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Marking Space: Redefining the South Knoxville Waterfront

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To the Graduate Council:

I am submitting herewith a thesis written by John Edward Reed entitled "Marking Space: Redefining the South Knoxville Waterfront." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Architecture, with a major in Architecture.

Max A. Robinson, Major Professor

We have read this thesis and recommend its acceptance:

Gregor A. Kalas, Mark Schimmenti

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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Accepted for the Council:

Carolyn R. Hodges
Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

MARKING SPACE:
REDEFINING THE SOUTH KNOXVILLE WATERFRONT

A Thesis
Presented for the
Master of Architecture
Degree
The University of Tennessee

John Edward Reed
August 2009

DEDICATION

This thesis is dedicated to my wife, Ashley Moore, the only person who understands the work, time and sacrifice within. Without her help and encouragement, this paper could not exist and I would still be wondering what it might be like to study architecture.

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I wish to thank all who have helped me accomplish my educational goals and put me on a path to architecture. I would like to thank my parents and family for being supportive of my career change and return to school. I would also like to thank my primary advisor Max Robinson for his level headed approach to my thesis and for keeping me on track. My committee, Gregor Kalas and Mark Schimmenti were instrumental in the development of this project and I am grateful. Finally, I would like to thank everyone at the University of Tennessee College of Architecture and Design, both faculty and students, for the myriad helpful suggestions that form the bulk of an architectural education.

ABSTRACT

In this thesis I will examine the idea of marking space by architectural intervention. I propose that the concept of marking is fundamental to architectural production. The history of the built form and the motivation behind it support markings importance. Furthermore, a close examination of the built environment shows the pervasiveness of this concept from taming nature to city planning and down to the level of a building itself and its rooms and organization.

Once establishing the importance of marking for architectural production, I will propose an intervention in the South Waterfront area of Knoxville, Tennessee that abides by these concepts and exemplifies their importance to what Kevin Lynch calls the “image” of a city.

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1 Introduction

Marking centers and creating boundaries are the basic acts of architecture. This thesis will explore the importance this act has had in architectural history and how a modern architectural intervention can redefine the conception of space in a city.

1.1 The Need for Marking

Marking is an essential beginning for architectural production and creating navigable space. It appears in many topics of architectural discussion and is central to the human reaction toward environment and built form. Wallace Stevens's poem, "Anecdote of the Jar," expresses this concept succinctly:

I placed a jar in Tennessee,
And round it was, upon a hill.
It made the slovenly wilderness
Surround that hill.

The wilderness rose up to it,
And sprawled around, no longer wild.
The jar was round upon the ground
And tall and of a port in air.

It took dominion everywhere.
The jar was gray and bare.
It did not give of bird or bush,
Like nothing else in Tennessee.

Stevens' take on this marking is reminiscent of Heidegger's description of the temple marking a site. "[T]he temple is not 'added' to what is already there, but ...the building first makes the things emerge as what they are" (Norberg-Schulz, 1988). The act of placing a jar in the wilderness has created a center and order to the surrounding world. Where there was no defined space, there is now a reference point and the rest is defined by it. Scale is established by comparing size and distance to the known dimension of the jar. In addition, the jar is round and smooth, its cylindrical perfection a shocking contrast to the natural world. The glass itself reveals not just the process, or hand, of mankind, but civilization and the perpetuation of knowledge through centuries. It has made the land "no longer wild," but marked as subservient to the will of man.

Roland Barthes discusses the basic concept of marked/unmarked in *Elements of Semiology*.

For Barthes, the “best known” of semantic oppositions are the *privative oppositions*, “...characterized by the presence of a significant element, or *mark*, which is missing in...the other.” (Barthes, 1968). The marked/unmarked relationship implies a certain specificity. The marked term (or object) is, conceptually, a subset or subtraction from the unmarked, although it often manifests itself by displaying an addition, or mark. Barthes explains this using the concept of *masculine/feminine* terms. “[M]asculine’ in fact corresponds to a non-differentiation between the sexes, to a kind of abstract generality...as opposed to which, the feminine is well marked” (Barthes, 1968). As examples, Barthes uses “poet/poetess, count/countess” (Barthes, 1968). So for architectural marking, the mark establishes space as a subset or subtraction of what it was before, it becomes subservient to the unmarked object placed within it and is defined or redefined.

Tied in with this concept is Barthes “second” problem of privative oppositions, the “*zero degree of the opposition*” (Barthes, 1968). The unmarked can also act as an agent “...of creating meaning ‘out of nothing’” (Barthes, 1968). In Stevens’ poem, the jar is the unmarked object, marking the land (taking “dominion”) and making it “no longer wild.” It gives the wilderness specificity and definition. By signifying certain concepts (i.e., civilization), it creates meaning ‘out of nothing;’ meaning that does not exist prior to its appearance.

This concept of marking appears throughout architectural theory. For many, it is the core motivation to architectural production. Barthes himself uses it in an architectural setting while discussing the Eiffel Tower in Paris (Figure 1), calling it “a kind of zero degree of the monument” (Barthes, 1982). Being, essentially, useless as anything else, it reorders Paris both as a marker and as a belvedere, turning Paris “into a kind of Nature...a landscape” (Barthes, 1982).

Fustel de Coulanges’ *The Ancient City* describes the rites of foundation and the importance of the marks placed on the land, both for the creation of a city and for the creation of a home. In each, the hearth and sacred fire create a center that requires a protective enclosure, what he sees as the driving force of architecture. “According to the Greeks, the sacred fire taught men to build houses; and, indeed, men who were fixed by their religion to one spot, which they believed it their duty not to quit, would soon begin to think of raising in that place some solid structure” (Fustel de Coulange, 1980). The founding god of the city or dwelling, was fixed to the land by this marking of the ground.

When Gottfried Semper attempts to show that “the form and character” of architecture should be “dependent on the ideas embodied in them,” he finds himself “forced to go back to the primitive conditions of human society” (Semper, 1989). There, he also sees the beginnings of architecture related to the marking of a site by the first, moral element of architecture, the hearth. “Around the hearth the

first groups assembled; around it the first alliances formed; around it the first rude religious concepts were put into the customs of cult. Throughout all phases of society the hearth formed that sacred focus around which the whole took order and shape” (Semper, 1989). The hearth marks the wilderness and makes it subservient.

Kenneth Frampton echoes this idea when quoting Vittorio Gregotti. “The origin of architecture is not in the primitive hut...Before transforming a support into a column, a roof into a tympanum, before placing stone on stone, man placed the stone on the ground to recognize a site in the midst of an unknown universe: in order to take account of it and modify it” (Frampton, 1995). Here, before creating even the hearth, the land is marked and put “in order” by the placement of the first stone. Later this stone, and marker, will acquire a more obviously human countenance.

1.2 Path, Edge, District, Node, Landmark

In 1960's *The Image of the City*, Kevin Lynch focuses on the city as a perceived image that is translated by an observer into a totality that helps navigation and enhances that observer's experience of the city as a place. Much of this work is concerned with the gathering of data and impressions from citizens of a city. He does this through mapping techniques and in-depth interviews to help determine the image of a city created by various individuals. He attempts to generalize certain traits about the experience of the city, taking into account the order and depth of individual experiences and the effect those have on all the senses. For example, the order in which parts of the city are encountered can have an impact on the image that is formed. Often a familiar part of the city becomes the focal point for where to start mapping.

The five physical elements that Lynch determines are keys to the formation of image are paths, edges, districts, nodes and landmarks (Figure 2). Lynch defines them as follows:

1. Paths. Paths are the channels along which the observer customarily, occasionally, or potentially moves. They may be streets, walkways, transit lines, canals, railroads. For many people, these are the predominant elements in their image. People observe the city while moving through it, and along these paths the other environmental elements are arranged and related.
2. Edges. Edges are the linear elements not used or considered as paths by the observer. They are the boundaries between two phases, linear breaks in continuity: shores, railroad cuts, edges of development, walls... These edge elements... are for many people important organizing features, particularly in the role of holding together generalized areas, as in the outline of a city by water or wall.

3. Districts. Districts are the medium-to-large sections of the city, conceived of as having two-dimensional extent, which the observer mentally enters “inside of,” and which are recognizable as having some common, identifying character. Most people structure their city to some extent in this way...
4. Nodes. Nodes are points, the strategic spots in a city into which an observer can enter, and which are the intensive foci to and from which he is traveling. They may be primary junctions, places of a break in transportation, a crossing or convergence of paths, moments of shift from one structure to another. Or the nodes may be simply concentrations...some nodal points are to be found in almost every image...
5. Landmarks. Landmarks are another type of point-reference, but in this case the observer does not enter within them, they are external. They are usually a rather simply defined physical object: building, sign, store, or mountain. Their use involves the singling out of one element from a host of possibilities. Some landmarks are distant ones...They may be within the city...isolated towers, golden domes, great hills...Other landmarks are primarily local, being visible only in restricted localities... the innumerable signs, store fronts, trees, doorknobs and other urban detail...they are frequently used clues of identity and even of structure, and seem to be increasingly relied upon as a journey becomes more and more familiar.

(Lynch, 1960)

These criteria are often mixed (paths can be edges) or changed depending on perspective (a district may become a node when viewed at a larger scale.) Some people will automatically rely more heavily on one of these imaging elements and others will change their reliance depending on situation and experience. For example, Lynch’s concept of “path” is often a determining factor for many, particularly individuals who are less experienced in the city. As experience grows, the path conception and image of a city is frequently replaced by an image that relies on landmarks for orientation.

As Lynch’s investigation became more sophisticated, it became clear that the links between two or more of these elements was important to the development of a city image. How people were able to transition from one element to another became the determining factor in how easy the image of the city was to negotiate. This becomes the crux of Lynch’s investigation and its usefulness in city planning. A good relationship and understanding of these relationships will create a city that is easily imaged and negotiated. For Lynch, “the images of greatest value are those which most closely approach a strong total field...and which can be put together either hierarchically or continuously, as occasion demands” (Lynch, 1960). Although Lynch reminds us that a city is experienced in it’s totality (sights, smells, sounds) and is experienced differently by every individual, his investigation gives the designer the tools and background to examine the visual landscape of the city and to manipulate it to his “best”

advantage. He concludes, “When reshaping cities it should be possible to give them a form which facilitates these organizing efforts rather than frustrates them” (Lynch, 1960). The argument, purposely limited by Lynch, is about the form of the city. He doesn’t attempt to define a “best” form or even to give criteria to determine such a form, but leaves it to the designer to come up with that determination and its appropriateness to the culture.

1.3 Marking and Center

The idea of marking space is often about creating a center to chaos. By creating a point of reference, the universe can be explained. The concept of marking and centering is linked to many areas of architectural theory. The Roman *mundus* and Fustel de Coulanges’ conception of the sacred hearth as center show how basic this concept is to architectural production.

One concrete example of “placing a jar” occurs in Kurt Forster’s discussion of monuments and the concept of *instauratio*. Monuments mark space for groups of people in the same way “home” is marked for individuals. *Instauratio* includes this concept but includes other factors that bring it more in line with Stevens’ use of the jar. The *instauratio* is “the partial remaking of a section of the city... [it] makes new ‘sites,’ marks an area, connects low and high, and, above all, provides a new point of view” (Forster, 1984). The *instauratio* redefines the land around it and connects the area to both its beginning and its future. Forster points to the London Monument as an example. The monument marks the site of the origination of the Great Fire of 1666 and also marks this as a new beginning for the city. In addition, its inscription connects this tragedy with the ultimate end of the world in apocalyptic fire.

But the monument Forster discusses that more closely relates to Stevens’ concept of marking the land is the founding of Sabbioneta (Figure 3). What is now a small Italian town was conceived as the capital city of Vespasiano Gonzaga, a man with big ambitions. “Sabbioneta was to be his *caput mundi*, the pivot of his tiny universe. Its centre was marked by a Roman column crowned with a statue of Minerva, said to have been plundered by Vespasiano’s father during the Sack of Rome in 1527” (Elam, 1989). The column acts as Stevens’ jar, ordering the “wilderness” around it and announcing the future use of the site, but it also connects the site to a history. It situates it in the history of the Roman Empire and attempts to establish the city as an authentic successor to Rome. It also connects to Gonzaga family history, implying that the Gonzaga family’s role in the sack of Rome is merely a way of reestablishing the lawfulness of its rule. Kurt Forster says:

The central spot in Roman and in many later town foundations honors... the site of origin. The original placement of a column in the center of Sabbioneta... returns to the Roman notion of the town’s *mundus*, and, as

a practice imported from Rome, represents materially the derivation of Sabbioneta from its symbolic mother city. Such columns, erected at the central intersection of the principal cross streets, anchored the city at one and the same time in its history and place and in the ahistorical realm of origins. As a landmark of the city's inauguration – indeed descending from augural practices in antiquity – the columnar monument rises beyond center and origin to survey the limit and remind one of the end as well as the beginning.

(Forster, 1984)

Also like Stevens' jar, the column brings with it a history of civilization, in this case a particular civilization. It was produced outside of its present context, and so brings with it a suggestion that this new area it now occupies will be redefined in relation to that outside civilization. The surrounding country side is "no longer wild" not just because it will be built and occupied, but because it will be built and occupied by "Romans."

The development of Sabbioneta up to the death of Vespasiano continues this connection. Forster shows, in detail, how the layout of the city center and cross axis as an echo of ancient Rome is continued in the placement of the palace, theater and public square (Forster, 1977). But upon Vespasiano's death, the city failed to prosper or become a center of empire. The city has become "a tiny town off the road from Mantua to Parma" (Elam, 1989) and the grand scale of its inception seems slightly out of place. This, however, has allowed the column to continue to act as marker. "The column originally stood in the Piazza Castello, where the two main streets of the town met in a kind of Roman forum... This was the ducal domain, the site of Vespasiano's fortress... The Roman column has been transferred to a second piazza devoted to civic and religious functions, and Minerva now presides as goddess of peaceful rather than martial arts" (Elam, 1989). By moving the column, the city of Sabbioneta has redefined the space again, removing the prominence of Vespasiano and Rome (though still invoking that history) and recentering the city according to its modern use, as a small Italian town.

The idea of "dwelling" instead of merely "residing" is also reliant on marking a center. Joseph Rykwert laments the modern concept of residing and the loss of dwelling. For him, the modern reliance on technology and rationalism has undermined the basis of human dwelling. By removing the emotional connection and individual mark (a necessity for an "international" style) we have denied a basic human want. The practice of "discarding clothes, cars, houses as soon as they have passed from immediate fashion" (Rykwert, 1982) has created an environment with no permanency, no marking. "[W]hat a man requires of his house is conviction that he is, in some sense, at the centre of the universe; that his home mediates between him and all the confusing and threatening world outside; that in some definite place

the world is summed up for him in a place which is his” (Rykwert, 1982). Rykwert sees this as the reason for the drive towards suburbia over the “anonymous apartment, however superior...what sways people finally may really be that little piece of castellation” (Rykwert, 1982), the little mark that centers the home as theirs. An inadequate mark, a poor substitution for dwelling, but perhaps the only choice for the middle-class.

Ivan Illich also connects dwelling with marking and laments the modern trend to living without such marks. “For the modern resident, a mile is a mile...because the world has no center. For the dweller the center of the world is the place where he lives...the dweller’s culture distorts his vision. In fact, it determines the characteristics of the space he inhabits” (Illich, 1992). For the dweller, “the threshold is like the pivot...on this side lies home” (Illich, 1992). The resident, however, is prohibited from making these marks. “The marks he leaves are considered dents – wear and tear. What he does leave behind him will be removed as garbage” (Illich, 1992). Without this ability to dwell, the act of architecture has been reduced to “the production of garages for people, commodities and cars” (Illich, 1992). So even in the modern world, especially in the modern world, there is a need for marking and dwelling.

Another concept involved in keeping this connection between built form and human dwelling is phenomenology. But to Christian Norberg-Schulz, these phenomena are only meaningful because they are compared with a known (and marked) center. For him, the “way” through space becomes the “most fundamental motive.” Space is defined by travel between points. “The way is always directed from the known towards the unknown, but man always returns to the place where he belongs; he needs a home which designates his point of departure and return. Around this centre his world is organized as a system of ways” (Norberg-Schulz, 1988). The phenomenological experience, though perhaps irrational to the outside observer, is organized by the individual around his marked and centered reference point.

Norberg-Schulz goes on to explain this in terms of *Existential Space* and its relationship to *Architectural Space*, using language very similar to Lynch. He argues that “man gradually constructs the image of a structured world, in which ...*existential space*, forms an integral part.” This space represents “what is known and what permits man to depart towards a more distant goal. Only when the individual possesses such a point ...of reference, he may act in a meaningful way” (Norberg-Schulz, 1988). Our interaction with space is defined by the centers we mark as home. “When the centre of our immediate space coincides with the centre...of existential space, we feel *at home*” (Norberg-Schulz, 1988). So existential space is “our concept or image of the environment” (Norberg-Schulz, 1988) but this concept is dependent on the “concrete properties of the environment” or the architectural space. The existential

space/architectural space connection is bidirectional. We develop our concept of existential space by our experience in architectural space, but we also develop and change the architectural space to fit our concept of existential space in order to “feel at home.” By marking our place of dwelling and creating a series of marker points as reference, we are able to navigate the larger world and make sense of it.

At the modern building scale this idea of center continues. John Ronan’s Gary Comer Youth Center (Figure 4) on the edge of Chicago shows how this idea is carried from a city scale right into the interior of the building, changing the concept of center as the scale changes by exploiting Lynch’s ideas of occupiable and unoccupiable centers found in nodes and landmarks.

From a distance, the tower of the Center declares the building as an important mark of the community. It stands above the housing of the area and can be seen from a distance, acting as a landmark and orientation device. An observer’s physical position in the neighborhood can now be quickly referenced by its relation to the tower.

As the observer approaches the building, the tower becomes less prominent, hidden above the colorful façade of the main building. The color and panels of the Center stand apart from the surrounding housing, marking the boundary of an important change.

Once inside the building, however, the concept of center changes again as the predominant feature becomes the center activity area, an example of Lynch’s node. The purpose of the Center, the new home of the South Shore Drill Team, becomes the focus and center of the building. The classrooms and dining areas surround and look into the gymnasium and performance floor. The tower is now completely out of view and the center is redefined once again.

The Gary Comer Center is an important example not just for these physical attributes, however. By creating a distinct and visual marker, Ronan has redefined the neighborhood as centered on his intervention. He has given the neighborhood an identity and center that did not exist beforehand. This redefinition is extended to the city of Chicago itself, creating a visible landmark that emphasizes the South Shore as an important part of the city.

1.4 Marking and Boundary

Marking is also elemental to the conception of boundary and enclosure. Fustel de Coulanges describes the founding of Rome and the importance of the furrow boundary marking the extents of the new city. “Romulus traced a furrow which marked the enclosure...This enclosure, traced by religion,

was inviolable. Neither stranger nor citizen had the right to cross over it” (Fustel de Coulange, 1980). This marking of the boundary was expected to be performed at the establishment of a home as well. But the established furrow boundary was architecturally marked much as the hearth marked the mundus. “On this line, at certain points, the men place large stones or trunks of trees, which they called *Termini* . . . The Terminus, once placed in the earth, became in some sort the domestic religion implanted in the soil, to indicate that this soil was forever the property of the family” (Fustel de Coulange, 1980).

Integral to the idea of boundary is the idea of the gate. In fact, the gate is established in the process of creating the boundary. Since the boundary furrow was inviolable, the furrow was interrupted at the point of the gate. Joseph Rykwert describes this boundary founding, “When he [Romulus] came to the places on the boundary where the gates were to go . . . he took the plough out of the ground and carried it over the span of the gate” (Rykwert, 1976). A break, and civil space, was created to allow transport across the sacred boundary. These gates would also get architectural attention over time.

The idea of “marking the wilderness” is of particularly use in the development of landscapes. Natural landscapes have always included markers. From aboriginal Australia’s Ayer’s Rock to Ansel Adams’ use of El Capitan to tame and orient Yosemite in picturesque fashion, humans have always used natural formation to define space and tame the “slovenly” wilderness. John Dixon Hunt explains this as an “intellectual” process, a changing of “first nature” to “a version of second nature”: a “response to the terrifying and threatening spaces of mountains, sea, or desert has been to annex them mentally to what is termed the ‘sublime’ . . . first nature has now been subsumed and managed culturally” (Hunt, 1992).

Later, the English landscape did the same in a more formal way. In fact, Hunt quotes “Anecdote of the Jar” and uses the Garden at Castle Howard to pursue this point of changing first nature into second nature through the use of marking, or, in his terms, “the writing of a site, the inscription of meaning – sometimes with actual words, but just as often by a dumb visual language – onto some segment of terrain” (Hunt, 1992). With this in mind, he revisits the Gardens of Castle Howard to explain what some see as inconsistencies. The Temple of the Four Winds presents a view reminiscent of Stevens’ jar “by the siting of a massive bridge and a circular temple” that shows “an English landscape transformed” (Hunt, 39). Criticizing Kerry Downes’ portrayal of the Pretty Wood monuments as “utterly pointless,” Hunt points out, “These structures and what they represent of cultural history all bring into prominence the Yorkshire scenery in which they have been introduced. Yet they make the northern wilderness no longer wild” (Hunt, 1992). The problem of perception is that the English landscape artists were so successful at achieving their ends, the object “registered simply as items dumped in the landscape”, but to “those educated and attuned to thinking of art as representation, such a spot . . . would have declared

its cultural history” (Hunt, 1992). Instead of seeing these as markers that reorganize the land, a land that was also physically reorganized, they were seen as items gaining meaning from a pure nature. However, they were placed quite purposefully to mark and define the “northern wilderness.”

Finally, this concept of marking boundary is seen extensively in the “manifest destiny” of America and its move west. First with railroad bridges and later the interstate highways, the land was marked as tamed and controlled. Hydroelectric dams marked the waterways throughout the country. Ansel Adams and other landscape artists and the National Park system created Hunt’s “intellectual” marking of the most remote of areas until most of the land was marked. Perhaps this “success” has produced much the same perception as seen in Castle Howard. The land is so tamed, reduced to “second nature” that the meaning of the mark is overlooked and its importance forgotten.

However, boundary marking is relevant to a modern city as well as to landscapes and foundation rituals. One example is the Grand Arch of La Defense in Paris (Figure 5). The monumental arch creates a visual terminus for Champs-Elysee and defines the boundary between Paris and the West Paris business district. It also occurs at the threshold and becomes a gate between the two districts. It reorders the city image by making this boundary visually evident from even a great distance.

1.5 Distributed Center - The Matrix

It is difficult for a modern city to be centralized in this traditional way, however, communications and transportation allow for a web of centers, marked in significant ways, and these centers still hold a significant importance. Norberg-Schultz places this idea of grid and matrix in the American city tradition. He defends the American city against charges of being “a kind of non-place” by examining the matrix and grid as exemplifying an “open city” that stems from the North American city foundation model of a main street. “In the open city, the street becomes the primary fact...a street without definite ends and limits” (Norberg-Schultz, 1988). The early development of Williamsburg, Virginia is a typical American example. “Although it has a public building at either end and a Market Square in the middle, there is hardly any feeling of an enclosed, urban space” (Norberg-Schultz, 1988). The houses themselves form a matrix of individual centers and “expresses a new sense of infinite space. This characteristic is supported by the symmetrical facades of the houses, which do not form any continuous row but stand alone as individual identities” (Norberg-Schultz, 1988).

This individuality extends as the city grid extends. By Benjamin Franklin’s time, Philadelphia had grown into such a non-centered matrix. “Instead of focusing on the great square [planned by Penn] it

focused on nodes of activity” (Norberg-Schultz, 1988). Modern Manhattan continues this concept of infinite grid even while being naturally contained on an island. “Although Manhattan is an island, it is experienced as an open form. The streets between Hudson River and East River do not lead to any goal but are suddenly cut off by the edge of the rivers, while the avenues seem infinite” (Norberg-Schultz, 1988).

This infinite grid is continued vertically in the facades of the buildings. The new use of iron in building allowed for facades that continued the idea of multiple centers and individual identity. Norberg-Schultz examines this through the works of James Bogardus, the Laing Stores of 1848 and the Bogardus Factory of 1849. “Both buildings express better than any earlier structures the symbolic openness of the American grid. For the first time, American space had got an adequate architectural interpretation...His interpretation is not a fixed architectural form but rather, an open system like the grid itself, waiting to be occupied by individual expressions of activity” (Norberg-Schultz, 1988). The American desire to build skyscrapers is an obvious extension of the infinite grid to the vertical plane.

To accomplish this openness and make the multiple centers of a matrix remain navigable requires an architectural quality not required of a more traditional city. “[T]he lessons offered by the American city are the demonstration that the identity of place can be combined with change and growth and that orientation and identification in the open city depend on architectural quality...When the grid is taken into possession by buildings that are expressions of activity, the American city shows what urban life means in the New World” (Norberg-Schultz, 1988).

The Free University of Berlin (Figure 6) takes this conception of street and matrix and applies it to a classroom building. By organizing the classrooms along a circulation grid, the activity of the individual classrooms become the nodes and multiple centers of the building.

1.6 Conclusion of Comparative Analysis

For my project, I will attempt to use these concepts to redefine the city image of Knoxville to include the emerging South Waterfront (Figure 7). This area seems detached from the rest of the city because of its location and isolation across the Tennessee River. However, the topographical ridgeline south of the area visually disconnects it from the development to the south while visually connecting the area to the downtown north of the river. The large and visually interesting bridges at Gay Street and Henley Street also indicate the connection that these two areas could have in the city image of Knoxville (Figure 8). By utilizing Lynch’s ideas of city imaging and the basic human conception of marking, I will attempt to create an architectural intervention that will both mark the border of Knoxville to include the

southern shore and also define a center to that shore that expresses its importance as a place.

2 Site Analysis

The specific site chosen for this project is at the south end of the Gay Street Bridge beneath the JFG Coffee sign. The sign is a significant landmark of South Knoxville and is visible from the center of Gay Street downtown (Figure 9). In fact, it is located on the visual axis of Gay Street through downtown and seems to mark a site of some significance. However, the site itself is abandoned and the sign marks nothing but the foundation of a long demolished hardware store and a set of stairs that lead to a guard rail surrounding a parking lot (Figures 12 and 13). Because there is nothing there, the sign is missing significant meaning. When seen from the middle of Gay Street downtown, there is no reference to its size or location. Is it across the river or on this side of the river? Is a visitor even aware that there is a river?

Using this site presents the opportunity to redefine the JFG sign as a marker of the South Waterfront and to use this area as a node that connects South Knoxville with downtown, the South Waterfront with the Volunteer Landing area on the north shore and the city level at Gay Street with the River level below, a river that is woefully under utilized as part of the image of the city of Knoxville.

Many of the landmarks of downtown Knoxville are visible from the site, most significantly the Gay Street Bridge (Figure 14). The opportunities for experiencing this city landmark from a new perspective will be significant to the project.

The site is also accessible by a number of transportation methods (Figure 11). The South Waterfront Vision plan sees this area as a recreational corridor, with bike paths and watercraft landings. The bridge and roads also connect it to downtown and South Knoxville. There is also an opportunity to create a water taxi system that would further connect the north and south shores. The planned riverfront park would be directly adjacent to this site. Furthermore, the Bell Tower Walk and Sevier Avenue shopping corridor (a planned “main street” style retail zone) would be directly east of the site.

Of particular concern to any development on this site is the potential success of the Knoxville South Waterfront Vision Plan. For this thesis project, my position is that many of the ideas contained in the plan will be in place, particularly the relocation of Holston Gas, the development of a riverfront park and bicycle path, the development of the Bell Tower Walk and the additional retail environment of Sevier Avenue. This site can then become the node between downtown and this new development.

3 Program

3.1 Program Description

The program for the site was chosen using three criteria. The program needed to draw people from both the South Knoxville neighborhoods and downtown, as well as a diverse group from further afield. The program also needed to create use and occupancy over the majority of the day, much in the spirit of Jane Jacobs, and create a “critical mass” that would both help the viability of the South Knoxville Vision Plan and be helped by it. Finally, the program needed to create the node between the horizontal levels of the north and south shores as well as east and west along the shore, but also vertically between the city level at Gay Street and the river level below.

I chose to solve these issues using a mixed use retail complex and public market (Figure 16). The public market would concentrate on agriculture and other food products. This is a needed service for both downtown and the South Waterfront neighborhoods. The East wing would concentrate on a more permanent market, particularly those requiring refrigeration such as dairy, fish or meat. This is a service that is not available in the current Farmer’s Market on Market square. The West wing would be more open and less permanent to allow a variety of vendors access. These could change on a daily basis or could even be occupied by different vendors in a single day as the clientele changes.

The next level down contains a cafe under the JFG sign (Figure 17). This reinforces the use of the sign as a marker of the complex and allows people to experience its size and position in the city.

The third level contains the two major restaurants of the complex (Figure 18). The eastern restaurant is more formal and uses the local produce found above at the market level. The western restaurant is less formal and would serve food that could be eaten in the amphitheater or adjacent park and courtyard.

The lower restaurant level (Figure 19) would contain a similar establishment and create a variety of options for patrons.

The bicycle co-op would occur on the next level (Figure 20) with the bicycle path leading directly to it. The idea of a bicycle co-op is current here in Knoxville and its location at this point would connect it to the downtown and the new development of the South Waterfront. It would also allow for a large storage, rental and repair area that would be difficult to obtain in downtown while still being easily accessible from downtown.

The boat and supply store (Figure 21) would connect the complex to the river level and the Marina that would be cut into the shore at this point. The Marina creates a connection back across the river to Volunteer Landing by private boat or by a proposed water taxi system. The complex can then be utilized as a starting point for activity on the north shore. For example, football game “tailgating” could occur in the new park and at the complex while the water taxi system makes the final connection to the stadium convenient.

3.2 The Program and Marking

The program marks the site in significant ways. The first approach from the city would be across Gay Street Bridge. By reinstating the electric trolley (Figure 28) across the bridge, the trolley tracks would become a mark on the street itself, so a person crossing Gay Street downtown could visually follow the tracks to their end at the JFG sign. The trolley turnaround becomes a node for transitioning between the north and south as well as along Sevier to the east and west.

The JFG sign itself becomes a gateway to the complex (Figure 29) with a path through the trees and under the sign leading to the view back across the river and down Gay Street. The sign also become a node of the complex with its four post base creating a junction between the major Gay Street axis and the perpendicular paths created by the Market roof structure and stalls.

The edges of the complex are marked by the retaining walls that reveal the boundary, much as the sacred furrow marked the edges of the city at foundation (Figure 30). The edge condition is additionally marked by the amphitheater, which reveals the original topography as it changes from a riverfront backdrop to a cliff along the river's edge beneath the Baptist Hospital site. It also redirects the view back to the center of the complex as it works its way down the terrain.

The Marina gate acts as a landmark for boat traffic (Figure 43). Its vertical presence and volume make it visible to low lying boats and marks the entrance to the complex. The observation deck that is part of the Marina gateway allows visitors the opportunity to experience the Gay Street Bridge from a new vantage point and further reinforces the Bridge as an important image and marker for the city. The entrance from the marina to land (Figure 42) is further marked by the sloping ramps as well as the shaded entry gate, marking the center of the complex.

The complex is marked on a smaller scale as well. The market stalls are marked by their relationship to the structural columns (Figure 39). The stalls would be marked by their occupants in a variety of ways (Figure 32), from permanent display cases that create public and private zones as well as walkways, to the simple arrangement of tables and signs hung from strings that mark a particular space for the day. The restaurants continue this theme with a bridgelike gateway that separates the kitchen and public areas (Figures 35 and 37). The funicular ramp also marks a transition between the public areas and the private or mechanical "back of house" program (Figure 24).

3.3 Changing the Image of the City

By marking the site as important in these ways, the complex has created a place that can be experienced and remembered. The JFG sign is no longer a marker of nothing, but a place that has been experienced. A person seeing it from the middle of Gay Street would now know its size because they would have stood beneath it. They would understand its location and connection to the river and reconfigure their image of the city to include the South Waterfront and the Tennessee River that stands between the two (Figure 15). They may also have a new image of the city that includes the view

from the South back to the North, the skyline and its reflection in the water, and come away with a reinforced idea of Knoxville as a city on a river.

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Appendix

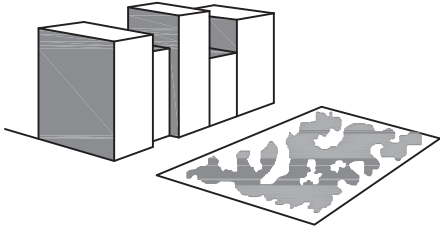


Figure 1 | Eiffel Tower | <http://paris-photo.esem.sk/photo/paris-eiffel-tower.jpg>

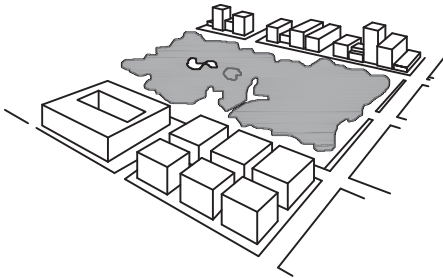
Kevin Lynch | *The Image of the City*



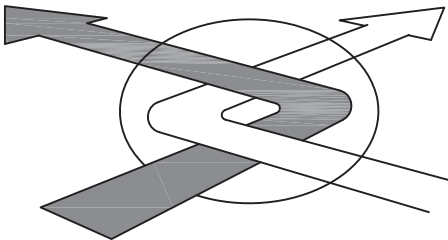
1. Path



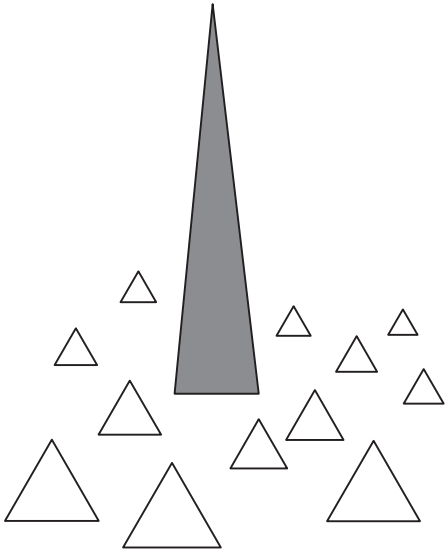
2. Edge



3. District



4. Node



5. Landmark

Figure 2 | Forming an Image | Author



Figure 3 | Foundation Marking of Sabbioneta
| <http://digilander.libero.it/toraus/viaggi/800px-Sabbioneta01.jpg>



Figure 4 | Gary Comer Youth Center | http://www.arch.utk.edu/special_programs/lecturef07.html



La Defense Arch

Figure 5 | Marking Borders | <http://www.sobi.org/photos/places/Paris/defense/defense1.jpg>

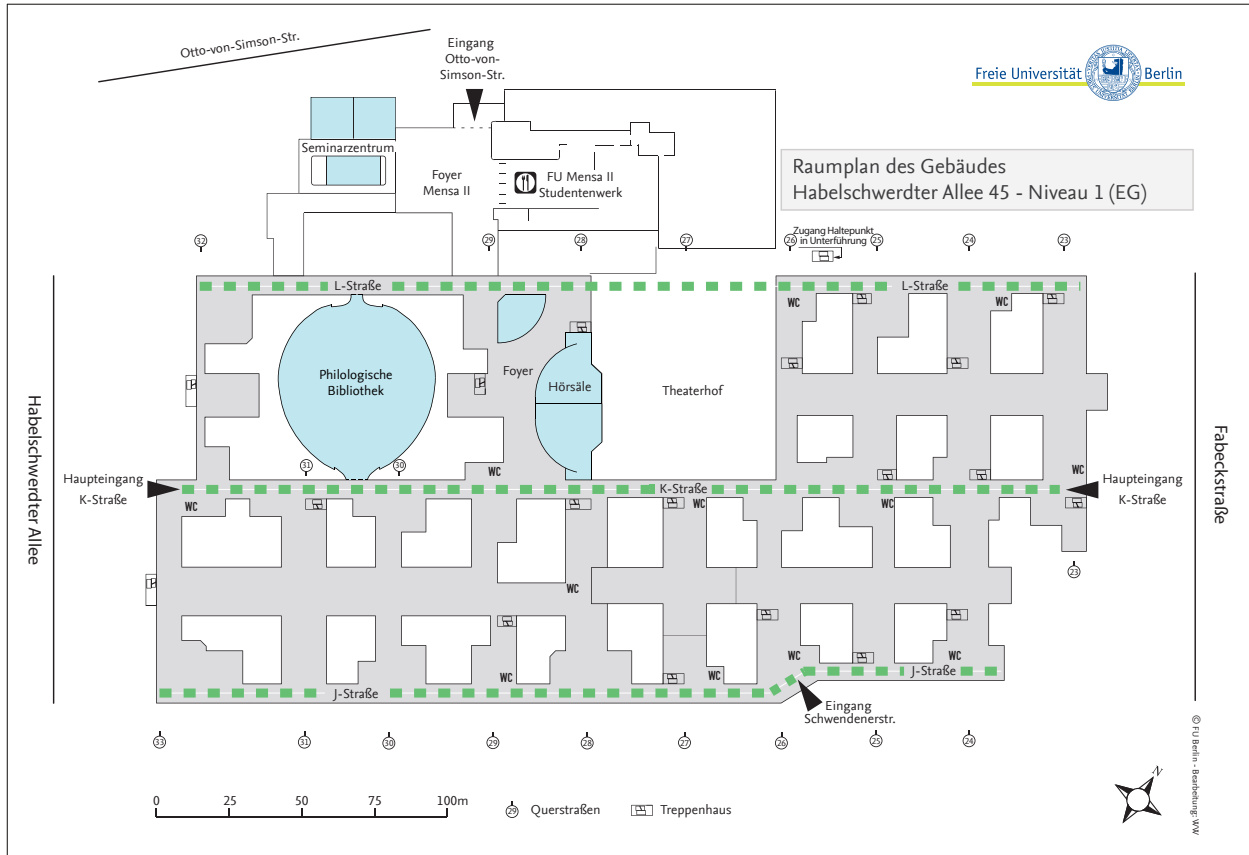
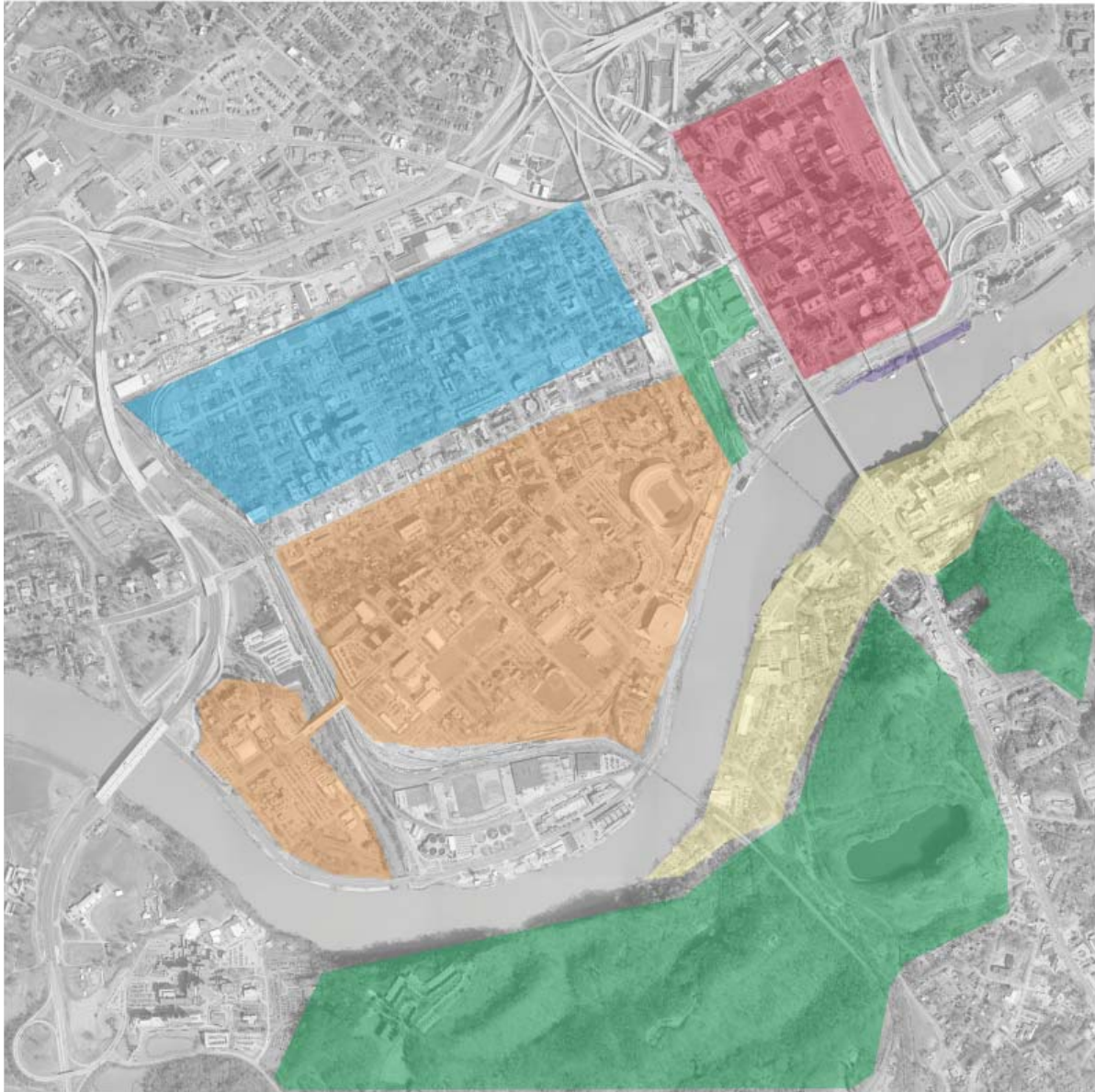


Figure 6 | The Matrix | http://www.oei.fu-berlin.de/ueber_institut/download/Raumplan.pdf



Knoxville Zones

The South Knoxville Waterfront Zone is isolated by the River on the North and the Ridgeline to the South. It is visually connected with the downtown, but is considered a separate area.

The Tennessee River itself is often overlooked as an important feature of the city.

- Fort Sanders
- University of Tennessee
- Downtown
- Volunteer Landing
- South Knoxville Waterfront
- Green Space
- Ridge Line

Figure 7 | Knoxville Zones | Author



Knoxville Paths and Landmarks

Knoxville has a strong East-West orientation along Interstate 40 and Kingston Pike. The density south of the river quickly lessens and strong path orientations are lost.

Figure 8 | Knoxville Paths | Author



JFG Sign from Gay Street | The beloved South Knoxville landmark signifies nothing and marks only the remnants of a hardware store.

Figure 9 | Gay Street Marker | Author



Figure 10 | Gay Street Axis | Author



Figure 11 | Potential Paths | Author



Undeveloped, but not Unmarked | Former building pads and foundations mark an earlier use



Stairs to a Parking Lot Rail



Site of Proposed Sevier Street Shopping & Bell Tower Walk

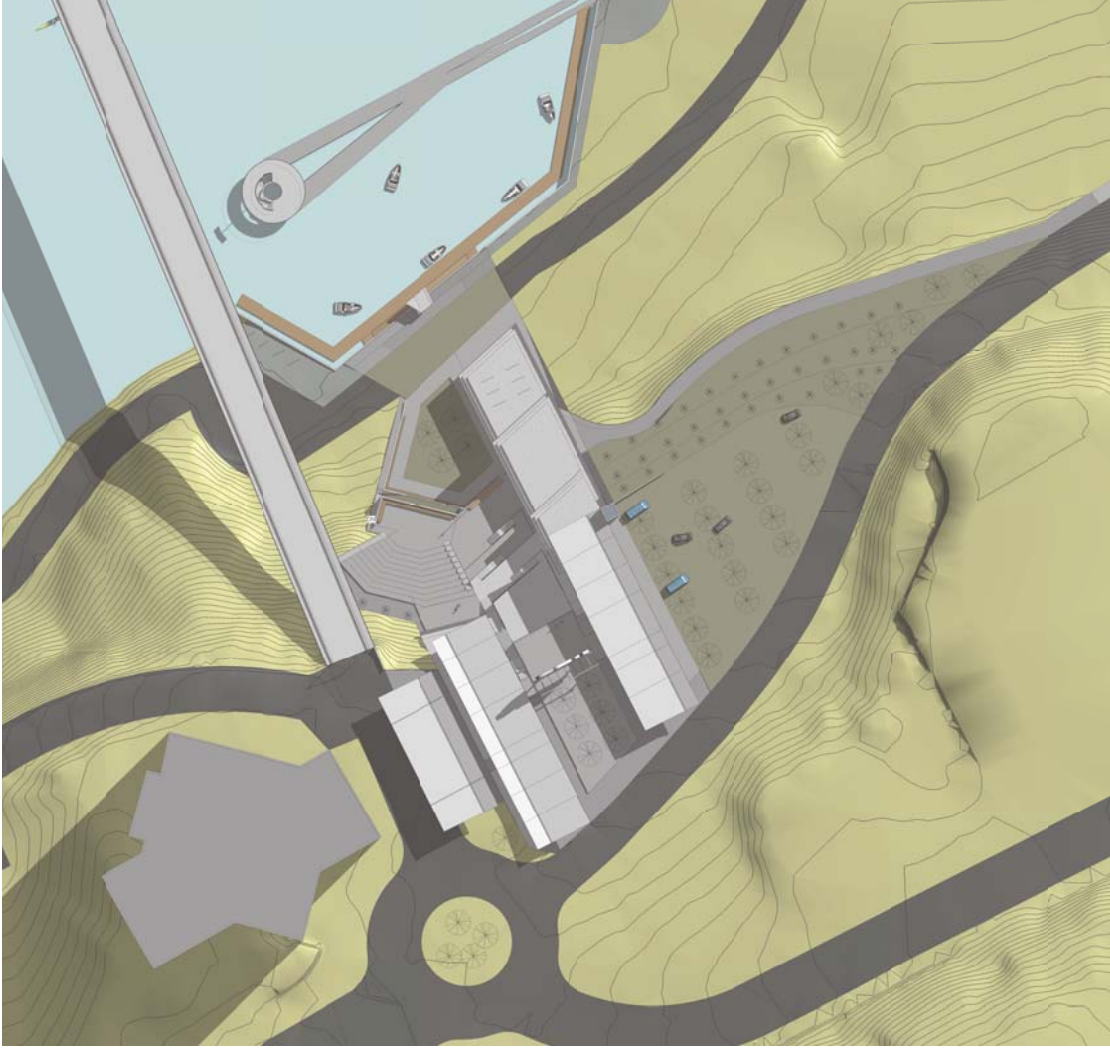
Figure 12 | A Marker Without a Place | Author



Figure 13 | Beneath the JFG Sign | Author



Figure 14 | Visible Landmarks | Author



Site Plan
1/128" = 1'-0"

Figure 15 | Site Plan | Author

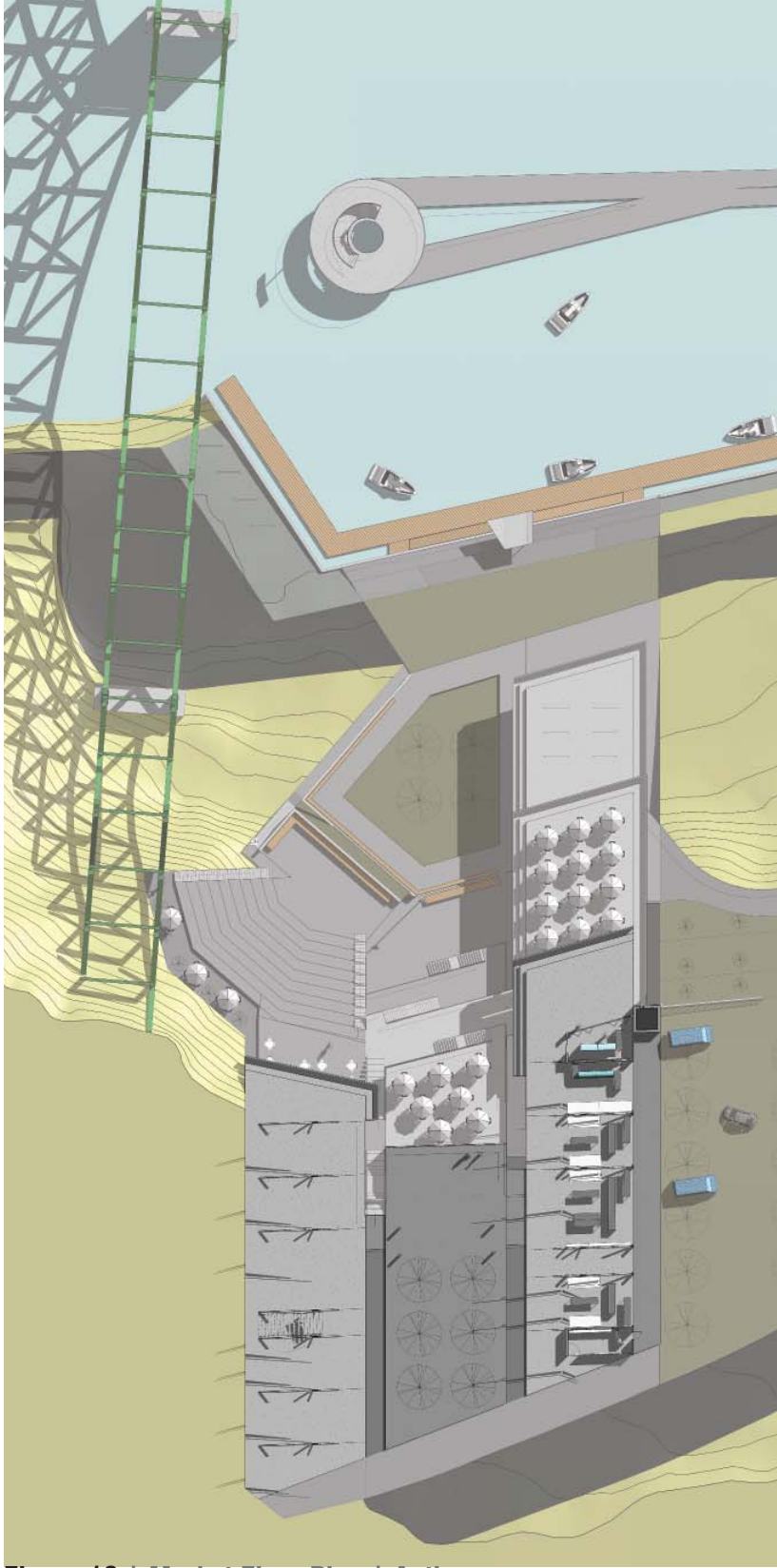


Figure 16 | Market Floor Plan | Author

Public Market Level
1/64" = 1'-0"

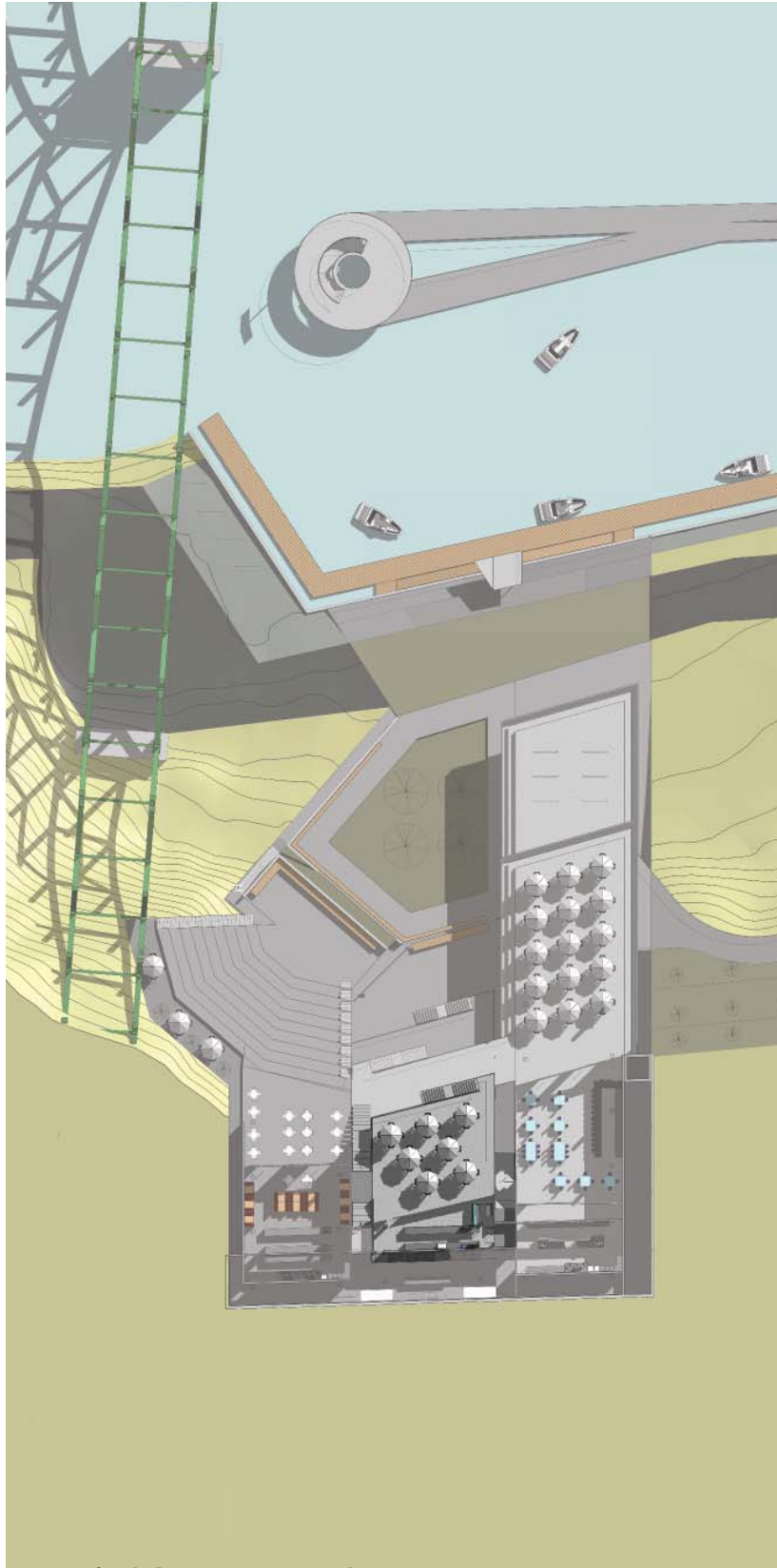


Figure 17 | Cafe Floor Plan | Author

Cafe Level
1/64" = 1'-0"

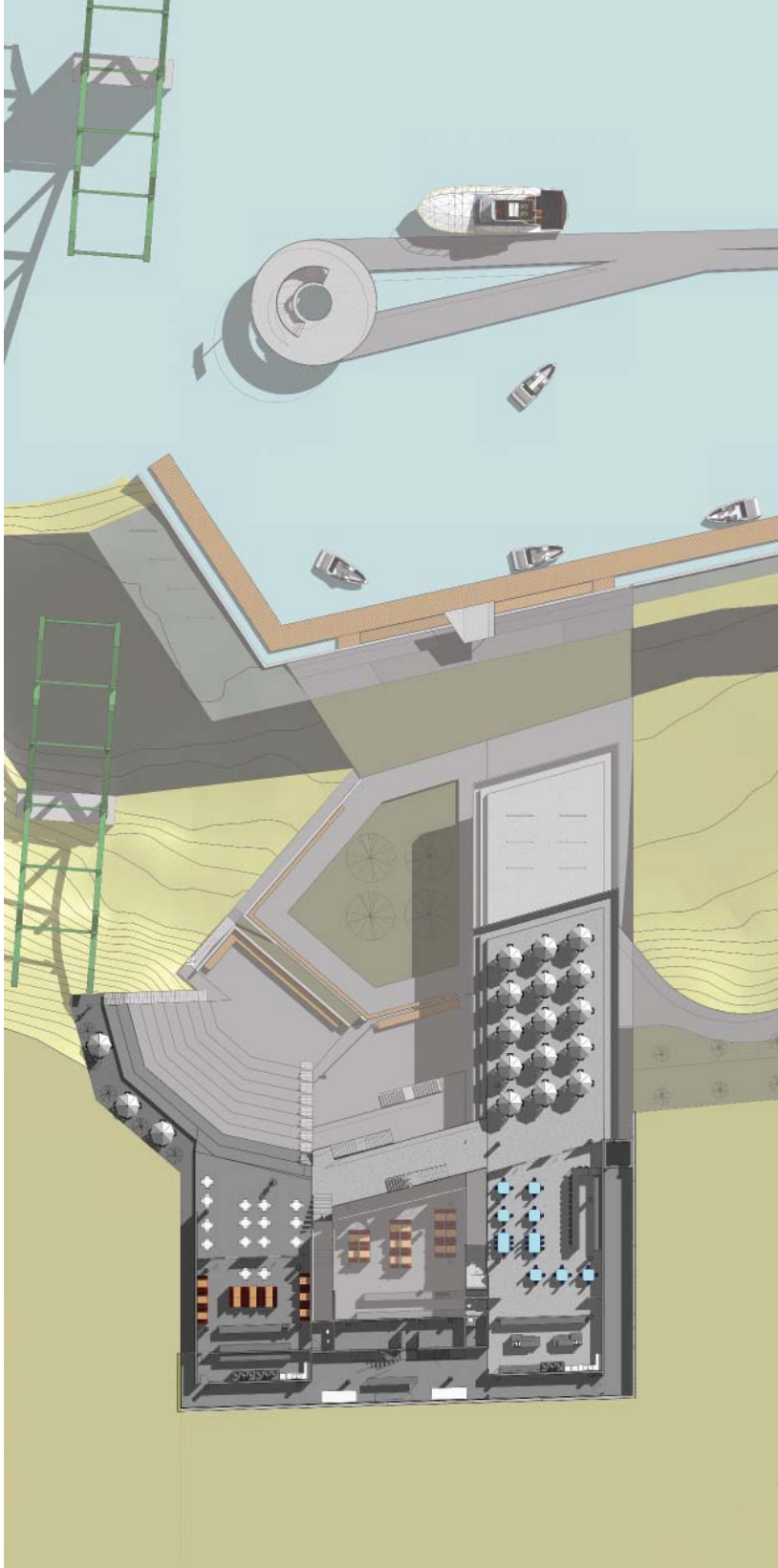
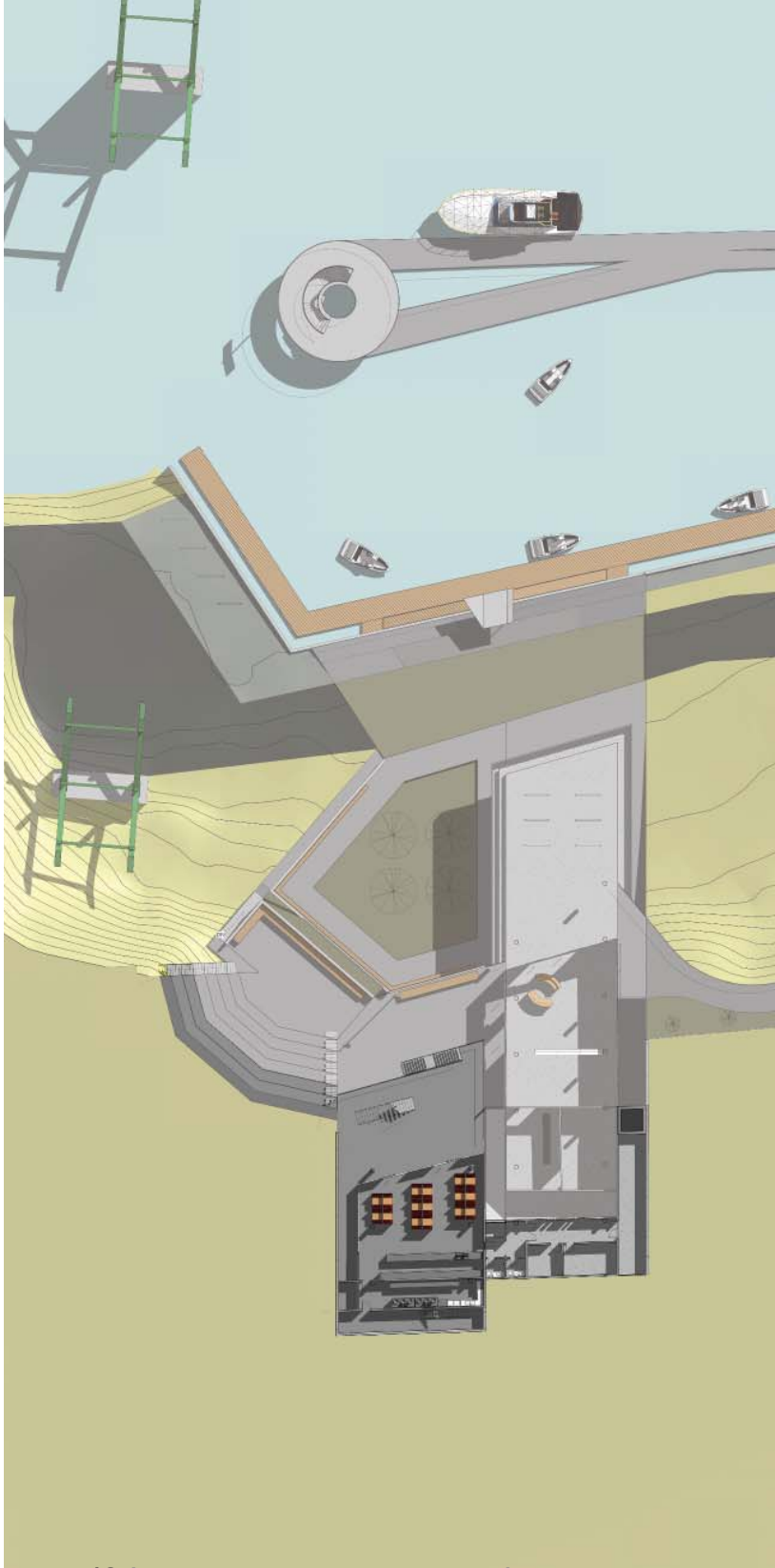


Figure 18 | Restaurant Floor Plan | Author

Main Restaurant Level
1/64" = 1'-0"



Lower Restaurant Level
1/64" = 1'-0"

Figure 19 | Lower Restaurant Floor Plan | Author

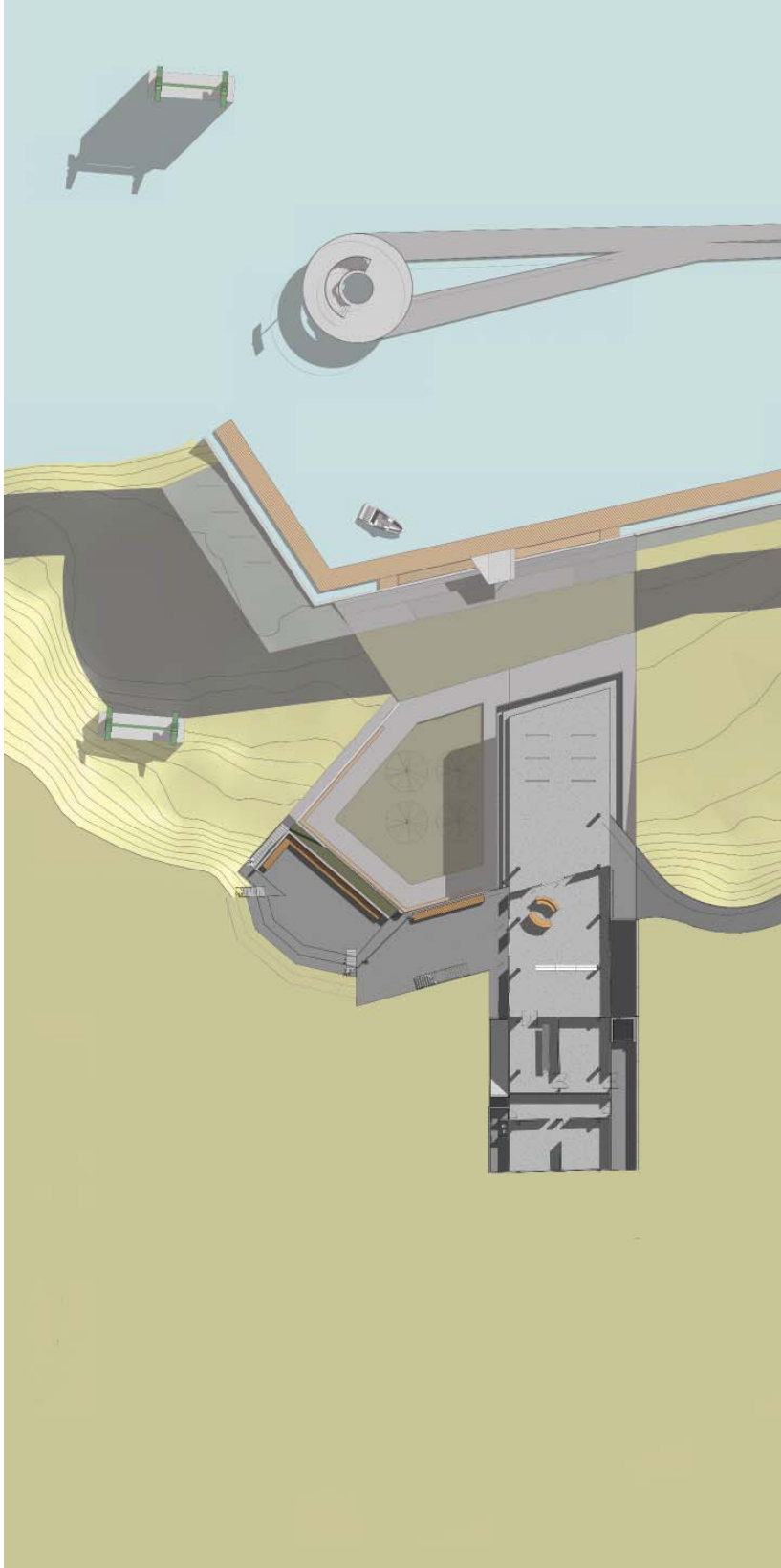
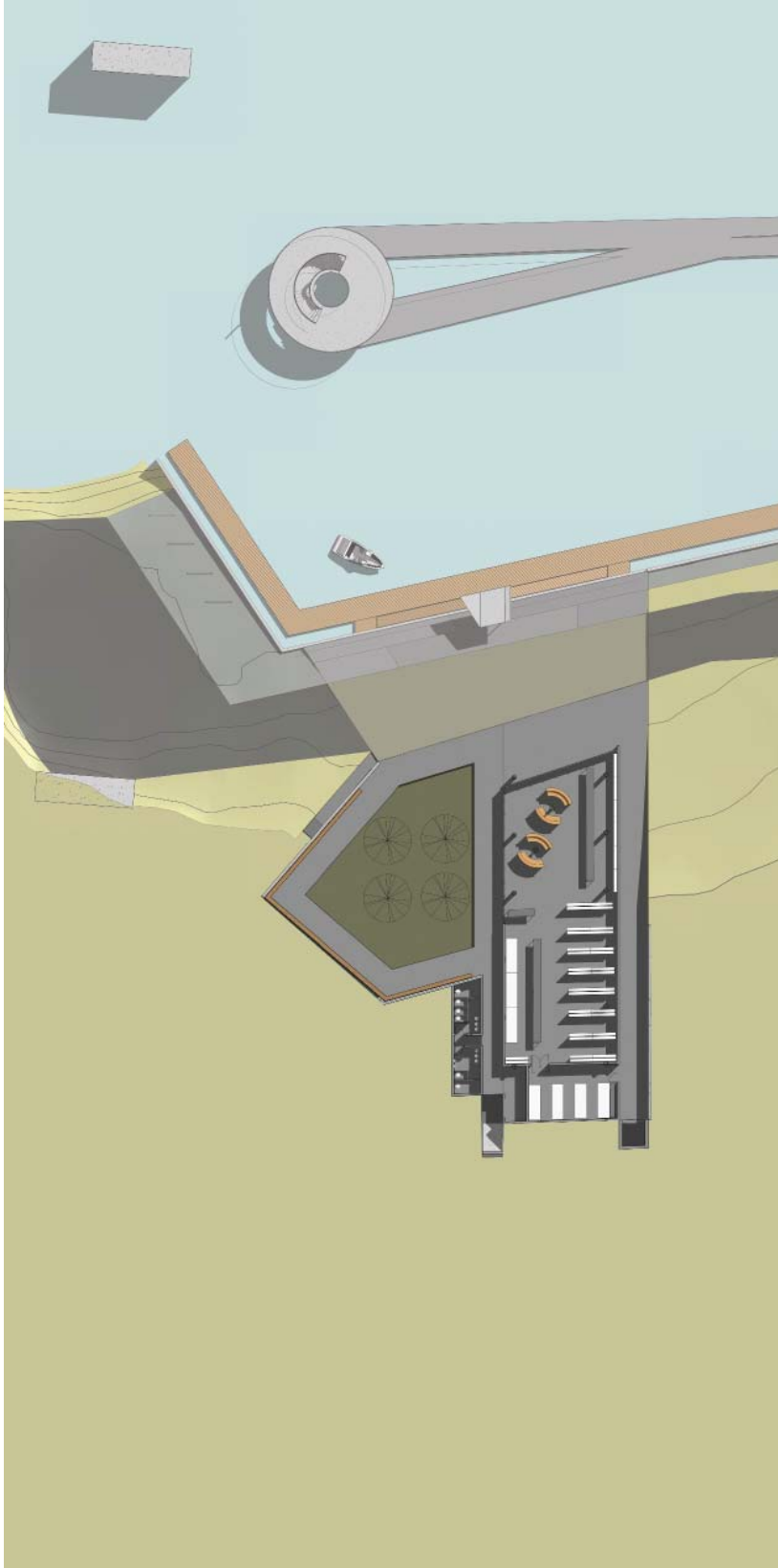
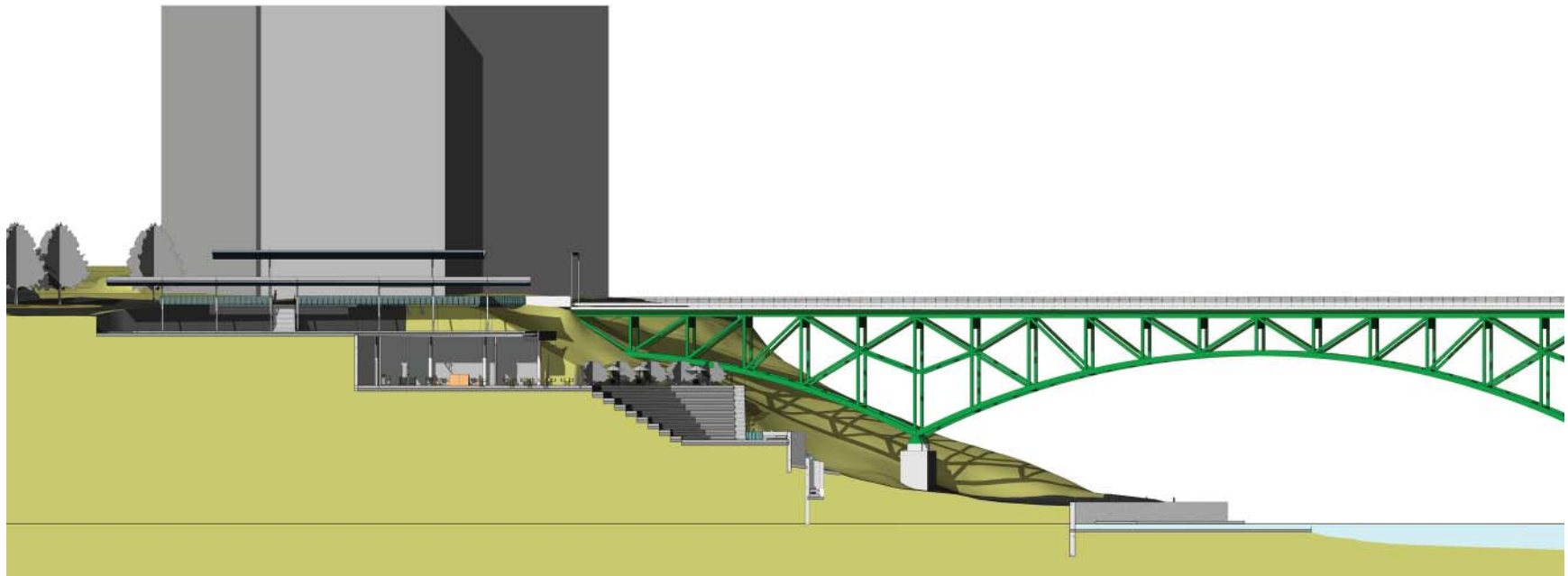


Figure 20 | Retail Level 2 Floor Plan | Author



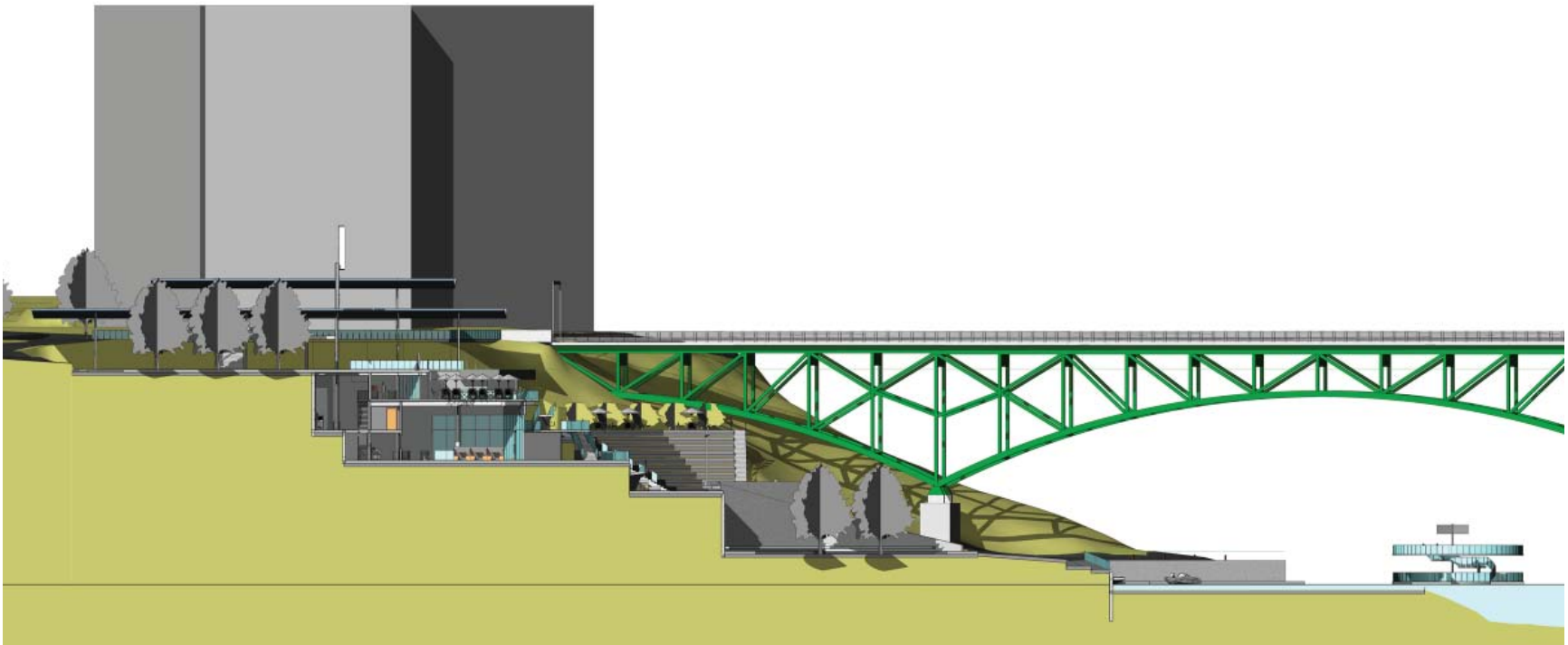
Boat Store Level
1/64" = 1'-0"

Figure 21 | Retail Level 1 Floor Plan | Author



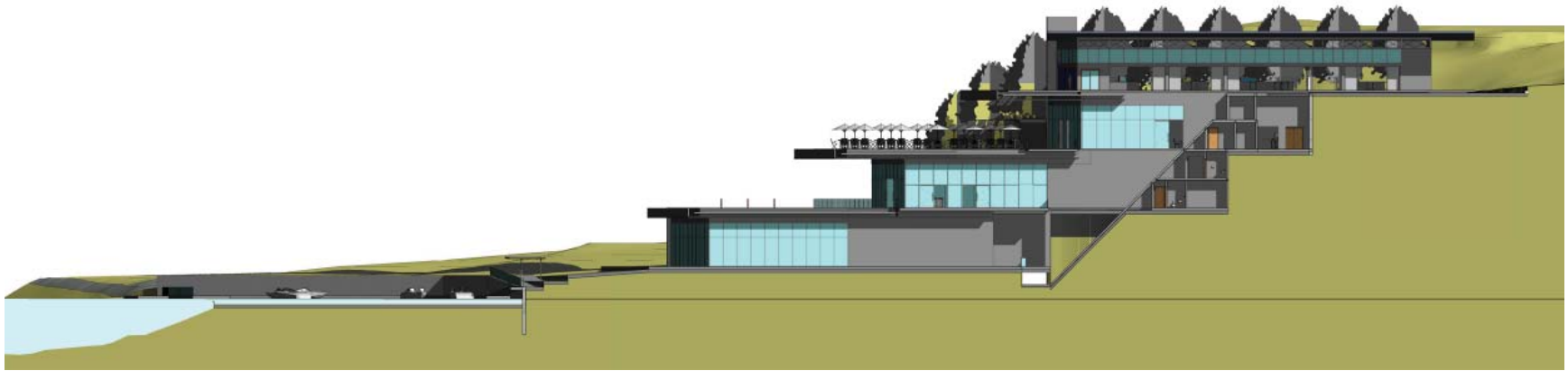
West Complex Section
1/64" = 1'-0"

Figure 22 | West Complex Section | Author



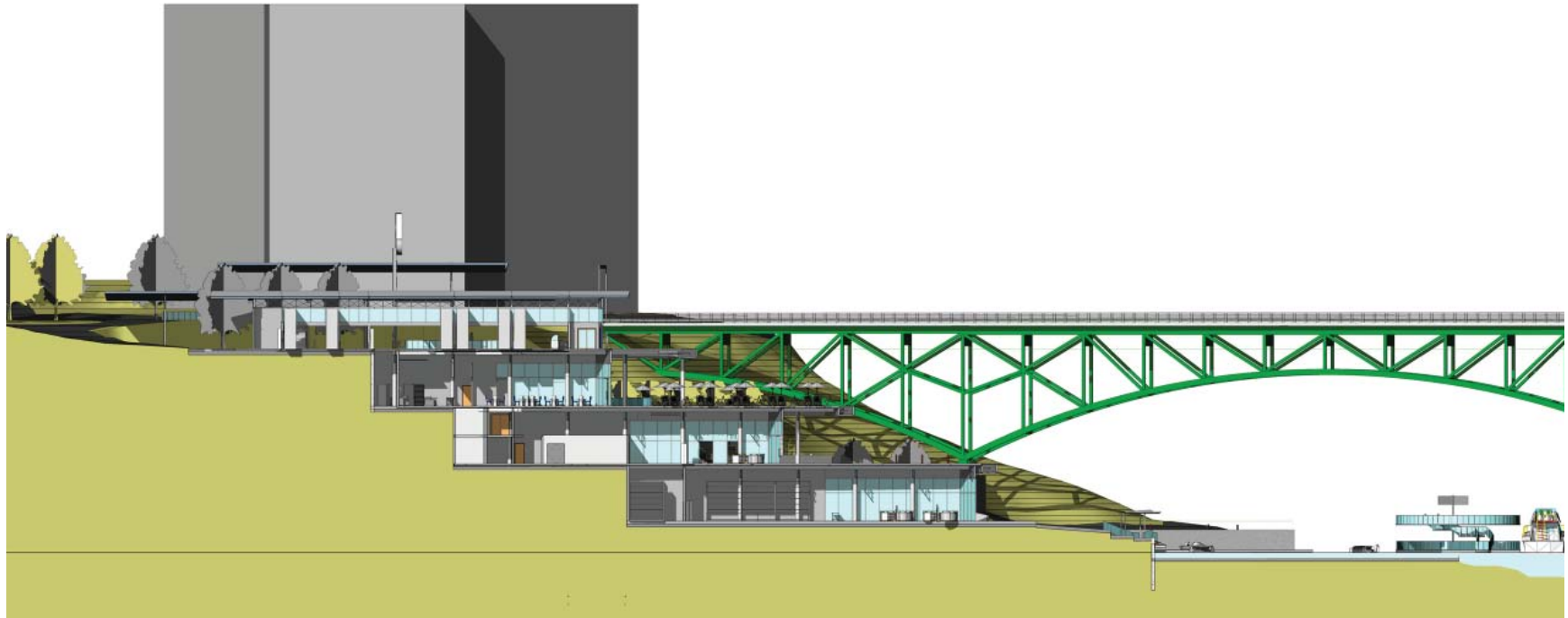
Center Complex Section
1/64" = 1'-0"

Figure 23 | Center Complex Section | Author



Funicular Corridor Section
1/64" = 1'-0"

Figure 24 | Funicular Corridor Section | Author



East Complex Section
1/64" = 1'-0"

Figure 25 | East Complex Section | Author



Cafe Cross Section
1/64" = 1'-0"

Figure 26 | Cafe Cross Section | Author



Market Cross Section
1/64" = 1'-0"

Figure 27 | Market Cross Section | Author

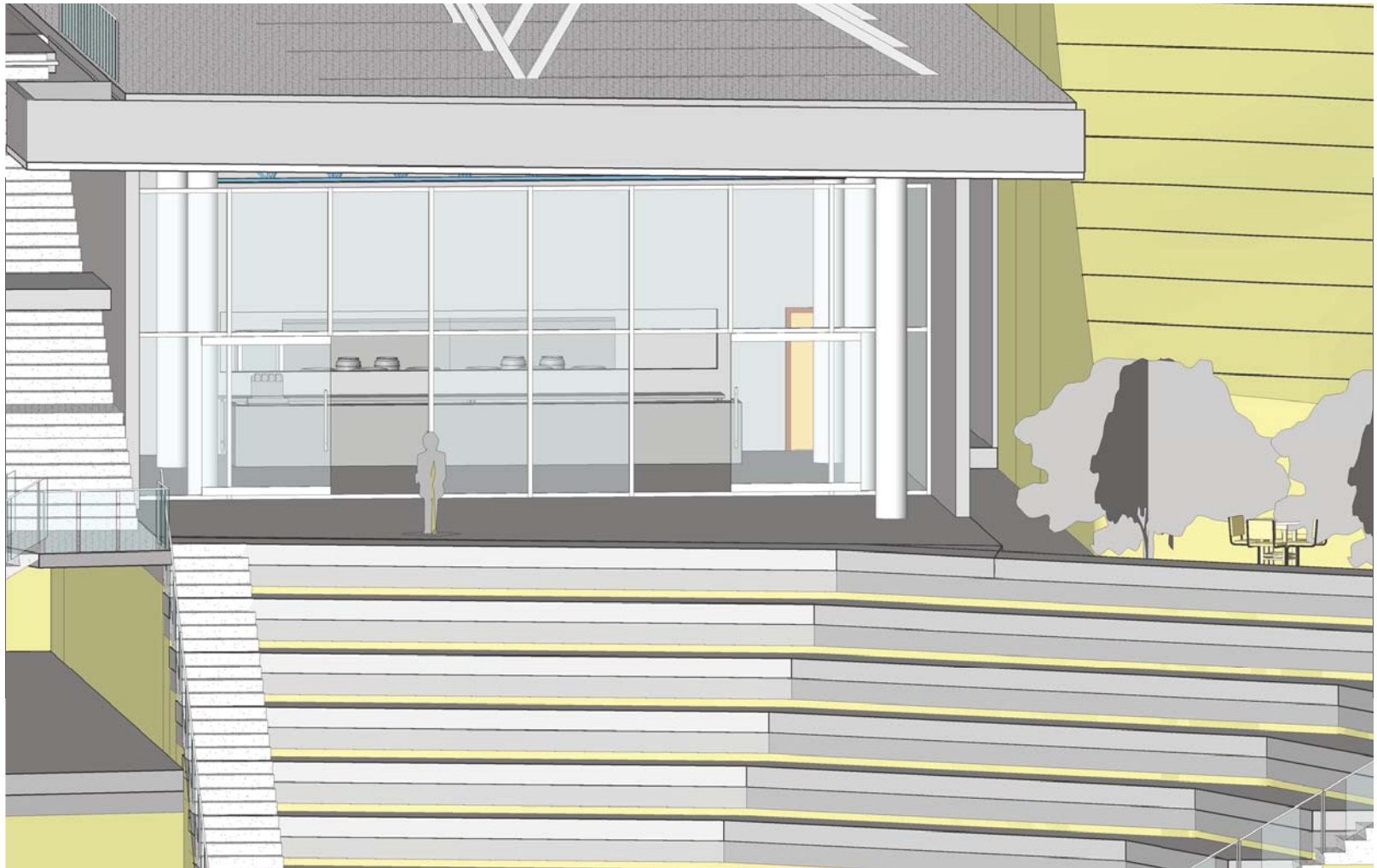


Trolley Stop | Marking the Path from Downtown

Figure 28 | Trolley | Author



Figure 29 | Entry Courtyard | Author



Node - Path - Border | Retaining Wall and Balcony Marking Border

Figure 30 | Amphitheater Node | Author

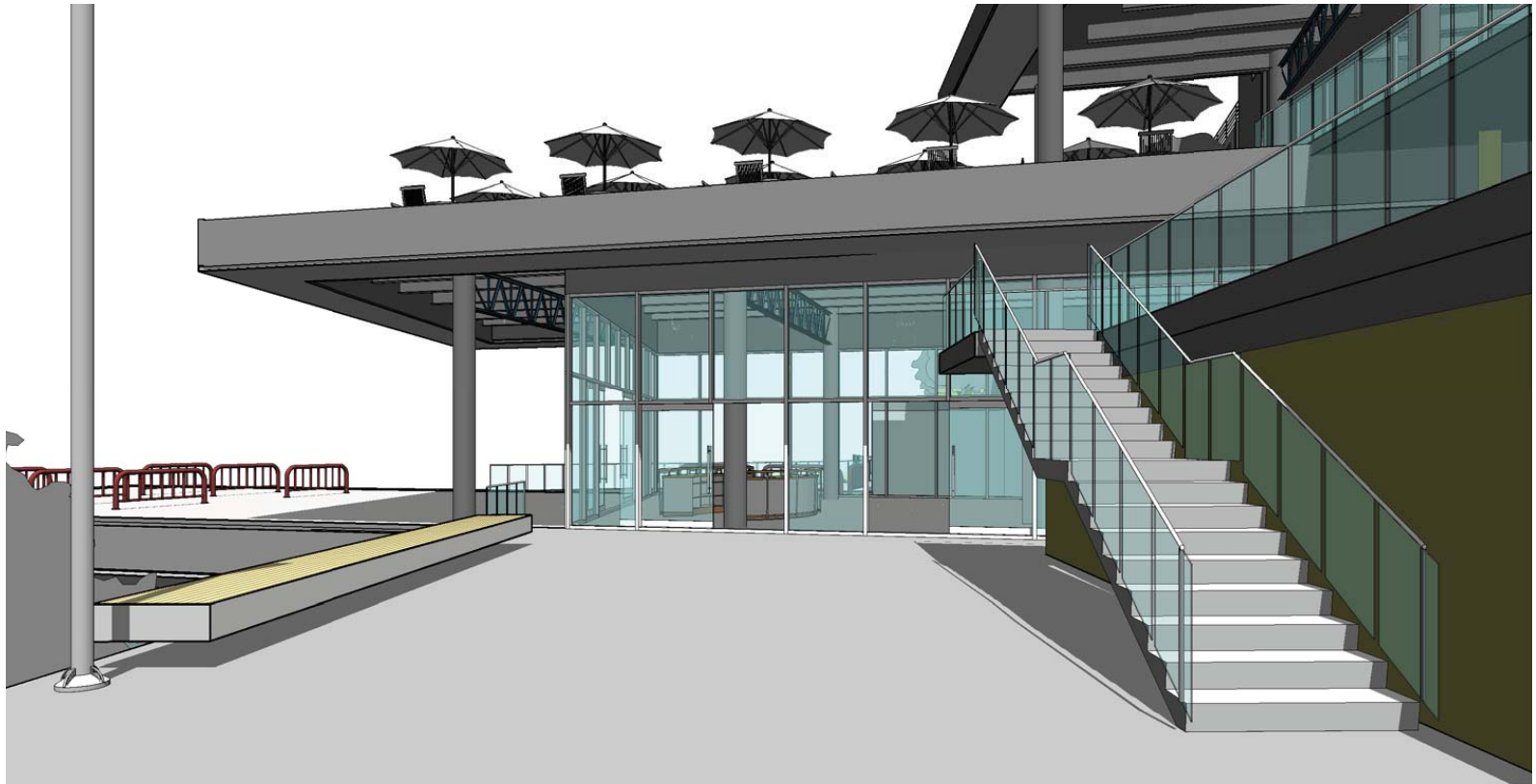


Figure 31 | Bicycle Level Path | Author



Figure 32 | Individual Marking | <http://dessertcomesfirst.com/archives/619>



Figure 33 | Boat Store Interior | Author



Water Taxi | Creating New Paths and Connections

Figure 34 | Water Taxi | <http://www.theaquabus.com>



Restaurant Kitchen | Gateway between Public and Private

Figure 35 | Marking the Separation | Author



Figure 36 | Restaurant Interior | Author



Casual Dining Kitchen and Counter | Gateway

Figure 37 | Marking the Junction between Public and Private | Author



Figure 38 | Central Restaurant Interior | Author



Figure 39 | Public Market | Author

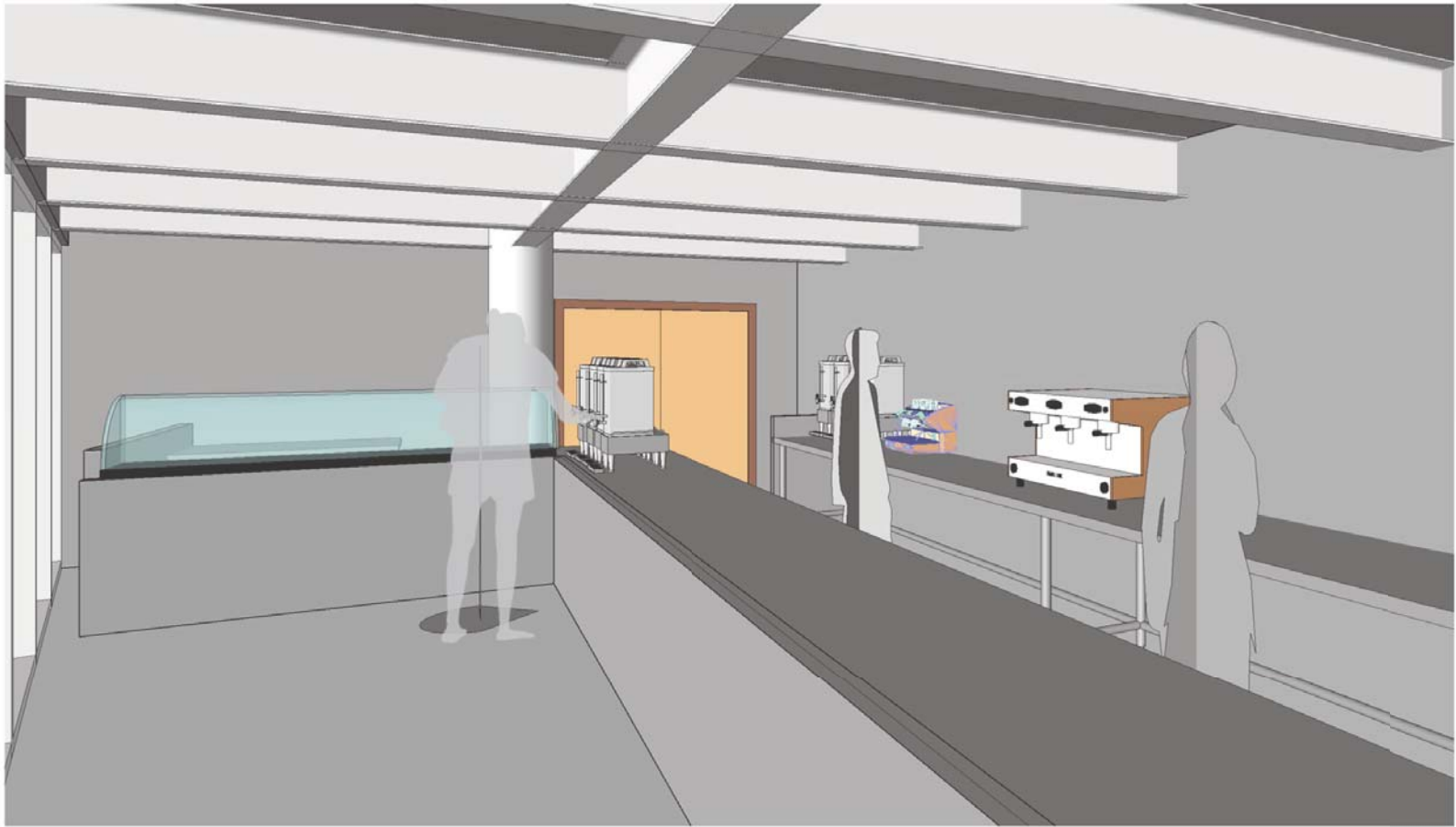


Figure 40 | Cafe Interior | Author



Figure 41 | View from Amphitheater Dining Deck | Author



Figure 42 | View from Wavebreak | Author



Figure 43 | Marina Entrance | Author

Vita

John Reed is originally from Placentia, California. After graduating with a B.S. in Mathematics and a B.A. in English Literature from Pepperdine University in Malibu, California, John worked as a Computer Technician at the California State University, Fullerton campus for six years. He obtained his Master of Architecture degree from the University of Tennessee in May 2009. He is planning to relocate to Nashville Tennessee with his wife Ashley Moore and their two cats, Wedgy and Stanley.