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In Defense of a “Third Place”

How Reassembling the Boundaries of an Urban
Military Installation can Maintain Security while
Uniting the Community



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In Defense of a “Third Place”

How Reassembling the Boundaries of an Urban Military
Installation can Maintain Security while Uniting the Community

Peter James Deluliis, RA, NCARB, LEED AP

Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of:

Master of Science
in
Architecture - Urban Design Concentration

Susan Piedmont Palladino, Chair
Paul Kelsch
David Lever
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In Defense of a “Third Place”

How Reassembling the Boundaries of an Urban Military Installation can Maintain Security while Uniting the Community

Peter James Deluliis, RA, NCARB, LEED AP

Abstract

“Regardless of the differences among their citizens, cities always define their community as against the outside world; a settlement with internal defense walls cannot be called a true community.” Community Design & Culture of Cities, by Eduardo Lozano pg 5

Throughout the history of human civilization, no manmade structure has been used to defend territory more than the Wall. Walls have been used to delineate the edges of empires, separate communities, limit migration and provide protection from enemies. As a result, the Wall has become synonymous with imperialism, segregation, racism and isolationism. But what about instances when security outweighs all other concerns? Is there a way to use the wall to maintain defensible space without negatively impacting the greater community?

In the case of a military installation located in an urban environment, this is a real issue. Walls which protect the sensitive content within, also serve to divide the community. These necessary physical barriers have the incidental consequence of segregating the servicemembers and government civilians within from the community which they serve.

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“The physical characteristics of walls are not decisive as to their meaning. Rather, the key question is: who is on which side of the wall? Does the wall perpetuate power, or defend against it? Does it reinforce domination, or shield vulnerability? Does it strengthen hierarchical relationships among people, or does it pave the way towards greater equality?... One wall defends survival, the other protects privilege.”

Ellin, *Architecture of Fear* (109)

In Defense of a “Third Place”

How Reassembling the Boundaries of an Urban Military Installation can Maintain Security while Uniting the Community

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General Audience Abstract

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Finally, thanks to the United States Navy, in particular the Civil Engineers Corps, for offering me such a great opportunity as this. The Navy took a blue collar kid from Brockton, Massachusetts and helped him see the world and become an Architect. I consider myself blessed to serve in uniform.

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Separation barriers cannot mask the underlying motivation behind them. When the barrier is born of negative intent (fear, imprisonment, segregation or inequality) the barrier will almost assuredly be divisive.

INTRODUCTION

Barriers. Boundaries. Walls. For the past few years we haven't been able to turn on the television, read the newspaper, or participate in any popular culture without being bombarded by these terms. And almost invariably they've been used negatively. As a career Naval officer (and also an architect) it occurred to me that even the most ardent opponents of barriers must agree that at times barriers are necessary. In fact, at times barriers are desirable. For example, in the case of a police department or a military installation most people can agree that the need for security outweighs the need for access. This was the genesis for my thesis.

I've spent many years working on military installations. Some of these were large installations in rural areas. Some were small installations in more urban areas. One thing that's always struck me is the division between those inside the installation and those outside the installation. Take any military installation for example. Because there are classified spaces and materials located within, and because that installation serves the greater good of the surrounding community, it's understood that the installation should be kept separate from the surrounding community. This is usually done with walls or in some instances geographic features (such as large swathes of desert or mountains). It has always struck me as curious that the individuals in the surrounding community have such infrequent interaction with the individuals within the installation. Sure, there are some individuals in the surrounding community who have family that work on the installation or may even work in the installation themselves, but for the most part what we find is two separate communities; the community which exists inside the installation walls and the community which exists outside. This has always struck me as such a missed opportunity. Why can't there be a zone of interaction along the boundaries of these installations which encourages cross pollination between the community and the military members within? I believe that through research into historical precedent, and application of thoughtful design, this can be accomplished.

SITE SECURITY DESIGN

My first step in this process was to better understand the historical use of walls and barriers. It was important for me to get a better grasp of the advent of walls, and to look for examples where vertical barriers were viewed favorably throughout history. One of the recurring themes in my research was that walls and vertical barriers take on the persona of the intent in which they are placed. Put another way, the wall is the embodiment, or manifestation, of some intention either positive or negative. When a wall is constructed out of fear or some other negative emotion it embodies that negativity and is perceived as a negative element.

Conversely when a wall is constructed for positive reasons, such as to equally delineate property lines with no intention of taking advantage of those on either side, its use can be understood and appreciated. This is evident in much of what is going on at the Mexican-American border today in the year 2019. Numerous design proposals have been put forth which tastefully address the issue of separation without embodying the fear and inequity which is so commonly found in our chain-link and barbed wire solutions(see images below). All walls do not have to be seen as negative. There are ways to reassemble those vertical elements so that the wall does not appear aggressive or foreboding but instead serves the purpose of providing the necessary separation or delineation.

These are the things that I looked at in my research. How can the components of the wall be reassembled so that security can be maintained without sacrificing that relationship between the two sides? A myriad of strategies began to take shape. For example removing barbed wire or aggressive structures from the barrier, slanting the walls so that they become a more gentle slope, introducing other types of barriers such as water or raised curbs, these are all ways to provide that barrier without creating a frightening or offensive structure. In my research I looked at numerous design proposals that addressed security while at the same time remaining accessible at least visually to the users in the vicinity. Beautiful water features or landscaping features are able to provide that physical separation without imposing some type of malicious intent on the users. It was these types of solutions that I really wanted to incorporate into my project and I felt that looking at the vertical barrier in a different way was going to be the key to success for my thesis.

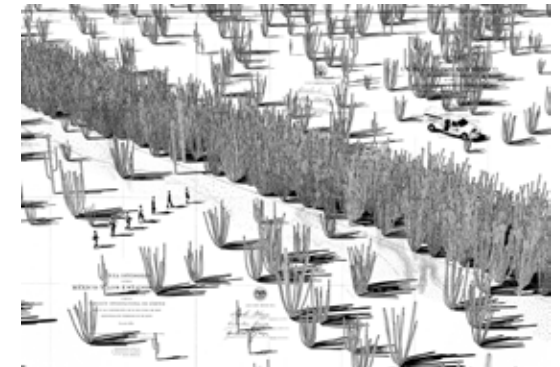
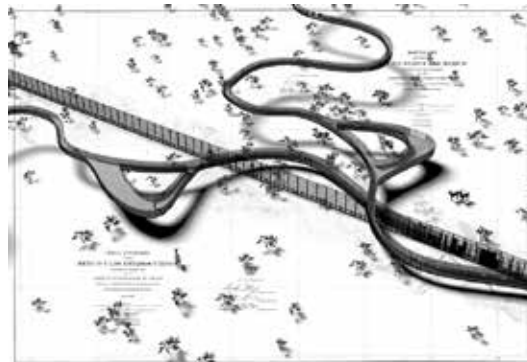
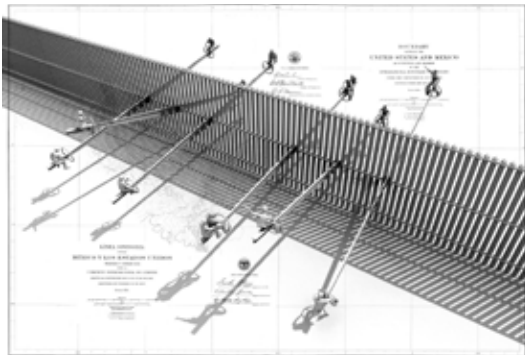


Diagram 2.1: Site Security Zones

This diagram shows a general representation of the six security zones superimposed on a hypothetical site. The dimensions and area of each zone and arrangement of elements vary per project, based on site conditions and project scope.

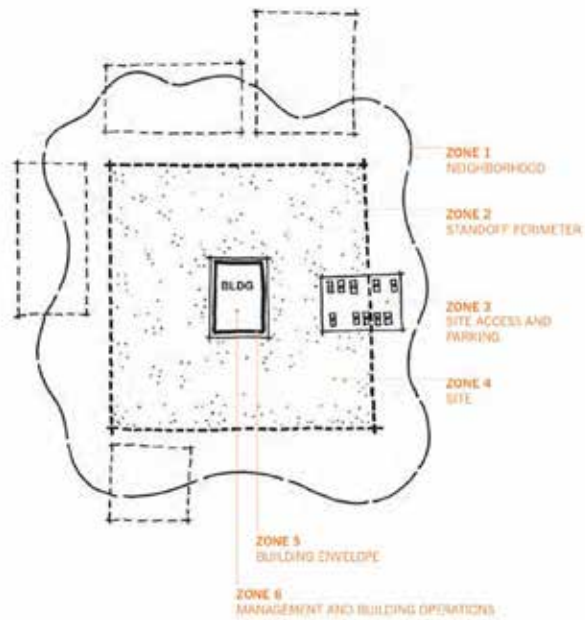
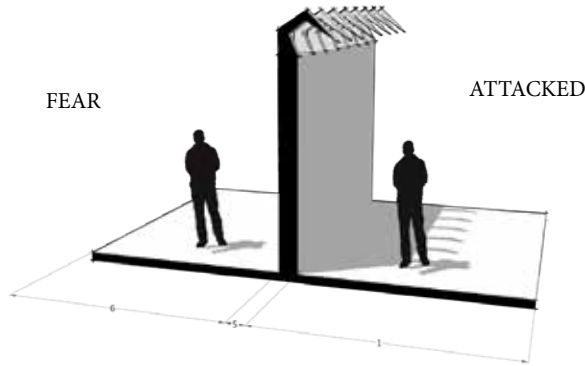


Image from GSA Site Security Design Guide

“Federal buildings must connect with their communities in an open and accessible way.”

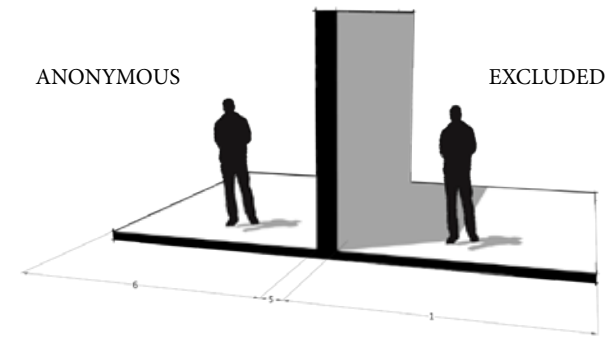
GSA, *Site Security Design Guide* (23)

AGGRESSIVE



UTILITARIAN DEFENSE WALLS CONVEY FEAR AND AGGRESSION.

CLAUSTROPHOBIC



SLIGHT INTERVENTIONS CAN MAKE WALL LESS AGGRESSIVE BUT STILL ACCOMPLISH LITTLE TO RELATE TO THE COMMUNITY

“Working quickly, they pulled out rolls of barbed wire and, within a few hours, had established a barrier clean across the center of the city. Guards were posted every few yards, as necessary, and, within a matter of hours, Berlin was cut in two. The Berlin Wall had come into being....Its construction was an admission of defeat by the communist leadership. Once built, it was doomed, sooner or later, to come down.”
National Archives, *A City Torn Apart* (20)

<https://www.zonawire.in/concertina-coll.html>



<http://www.spokesman.com/stories/2019/feb/06/nogales-arizonas-officials-want-razor-wire-removed/>



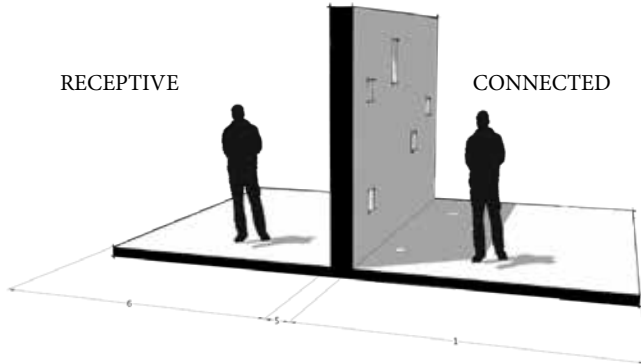
<https://news.usc.edu/71860/remembering-the-night-the-berlin-wall-went-up-and-when-it-came-down/>



<http://aparticlewave.blogspot.com/2010/11/wall-as-architecture-of-absence.html>

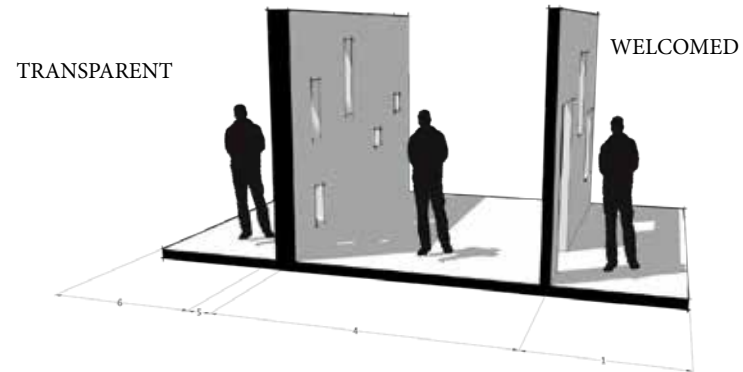


VISUALLY PERMEABLE



PUNCTURES IN THE WALL PROVIDE VISUAL ACCESS WHICH BEGINS TO DEVELOP A RELATIONSHIP BETWEEN THOSE INSIDE AND OUTSIDE.

PHYSICALLY ACCESSIBLE



WALLS WHICH ENCLOSE ACCESSIBLE SPACE ARE PERCEIVED DIFFERENTLY THAN WALLS WHICH SOLELY SEPARATE. THE USER SHIFTS FOCUS FROM EXCLUSION TO EXPLORATION; THE CREATION OF A "THIRD PLACE."

“For walls produce and reflect fear as well as security. Anyone who has visited a concentration camp knows of the feelings that their first glimpse inspires in a visitor; it challenges the imagination to reproduce the feelings such walls inspire for the inmates. Prison walls and jail cell walls are no different...Such walls reflect rather than inspire, fear, but they are walls created by fear nonetheless.”

Ellin, *Architecture of Fear* (102)

<https://www.prodema.com/en/>

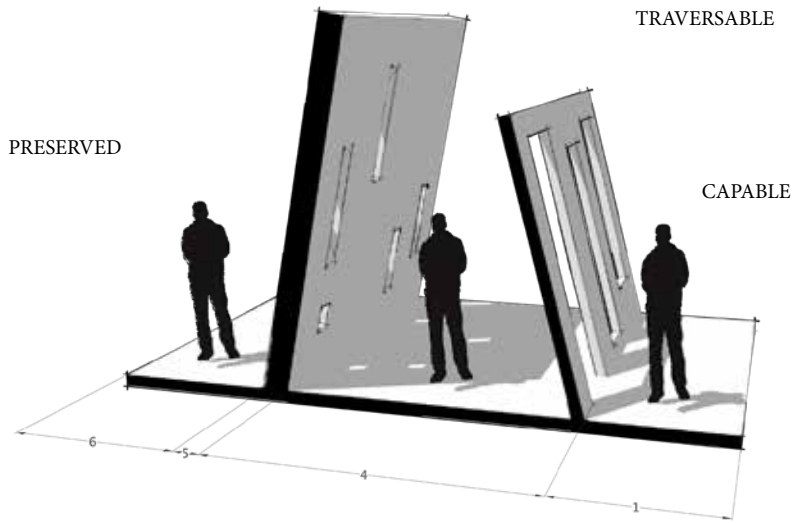


<https://www.flickr.com/photos/trevorpat/33959572762>

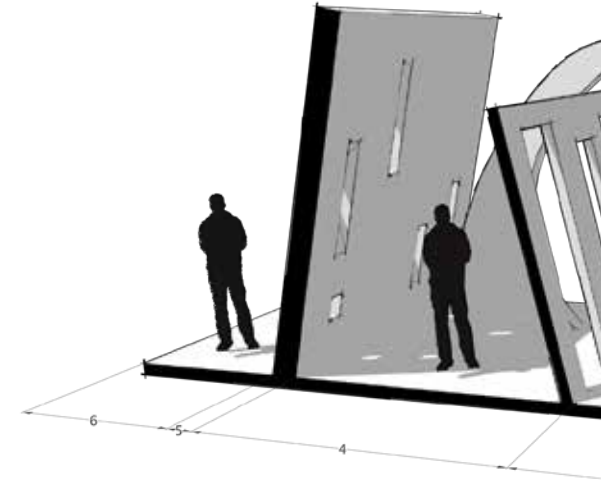


<https://www.architecturalrecord.com/articles/13002-domaines-ott-winery-by-carl-fredrik-svenstedt-architect?view=preview>





SLOPING WALLS ADD A LEVEL OF VISUAL INTEREST AND APPEAR MORE INVITING THAN PURELY VERTICAL WALLS. HUMANS UNDERSTAND GRAVITY AND GENTLER SLOPES ARE MORE EASILY OVERCOME.



WATER ACTS AS A SECURITY FEATURE WHILE ELEMENTS WHICH CONNECT THE INTERIOR TO THE EXTERIOR VISUALLY OR PHYSICALLY, PIQUE CURIOSITY.

“There is good reason to believe that the wall can serve as a linear urban corridor through border cities that it divides.”
 Rael, *Borderwall as Architecture* (43)



<https://www.trendir.com/twisted-reflective-house-with-angled-walls-and-ceilings/>



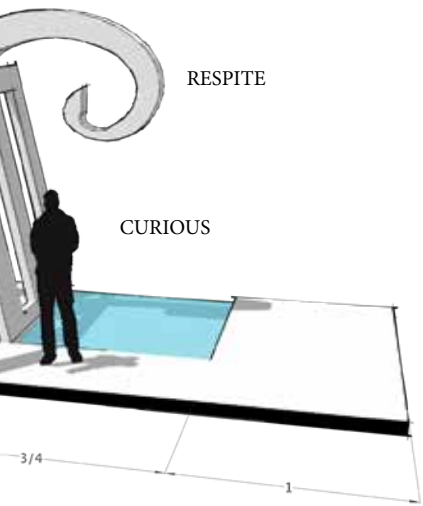
<https://www.wam.com/en-ca/design-and-plan/architects/2017/bascom-international-centre-for-care-art/>



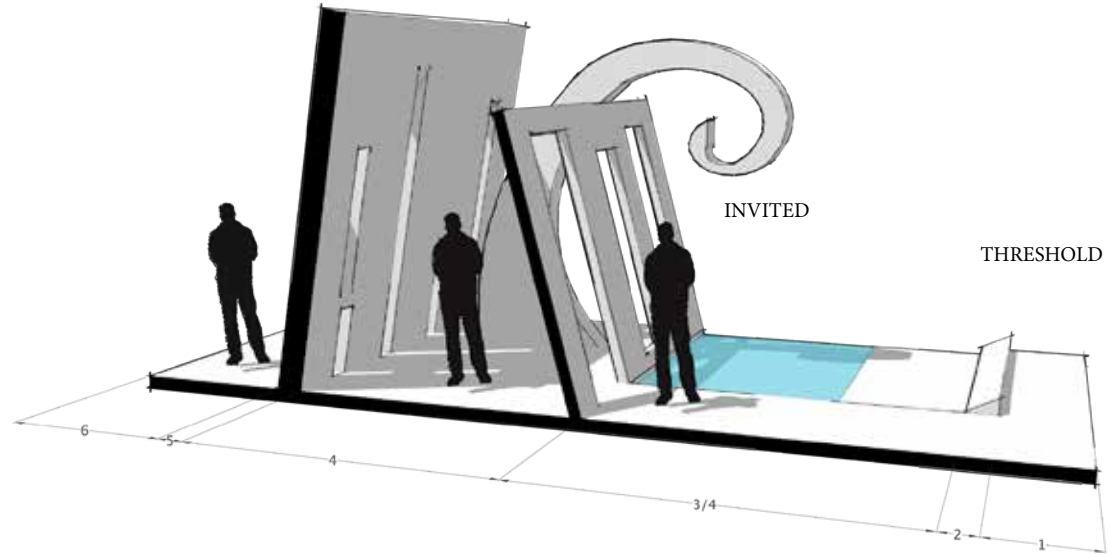
<https://uk.usembassy.gov/our-relationship/policy-history/new-embassy/photos/>



<https://uk.usembassy.gov/new-embassy/benefits/>



ALSO ATTRACTING VISITORS.
SPACE TO THE EXTERIOR, EL-
OSITY.



ELEVATION CHANGES FURTHER EXTEND SITE WHILE MAINTAINING SECURITY.
INTRODUCTION OF NEW MATERIALS HELP DELINEATE EXTENTS OF SITE AND
DEFINE THE STANDOFF PERIMETER.

“A moat translates a river or island into a man-made defense. A wall duplicates high ground. Water and high ground, in natural and artificial versions, were combined in a thousand and one forms to protect settlements.”
Lozano, *Community Design & Culture of Cities* (216)



<http://www.artnews.com/2018/09/21/emily-and-mitchell-rado-glenstone-expansion/>



<https://www.bigstockphoto.com/image-19030112/stock-photos-quiet-backstreet-in-strasbourg2C-france-with-flowering-purple-wisteria-overhanging-an-old-wall-with-a-rustic-wooden-bench-on-the-road-in-the-shade-of-a-tree-with-fresh-green-spring-foliage>



<https://calgaryherald.com/news/local-news/calgary-parks-to-get-75m-in-new-funding>

SITE SELECTION

One of the first steps for me was to find a site where I could put my research into action. I knew that I needed to find a military installation which had a good number of people who worked or lived there and was accessible to the general public in terms of public transportation or walking paths, etc. There also needs to be enough activity in the surrounding community to fully support my proposed design. I began by creating a list of all the military installations within the Washington, DC metropolitan area. This was the quantitative piece of my site selection process. I created a matrix where I was able to score each one of these installations based on a series of metrics which I assigned. For example, the population of the installation, the historical significance of the installation, the proximity to public transit, and the level of activity in the surrounding community to name a few.

SITE SELECTION PHASE 1 (QUANTITATIVE)

	A	B	C	D	E	F	G	H	I	J	V
1			SELECTION CRITERIA								
2			BASE POPULATION	SCORE	HISTORICAL SIGNIFICANCE	SCORE	PROXIMITY TO URBAN AREA SCORE	PROXIMITY TO PUBLIC TRANSIT SCORE	NEIGHBORHOOD WALKABILITY SCORE	NEIGHBORHOOD GROWTH SCORE	
3											
4			HIGHER POPULATION BASES WILL INCREASE THE POTENTIAL POOL OF USERS AND THE LIKELIHOOD OF INTERACTION BETWEEN EMPLOYEES AND COMMUNITY		AGE OF BASE INCREASES LIKELIHOOD OF HISTORICAL VALUE TO DOD AS WELL AS SYMBOLIC VALUE TO THE SURROUNDING COMMUNITY		BASES WHICH ARE CLOSER TO POPULATED URBAN AREAS WILL PROVIDE MORE OPPORTUNITY FOR USE AND INTERACTION	BASES WHICH ARE CLOSER TO PUBLIC TRANSIT ACCESS WILL PROVIDE EASIER OPPORTUNITY FOR USE AND INTERACTION	BASES WHICH ARE LOCATED IN WALKABLE AREAS WILL PROVIDE EASIER OPPORTUNITY FOR USE AND INTERACTION	RAPIDLY GROWING SURROUNDING AREAS PROVIDE POTENTIAL EXPOSURE TO LARGER/MORE DIVERSE POOL OF USERS	HIGH INCREASE DESIGN
5			WEIGHTING OF CATEGORY	1	1		3	2	2	1	
6			INSTALLATION								
7											
8			A JOINT BASE ANACACOSTIA BOLLING	12023	2	1918	1	2	2	1	2
9			B JOINT BASE ANDREWS	20818	3	1945	1	1	1	1	1
10			C JOINT BASE MYER HENDERSON HALL	10924	2	1861	2	2	2	2	2
11			D FORT MCNAIR	1000	1	1791	3	3	2	3	3
12			E WALTER REED MEDICAL CENTER	13514	2	1909	2	1	3	2	1
13			F FORT BELVOIR	28122	3	1917	1	1	1	1	1
14			G MARINE BARRACKS 8TH & I	1100	1	1801	3	3	3	3	3
15			H US NAVAL ACADEMY	5443	1	1845	2	2	1	2	2
16			I NSWC CARDEROCK	3200	1	1987	1	1	1	1	1
17			J WASHINGTON NAVY YARD	21744	3	1799	3	3	3	3	3
18											
19			SCORING CATEGORIES: HIGH(3), MEDIUM(2), LOW(1)								
20											
21											

Age of the installation was particularly important as the military cherishes its older facilities helping to ensure me that these bases will remain in use for quite some time. This data began to give me an idea as to which installations may work best for my thesis. In the end I was able to narrow my choices down to three historically significant and strategically located installations in Washington, DC. Those were Fort McNair in Southwestern Washington, DC, and Marine Barracks Washington and the Washington Navy yard, both located in Southeastern Washington, DC. Each of these three installations provided exceptional opportunities for my thesis due to their age, use, and location.

K	L	M	N
VISIBILITY SCORE	TOTAL (HIGHER BETTER)	OVERALL RANKING	
1			
1	18	7	
1	13	8	
2	22	4	
2	28	3	
3	21	5	
1	13	9	
3	31	2	
3	20	6	
1	11	10	
3	33	1	

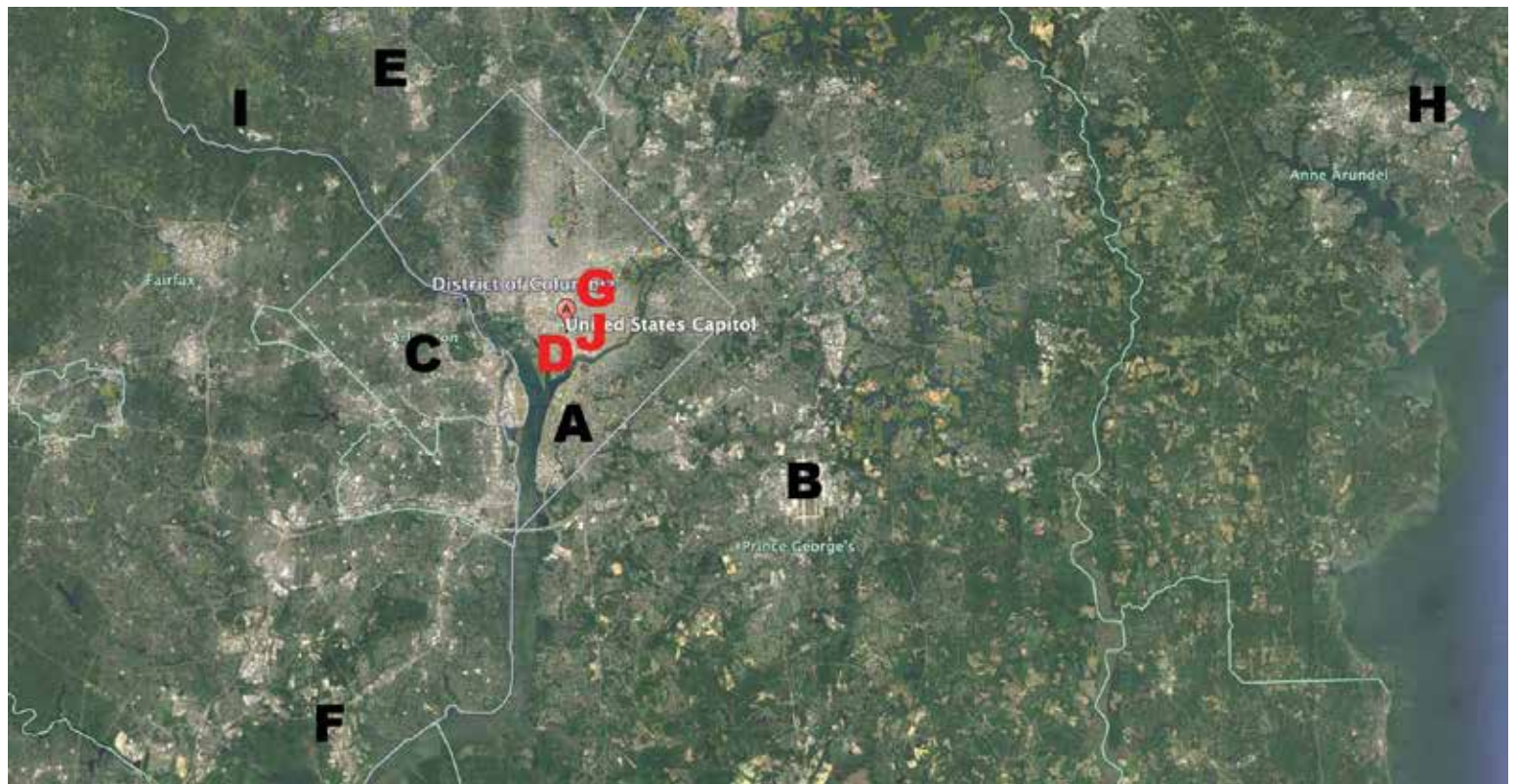
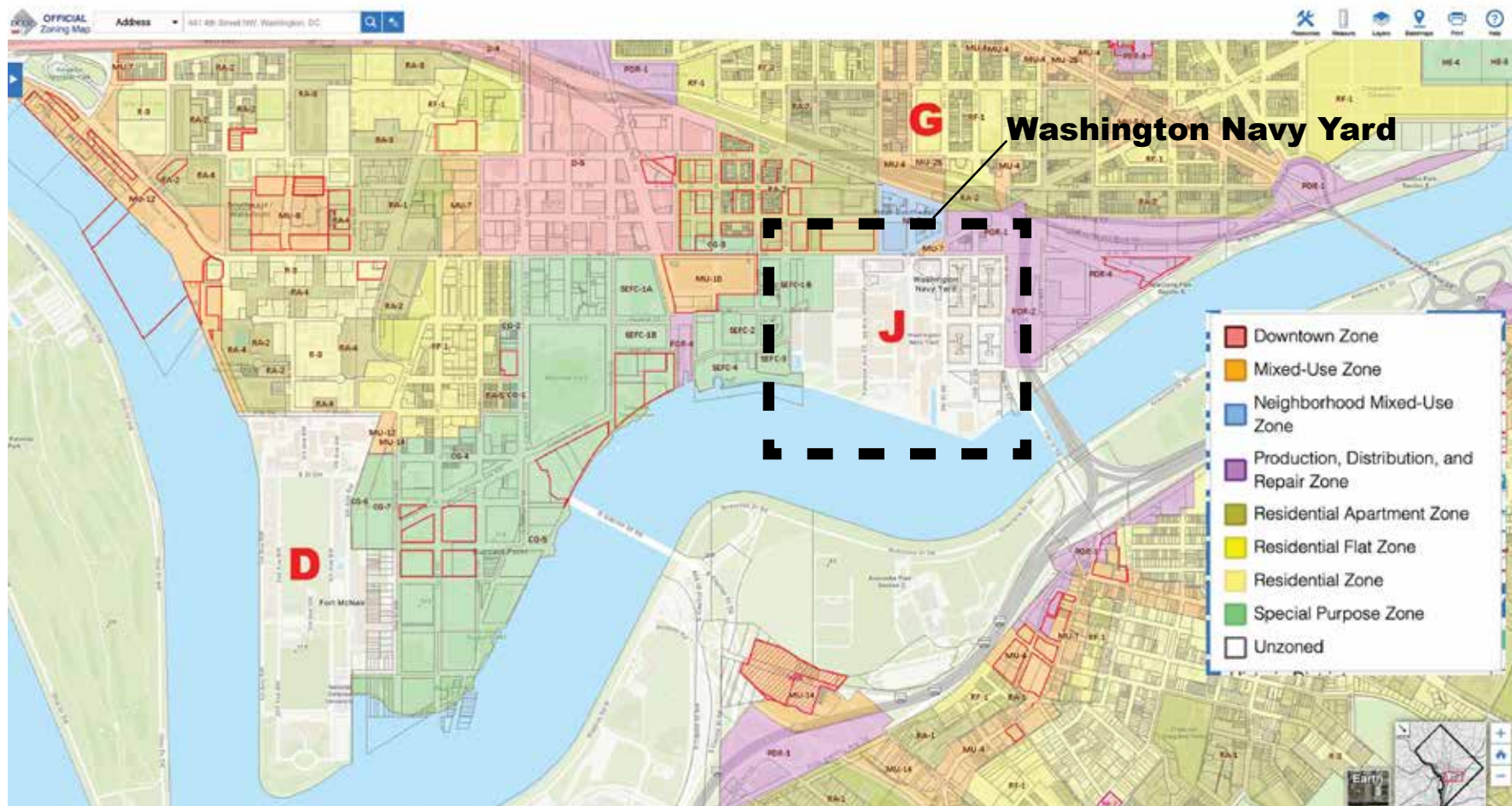


Image from Google Earth

Once I had narrowed my list down to these three installations it was time for me to look at the finer details of each. I personally visited each installation, walked around the community, and familiarized myself with the boundary separating the installation from the community. I consider this the qualitative portion of my site selection process. A recurring theme during each of my visits to these installations was that they were historic with brick walls and wrought iron gates and located in mixed-use neighborhoods.

While Fort McNair and the Marine Barracks were both excellent possibilities for my thesis, the Washington Navy Yard proved to be the optimal site for a few reasons. First off, unlike the others the Navy Yard was centrally located between two metro stops; the Navy Yard stop and the Eastern Market stop. It was also located on a popular thoroughfare (M Street) providing numerous opportunities for individuals to get to the site. Both Fort McNair and the Marine Barracks were only within walking distance of one Metro stop.

SITE SELECTION PHASE 2 (QUALITATIVE)



In addition the Navy Yard happens to be directly adjacent to the bustling Southeast Federal Center-Navy Yard Development Area which is exploding in Southeast DC right now. In fact a visit to this area during any day of the week will fully demonstrate how busy it is. The Southeast Federal Center development is comprised of multiple sports venues and mixed-use retail and residential and is proving to be quite the attraction for the city. On the other side of the Washington Navy Yard there are plans to construct a park along the 11th Street Bridge which is intended to provide a much-needed connection from Southeast DC to the Anacostia region. In effect, the Navy Yard is sandwiched between two areas with the potential to have numerous users and bustling activity. Perhaps the best part of the Navy Yard site is that its entire southern edge runs along the Anacostia River. This area belongs to the Navy Yard and is kept open for traffic twenty-four hours a day, only closed when the Navy deems it necessary. My research found that the Riverwalk had much potential which has been unrealized up until now.

SITE D - FORT MCNAIR

- BORDERED BY SPECIAL PURPOSE ZONE AND RESIDENTIAL
- SMALL STREETS, QUIANT NEIGHBORHOOD FEEL
- CLOSEST METRO STOP IS WATERFRONT
- QUIET, LITTLE PEDESTRIAN TRAFFIC IN DIRECT VICINITY
- LOW DENSITY AREA



SITE G - MARINE BARRACKS 8TH & I

- BORDERED PRIMARILY BY RESIDENTIAL WITH SOME MIXED-USE
- SMALL STREETS, QUIANT NEIGHBORHOOD FEEL
- CLOSEST METRO STOP IS EASTERN MARKET
- LIGHT PEDESTRIAN TRAFFIC ALONG 8TH ST, HEAVIER DURING EVENINGS AND WEEKENDS
- LOW DENSITY AREA

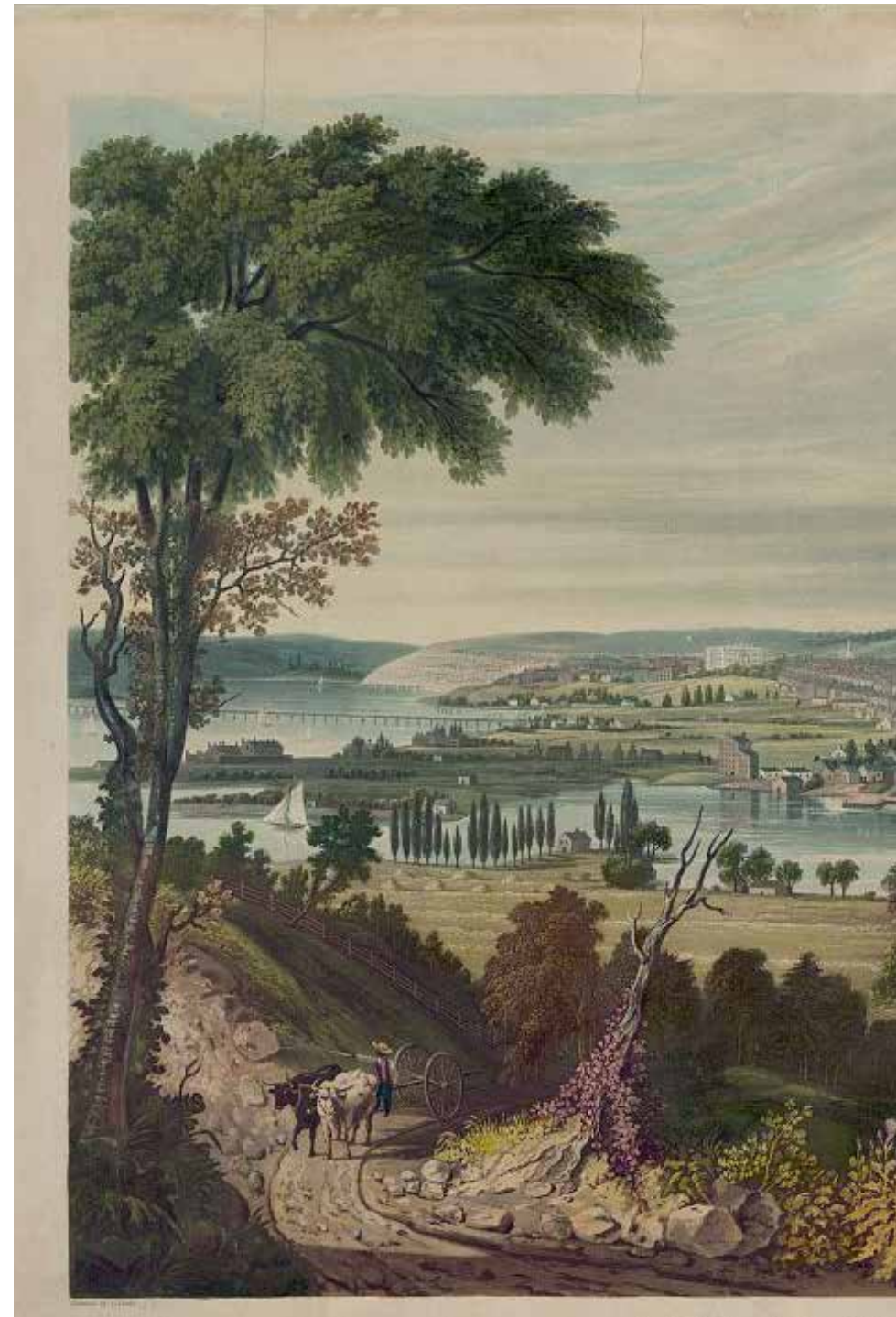
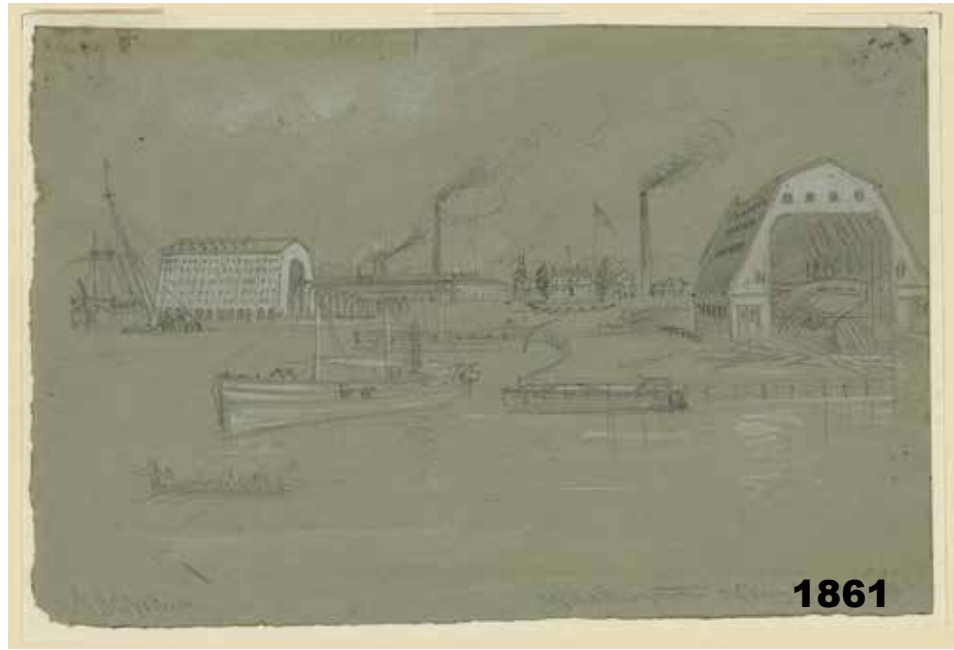


SITE J - WASHINGTON NAVY YARD

- BORDERED BY SPECIAL PURPOSE ZONE, RESIDENTIAL, NEIGHBORHOOD MIXED USE AND INDUSTRIAL ZONE
- LOCATED ALONG M STREET, 6 LANE BLVD
- CLOSEST METRO STOP IS NAVY YARD BUT EASTERN MARKET IS ALSO CLOSE
- CONSIDERABLE NEW DEVELOPMENT ADJACENT (SOUTHEAST FEDERAL CENTER - THE YARDS, 11TH ST. BRIDGE)
- HEAVY PEDESTRIAN TRAFFIC
- MEDIUM-HIGH DENSITY AREA



HISTORIC WASHINGTON NAVY YARD



CONTOUR MAP



Image from <https://opendata.dc.gov>

FLOOD MAP



Image from <http://dcfloodrisk.org>

“The Washington Navy Yard was the most recognizable symbol of the United States Navy in the nation’s capital.”
Marolda, *The Washington Navy Yard* (xi)

EXISTING NAVY YARD WATERFRONT

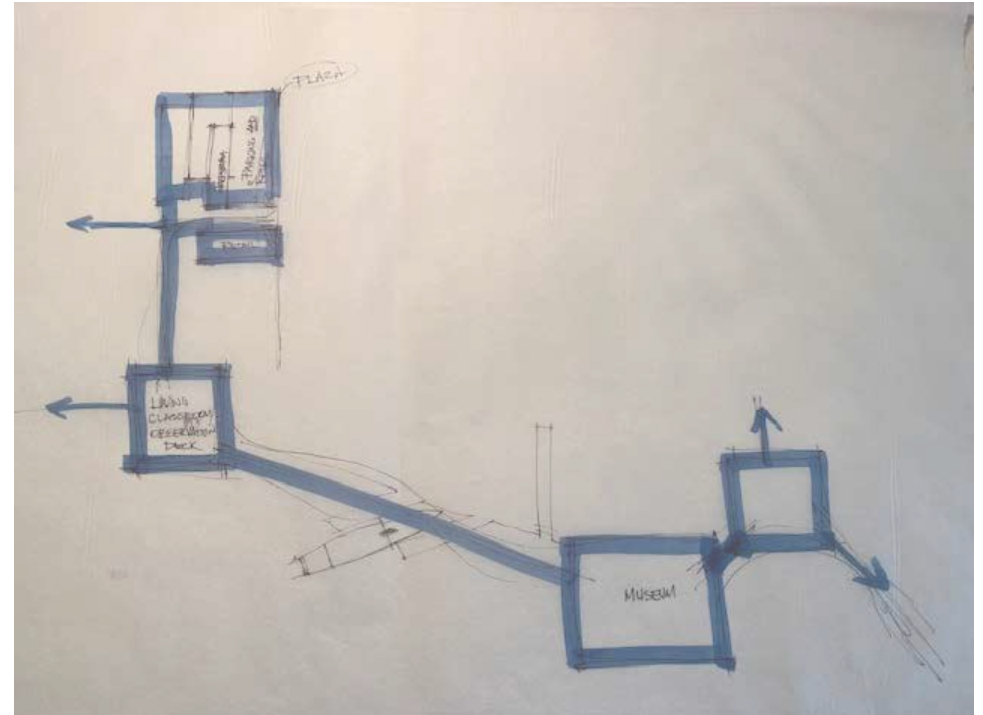


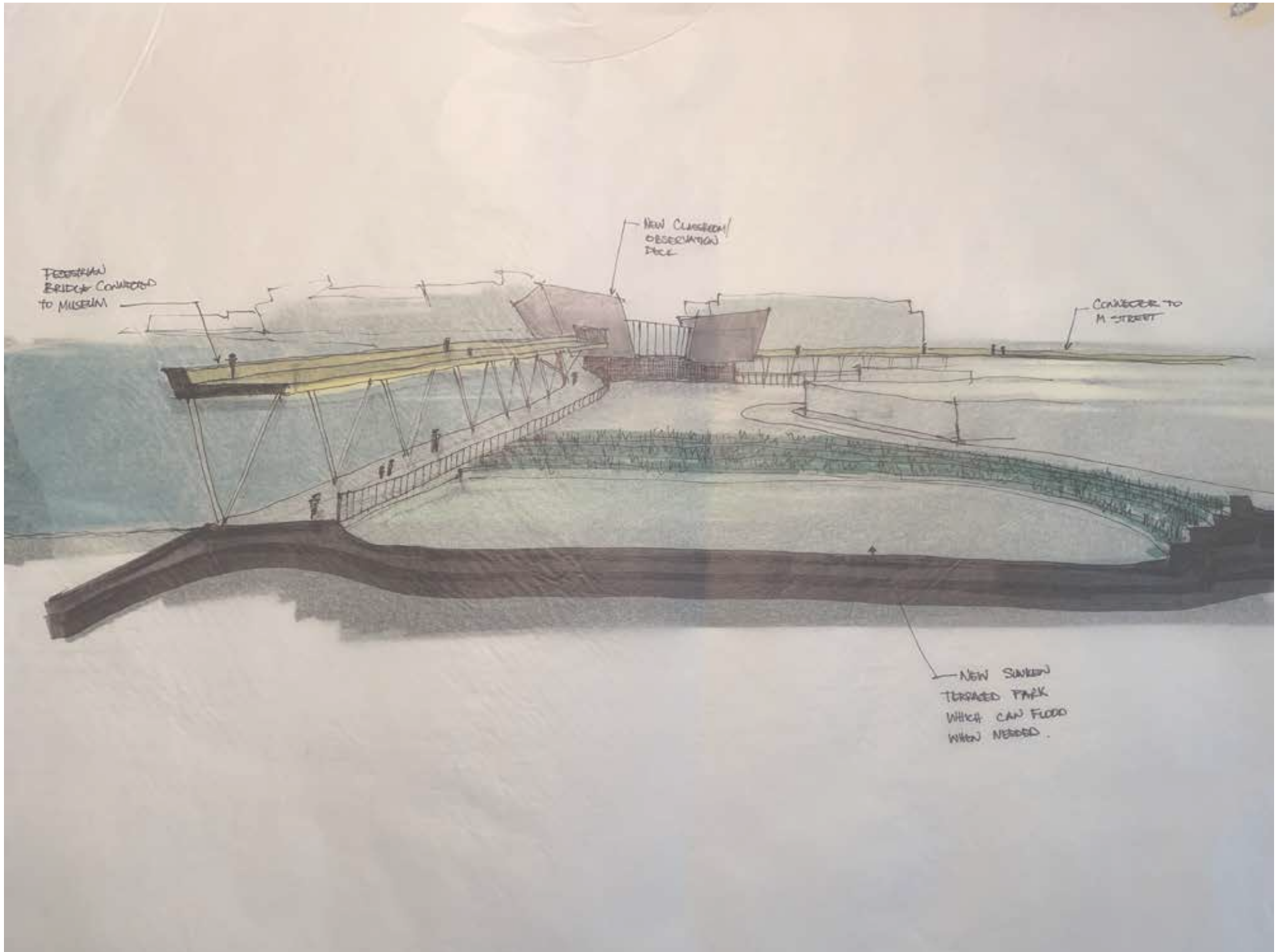
MASTER PLAN

CONCEPT

Upon selecting the Washington Navy Yard as my site I began a more detailed analysis of specific site attributes such as contouring, flooding, and specific uses of facilities and areas within the fence line. Through this research it became clear to me that there was plenty of opportunity along the western and southern boundaries of the Navy Yard to create new spaces and corridors which the public could use along with the personnel from the installation. Specifically just outside of the northwest corner of the Navy Yard there is a vacant dirt parking lot which is totally underutilized at this time. Similarly along the southern fence line due to nuisance flooding which occurs once to twice per year Prime waterfront real estate is relegated to parking lots and a small sculpture park.

It was these types of realizations that began to anchor my concept for a master plan. By creating new types of spaces along the fence line beginning in the northwest corner extending South to the river and then along the riverfront to the 11th Street Bridge I could introduce some new valuable program space which could be used by both the community and the installation and begin to introduce some of the interaction I was looking to achieve. Due to the size of the site I had to pay particular attention to access from each of these new spaces to the next. In effect I was creating a continuous corridor around the fence line from the northwest corner to the southeast corner.



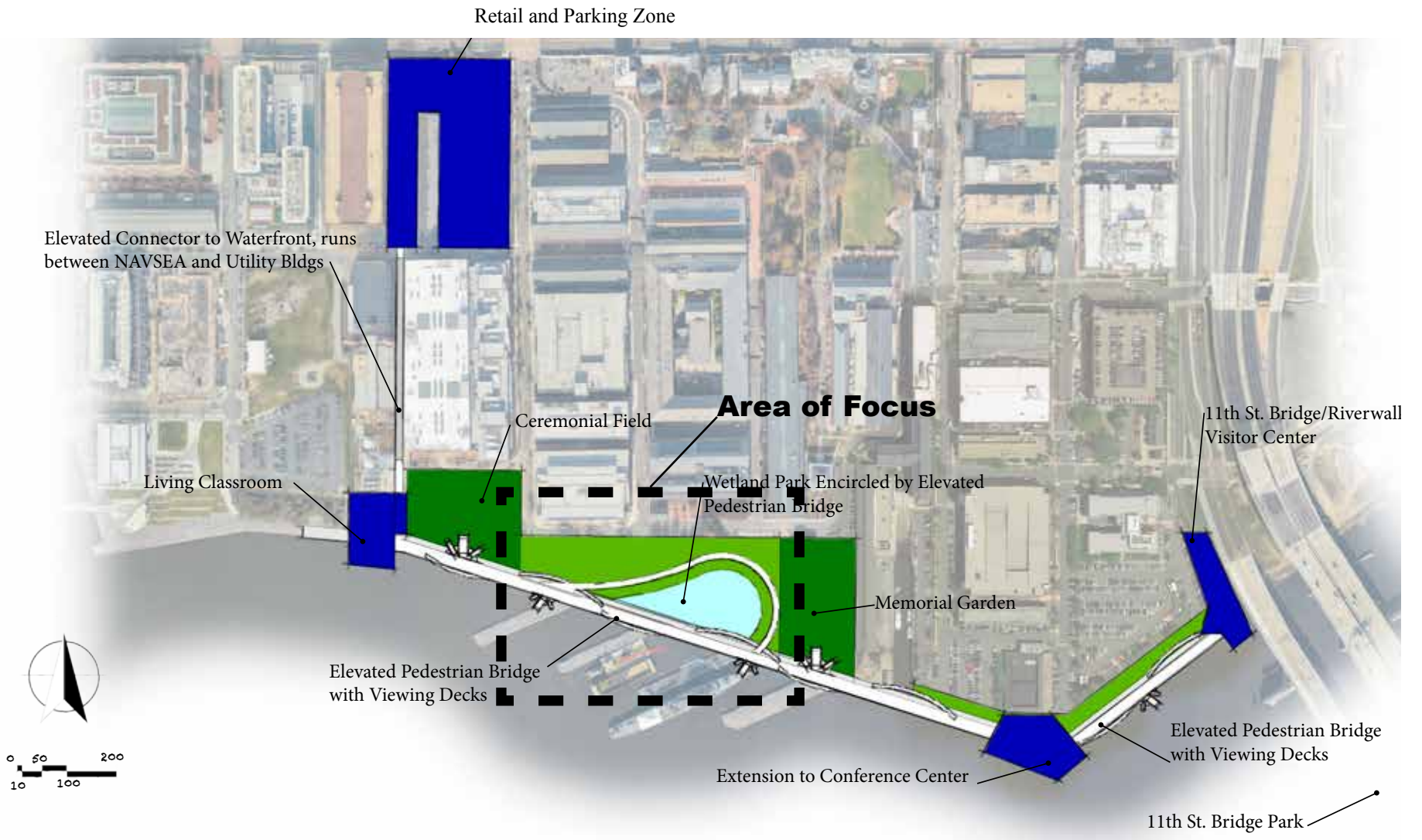


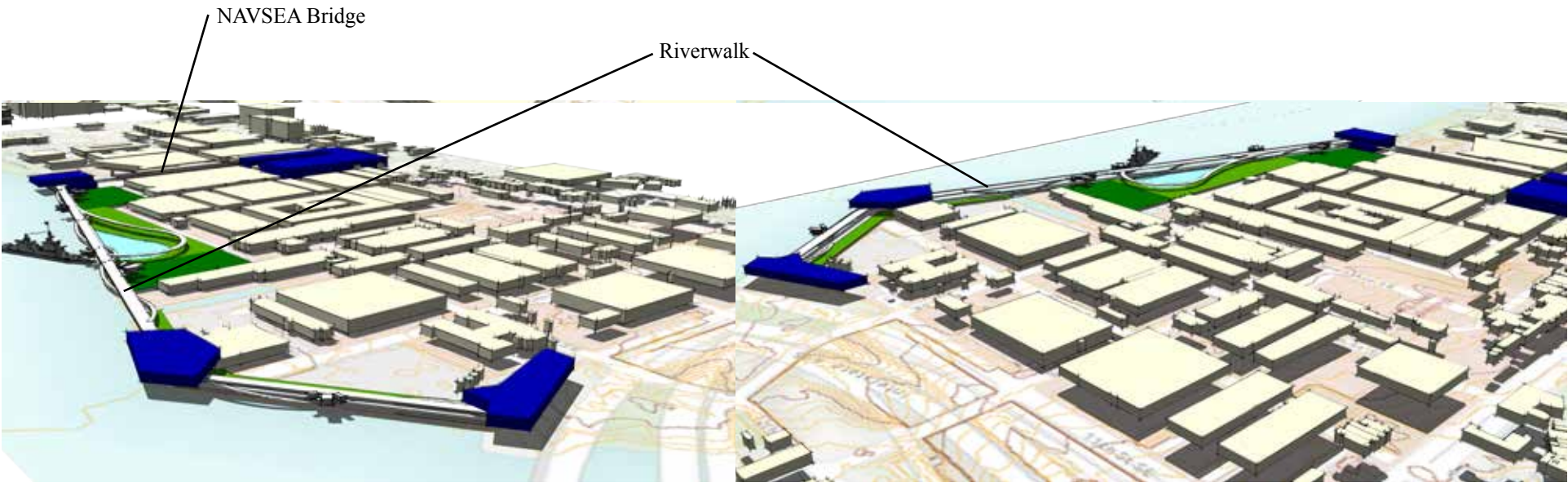
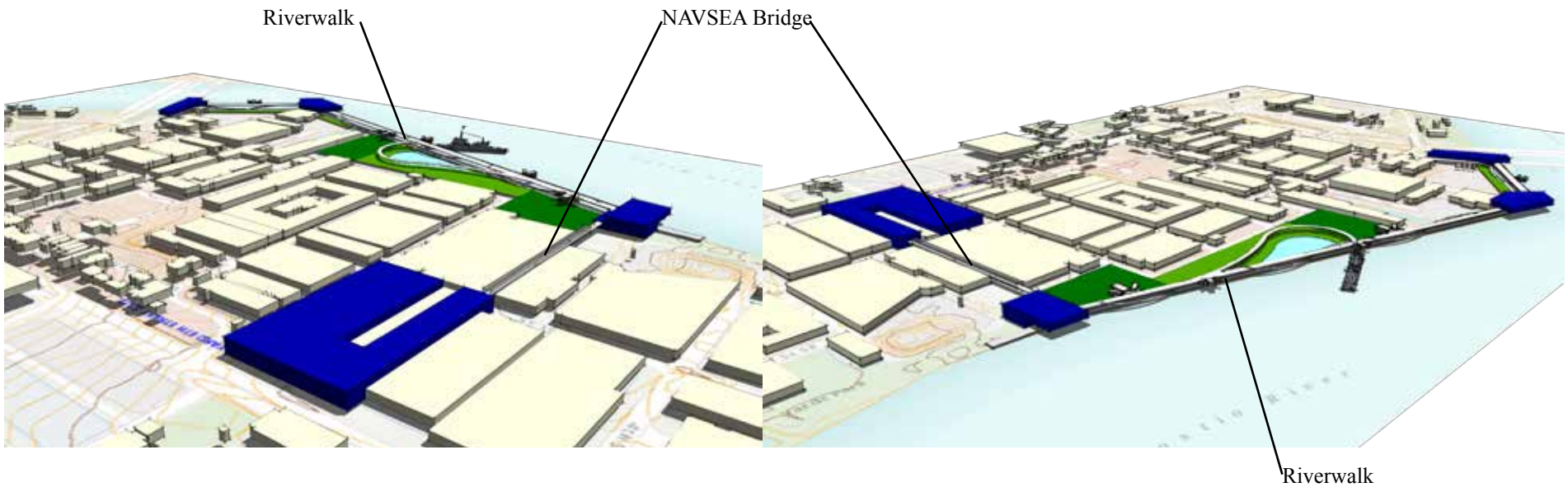
PEDESTRIAN
BRIDGE CONNECTS
TO MUSEUM

NEW CLASSROOM/
OBSERVATION
DECK

CONNECTOR TO
M STREET

NEW SUNKEN
TERRAZED PARK
WHICH CAN FLOOD
WHEN NEEDED.



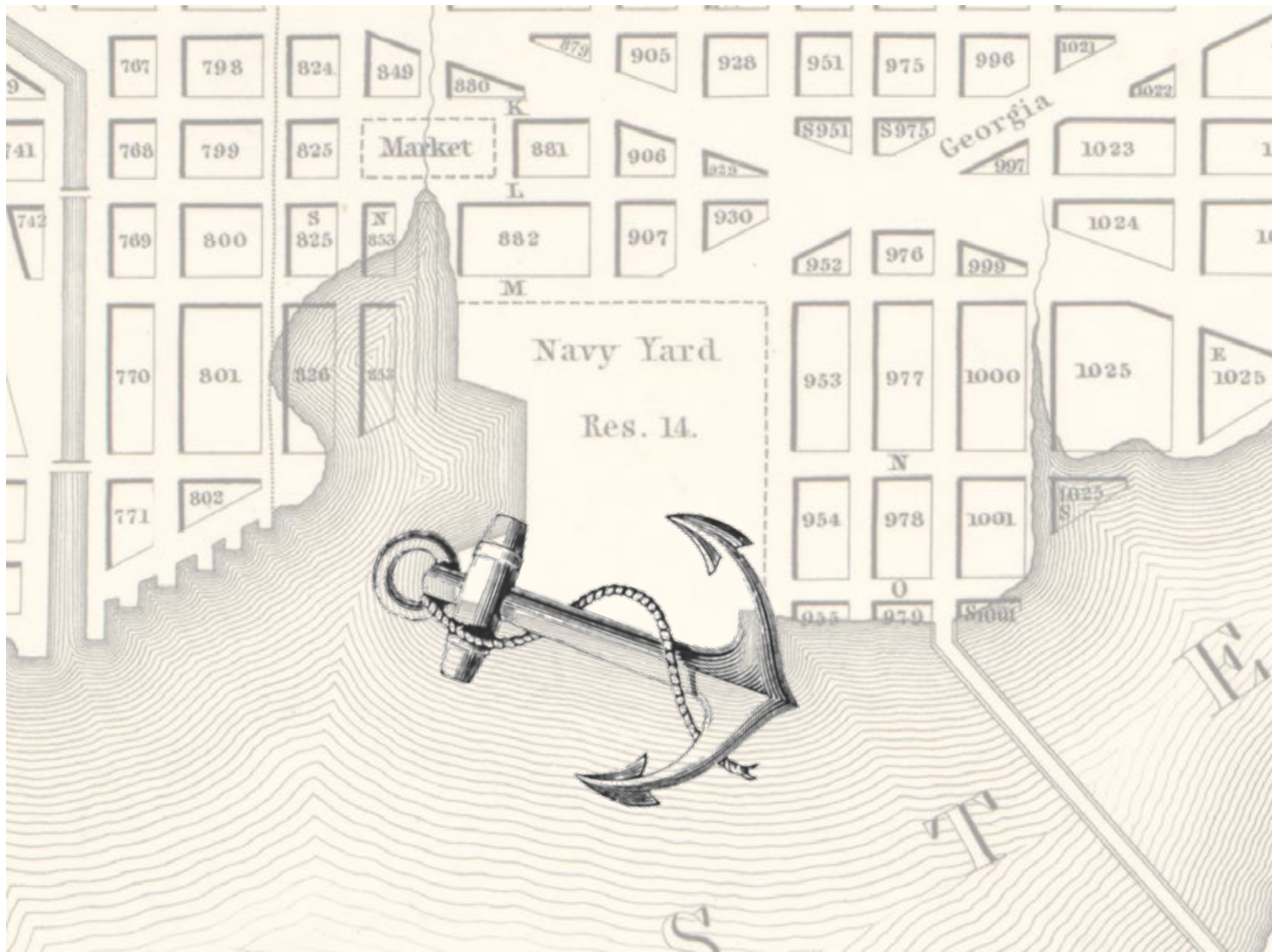


While this provided the framework of my master plan it still left many questions. Namely, how do I begin to break down the vertical barrier to achieve the interaction I'm looking for without sacrificing security. Because I only had so much space to work with I began to think about the barrier in different terms. For example there are military installations in the Mojave Desert which do not have fences around them because the desert acts as the barrier. This got me wondering if there was some other way to provide this separation in this limited horizontal space? I began to think vertically. By creating a raised pedestrian bridge (NAVSEA Bridge) throughout my master plan I was in effect bringing users inside the base visually without sacrificing security. For example as an individual comes from the Southeast Federal Center to the 11th Street bridge and they walk along an elevated walkway they are visually able to access the installation, see the ceremonies that are going on inside and feel a part of them, without actually being able to access the secured area(Riverwalk). Furthermore this also addressed the issue of flooding. An elevated walkway provides users the opportunity to get from the Southeast Federal Center to the 11th Street Bridge even during periods where the Anacostia River is higher than your usual. These Concepts form the basis of my master plan.

Some of the important components to make this work were creating spaces inside the fence line along the southern edge of the installation where users of the elevated walkway could stop and visually engage with the goings-on within. My master plan presents a few options, namely a ceremonial field, a wetland park, and a relocated sculpture park. The intent here is for users to find themselves viewing retirement ceremonies or Navy Band practices, etc from the elevated walkway, and feeling a part of what's happening inside the installation. All the while remaining safely separated from the secure installation.

Upon the conclusion of the masterplan phase I selected a specific area of focus to further develop and put my ideas into practice. Namely, I chose to focus on the wetland park as I see this as the most underutilized portion of the Navy Yard. An area which is largely paved to address the flooding issues, the wetland park has the strongest potential to create this third-place of interaction.





Base Map Image from <https://www.loc.gov/maps/?fa=location:washington+d.c.&q=dc+wash&st=gallery> dated 1839

This new wetland park is primarily composed of two components. The first component (Programming) is creating a third place which will attract and encourage use by both the surrounding community and the individuals within the installation. This could primarily be accomplished by creating program spaces which could serve and attract the users. The second component (Security) involves maintaining a satisfactory barrier between the wetland park and the adjacent installation without overtly dividing the two. A foundational premise of my thesis is the reinterpretation of the vertical barriers to achieve adequate separation in a less traditional way. As such I could not rely solely on simple vertical planes (brick walls or wrought iron gates) to separate this third place from the installation.

PROGRAM

As I focused on the first component, creating a place attractive to the community, I found myself primarily looking at the historical significance of the Washington Navy Yard. As I researched this installation I found its history rich with nautical themes and monuments related to sailing and the sea. Given the commemorative aesthetic of Washington, DC I found myself striving to create a place which could be representative in both its form and spirit of the United States Navy. For this I found myself harkening back to the symbolism of the anchor. Such a universally understood form I envisioned this place, the Navy Yard, as the symbolic anchor for the entire United States Naval service. Furthermore, what better maritime symbol to illustrate the power and significance of this place in a peaceful and passive manner than this; the placid anchor which holds the massive warship steady? It is here that I began to lay out my plan using the sweeping curved forms of the anchor.

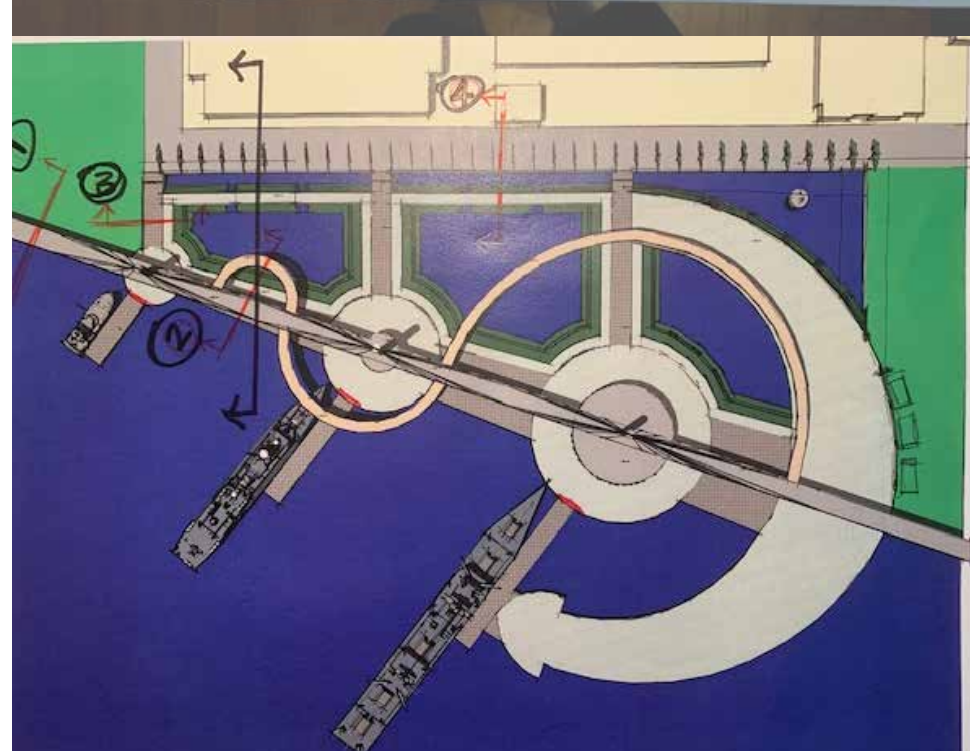
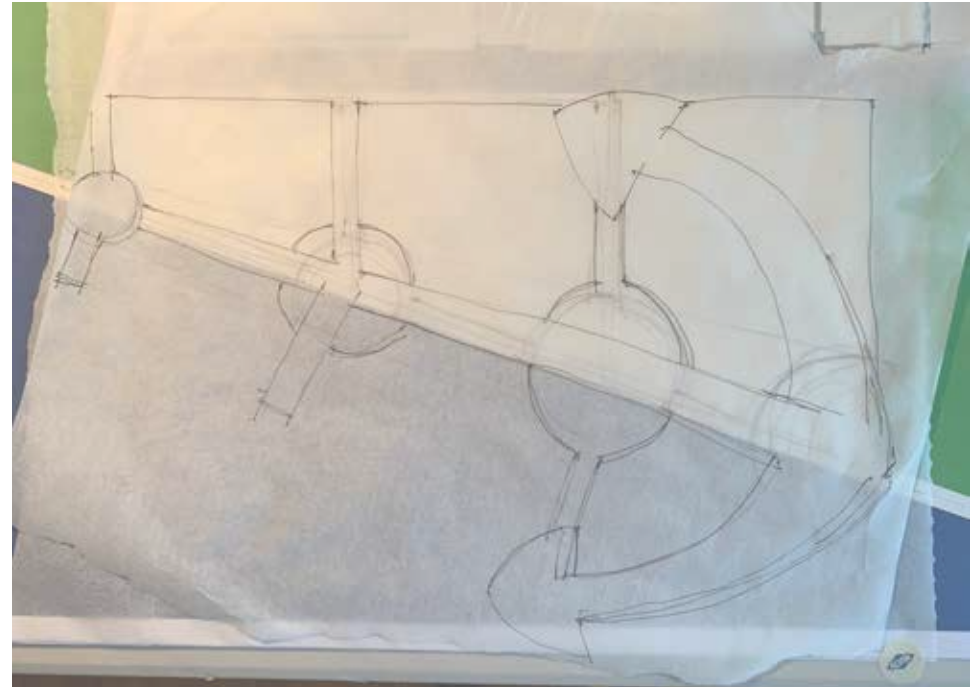




Image from <https://www.wcvb.com/article/uss-constitution-celebrating-its-221st-birthday/23984876>

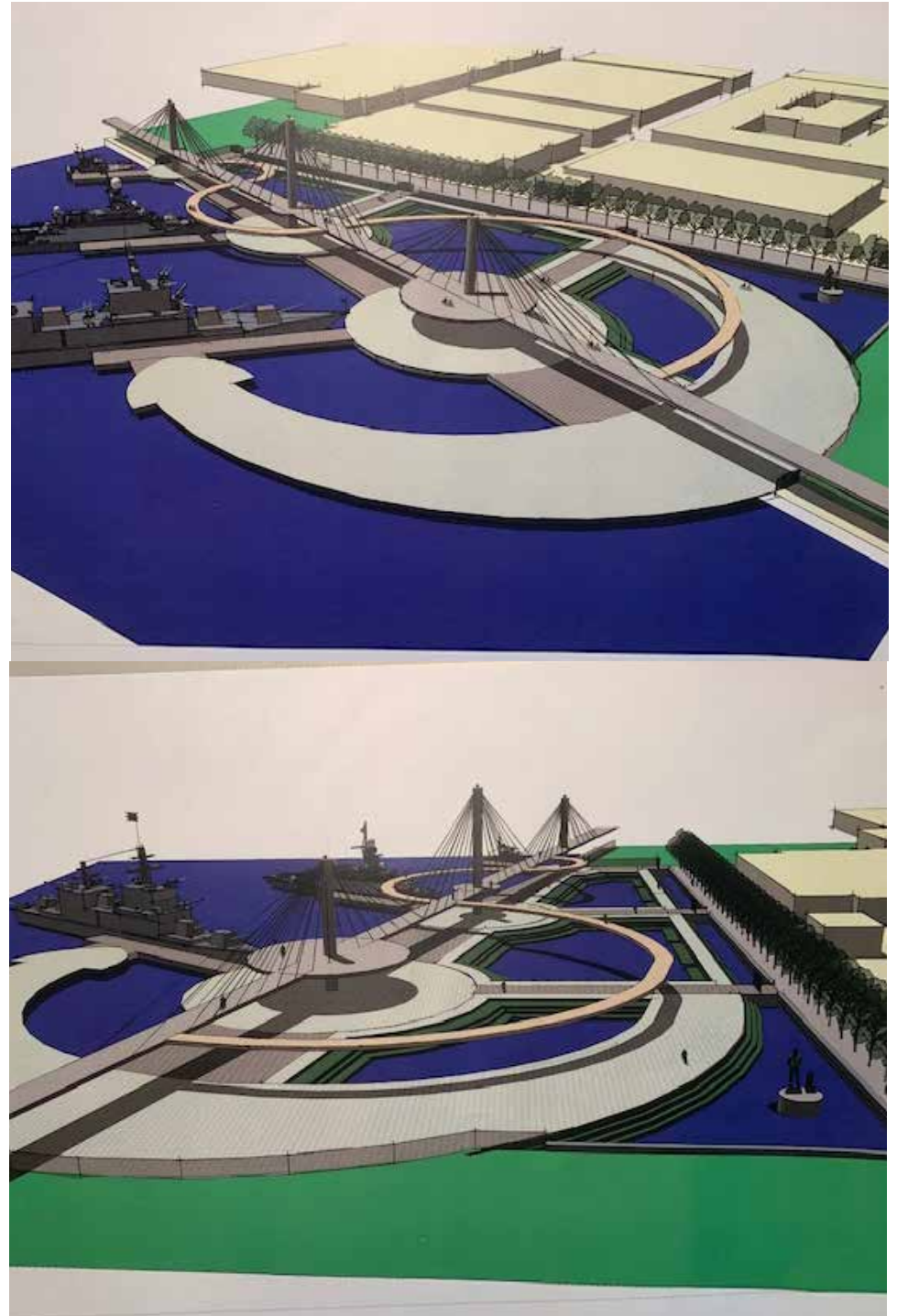
“The masts and rigging of USS Constitution were a common site on the banks of the Anacostia River.”
Marolda, *The Washington Navy Yard* (xi)

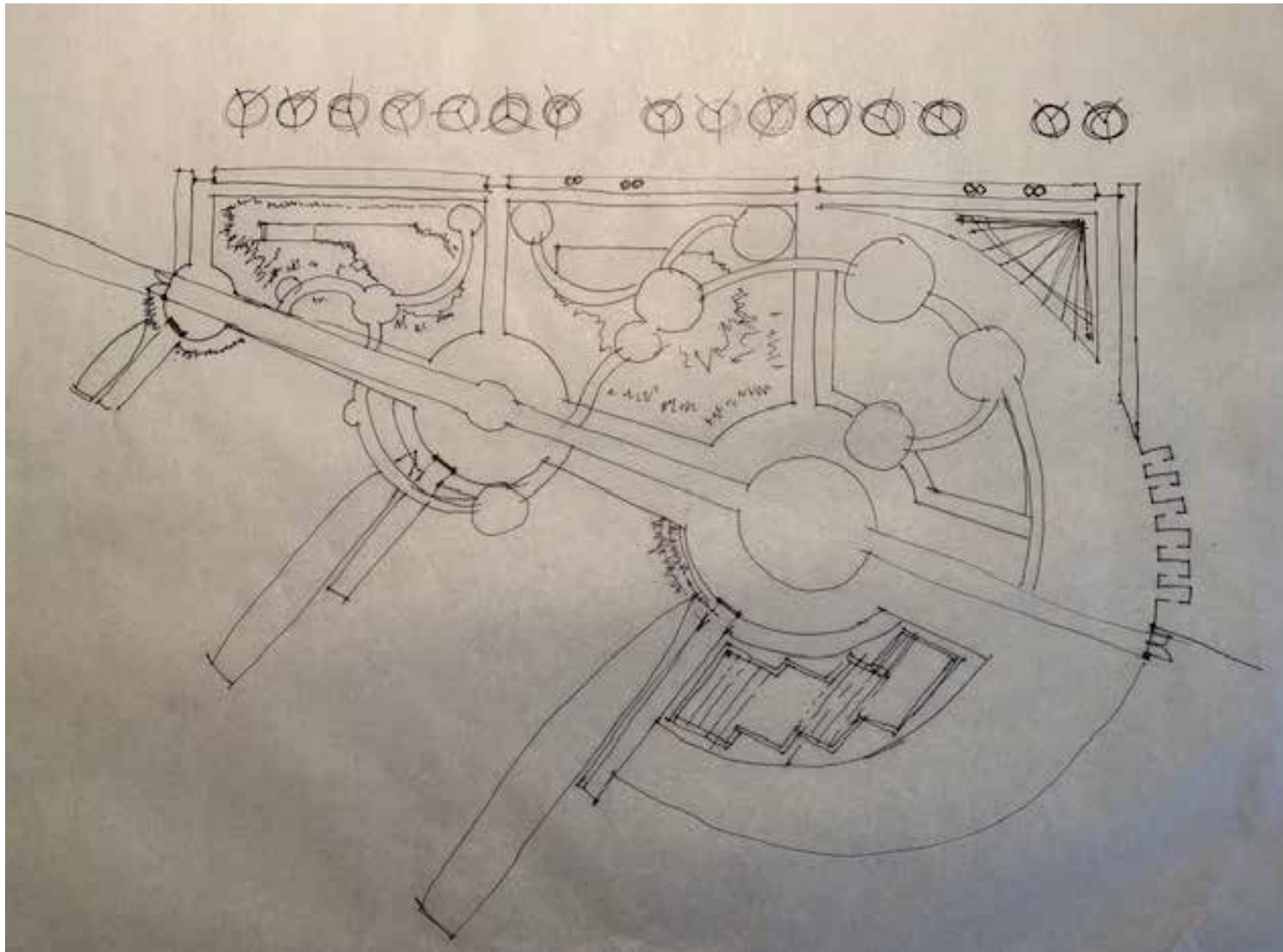
Given the fact that the Admiral Willard Sculpture Park currently located inside the fence line of the Navy Yard was the only existing use that I wished to keep in my design, I had every intention to relocate these sculptures to the new wetlands park to be enjoyed by the entire community. It was extremely important for me to make this new wetland park an educational place where users could learn about the United States Navy and see some of its most treasured statues and Relics. As I began to lay out the park and looked at access from the installation to the riverwalk three obvious junctions were exposed and it is here that I chose to relocate the sculptures.

In keeping with the educational component it occurred to me that a trip to the Washington Navy Yard without experiencing a tour of a Navy vessel would be a shame. As such I introduced three size Naval vessels as floating museums to be used by visitors. These would be located along three piers which would continuously remain accessible along with the Wetland Park. Only the brow of each would be secured if need be so that the vessels themselves can remain part of the installation but can be used by visitors when the Navy deems appropriate.

Because one of the most prominent units located on the Navy Yard is the Navy ceremonial band I felt that it would be a missed opportunity not to provide a forum for the band to play for the public. A small amphitheater with ample room for viewers is provided in the northeast corner of the wetland park. The intention is for the Navy Band to be able to perform here and showcase their talents to the general public visiting the park. In addition, this also provides an area for non-Navy bands to perform as well increasing the possibilities for its use.

Adjacent to this Amphitheater is a food truck park which can be used by the surrounding community and individuals on the installation during lunch and special events. The beauty of the food truck park is that it provides retail space on a semi-permanent basis.



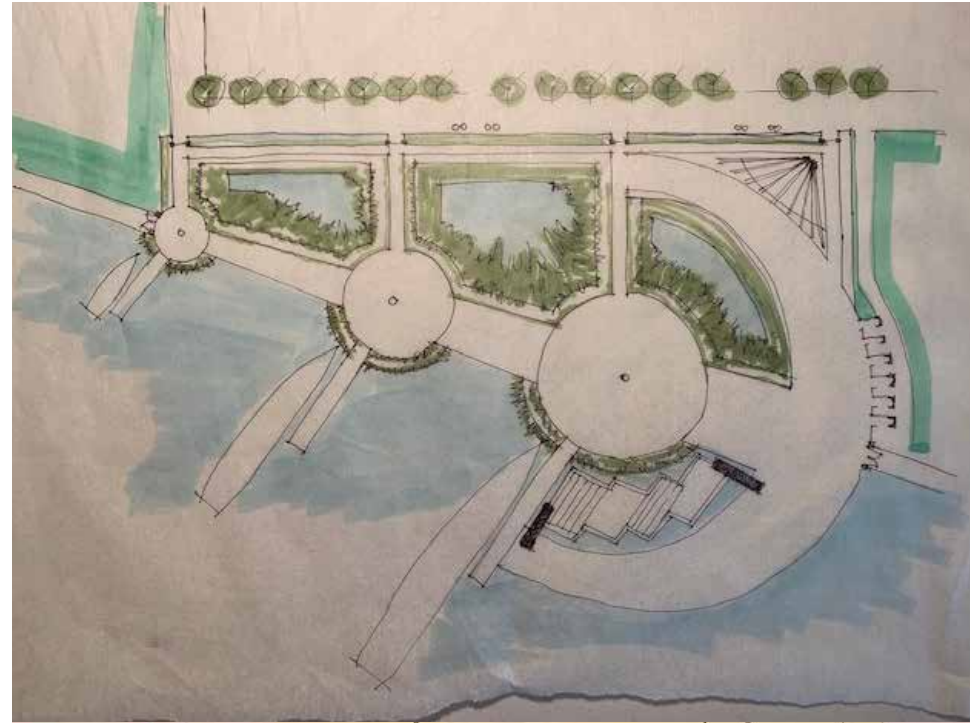


In present day 2019, a visit to the Washington Navy Yard around lunch time of any given weekday will expose multiple food trucks scattered throughout the installation. By collecting each of these in a central area, accessible to the public as well as the installation, I can create a place ripe for interaction and flexible enough to adjust with the Navy's security needs on any given day.

A public swim center is also programmed for the southeast section of the park. While taken for granted by many, the ability to swim is extremely important to the Navy and has been known to keep many would-be sailors from realizing their desire to serve their country. The Navy takes swimming very seriously, and what better way to engage with the community and demonstrate Navy core values than by sponsoring a public swim center for all to use?

Finally, the most substantial element of the programmed spaces designed to attract visitors, is the wetland park itself. This includes the elevated pedestrian bridges and paths encircling the pond beds. The intention for this element is itself two-fold. On the one hand providing a natural setting for relaxation or exercise or simply communing with nature in a dense urban fabric. On the other hand the wetland park is an outward display of the Navy's commitment to defending our territory (in this case from the river) as well as adapting to the threat of rising water levels in a resilient fashion.

By providing a mix of programmed uses which could appeal to both the surrounding community as well as those working on the installation, I am providing attractions to encourage the interaction I hope to achieve. While there is a certain level of activity which is expected to take place already given the strategic location of the site, these new programmed uses will only help increase that activity.



SECURITY

“We call this universal behavior “site plus,” that is, taking advantage of the characteristics of a site as well as adding reinforcements to achieve safe ground. Two types of sites offer initial advantages for defense: those with water protecting part or all of the perimeter and those with steep slopes protecting all or part of the perimeter. Water and high ground, alone or in combination, are still highly valued for more than utilitarian reasons.” Lozano, *Community Design & Culture of Cities* (214)

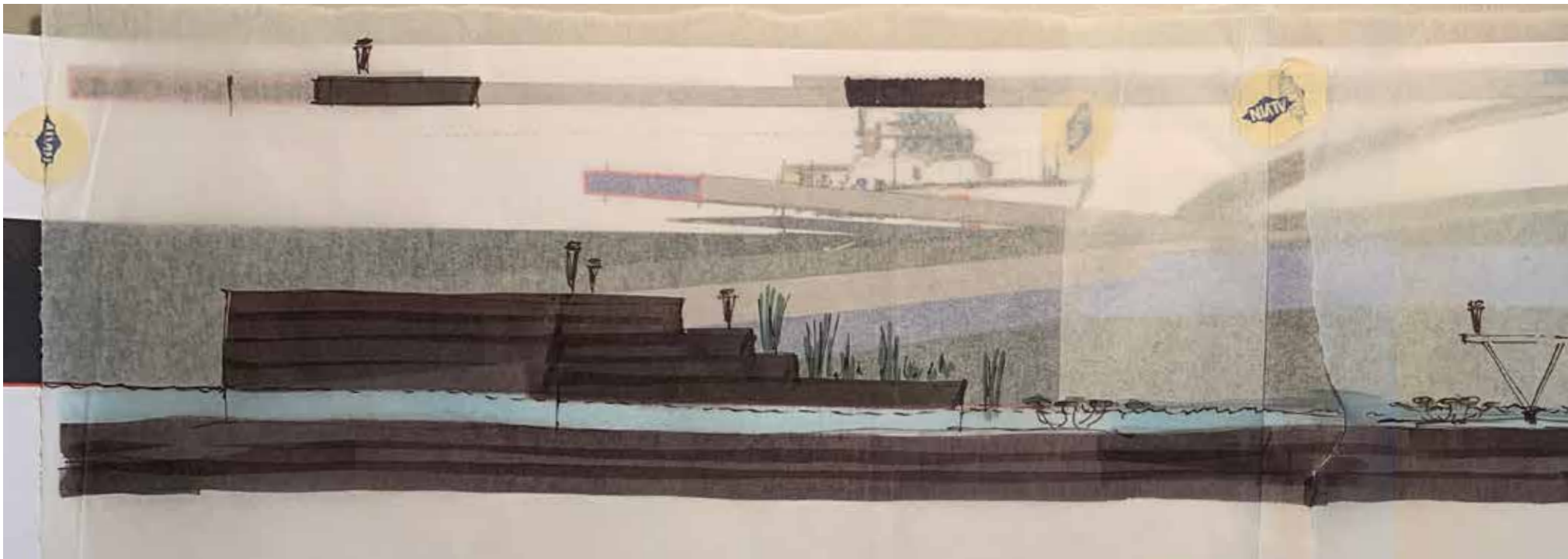
“Other locations with partial slopes require, in addition, man-made protection: the artificial hill-the defense wall-establishes a vertical barrier between the settlement and the outside world.”

Lozano, *Community Design & Culture of Cities* (216)

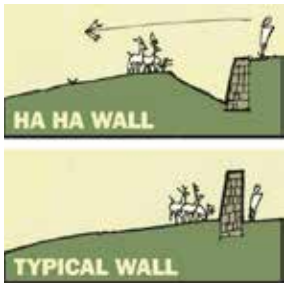
The second component required a less traditional approach to providing separation. For the Third Place to work, it was important that it felt both connected to the installation as well as unique. The Third Place must be a distinct zone of interaction that its users are aware of (even if subconsciously).

For this to be effective, it was necessary to create a formal sense of entry and exit. This was accomplished using simple gates (similar to the design of the existing Navy Yard gates) to clearly articulate its boundaries. These gates provide the users with a sense of entering or exiting a distinct place. Because the design of the gates is in keeping with the rest of the Navy Yard, users can associate them with the installation and logically feel as if they are entering the installation.

Once the users are within the Third Place, it is important to tastefully treat the boundaries to promote security (in an unobtrusive way). For this design problem I found myself focused on two historic approaches; the Moat and the Ha-ha. In the case of the moat (similar to the example of the desert mentioned earlier) a simple waterway provides the separation needed rather than a wall. In the case of a Ha-ha, a change of elevation which is hidden from the user provides separation while providing the illusion of connection. By combining these two concepts at the boundary of the Third Place, we achieve the benefits of separation without the negative connotation of the vertical plane. An added benefit of this treatment at the boundary was the opportunity to introduce terraces to assist the ecological processes of the wetland.



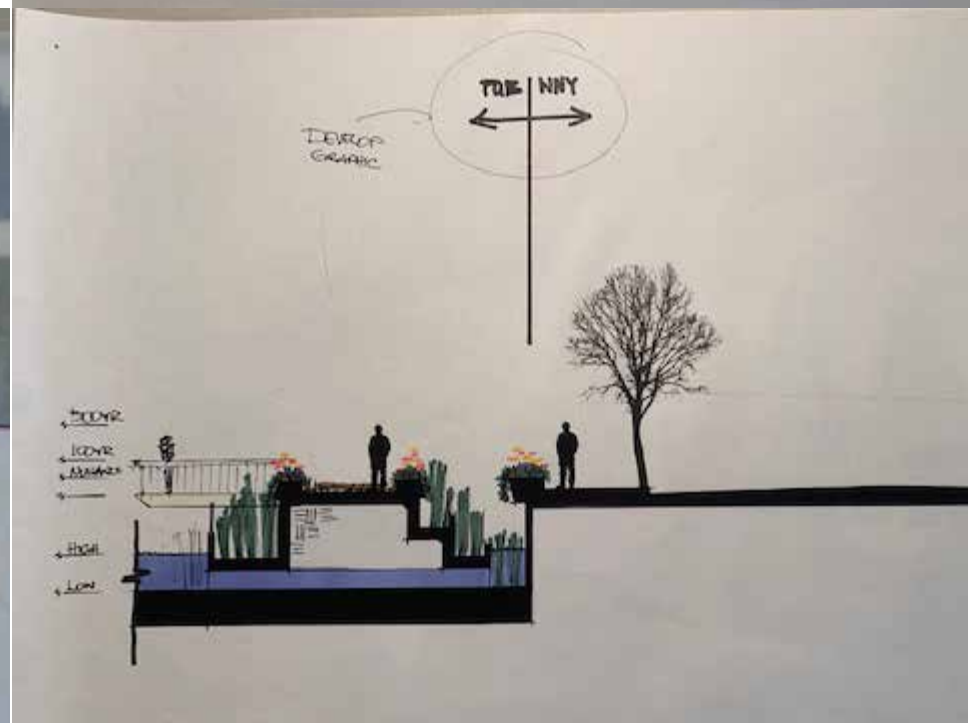
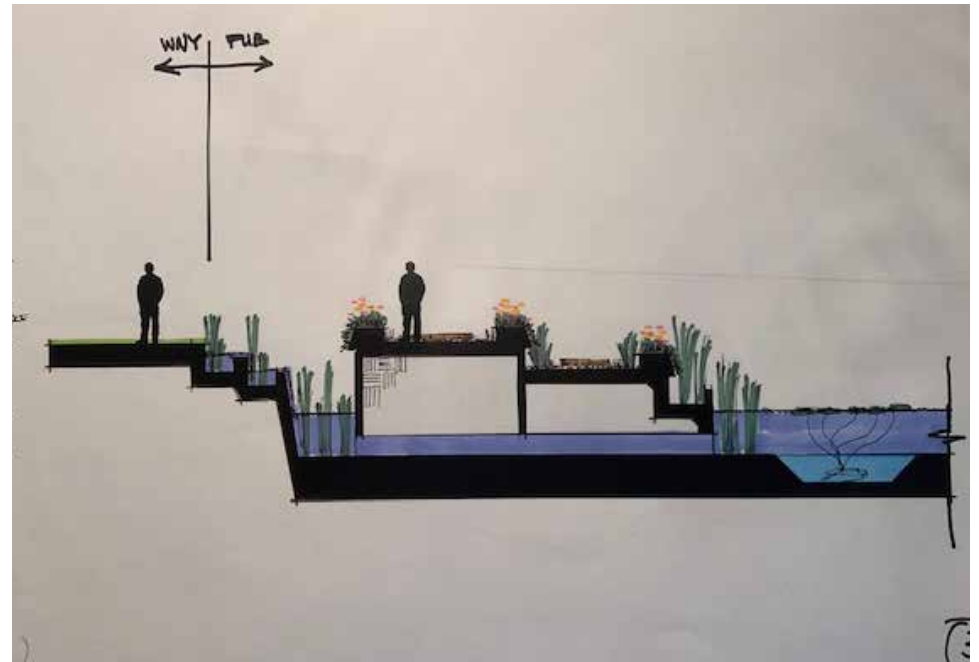
Stormwater from the installation can now be diverted to the terraced zones along the east and west borders of the park for gravity filtration prior to eventually joining the river and aquifer. Conversely, rising water levels at the river can successively flood the pond and terraces to be held longer in the spongy soils and vegetation in order to mitigate the impacts of flooding. Wave action can also be decelerated thanks to the drag of the soil and vegetation.



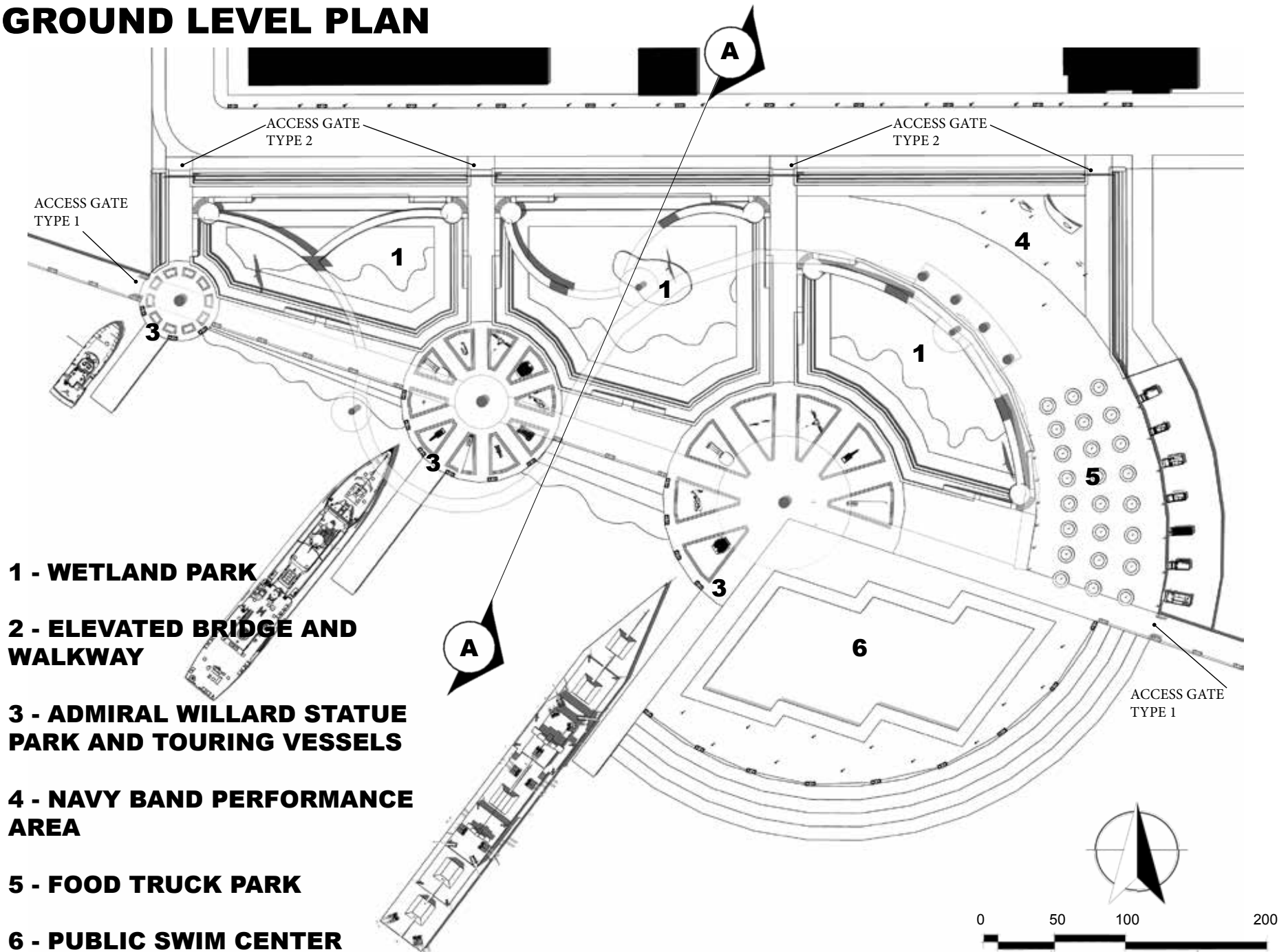
Ha-Ha wall Image from <http://thedabbler.co.uk/2014/12/ha-ha-brouhaha/>



Moat Image from <https://nothingventured.rocks/brand-the-only-true-moat-in-saas-24459d8d4eae>

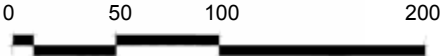
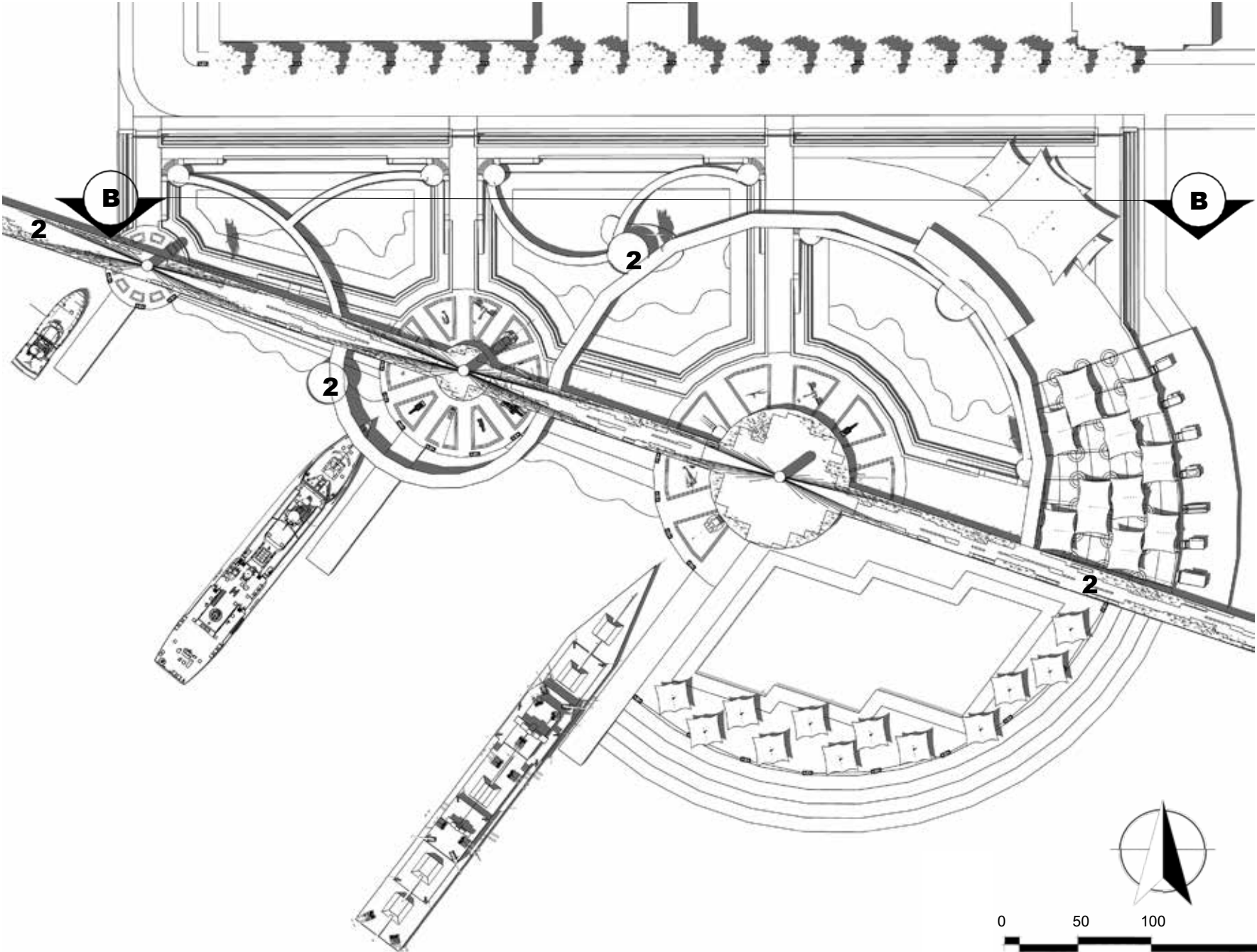


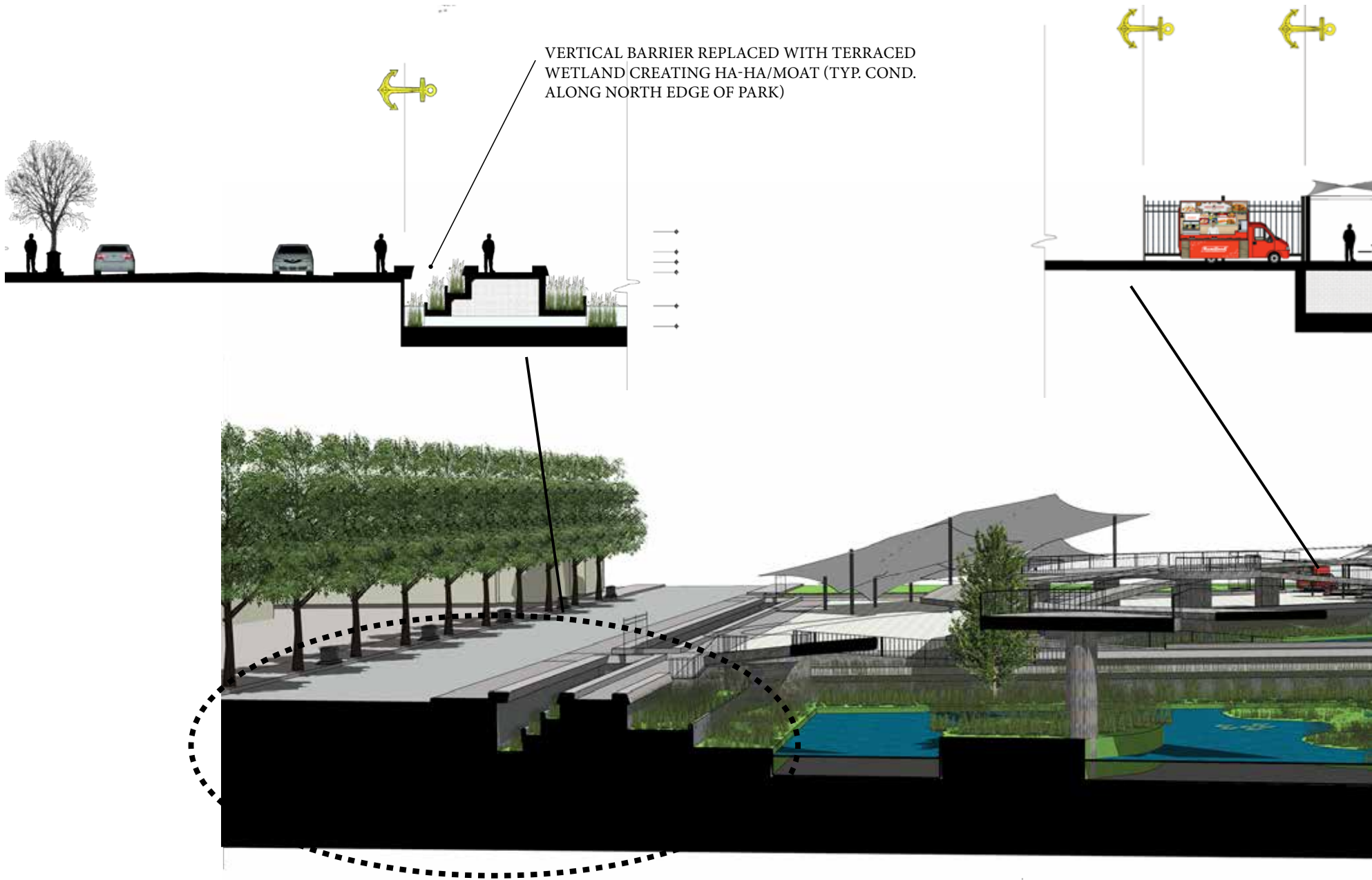
GROUND LEVEL PLAN

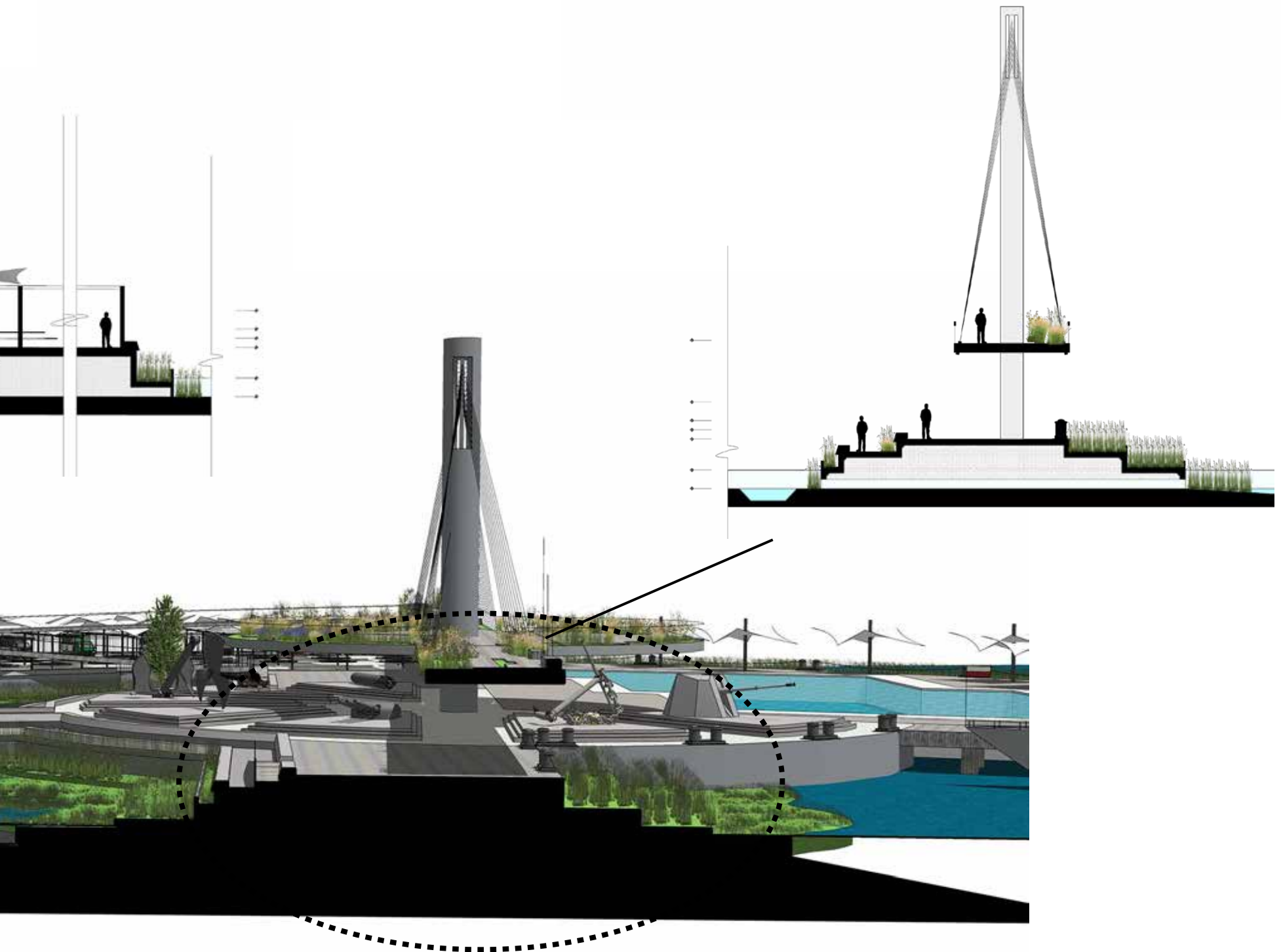


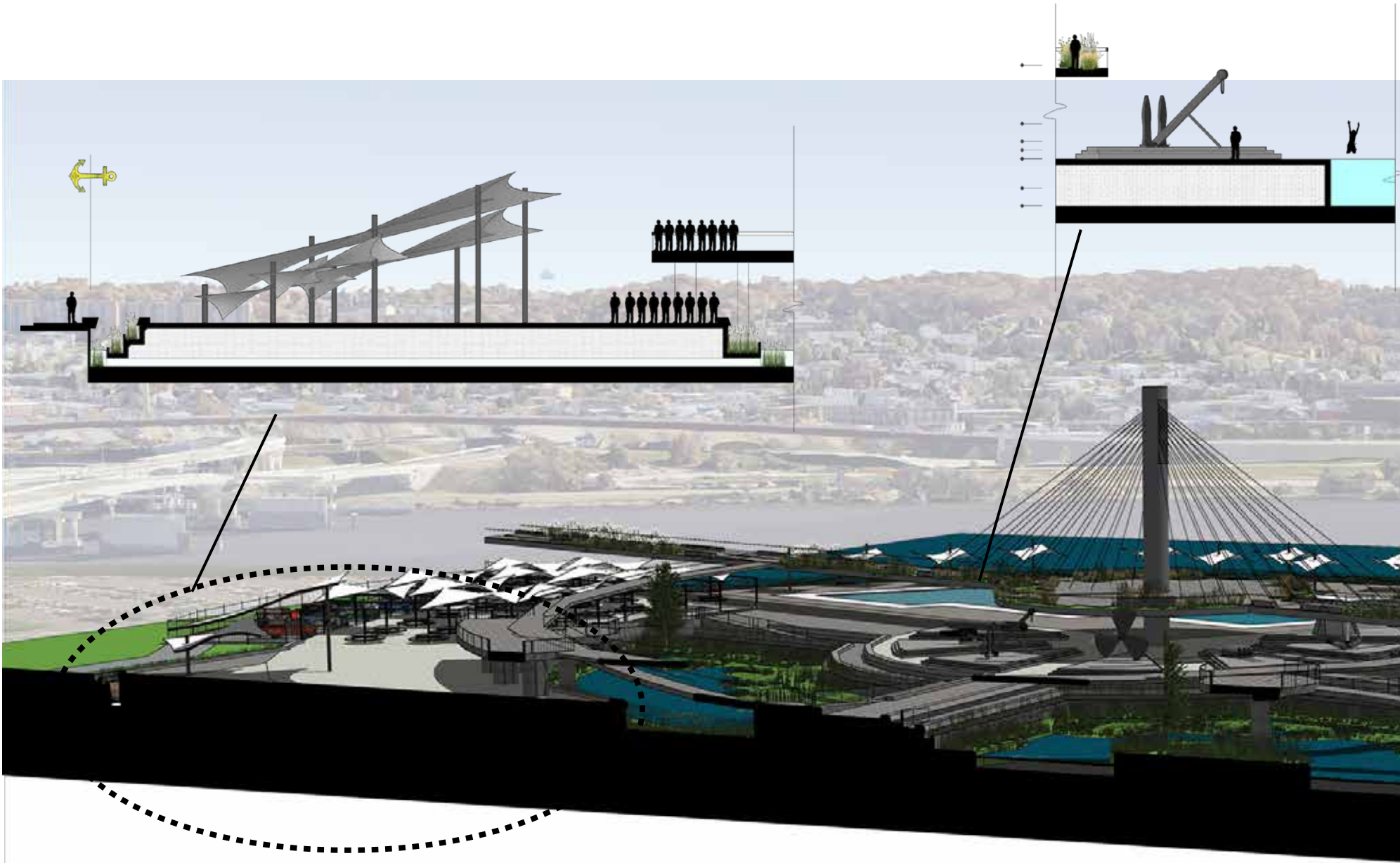
- 1 - WETLAND PARK**
- 2 - ELEVATED BRIDGE AND WALKWAY**
- 3 - ADMIRAL WILLARD STATUE PARK AND TOURING VESSELS**
- 4 - NAVY BAND PERFORMANCE AREA**
- 5 - FOOD TRUCK PARK**
- 6 - PUBLIC SWIM CENTER**

BRIDGE LEVEL PLAN



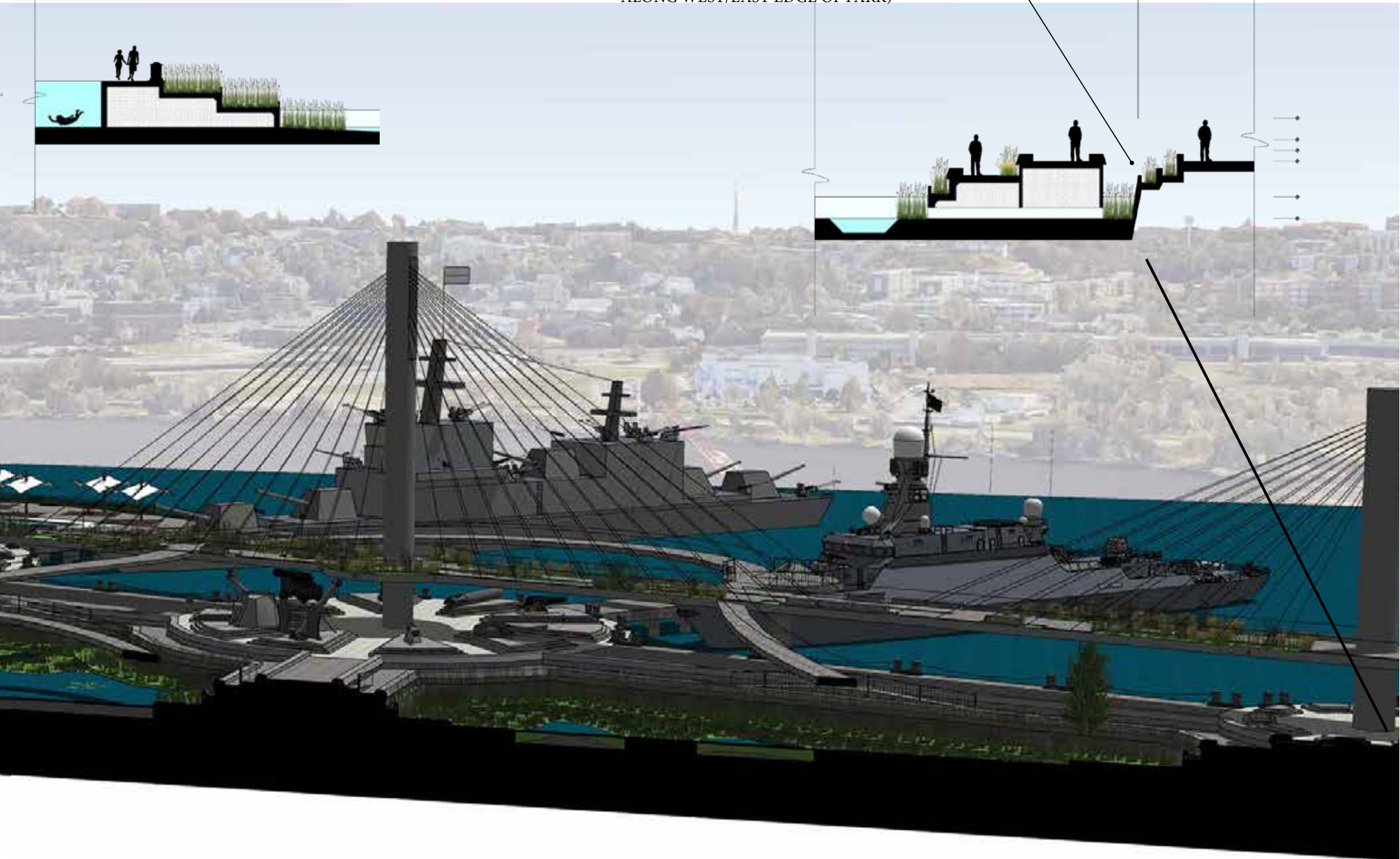
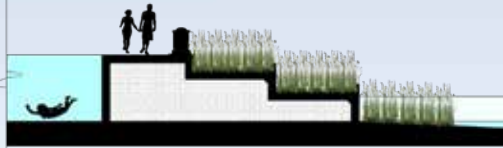




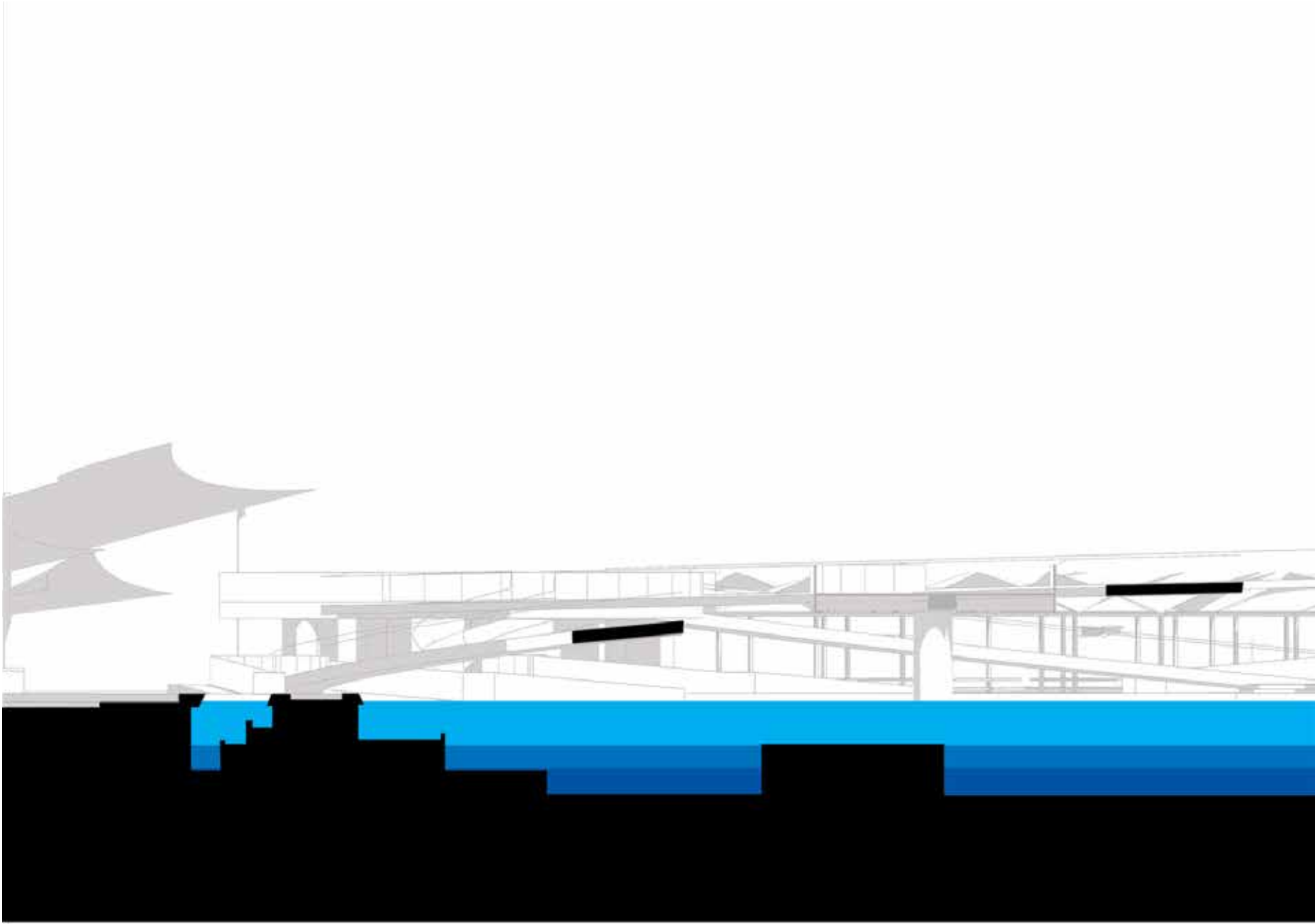


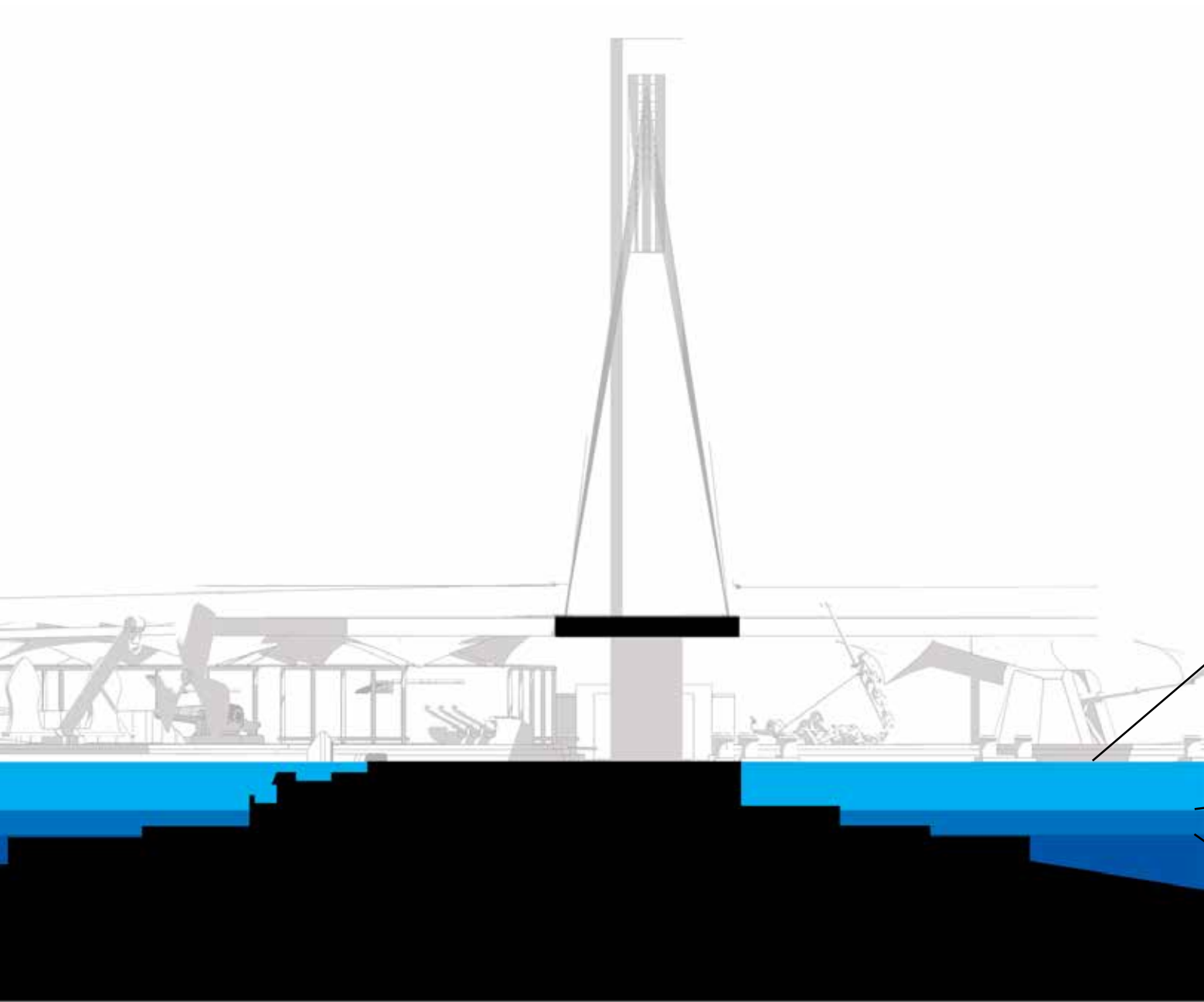
SECTION B-B

VERTICAL BARRIER REPLACED WITH TERRACED WETLAND CREATING HA-HA/MOAT (TYP. COND. ALONG WEST/EAST EDGE OF PARK)



WATER LEVEL VARIATION





Nuisance Flood

High Tide

Low Tide

WATER LEVEL VARIATION



0'



1'



2'

AVERAGE DAILY WATER LEVEL



5'



6'



NUISANCE FLOOD



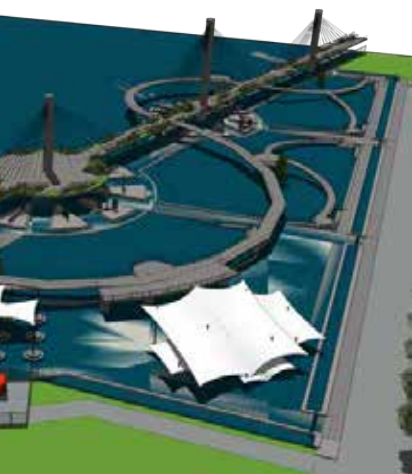
2'
EL RANGE



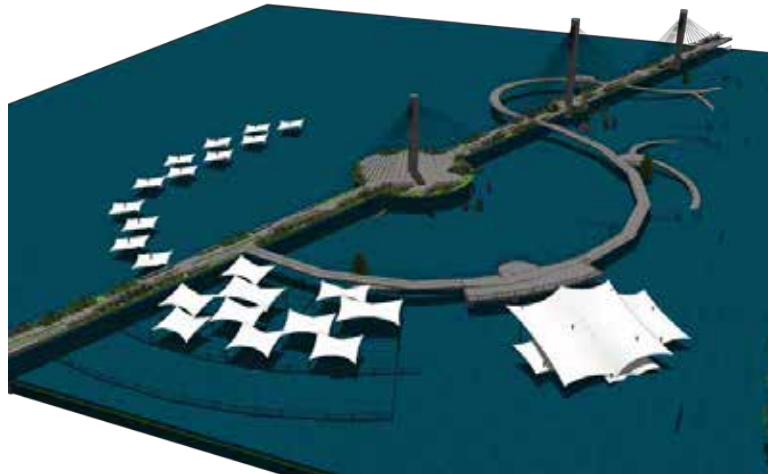
3'



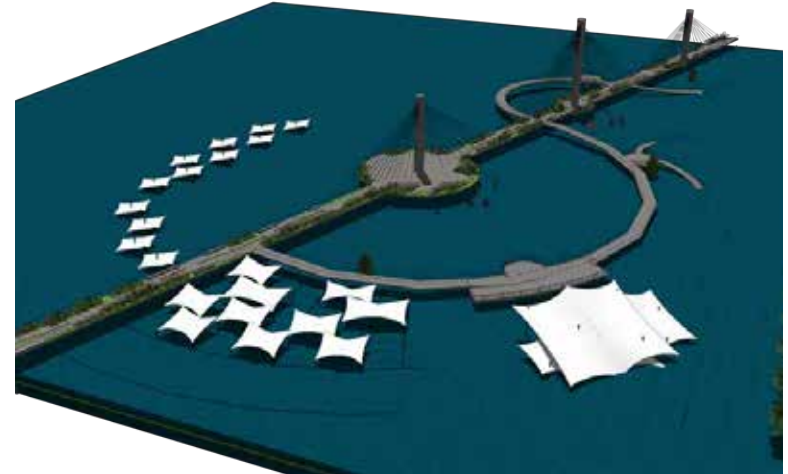
4'



**DRAINAGE
FLOOD**



**100YR
FLOOD**



**500YR
FLOOD**

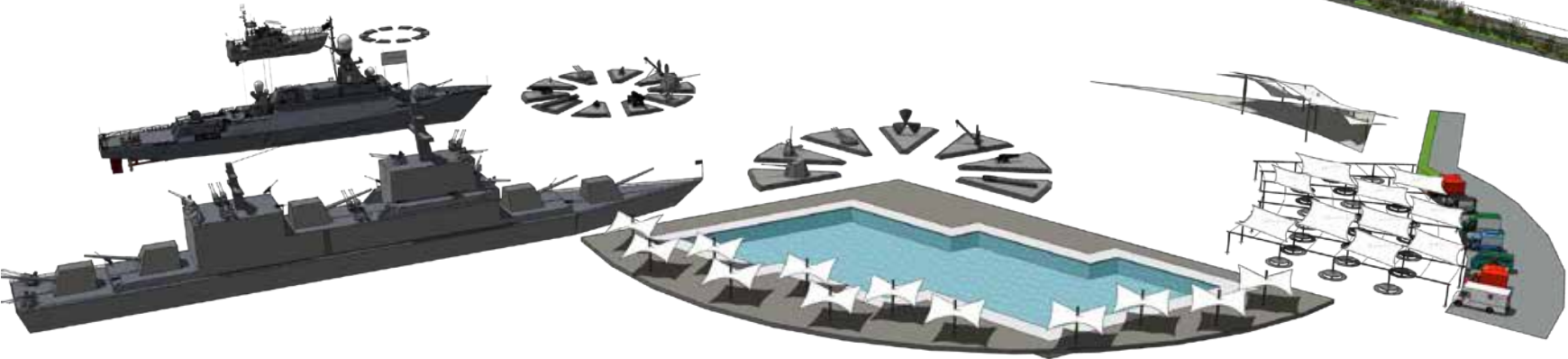
SITE PLAN



ISOMETRIC LAYERING



LINEAR ACTIVITY LAYER



PROGRAMMED ACTIVITY LAYER



SURFACE ACTIVITY LAYER



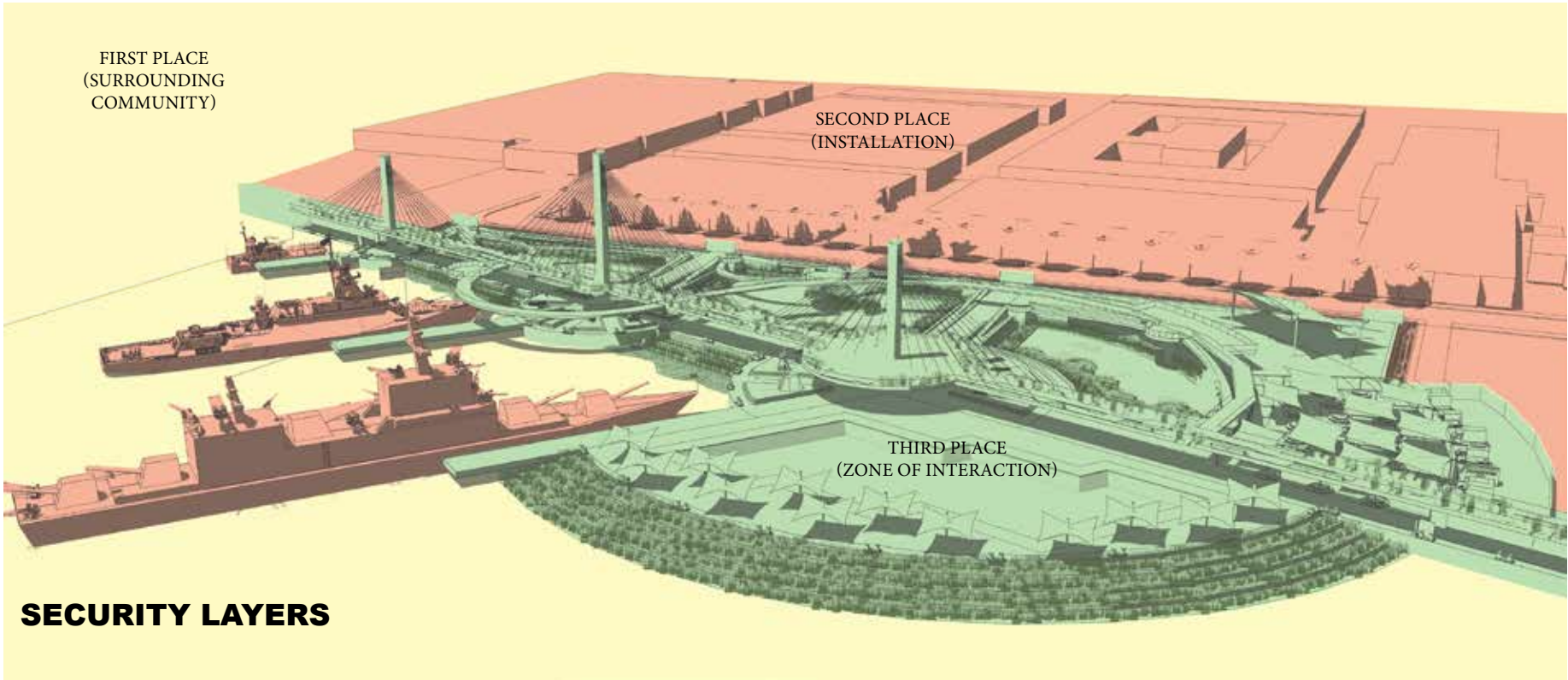
OVERLAPPED LAYERS

FIRST PLACE
(SURROUNDING
COMMUNITY)

SECOND PLACE
(INSTALLATION)

THIRD PLACE
(ZONE OF INTERACTION)

SECURITY LAYERS

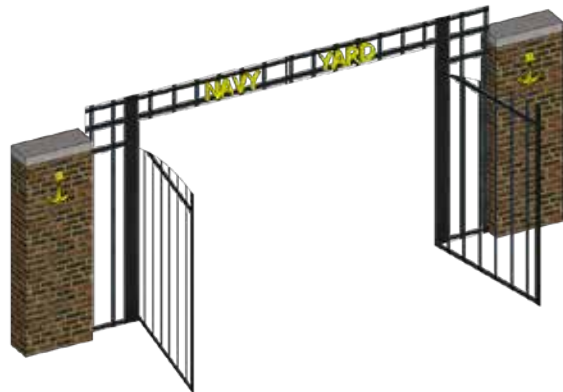


ACCESS GATES

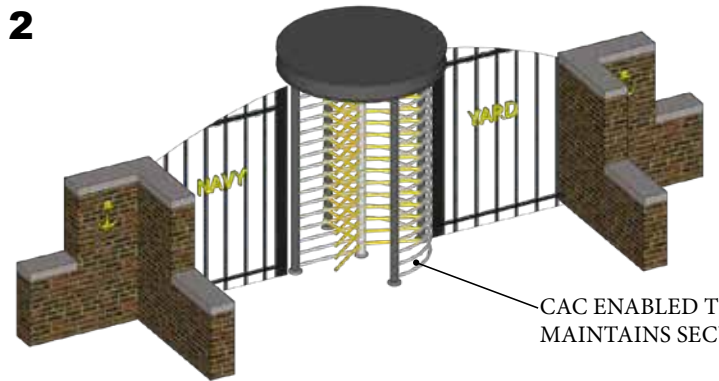
TYPE 1



WHILE GATE CAN BE CLOSED TO SECURE WETLAND PARK IF NECESSARY, INTENT IS FOR IT TO REMAIN OPEN AND DEFINE THE THRESHOLD FOR VISITORS WHILE CREATING A FORMAL SENSE OF ENTRY INTO THE PARK.



TYPE 2



CAC ENABLED TURNSTILE MAINTAINS SECURITY

EXISTING GATES



"M" ST. MAIN GATE



"M" ST. EAST GATE



11TH ST. SOUTH GATE



VIEW 1 (RIVERWALK EAST)



VIEW 2 (TYPICAL WETLAND PATH)



VIEW 3 (RIVERWALK WEST)



“The emphasis on the Wall as an inclusive monument for all to experience, visit, and enjoy appears to be growing in popularity...The wall was garrisoned not by toga-draped latin speakers but by a polyglot mix of recruits drawn from around the Roman world. The Roman empire served to allow people, things and ideas to move over great areas and mingle in new combinations. Near Eastern religions from the cult of Mithras to Christianity were brought to the region, while classical gods were fused with local ones. Far from the empty rural and isolated landscape we now see, the military zone of the Wall was an area of thriving activity, economic and cultural innovation and pluralism.”

Hingley, *Hadrian's Wall* (317-318)

Bibliography

Adair, Steve. National Capital Urban Design and Security Plan. Diane Pub Co, 2002.

Blakely, Edward James, and Mary Gail Snyder. Fortress America Gated Communities in the United States. Brookings Institution Press, 2010.

Editors, Phaidon. The High Line. Phaidon Press (UK), 2015.

Ellin, Nan. Architecture of Fear. Princeton Architectural Press, 1999.

France, R. L. Wetland Design: Principles and Practices for Landscape Architects and Land-Use Planners. Norton, 2003.

GSA. The Site Security Design Guide. 2007.

Hammer, Donald A. Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural. Lewis Publishers, 1991.

Hardingham, Samantha, et al. Bernard Tschumi - Parc De La Villette: Supercrit ; Routledge, 2012.

Hingley, Richard, and Rich Hartis. "Contextualizing Hadrian's Wall: The Wall As 'Debatable Lands.'" *Frontiers in the Roman World*, pp. 79–96., doi:10.1163/ej.9789004201194.i-378.22.

Hingley, Richard. Hadrian's Wall: a Life. Oxford Univ. Press, 2012.

Kempen, Ronald van, and Peter Marcuse. Of States and Cities: the Partitioning of Urban Space. Oxford Univ. Press, 2006.

Low, Setha M. Behind the Gates: Life, Security, and the Pursuit of Happiness in Fortress America. Routledge, 2003.

Lozano, Eduardo E. Community Design and the Culture of Cities: the Crossroad and the Wall. Cambridge University Press, 2003.

Marolda, Edward J. The Washington Navy Yard: an Illustrated History. University Press of the Pacific, 2004.

Merridale, Catherine. Red Fortress: History and Illusion in the Kremlin. Picador, 2014.

Military Handbook Design Guidelines for Physical Security of Facilities. 1987

National Archives and Records Administration. A City Torn Apart Building of the Berlin Wall, 2011.

Oudolf, Piet, and Rick Darke. Gardens of the High Line: Elevating the Nature of Modern Landscapes. Timber Press, 2017.

Rael, Ronald, and Teddy Cruz. Borderwall as Architecture: a Manifesto for the U.S.-Mexico Boundary. University of California Press, 2017.

Saddiki, Said. World of Walls: the Structure, Roles and Effectiveness of Separation Barriers. Open Book Publishers., 2017.

The Great Wall of China, Ruby TSAO. Chinese American Forum Volume XXXII, No. 3 - January-march 2017

Travel/holiday.: Walls of freedom: behind ancient ramparts, Lucca preserves the essence of Italian freedom and romance, Cotler, Gordon

Tschumi, Bernard. Cinégramme Folie: Le Parc De La Villette: Paris, Dix-neuvième Arrondissement. Champ Vallon, 1987.

Wang, Fang. Beijing Urban Memory Historic Buildings and Historic Areas, Central Axes and City Walls. Springer Singapore, 2018.

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