up.



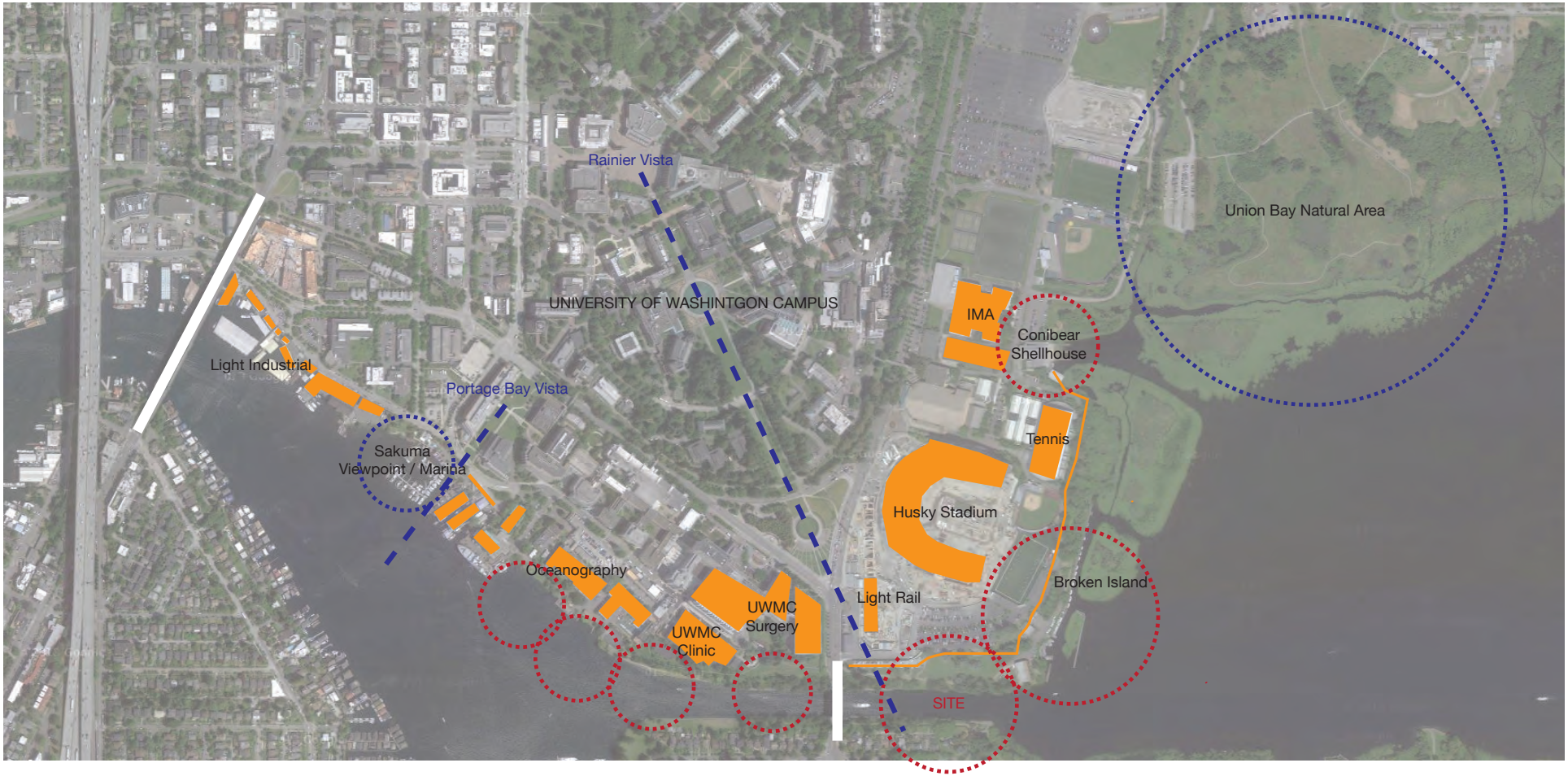
the physical location and riparian characteristic of the campus has not changed, the existence of institutional buildings and private businesses along its shores makes it inaccessible to pedestrians and cyclists. The University of Washington campus as it currently stands has effectively been cut off from the very shores on which it was built.

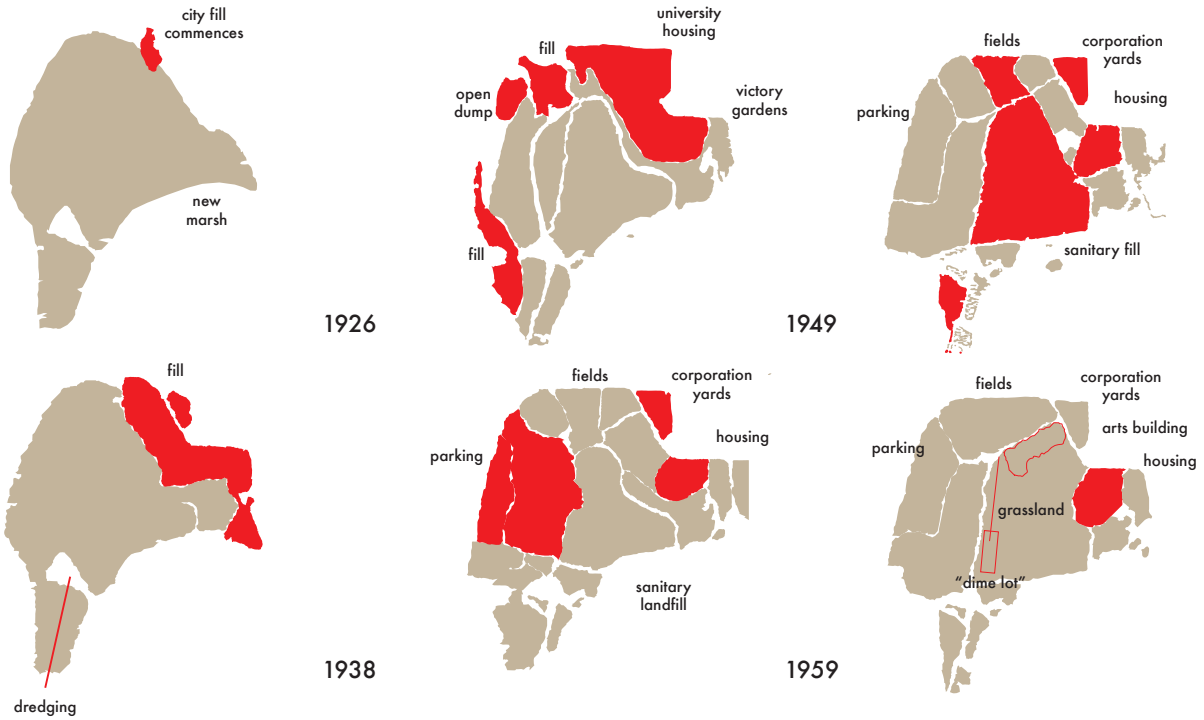
This thesis proposes to reconnect the University of Washington to its water's edge through employing the metaphor of "cut and fill" – two violent and powerful operations that shaped the campus in the first place. The campus will be reconnected to the water through a walkway built along the Montlake Cut.

03. SITE

Of all the areas of the University campus that touch the water's edge, the northeastern bank of the Montlake Cut exemplifies the relationship that the University has with Lake Washington, Lake Union and Union Bay best. This site is characterized by a paradoxical dilemma. The site is much beloved by University students and the public alike. Its wooded characteristic and vistas provide the citizens of Seattle a sense of relief from the hustle and bustle of urban life. With that said, the site also exhibits a transitory characteristic, it is a place where one "passes through"

03. The Water's Edge
Diagram showing how the UW campus is cut off from the water.





04. Fill operations
Diagram showing fill operations along Union Bay.

whether it be on foot or by kayak.

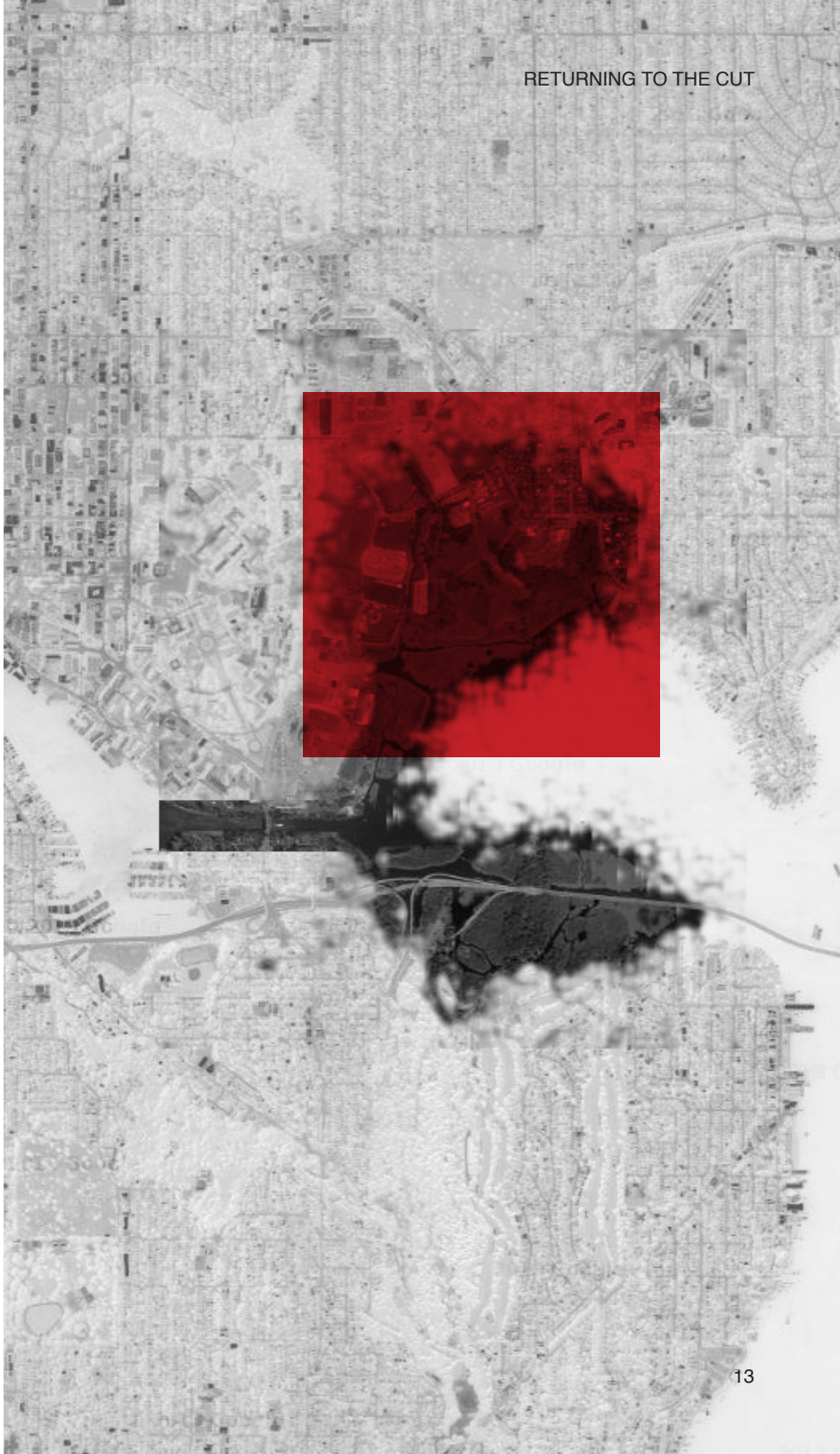
Although people come to enjoy its idyllic setting, there is no real sense of congregation or gathering at the site. A primary cause for this transitory nature that exists at the site is its history and topography, both of which are intimately linked to each other. The site is characterized by a steep slope that runs the entire length of the site. This slope, coupled with an even steeper cross-slope make the water's edge inaccessible from land and vice versa.

04. THEORETICAL FRAMEWORK

Architect Carol J. Burns proposes a twofold approach in approaching notions of site within the context of architecture. With any given site, one must realizes that it is either "cleared" or "constructed." Burn describes a cleared site as one that is, "unoccupied, lacking any prior constructions and empty content." In contrast, the constructed site, "emphasizes the visible physicality, morphological qualities, and existing conditions of land and architecture."[4]

Burn suggests the strategy of employing specific visible phenomena as a generative device when dealing with constructed

05. Cut and fill
Red areas indicate cut and fill operations respectively.



06. Montlake Cut
Images showing the various developments of the Cut over time.

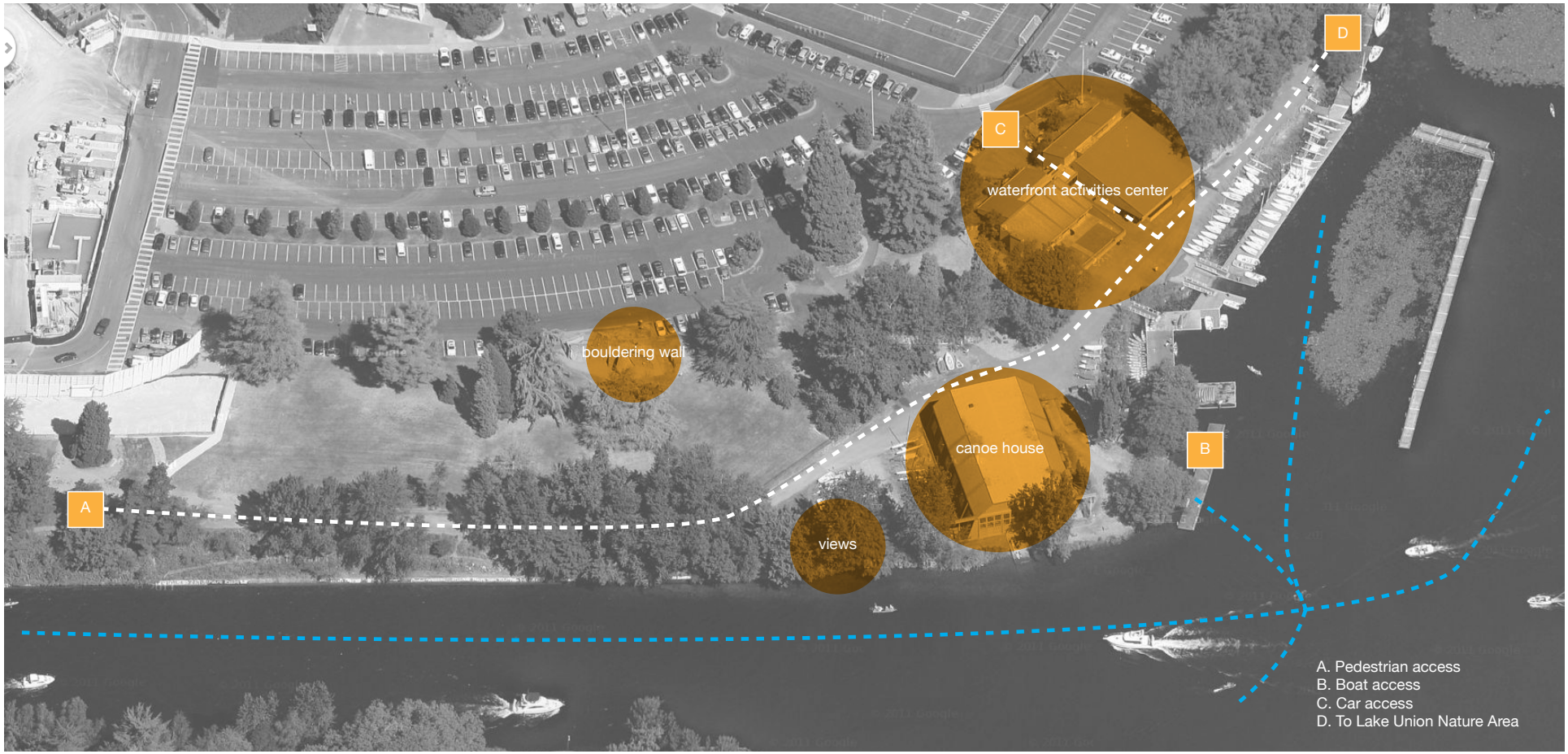
site conditions. Given that the Montlake Cut is an artificial landscape, this thesis warrants a closer inspection of the various operations that resulted in the shaping of the site itself and the University of Washington campus as a whole. Architectural historian Marc Treib also speaks to notions of the constructed or "designed landscape and defines it as a, "landscape shaped to convey human intention, providing accommodation and, perhaps, even beauty."[5] Paradoxically, given the history of the Montlake Cut, it has embedded itself into the landscape of Seattle to the extent that some assume that is in fact a natural condition.

Speaking more closely and specifically to the potential generative potentials that existing site conditions has on an architecture project is the Swiss landscape architect and theorist Christophe Giro. Given the site's complex and often untraceable history of cut and fill operations, this thesis employs the "four trace concepts" of landscape architecture to establish a framework for analyzing and intervening on the Montlake Cut site.[6]

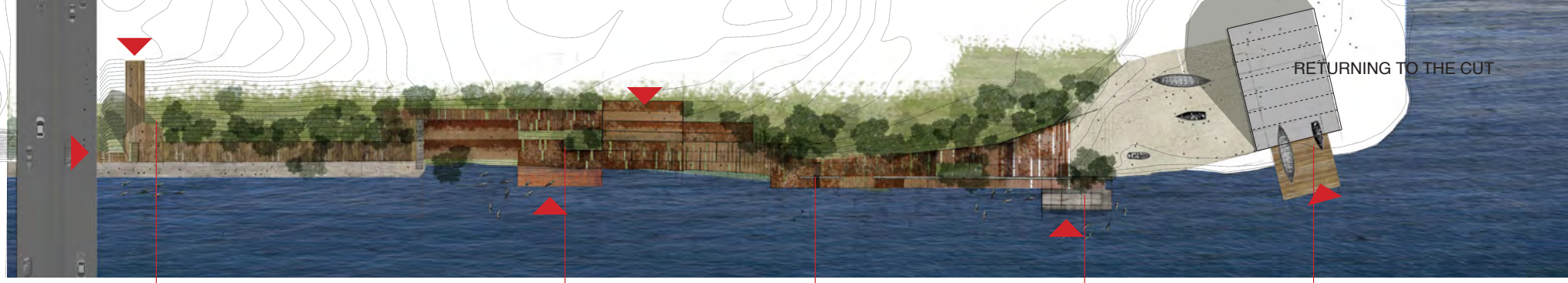
Expanding on his four trace concepts, Giro elaborates and identifies them as being the following: landing, grounding, finding, founding. This ideas results from Giro's observation of the tendency for contemporary (in particular French) landscape architects to emphasize a project's design or function over other

07. Edges revealed
Collages showing artificial edges concealed and revealed along the site.

08. Programs
Site plan showing widening of the cut with program.



09. Site conditions
Diagram showing access points along the site.



tower / warming hut

grandstand

overlook / stairs

kayak pavilion

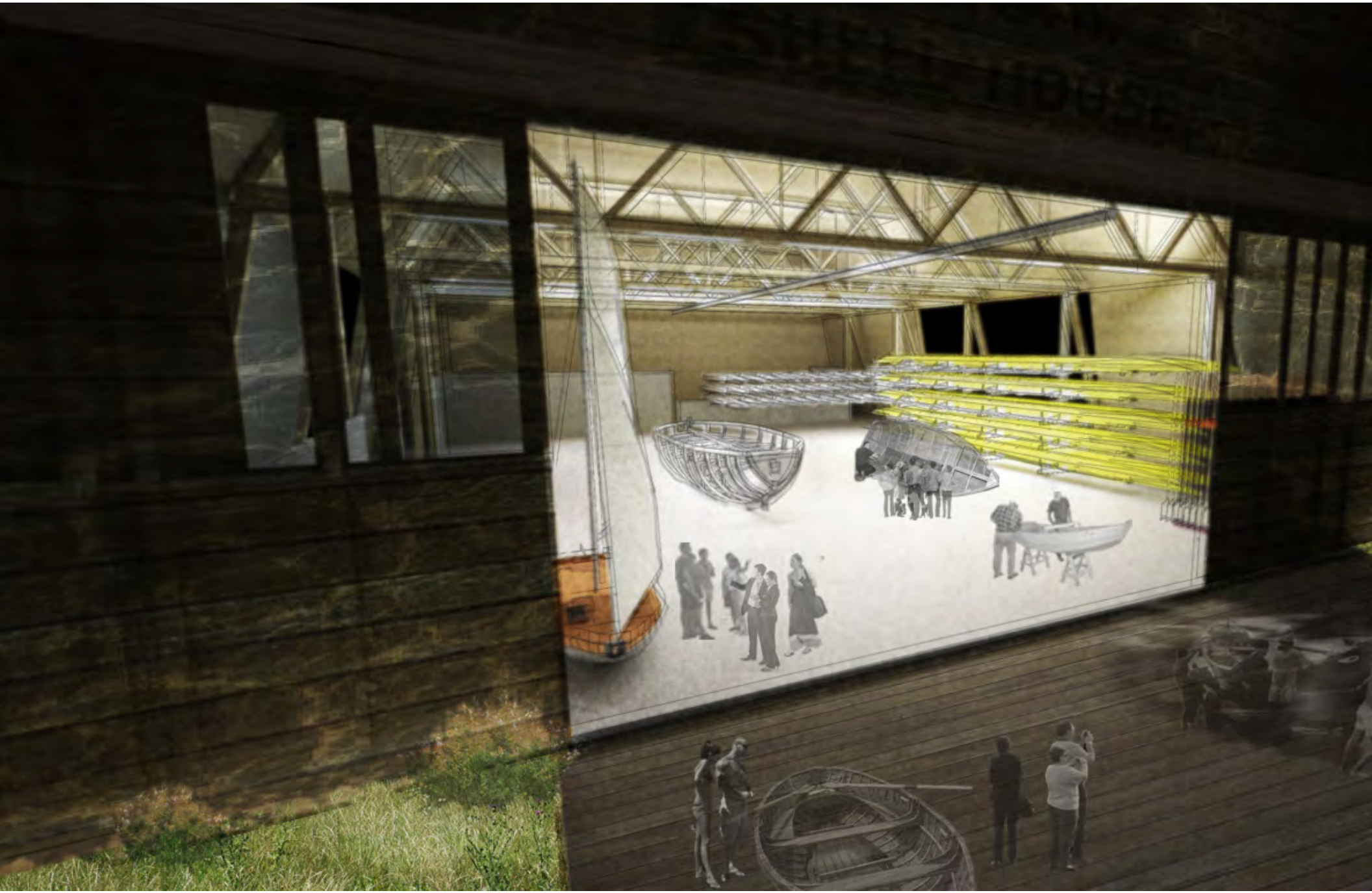
boat workshop

less tangible (potentially more meaningful) elements of any given site.[7]

LANDING – transition, temporality and seasonality

Landing is the initial act of acknowledging a site and marks what Giro calls the “beginning of the odyssey of the project.” This initial phase characterized by exploration invokes both the literal and figurative touching of the ground itself as a means of fleshing out elements that were hitherto unknown to the designer. Therefore, landing is an important step that establishes the boundaries of a project both physical and analytical.[8]

The initial impression that prevails at the Montlake Cut site is one of temporality and transition. Most obvious is the physical transition (the artificial shore) between the Montlake Cut (water) and the slopes of the campus (land). Programmatically the site exhibits a strong sense of transition in that it exhibits a sense of it being a place where people and things “pass through” but do not remain. The site is a popular spot for joggers and rowers, while this is the case none of them remain on the site to perform activities. These users merely pass through the site as a means of getting from one place to another. The site also sits at an intersection of numerous roads, many major. The Montlake Bridge,



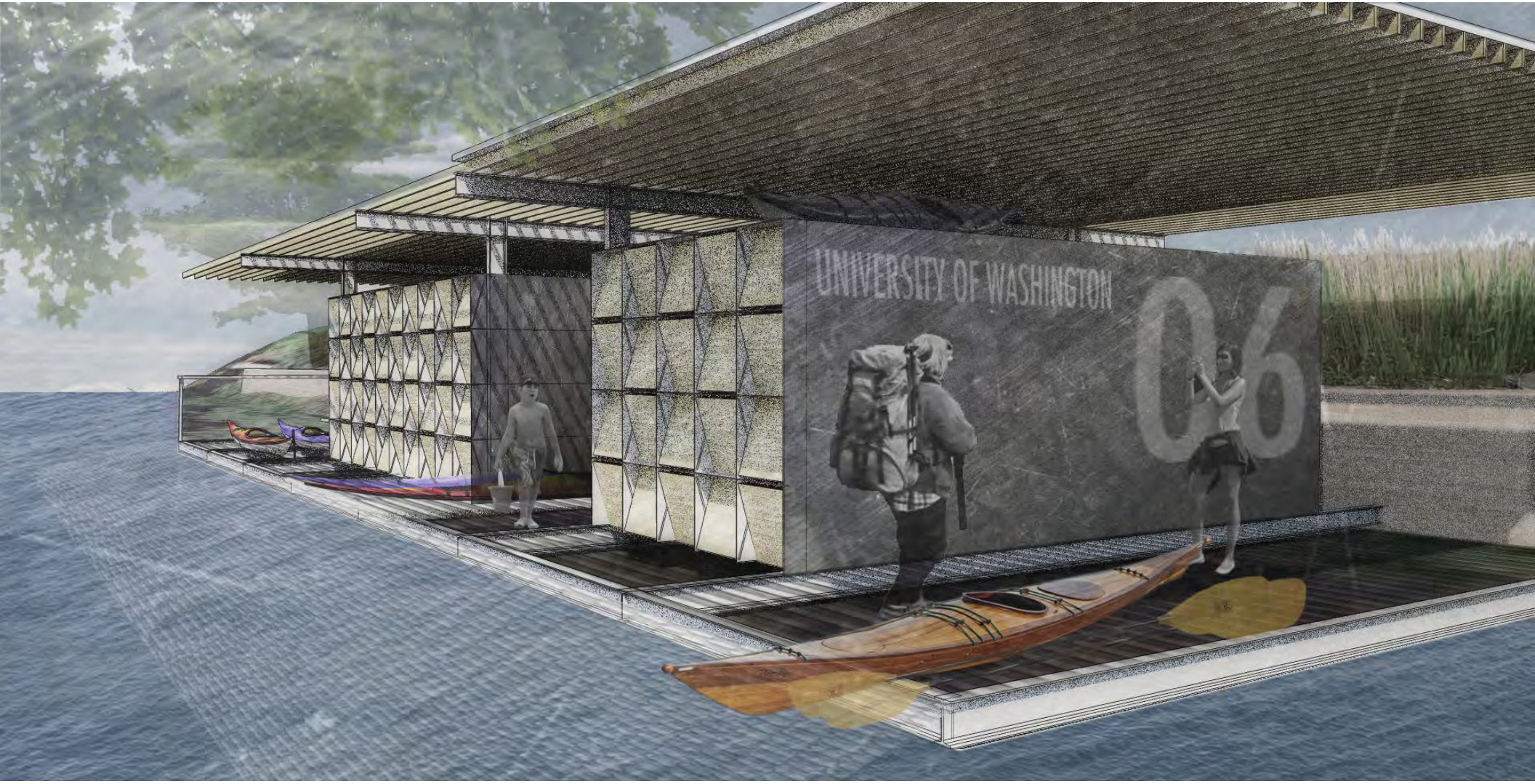
10. Old Canoe House
Night view showing the public boat workshop.

various bus routes, and the forthcoming light rail station further emphasize the site's characteristic of it being a place where one passes through.[9]

It does not take long for one to realize that this sense of temporality and transition is deeply rooted in the history (even prehistory) of the site itself. Historical maps of the area indicate that the Montlake Cut site had always been used as an area of transition well before 1908 and the appearance of the canal that we see today. Maps dating to 1886 (and earlier) indicate that the land that eventually was carved out to make way for the canal had been used as an overland canoe portage by native Americans and loggers as a portage (which gave the bay its name). Thus the creation of the cut was not a single watershed event but instead one that developed over decades, even centuries. It is apparent that this feeling of temporality goes beyond what one perceives or knows about the site.

GROUNDING – recovering an inhabitable edge

Grounding is the second step that occurs (and reoccurs) within the process of understanding and discovering of a site. Unlike landing which occurs only once at the beginning of a project, the process of grounding reoccurs indefinitely throughout the life of a project. Giro explains that, "grounding is more about


UNIVERSITY OF WASHINGTON
06

11. Departure
Perspective of the kayak pavilion perched on the concrete edge of the Cut.

reading and understanding a site through repeated visits and studies." A site cannot be simply understood as a single entity or event, instead implies the existence of numerous layers - at times visible to the human eye and at other times not. Thus landing is a critical step that acknowledges that at times the most crucial aspects of a site are invisible and often intangible. As Giro explains, "it is not necessarily what remains visible to the eye that matters most, but those forces and events that undergird the evolution of a place."[10]

Upon numerous visits back to the site, one begins to notice that there are in fact distinct edges within the site of the Montlake Cut itself. The site is in fact an aggregation of various smaller sub-sites such as edges, paths and clearings. Given its artificial nature, the slopes of the Cut are characterized by shelves of dirt held back by a thick lining of concrete. Over the course of time since it creation in 1908, the slopes of the cut have been "filled in" by vegetation and dirt. Yet it is still possible to discern the various hidden edge conditions that exist today. This thesis proposes to recover, thicken and ultimately reconnect these lost edges to create a strong singular edge that is inhabitable. Just as nature has filled in this artificial edge over time, the idea behind this thesis is to create a programmatic or social fill that will once reemphasize

12. Gathering place
A view of the overlook at night.

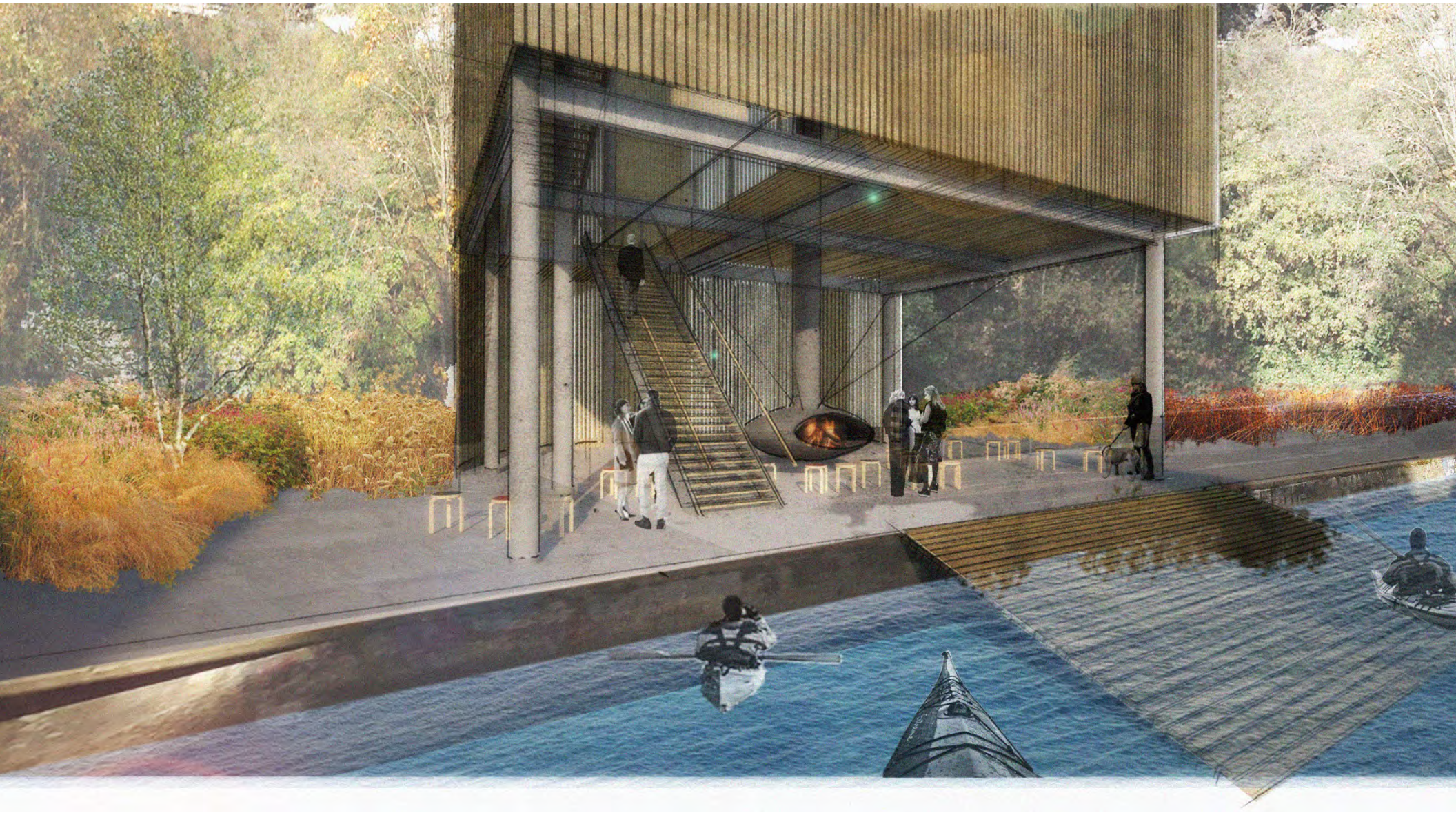
edge lost over time as means of creating new edges and fill both literal and metaphorical.

FINDING – a public amenity, place of discovery

Finding describes the process of searching as well as the ensuing outcome. The trace concept of “finding” is perhaps the most esoteric and inexplicable one out of the four set out by Girot. He explains the process of “finding” as one not necessarily tied to design or a specific intervention. With that said, this process of finding is essential to this project as it becomes the main idea for the site. The site in fact becomes a process for visitors to find and rediscover the various historical and geological layers of the site itself.[11]

FOUNDING – the project emerges

Founding is the final step in which the previous three steps cumulate to create a new intervention. This is the step in which the project proposed here begins to take physical shape. In summary, this section organized the basic principles or “trace concepts” employed over the course of this thesis to explore and analyze the Montlake Cut site. Borrowing from both Burns and Giro, this thesis employs the existing qualities and historical site operations as a means of analyzing and organizing the Montlake Cut site.[12]



13. Entry
The warming hut approached via kayak.

14. Finding
Initial site diagram showing larger connections between nodes.

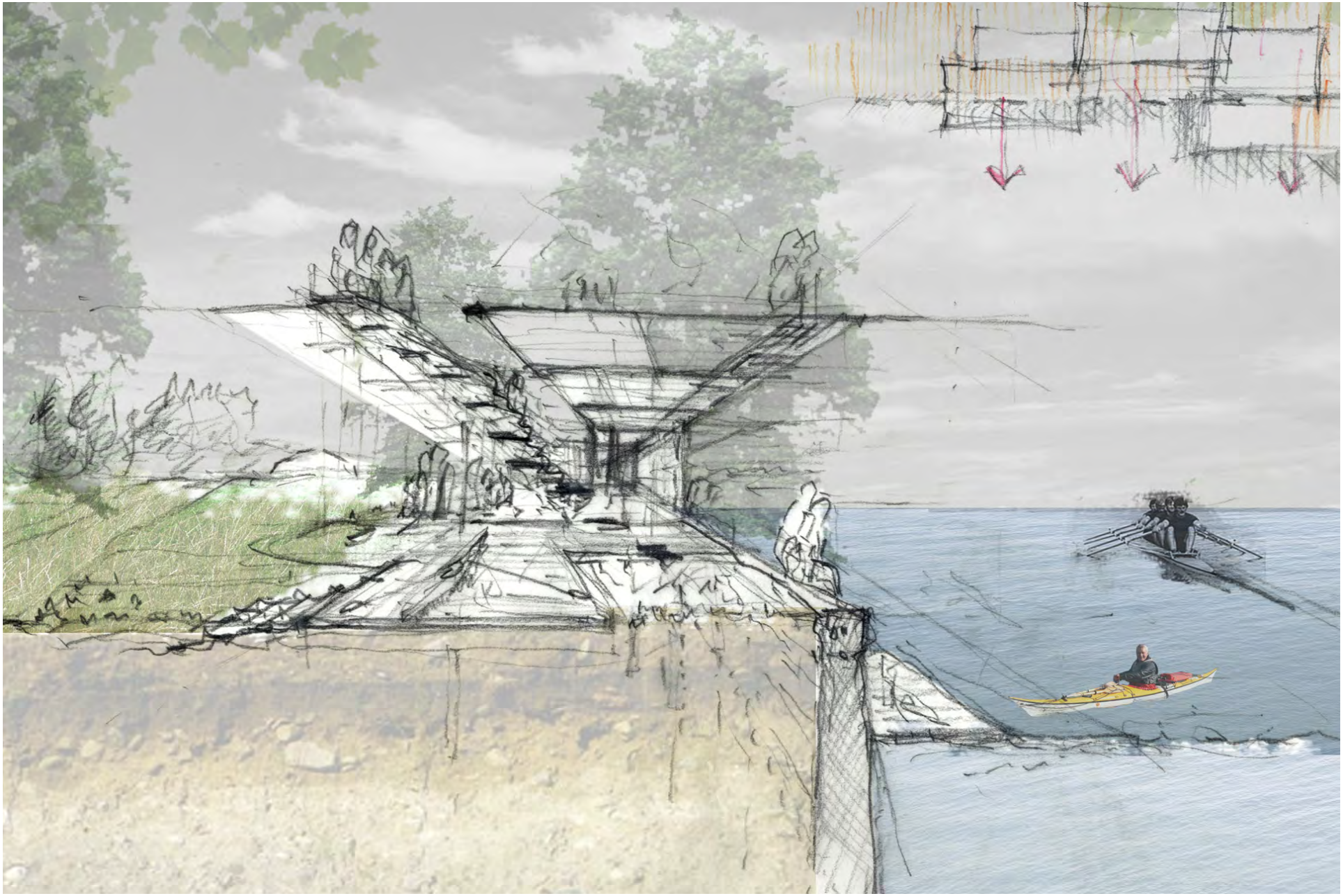
15. Initial cut
Conceptual section showing initial exploration of the water's edge.

05. PRECEDENT

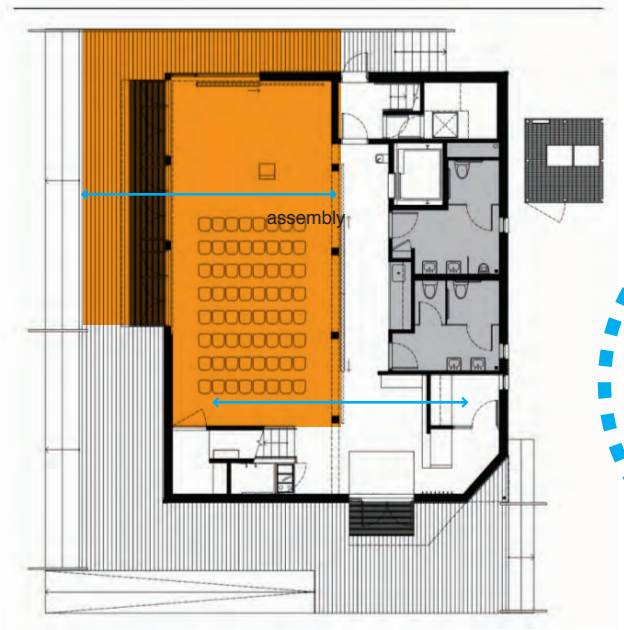
Given that the project proposed in this thesis is not one that is conventional "architectural," the precedent discussed here draw from the discipline of both architecture and landscape architecture. The Hudson River Education Center and Pavilion was built by the Architecture Research Office for the Scenic Hudson Land Trust and consists of two structures within a public park located directly on the banks of the Hudson River in Beacon, New York. The two structures are a new kayak pavilion and an environmental and arts education center housed within a restored barn. Standing several hundred feet from one another, these two structures are integrated into their park setting designed by Reed Hilderbrand Landscape Architects.[13]

This project restored the existing barn that is the last surviving structure along Beacon's waterfront that speaks to its industrial past. The architects preserved the barn's simple and elemental structure to turn the building into loft-like public spaces with an abundance of natural light. The building's existing heavy timber post-and-beam structure was kept exposed in juxtaposition to the introduction of new durable materials such as concrete floors, plywood walls and large glass sliding doors.

The building's program is divided simply into a multipurpose



16. Precedent
Analytical diagrams of the Hudson River Education Center.



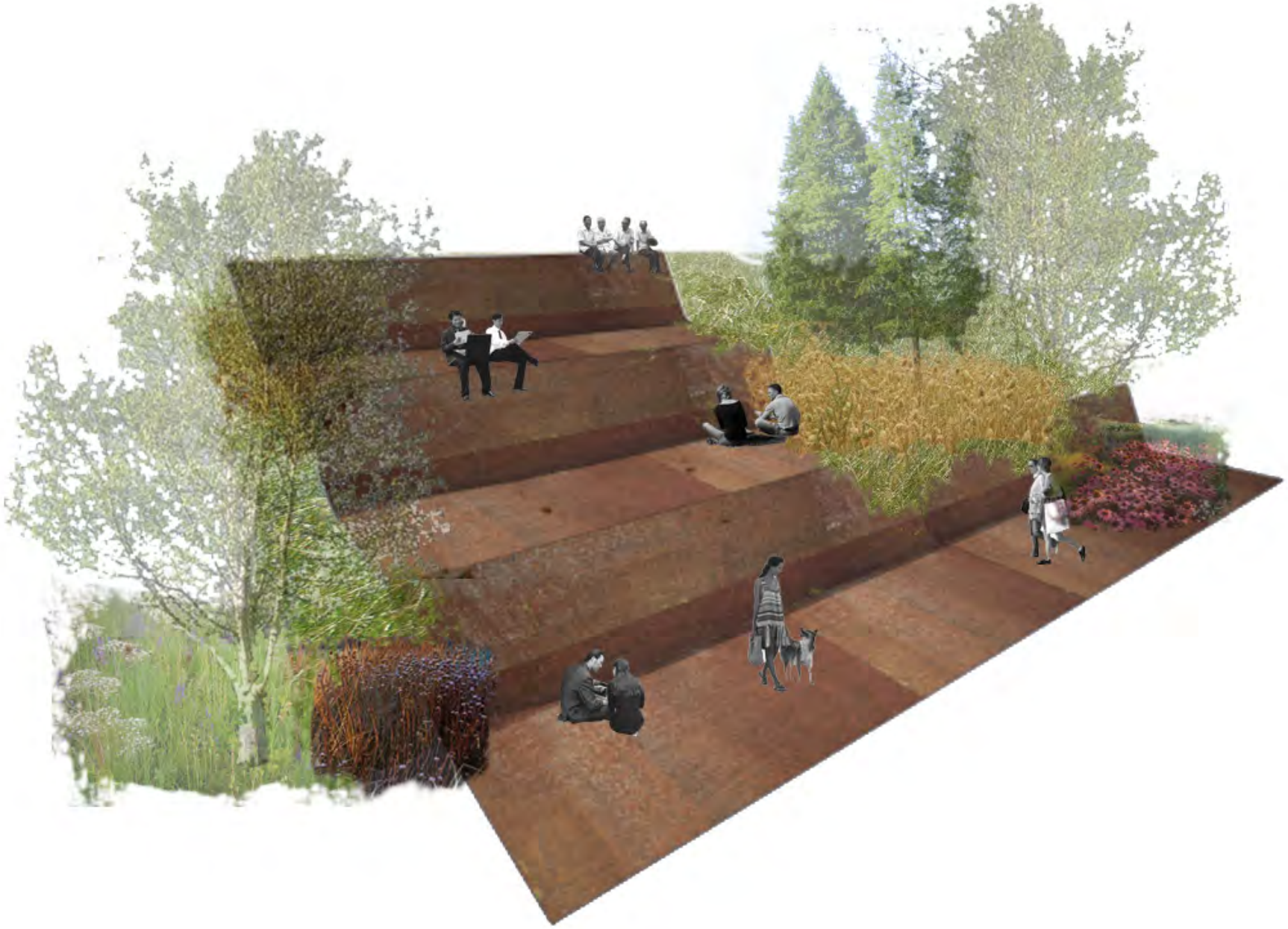
ground level

second level

17. Tectonic Section
Section showing structural makeup of the walkway.

room on the ground floor for public exhibits and lectures. There are two classrooms on the second floor along with support spaces including a small catering kitchen for each floor. A new wood wrap-around deck on the ground floors facilitates the multipurpose room to open up to the site by means of a set of large sliding doors, emphasizing the building's new connection to the site. The new porch also provides additional outdoor gathering spaces that serve the building. In addition, a new elevator and stair were constructed to bring the building up to code for public gatherings. New mechanical, electrical, plumbing and fire suppression systems were also introduced for the same reason.

A new kayak pavilion was constructed several hundred feet from the historic barn. While the new education center has since become a new destination for visitors, the kayak pavilion equally acts as a threshold to the extensive Hudson River and its system of tributaries in defiance to its purely utilitarian function of storage. The pavilion utilizes economical and utilitarian materials such as corrugated steel and painted structural steel. In addition to secured storage for up to sixty-four kayaks, the structure also incorporates a changing room, storage area and launch area and ramp lined in wood decking covered by a horizontal roof. Albeit simple in construction and program, this project demonstrates



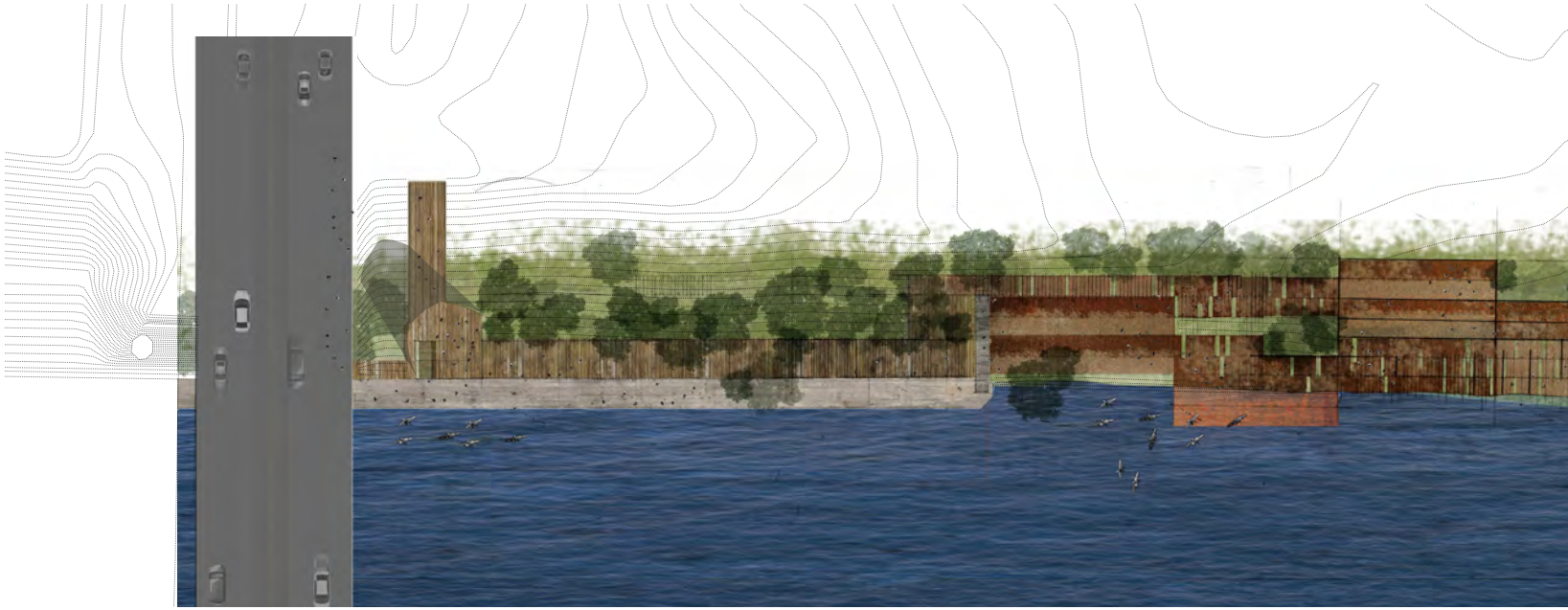
18. Gathering
Perspective showing
grand stand seating.

how an existing historic structure (such as this barn) can be restored and its new program expanded by site interventions and a complementary simple structure (the kayak pavilion).[14]

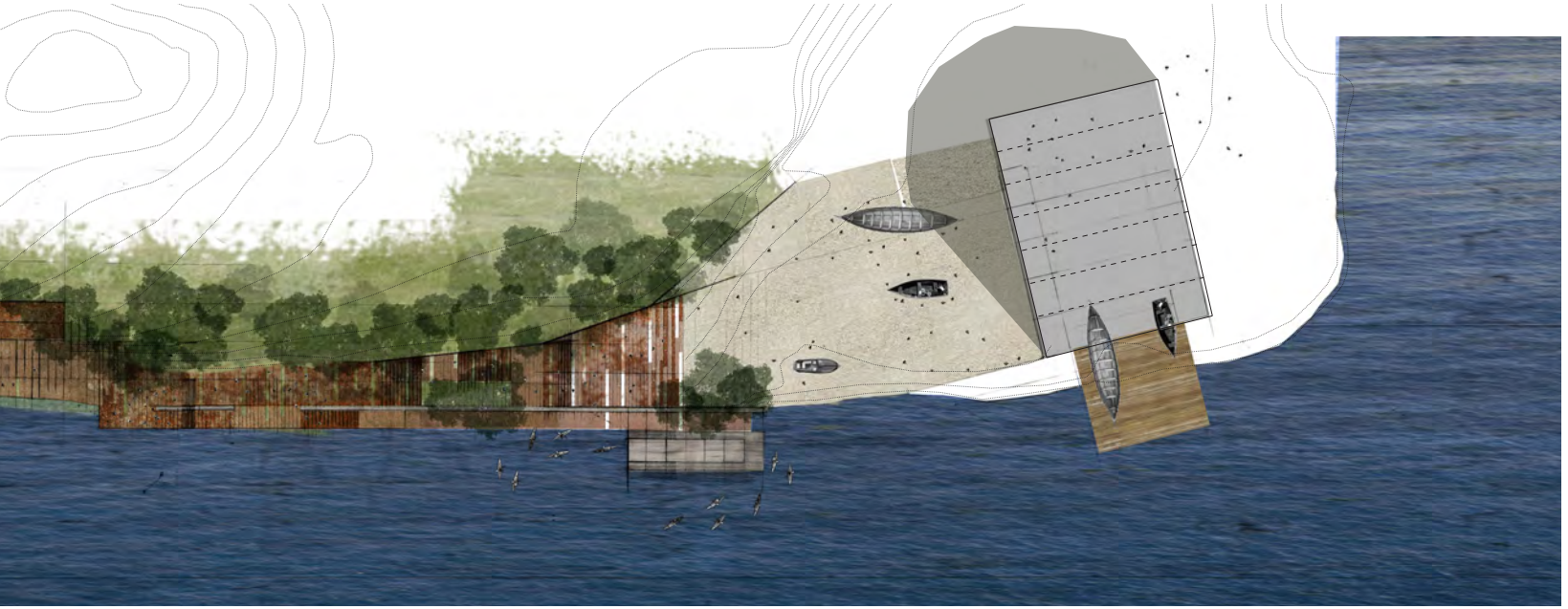
06. PROGRAM

The proposed intervention in this thesis is a public amenity that serves that City of Seattle but built on University property. With that said, part of the project, primarily the boat workshop is proposed to serve water sport enthusiasts and boat owners. It is the intent of this project that the this exposure of the general public to boating and associated repair activities will bring together

This historic structure will be reactivated as the centerpiece of the site and would be utilized by the University, the public as well as an outpost for local non-profit groups such as the Center for Wooden Boats and the Pocock Rowing Center both of which are seeing increased demand for their on-the-water youth programs. The vacated kayaks will be stored in a new kayak shed built into the cut itself.



19. Founding
Site plan and site elevation showing intervention.



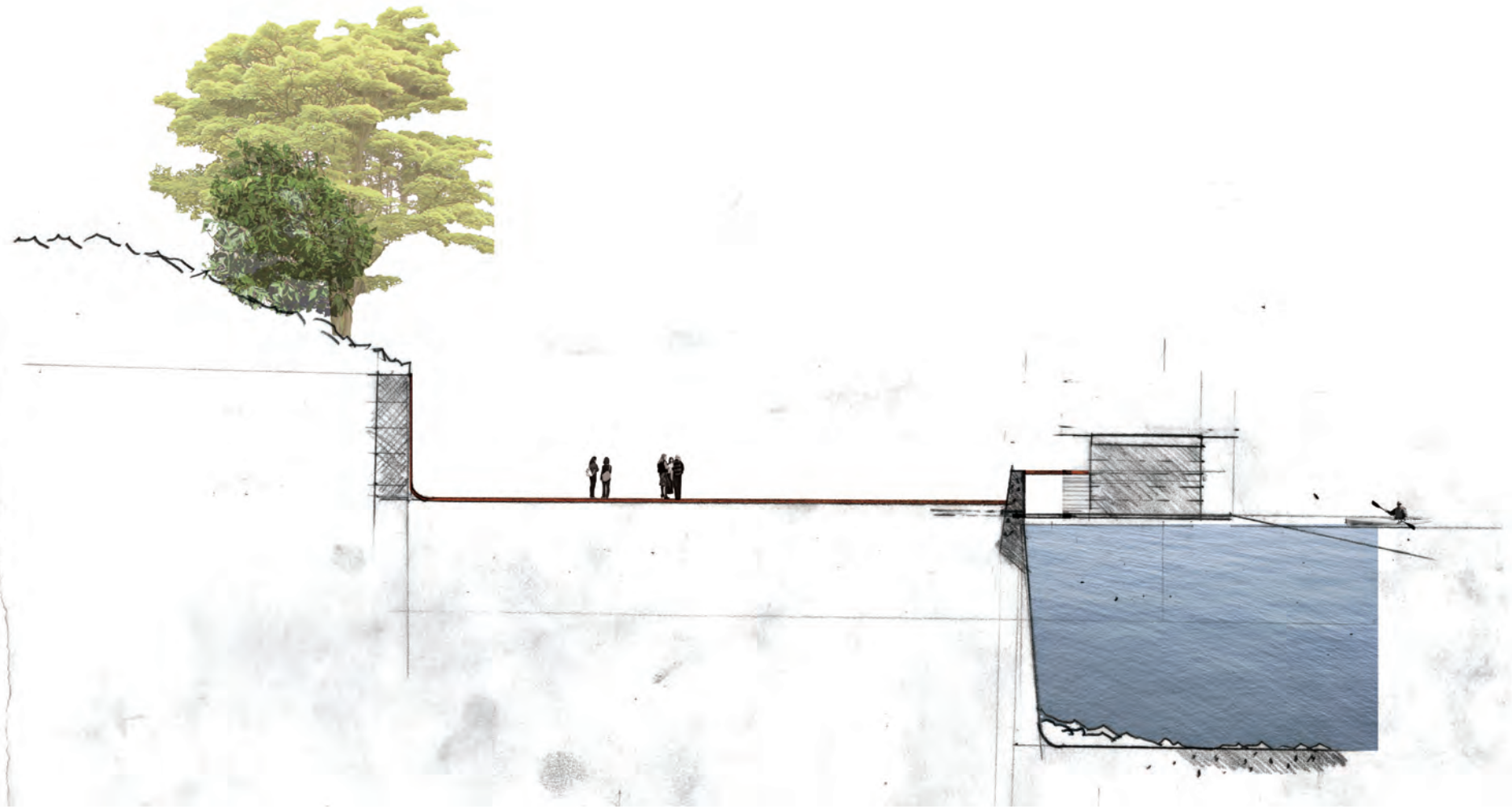
07. DESIGN

As described in the “Theoretical Framework” section of this document, this thesis has incorporated the “four trace concepts” in landscape architecture as explained by the Swiss landscape architect and theorist Giro. The site interventions proposed in this project incorporate the historic engineering “cut and fill” operations as a metaphor and a means of organizing the Montlake Cut site. A tower is proposed at the Montlake Bridge that will create new vertical connections between the now disconnected paths that exist along the site’s steep slope. At the water’s edge is a warming hut accessible both by pedestrians and kayakers. Past the tower, is an elevated walkway that continues back through the site. The walkway turns into retaining walls and grandstand seating that cut into and line the steep banks of the cut, thickening the water’s edge.

Along with the new vertical connections provided by the tower, the walkway will provide a horizontal link between the Montlake Bridge and the Canoe House by enhancing some of the existing but limited edge conditions. The walkway widens at points along the slope to provide vistas and areas of congregation, both on land and by the water. These include

site lighting elements, grandstand seating, benches and a kayak landing.

The walkway concludes in the form of a lookout constructed on the literal concrete edge of the Montlake Cut itself. Stairs then lead down to the Old Canoe House will be vacated of its smaller watercraft and structurally retrofitted to serve as a public workshop for boats.



20. Site section
Section showing kayak pavilion perched on the site's edge.

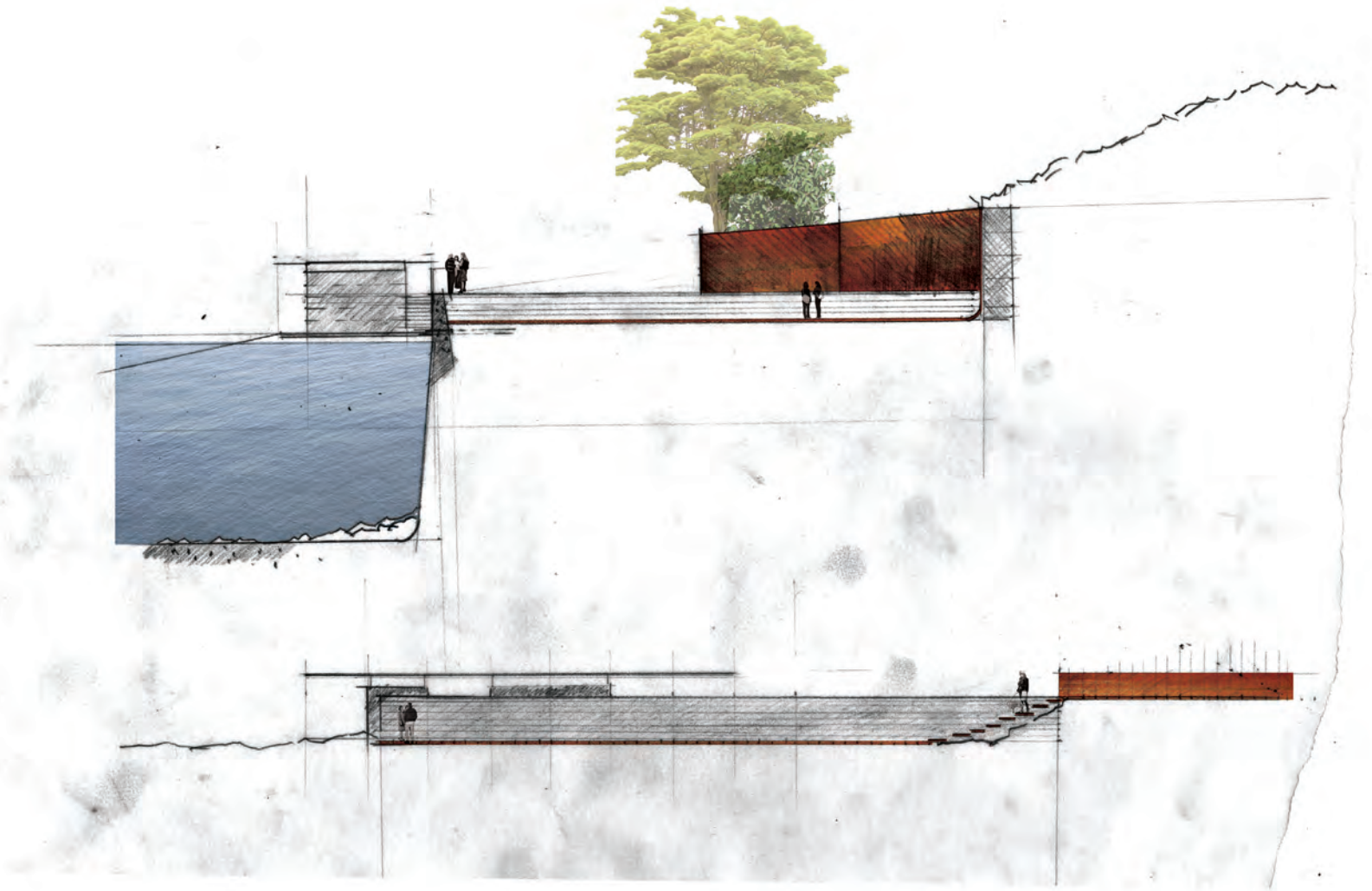
08. CONCLUSION

"Returning to the Cut" proposes to reconnect the University of Washington to the water's edge. This thesis began with an exploration of the violent and opposing historical operations that occurred to create the site itself. These operations of cut and fill removed astronomical amounts of earth and altered the University's landscape forever. The exploration of the site was built upon the "Four Trace Concepts of Landscape Architecture" as set forth by Swiss landscape architect Christophe Girot – landing, grounding, finding and ultimately founding.

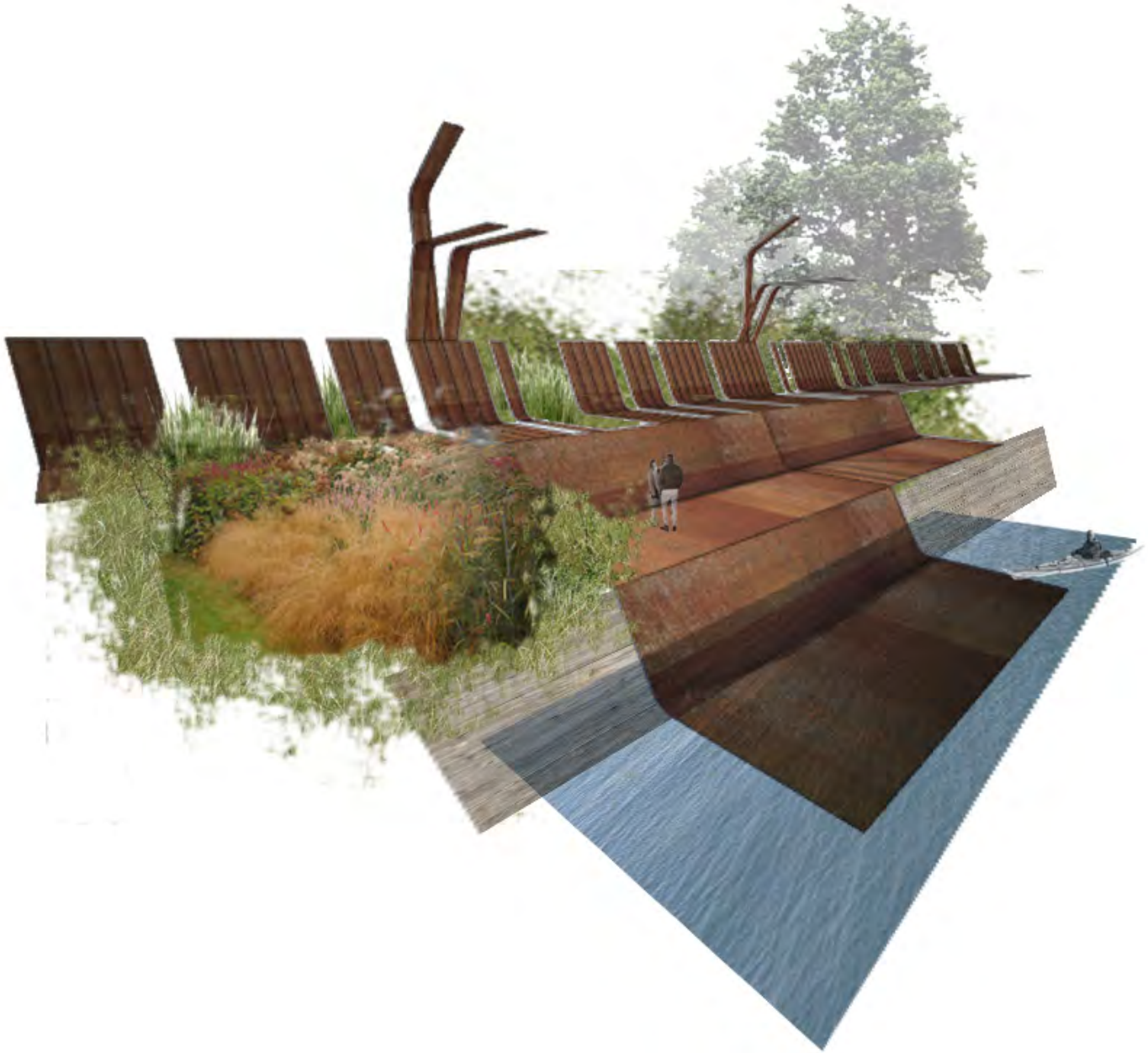
As with any thesis, "Returning to the Cut" raised many more questions than it answered. Given the challenging nature of the site, characterized both by its topography and complex history, the term "site" itself began to shift within the thesis. The result was a thesis characterized by a long process involving discovery, iteration and reiteration. What began as a broad campus-like scheme was eventually condensed to a linear, walkway along the water. Thus the definition of the site (and scope of the project) shifted to a single line. Ultimately the project came to focus on rediscovering this literal concrete edge of the Montlake Cut and the University campus itself.

The result is a thesis that condenses and hence reinterprets

21. Site section
Section showing kayak pavilion perched on the site's edge.



22. Kayaks
Initial sketch showing project concept.



23. Widening
Perspective showing kayak landing and walkway.

the notions of the Montlake Cut. As mentioned earlier, though at first glance appearing to be natural, The Montlake Cut, like many sites across Seattle is a “constructed site.” The violent and opposing operations of cut and fill that occurred here permanently altered and scarred the existing landscape. This thesis recognizes this violent path and proposes to intervene upon it. As the title implies, this thesis operates around the idea of “returning” and “reclaiming.” The interventions proposed here is only one of endless layers at which a designer can interpret these ideas. Regardless of the scope and scale of any intervention, architectural or otherwise, the fact that the various cut and fill operations that built up to the creation of the Montlake Cut in 1908 remains permanent and irreversible.

End Notes:

1. No Finer Site – University of Washington Libraries Exhibit
http://www.lib.washington.edu/exhibits/site/
2. Montlake Cut (Seattle)
http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=10221
3. Ibid.
4. Burns, Carol J. “On Site: Architectural Preoccupations,” Drawing, Building, Text, New York: Princeton Architectural Press, 1991, p. 149.
5. Treib, Marc, “Nature Reclaimed,” Recovering Landscape. New York: Princeton Architectural press, 1999, p. 30.
6. Girot, Christohpe “Four Trace Concepts in Landscape Architecture,” Recovering Landscape. New York: Princeton Architectural press, 1999, p. 60.
7. Ibid.
8. Ibid.
9. Ibid.

10. Ibid.

11. Ibid.

12. Ibid.
13. Hudson River Education Center And Pavilion / Architecture Research Office, Arch Daily, http://www.archdaily.com/197073/
14. Hudson River Education Center And Pavilion / Architecture Research Office, Arch Daily, http://www.archdaily.com/197073/

References:

Burns, Carol J. “On Site: Architectural Preoccupations,” Drawing, Building, Text, New York: Princeton Architectural Press, 1991.

Girot, Christohpe “Four Trace Concepts in Landscape Architecture,” Recovering Landscape. New York: Princeton Architectural press, 1999.

Hudson River Education Center And Pavilion / Architecture Research Office, Arch Daily, http://www.archdaily.com/197073/

No Finer Site – University of Washington Libraries Exhibit
http://www.lib.washington.edu/exhibits/site/

Montlake Cut (Seattle)
http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=10221

Treib, Marc, “Nature Reclaimed,” Recovering Landscape. New York: Princeton Architectural press, 1999.

LIST OF FIGURES:

11. Departure
Perspective of the kayak pavilion perched on the concrete edge of the Cut.

12. Gathering place
A view of the overlook at night.

13. Entry
The warming hut approached via kayak.

14. Finding
Initial site diagram showing larger connections between nodes.

15. Initial cut
Conceptual section showing initial exploration of the water's edge.

16. Precedent
Analytical diagrams of the Hudson River Education Center.

http://www.archdaily.com/197073/

17. Tectonic Section
Section showing structural makeup of the walkway.

18. Gathering
Perspective showing grand stand seating.

19. Founding
Site plan and site elevation showing intervention.

20. Site section
Section showing kayak pavilion perched on the site's edge.

21. Site section
Section showing kayak pavilion perched on the site's edge.

22. Kayaks
Initial sketch showing project concept.

23. Widening
Perspective showing kayak landing and walkway.

**Project images were created by the author unless noted otherwise.