ABSTRACT

Title of Thesis:	RECLAIMING THE FALL ZONE: MEDIATING PHYSICAL AND CULTURAL EXCHANGE IN RICHMOND, VIRGINIA
	Kenneth Filler, Master of Architecture 2016
Thesis Directed By:	Peter Noonan, Professor of the Practice, School of Architecture, Planning & Preservation

This thesis will address cultural and physical place reclamation, at the ambiguous intersection of 'city' and nature.' By creating a juxtaposed sequence of multi-scalar interventions, which challenge the conventional boundaries of architecture, and landscape architecture; in order to make commonplace a new dynamic threshold condition in Richmond, Virginia. At its core, this thesis is an attempt at place-making on a site which has become 'no place.'

This concept will be manifest via a landscape park on Mayo Island in Richmond, anchored by a community retreat center, and architectural follies along a constructed path. The interventions will coincide with value of place in historical Richmond: an integrated, socially desegregated waterfront hinge; a social nexus of inherent change, at the point which the river itself changes at the fall line.

RECLAIMING THE FALL ZONE: MEDIATING PHYSICAL AND CULTURAL
EXCHANGE IN RICHMOND, VIRGINIA

by

Kenneth Paul Filler

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Master of Architecture
2016

Advisory Committee:
Peter Noonan, Professor of the Practice, Chair
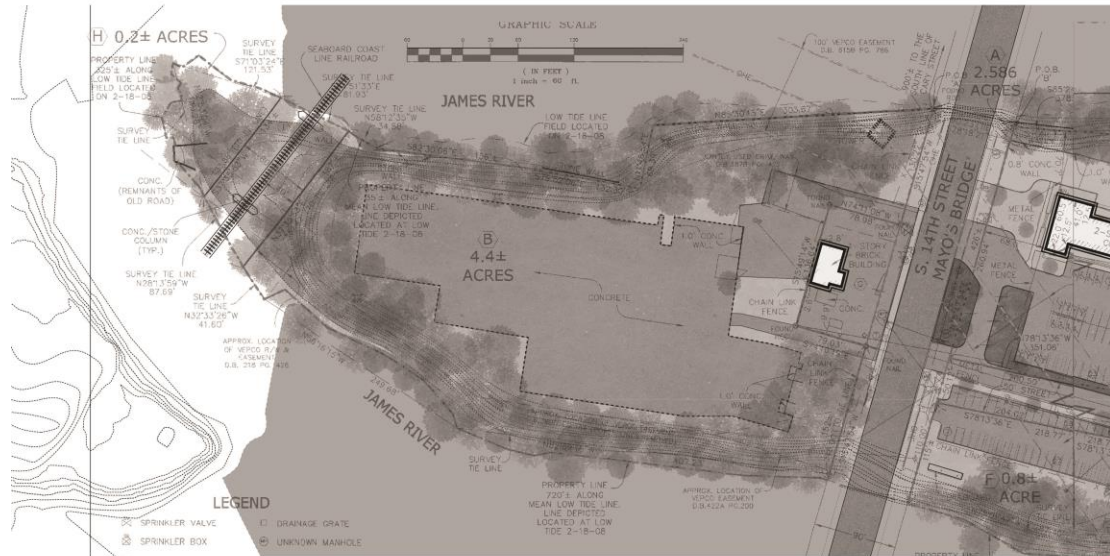Brian Kelly, Professor
Jamie Tilghman, Lecturer

Table of Contents

Current Plans for the Site

EXISTING CONDITIONS

MAYO BRIDGE APPROACH

List of Figures

List of Illustrations

Chapter 1: Theory and Concept

Brief: Atmosphere of Awareness

"I perceive in a total way, with my whole being"[1]

-Maurice Merleau-Ponty

One cannot understand the *subject* within a given environment without first giving the subject's *atmosphere* it's due. In the case of art and architecture, as Juhani Pallasmaa claims in *The Eyes of the Skin: Architecture and the Senses*, "I lend my emotions and associations to the space, and the space lends me it's atmosphere, which entices me and emancipates my perceptions and thoughts."[2] It is an undeniable fact that great spaces do not evoke the same feelings in each user. If the physical built manifestation of an architectural idea is inherently static, then logically the perception of the user must be a factor in the space *feeling* different.

Before grasping what constitutes (or contradicts) quality space, one must adopt a fully immersive attitude toward perceiving space. Shifting one's worldview away from monotony, and towards seeking enlightenment through architecture, gives one the chance to achieve dwelling. As Karsten Harries paraphrases Heidegger in *The Ethical Function of Architecture,* "Only if we are capable of dwelling, only then can we build."[3] Consciously adopting this 'atmosphere of awareness' allows one's subconscious to be receptive to the inputs and outputs of their environment.

---

1 Pallasmaa, Juhani 2005. *The eyes of the skin : Architecture and the senses*. Chichester :; Hoboken, NJ : Wiley-Academy ;; John Wiley & Sons,.

2 Pallasmaa, Juhani 2005. *The eyes of the skin : Architecture and the senses*.

3 Harries, Karsten. 1997. *The ethical function of architecture*. Cambridge, Mass. : MIT Press,.

"When the countryside is far away, the city becomes a prison"[4]

-A Pattern Language

The modern urban threshold condition is one of accumulating contradictions. A bustling, lively, diverse urban core can be an epicenter for cultural exchange, or a vehicle for perpetuating isolation. A picturesque, immense countryside can provide an ephemeral backdrop for contemplation, or house a diversity of life that a city could never hope to attain. The prevailing treatment of strictly defining what is 'nature,' and what is not, has created a rigid divide at the edge of the city. Rem Koolhaas writes, "The Metropolis strives to reach a mythical point where the world is completely fabricated by man, so that is absolutely coincides with his desires."[5]

Figure 1 The City of the Captive Globe, 1972, Delirious New York

---

4 Alexander, Christopher, Sara Ishikawa, and Murray Silverstein. 1977. *A pattern language : Towns, buildings, construction*. Center for environmental structure series ; v. 2; center for environmental structure series ; v. 2. New York : Oxford University Press,.

5 Koolhaas, Rem. 1978. *Delirious new york : A retroactive manifesto for manhattan*. New York : Oxford University Press,.

On the contrary, in the forest, as proclaimed by Rene Menard, "I am my entire self… Thickly wooded distance separates me from moral codes and cities."[6] This comparison is not to say that the forest or the city prevails in the minds of the people. It is to say that the stark separation of the two, while heightening some desirable qualities of each, *has a far greater negative influence on the daily life of a city-dweller.*

Even close proximity of what is understood to be city, and what is understood to be countryside, according to *A Pattern Language,* is not willingly traversed by inhabitants of the city. "People need green open places to go to; when they are close they use them. But if the greens are more than *three minutes* away, the distance overwhelms them."[7] This observation, which was determined over the course of eight years by Christopher Alexander as his team, point to a fallacy of urban planning. What the urban planner consciously assumes, may not typically align with use patterns of an evolving society.

Is the role of the designer then to make sure a woven understanding of what is city and what is countryside, (or possibly more appropriate for this context: landscape) is readily understood all at times? Should there be an undeniable presence of continued duality between what is 'man-made' and what is 'natural? Probably not. However, in his seminal text *Design With Nature,* Ian McHarg clarifies this contradiction: "it is not a choice of either city or countryside: both are essential, but

6 Bachelard, Gaston, M. Jolas, and John R. Stilgoe. 1994. *The poetics of space*. 1994 edition. ed. Boston, Massachusetts: Beacon Press,.

7 Alexander, Christopher, Sara Ishikawa, and Murray Silverstein. 1977. *A pattern language: Towns, buildings, construction*. Center for environmental structure series; v. 2; center for environmental structure series; v. 2. New York : Oxford University Press,.

today it is nature, beleaguered in the country, too scarce in the city, which has become precious."[8]

Figure 2 Van Gogh, Olive Trees at Montmajour

Architecture can therefore reside at the mediator between city and countryside at the macro and micro-scales. Designing not only a physical manifestation, but a new relationship between society's understanding of what architecture and landscape architecture can become, will be of paramount importance to the research in this thesis. "(Architecture) is not an isolated and self-sufficient artefact, it directs our attention and existential experience to wider horizons."[9]

On an experiential level, one must then question their personal recollection and interaction with 'nature' within the city. JB Jackson, a prolific writer on American landscape, sheds light on what is all too often true of urbanites: "Our

---

8 McHarg, Ian L., and American Museum of Natural History. 1969. *Design with nature*. [1st ed.]. ed. Garden City, N.Y.,: Published for the American Museum of Natural History [by] the Natural History Press,.

9 Pallasmaa, Juhani 2005. *The eyes of the skin : Architecture and the senses*. Chichester :; Hoboken, NJ : Wiley-Academy ;; John Wiley & Sons,.

contacts with (the natural) environment are not only brief and infrequent, but scheduled, taking place on holidays and weekends, determined not by seasons but by routine of urban work."[10]

Peripheral Perception & the 'Code of Culture'

> "The contemporary city is increasingly the city of the eye, detached from the body
> from rapid motorized movement"[11]
>
> -*Juhani Pallasmaa, The Eyes of the Skin: Architecture and the Senses,* pg 32

Pallasmaa is alluding to the clear preference in modern society given to visual stimuli. Vision and hearing, he states, "are now the privileged social senses, whereas (smell, taste, touch) are considered as archaic sensory remnants with a merely private function," which are usually "suppressed by the code of culture."[12] Detachment from the tactile nature of the city has become almost second-nature in the 21st century. This 'code of culture' is filtering which senses are universally accepted as 'socially acceptable,' not based on any specific 'code,' but rather a majority mentality. Achieving sterility in the urban context has surpassed any desire for the genuine, multisensory experience of the city.

---

10 Jackson, John Brinckerhoff. 1984. *Discovering the vernacular landscape*. New Haven : Yale University Press,.

11 Pallasmaa, Juhani 2005. *The eyes of the skin : Architecture and the senses*. Chichester :; Hoboken, NJ : Wiley-Academy ;; John Wiley & Sons,.

12 Pallasmaa, Juhani 2005. *The eyes of the skin : Architecture and the senses*.
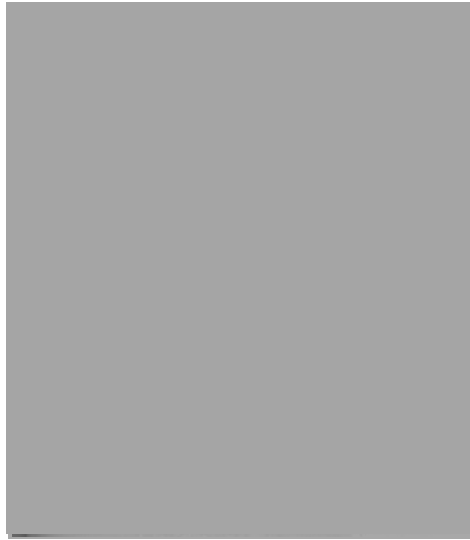
Figure 3 Herbert Bayer - The Lonely Metropolitan, 1932

Figure 4 Le Corbusier - The Open Hand Sketch, 1954

Lisa Heschong rather sarcastically expands upon these ideas in *Thermal Delight in Architecture*: "It is not uncommon… to drive an air conditioned car, to an air conditioned office to work until it is time to go to dinner in an air conditioned restaurant before seeing a movie in an air conditioned theater."[13] This brief testimony mocking the unnecessity of thermal neutrality, is merely one example of how the

---

13 Heschong, Lisa. 1979. *Thermal delight in architecture*. Cambridge, Mass. : MIT Press,.

modern urban built environment has attempted to regulate the human body's inputs and suppress the remaining senses. Pallasmaa argues, more specifically, that architecture cannot be a purely visual aesthetic achievement, but rather a fully immersive sensual experience.

If one does however begin dissect the relationship between conventional urbanism and vision, one may conclude that cities tend to rely heavily solely on 'focused' corridors, in contrast to peripheral vistas. Pallasmaa explains this "poverty of the field of peripheral vision" as inherently contradictory to way humans have dwelled for millennia. He continues to convey that, "the forest unfolds us in its multisensory embrace, the multiplicity of peripheral stimuli effectively pulls us into the reality of space."[14] This is not to say that 'trees are better than buildings.' However, this fact about human perception addresses a spatial condition, rather than a programmatic one. Through design, can an urban condition adopt a profound peripheral character? One could argue that it very well could.

The urban condition, experienced often first as a faint skyline in the distance has a certain aura of mystery and grandeur; often experienced in the aforementioned state of 'rapid motorized movement.' It seems as though the approach to the urban core is often only done at 65 mph on massively engineered raised highway systems, and before one can process the functioning nature of the city, the urban threshold condition has already come and go. This *le regard surplombant*[15](the look from above), according to Swiss thinker, Jean Starobinski creates a strong psychological and physical disconnect between the user's flight from the countryside, and entrance

---

14 Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture*. AD primers; AD primers. Chichester : John Wiley & Sons Inc.,.

15 Pallasmaa, Juhani 2005. *The eyes of the skin : Architecture and the senses*. Chichester :; Hoboken, NJ : Wiley-Academy ;; John Wiley & Sons,.

to the urban core. Can architectural and landscape architectural interventions at the urban threshold condition heighten the user experience upon entry to the city? Can design thinking altar major urban entry sequences, while still maintaining a respect for much needed infrastructure?

In the words of Junichiro Tanizaki, in regard to Japanese culture, "we do not dislike everything that shines, but we do prefer a pensive luster to a shallow brilliance."[16] How can the American industrial waterfront regain its pensive luster, and shed a false facade of shallow brilliance?

Figure 5 Christopher Alexander - Highway Sketch

---

16 Tanizaki, Jun'ichirō. 1977. *In praise of shadows*. New Haven, Conn. : Leete's Island Books,.

Stewardship and Respect

"If you want to destroy a barn, a farmer once told me, cut an eighteen inch square hole in the roof. Then stand back"[17]

-Chris Riddle, in The World Without Us by Alan Weisman, pg 17

The omnipotent power of the natural world is undeniable; architecture cannot be fully realized without first understanding that simple fact. JB Jackson, in *Discovering the Vernacular Landscape,* classifies man's relationship with nature in two ways: landscape at the creation of man, or man as the creation of landscape: "man, the political animal, thinks of landscape as his own creation, as *belonging* to him… whereas man the inhabitant… sees himself as belonging to the landscape in the sense that he is the *product.*"[18] In an age where society is seemingly making up for centuries of blatant disregard for the natural world, in light of progress, 'sustainability' reigns supreme. The idea of being sustainable in the 21st century is simply a response to rampant unsustainable living. 'Sustainability' before the industrial revolution was more synonymous to survival, not 'best practices.' In *In Praise of Shadows,* Junichiro Tanizaki again touches on a Japanese proverb that dates back thousands of years to explain early man's more tactile efforts of environmental stewardship. "The brushwood we gather - stack it together, it makes a hut; pull it apart, a field once more."[19]

17 Weisman, Alan. 2007. *The world without us*. New York : Thomas Dunne Books/St. Martin's Press,.

18 Jackson, John Brinckerhoff. 1984. *Discovering the vernacular landscape*. New Haven : Yale University Press,.

19 Tanizaki, Jun'ichirō. 1977. *In praise of shadows*. New Haven, Conn. : Leete's Island Books,.
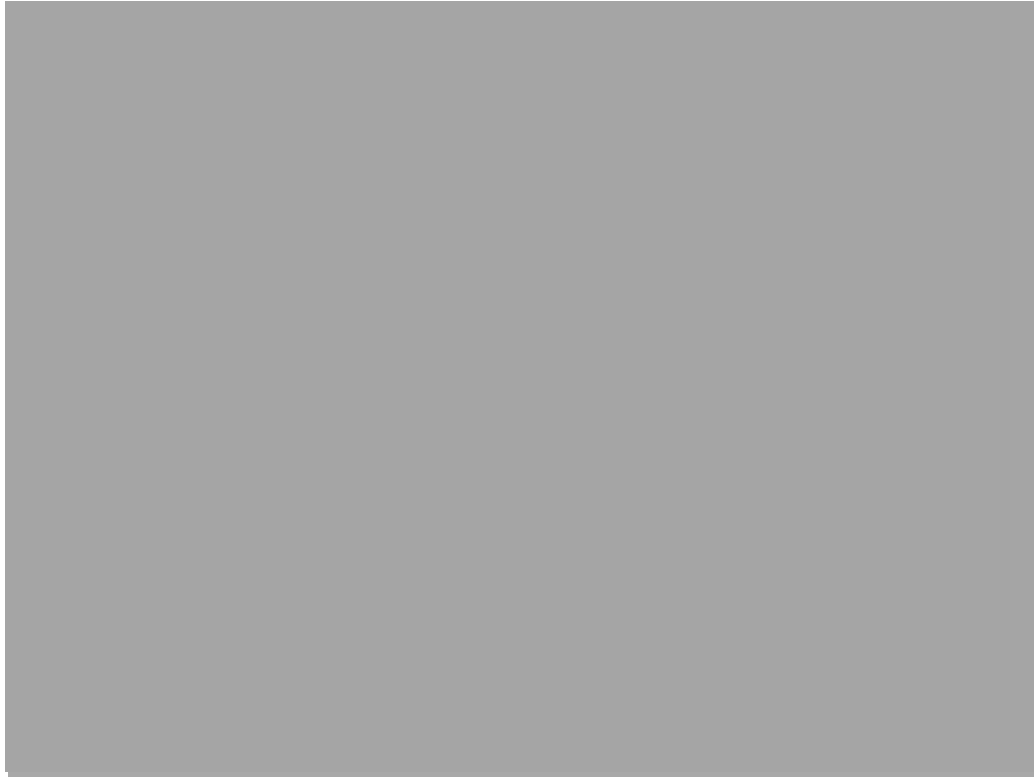
Figure 6 Black Forest Farmhouse – Germany

Water, especially in close proximity to urban centers, is the most important driver for human settlement patterns. The river, especially, is an active agent of simultaneously destruction and regeneration which can either coexist with or contradict the efforts of an expanding society. "Water is simultaneously the image of life and death," argues Pallasmaa, "it is also a feminine element, which can however in its most forceful forms, obtain masculine characteristics."[20] The presence of water in our cities has been largely reduced to an aesthetic commodity, lacking almost all real transportation value, potential consumption opportunity, and even is more often than not polluted to the point, where it is unsafe to touch. As quoted in *A Pattern Language* "we came from water, our bodies are largely water… we need constant

---

20 Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture*. AD primers; AD primers. Chichester : John Wiley & Sons Inc.,.

10

access to water… but everywhere in cities, water is out of reach."[21] Is it too late for our major urban centers to salvage water quality; is society too far entrenched in the times of progress? Waterfront regeneration is undoubtedly a trend, but often times this is still solely an aesthetic venture to increase property value. How can architecture, with a gentle touch and a strong notion of environmental stewardship, be the catalyst for *true* waterfront regeneration, not an aesthetic addition to a forgone ideology or waterfront urbanism?

The Character of (Political) Boundary

"The location of permanent boundaries are established by means of what seem to use to be haphazard procedures - the throwing of a hammer, the flight of a chicken, the distance a sound could carry - intended to symbolize their divine, inscrutable nature"[22]

-JB Jackson, Discovering the Vernacular Landscape, pg 49

Boundaries are not merely lines. JB Jackson speaks to the duality of physical and "political" qualities of perceived boundaries. A political boundary he asserts is a boundary that cannot be seen directly, but instead has indirect consequences. More generally, a *political landscape*, is typically one of "economic or social (or cultural) territory," an example of which could be the zone in which a particular newspaper is circulated.[23] A higher entity, being a publisher, is choosing to literally withhold knowledge from certain users, thus creating a boundary of inclusive and exclusive knowledge.

---

21 Alexander, Christopher, Sara Ishikawa, and Murray Silverstein. 1977. *A pattern language : Towns, buildings, construction*. Center for environmental structure series ; v. 2; center for environmental structure series ; v. 2. New York : Oxford University Press,.

22 Jackson, John Brinckerhoff. 1984. *Discovering the vernacular landscape*. New Haven : Yale University Press,.

23 Jackson, John Brinckerhoff. 1984. *Discovering the vernacular landscape*. New Haven : Yale University Press,.

Figure 7 The sawatari-ishi steps across the marsh - Heian Shrine, Kyoto

The evolution of a political landscapes has been an ever evolving process since the beginning of civilized life. Traditionally, Jackson distinguishes between two primary methods of thinking about a political boundary: one being a skin, and the other an envelope. Political *skin-like* boundaries attempt to "establish an effect relationship with the outside world," where the *envelope-like* boundary attempts to "isolate and protect."[24] However a region, city, or even building treats its edge conditions, radically affects the perceptions that approaching users have of the space contained within.

Coinciding with the political boundary, is obviously the more conventional understanding of boundary: the physical manifestation. At our urban edge conditions, the river is especially of interest to this research. In *A Pattern Language,* it is said that "the strength of a boundary is essential to a (place). If the boundary is too weak the

24 Jackson, John Brinckerhoff. 1984. *Discovering the vernacular landscape*. New Haven : Yale University Press,.

12

(place) will not be able to maintain its own identifiable character."[25] In an era of exponentially growing transparency, it is still vital to maintain a sense of place, context, and being with a defined spatial condition. What are the cultural implications of an urban edge condition; how exclusive should a 'public' realm feel?

Historical Meaning: Love of Place

"Art seeks a lost world, rather than an unconquered territory"[26]

-Juhani Pallasmaa, The Embodied Image pg 49

"Love of place," as described by Yi-Fu Tuan refers to the simple fact that "one may value an object or place for the ideas it embodies," which then, "stores the idea, giving a physical reality outside the mind."[27] This sentiment, is at the root of the creation of culture: the yearning for belonging to a place. This feeling of inclusiveness, of familiarity, resides deep within the human psyche. This "love of place," be it a home, a city, a region, a country, is the one commonality that unites people across generations: one still feels a connection to the original inhabitants. Gotthard Booth, an American therapist, helps develop a form to this notion "nothing gives man fuller satisfaction than participation in processes that supersede the span of an individual life."[28]

This is especially relevant in the field of architecture, in which users literally can build physical realizations of a culture, which will then be perceived by the next

25 Alexander, Christopher, Sara Ishikawa, and Murray Silverstein. 1977. *A pattern language : Towns, buildings, construction*. Center for environmental structure series ; v. 2; center for environmental structure series ; v. 2. New York : Oxford University Press,.

26 Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture*. AD primers; AD primers. Chichester : John Wiley & Sons Inc.,.

27 Heschong, Lisa. 1979. *Thermal delight in architecture*. Cambridge, Mass. : MIT Press,.

28 Pallasmaa, Juhani 2005. *The eyes of the skin : Architecture and the senses*. Chichester :; Hoboken, NJ : Wiley-Academy ;; John Wiley & Sons,.

generation. Joining this upward march in the betterment of society through architecture is a common thread that can allow designers to not only "concretize the present," but also to "evoke our awareness of the past as well as our confidence of the future,"[29] urges Pallasmaa.

Figure 8 Alvar Aalto - House of Culture, Helsinki, 1952-1958

This creation of culture does not happen overnight however, as culture is perhaps the oldest of all human invention. A new gateway building designed in a vacuum, without regard to context, cannot solely 'change the culture' of an underutilized waterfront. An intervention can start to shift use patterns, create better space, and influence human perception; however culture is the underpinning motif which needs to first be understood, not wiped clean and changed. As Lisa Heschong wittily scoffs, "A few tubes of astronaut's nutritious goop are no substitute for a gourmet meal."[30] How can architecture then be a vehicle for cultural resonance, for

---

29 Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture*. AD primers; AD primers. Chichester : John Wiley & Sons Inc.,.

30 Heschong, Lisa. 1979. *Thermal delight in architecture*. Cambridge, Mass. : MIT Press,.

understanding the peoples who have previously occupied that point of the Earth, and an incubator in which cultural values can thrive?

Architecture should heighten one's understanding, of the "picturesque idiosyncrasies"of a place, says JB Jackson: "all the stuff of tourist folklore: the unmistakable taste of a local dish or a local wine, the smell of certain seasons, the sound of a local song!"[31] The boundary between inclusion and exclusion is not one of degrees of welcomeness, but rather familiarity. Thus the condition of the built environment should be catered to reinforce the familiarity of the everyday user, and arouse curiosity in the visiting user.

Sequential Variance, A Juxtaposed Experience

"There is an extra delight in the delicious comfort of a balmy spring day as I walk beneath a row of trees and sense the alternating warmth and coolness of sun and shade"[32]

-Lisa Heschong, Thermal Delight in Architecture, pg 17
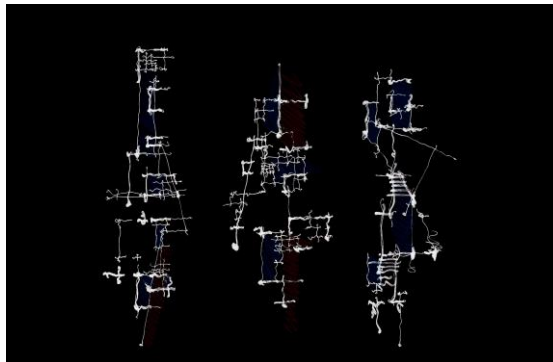
Figure 9 Early conceptual sketch of spatial layering - drawing by author

Not only architecture, but life, should be something experienced free of monotony, and consisting of layered, varied experiences. One can only fully realize

---

31 Jackson, John Brinckerhoff. 1984. *Discovering the vernacular landscape*. New Haven : Yale University Press,.

32 Heschong, Lisa. 1979. *Thermal delight in architecture*. Cambridge, Mass. : MIT Press,.

the extent of certain stimulation, when one has embraced the contradictory. "We are warm *because* it is cold out-of-doors,"[33] according to Karsten Harries. This is not to say that life should be an outrageous collection of radical experiences, but rather a path of ever evolving thresholds. Architecture too can mirror this life path by embodying a commitment to spatial layering, thermal range, material weaving, programmatic shifts and sectional quality (amongst many others).

In the spatial realm, the human mind desires a labyrinth of conditions. The concept of 'refuge' and 'prospect' in architecture as described by Pallasmaa in *The Embodied Image*: "The preferred spatial situation combines a sense of protectiveness of the immediate setting (refuge) with a wide vista of the environment providing a sense of control (prospect)."[34] It is speculated our mind's preference for this condition dates back to the times when our early ancestors lived and hunted at the threshold of the treeline and the open field.
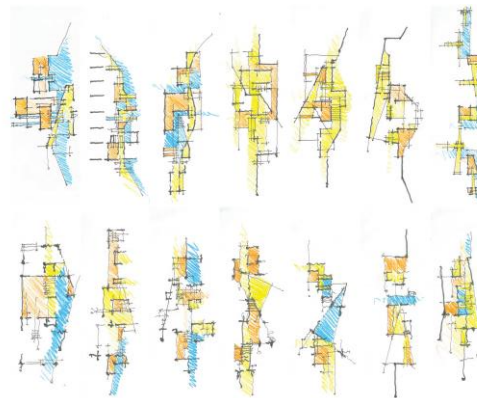
Figure 10 Early Series of thought experiment sketches - drawing by author

This notion of a need for sequential, juxtaposing spaces provides an opportunity for designers, in which architecture must address these complexities. The

---

33 Harries, Karsten. 1997. *The ethical function of architecture*. Cambridge, Mass. : MIT Press,.

34 Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture*. AD primers; AD primers. Chichester : John Wiley & Sons Inc.,.

ultimate goal of architecture is to "re-orient, scale, refocus, and slow down our experience of the world,"[35] according to Pallasmaa. If architecture can shift one's thought processes, much like a poem, or a great work of art, than the architecture has served its innate purpose.

> "When I speak of (architecture), I am not thinking of it as a genre. (Architecture) is an awareness of the world, a particular way of relating to reality"[36]
>
> *-Andrei Tarkovsky (on poetry),* in *The Embodied Image,* pg 40

Figure 11 Sancaklar Mosque, Istanbul - photograph by author

---

35 Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture*. AD primers; AD primers. Chichester : John Wiley & Sons Inc.,.

36 Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture*. AD primers; AD primers. Chichester : John Wiley & Sons Inc.,.

Chapter 2: Context Analysis, Physical Relationships, Social Perception

Introduction to Place

"The Native Americans named it in honor of their King, Powhatan, and the English in honor of their king, James I."[37]

T. Tyler Potterfield on the James River, *Nonesuch Place: A History of the Richmond Landscape*

Figure 12 Bird's Eye View of Richmond - Virginia Historical Society

A city born out of the James River, present-day Richmond's reason for being is inextricably linked to the dynamic James, formerly known as *yeokanta*[38], or simply the Powhatan River by the Powhatan people. A site so ripe for a future settlement, William Byrd, the founder of Richmond town, remarked in 1737, that site was so "naturally intended," that the "traffic of the outer inhabitants *must* center there."[39] In

---

[37] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.* Charleston, SC: History Press.

[38] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.* Charleston, SC: History Press.

[39] Ibid.

1607, John Smith too remarked that the northern banks of the James River fall line were an "inevitable site for the founding and the growth of the city."[40]

Long Live James

Before Richmond, and even before the occupation of native peoples, the James River carved its way through a pristine landscape; roaring downstream at times, and meandering at others. The James River today has a watershed of over ten thousand square miles (one quarter of the area of Virginia[41]) and is fed by a large portion of the rain and groundwater from the Western half of Virginia. The James however, as explained by David Harbor, professor of geology at Washington & Lee University, "is far more than simply the sum of its streams; rather, it is the living, pulsing force that brings waters together from every part of the state, each source different from the all the rest."[42] The diversity of these sources, Harbor explains is what gives the river its strength.

The site of modern Richmond is situated inevitably and purposefully at the navigable terminus of the James River from the Chesapeake Bay and Atlantic Ocean. Early travelers like JFD Smyth in 1784, describe what is now the 'fall-zone' as a "ledge of rocks," which "interrupted the whole stream of the river."[43] The Fall Zone, according to T. Tyler Potterfield, a former city planner occurs from Bosher's Dam to

---

[40] Stanard, Mary Newton. 1923. *Richmond : Its People and Its Story*.Philadelphia: J.B. Lippincott Co..

[41] Deans, Bob. 2007. *The River Where America Began : A Journey along the James*.Lanham: Rowman & Littlefield.

[42] Ibid.

[43] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape*.Charleston, SC: History Press.

Mayo's Island, covering a distance of 8.5 miles, and dropping a total of 110 feet.[44]
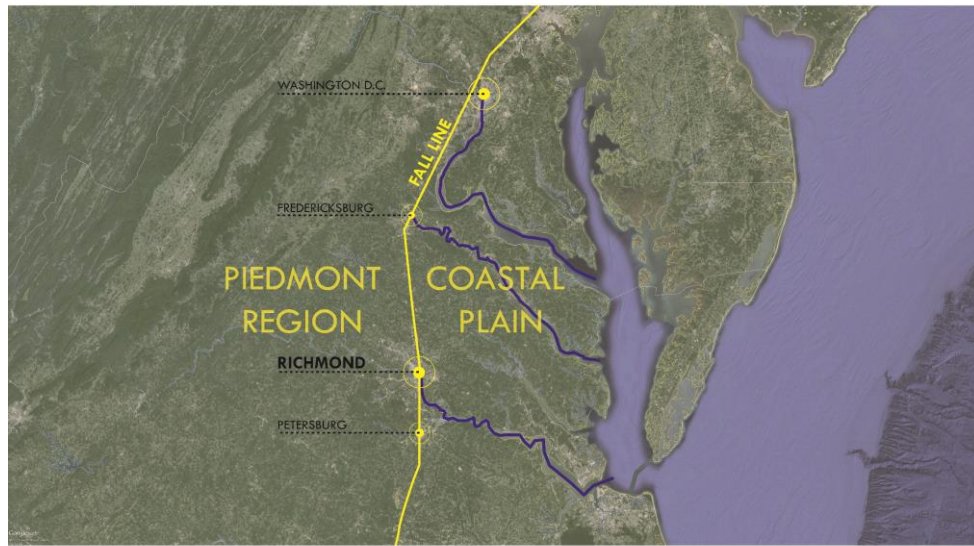
THE FALL LINE - THE JAMES RIVER

Figure 13 Settlement Patterns along the fall line - drawing by author, Google Earth underlay
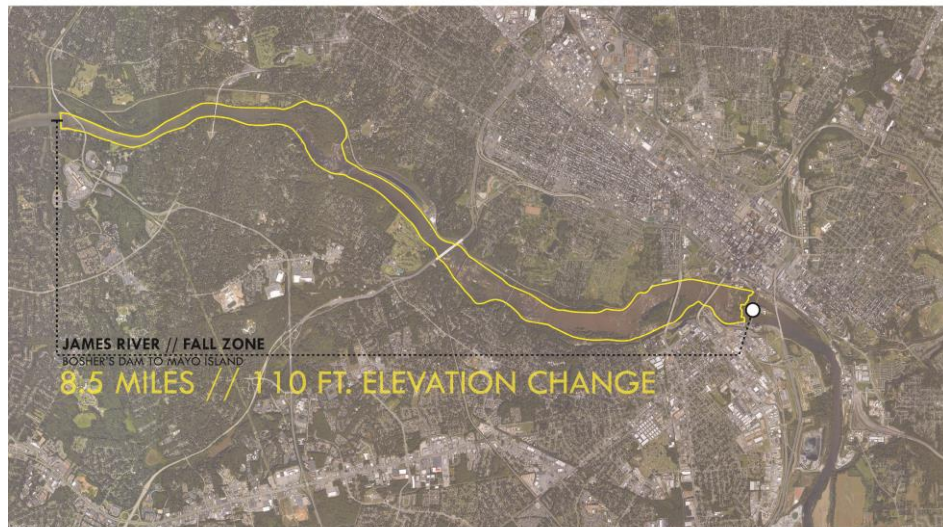
LINE TURNS TO ZONE

Figure 14 The Richmond Fall Zone - drawing by author, Google Earth underlay

---

[44] Ibid.

The implications of the fall zone reverberate deep through the spiritual, cultural, (and later commercial and economic) aspects of living along the James. In his text, *The River Where America Began: A Journey on Along the James,* Bob Dean speaks to the importance of the James to its earliest inhabitants referring to the water as the "beating heart of their world." Dean, defines the James in eyes of the Powhatan tribes, as "fickle and genuinely mysterious, whose capricious ways could be learned, even predicted, but never tamed," alluding to the immense respect commanded by the James.[45] The fall zone provided a defensible position on the north side (modern Richmond) and an alluvial plane on the south side (modern Manchester). This juxtaposition of waterfront conditions, readily available flowing water, and opportunity for a range of basic needs in one secure position is the true driver behind settlement at the falls.

Early Occupation Timeline

Powhatan Nation

> "Seated pleasantly on the hill was Powhatan town, an Algonquian village of some 150 inhabitants, and a dozen or so oblong buildings."[46]
>
> -Harry M. Ward, *Richmond, An Illustrated History*

As the Newport team was sailing northwest up the James River in 1607, just a few weeks after landing in Jamestown, searching for the "shortcut to China, and

---

[45] Deans, Bob. 2007. *The River Where America Began : A Journey along the James.* Lanham: Rowman & Littlefield.

[46] Ward, Harry M., Harold E. Greer, and Richmond Independence Bicentennial Commission. 1977. *Richmond during the Revolution, 1775-83*

whatever gold they might dig up with their pickaxes along the way,"[47] a powerful

nation of roughly thirty tribes, spread out over 150 villages united under Chief

Powhatan, was thriving, much like their ancestors before them. Much to the chagrin

of the discoverers of the 'New World', archaeologists believe natives peoples had

occupied the greater Virginia region for close to 12,000-16,000 years prior to the

arrival of the English.[48]

Surpassed in fame by his daughter Pocahontas, Powhatan (actually named

Wahunsenacawh) born sometime around 1550, was the supreme Chief of the

Powhatan Confederacy, consisting of tribes such as the Appamatuck, Mattaponi,

Paspahegh, Piankatank, Rappahannock, Weyanoke, and Warraskoyack among others.

The confederacy operated largely as a loose conglomeration of allied tribes, pledged

to aid and protect one another, united under the common Algonquian language. It

should be noted however, that not all natives people were allied; the falls on the

James marked the western expansion of the Powhatan territory, which was bordered

by their intensely contested enemies, the Monacans.[49]

The eventual clashing of cultures due to perceived entitlement of land

ownership characteristic amongst almost all colonial interactions with native peoples,

is heightened at the location of modern Richmond due to geographical prominence of

the falls, and proximity (in time and distance) to the English settlement of Jamestown.

---

[47] Deans, Bob. 2007. *The River Where America Began : A Journey along the James.*Lanham: Rowman & Littlefield.

[48] History Is Fun: Living with Indians (WEBSITE PLACEHOLDER)

[49] Ibid.

Figure 15 John Smith 1607 Map of Virginia, Modern Richmond at site labeled "The Fales"

Enter the English

The two most important events in regard to the creation of Richmond are the initial findings of the Newport expedition in 1607, and the drafting of the first plan of Richmond by William Mayo, commissioned by William Byrd II in 1737. The 130 years between these two events consist of periods of peace, but primarily periods of English encroachment on native lands which led to skirmishes.

Immediately after setting eyes on the site in early 1607, in 1609, John Ratcliffe writes to the Prime Minister of England, claiming that 100 men have been "planted" at the Falls.[50] This would follow by a failed fort building attempt in 1609, named aptly West Fort, in relation to Jamestown, which was abandoned by 1611.

---

[50] Stanard, Mary Newton. 1923. *Richmond : Its People and Its Story.*Philadelphia: J.B. Lippincott Co..

Multiple small towns such as Henrico, and Falling Creek began to spring off west from Jamestown, inching closer to the initial site of the West Fort over the next decade. Following a "massacre" under the orders of Opechancanough, Powhatan's successor, in 1622, where 360 colonists were killed under orders.[51] English settlers (who eventually retaliated), were quick to avoid areas near the falls. The town farthest west, four to five miles southeast of the falls, still in 1639 was named: World's End.[52]

At this point in the brief recorded history of the location of Richmond, the falls marked a monumental point in the perception of the English, and the natives. It is inevitable then that such a place that George W. Bagby, described in 1838, as the "most beautiful site for a city in the world,"[53] would invoke contention and conflict.

Following the construction of a fort in 1645, near the "fall line on the north side of the James River."[54] was the battle at Bloody Run in 1656, in which 700 migrating Seneca tribespeople defeated Colonel Edward Hill[55], triggered an English redefinition of the county around modern Richmond, and made it legal to kill any native which passed through these completely fabricated and completely unmarked "borders."

[51] Ward, Harry M., and Milton J. Elliott. 1985. *Richmond : An Illustrated History.* Northridge, Calif.: Windsor Publications.

[52] Stanard, Mary Newton. 1923. *Richmond : Its People and Its Story.*Philadelphia: J.B. Lippincott Co.

[53] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

[54] Richmond Planning and Development Review (WEBSITE PLACEHOLDER)

[55] Stanard, Mary Newton. 1923. *Richmond : Its People and Its Story.*Philadelphia: J.B. Lippincott Co.

Figure 16 Mayo and Byrd Map 1737, Virginia Historical Society

The next 50-60 years involves land grants changing hands, from the Stegg family to William Byrd I in 1671, and eventually William Byrd II in 1705. Primarily operating for private gain, Byrd was not inclined to began planning for a settlement on the site until the Virginia House of Burgesses introduces a bill requiring William II to sell the Commonwealth 50 acres for the purpose of establishing a town at the falls. [56] Following the initial survey, the town was incorporated by the Virginia General Assembly in 1742, established as the capital of Virginia in 1780, and as a city in 1782.[57]

---

[56] Richmond Planning and Development Review (WEBSITE PLACEHOLDER)

[57] *It should be noted that Native American historical records in the area of modern Richmond, for the most part cease to exist, and it generally expected that the English settlers gained controlled of the site, without much major opposition. **The general assumption is due to the early nature of these conflicts, most native peoples in the Powhatan Confederacy relocated, or retreated to the wooded areas surrounding Richmond or an area further upstream. Even though the estimated population of Powhatans in area around this time reach 20,000.*

According to Harry M Ward and Harold E Greer, authors of *Richmond During the Revolution,* Richmond grew from a small collection "warehouses, a store, and at least one tavern" in the late 1730s, to a community of 250 living near Shockoe creek in 1742, to roughly 574 people in 1769, to just over one thousand in 1782 during the time of the Revolution, where it was still a "village of muddy streets and small frame houses."[58]

Figure 17 Skirmish at Richmond, 1781, Virginia Historical Society

Over the next century and a half into the 20th century, Richmond evolves into a major hub for commerce, industry, and cultural in the southern half of the United States. The following sections of this chapter will investigate the implications of this growth in four realms:

Industry and the Environment　　　　　*Cultural Segregation and Desegregation*

Space Making: Grid vs. Topography　　　*Transportation and Access*

---

[58] Ward, Harry M., Harold E. Greer, and Richmond Independence Bicentennial Commission. 1977. *Richmond during the Revolution, 1775-83*

Industry and the Environment

"(I was) lulled to sleep… by the song of the river-rapids. It is a song, never a moan."

-Marion Harland, 1844[59]

The pristine James in all its glory, as mentioned, was hailed by early travelers for its picturesque aura. In 1803, William Wirt felt "surrounded to a great distance by green plains and stately woods," upon his visit to Richmond[60]. These "dense woodlands" as George Percy later noted just four years later in 1807 "served to stabilize the embankments to reduce erosion." Perhaps Percy, was taking a more realistic glance at the state of the waterfront around the turn of the 19th century similar to that of architect and artist Benjamin Latrobe in 1796: "not a tree exists to enliven the dead appearance of its (the city's) wooden buildings."[61] The term "surrounded" used by Wirt was definitely true as seen from the many peaks of Richmond, but the truth of the cityscape was on one of deforestation triggered by a booming mill industry.

So how in sixty short years since the original conception of the city of Richmond in 1737, was the need for sustainable practice of relevance? Beginning largely with the shipping age of Richmond, following the approval for The James River and Kanawha Canal by George Washington in 1785, and eventual construction beginning by 1800, industrial practices in Richmond expanded exponentially. The six

---

[59] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

[60] Ibid.

[61] Ibid.

decades leading up to the Civil War saw the newly minted Virginia capital to an

industrial powerhouse, fueled by the hydropower of the fall zone. The English had

beaten the rapids by transporting goods around them, and began an endless cycle of

progress. Richmond became widely known for its iron, tobacco, flour, paper, textile,

and spices industries.[62]

*By 1860, a broad industrial base had been established directly on the waterfront. According to the
City of Richmond, 2009 Downtown Plan (Historical Background)[63]*

300 factories and plants
$12 million in production goods
2 largest flour mills in the United States
1600 barrels of flour produced daily
50 tobacco factories in operation
23 independently run granite quarries
81,000 population of Richmond in 1860

Figure 18 Belle Isle in the 1850s - T. Tyler Potterfield Collection

Frederick Law Olmstead, famed landscape architect, described Richmond in

1852 as a "dull cloud of bituminous smoke."[64] Olmstead also commented on the

amount of significant erosion, lack of general sanitation and sewers in the city around

this same time. Industry had taken hold of the Richmond waterfront, with no signs of

---

[62] Richmond Planning and Development Review

[63] Richmond Planning and Development Review

[64] Ibid.

lightening its grip. Shockoe Creek, the original sewer pictured in the 1737 Plan by William Mayo, was rerouted to become the city's main sewer main around 1860,[65] erasing any memory of the creek which acted as the lifeblood of the city upon its inception.

In spite of an overwhelming trend of industrialization, Richmond maintained some environmental integrity. Public springs acted as important gathering spaces in the 1800's, even after the Richmond waterworks was constructed in 1831.[66] The first major formal tree planting in the city occurred in 1816, in an effort to complete the Capitol Square grounds (in construction from 1780-1820[67]). Significant tree planting was not begun until the urban nursery was established in 1890, which saw 50,000 trees planted from 1890-1904.

"Through much of its history," notes T. Tyler Potterfield, "Richmond was a compact walking city and the countryside was close at hand." As early as 1737, William Mayo constructed a villa style home (ironically named Powhatan's Seat), on the outskirts the then very small town of Richmond. This started a series of villa construction in which Richmond elite had "more of a desire to take in the view than to become part of the view."[68]

This attitude towards a desire to attain a view by buying property detached from the ongoings of the city, is a sentiment that allows for a disillusion for how one treats the precious provisions of the natural world. 19th century Richmond, began a

---

[65] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.
[66] Ibid.
[67] Richmond Planning and Development Review
[68] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

disconnect between city and countryside, which was typical of many east coast industrial centers.

In Richmond however, the rapid densification of the waterfront, and the expansion of the city, choked the once infinite wooded plains, depleted waterfront landforms, and lowered water quality at an alarming rate. Compounded by the attention to the agony of the Civil War in years to follow, a major social and economic driver for the city's future, industry allowed Richmond's citizens to trade the environment, for an economy, without thinking twice.

Figure 19 View of Richmond from Hollywood Cemetery, Virginia Historical Society

Space Making: Grid vs. Topography

In the original 1737 Richmond grid plan, 65 foot wide streets made square gridded plots, two acres each, divided into four half acres lots.[69] These lines however, were surveyed with seemingly no attention to the extreme topography on the north side of the river, which had "dramatic possibilities for landscape design and urban planning," according to city planner T. Tyler Potterfield. Major westward grid expansion continued this planning practice of creating a series of gridded plots, of the same size, in 1769, 1780 and into the 19th century. Exceptions to the rule, which are still evident today, include the towns of Manchester (1769), and Sydney (1816), which drew their orientation from the curve of the river, west of the original downtown.[70]

Despite the rigidness of the Richmond grid on paper, the reality of the grid didn't take shape for nearly a century. Samuel Mordecai, a Richmond lifetime citizen who published his recollections of the city in his (originally anonymous) text *Richmond in by-gone-days,* in 1860, gives one of the only first hand account of the city's development from the Revolution to the Civil War. Mordecai notes that in 1800, "Brick Row" was commonly the name given to the Main St. area, being that it was the "only place where buildings weren't few and far between."[71]

---

[69] Richmond Planning and Development Review

[70] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.* Charleston, SC: History Press.

[71] Mordecai, Samuel. 1946. *Richmond in By-Gone Days.* Republished from the 2d ed. of 1860. Richmond: Dietz Press.

Figure 20 "Commons of the City" Richard Young's 1810 Map

In Richard Young's 1810 map of Richmond, there is a label on the oblong linear piece of land between the edge of the 1737 grid, and the waterfront which reads: *Commons of the City*, in a very eloquent, and wide space cursive text. It is clear that early Richmond, the waterfront, springs, and high points were the earliest forms of informal public space, with a more meandering, medieval character. Mordecai, recollects the "Richmond Commons," as being a "fashionable promenade," around 1800 where one went to see and be seen.[72]

Ellyson's map of 1856, one of the first to show the juxtaposition of grid and topography, makes the planning contradiction immediately obvious. While these steep plots were typically unsuitable for buildings prior to modern grading techniques, they become suitable for gathering. [73] One can speculate that serendipitous land use, operating within the limitations of a given grid, gave rise to culture in Richmond, rather than a prescribed landscape program, or special attention to designing public space. Not until the Capitol Square was completed in 1820, was their a true anchor for urban planning in the growing city. [74]

---

[72] Mordecai, Samuel. 1946. *Richmond in By-Gone Days.* Republished from the 2d ed. of 1860. Richmond: Dietz Press.

[73] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.* Charleston, SC: History Press.

[74] Richmond Planning and Development Review

Figure 21 M Ellyson plan showing grid and topography, 1856

Following the creation of the Committee on Public Squares in 1851, and the leadership of city beautiful proponent Colonel Wilfred Emory Cutshaw into the 1890s, Richmond began to acquire and create a series of public parks such Monroe Square in 1872, and Libby Hill Park in 1883. Around the time of the Civil War, Richmond also paid far more attention to the formalization of the burial of the dead, by creating elaborate (often segregated) cemeteries in Oakwood Cemetery and Hollywood Cemetery.[75] Monument Avenue, as featured in Allen B. Jacobs *Great Streets,* conceived as early as 1870, and visible in city plans as early as 1887, became a premier example of the Grand American avenue, a precursor to the City Beautiful movement.[76]

---

[75] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

[76] Jacobs, Allan B. 1993. *Great Streets.*Cambridge, Mass.: MIT Press

Figure 22 Bartholomew, Growth of Richmond

Richmond developed as a series of grid expansions, extensions of major streets westward from the Capitol Square, and park formalizations without any cohesive course of action until the First City Planning Commission was established in 1932, and ultimately the city's first Master Plan in 1946.[77]

Transportation and Access

From the construction of The James River and Kanawha Canal in 1800, to Richmond's claim as the largest railroad hub on the east coast in the years just after the Civil War[78], to the construction of I-95 directly through the city in 1957[79], Richmond has always been at the forefront of the latest transportation revolution. Ironically, all of these phenomena occur at the same point in the city, the location of the original mouth of Shockoe Creek, just west of the original 1737 grid. The Powhatans, the English, the Richmond early inhabitants, and the modern American

---

[77] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

[78] Richmond Planning and Development Review (WEBSITE PLACEHOLDER)

[79] Wikipedia I-95

all carved away, built on, and built over this point to create a confluence of wood, concrete, iron, and steel at the location of the falls.

The James River and Kanawha Canal was originally intended to stretch 197 miles from the Atlantic Ocean to the Ohio River (not China, as John Smith had hoped).[80] Slow progress was eventually halted after only 7 miles, and the canal's commercial use was abandoned after 1877 due to major damage caused in the Civil War.[81] It can be readily seen in the maps ranging from 1810, 1835, and into the Civil War, that the decades of cut and fill dramatically changed the Richmond waterfront on the north side of the river. Many river races were cut on either side of the river to accommodate water flow for the hundreds of mills that operated directly on the waterfront.

Figure 23 The Ever-changing river edge - drawing by author

---

80 Richmond Planning and Development Review

81 Potterfield, T. Tyler. 2009. *Nonesuch Place: A History of the Richmond Landscape.*Charleston, SC: History Press.

Also seen in Figure 23 the most distinguishable geological feature of the

Richmond landscape are the islands, quasi-islands, and boulders which populate the

fall zone. These islands, all within the floodplain of the James, repeatedly are drawn,

mapped, and surveyed with varying degrees of perception. The ever-changing

dynamic nature of the river, allows their true shape to remain aloof, their outlines up

to interpretation. For the sake of this study, the concentration of analysis will remain

primarily centered around the group of islands anchored by Mayo and Vauxhall

islands.

One aspect of the islands use that has not changed is the desire to connect

across the river at this hinge point of the river. Changing hands of ownership of

islands, have controlled passage across the James from Richmond to Manchester.

Timeline of early infrastructure on and across the James River[82]

1785 George Washington approves The James River and Kanawha Canal
1788 Original Mayo Bridge connects Richmond to Manchester
1794 Footbridges connect Vauxhall island to Mayo's Bridge
1800 Construction begins on Canal
1836 First Railroad bridges across the James River
1874 Free Bridge (9th St.) constructed
1888 Mayo Island Boathouse built
1911 Mayo Bridge rebuilt (as exists today)

---

[82] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

Figure 24 Mayo Bridge 1819, Virginia Historical Soceity

The area around the falls, was always a "diverse collection of footpaths" with the "canal towpath, early roads, and improves turnpikes."[83] which was heavily trafficked. The idea of controlling this traffic, and even imposing monetary (or worse) penalties on violators was in place from the onset of infrastructural advancement. The original Mayo Bridge, was a privately owned, taxable right of passage across the James as early as the beginning of the 19th century. Charles Dickens, in his *American Notes*, in 1842 commented on his state of confusion at the bridge toll: "there are two bridges across the river: one belongs to the railroad, and the other, which is a very crazy affair, is the private property of some old lady in the neighborhood, who levies tolls upon the townspeople."[84] He goes on to explain that the fine for not obeying is five dollars for a white man, and lashings for an African American. *(**It should be*

---

[83] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

[84] Duke, Maurice., and Daniel P. Jordan. 1983. *A Richmond Reader, 1733-1983.* Chapel Hill: University of North Carolina Press.

noted that Dickens notes on Richmond are far from positive as a whole, in contrast to his contemporary, and Richmond native Edgar Allen Poe). Free passage across the river was not accessible to the public until the 9th St. Bridge (appropriately nicknamed the "Free Bridge"), was built in 1874, close to a century after Mayo Bridge was first built in 1788[85]…

As mentioned, the boating and railroad industries have important historical meaning in the eyes of Richmonders. in 1730, Robert Rockett created a goods transporting ferry service, which evolved into Rockett's Landing, just east downstream of the downtown. This became an epicenter port for the region, "once considered the busiest inland port in America," and thrived until about the 1920's.[86] Richmond rebranded itself as a railroad center just after the fall of the city in 1865 to Union force, and eventually surpassed Philadelphia, Baltimore, and Norfolk, *combined* in the amount of goods shipped by rail annually.[87] Rocketts Landing, being the last port to support major ships upstream on the James River from the Atlantic Ocean, conveniently located next to a major railroad hub, created a perfect opportunity for commercial success and cultural exchange.

Cultural Segregation and Desegregation

Like much of America, racial tensions predominantly between white descendants of early English colonists, and African Americans defined the cultural landscape of Richmond from the beginning of English occupation. The undertone of

---

[85] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

[86] Rocketsvillage.com

[87] Richmond Planning and Development Review

steady economic growth, commercial success, and cultural place-making, was a major ethical rift: slavery and segregation.

"Early on, it became apparent that in Richmond there would be a distinct difference between the lower and upper portions of the town," explains T. Tyler Potterfield.[88] White residential communities dominated the highest elevations of the landscape, while commercial activity and African American homes developed in the lowland floodplains. *An Ordinance Concerning Negroes, The Richmond Black Code,* an official document in 1859, outlined the rules for African Americans in the southern antebellum community, which had been practiced by word of mouth for decades.

The code prohibits African Americans from the Capitol Square, unless employed by a white man, or accompanying a white child or elderly person. Special exceptions at times may have been made for a black worker, even if they were free, when walking directly from work in the upper portion of town as a servant, to the lower portion of town back to their residences.[89] As many of the public squares were the only easily navigable routes from the upper to lower portions of the town, the physical spaces which modern Richmonders hold dear historically, actually harbored a cultural atmosphere of hate, oppression, and exclusion.

African American's, as well as other minorities in Richmond in the 1800's experienced harsh restrictions even upon burial. In 1810, Christopher McPherson spoke in 1810 of the deplorable conditions of the few African American cemetery lots

[88] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

[89] Duke, Maurice., and Daniel P. Jordan. 1983. *A Richmond Reader, 1733-1983.* Chapel Hill: University of North Carolina Press.

in the city saying often "coffins washed away into the current of Shockoe stream." [90] Cemeteries, were the most regulated, and segregated of Richmond's public spaces.[91]

Figure 25 The Fall of Richmond, April 1865, Virginia Historical Society

A major victory African American's living in Richmond, was clearly the Union takeover of Richmond, by President Lincoln himself, in April 1865. As it is described by Ernest B. Ferguson in *Ashes of Glory,* "On May 20 (1861) the Confederate Congress voted to move the government to Richmond… With that, Virginia's capital had become the very symbol of the Confederacy, and the ultimate prize in a bloody war."[92] As glorious of an event as this was, inferiority of black people, now freed, was too deeply ingrained in the minds and policies of the people.

The Civil Rights movement and desegregation of Richmond area schools in the 1960's, capped another 100 years of tension after the end of the civil war, with

---

[90] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.* Charleston, SC: History Press.
[91] Ibid.
[92] Civil War Trust, The Fall of Richmond, Virginia (WEBSITE)

40

even more tension. Throughout the end of the 19th and 20th centuries, subpar or nonexistent facilities for black citizens, from playgrounds, to recreational facilities, to churches, to housing overwhelming defined African American neighborhoods. As early as 1790 however, minority communities did start to create strongholds within the dominant white fabric. "Little Africa" in Jackson Ward , still a prominent African American community today, flourished from 1790-1860; Little Germany arose after 1840, and Jewish immigrants moved into Shockoe Valley around this same time.[93]

Figure 26 Civil Rights Monument in Richmond

One area of the cultural scene in Richmond, which did not particularly operate under the laws of segregation in the 19th century was the fall zone. The densely wooded islands, the shifting shorelines, and running rapids were an area of solace for the people of Richmond, "of all sizes, sex, color, and nationality," pronounced Ernest Walthall in his 1850-1860 observations.[94] The River itself was the least segregated and most integrated part of the fabric of the city. Frederick Law Olmstead in 1852, again speaks to the "rowdyism," and "vice" that characterized the islands at the

---

[93] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

[94] Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

time."[95] Vauxhall island especially was seen as common "pleasure ground" for all people, taking part in various sporting events, betting games, and leisure, out of the upper-class public eye.

Perhaps the river personified in Blair Niles' *The James, From Iron Gate to the Sea,* and the self, resonate in one another:

"At the Falls a great change takes place in the nature of the (River or Self), which has been gradually descending from the mountain region of the great Valley, from the hills about Lynchburg, through rolling country to the heights above the Falls, where all elevation comes to an abrupt end. The (River or Self) now traverse the level coastal lands. Below Richmond it becomes suddenly a wide, tawny, tidal estuary, taking its color from the soil through which it and its lower tributaries pass."[96]

The journey of the James River is not unlike the journey of the Self, or the human experience. The River is a living, pulsing being, with times of plenty when the rains come, and times of sorrow during drought. The River is loud and dynamic at times; other times it is soft, gentle, and unassuming. The River passes no judgement, the river just passes through. And at this moment of change, this "great change" of the fall zone, the river rethinks and re-identifies. Its appearance changes, as the water passing through is growing older, closer to the Ocean.

However the Self traverses the human experience, it to at times rethink and re-identifies; and at no time is this attitude heightened than at times of a juxtaposed experience like that of the fall zone of the James. This is why the atmosphere of

---

[95] Ibid.

[96] Niles, Blair., Edward Shenton, and Fitzgerald Rivers of America Collection (Library of Congress). 1945. *The James : From Iron Gate to the Sea*

integration and inclusion can thrive at a place where all people identify holistically,

unbound by race, ethnicity, gender, or culture.

Chapter 3: Discovering Social Undertones Through Physical Manifestation

Introduction
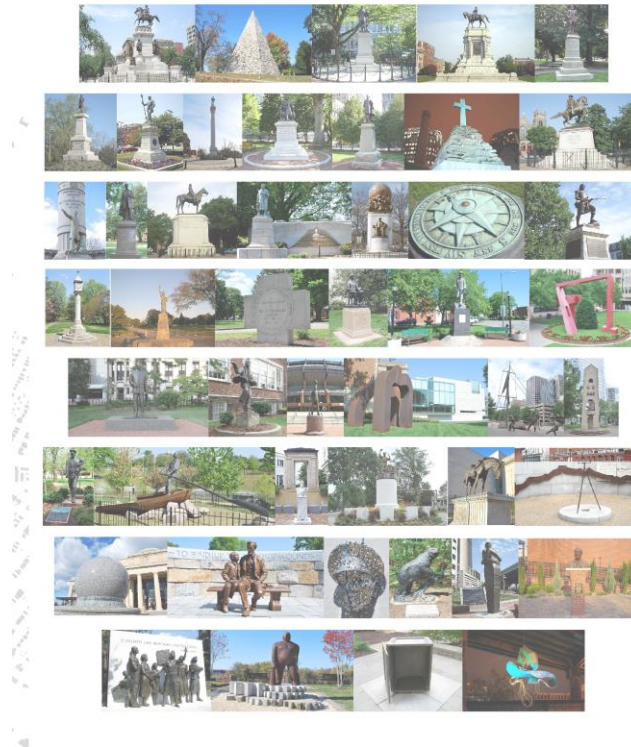
Figure 27 The monuments of Richmond, chronologaically from 1858-2015, photo diagram by author

Perhaps the most prominent characteristic of the Richmond cityscape, is the use of monuments in prominent urban spaces that commemorate an historical figure, event, or group of importance to the shaping of Richmond today. With a strong ties to exploration, maritime history, industry, war, slavery, civil rights, the environment and the arts, Richmond is a town that has close ties to many realms of the human experience. The following exercise profiles, catalogs, and analyzes the implications of these architectural follies simultaneously in the spheres of time, place, and social connotation.

"Monumentality is enigmatic. It cannot be intentionally created. Neither the finest material nor the most advanced technology need enter a work of monumental character for the same reason that the finest ink was not required to draw up the Magna Carta"[97]

-Louis Kahn, *Monumentality* in *Essential Texts, pg 22*

If one were to begin the process of profiling a cities moral, ethic, and civil code, they may start by glancing at the monuments and statue that populate the urban fabric. What the people of a place decide to make permanent, should (in theory) align with what they hold to the highest standard; what they hold to be true. As Kahn plainly puts in his 1944 essay, monumentality is not something purely of grandeur and expense, but rather a physical manifestation of a genuine happening, person, or idea. While Kahn is not solely referring to 'monuments' in the conventional sense, but rather architectural monumentality in general, his assertions remain aptly true in the case of singular notions of monumentality.

The reactive nature of memorializing, monumentalizing, and dedicating, obviously occurring after the subject has lived, or event has occurred, allows for a unique moment to occur in which people can assess their place in the ever evolving timeline of their home. Juhani Pallasmaa affirms this human desire to reconcile one's relation to time: "In concretising the present, they (buildings/architecture/monuments) evoke our awareness of the past, as well as our confidence in the future."[98] As place evolves, its physical point in space is the same; thus the position of the monument does not move. As society evolves, so does the morality and ethical intention of its people; thus the ethical position in the human mind also evolves. *Here is where the*

---

[97] Kahn, Louis I., and Robert C. Twombly. 2003. *Louis Kahn : Essential Texts.* New York: W.W. Norton.

[98] Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture.*

45

contradiction of physical permanence and societal evolution then evolves into a

contentious dilemma.

Figure 28 Robert E Lee Monument on Monument Ave.

Individual Virtues vs. The Collective Cause

The face of the confederacy undoubtedly was, and always will be, General

Robert E. Lee. A brilliant mind, a masterful general, and accomplished hero of the

south, who also happened to lead an army which upheld slavery: the most potent and

unforgivable crime against humanity to ever exist. His statue (Figure 28) is not only

at, but creates, the epicenter of the main residential sector of Richmond. Erected in

1890, 25 years after the end of the Civil War, the Lee statue unveiled proved to be

one of the most celebrated moments in the city's history. 15,000 Confederate Civil

War veterans (including 50 former living confederate generals!) were in attendance

for the dedication of the statues.[99] Over a century later, General Lee is still perched

atop his trusty horse, Traveller, still an iconic image of the Richmond urban fabric.

After the Civil War from 1861-1865, in which Richmond fell to the hands of the

Union, the city immediately began a period of memorializing their lost leaders. After

the initial monument to the Confederate War Dead in 1868, an intense period of

monument building to the Confederacy resulted in at least nine more monuments by

---

[99] Duke, Maurice., and Daniel P. Jordan. 1983. *A Richmond Reader, 1733-1983.* Chapel Hill: University of North Carolina Press.

1919, directly in the downtown area of Richmond.
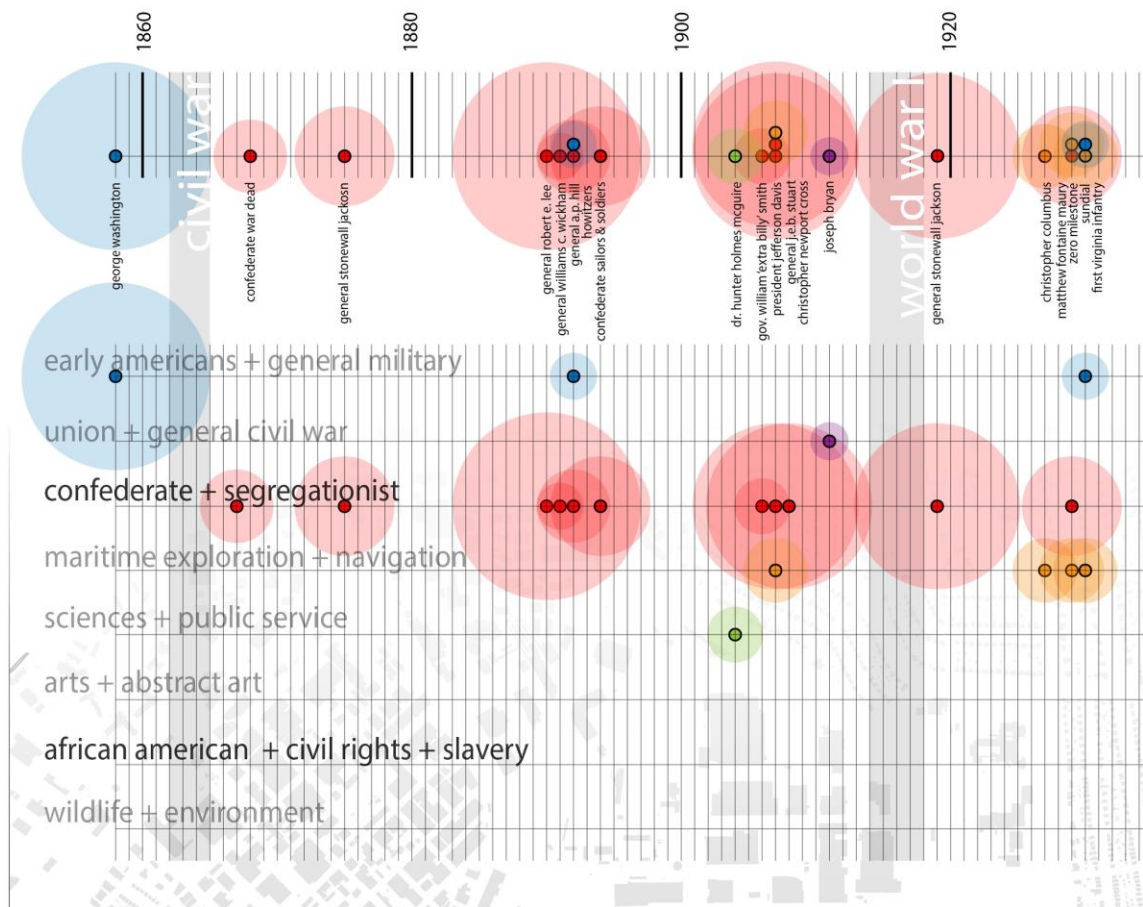
Figure 29 – drawing by author

Figure 29 illustrates the intense period of monument building to Confederates in the decades following the Civil War. The timeline (top) is on a relative scale, the categorization chart (below) identifies the monuments as they fit into the societal dedication categories. The size of the circle can be explained as perceived "known-ness" or influence on the city fabric

Monuments of particular interest are the five Confederate monuments which occupy the central axis of Monument Ave. (INSERT DIAGRAM) Confederate heroes such as J.E.B Stuart, Stonewall Jackson, and Jefferson Davis, proudly continue the legacy which began with Robert E. Lee, and become nodes of public space, front and center for Richmonders to see. In *A Richmond Reader,* by Maurice Duke and Daniel P. Jordan, a compelling selection from *Harper's Weekly* in 1890 sheds light on

47

a likely common regional perspective of the Confederate Generals at the time: "General Lee personified what was best in a bad cause. His individual virtues gave the Southern people, who craved a demonstration commemorative of an indelible epoch in their lives, something substantial and unquestionably creditable to rally around."[100] Speaking to the varying perception of what a monument symbolizes, one can see the dilemma in deciding whether an action of the past can be judge by the ethics of today.

Through the end of WWI, the Confederate monument building practice reigned supreme, however there began to be a larger presence of monuments to maritime exploration, and an occasional monument to public service or early Americans.

Silence… Then Reconciliation?

The ensuing years during WWI and WWII see little to no monument building in the city of Richmond. From 1930-1970 less than a half dozen publicly commissioned monuments are built, speaking to the direct correlation between social happenings, and the need for a lull in major movements, in order to wallow in the period of reflection in which most monuments are conceived. The real catalyst of the next monument building revolution is the Civil Rights Movement in the United

---

[100] Duke, Maurice., and Daniel P. Jordan. 1983. *A Richmond Reader, 1733-1983.* Chapel Hill: University of North Carolina Press.

States.
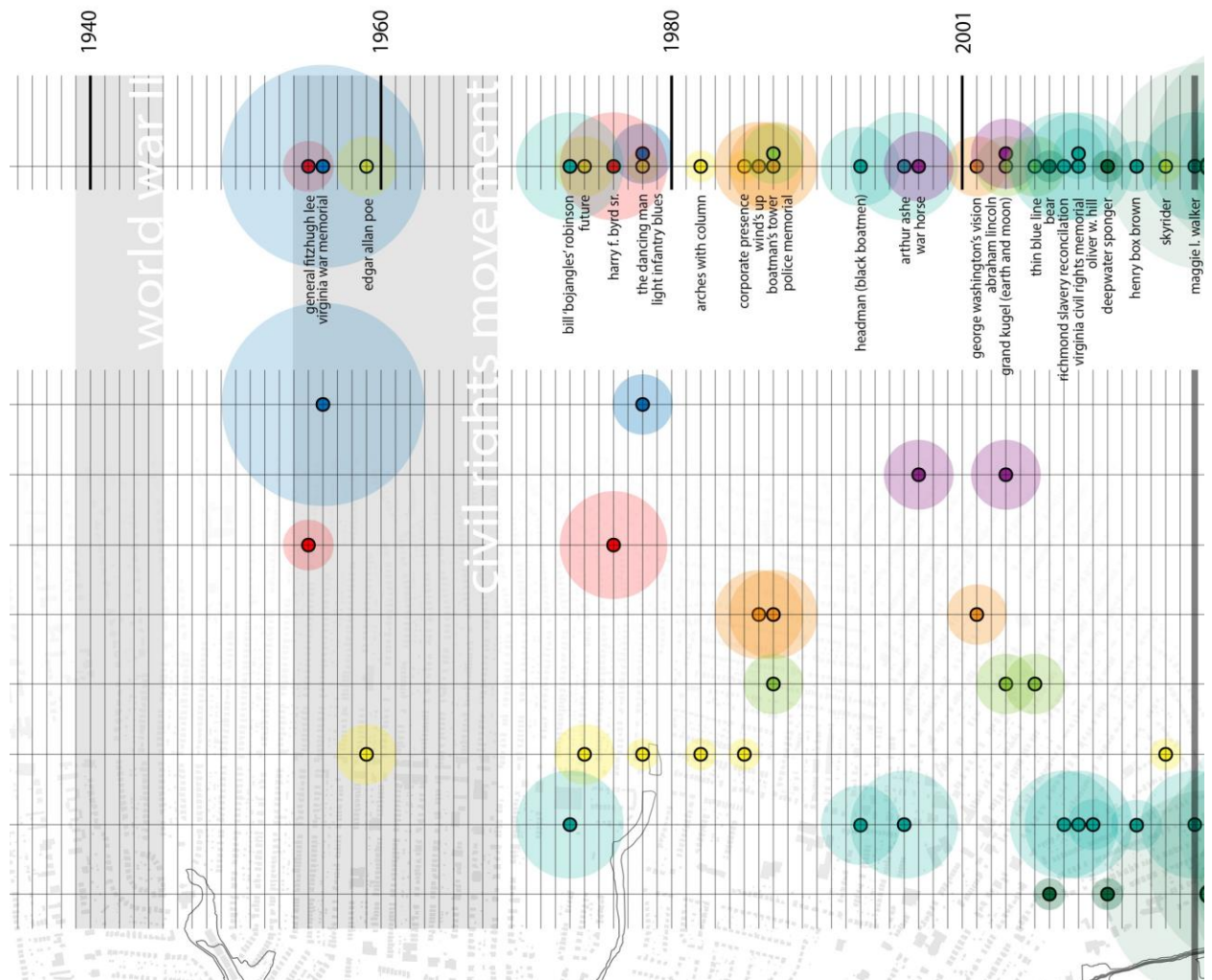
Figure 30 - drawing by author

A tumultuous time of tension and sacrifice, this time for a just and righteous

cause (the realignment of the psyche of America's people) is the direct 20th century

correlation to the Civil War in Richmond. Causing a major overhaul in the

commissioning of monuments in Richmond, the Civil Rights movement (paired of

course with decades of war - WWI, WWII, Korean War, and Vietnam) launched the

city into a new phase of public art. Other than the construction of Bill 'Bojangles'

49

Robinson in 1973, the African-American monument movement didn't take off in Richmond until the 1990's. At least eight major publicly commissioned monuments to African Americans or the Civil Rights Movement in general have been constructed since, with the latest due to be erected in 2016 to prominent African American business mogul, and Richmond native Maggie Walker. This too is coming on the heels of a rise in the number of monuments to public service (especially the police force), the sciences, past american icons/explorers, and many others.

Defining Reconciliation, Place Matters
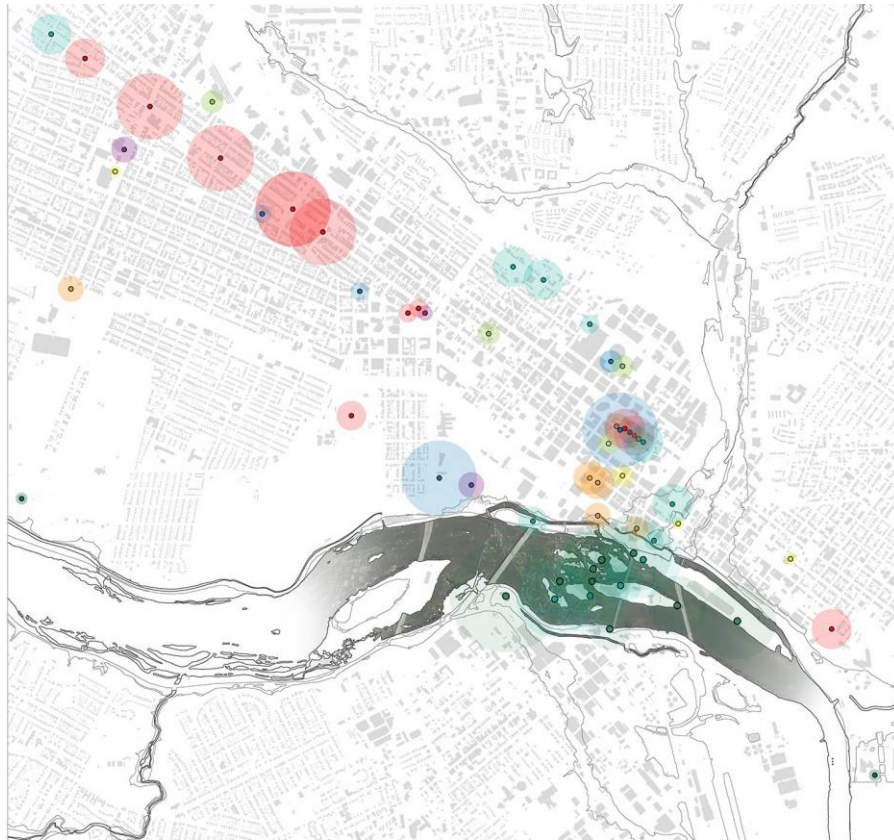
Figure 31 Confederate Monuments dominate formal public space - drawing by author

The concerning disconnect between post-Civil War, and post-Civil Rights monuments lies in the qualitative nature of their conception, not the quantitative. While a similar number of monuments to either faction exist throughout the city, their

actual perception of importance is skewed overwhelmingly in favor of the Confederates. As Figure 31 shows, the Confederate monuments are nodes along a major axial boulevard (Monument Avenue.) which bisects the core of the downtown and orients the entire flare of the city. The African American monuments pepper the interior streets of the historically black neighborhoods, or rest in rather meek nuances of the underutilized waterfront quasi-plazas. The Confederate monuments are also typically much taller, more concrete, and seemingly more eternally situated than their counterparts. Challenging convention, especially in a publicly commissioned field, can raise the issue of social reconciliation on a numeric relative scale, as clearly falling short of true influence.

1861…1968…2016?

The comparison between Civil Rights and African American monuments, while clearly a relevant, tense issue in the city of Richmond, is more an adequate example of larger issues of monumentality concepts. Each monument movement is a response to the issues of the times, entirely relevant to the most pressing issues of the day. ***What then are the issue of today?*** One could argue the ***Environmental Movement*** is relative to today's generation, as national identity was in 1861, or civil rights reconciliation in 1968. Creating a space on Mayo Island which is rooted in the mindsight of sustainable sight reclamation, can echo a new message for this movement.

Chapter 4: Site Precedents

Parc de la Villette // Paris, Bernard Tschumi

"The common denominator of the concept is the point grid made up of small buildings called folies. Among them are a theater, a cafe, and a sort of TV studio for children, along with many other programs. Each of these programs will change many times over the ensuing years."

-Bernard Tschumi, *Architecture Concepts, Red Is Not A Color pg 118*

Bernard Tschumi's entry for Parc de la Villette, a major new cultural hub for the people of France in Paris, operates as a superimposed grid over an existing context, where each connection of the grid is marked by a glaring red architectural intervention, defined as a follie. The grid itself, is a simple solution to a difficult context: creating a common denominator (the grid) as a vehicle for design intention.

Tschumi delves into the complexities of the seemingly straightforward grid, by upholding the importance of a tripartite scheme of overlays, in a "system of lines," and a "system of surfaces" to complement the follies (or "system of points").[101] The admitted arbitrary system of the grid in turn evolves and adapts as a the design process and implementation continues.

"La Villette aims at an architecture that means nothing, an architecture of the signifier, rather than the signified,"[102] pronounces Tschumi in *Red Is Not a Color.* This desire for interpretive infinity, coined by Nietzsche, is the intent of the follies of the grid. To allow the user to make their perception of the object their own is the goal of the architect. Some of the installations are more suitable to social gathering; others

---

[101] Tschumi, Bernard. 2012. *Architecture Concepts : Red Is Not a Color.*New York: Rizzoli.

[102] Ibid.

for contemplative isolation. Created with a generic kit of parts, theses follies share a common thread of design language, while maintaining a uniqueness through site positioning, orientation, density and use.
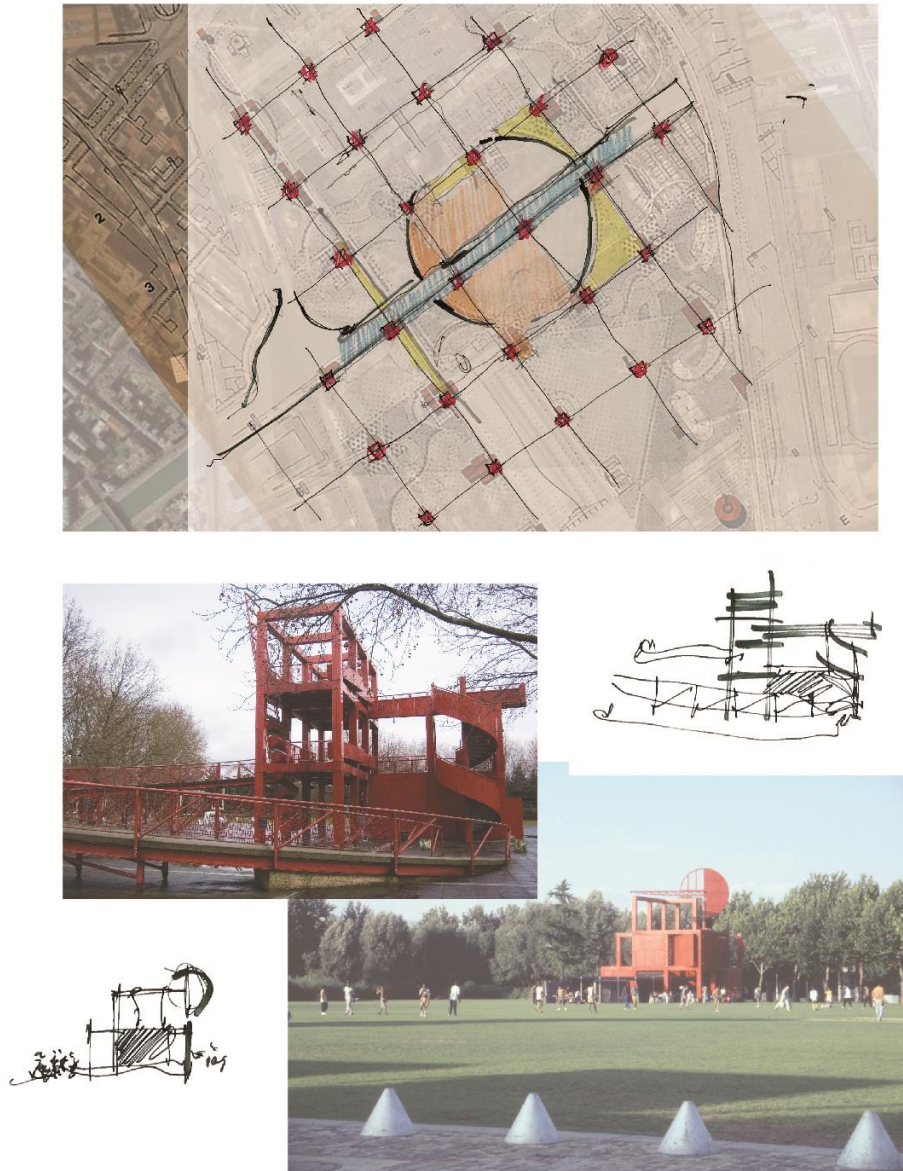
Figure 32 A Precedent Study Collage - drawings by author

Ghost Studio Grounds // Kingsburg, Nova Scotia, Bryan Mackay-Lyons + Students

"What may we now read into the quasi-permanent existence of this structure as it stands alone and unattended before the sea? Perhaps we should think of it as something more than a structure. In fact, it could be said that its ultimate function is to serve as a landscape marker, as a kind of sky-sign"

-Kenneth Frampton, *On the Fringes of the Empire* (on Ghost 5)

An ever-evolving 'campus' of sorts, the family owned grounds of Canadian architect and professor Bryan Mackay-Lyons houses a quasi-planned array of vernacular architectural follies emanating out from a simple access road to the expanse of the sea (FIGURE SITE).

The architecture, built by students over the course of a few weeks, evokes a sense of robust humility: a "sky-sign"[104] object in space, which also so convincingly complements the gentle arc of a hill turning into ocean. The compact nature of the now standing half dozen projects with a few hundred yards, creates a nexus point in an otherwise remote location to enforce a threshold for place. Relative density, in the face of peripheral vistas of the countryside, creates a juxtaposition of modularized vernacular high-design, against the rugged Nova Scotian landscape.

Of particular interest are the Ghost 6 Towers (FIGURE TOWER), and Ghost 9 (FIGURE GHOST 9). These structures straddle the line between indoor inhabitable space, and durable outdoor pavilion. The repetition of vertical wood members wrapping the facades, heightens the previously mentioned contrast with the rich forest backdrop. Ghost 9, a horse barn, as described by Robert McCarter, in his essay *The*

---

[103] Sketches by author, images from architect website, plan from google with sketch overlay (PLACEHOLDER)

[104] MacKay-Lyons, Brian., Peter. Buchanan, and Ghost (Symposium). 2008. *Ghost : Building an Architectural Vision.*

Thought of Construction, is "characterized by an ephemeral monumentality, and also every inch a handmade thing.[105] A modest statement of monumentality, which Kahn afirms is "independent of scale or expense."[106]

Figure 33 A Precedent Study Collage - drawings by author

---

[105] Ibid.

[106] Kahn, Louis I., and Robert C. Twombly. 2003. *Louis Kahn : Essential Texts.* New York: W.W.Norton.

Confluence Project // Washington and Oregon, Maya Lin Studio

A multi-state retracing of the original path of Lewis and Clark across parts of Oregon and Washington, the Confluence Project is a necklace of six parks hugging the Snake and the Columbia River's, emptying out into the Pacific Ocean.

(FIGURE XX) shows Cape Disappointment State Park, a "sequence of paths, viewpoints, and sculptural elements,"[107] designed by Maya Lin to create a reveal of focal points as one progresses through the site. The destination points do not orient the center of the park, but rather dot the periphery closer to the coastline. The center of the site is actually almost entirely composed of parking spaces, flanked by the major destination points on the east and west sides, creating a tension radiating out from the center arrival point. The pathways are typically circuitous, whimsically arriving at the nodes, rather than being oriented by the nodes.

Points of design such as a fish cleaning table, minimal amphitheater, and something as simple as a paved circle around an aged cedar stump, act as follies of programmatic use, but also modest landscape visions. This is typical of most of these six parks designed by Lin: the natural tendencies of the topography and river drive the form of the paths, and historically important, or obviously prime gathering locations, are the places of intervention.

Follies of environmental character, enveloped by the canopy of the forest, or the vastness of the countryside, the Elliptical Bird Blind (FIGURE XX) at Sandy river Delta Park, is a quintessential example of this type of intervention designed by Lin. A geometric form, preceded by a raised arc pathway, puts the user within the canopy,

---

[107] Confluence Project Online Journey Book

and above the ground plane. Operating with a light touch, this also is very much a

destination that terminates a circuitous path.

Figure 34 A Precedent Study Collage - drawings by author

Seattle Olympic Park // Seattle, Weiss/Manfredi

As described by Weiss/Manfredi, the Seattle Olympic Sculpture Park is an "uninterrupted Z-shaped green platform"[108] which acts as a major civic upgrade for a once industrial site on the waterfront. With a strong sectional quality, this path rises and falls over existing infrastructure, and embodies a project with a 'big idea' with its iconic form. A bold weave, (FIGURE SITE) adjacent to a regular city grid, the park makes a point to not abide by contextual clues, but rather make a statement of defiance to the norms that have monotonized the waterfront.

The pieces of art and architecture are amongst and within the path, while still becoming moments of grandeur in their own right. Largely abstract, and the follies are objects of observation in the round, not intended to be inhabitable space. The issue of perceived privacy of the grass, versus the public realm of the concrete (FIGURE VIEW) creates a focused corridor of circulation throughout much of the user's experience, paired with vast views of the skyline.

---

[108] Weiss/Manfredi Website

Figure 35 A Precedent Study Collage - drawings by author

Vietnam Veteran's Memorial // Washington, DC Maya Lin

An extremely contentious memorial, for a contentious war, in the nation's most contentious city, the Vietnam Veteran's Memorial, designed by then 21 year-old Maya Lin, is one of the most beautifully humble pieces memorial interventions in the world. Described at times as a "black gash of shame" [109] on the Mall, but maybe more appropriately as a symbolic black scar for the nation, the memorial is merely two black granite walls which ascend in height as one descends down from the corners to the apex in the center.(FIGURE SKETCH)

The unpretentious nature of the design, free of traditional monumental decor, speaks again to the infinite interpretation possible within the self, succumb to the atmospheric weight of the memorial. Memorials as civic anchors are just as vital to a society, as any other gathering space; understanding history is one of the most profound and pertinent mantras of the human race.

The orientation of the wall is a nod derived from two icons of American pride with direct visible range: the Lincoln Memorial to the southwest and the Washington Monument to the ESE. This places the monument as a folie on a larger scale relative to the formal core of of the National Mall which typically adopts a more rigid organizational structure. As one can see in (FIGURE SITE) the memorial sponsors a shift from the formal central axis of the mall, creating the all important juxtaposition of spatial conditions.

---

[109] Maya Lin Studio (WEBSITE)

Figure 36 A Precedent Study Collage - drawings by author

61

Chapter 6: The Site

City Diagrams

Figure 37 Figure Ground - drawing by author
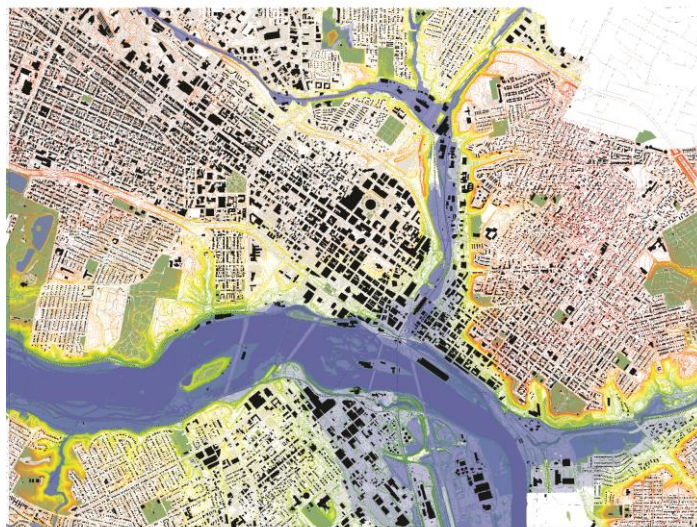
Figure 38 Contours and Floodplain - drawing by author

SITE
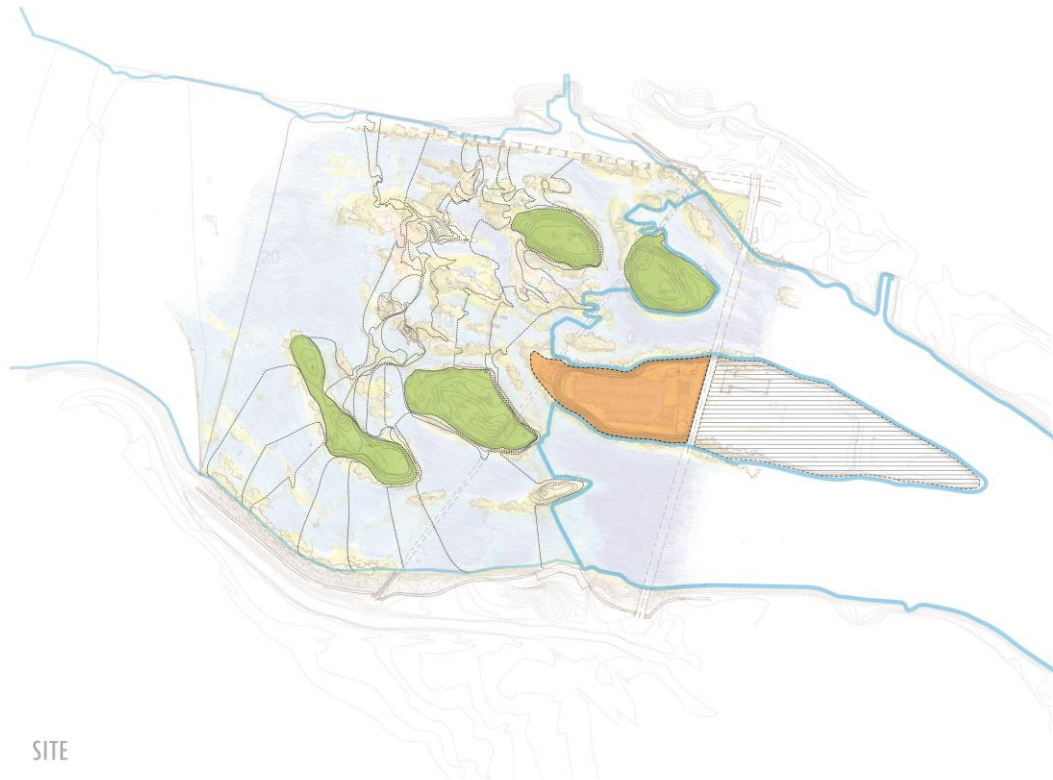
Figure 39 Terminus of The James River - drawing by author

SITE

Figure 40 River wall outline - drawing by author

Figure 41 Highpoints on the James River - drawing by author

Figure 42 Rapids to the West - drawing by author

Figure 43 Access Points - drawing by author

Figure 44 Trails extending from the Site - drawing by author
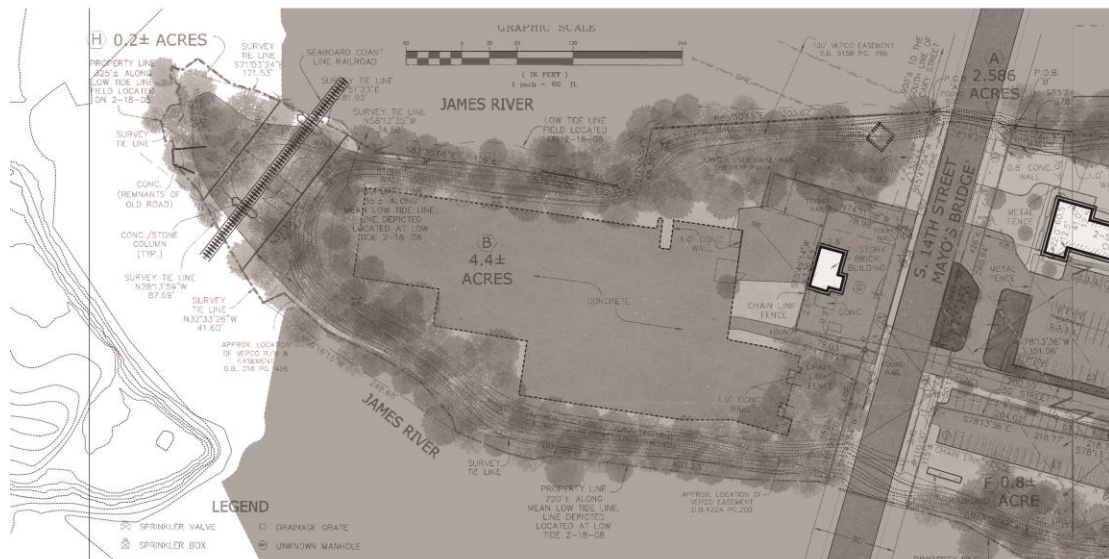
EXISTING CONDITIONS

Figure 45 Existing Conditions - drawing by author

Development of Mayo Island has been something of interest in discussion in the

formation of the Richmond Riverfront Plan approved in 2012[110]. Currently, as the site

is in the 100-year floodplain, as noted by the document supporting the Richmond

Riverfront Plan, development is a difficult task. The floodwalls, which have been

constructed since the last major flood in Richmond, are likely to "amplify" flood

conditions on the island as well, according to the Richmond Riverfront Plan.[111]

---

[110] Richmond Riverfront Plan 2012
[111] Ibid.

Branded as the "Central Riverfront Park," this approved city plan proposes making "Mayo Island" the 'green jewel' of the waterfront[112]. Short term plans include making the parking lot a staging point for Richmond's Cycling events, while peppering the edges of the site with Watercraft launches and nature trails. While this is a step in the right direction, it is not one that really changes the atmosphere, character, and sustainable aspects of the site.

Mayo Island's "Long-Term Plan," which is the following page in the aforementioned document, makes the site almost entirely green space, with parking on the south side, a concessions area and temporary stage element. While this is a step further in place making on the site, this strategy seems like one of many along the waterfront, rather than a design that can fully evoke the importance of this specific site and embody and atmosphere. One could frame this thesis in the context of critical analysis of this specific part of a broader plan; a plan that actually is rather comprehensive and dynamic.

[112] Richmond Riverfront Plan 2012

Chapter 7: Design Ideology

Design Strategies

EXISTING CONDITIONS

Figure 46 The Current Site Conditon - photograph by author

The design ideology governing this project, when simplified to its most elemental

stage, is one of place-making. The principles behind place reclamation and ultimately

redesign is actually rather profound in and of itself at this basic level of

understanding. This project aims to take a parking lot and transform that space into a

dynamic, accessible, and layered intervention of landscape and architectural elements,

to serve as an amenity for the community, in a place that holds historical and cultural

significance

A place that is currently paved with black tar, guarded by barbed wire fences, and remaining exclusively in private ownership devoid of any value to the people of Richmond, or to the owners themselves, other than land speculation and potential profit.

Figure 47 Proposed Site Plan - drawing by author

One can see that in the same amount of space in which an irrelevant eye sore of a parking lot occupies, approximately 4.5 acres (including square footage of Mayo Island west of the public right of way), the city could maintain a facility with extensive indoor and outdoor public event and activity spaces. Since this project began in the Fall of 2015, in the Spring of 2016, a new fence was constructed around

the entire parking perimeter of the site. There has also been a completely new layer of

blacktop rolled onto the site with fresh white paint strips for parking spaces; parking

spaces which no one can park on. It is clear there is no intent to responsibly and

sustainably redevelop this site, which does and does not align with the City's

Waterfront plan design goals.
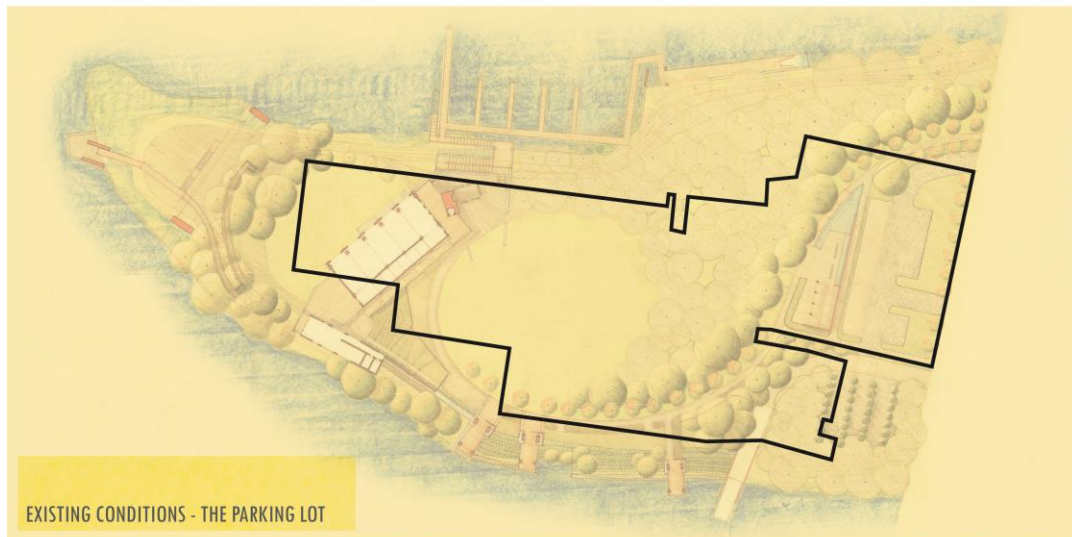
Figure 48 Existing outline of parking lot - drawing by author
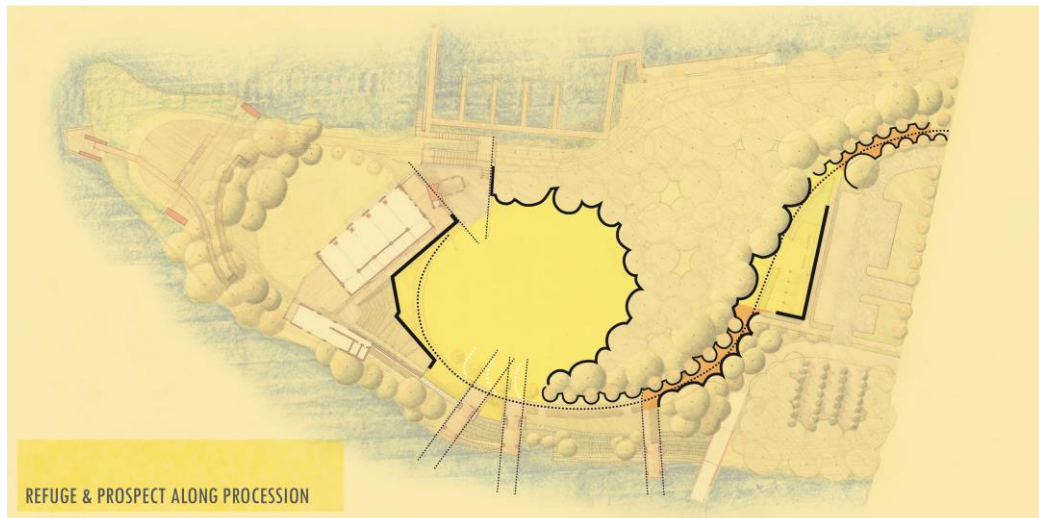
Figure 49 Refuge and Prospect Along Procession - drawing by author
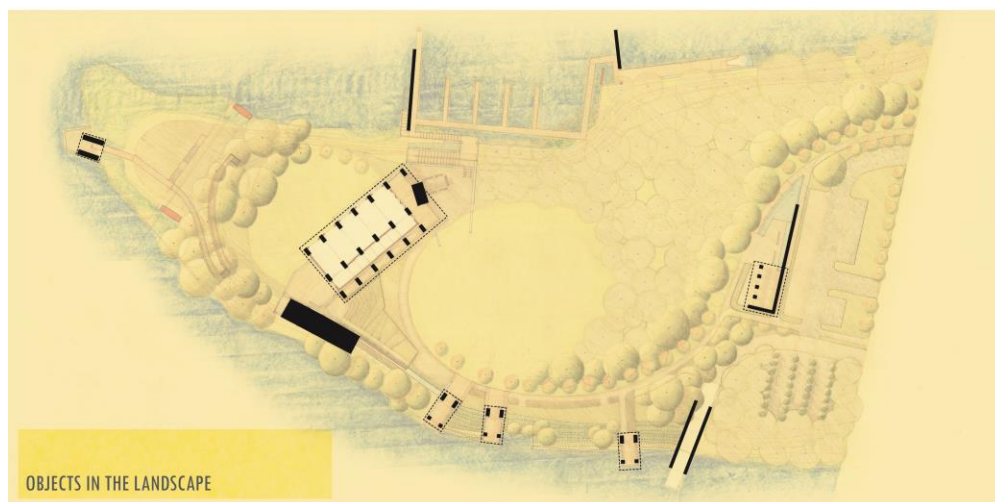
Figure 50 Objects in the Landscape - drawing by author
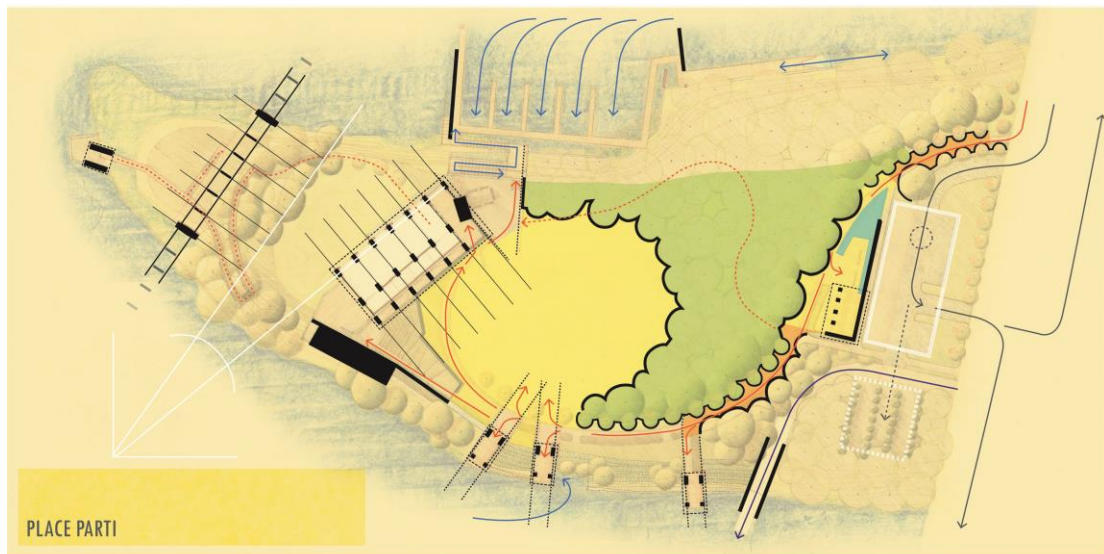
Figure 51 Place Parti - drawing by author

The strategic goal behind this project as a designer, is to keep readily available the toolbox of what one would conventionally consider belonging to a landscape architect, within the realm of architectural design. Landscape elements are the primary drivers behind creating a procession and promenade to the eventual anchor building on the site. These elements, primarily liner trees, help to create a sense of expansion and contraction along a public path, with nodes of occupation along the way. These nodes along the path, are the objects in the landscape, which act as follies set amongst the larger systemic nature of the site metabolism.

Building Placement and the Railroad
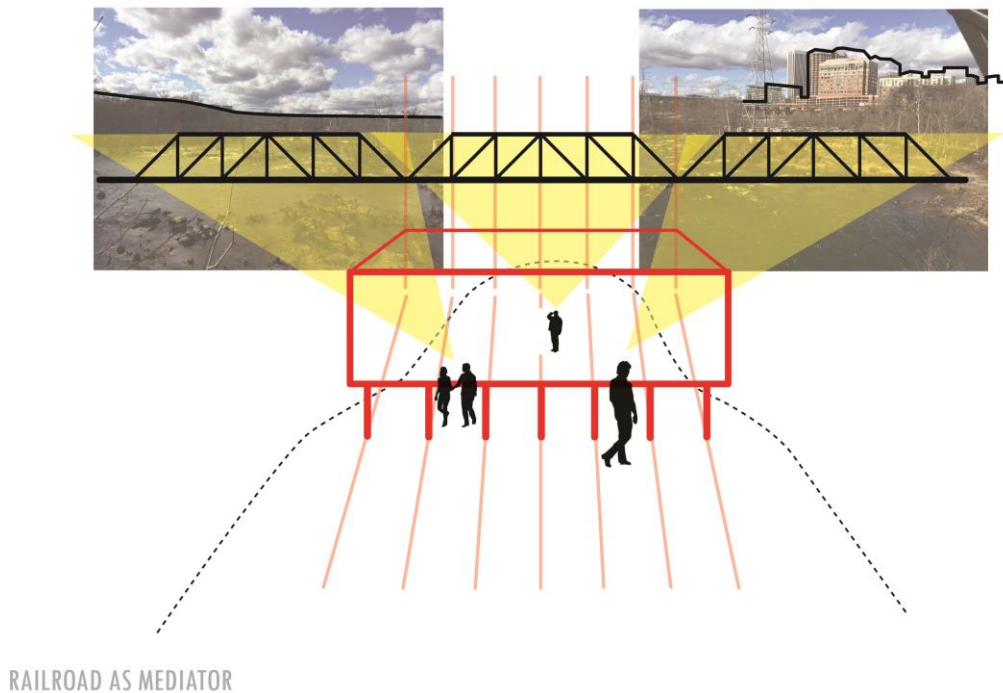
Figure 52 Railroad as mediator - drawing by author

Throughout the process of design, the railroad has become an integral part of

understanding how to place the building on the site. Early in the design process, the

design team engaged in many parti and building placement schemes to coincide with

different ways to experience the site. One scheme placed the building on the north

side of the site, allowing for a much tighter and urbane public promenade that would

project the building back to the city. Another, would position the main architectural

node on the south side of the site, projecting back towards the more natural vistas of

the rapids corridors, and away from the directionality of the city. The third however,

grasped a certain poetic structure which allowed the architecture to become a

mediator between city and the unsettled realm, by positioning itself on the west side

of the site, occupying the space immediately adjacent to the elevated railroad crossing on the site.

LACKAWANNA VALLEY // THE MACHINE IN THE GARDEN

Figure 53 Lackawanna Valley

Machine in the Garden, by Leo Marx, delves into man's supposed relationship with the American ideal of the railroad. The narrative catalogs an experience by Nathaniel Hawthorne in 1844, regarding man's perception at the intersection of the railroad and the natural setting of landscape. Hawthorne, as quoted by Marx, details an account in which a train passes through a forest setting: "But hark! There is the whistle of the locomotive - the long shriek, harsh, above all other harshness, for the space of a mile cannot mollify it into harmony." Hawthorne continues by summarizing the broader context of which the train represents in America at the time, and now: "It tells a story of busy men, citizens, from the hot street, who have come to spend a day in a country village… (who) bring the noisy world into the midst of our

slumbrous peace." But Hawthorne then, so eloquently rationalizes this interruption in his solace, in a stunningly profound manner by exclaiming after the sound has subsided, "as our thoughts repose again, after this interruption, we find ourselves gazing up at the leaves, and comparing their different aspect, the beautiful diversity of green."
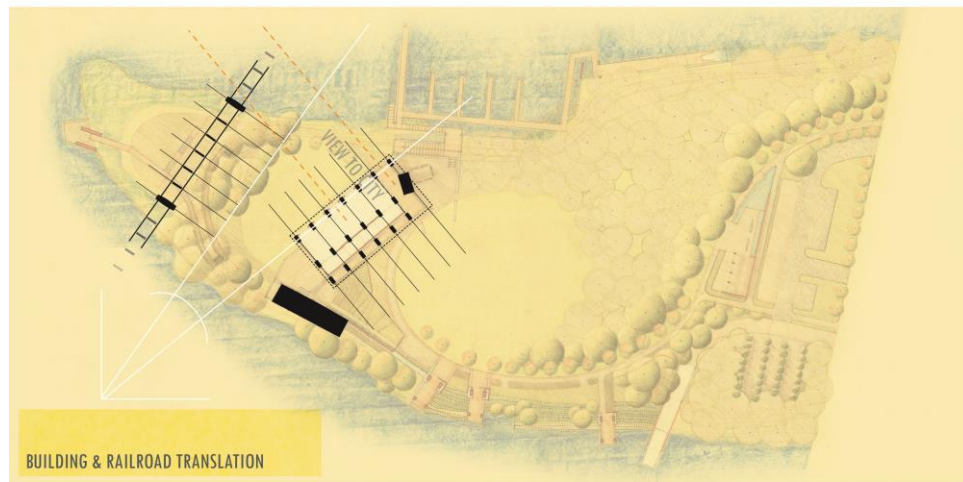
Figure 54 Building Railroad Translation - drawing by author

As Hawthorne asserts, and Marx then explains, the presentation of the train arouses the mind out of a state of simple ponderance of thought in the wild, and into a more complex set of moral and societal conflicts of man and machine. After having a thought of intense complexity, when one returns to a more contemplative state of mind in the landscape setting, their view may be altered or shifted having experienced the other.

The decision then to place the building in close proximity to the railroad is meant to heighten this understanding of the event of the railroad. As the railroad is this American quintessential uniter (or divider) of city, nature, man, and industry, this building can to be a mediator between physical and cultural conditions of Richmond's physical and political boundaries. Later in the explanation of the experiential promenade, the user experience of the railroad will be investigated in further detail.

The Sequential Transect – Procession from the Urbane

Parking – Urban Disassociation

Figure 55 The Sequential Transect - drawing by author

The promenade begins with the assumption that the user is arriving from a transit corridor which is dominated by the vehicle. Whether the user is arriving on foot, by bicycle, by bus, or by car, this access to the site is still one that *could* be done

by car, giving the entry zone its form. This zone is the place of disassociation from the urban realm. Onsite parking (if buildings on the site need parking) is important to take into one's own ownership. It would be very easy to place the parking off site, however making sure the character of the parking is as permeable, well crafted, and the least obtrusive it can be, is only something that can be done in the larger design arc, by the responsible designers The parking garden will be one which includes tree cover, and a direct accessible path which will lead users into the

Figure 56 Zone 1 - drawing by author

Landscape Density – Immersion & Self-Awareness

Following a full transition into bodily dependent movement, and the dissociation of the machine, the body would move through a dense collection of trees and landscape elements; blocking any and all views of the city, not only limiting but

alternating sunlight and wind exposure. Sending one through a dominant landscape

setting will heighten sensations of the natural realm with a noticeable shift in climatic

conditions, allow one to be purposefully disoriented to their greater surroundings,

while becoming more in tune with their immediate surroundings. Certain pockets of

light are to poke through the tree cover, inhabited by low walls, small towers, or

places of stasis amongst a general path of movement.

Figure 57 Zone 2 - drawing by author

Great Lawn – Re-exposure and Gathering

Immersion into a dense setting is then juxtaposed and given purpose upon the

act of emerging into the great lawn. The edge condition of the forest and the lawn,

acts as a place of decision and discovery. A place where one can either rest amongst

the shade of the tree and gaze into the lawn, or walk along for interspersed moments

of sun and shade, triggering climatic variety. The lawn then acts as a the open

mediator between building and forest; the stage setting condition for the objects in the field, ripe for occupation. Exposed to the elements, the lawn is the embodiment of prospect, the host of a beautiful day's activities, and the host of nighttime's moments of gathering. Experientially, the lawn is communal, where the forest is inherently individual and contemplative.
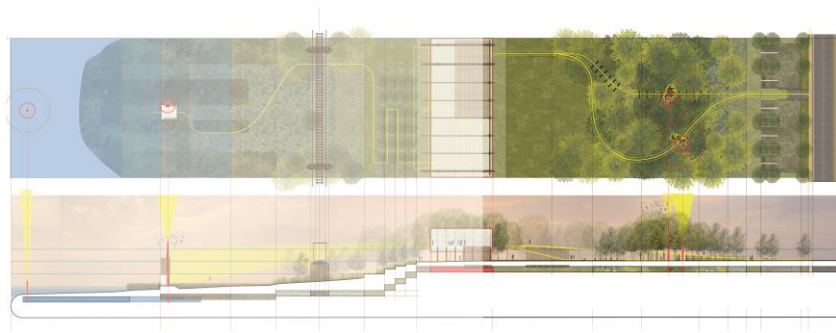
Figure 58 Zone 3 - drawing by author

The Building – Withhold and Reveal

The building is both the object which fronts the expanse of the great lawn, and reveals the remaining expanse of views to the larger context. Before one reaches the building, there is a sense of mystery in what lies beyond, and a immediate tactility to the atmosphere which is rolled out before it. The complexities of what the building wants to be will be further explained in the chapter regarding the building, but contextually, the building is the master of its environ. Perched atop the common plane, the main circulation level is placed on the *piano nobile* in response to the

proximity and potential flood hazard of the river below. One must ascend to the level

of the building to be granted an understanding of what lies beyond, hence giving

meaning to the building as a mediator between all parts of the composition of the

landscape.
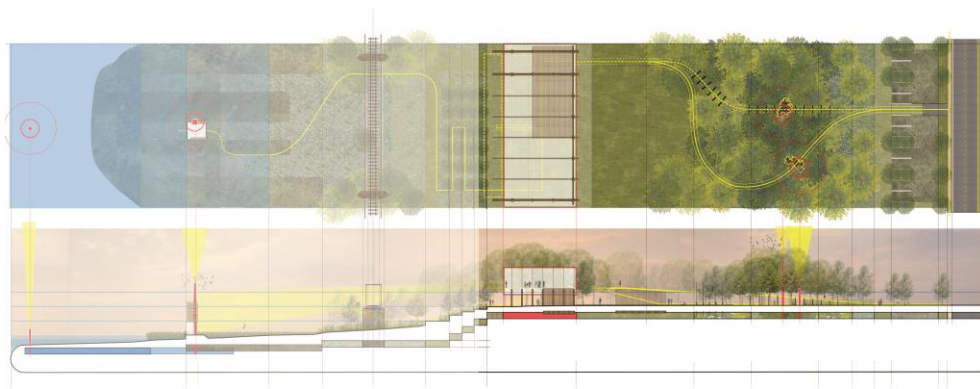
Figure 59 Zone 4 - drawing by author

Stepped Landscape – Constructed Descension

Acting as a sponge to the threat of flood, but also a place making device, the

stepped landscape eases users past the point of occupation to a new experience which

evolves back into landscape driven design. Terracing with interspersed stairs and

path, this part of the overall promenade is not conventionally accessible to all in its

later phases, but tends to adapt a more ephemeral path structure at its base, while

maintaining accessibility in the areas closer to the building. Flood tolerant plants, and

retaining walls with minimal impact and maximum stability should be used to assist

the user in traversing through an infrastructural intervention that straddles the duality

of pragmatism and heightened experience.
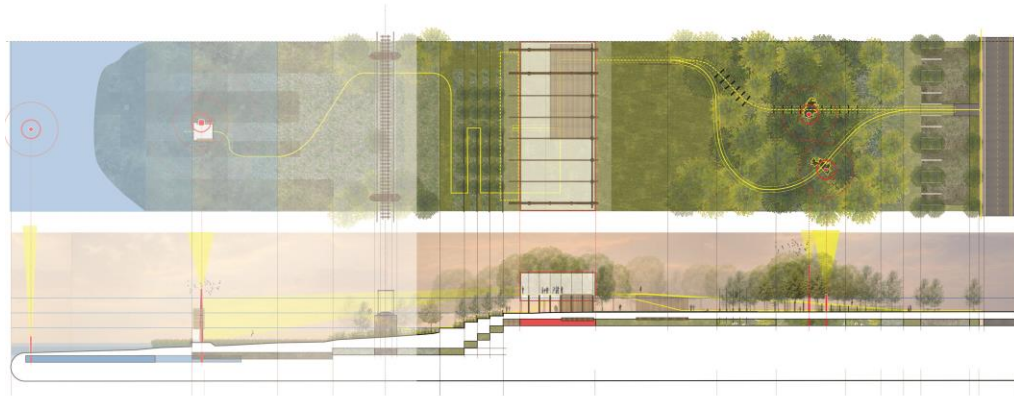
Figure 60 Zone 5 - drawing by author

The Elevated Railroad – Industrial Insertion

In the case of a site with an elevated railroad, the path would expect to both

proceed under the railroad into the lowlands, and also address its sectional quality by

ascending a path up towards the level of the rail. The threshold of the rail line is one

that ends the communal experience from the lawn and building, and disperses the user

into a more unadulterated environment rooted in the ideas of man as a singularity in a

larger system of flows. The rail line is backdrop for viewing from the building

platform, a frame for the landscape beyond, a linear spearhead through the site, and in

turn something to be celebrated and beholded. Once one crosses the railroad, their

perspective of what seemed to be far beyond when the promenade began, now

becomes readily tangible.
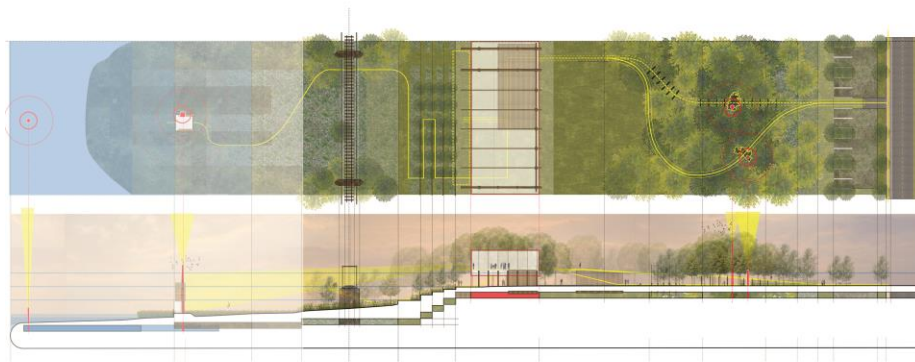
Figure 61 Zone 6 - drawing by author

Lowlands – Point of Contemplation

      The remaining expanse of inhabitable land, most vulnerable to the force of the

river, flattest in nature, and generally most transient in its character is a place for man

to reflect on the promenade just experienced. The point of reflection should be

marked by a tower element, which affords a degree of elevation ascension to allow

the user to see both where the path has come from, and where the larger expanses of

the promenade may lead. Here the experience is one of individual reconciliation with the natural realm, and one governed by the powers of observation.

Figure 62 Zone 7 - drawing by author

Strung together, these nodes of experience do not occupy hard edges, but rather blend into one another with a sense of discernable character which allows them to maintain their own individual meaning to the overall arc of the project. It is important for the user to not only know that each realm of the transformative process is in fact stimulating their conscious psyche with varied stimuli, but also some subconscious underpinning of a collective weave of cohesiveness in their time along the path.

Chapter 8: Discovering Mayo Island: The Perspectival Promenade

Introduction

Figure 63 - drawing by author

Mayo Bridge Approach

The site is approached via Mayo Bridge, primarily from the north side, as Downtown

Richmond occupies the north side of the James River, and Manchester occupies the

south. The approach affords the view of the building, poking out beyond the familiar

line of the tree canopy, and slowly disappears as one moves closer to the site. This is

to give the user an idea of the space which they will ultimately occupy, but then

moving the user into the more immersive beginnings of the promenade. The

projecting westward roofline of the structure gives a sense of directionality and

reference upriver to the landscape which lies beyond. Above the roofline the user can

see the linear element of the fireplace which acts as a spire on the skyline of the island, and marks the point at which the user can hope to reach. From even farther back, even in the windows of the buildings of Richmond, one can imagine the fireplace as a symbol of stability and permanence in an ever evolving river landscape.
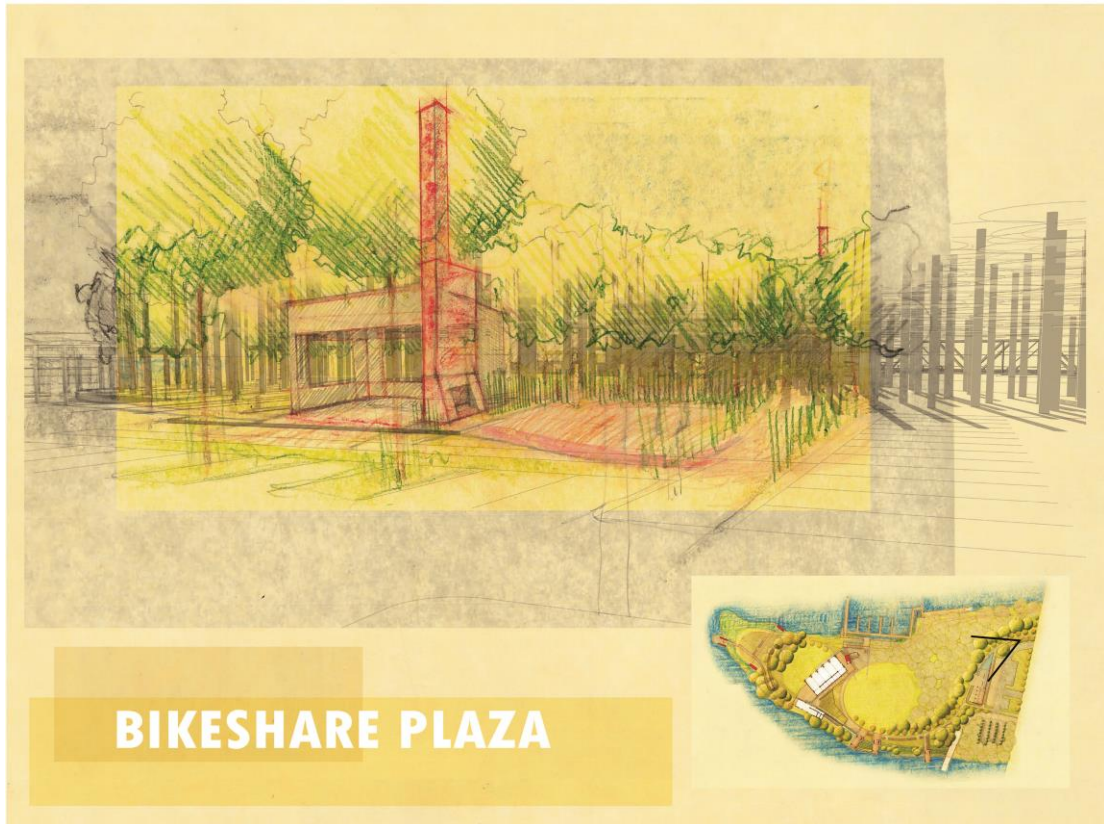
Figure 64 - drawing by author

Bikeshare Plaza Promenade

Conceptually the bikeshare plaza is the true arrival point of the site, allowing for place-making at an introductory level. Creating place for the initial meeting of users of the site, the plaza acts as a complementary area to the dissociative act of removing oneself from the vehicle and the urbane. A receiving element, the plaza is a foreground element to the forest beyond, a suggestive element to frame the path

beyond, and a practical zone which allows one to store a bike, get a drink of water, change clothes, or rest before moving into the rest of the site.

Figure 65 - drawing by author

Bikeshare Plaza Plan

Parking

The Bikeshare plaza in plan view displays the design mentality behind how the site handles the automobile. The bus loop and handicap parking spaces are the only blacktopped part of the site (compared to virtually the entirety of the flat portion of the 4.5 acres of the existing site), due to ease of accessibility for ADA user's, compliance with bus access regulations and maintenance for this part of the site. The row of parking lining the west end of the parking lot will be surfaced with a gravel

composite base product to maintain a permeable surface, which can withstand the steady flow of traffic. The gravel parking provides a transitional row of permeable surface, reinforcing this progression from the street to the bikeshare plaza for those arriving by car. The patch of land located immediately south of the parking lot will operated dually as an event parking overflow lot, and pocket park accessible from the street. At times when an event is being held on the island, this will be able to easily park 20 extra cars.

Boat Launch

A boat launch will be immediately accessible from the road, but also through the parking lot. For users arriving by car towing or toting a small craft, motorized or not, can drive down the ramp to the water surface. The ramp is to be constructed of concrete, with two large retaining walls on either side once the descent into the water begins, sloping 25' to the water.

Path Structure and Bridge

The primary access point of the site for users arriving by bike or by foot is the northernmost path entrance from the sidewalk crossing Mayo Bridge. Trees will be used as liner elements to draw the patrons into the promenade, creating a formal entry experience for a brief moment of compression corridor. After travelling about 100' on a tight gravel path, the user approaches a wooden bridge rising a few feet above a shallow pond of water. The bridge, spanning about 50' is the path threshold which allows the promenade to make its statement of entry. Crossing over water evokes the

metaphor of cleansing, allows for a slight degree of elevation change, and crosses

under the shadow of newly planted (but eventually large growth) trees to the west.

The Plaza

The southwest corner of the site is to have a covered bike share station which is

flanked on the east and south sides by a low wall which extends farther into the

landscape. The water element runs along the base of this low landscape wall, giving

view to two low masonry benches, to provide a discernible origin point for users of

the site to meet. Richmond has recently approved a 20 station bikeshare operation for

200 bikes, according to the Richmond-Times Dispatch, which hopefully can include

the newly touted Mayo Island Station. The Plaza entry is controlled to only occur on

the west side of the site after one exits the bridge or loops around the south end to

insure a certain efficiency and directionality in the approach of the bikeshare docking

station.
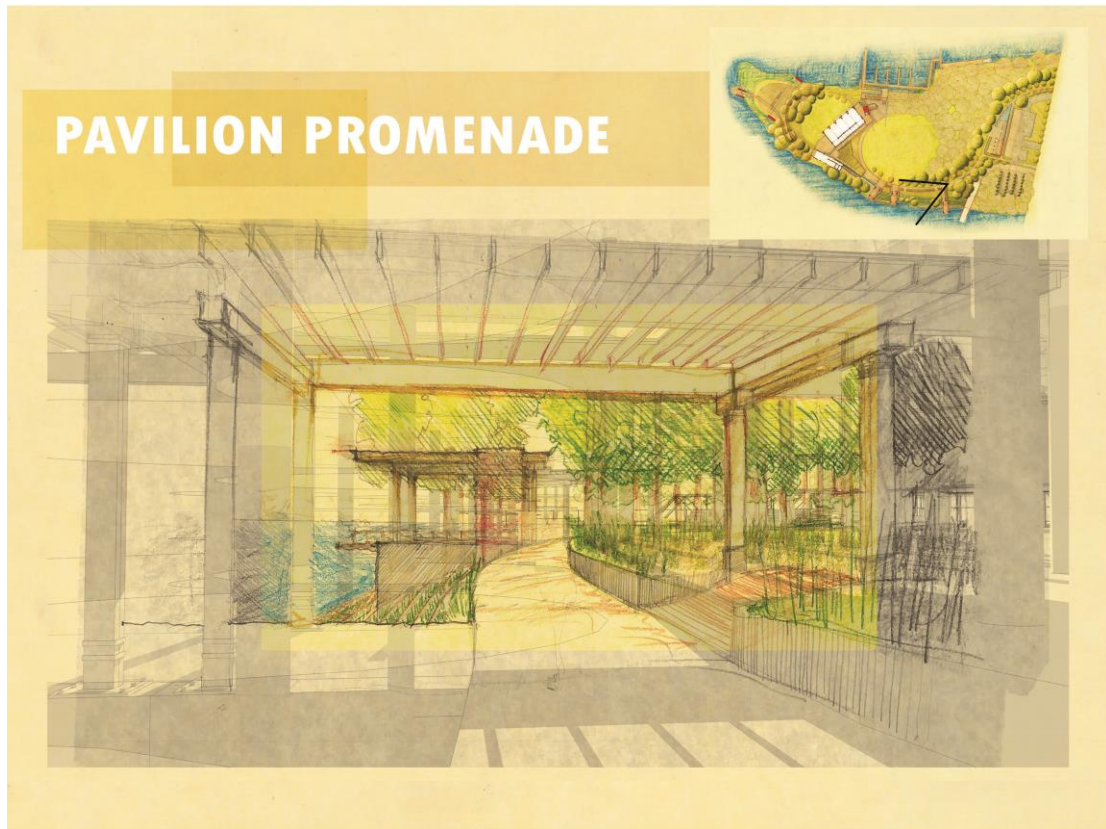
Figure 66 - drawing by author

Pavilion Promenade

As one progresses southwest away from the bikeshare plaza and into the larger sweep

of the path, one begins to encounter 'pearls on a necklace, situated in concert with the

topography of the south slope of the site. To the north side of this site will be a newly

planted tree cluster labeled 'New Wood' and to the south is this series of pavilions

addressing the vistas out toward the water. This section of the plan is meant to be one

driven by experiencing nodes along a path, providing intermittent moments of

progression and stagnation. At any point along the path the user can veer off into the

tree cover to the north into a darker shade; this part of the site will receive south light,

but will also be in close proximity to these shaded areas, and will only be exposed

during the midday hours to sunlight.

Figure 67 - drawing by author

The pavilions lining the promenade are nestled into the side of the slope of the island.

A two part structural approach, the base is tilt up precast concrete which provided a

stable base within the floodplain to a lighter wood column and beam structure

supporting a projecting roof above. The top level of the pavilion with be directly

accessible on grade with the path, having a brick wall give some privacy to the

pavilion if a group was occupying it. The pavilion is 20'x25' in size, and able to

support a party of 25 users for a small event, house a picnic under the shade, support

the station of a vendor for activities on the lawn, or simply act as a viewing platform

for kayakers and boaters finishing their run down the rapids on the south side of the

site. The base will function as kayak and small craft storage in the winter months and

can be accessed by stair from the top of the pavilion. This part of the structure is able to be locked overnight and in the winter months. These landscape pavilions pay close attention to their orientation, in making certain to align perpendicularly to the topography of the site, as one can see in plan. A project which influenced the idea behind these pavilions is the Casa Malaparte in Amalfi. The way the home acts in unison with the landscape rather than defying the topography of the site, gave rise to an architectural thought process that engages the site more directly.

James Pavilions Plan
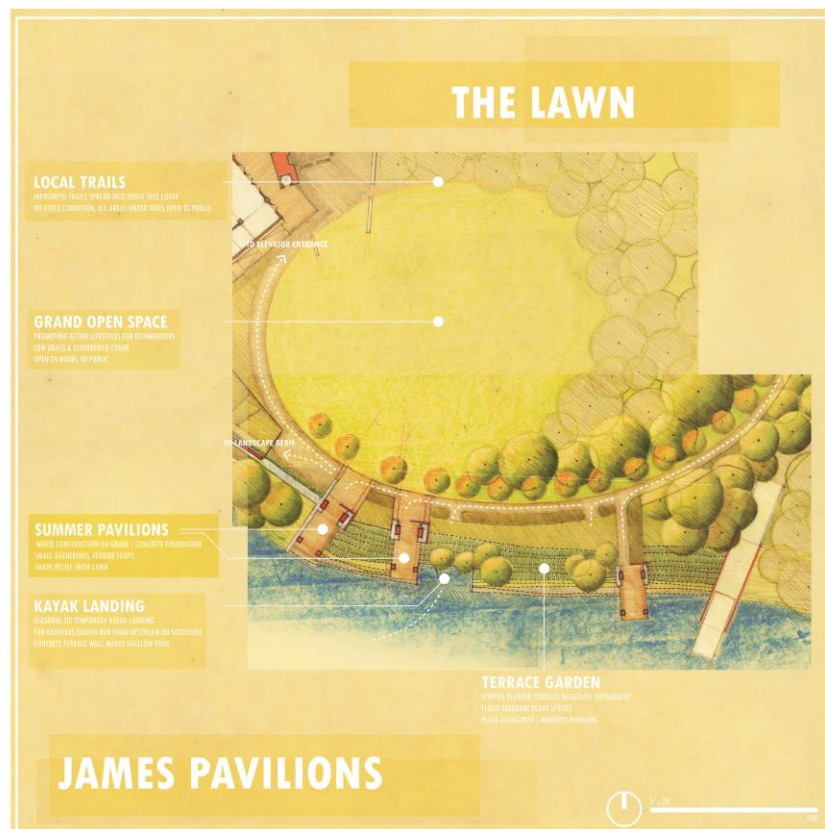
Figure 68 - drawing by author

The pavilions act as the mediators between land and water, and provide the users of the landscape an opportunity to bring the water into primary focus rather than a

91

background element which up to this point has peered around edges in the distance and provided an distant auditory element to the site. The landscape terracing occupying the larger distance between the two middle pavilions is meant to be a place for people to sit and enjoy a more intimate lawn atmosphere which steps down into the water. Liner, seasonal trees line the immediate edge of the path, fronting the larger trees planted behind. As the path progresses ever closer to the buildings, the landscape begins to taper off, to allow walkable causeways into the great lawn.

The Great Lawn is an oval shaped, loosely edged space settling in on about ¾ acre of the site. This programmable outdoor space can house events, play host to any number of outdoor activities, athletic or leisurely in character. Framed by the New Wood to the east, which is part of a larger tree planting initiative to plant 200 new trees on the site, the lawn is a place of communal optimism, a literal new town green for the people of Richmond.

The Great Lawn

The Great Lawn is an oval shaped, loosely edged space settling in on about ¾ acre of the site. This programmable outdoor space can house events, play host to any number of outdoor activities, athletic or leisurely in character. Framed by the New Wood to the east, which is part of a larger tree planting initiative to plant 200 new trees on the site, the lawn is a place of communal optimism, a literal new town green for the people of Richmond.

Landscape Precedent

Early in the design process, the design team engaged in precedent study a bit broader in scale than a standard architectural project. In reference to how one proceeds from a parked condition, through a landscape condition, and out to a strong axial condition framed by architecture, the team studied the Salk Institute by Louis Kahn. In order to understand how a great lawn can house a sequence of arrival while maintaining a dual approach sequence from land and water, the team looked at local Mt. Vernon. In addition, the Palladian Villa Emo was referenced as a precedent in how the building can extend its influence into the landscape with a reach from a central core. One can see in this FIGURE, how early design concepts attempt to latch onto these ideas regarding building and its relation to landscape.
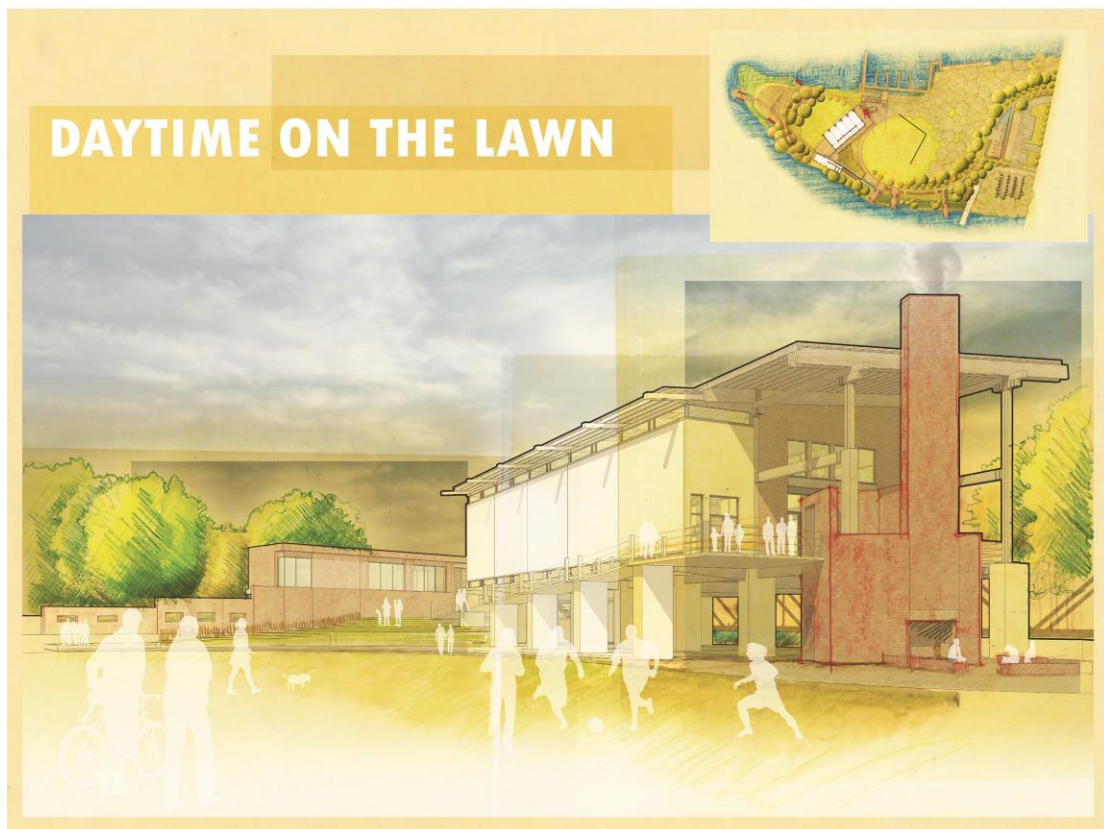
Figure 69 - drawing by author

Daytime Perspective

Daytime on the lawn can be the new place to be on a beautiful spring day in Richmond. Here we start to experience the generally opaque but juxtaposed frontage of the building toward the lawn. The facade,acts as a hard edge to this side of the lawn, countering the loose edge of the forest cover to the east. This edge though, however linear, still is porous enough to allow users to walk under the building

The Fireplace

Daytime on the lawn can be the new place to be on a beautiful spring day in Richmond. Here we start to experience the generally opaque but juxtaposed frontage of the building toward the lawn. The facade,acts as a hard edge to this side of the lawn, countering the loose edge of the forest cover to the east. This edge though, however linear, still is porous enough to allow users to walk under the building

Figure 70 - drawing by author

Nighttime Perspective

The facade will receive film projections from the lawn in the evening hours during warm weather months. The facade is designing to have 2' windows at the top and the bottom to allow ambient light to filter into the gallery on the other side. The gallery, needing no direct light, fits snug in behind this opaque wall, which fits a cinema size 16:9 ratio film projection in the center of the facade for regulation distance viewing from people seated on the lawn.

Chapter 9: Discovering the Architecture

<u>*Approach*</u>

Landscape Berm Approach

The path terminates with an earthen landscape ramp which is the hinge point between the procession into the architecture of the building, from the larger landscape progression. This is the moment when the user takes part in the upward march of the building procession, and fully realizes the elemental breakdown which constitutes the totality of the experience of this project. The building and cafe frame a view to the distance, to the tower, which is just now fully revealed to the user, creating a goal for the ultimate destination for the promenade. A brick wall, which turns into the structure of the cafe, comes down to meet the user, rising with one as one ascends up the low stair of the berm. The circulation path can either take the user straight and up into the cafe on the southside or direct the user to ramp up and along the main facade to the main entry on the north side of the building.

Figure 71 - drawing by author

North Docks

As a note before the program of the building is flushed out, the north docks provide

access on the north side of the site for motorized craft and small craft. Able to house 8

standard motorized fishing or patrol boats, the north docks are the reinvention of the

navigable terminus of the James River. With two breakwaters to quell upstream rapid

flow from the west, the north docks attempt to create a docking point at the farthest

possible west point of the James River. Bringing boat traffic (which can make

clearance under the Mayo Bridge - no sail boats) to the island can replace a stagnating

port at Rockett's Landing about a half mile downstream. Rockett's Landing is the

historic port of the city, but its proximity to the downtown isn't suiting it well for business, and it seems akin to a pariah in the larger system of the Richmond downtown. The docks will be built to take advantage of two major stone retaining walls which characterize the elevation of the north side of Mayo Island. The retaining walls are obviously not entirely structurally sound due to erosion and tree root interference, but they can provide the basis for reconstruction and a backdrop for arrival by boat on the site. A switchback stair leads the users from the docks up 28' to the elevation of the lawn, where they are greeted by the firepit at the base of the building.
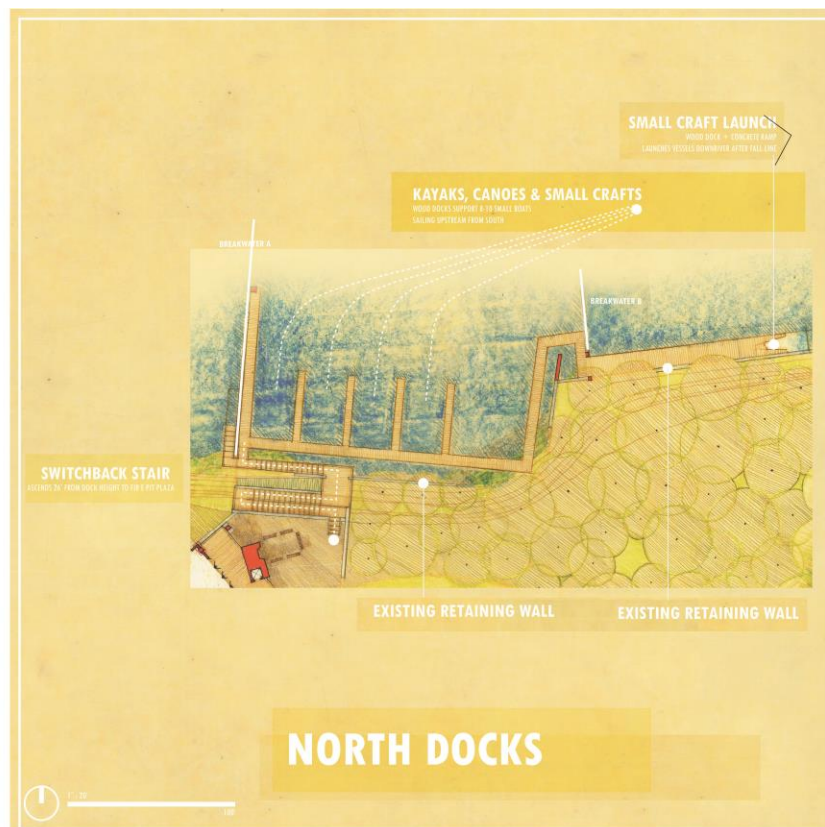

Figure 72 - drawing by author

Building Program + Precedent

Pre Design Program

It should be noted that the program of this project is not only one of building

program. Since the inception of the design process, the main interior programmatic

elements have been revolving around the elements of the great hall and the cafe.

However, the landscape elements are just as programmable. Constructed terraces and

lawns of public and private scale, as well as a switchback to negotiate the terrain of

the site make up the landscape program. Follies in the landscape, one a tower on the

westernmost part of the site, another contemplative in nature, (which has evolved into

the landscape pavilions) and water-based boathouse elements to receive people at the

docks. The program elements are attached by a system of trails, paths, and
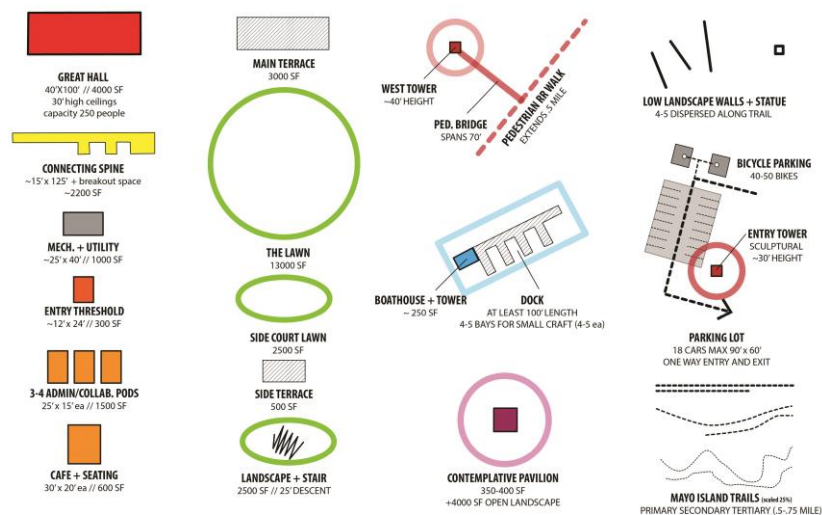
transportation nodes.

Figure 73 - drawing by author

99

The design of the building is very simply divided into two user conditions: the great hall, and the cafe. The Great Hall is a series of 5 20'x30' modules essentially creating a grand meeting hall for the people of Richmond. On the southeast side of the Great Hall is a linear gallery which can be accessed on either side of the space. The use of this space is meant to be one of flexible occupancy, but one always rooted in the spirit of civic gathering. Functions suggested to be housed the great hall include weddings, small concerts, design seminars, banquets, environmental symposiums etc. The Great Hall is truly a civic amenity to the people of Richmond, which would ideally be run by a public/private trust or the city of Richmond itself. Ownership of the project could fall into the hands of a gracious donor, who then would retain rights to the building, as long as it could be rented for an evening to any civic group or city regional organization which is some way contributed back to the city and the people of Richmond. The Gallery would be a continuously operating showcase for the artists of Richmond, or house installations with some relevance to the history of the waterfront or the cultural/social issues which surround it. The Cafe is a piece set aside from the main event hall of the building. An accompanying prep, storage, and restroom facility will make up the remainder of this more functional utility driven sector of the project. As the design currently stands the two halves of the building are not connected via a conditioned hallway space; the building could be presented with a separate option which extends the gallery to the doorway of the cafe to connect a service corridor (or this could occur on the underside of each program element).

Note about users: early in the design process the site was imagined to be a place of

gathering for the environmental grassroots groups which have offices in the

Richmond downtown area - anchored by the Enrichmond foundation. As this could

still be the case for certain events, the design team decided to make the function of

the building an inherently public one, in order to serve the needs of the people of the

city and the region surrounding Richmond as a whole.
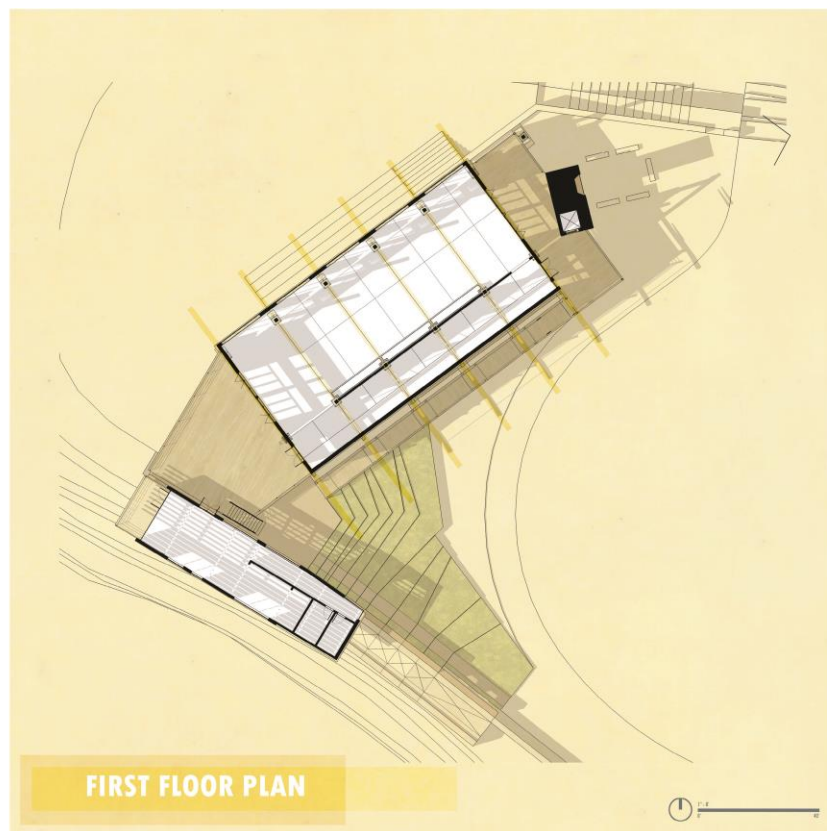
Figure 74 - drawing by author

PROGRAM

Figure 75 - drawing by author

Building Precedent

During the process of design, many precedents of similar scale were referenced in order to gain a better understanding a building with a simple program, a great place for gathering, which opened up to the landscape. Primarily studying work by Bohlin Cywinski Jackson, Cutler Anderson, and Shim Sutcliffe (among others), the scale, function, and architectural atmosphere of these projects compare to the building at hand.
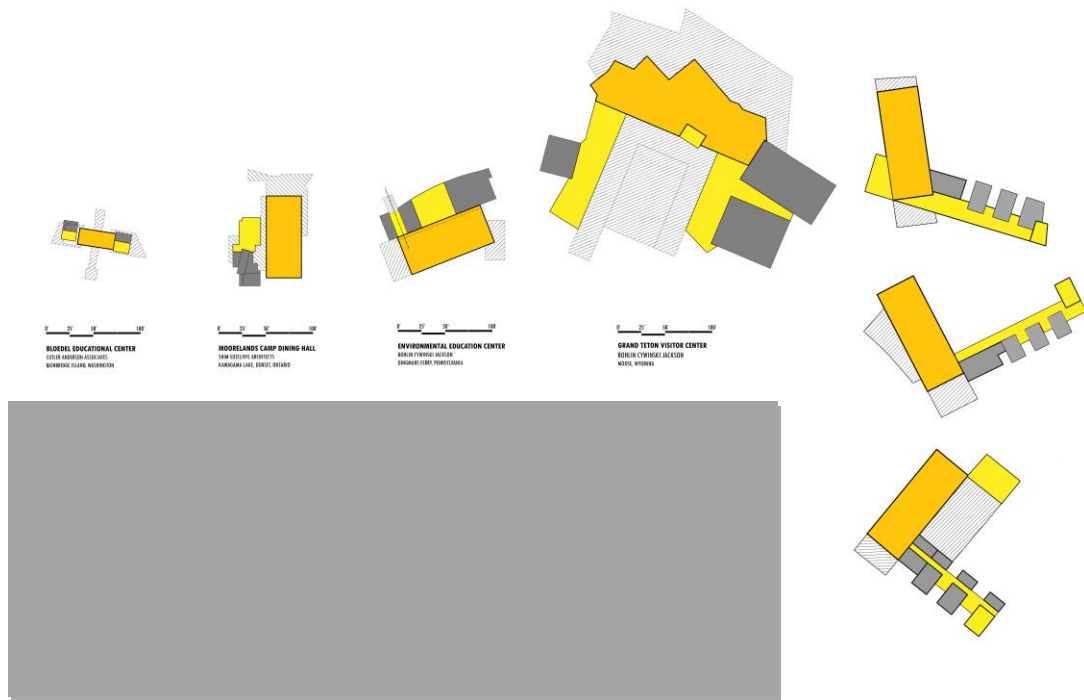
Figure 76 - drawing by author

Exterior Program Elements

The exterior program elements in this project are arguably just as important to the spatial experience of the architecture. Leading up to the hinge of the project, the landscape berm doubles as a vertical circulation element, but also a seated terrace for people to sit, gather, and view back onto the lawn.A deck, on grade with the floor of the great hall and the cafe is accessible by a stair from the top of the berm and fills the gap between the two interior program elements. The Front Porch of the site on the north end of the site, receives users moving up the elevator and the ramp, and provided a roofed platform for viewing back towards the city prior to entering the building.

103

LANDSCAPE ELEMENTS

Figure 77 - drawing by author
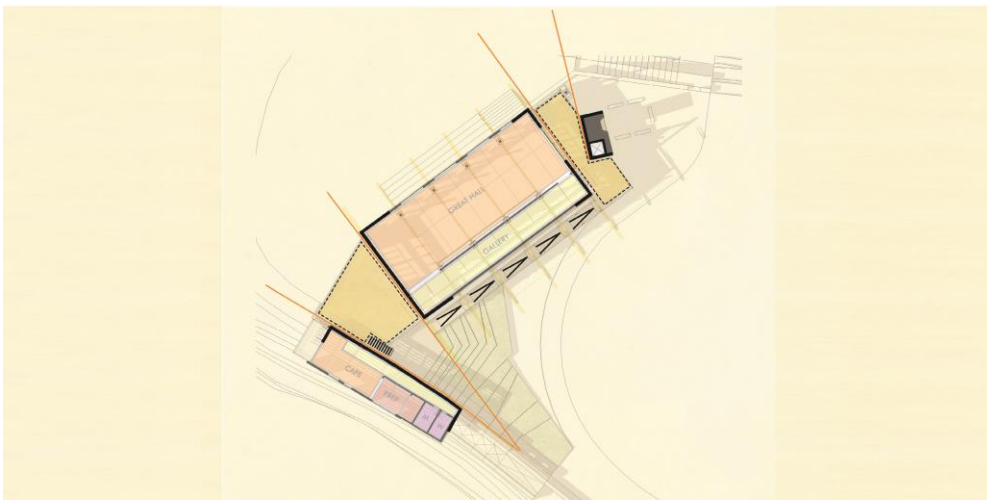
PLATFORMS & VERTICAL CIRCULATION

Figure 78 - drawing by author

Architecture of Flooding

Critical Flood Height

The elevation of most of the island remains consistent on a plateau, raised 30' above the water level of the river. The standard river depth fluctuates around 4'-6' along the edge of the site. Minor flooding will raise the river height around 6'. This is among a typical range for a heavy rain event, causing water velocity to increase and debris to enter the river. Major flooding begins to occur when the river rises 6'-18' feet from an upstream surge. The water begins to be completely murky, moves extremely swiftly over the rapids, large debris is swallowed up by the river, and waterside properties are flooded. At 24'-30' major damage to the surrounding areas are possible, and the Riverwall in Richmond channels the water even more swiftly downriver, away from the city, but straight downstream through the site. At 30', the water eclipses the plateau of the island, and structural damage to Mayo Bridge is possible. The record flood height is 36'; this will happen again, it will happen more severely, and does create a design problem for the site. Being that current 100 year flood projections are not entirely stable with global climate change, the decided 'Critical Design Height' for the project has been deemed 42', to give a 6' buffer zone above the record flood height, equivalent to a one story rise of 12' above the plateau of the island.
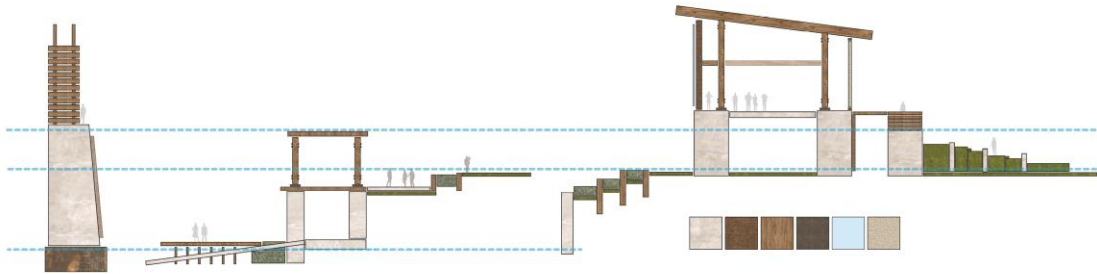
Figure 79 - Material Culture and Flooding - drawing by author
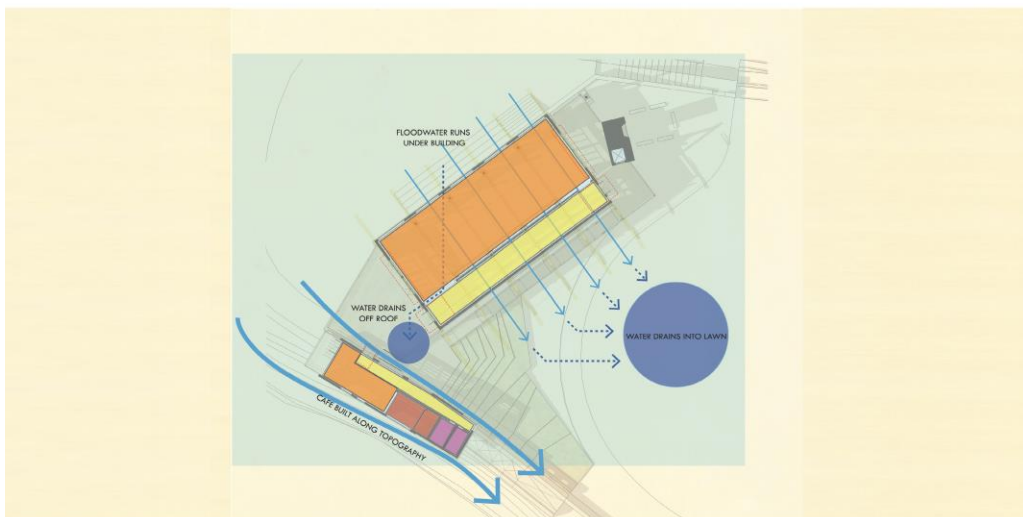
FLOOD CONDITION
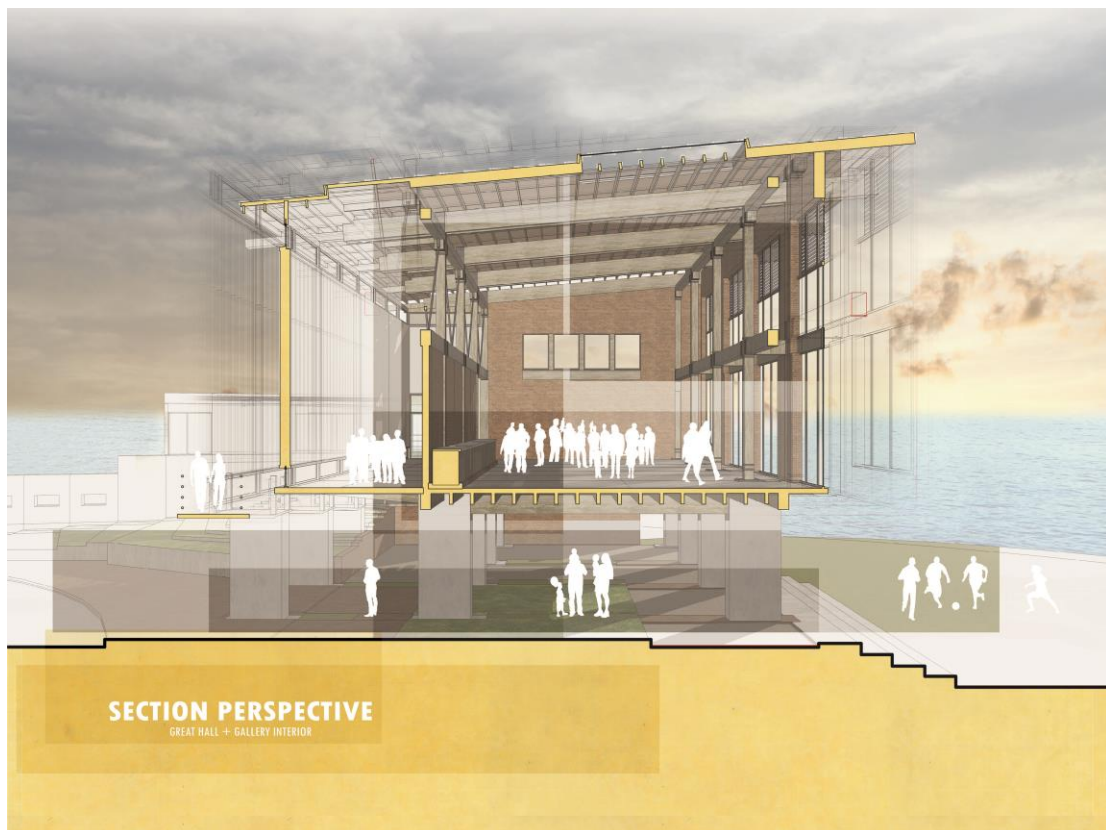
Figure 80 - drawing by author

Building on Piloti

The Building is raised on piloti in order to protect the investment of the conditioned space from flood conditions. The Great Hall is raised on robust concrete columns, acting in a tectonic nature similar to that of the railroad bridge, minimizing surface area facing the upstream water flow and allowing the water to pass underneath in the event of a major flood. The lawn then would act as a sponge device to hold and store water which passes over the site. The cafe, situated along the topography lines, holds the same approach to minimizing upstream surface area, supported by a masonry wall and concrete columns below, and allowing water to pass through. Water can be drained from the roof of the building and stored in a cistern located below the platform adjacent to the landscape berm structure. Water can be collected and redistributed for irrigation in the summer, or if not needed slowly redistributed back into the river at a more natural pace.

Material Culture and Flooding

The three main programmatic architectural interventions on the site, the building, the pavilions, and the tower, are to be constructed with a keen understanding of material culture. The level of the floodplain should dictate what materials are used in the project. The Great Hall is constructed with concrete piers below the floodplain, as previously mentioned, and light frame wood construction above the floodplain. This speaks to a certain degree of architectural truth, in allowing the materials to function

107

in a way that coincides with their natural tendencies. The tower, which will be further

explained in a coming section, is a pure example of this principle. A purposeful

exception to this rule is the construction of the pavilions. Although the system of a

concrete foundational architecture with wood construction above holds true, the wood

is still in the floodplain. This however is okay, being that the investment of the wood

construction will be minimal. If a major food does sweep through the site, the

landscape pavilion is something that the community can rebuild.

Figure 81 - drawing by author

Building Construction and Techniques

The great hall, as mentioned, is raised on 5' wide concrete piers, set every 20' along its base. Dually slatted wood columns, tied with steel ties at the floor and ceiling support a wood beam roof system. A self supported brick facade is offset 4' from the wood columns on the west end of the building, tied together with steel plates. On the interior wall to the east of the building, steel lateral support rods are constructed in a "V" pattern in between each module of the wood column and beam. Locally sourced wood makes up the rafters and the floors of the structure. The facade fronting the lawn to the east has a light construction wood skeleton with a stucco finish on either side fronting the gallery on the interior and the lawn on the exterior. Skylights on the ceiling of the great hall are raised 6" above the roof plane, and waterproofed at the edges. The fireplace is a classic brick constructed hearth, harkening to traditions of Richmond fireplaces dating back to the Civil War era. The brick veneer continues around a concrete elevator shaft to make the appearance of a single masonry structure which encompasses both elements.

Chapter 10: Looking Beyond the Building

Great Hall Interior Perspective

Figure 82 - drawing by author

Once the patron is inside the the great hall, the layers of the natural realm beyond begin to become apparent in the foreground view. Layered in unison are the trees, the event of the passing rail-line, the tower, and the landscape beyond. The great expansive windows facing west, and the 25' ceilings allow for an abundance of light and air flooding into a space of exposed structural character

The part of the plan extending westward beyond the building,"The Point" encompasses the beginning of a more ephemeral trail system that develops organically with the topographic condition of the site. Departing from a more private northwest lawn on grade with the great lawn, this is not an ADA compliant trail, but rather a departure into the more 'wild' part of the river. There will be an alternating series of gravel paths with wooden stairs to traverse steeper elevation changes where needed. The path continues into the lowland part of the site, runs under the elevated train, and out into more of a dock like condition when approaching the tower. The tower is situated on an existing low foundational wall, which was probably part of an original retaining wall structure for early infrastructure on the river.

Figure 83 - drawing by author

Notes on Railwalk and Expansion

A design idea which hasn't moved beyond a conceptual agenda is that of attaching a railwalk to the elevated railway line. A railway stair, ascending up from the path in the lowlands could bring the users of the site back up to the level of the plateau of Mayo Island. The railwalk could attach itself to the structural members of the steel bridge module and allow users to walk alongside the path of the active train line in a secure manner. If this project can be the center for new dispersal and inhabitation of the James River archipelago, this could allow for new towers to arise on other islands in the area, connected by the railway walk. Originally the intent of the project experimented with the idea of building a trail system on multiple islands, however the scope of this thesis lends itself solely to design investigations of Mayo Island due to the immediate need to address the misuse of the site.

The Tower

Looming large at the westernmost tip of the site, the tower is a nod to industrial culture and history in the city of Richmond. A vertical railroad module construction method, creates a hybrid form of steel set into a concrete base rather than on top of it. The massive concrete plinth recalls the function of a bridge pier, and the steel module, even accompanied by the tracks and railroad ties as vertical facade elements, makes an unmistakable landmark 85' in height which can be seen from any discernable point on the waterfront. This element too will be a marker of flood heights, as it will be protruding out of the water regardless of any flood event. The

two levels of inhabitation are only accessible by ladder, making this pinnacle

experience a more extreme and active experience.
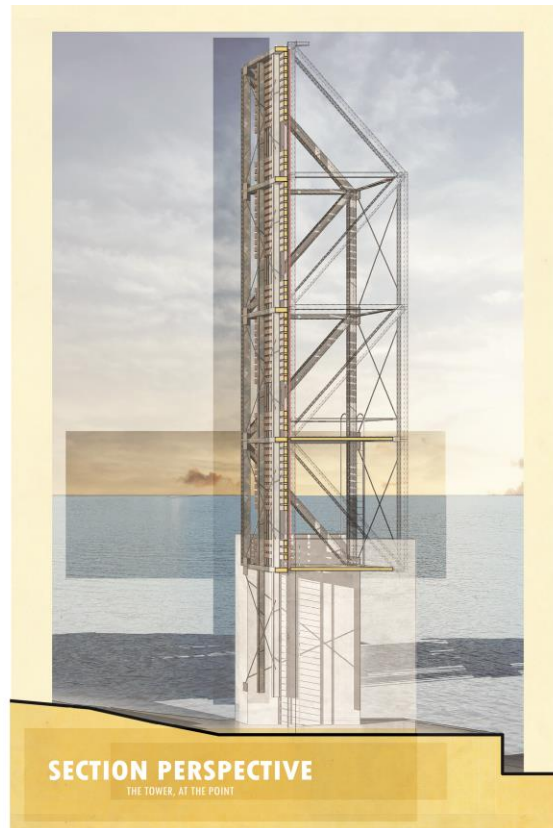
Figure 84 - drawing by author

View From the Point

When one reaches the top of the tower, one can view back and understanding the

totality and procession of the site as a whole. All of the elements which the user has

experienced along the way, are now back in view for a moment of contemplation and

reflection. Providing a context for reflection brings about a sense of self awareness,

but also a sense of prospect to what is beyond the site. One is able to look back on

where one came from, and also realizes the possibility of where one may go next.

113

Figure 85 - drawing by author

Bibliography

Chapter 1 References

Alexander, Christopher, Sara Ishikawa, and Murray Silverstein. 1977. *A pattern language : Towns, buildings, construction*. Center for environmental structure series ; v. 2; center for environmental structure series ; v. 2. New York : Oxford University Press,.

Bachelard, Gaston, M. Jolas, and John R. Stilgoe. 1994. *The poetics of space*. 1994 edition. ed. Boston, Massachusetts : Beacon Press,.

Harries, Karsten. 1997. *The ethical function of architecture*. Cambridge, Mass. : MIT Press,.

Heschong, Lisa. 1979. *Thermal delight in architecture*. Cambridge, Mass. : MIT Press,.

Jackson, John Brinckerhoff. 1984. *Discovering the vernacular landscape*. New Haven : Yale University Press,.

Koolhaas, Rem. 1978. *Delirious new york : A retroactive manifesto for manhattan*. New York : Oxford University Press,.

McHarg, Ian L., and American Museum of Natural History. 1969. *Design with nature*. [1st ed.]. ed. Garden City, N.Y.,: Published for the American Museum of Natural History [by] the Natural History Press

Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture*. AD primers; AD primers. Chichester : John Wiley & Sons Inc.

———. 2010. *The thinking hand : Existential and embodied wisdom in architecture*. AD primers; AD primers. Chichester, U.K. : Wiley,

———. 2005. *The eyes of the skin : Architecture and the senses*. Chichester :; Hoboken, NJ : Wiley-Academy ;; John Wiley & Sons

Tanizaki, Jun'ichirō. 1977. *In praise of shadows*. New Haven, Conn. : Leete's Island Books,

Weisman, Alan. 2007. *The world without us*. New York : Thomas Dunne Books/St. Martin's Press,.

Chapter 2 References

Deans, Bob. 2007. *The River Where America Began : A Journey along the James.*Lanham:
    Rowman & Littlefield.

Duke, Maurice., and Daniel P. Jordan. 1983. *A Richmond Reader, 1733-1983.* Chapel Hill:
    University of North Carolina Press.

Jacobs, Allan B. 1993. *Great Streets.*Cambridge, Mass.: MIT Press

Mordecai, Samuel. 1946. *Richmond in By-Gone Days.* Republished from the 2d ed. of 1860.
    Richmond: Dietz Press.

Niles, Blair., Edward Shenton, and Fitzgerald Rivers of America Collection (Library of
    Congress). 1945. *The James : From Iron Gate to the Sea.* The rivers of America; Rivers
    of America. New York: Farrar & Rinehart

Potterfield, T. Tyler. 2009. *Nonesuch Place : A History of the Richmond Landscape.*Charleston, SC: History Press.

Stanard, Mary Newton. 1923. *Richmond : Its People and Its Story.*Philadelphia: J.B.
    Lippincott Co..

Ward, Harry M., Harold E. Greer, and Richmond Independence Bicentennial
    Commission. 1977. *Richmond during the Revolution, 1775-83.*Charlottesville:
    Published for the Richmond Independence Bicentennial Commission by the
    University Press of Virginia.

Ward, Harry M., and Milton J. Elliott. 1985. *Richmond : An Illustrated History.*
    Northridge, Calif.: Windsor Publications.

Web:

Rocketts Landing - Luxurious Waterfront Living in Richmond, Virginia - Rocketts
Landing. *Richmond Area History - Rocketts Landing.* Retrieved from
http://rockettsvillage.com/about-rocketts-landing/history

History is Fun, Jamestown Settlement, Yorktown Victory Center, history museums,
America's beginnings. Retrieved from
http://www.historyisfun.org/visitus/documents/LivingwiththeIndians.pdf

Richmond Planning and Development Review Online
http://www.richmondgov.com/planninganddevelopmentreview/documents/masterplan
/02Background.pdf

Chapter 3 References

Duke, Maurice., and Daniel P. Jordan. 1983. *A Richmond Reader, 1733-1983.* Chapel Hill:
  University of North Carolina Press.

Kahn, Louis I., and Robert C. Twombly. 2003. *Louis Kahn : Essential Texts.* New York: W.W.
  Norton.

Pallasmaa, Juhani. 2011. *The embodied image : Imagination and imagery in architecture.* AD primers; AD primers. Chichester : John Wiley & Sons Inc

Chapter 4 References

Kahn, Louis I., and Robert C. Twombly. 2003. *Louis Kahn : Essential Texts.* New York: W.W.
  Norton.

Tschumi, Bernard. 2012. *Architecture Concepts : Red Is Not a Color.*New York: Rizzoli.

MacKay-Lyons, Brian., Peter. Buchanan, and Ghost (Symposium). 2008. *Ghost : Building an*
  Architectural Vision. New York: Princeton Architectural Press.

Confluence Project Journey Book http://journeybook.confluenceproject.org/

Weiss Manfredi http://www.weissmanfredi.com/

Maya Lin Studios http://www.mayalin.com/