ABSTRACT

Title of Thesis: THE OTHER SIDE OF THE TRACKS

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Thesis directed by: Matthew J. Bell, Professor , School of Architecture, Planning and Preservation

Industrial cities depend on the landscape to provide the conditions and resources necessary for their existence. In the process, this industry has eradicated the landscape. This thesis heals this landscape.

Interstate 83 in Baltimore, Maryland epitomizes the affects of contemporary and historical infrastructure on a site. Roads, train tracks and sewers allows for efficient transportation and a measure of control over the elements; yet it does so with little sensitivity to the uniqueness of a place, local physical or historical connections and the natural processes that contribute to the health of people,organisms and landscapes.

This thesis intends to use Baltimore and the I-83 corridor as testing grounds to assess and address issues present in a post industrial age of machines. This thesis analyzes aging industrial cities by proposing connections, defining edges, re-integrating natural processes and revealing the unique potential embodied in a place.

THE OTHER SIDE OF THE TRACKS

By

Angelo Pirali

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
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Advisory Committee:
Matthew J. Bell, Chair
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Brian Kelly

Dedication

Dedicated to Yavona, Ariana and Carmen Alicia. The loves of my life.

Acknowledgements

I would like to thank Professors Bell, Kelly and Koliji for their insight, expertise, understanding, wisdom and passion.

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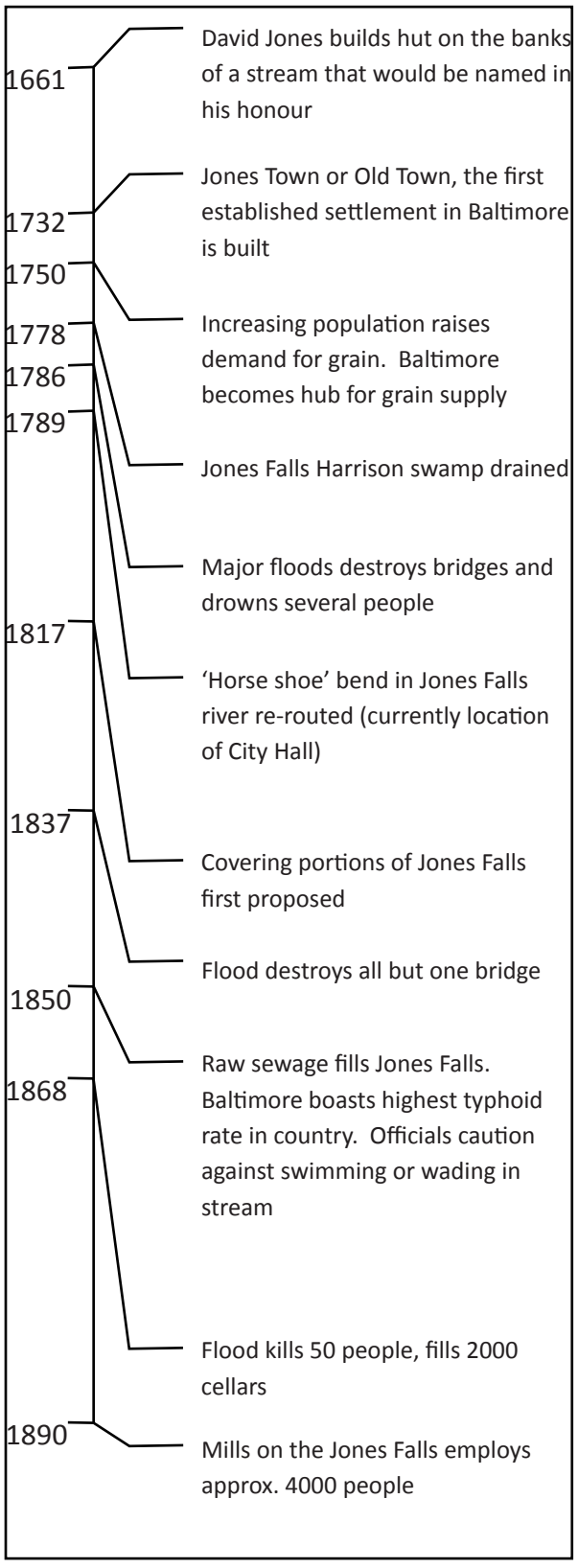

Fig. 01 - Jones Falls Timeline 1661-1900

1.1 - The Past

The Jones Falls Stream has always shaped the development of Baltimore. The very first colonial settlement in the vicinity of Baltimore was built on the banks of the Jones Falls just outside of the flood plains of the Harbour. Over time, the periodical flooding and impact of the Jones Falls forced the burgeoning city to begin to change the nature of this river and its' relationship to the people living on its' embankments. Swamps were drained and parts of the river were re-routed in order to lessen the destructive impact of the river. This river, however, paradoxically provided the means of sustenance for much of the region.

This sustenance came in the form of mills. Much of the region's grain was brought to Baltimore, which boasted not only a major inland port, but substantial

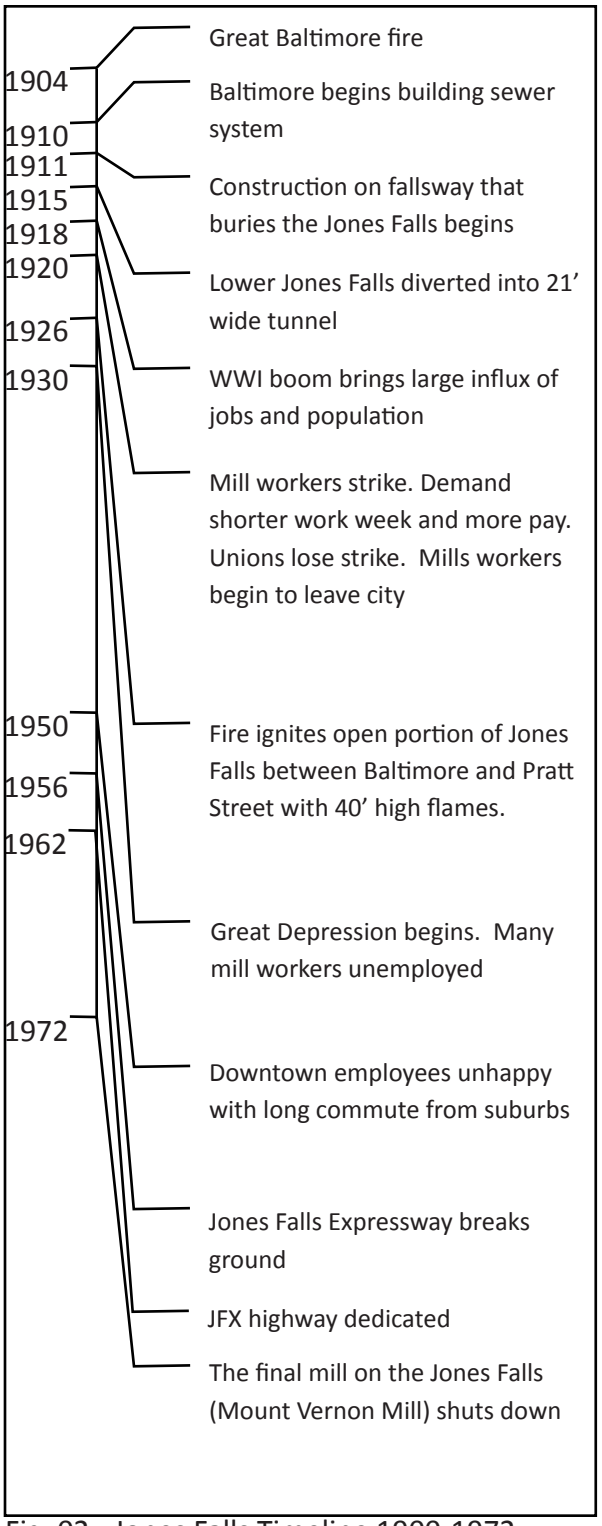

Fig. 02 - Jones Falls Timeline 1900-1972

river falls that fuelled the mills. The thoroughfare of the river was quickly joined by the thoroughfare of train tracks. These train tracks paralleled the river and ran from the city docks at the harbour to mills and regions far north of the city. The railroads could swiftly transport the raw grain to the mills and the processed grain back to the docks.

Baltimore's development and rise as an industrial city attracted workers to the region and as the mills began to accommodate cotton and other products, the city's population grew. Growth around the river was inevitable as were the disasters when the river overflowed. From 1786 to 1904 a series of disasters that included floods, fires and the spilling of raw sewage into the river caused the city to drain swamps and re-route the river.

The river as an amenity was obviously not in the minds of the

Fig. 03 - View from Biddle Street

Fig. 04 - Jones Falls 1904

Fig. 05 - View of Fulton Street - 1910

population at this time. In fact, other than being used as transport and power for the mills, the falls was seen as a blight. Its' use as an open sewer led to many diseases and at one point, Baltimore boasted the highest typhoid rate in the country. Until the mid 1900's, anyone who fell into the Jones Falls was given an immediate vaccination.[1]

As a result of this rampant disease, Baltimore began building a sewer system in 1910. Almost simultaneously, construction began on a fallsway that would cover parts of the Jones Falls. The fallsway diverted the river into 21' wide tunnels designed to contain and reduce flooding.

As World War I required the country to produce goods to fuel the war effort, Baltimore again saw an influx of people to work the mills and industry in the city. At this point in the history of the

1 Roylance, Frank D., "Troubled Waters: The Sad Fate of the Jones Falls" The Baltimore Sun, 17 March 1991

city, the relationship between the Jones Falls and its' site was very different from the environment that David Jones encountered when he built his hut. By this time, no one in Baltimore could recall how the site had appeared in its' relative virgin state.

It has been recorded that the Jones Falls stream valley was a place of abundance and that it "...once held so much life that dolphins were drawn there to feed". The waters were once navigable up to the 'horse shoe' where City Hall and its' square now stand. This was described as "...a good place to swim and catch crabs..."[2] In 1950, due to the open sewage and petroleum fumes, fires raged on an uncovered portion of the Jones Falls with flames climbing as high as 40 feet. What had once been a valuable source of drinking water now spawned typhoid and what had once been an economic boon, was now an environmental bane.

The successive events of a defeated mill worker strike and the Great Depression began the exodus of the mill workers from Baltimore. Workers of a different kind, who

2 Roylance, Frank D., "Troubled Waters: The Sad Fate of the Jones Falls"

Fig. 06 - Map of Baltimore - 1700
(Source: History Map website - http://www.history-map.com/picture/000/Baltimore-1700s-the-in.htm)

Fig. 07 - Demolished Bridges

had moved out of the city to the suburbs, now complained of the long commute to Baltimore's downtown district. A long commute coupled with the city's historical attitude toward the stream led to the construction of the Jones Falls Expressway.[3]

Hoping to shorten the commute between suburb and city and proposing to cure what Calvin W. Hendrick, chief engineer of the city sewer commission called "one of the greatest eyesores a city ever had to endure", the city council proposed an elevated highway, covering the falls way from Baltimore Street to Mount Royal and burying the river until it spilled into the inner harbour.[4] This marked a complete severing of the relationship Baltimore had with its' beneficent river. The covering of this stream valley also marked the destruction of many historic bridges and the removal or deactivation of the train lines that ran parallel to the river.

Beginning in the 1950's, Baltimore's Inner Harbour began to be re-imagined as a tourist attraction and a hub for commercial activity. The sudden rise of the Inner

3 Kelly, Jacques, "JFX is a Long Stretch of History," The Baltimore Sun, February 7, 2009.

4 Roylance, Frank D., "Troubled Waters: The Sad Fate of the Jones Falls"

Harbour along with the confluence of events such as a shift in the type of worker required at the Harbour, suburban flight and federal government initiatives espousing interstate development led to the introduction of Interstate 83 (I-83) as a quick and efficient route into and out of the harbour.

Having never considered the Jones Falls stream valley as something precious and worth preserving, the river was converted to a completely mechanical construct denying the existence of its' namesake. Stream valleys are very accommodating for transportation infrastructure. It is more expensive to build over hills and undulating land. Stream valleys often offer the opportunity for gentle slopes on broad alluvial plains and the historical development and difficulties of alluvial plains contribute to undeveloped air rights above stream valleys and next to large water bodies. The difficulty of introducing arterial streets into existing urban fabric can be problematic. In established cities, streambeds became very attractive for freeway development. Many American and industrial cities have, are or will deal with the future development of land that has been dedicated to industry and transportation.

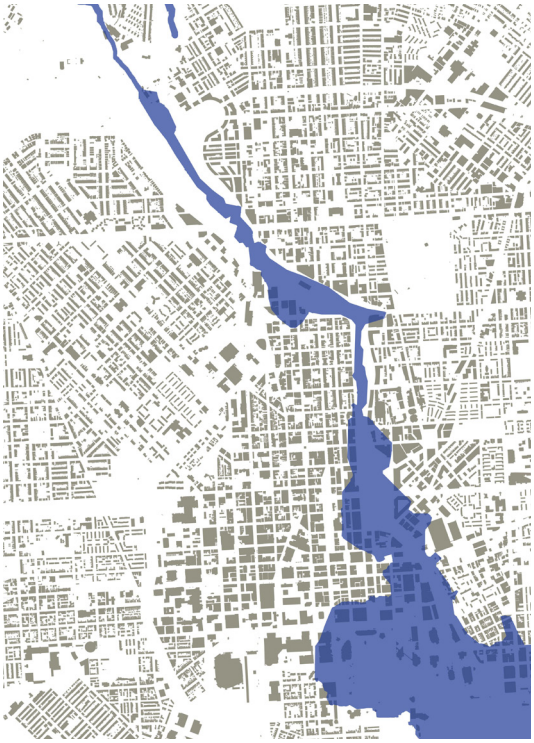

Fig. 08 - Baltimore Floodplains
(Source: Author)

In 1904 the Olmsted Brothers Landscape Architects issued the *Report Upon the Development of Public Grounds for Greater Baltimore.* They understood the

continued growth of cities would cause parks and undeveloped land outside city limits to become scarce. They argued there would be a desire and need for park land that is nearby and accessible to city dwellers. The existing park system in cities were finite and not sufficient for denser future populations. Furthermore, they asserted the allocation of park land was similar to the allocation of resources for a police force of a growing population. They advocated for the Jones Falls to be converted into a park similar to that of the Emerald Necklace in Boston. If executed, the park would have been second in scope only to the aforementioned Emerald Necklace. The Jones Falls was the natural site for one of these parks because of its geographic location as a valley and tributary to the Bay.[5] The Olmsted Brother's suggestion was not heeded. The Jones Falls Expressway was eventually built and a highway took the place of a park.

The Olmsted Brother's predictions for Baltimore have come true in a sense. The scarcity of surrounding landscapes has come to fruition but the density he envisioned for cities is not always the cause. Facilitated by the rise of the automobile, sprawl and suburban flight much of the undeveloped land around cities was gobbled up while contributing to a dip in the density of the city. The historical and modern methods of development have destroyed society's perception of natural processes and as was the case almost immediately after the first human settled on the banks of the Jones Falls, eliminated a sense of place.

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5 Olmsted, Frederick Law and John Charles Olmsted, *Development of Public Grounds for Greater Baltimore. Walsworth Publishing Company*, 1987.

1.2 - The Present

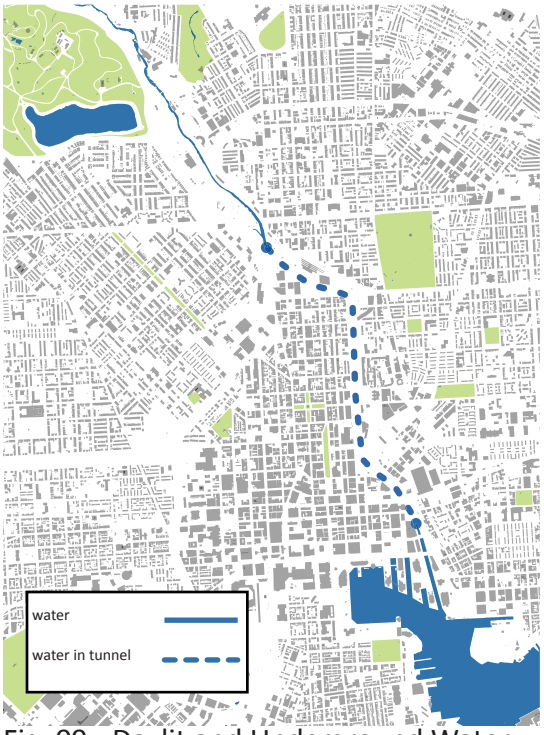

Fig. 09 - Daylit and Underground Water
Source : Author

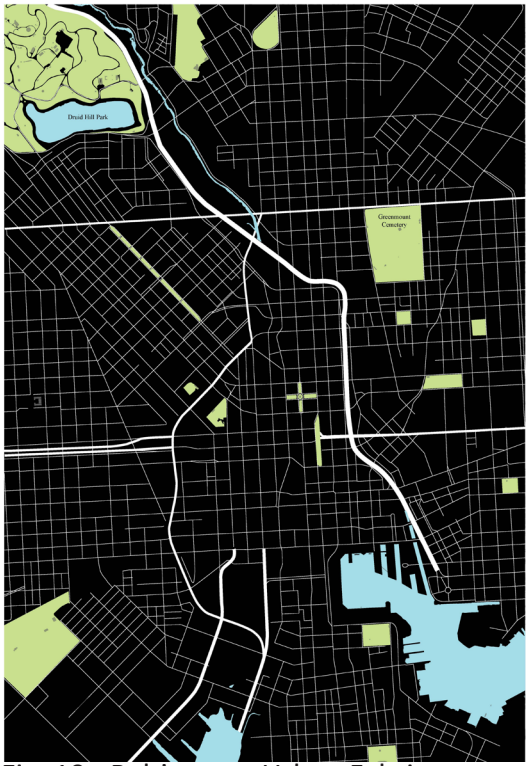

Fig. 10 - Baltimore - Urban Fabric
Source : Author

The Jones Falls and Urban Form

Today the Jones Falls is a neglected part of the city. Connections to it are tenuous and meagre. Just south of North Avenue, the falls flows into a tunnel. It does not emerge again until the Inner Harbour.

Also prevalent are occasional diagonal streets that slice through the grid that dominants the rest of the city. In many of these diagonals, the collisions of the divergent grids are not clearly resolved and the results are ill defined spaces at these edges. While not a diagonal, the Jones Falls is one of these edges and the walls of the Jones Falls Expressway/Stream Valley are also ill-defined. Some of the diagonals are in response to the Jones Falls. These streets are sometimes oriented perpendicular to the Falls, most likely as away to move good easily to and from the river.

Fig. 11 - Existing Edges on the Falls Valley
Source : Author

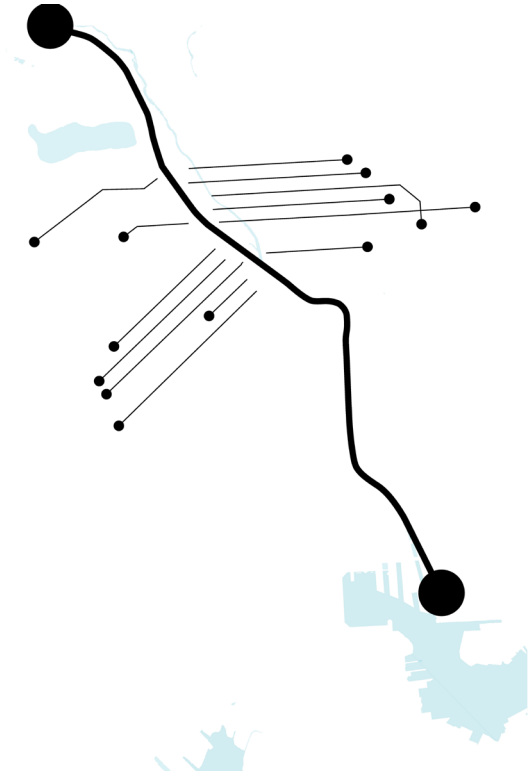

Fig. 12 - Connection Implications
Source : Author

The expressway provides an efficient means of travel in the north-south direction; however, it has the opposite effect in the east-west direction. Connection over and under the expressway in the east-west direction is much less efficient and experientially the expressway is a very divisive element. The elevation of the expressway is rarely on grade with the rest of the city. The abrupt change in section caused by the freeway being either depressed or raised above grade leads to urban spatial conditions that separate and isolate neighbourhoods.

There is strength in the Jones Falls as a generator of urban form but the history of the stream ensures that there no significant urban spaces on the Fallsway. It is a void that divides the city. Additionally, there is little vegetative space in the center of the city and the only other significant area of open space other than Druid Hill Park in this portion of the

Fig. 13 - Baltimore - Figure Ground
Source : Author

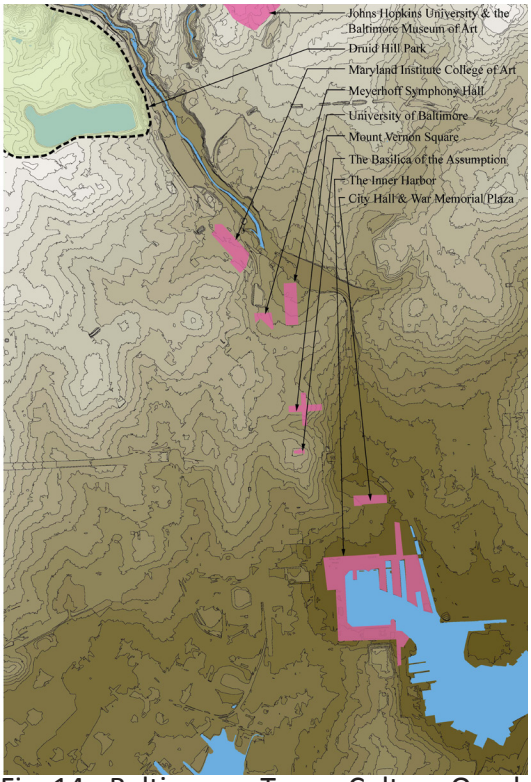

Fig. 14 - Baltimore - Topo - Culture Overlay
Source : Author

city is Greenmount Cemetery. What little vegetative spaces exist are disconnected and isolated.

Baltimore is located in the piedmont geological region. The piedmont is usually characterized by rolling hills, which are the remains of ancient mountains that have been eroded away. Buildings are generally located on the plateaus surrounding the water with the most significant cultural spaces lying on the ridge line east of the river valley.

Fig. 15 - Street and water relationship
Source : Author

Fig. 16 - Baltimore - Topography with buildings
Source : Author

The conditions in an around the Jones Falls are varied. Druid Hill Park boasts expansive open spaces and a reservoir. There is an incredible amount of topography from the reservoir down to the banks of the Jones Falls Valley. The connection between the Druid Hill Park and the valley is disconnected by the Jones Falls Expressway and the light rail tracks that travel next to the stream.

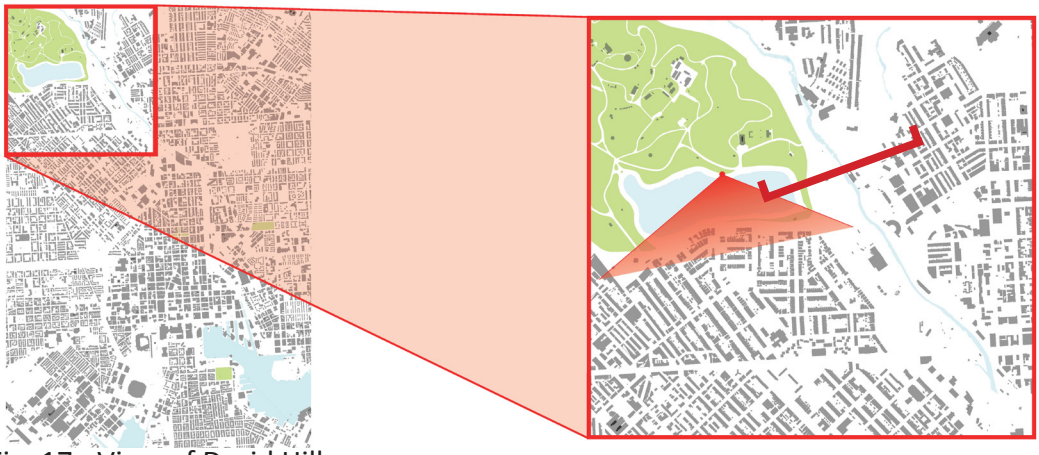

Fig. 17 - View of Druid Hill
Source : Author

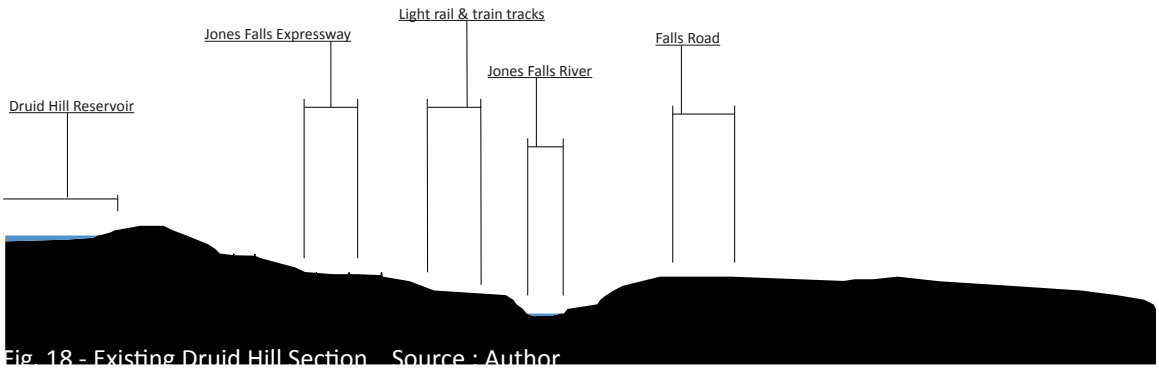

Fig. 18 - Existing Druid Hill Section Source : Author

The view of Baltimore upon exiting Penn Station is under whelming. The new University of Baltimore Law building under construction directly across from the entrance starts to create a focal point for travellers exiting the station. There is a palpable sense of disconnection with the city as many of the buildings seem far away. There is neither an urban space nor a sense of architectural character to welcome travellers to Baltimore.

The train station sits on a plinth or island that houses parking to the south and elevated above the valley that separates Charles North, Bolton Hill and the Mid-Town

Fig. 19 - View exiting Penn Station
Source : Author

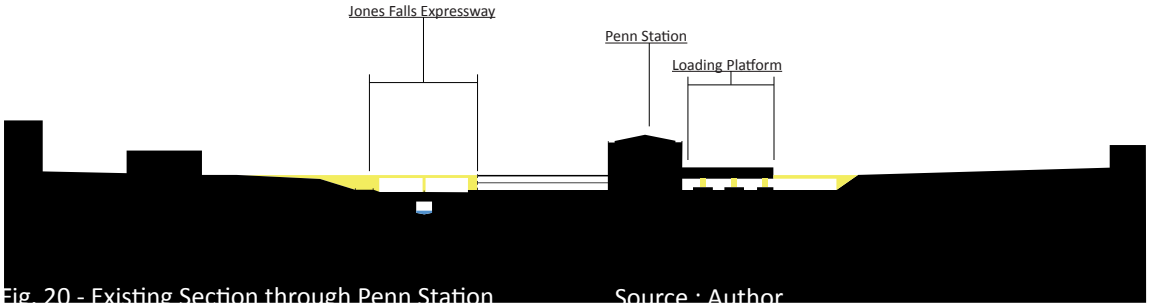

Fig. 20 - Existing Section through Penn Station Source : Author

Belvedere neighbourhoods. The acreage given over to the train yard and the Jones Falls Expressway is significant.

In the former river valley transformers, I-83, the light rail tracks and the train yard all occupy significant amounts of land in the city. While access usually equals value, the access that I-83 and the train station bring to this location is not exploited. Buildings such as parking garages abut the interstate and much of the urban fabric on the edge of the expressway is ragged and ill-defined. Parking lots are abundant, as are low rise buildings on the edges of the valley while transformers, I-83, the light rail tracks and the train yard occupy the valley floor.

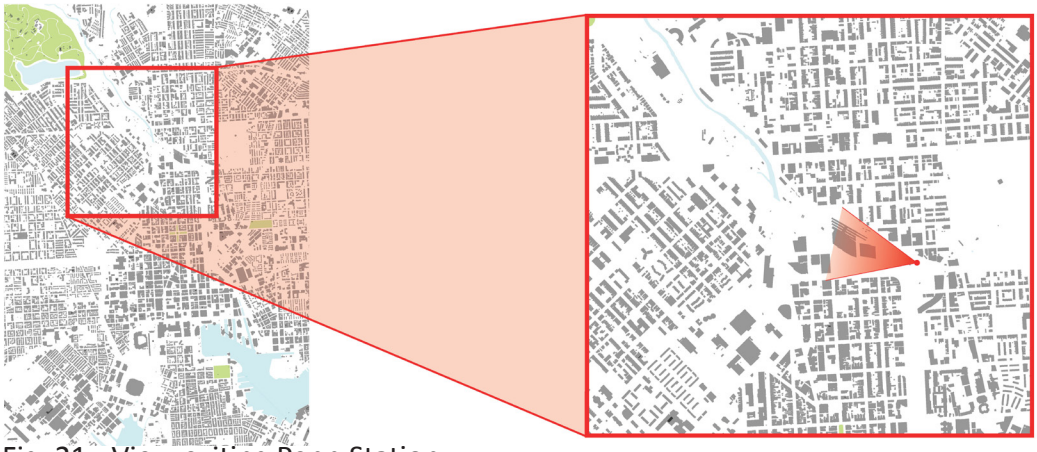

Fig. 21 - View exiting Penn Station
Source : Author

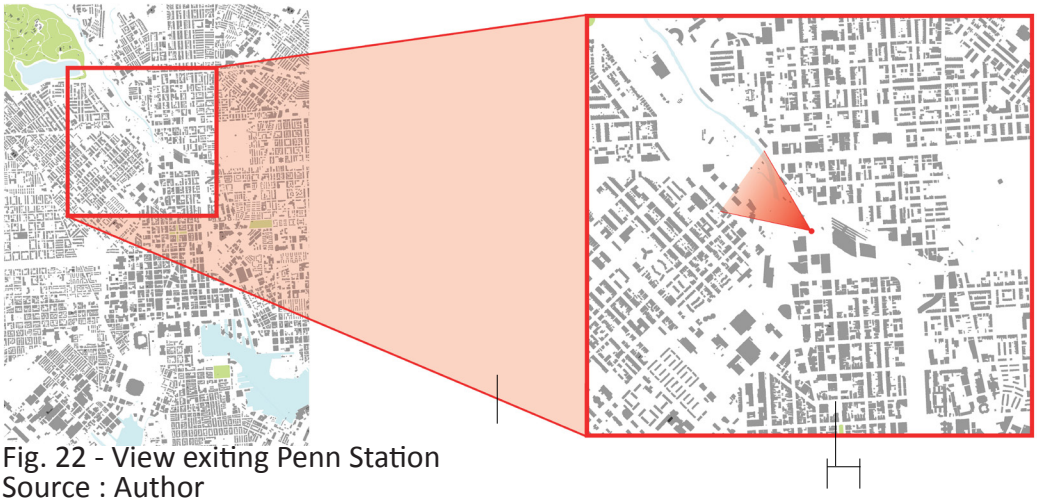

Fig. 22 - View exiting Penn Station
Source : Author

The expressway is elevated in the Mount Vernon Square and the Penns-Fallsway neighbourhoods. This allows roads aligned east and west to pass underneath. The expressway, however, is still an imposing divider between the neighbourhoods to the east and west of it. The change in grade from the Washington Monument down to the Fallsway is significant. Slightly south of this section exists the location of what is referred as the 'Market under the bridge'. On Sundays, a lively farmers market opens under the expressway.

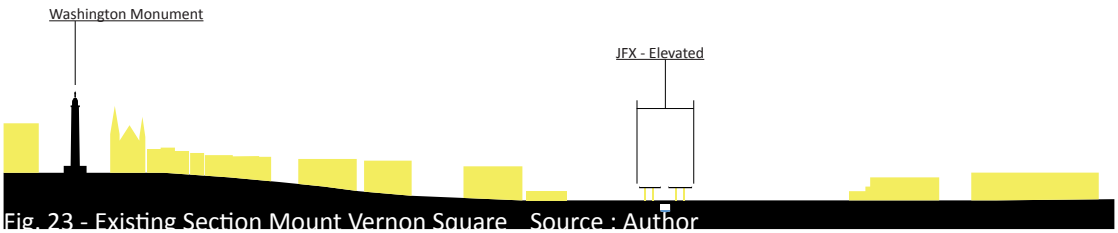

Fig. 23 - Existing Section Mount Vernon Square Source : Author

Fig. 24 - View below street level of train tracks
Source : Author

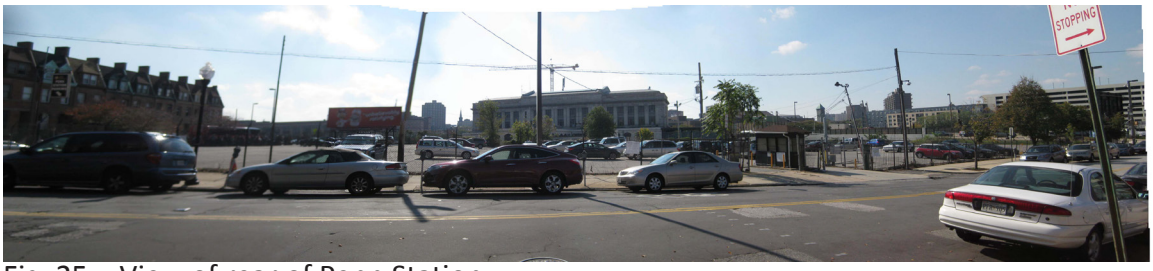

Fig. 25 - View of rear of Penn Station
Source : Author

1.3 - The Future

The form and nature of the stream valley, the Fallsway and the highway create many problems that are unique to place, however, are not unique in concept. Many cities have problems addressing their waterfront and recognizing the opportunities that lie therein. This recognition is further hampered by historical uses of a place's amenities. Recently many cities have begun to reconsider their relationship to water. Following the 1972 Clean Water Act, many municipalities had to consider technical methods to cleanse the waste produced by their citizens. Presently, the Clean Water Act is pushing a more ecological agenda. The Clean Water Act hopes to change the traditional harbour from a port to a "living estuary".[6] Its motivations now include healthy flora and fauna in addition to the local and visiting population.

One of the obstacles in the way of this agenda is the "industrial wall" that has been traditionally present at the water's edge.[7] The problems outlined in the history of the Jones Falls occurred to a greater or lesser extent in many industrial cities. In studying the Jones Falls site and other cities with similar conditions, these problems can be broken down into four interrelated categories: the denial of natural processes, a lack of edges, a lack of places and the paradox of connectivity.

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6 Gastil, Raymond W. *Beyond the Edge: New York's New Waterfront.* New York, NY: Princeton Architectural Press, 2002.

7 Ibid, 35.

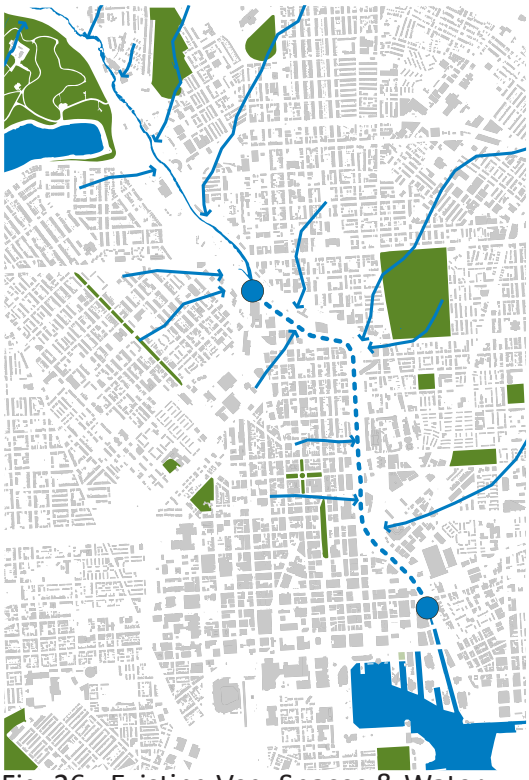


Fig. 26 - Existing Veg. Spaces & Water
Source : Author

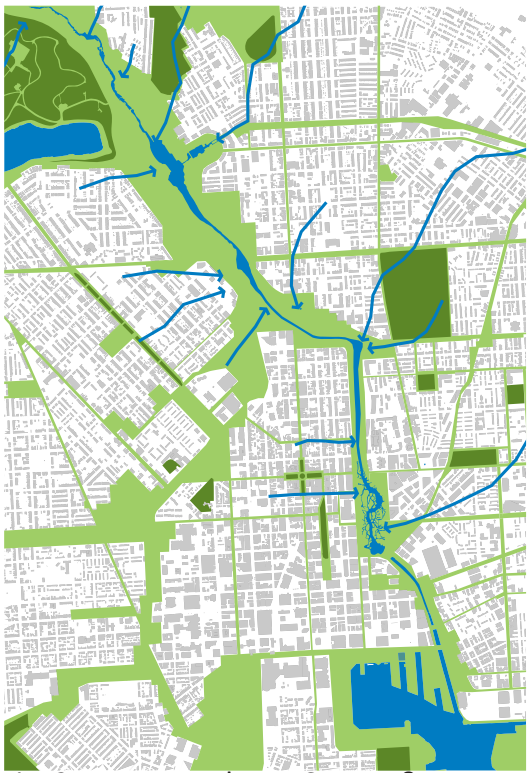


Fig. 27 - Proposed Veg. Spaces & Water
Source : Author

The Denial of Natural Processes

Natural processes are limited due to disconnected vegetative spaces along with a disproportionate amount of impervious to pervious surfaces lead to large amounts of overland water flow. Connecting these spaces through corridors which layer hardscapes over rain gardens allows for the infiltration of water locally, but also directs water to larger catchment areas where infiltration and sedimentation can happen at a larger and more visible scale.

Research also shows that a green city, that is cities with highly accessible parks and green space, are healthy cities. These cities boast fewer rates of obesity and stress levels. [8]

8 Beatley, Timothy, *Biophilic Cities: Integrating Nature into Urban Design and Planning*. Washington D.C.: Island Press, 2011.

Fig. 28 - Existing Edges
Source : Author

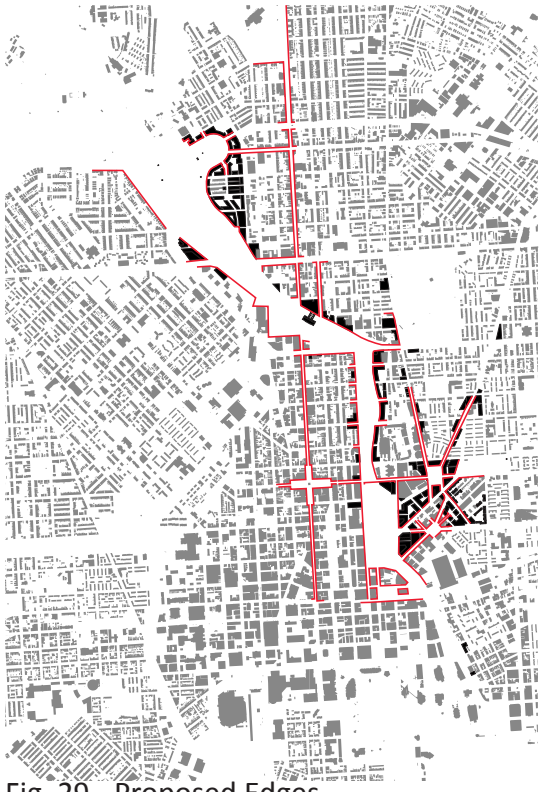


Fig. 29 - Proposed Edges
Source : Author

The Lack of Edges

The use of the river valley as an industrial site precludes the existence of strong edges. An industrial landscape is typically seen as a dirty landscape therefore an urban form was not desired. Societal attitudes toward this landscape has been one of hiding and camouflage rather than celebration.

By freeing the traditionally industrial river valley from the industrial built forms, strong edges can be used to clarify and organize the urban context. This creates place at two scales: the neighbourhood and the city.

Fig. 30 - Existing Connections
Source : Author

Fig. 31 - Future Connections
Source : Author

The Lack of Place

The framework created by clarifying the edges along the Jones Falls river valley gives rise to proposed places that serve as a counterpoint to the existing spaces.

The existing and proposed spaces straddle the newly created swath of useful land in the river valley. The river valley itself becomes an emphatically important and integral element in the city and serves to re-center the city.

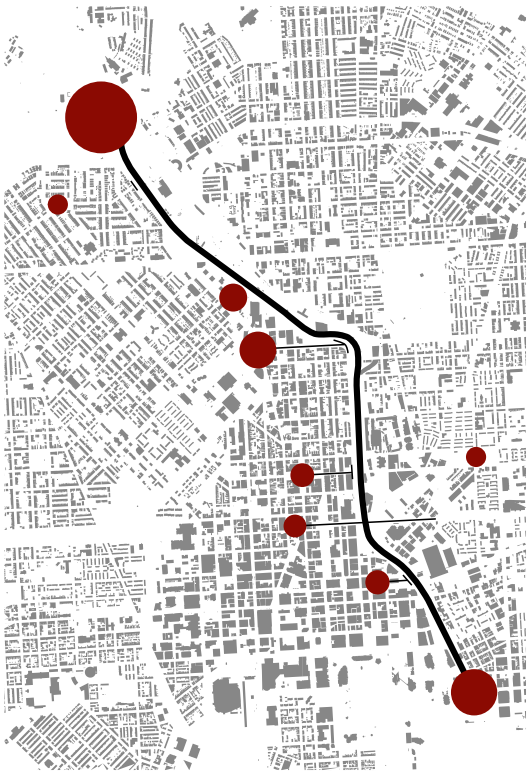


Fig. 32 - Existing Connections
Source : Author

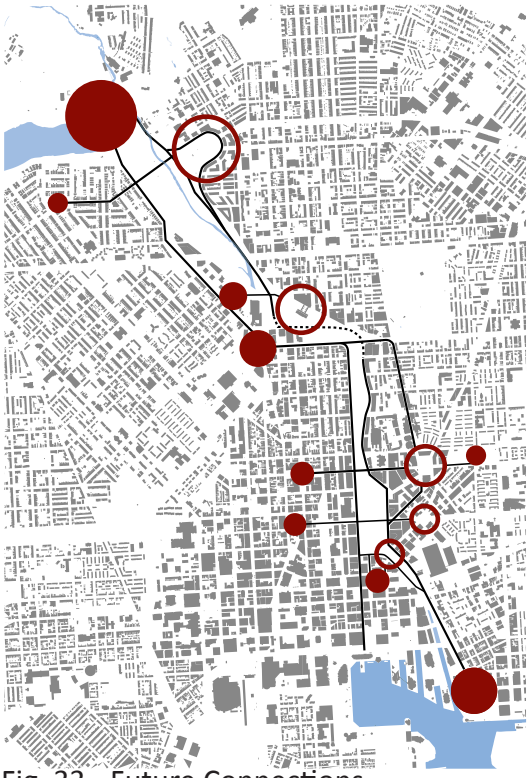


Fig. 33 - Future Connections
Source : Author

The Paradox of Connectivity

The paradox of connectivity lies in the contemporary design of infrastructure. I-83, like many high speed thoroughfares, connects places in one direction while dividing places in the other. This idea gained favour due to the periodic flooding of harbours and rivers and though society desire to be at its edge to take advantage of its potential for transportation, energy and industry. The danger as well as the convenience of proximity to water tended to push industrial functions onto the waterfront zone and lead society aiming for ways to control the landscape. The resultant disconnect has led to a severance and sometimes annihilation of relationships to water.

With much of the previous industry leaving cities, there is great potential to reconnect numerous local places with multiple routes, experiences and modes of transportation.

Chapter 2: Precedent Analysis

The following precedents were chosen because of their relationship to the problems facing industrial cities. Many other precedents were looked at, however, these two were especially suitable due to their divergent premises.

The Cheonggyecheon River Restoration provided a means of urban overhaul that returned to an almost primordial state while the Seattle Olympic Sculpture Park provided a means of integrating and embracing of the existing industrial landscape.

2.1 - The Cheonggyecheon River – Seoul, South Korea

The situation of the Cheonggyecheon River is remarkably similar to that of the Jones Falls. Like the Jones Falls, the Cheonggyecheon River was historically basic infrastructure around which Seoul was structured. The river valley was also surrounded by hills that became the basis for the urban orientation and location of the city. Joan Busquets posits that the condition of the Cheonggyecheon River was not at all unique:

> The city's foundational relation with its geography seems to respond to a universal concept, the prototypical "valley section" that Patrick Geddes posited a century ago. He reminds us how civilization evolves in its valley position according to the dominant activities of each age, from nomadism to fishing, to farming and then to urban life; its situation in the valley evolves with the way people settle and live. The stream presents water as a way for the settlement to grow, leading to districts along its tributaries. Later, growth calls for more stable means of provisioning, and the stream becomes important for complementary activities such as washing, drainage, etc. In addition flood prevention measures tend to increasingly separate the stream from the activities carried out in its immediate surroundings. [9]

9 Busquets, Joan, Olympic Sculpture Park for the Seattle Art Museum. Cambridge, MA: President and Fellows of Harvard College, 2008.

Fig. 34 - The Cheonggycheon River - Before and After
Source : Busquets, Joan, *Deconstruction/Construction: The Cheonggyecheon Restoration Project in Seoul*. Cambridge, MA: President and Fellows of Harvard College, 2011.

Continuing the parallel path of the Jones Falls and the Cheonggyecheon River was the construction of a highway over the stream between 1956 and 1970. Infrastructure was constructed along the river furthering the disconnect between the city and the river and beginning a "process of superimposition of different specialities (water, sewerage, and private and segregated transport) that have little potential for introducing a new dialogue with the city and surrounding activities." [10]

The Cheonggyecheon Restoration Project seeks to "redesign the stream as an urban space that is capable of addressing hydraulic issues and infrastructure of all kinds, as well as constructing a fragment of the city's system of natural spaces."[11] It achieved this by removing the raised highways that existed above the stream and day-lighting the river beneath. The newly revealed stream was treated as a wide avenue. This avenue ranges from 131'-0" to 262'-0" in width and is depressed 6'-0" to 20'-0" below the perceived level of the city. The phased deconstruction and construction of this new

10 Busquets, Joan, Deconstruction/Construction: The Cheonggyecheon Restoration Project in Seoul. Cambridge, MA: President and Fellows of Harvard College, 2011.

11 Ibid, 8

Fig. 35 - Cheonggyecheon River over time
Source: Busquets, Joan, *Deconstruction/ Construction: The Cheonggyecheon Restoration Project in Seoul*. Cambridge, MA: President and Fellows of Harvard College, 2011.

swath of streambeds and terraces are connected to the perceived level of the city by ramps and bridges.

The complicated process involved the integrating of rainwater, sewerage, storm water and connections across streets as well as organizing a multi-level system that would separate and sponsor various uses. The intervention places less emphasis on the automobile and mass transit systems by rendering them invisible through sectional solutions.[12] The project hopes to phase the various stages of the project to eventually landscape the perceived level of the city. This should eventually suggest a more gradual transition to the depressed portion of the intervention.

12 Busquets, Joan, *Deconstruction/Construction: The Cheonggyecheon Restoration Project in Seoul*. Cambridge, MA: President and Fellows of harvard College, 2011.

2.2 - Seattle Olympic Sculpture Park - Seattle, Washington

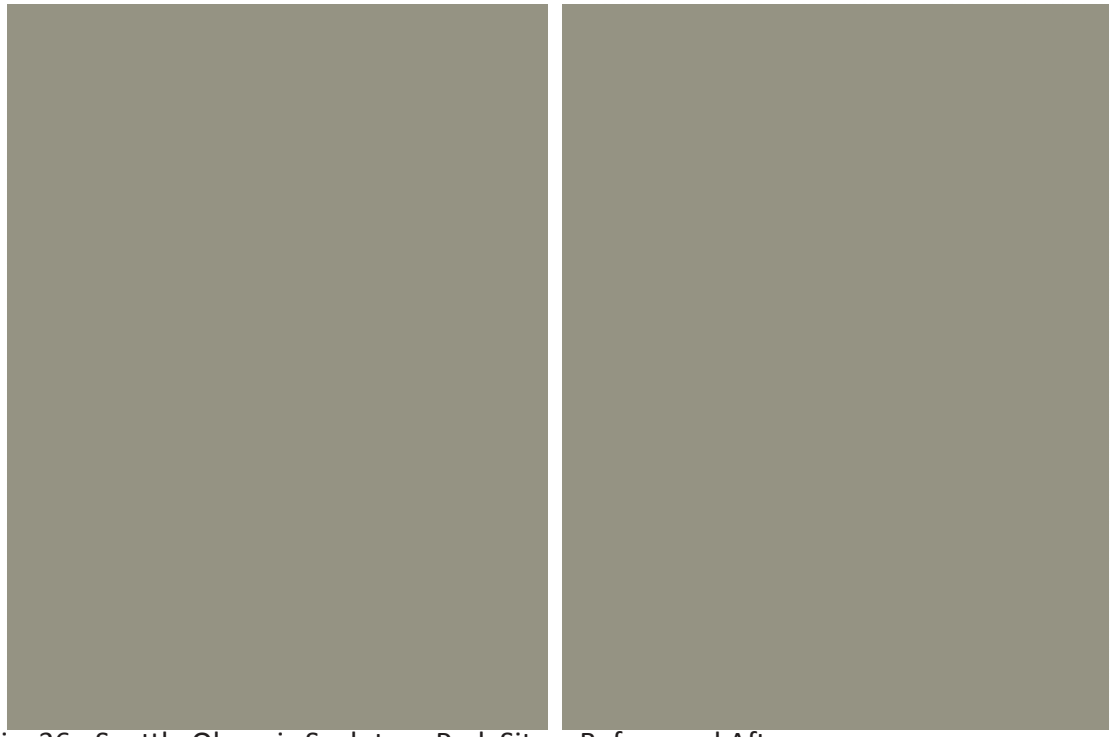


Fig. 36 - Seattle Olympic Sculpture Park Site - Before and After
Source : : Busquets, Joan. *Olympic Sculpture Park for the Seattle Art Museum: Weis/ Manfredi*. Cambridge, MA: President and Fellows of Harvard College, 2008.

The Seattle Olympic Sculpture Park reconnects the city to the waterfront by bridging over a highway and train tracks. It does this without hiding either of the lines of transportation. Additionally, it reconnects pedestrians to Myrtle Edwards Park, which runs along the shore to the north (Figure 43). By utilizing strong geometric clarity and providing visual connections to the bay and Mount Rainier the bridge connects pedestrians locally and regionally. The bridge gets pedestrians to the waterfront over what was previously industrial land, but it also makes regional connections by taking advantage of the topography to create vistas to landmarks.

The firm Wiess/Manfredi recognizes that "…infrastructure and its independence from the city is a pending issue in most cities and one that requires close attention"[13]

13 Busquets, Joan, *Olympic Sculpture Park for the Seattle Art Museum*. Cambridge, MA: President and Fellows of Harvard College, 2008.

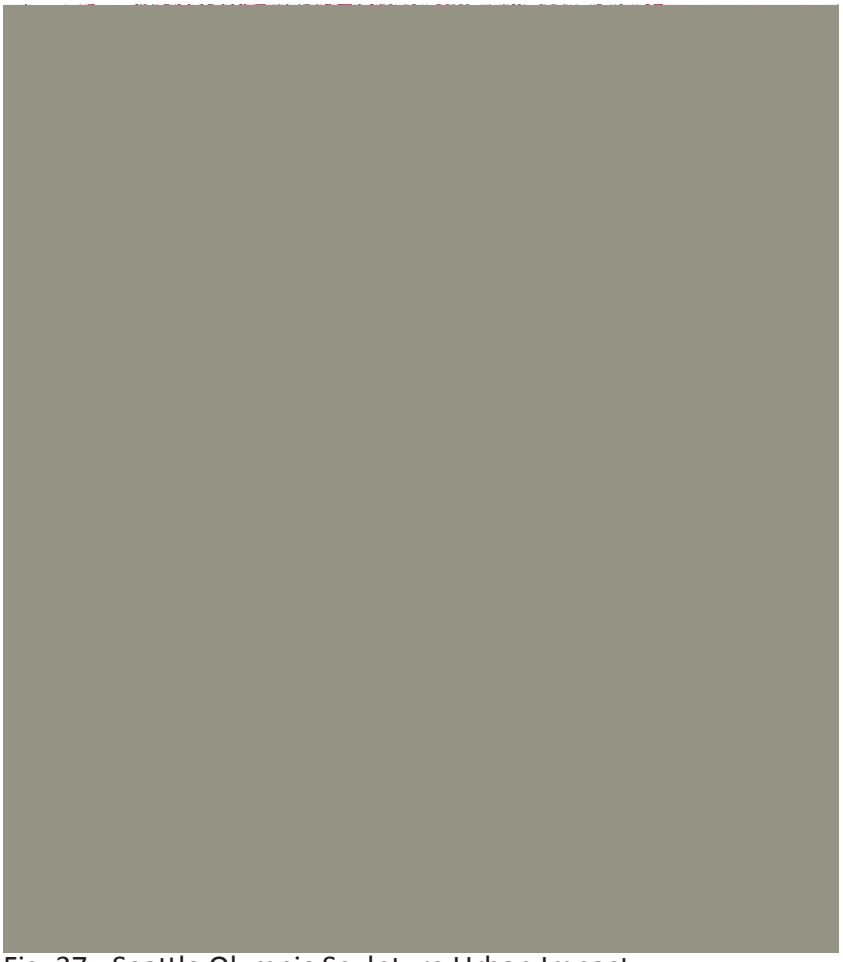


Fig. 37 - Seattle Olympic Sculpture Urban Impact
Source: Busquets, Joan. *Olympic Sculpture Park for the Seattle Art Museum: Weis/ Manfredi*. Cambridge, MA: President and Fellows of Harvard College, 2008.

The sculpture garden recognizes the importance of water in present day cities and how attitudes are changing in regard to addressing waterfronts. Connections are desired where infrastructure currently exists. This infrastructure was located near water because in many cases these spaces were "interstitial spaces or city edges…" that allowed for "…greater ease of implementation."[14]

Rather than ignore the presence of the infrastructure, this project sought to incorporate the highway and the rail into its sequence of spaces so that visitors are

14 Busquets, Joan, *Olympic Sculpture Park for the Seattle Art Museum*. Cambridge, MA: President and Fellows of Harvard College, 2008.

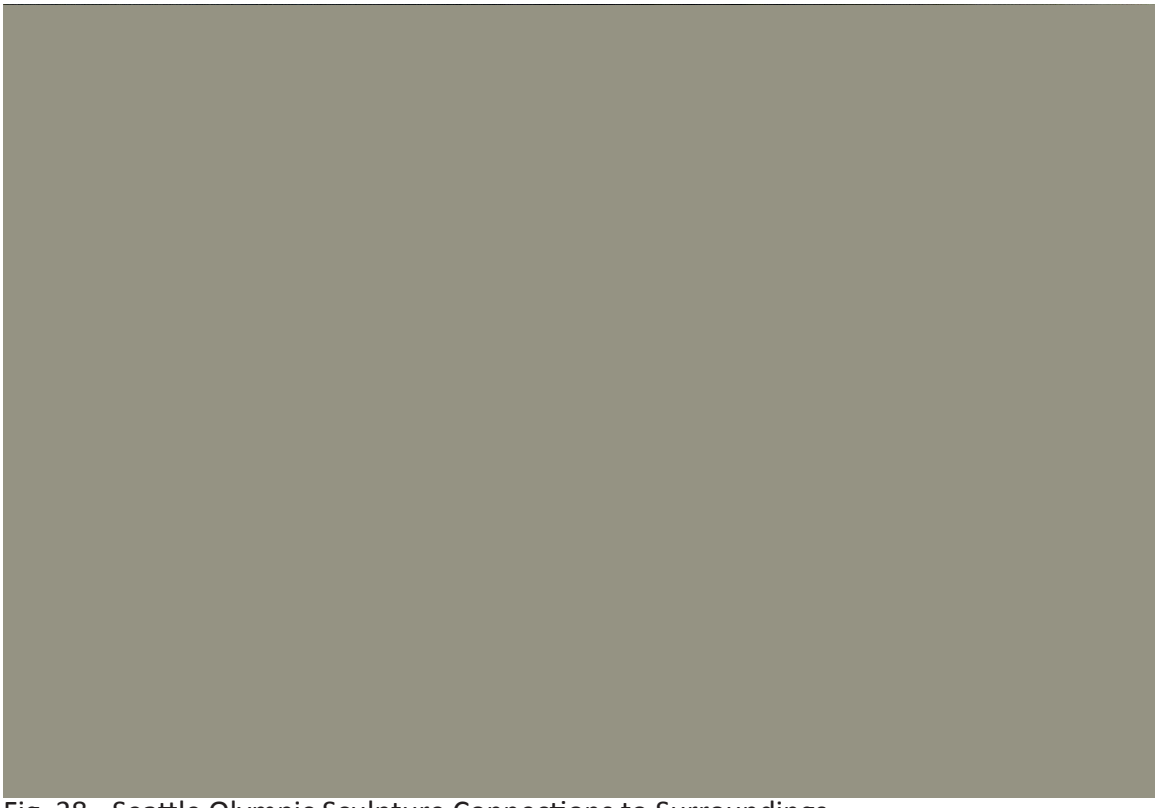


Fig. 38 - Seattle Olympic Sculpture Connections to Surroundings
Source: Busquets, Joan. *Olympic Sculpture Park for the Seattle Art Museum: Weis/ Manfredi*. Cambridge, MA: President and Fellows of Harvard College, 2008.

aware of the role this infrastructure plays in the city. The connections that the project fosters is not just a physical one but something more intangible and transcendent in connecting to far away natural landmarks, the local waterfront, the historic land use (the existing infrastructure) and the newly constructed museum. The design also re-imagines the shoreline and introduces a series of systems that mitigates and purifies water before it reaches the bay.

> Throughout the park landforms and plantings collaborate to direct, collect, and cleanse storm water as it moves through the site.
> A system of water management and remediation is integrated into the design of the park. The planes of the pavilion's roof are contoured to direct runoff into a scupper, and the site's slopes further direct runoff. Deep rooted grasses at the base of the slopes form bio-swales that cleanse runoff and prevent erosion. Where contaminated runoff was previously conveyed to a treatment plant 6 miles away, the current design collects runoff to irrigate the new shoreline landscape.
> The shoreline features an 800 foot long stretch of newly reinforced

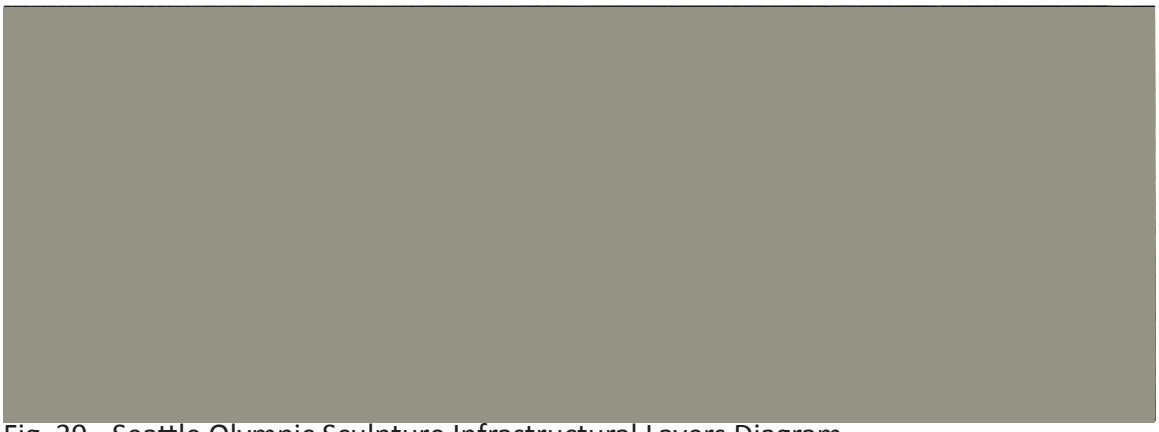


Fig. 39 - Seattle Olympic Sculpture Infrastructural Layers Diagram
Source: Busquets, Joan. *Olympic Sculpture Park for the Seattle Art Museum: Weis/ Manfredi*. Cambridge, MA: President and Fellows of Harvard College, 2008.

> seawall as well as a new beach with aquatic terraces. To stabilize the existing seawall, a buttress of riprap – more than 50,000 tons of rock – as installed along the coastline that provides new habitats for algae, sea kelp, crustaceans, and salmon. The new shoreline, beach, and tidal terraces establish the only habitat of its kind in Seattle's urban waterfront.[15]

The introduction and expansion of these man-made 'natural' systems in the project perhaps begin to provide the grounds for a return of natural systems and habitats that were previously unsupported by the industrial developments. While a return to a virgin state is impossible, the project suggests that urban interventions can begin to re-create a facsimile of systems that not only serve the human beings that occupy the site but also native species that depend on specific ecological balances in order to thrive. This precedent recognizes that urban design can acknowledge the importance of a genius loci as well as historical developments on a site while simultaneously imposing a new form and process in an intervention.

15 Source: Busquets, Joan. *Olympic Sculpture Park for the Seattle Art Museum*: Weis/Manfredi. Cambridge, MA: President and Fellows of Harvard College, 2008.

Chapter 3: Design Approach

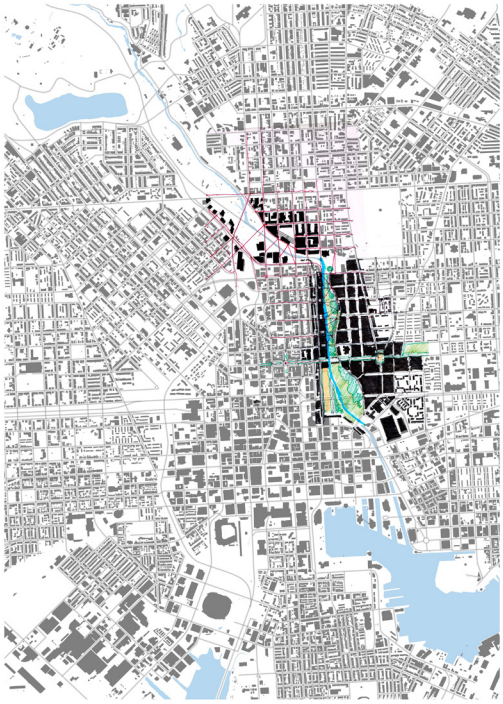


Fig. 40 - City Scale Scheme - Option A
Source : Author

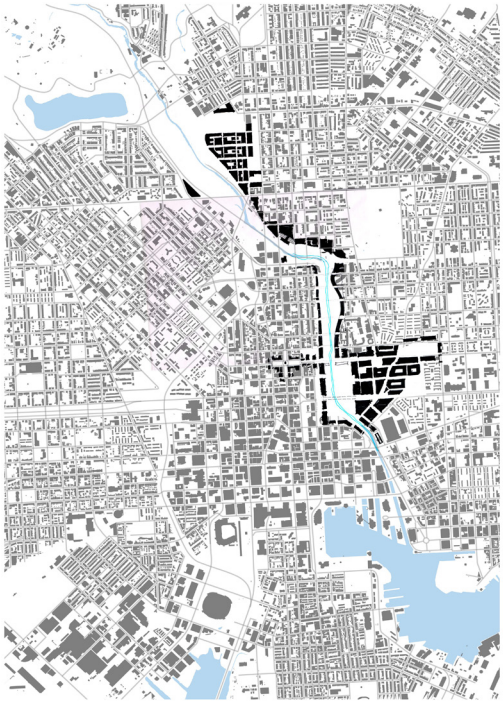


Fig. 42 - City Scale Scheme - Option B
Source : Author

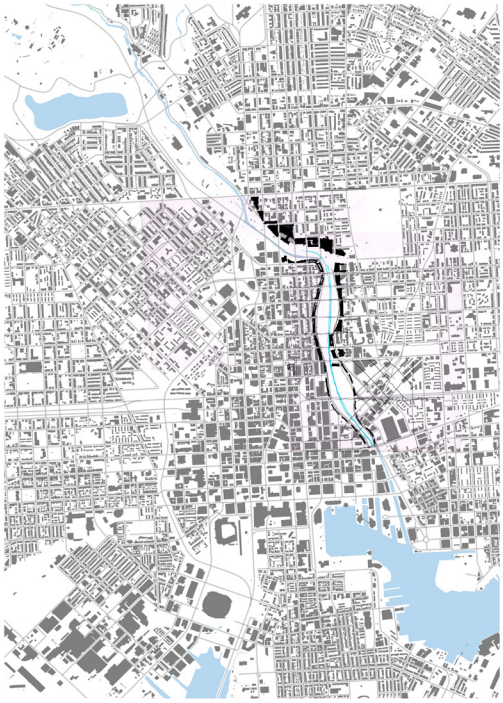


Fig. 41 - City Scale Scheme - Option C
Source : Author

The approach was not linear. There were many missteps, reconsiderations and cyclical processes. A constant questioning and re-framing of perspective was required. Assumptions were tested, discarded and then reconsidered. Solutions considered inappropriate from urban standpoints, at times were appropriate from ecological ones. At time design moves were made not to reach a solution, but rather to clarify problems.

Fig. 43 - Druid Hill Aerial
Source : Bing Maps; enhancements by Author

Fig. 44 - Penn Station Aerial
Source : Bing Maps; enhancements by Author


Fig. 45 - Mount Vernon Square Aerial
Source : Bing Maps; enhancements by Author

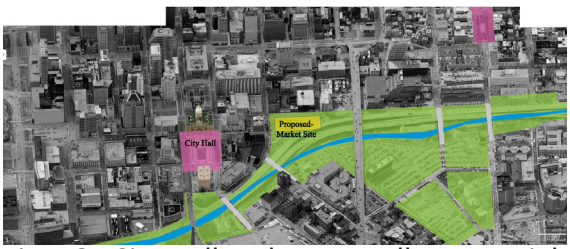


Fig. 46 - City Hall and Penns Fallsway Aerial
Source : Bing Maps; enhancements by Author

The design began with the intent of exploring concepts at a variety of scales: the city , the neighbourhood , the street and plaza. Each scale informed the design by stressing different critical factors.

The city scale revealed opportunities for connecting the city through the use of green corridors. These corridors would foster the treatment and purification of stormwater; allow for the migration of wildlife through diverse habitats and display these habitats and natural processes to city inhabitants. These landscapes would allow for a variety of movement systems including pedestrian, bicycle, and high and low speed automobiles. Another challenge was the incorporation of railways throughout these spaces that did not exclude the safe integration of pedestrians, bicyclists and wildlife.

The city scale also considers the disposition of significant cultural spaces in

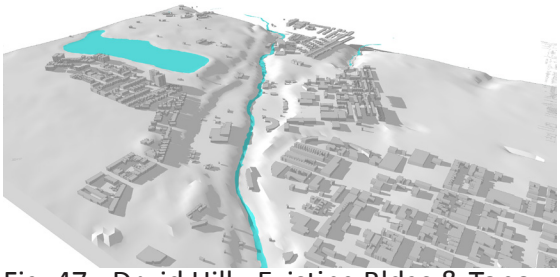


Fig. 47 - Druid Hill - Existing Bldgs & Topo
Source : Author

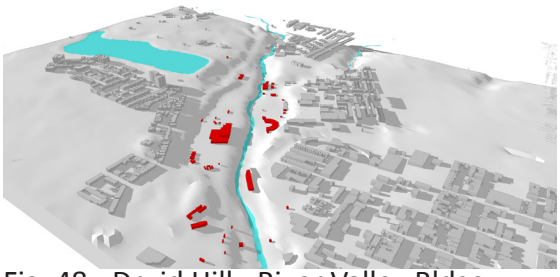


Fig. 48 - Druid Hill - River Valley Bldgs.
Source : Author

Fig. 49 - Druid Hill - Potential Greenway & Bridges
Source : Author

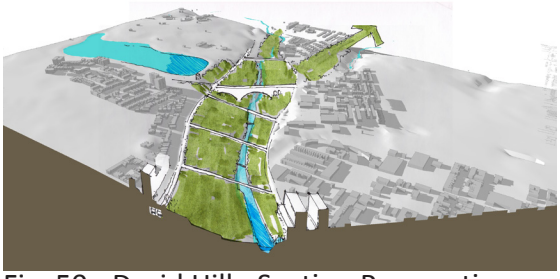


Fig. 50 - Druid Hill - Section Perspective
Source : Author

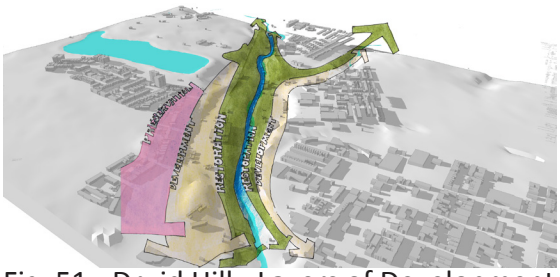


Fig. 51 - Druid Hill - Layers of Development
Source : Author

the area and their possible impact on the stability, health and viability of adjacent neighbourhoods. The historic placement of cultural spaces along the ridge line on the west of the Jones Falls deprives the east side of the river opportunities for neighbourhood identity and reinforces the physical divide that is the river valley.

The neighbourhood scale reveals significant physical and socioeconomic barriers. The physical barriers include the topography of the river valley, the expressway and the lack of bridges. The socioeconomic and cultural barriers include the lack of destinations, general building abandonment and a lack of diverse land uses. In short, there are no real reasons for anyone to move from the west side to the east side.

The neighbourhood scale also forces the local resolution of many divergent street grids and orientations. In some places, buildings and streets orient

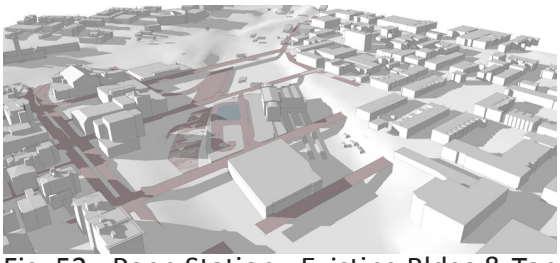


Fig. 52 - Penn Station - Existing Bldgs & Topo
Source : Author


Fig. 53 - Penn Station - Preliminary Scheme
Source : Author


Fig. 54 - Penn Station - Scheme - Section Perspective
Source : Author

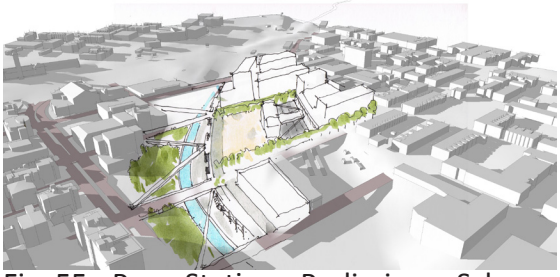


Fig. 55 - Penn Station - Preliminary Scheme
Source : Author

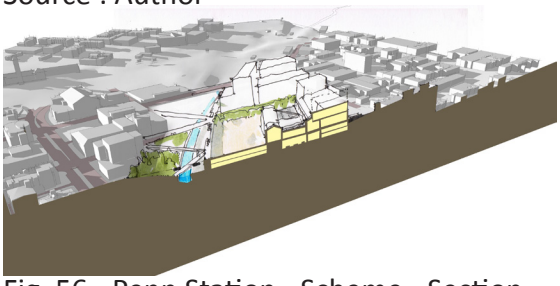


Fig. 56 - Penn Station - Scheme - Section Perspective
Source : Author

themselves to the river, while in many other instances, the north-south street grid is the structure of the neighbourhood.

The lack of cultural spaces on the east side of the river provides an opportunity for the creation of urban plazas. These plazas could function as counterpoints to the spaces and institutions on the west side. Significant spaces would also allow for the opportunity to resolve the aforementioned divergent grids at a significant moment in the city.

These plazas would anchor their neighbourhoods and provide a palpable sense of place and character that would theoretically lend stability to it's surroundings.

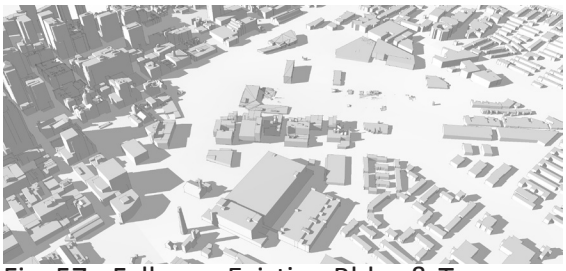


Fig. 57 - Fallsway Existing Bldgs & Topo
Source : Author

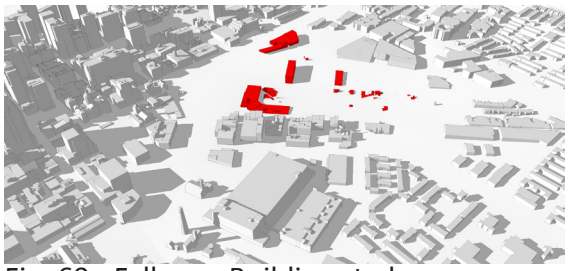


Fig. 60 - Fallsway Buildings to be demolished
Source : Author

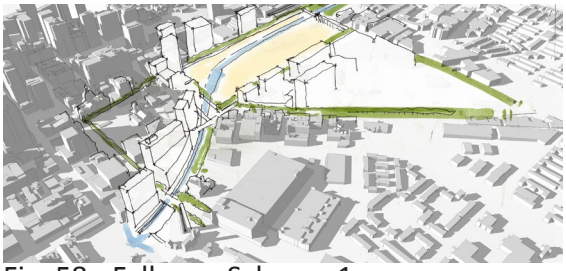


Fig. 58 - Fallsway Scheme 1
Source : Author

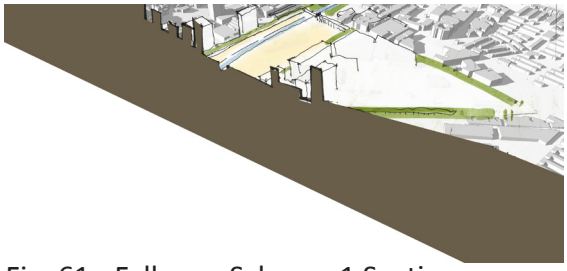


Fig. 61 - Fallsway Scheme 1 Section
Source : Author

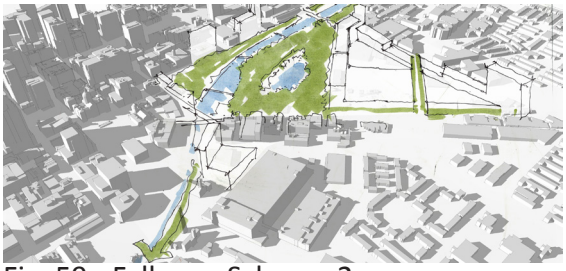


Fig. 59 - Fallsway Scheme 2
Source : Author

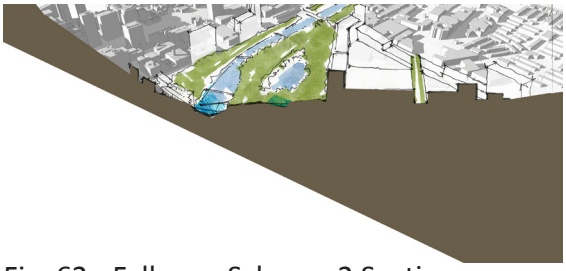


Fig. 62 - Fallsway Scheme 2 Section
Source : Author

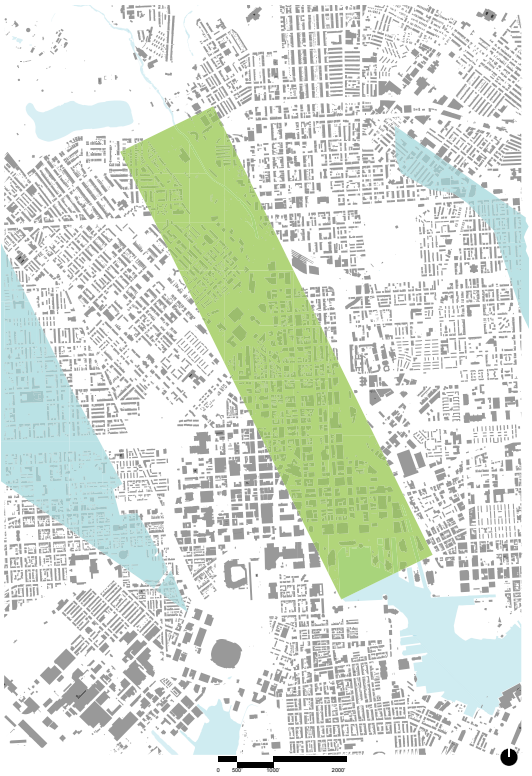


Fig. 63 - Baltimore - New York: Central Park Overlay

Source : Author

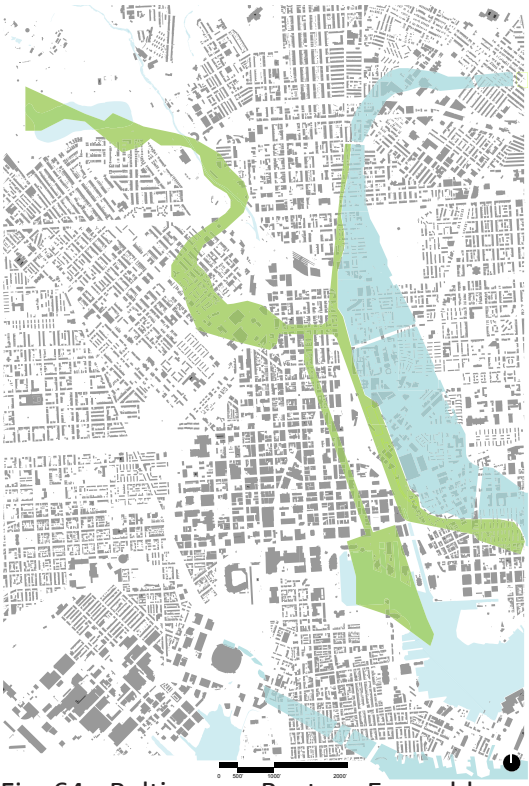


Fig. 64 - Baltimore - Boston: Emerald Necklace Overlay

Source : Author

Chapter 4: Design Proposal

4.1 - The Falls

Fig. 65 - Illustrative Plan
Source : Author

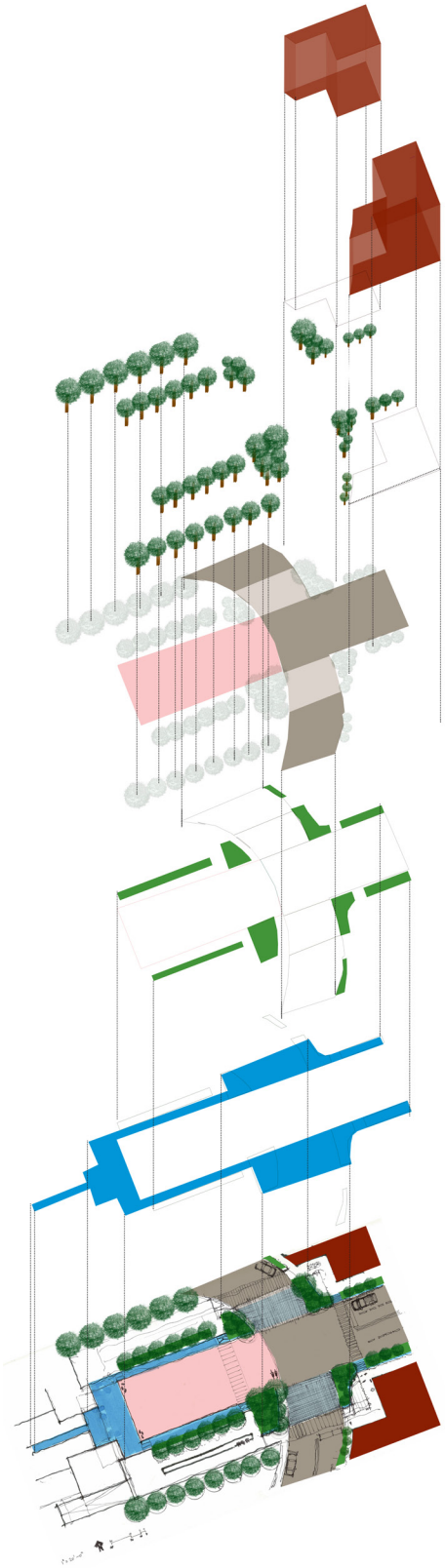


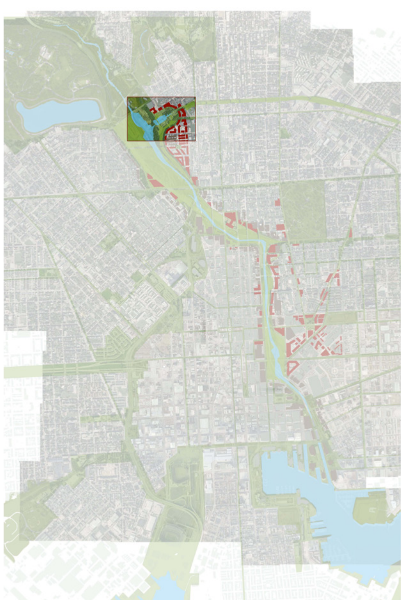
Fig. 66 - Vegetative Corridors
Source : Author

This thesis heals the landscape by creating places that restore and highlight natural systems. The systems are passive Infrastructural systems that perform ecological processes. These places are well defined and understandable within the larger context of the city and sponsor not only physical connections but historic connections to the conditions that gave the city its' form. These places are connected by vegetative corridors. The corridors are made up of thoughtful layers that integrate built systems into vegetative spaces.

This intervention use four lenses which focus the work: natural Processes, edges, places and connections. These lenses are then further explored through three sites. Although the three site focus on one or two of the lenses; all of the lenses are considered in the development and design of the sites.

4.2 - Remington Crescent

Fig. 67 - Illustrative Plan
Source : Author



Natural Processes

Remington Crescent is ideal for the management of stormwater. The significant existing topography, allows for the gathering and cascading of water through a series of weirs. The urban form follows loosely the arc of the topography, while allowing for the integration of divergent street grids. The form also places significant emphasis on the process of aeration, sedimentation and removal of pollutants from the water while providing a visual and physical connection to the Jones Falls River Valley.

Fig. 68 - Primary & Secondary Spaces
Source : Author

Fig. 70 - Street Terminus
Source : Author

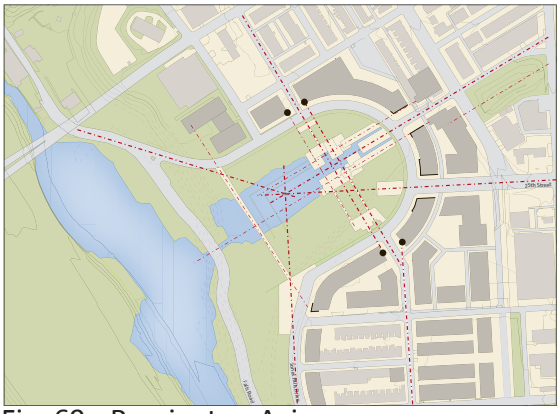


Fig. 69 - Remington Axis
Source : Author

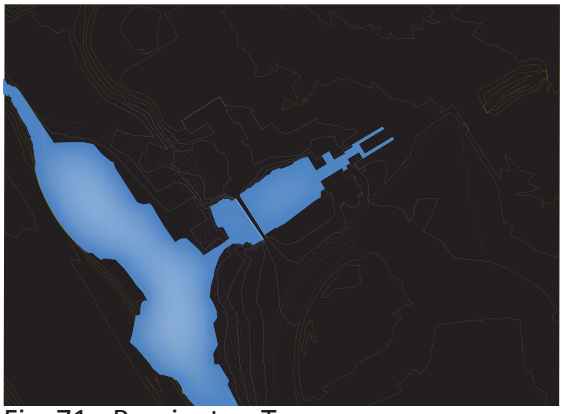


Fig. 71 - Remington Topo
Source : Author

Fig. 72 - Remington Perspective Aerial
Source : Author

Fig. 74 - Remington Key Plan
Source : Author

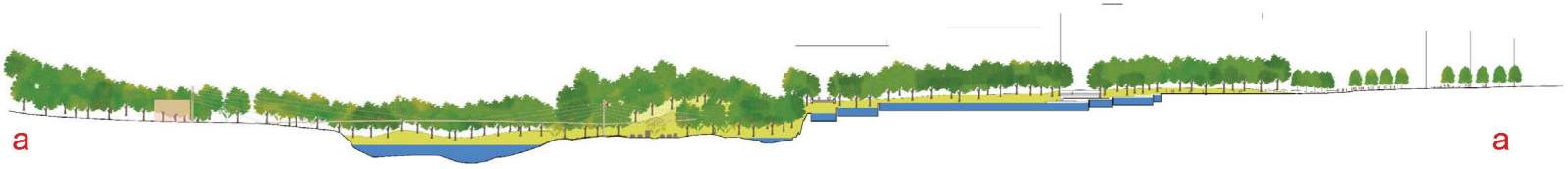


Fig. 73 - Remington Longitudinal Section
Source : Author

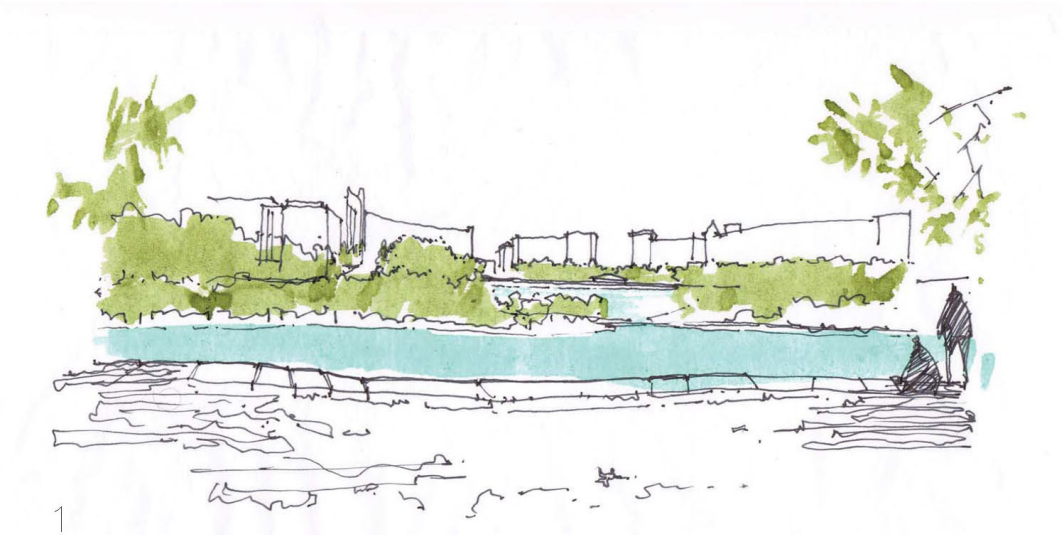


Fig. 75 - Remington perspective across Jones Falls
Source : Author

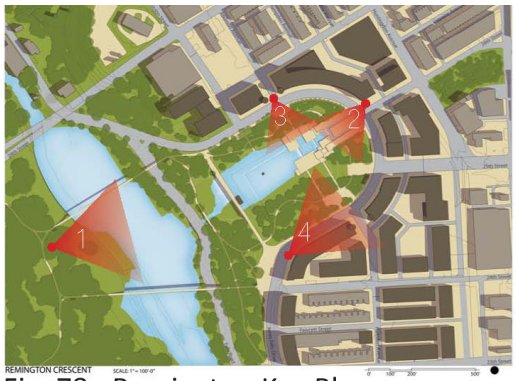


Fig. 78 - Remington Key Plan
Source : Author

Fig. 76 - Remington perspective through weirs
Source : Author

Fig. 77 - Remington perspective under trees
Source : Author

Fig. 79 - Remington perspective on road
Source : Author

4.3 - The Gardens at Penn Station

Fig. 80 - Plan of the Gardens at Penn Station
Source : Author

Place

Penn Station possesses tremendous potential as a gateway to Baltimore because of the MARC and amtrak trains and the light rail that connects to BWI airport.

In order to capitalize on this potential, I-83 is removed and a park is rolled over the train tracks to create usable landscape and support connections from the city level down to the river valley. The pickup and drop off area currently located to the south of

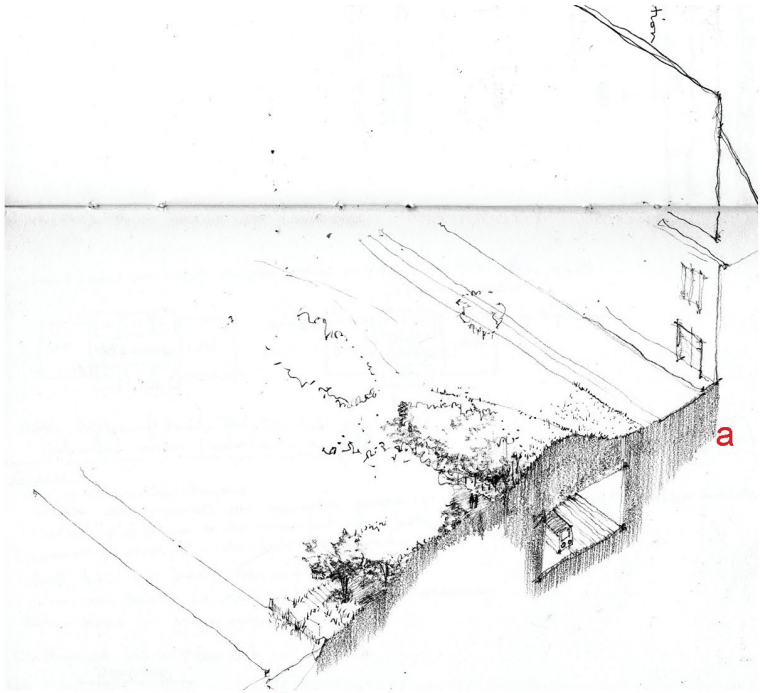


Fig. 81 - Section through rolled park and train tracks
Source : Author

Fig. 83 - Penn Station key plan
Source : Author

Fig. 82 - Section through river valley and Penn Station
Source : Author

Fig. 84 - Perspective of Penn Station
Source : Author

Fig. 85 - Penn Station key plan
Source : Author

the station is moved to the rear where a glass box becomes the commuter entrance.

The south facade of the station becomes the new garden face fronting newly created park land. This facade has a presence on both the urban upper level of the city and the softscape river valley below.

Fig. 86 - Perspective from river valley
Source : Author

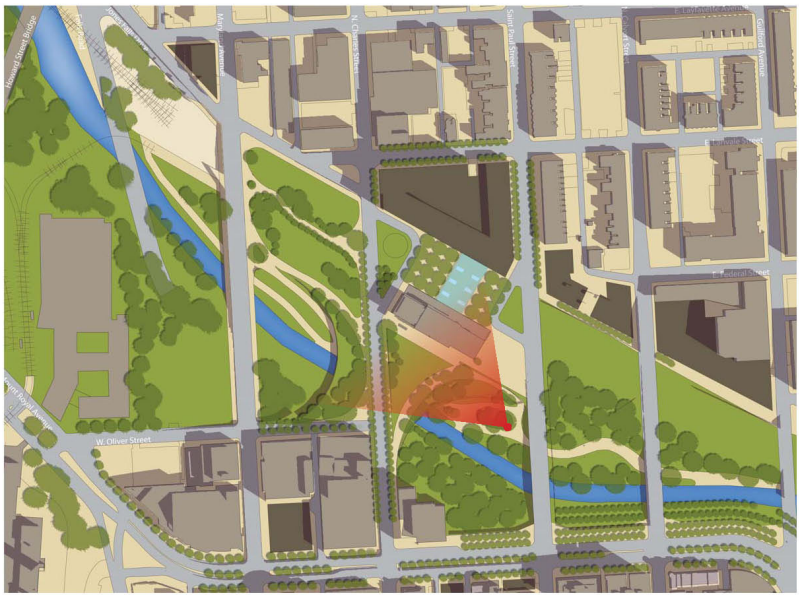


Fig. 87 - Penn Station key plan
Source : Author

Fig. 88 - Diagram of Penn Station Proposal
Source : Author

Fig. 90 - Penn Station Key Plan
Source : Author

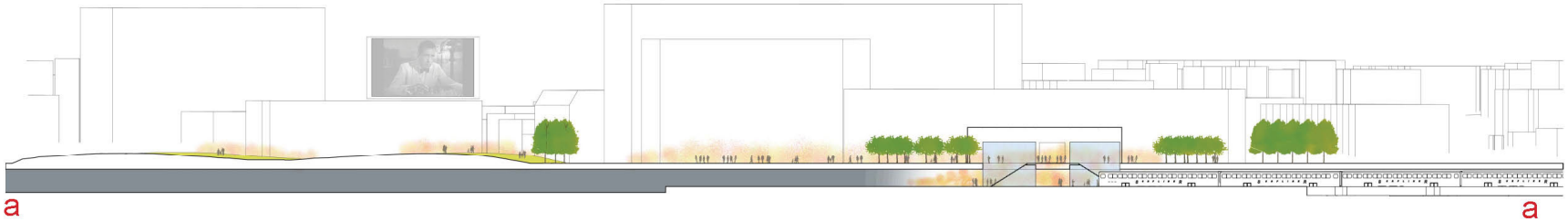


Fig. 89 - Section through Penn Station Concourse
Source : Author

Fig. 91 - Perspective through Penn Station Concourse
Source : Author

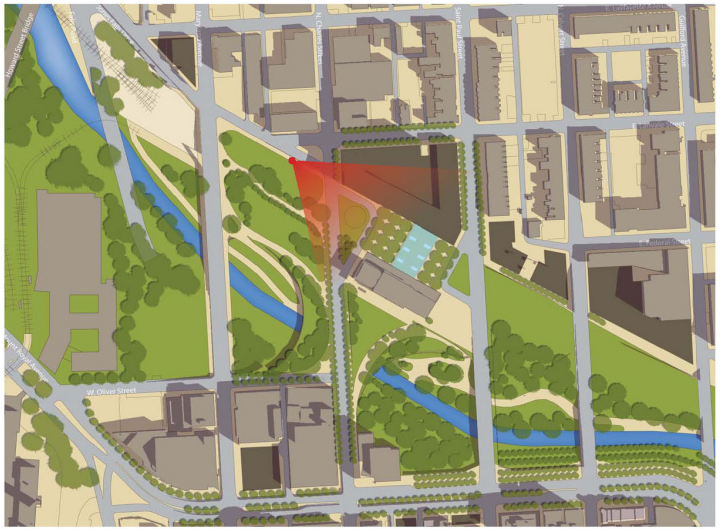


Fig. 92 - Penn Station Key Plan
Source : Author

The new commuter entry sits as part of a rhythm of spaces that marches from interior to exterior along the site. Seizing on the small culture of theater that exists in the area in the form of the Charles theater, the Everyman theater and the Maryland film festival that occurs one block north; a series of hills is embedded above the train tracks. These hills serve as seating of outdoor movies that can be projected onto a proposed screen.

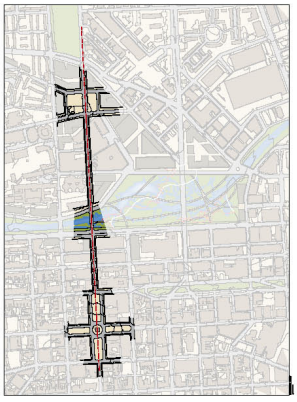
4.4 - Market Square and Jones Glade

Fig. 93 - Market Square & Jones Glade
Source : Author

Connections and Edges

Market Square and Jones Glade analyze connections and edges respectively.

Market Square relocates the existing market under the bridge that is displaced by the re-introduction of wetlands. The new square is located directly east of Mount Vernon Square and serves as a counterpoint to Mount Vernon Square in the fabric of the city. Both squares are located five minutes



walking on either side of the new wetland - Jones Glade.

Market Square, is bisected by Monument Street and carries through traffic six days a week. On Sunday, however, Monument Street is closed within the square

Fig. 94 - Market Square

Fig. 95 - Market Square Section

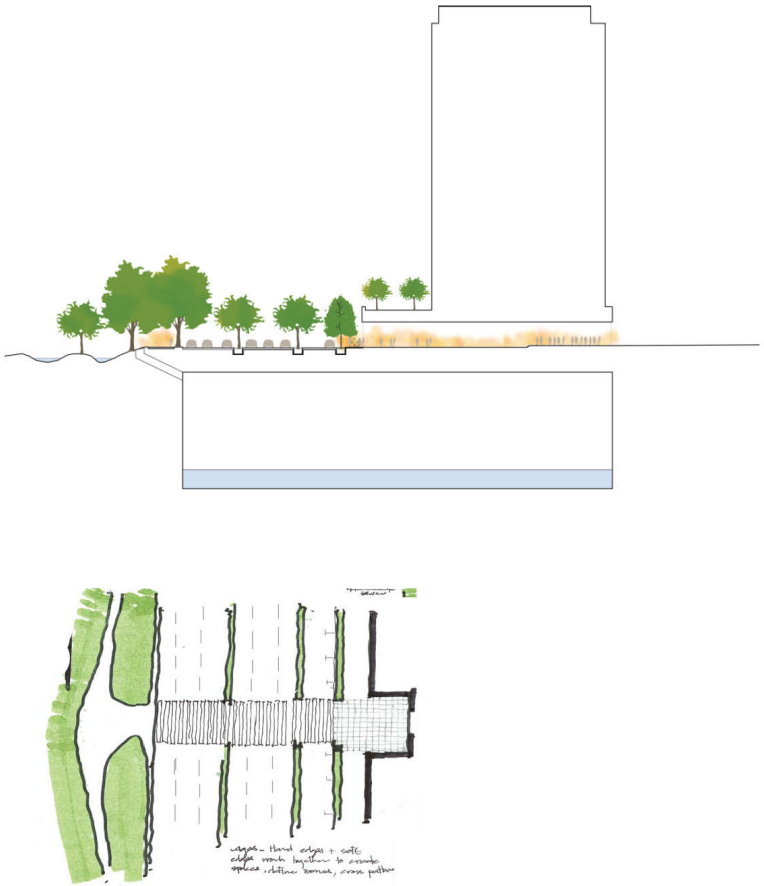


Fig. 96 - Edges

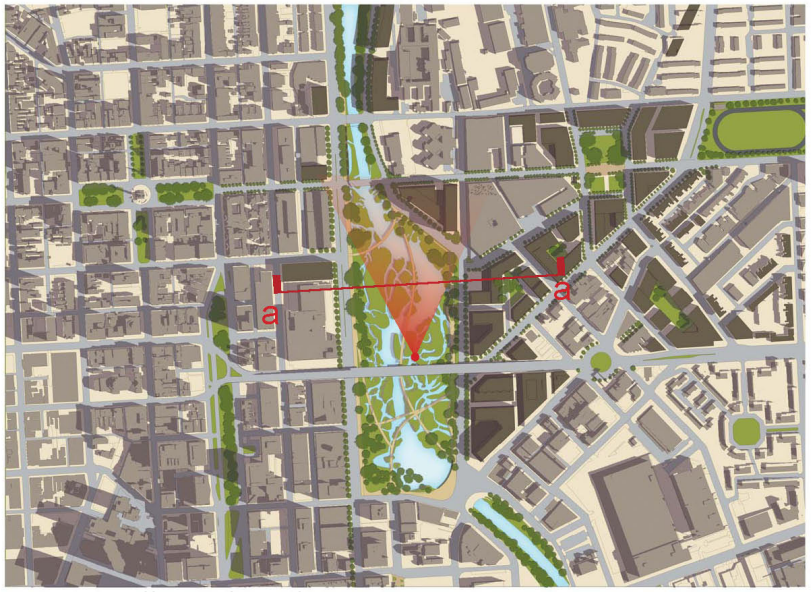


Fig. 97 - Fallsway key plan

and trucks and vendors are allowed to populate the square.

Jones Glade explores edges. There is a gradual movement from the hard urban edge to an undulating vegetative edge. There rectangular park space houses a wetland whose edges will ebb and flow with dependant on the quantity of water.

Fig. 97 - Perspective on fallsway
Source: Author

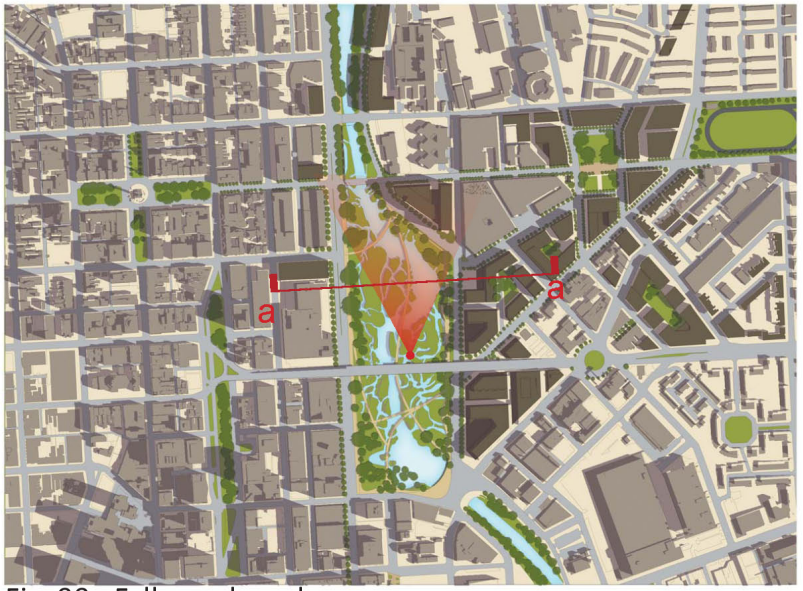


Fig. 99 - Fallsway key plan
Source: Author

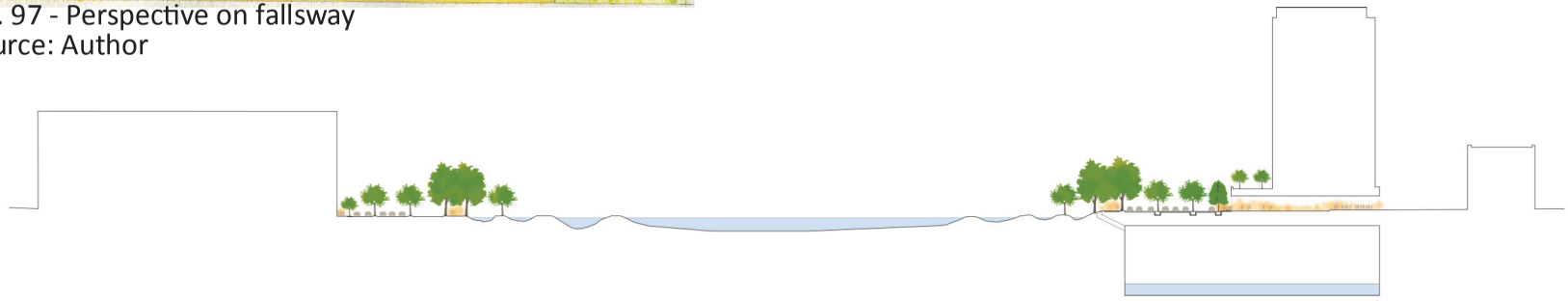


Fig. 98 - Fallsway Section
Source: Author

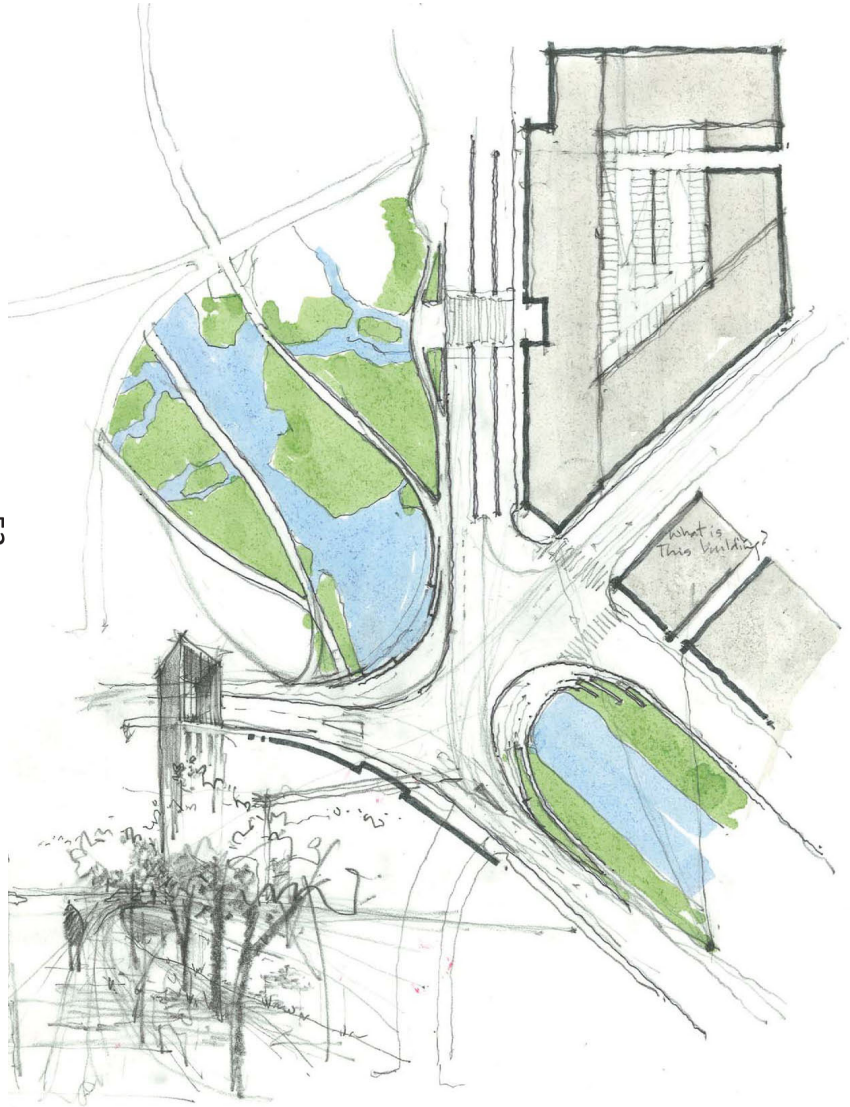


Fig. 100 - Jones Basin Sketch
Source: Author

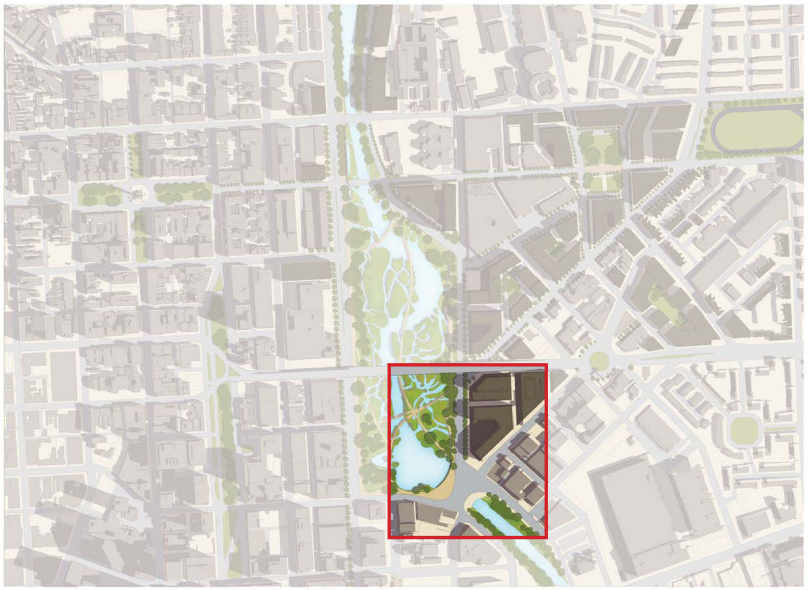


Fig. 101 - Jones Glade key plan
Source: Author

To the south of the space is a weir that allows for water to sit and saturate the site. This weir also prevents the tidal waters from flowing back into the city.

Chapter 5: Conclusions

Initial thoughts about this work revolved around a site and the ability of a place to inspire. The ideas were also concerned with a uniqueness of place. This uniqueness was supposedly tied to culture and the environment. As research continued into the site, there was a realization that no site is virgin and that time has layered things over places that have changed our perceptions of place.

The work then concerned itself with what to consider as meaningful generators of development (or lack thereof). Culture and history began to play big roles. So to did geography, climate, economy and current usage patterns. Prioritizing these cues became problematic and as I began to understand the site I began to realize the comprehensiveness of the problem.

Comprehensive problems require comprehensive solutions.

The need to understand one problem led to the need to understand another issue that impacted the initial problem. This spawned yet another discipline that required exploration. This was the nature of this project and it is the nature of our history and our environment.

As technology grows, so does humanity's ability to change the world. However, humanity must view the world through a wholistic lens. If not, that which is ignored becomes unknowingly affected. Collaboration should be the way of the future.

At the of this work,I have uncovered no secret or grand solutions. I have only realized how interconnected things truly are.

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