

ABSTRACT

Title of Document: **BALL[PARK]: URBAN RE-PROGRAMMING
IN AN EXISTING INFRASTRUCTURE**

 Zachary William Klipstein, MARCH, 2012

Directed By: Professor Emeritus, Ralph Bennett, AIA, School
 of Architecture, Planning and Preservation

Baseball has been observed as America's favorite pastime since its inception during the industrial revolution. This revolution is an earmark in America's history that spawned development throughout the country's interior, especially in waterfront towns. Establishing a connection to a water source was a major way for industrial towns to move goods to market and generate power. Many of these towns lost their reason for being with the introduction of railroad lines and interstate highway systems. This fact left most towns mere shadows of a remnant industry.

This thesis will explore a way to re-build and revitalize infrastructure and community within an urban context while preserving a fragment of America's canal era and transportation history. The site is at the western terminus of the C&O Canal in Cumberland, Maryland. Through intervention and exploration a time honored ground is transformed to reflect on an American pastime, integrating it into a historical context.

Ball[park]: Urban Re-programming in an Existing Infrastructure

By

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Dedication

I dedicate this project to my parents. Without their guidance and love I would not have made it to where I am today.

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Chapter 1: Background | Industry and Minor League Baseball

“The city precedes the industrialization.”¹

- H. Lefebvre

Industrial towns and cities around the turn of the twentieth century can be attributed to the success and welfare of America’s infrastructure and the advancement of technology. City fabric and urban environments were transformed to take advantage of site specific situations, utilizing waterfront property to generate power and taking advantage of solar and wind orientation. Companies within these towns soon began to realize that with the outsourcing of trades and commercial revenues, business production was on a decline and many of the factories were forced to close, often eliminating the town’s reason for being. Waterfront development of industry was often segregated from the inner rings of urban development of the city. Main Street downtowns are now finding themselves trying to establish connections with their once industrialized waterfronts and make an amenity out of a once viewed manufacturing landscape. In some situations, the town is flexible and can sponsor new types of industry within the existing infrastructure of old buildings/factories, highways and rail lines. New technologies and building system designs can retrofit these old buildings and integrate them back into the existing fabric of the city, creating connections to the waterfront and sustaining the infrastructure. This thesis aims to touch upon four aspects of a conceptual design agenda. This agenda includes addressing the **highway’s impact on urban character: making the highway an amenity, the pedestrian disconnect between the downtown and waterfront, utilizing park areas and open space: introduction and utilization of public spaces, and**

¹ Lefebvre, H., 1991. O direito à cidade. São Paulo: Editora Moraes. page 1.

harnessing the site's adjacency to the C&O Canal. Examination of the existing urban, architectural, and infrastructural vernacular will inform design decisions related to proposed building forms and uses, economic stimulus, urban design strategies, implementation of sustainable technologies and preservation of historical artifacts.

Industry

Since the end of the eighteenth century, science and technology have advanced our society in ways that allowed us to produce, transport, and build commodities and structures with a heightened level of accuracy and efficiency. This posed a separation between high-style urbane architecture and folkloristic building. James Fitch mentions in his article *Vernacular Paradigms for Post-Industrial Architecture* that “this separation hinged on the invention of the steam engine; the manufacture of Portland Cement and the invention of the Bessemer process for making steel; the invention of the electric motor and the internal combustion engine.”² These technologies revolutionized the way we build and produce buildings, towns, and cities, but they did not take into consideration the negative implications mass production can have on an urban environment. The redundant and repetitive nature cause by mass production often found many industrial towns searching for other avenues of economic revenue when the demand for their products ceased. Such was the case for Lowell, Massachusetts (Figure 3).

² Fitch, J. 1990. "Vernacular Paradigms for Post-Industrial Architecture," in Vernacular Architecture: Paradigms of Environmental Response, ed. M. Turan, Brookfield: Avebury Press. page 261.



Figure 1 - Lowell, Massachusetts Industrial Waterfront (Source: <http://members.virtualtourist.com/m/1f7b9/c2371/>)

The concept of obsolescence up until the industrial revolution was a non-issue. Practices and techniques used to make homes, towns and cities were exemplified through primitive and vernacular building techniques. Once mass production began to take hold, “the old artifact (tool, factory, town) began to be regarded as obsolete, an intolerable restriction upon increased productivity.”³ Society figured it was cheaper to throw it away and get a new one rather than preserve what was already there. This idea was taking a toll on American infrastructure in the mid-nineteenth century. The C&O Canal system, a waterway that was intended to move goods along the Potomac River from Ohio to the Nation’s capital was abandoned even before it was finished, falling in the shadows of the country’s new rail line infrastructure. Steamboats replaced the sails on shipping vessels. In the 20th century we have seen this great transit system benched and neglected in favor of an inefficient and expensive highway and airline system.

There are various aspects of construction and design that would imbue an ideal city. The generic ideas are site selection, climate, solar orientation, construction

³ Fitch, J. 1990. "Vernacular Paradigms for Post-Industrial Architecture," in Vernacular Architecture: Paradigms of Environmental Response, ed. M. Turan, Brookfield: Avebury Press. page 261.

viability and material availability. To Amos Rapoport, author of *House, Form and Culture*, it seems to be a bit more than that:

“The environment sought reflects many socio-cultural forces, including religious beliefs, family and clan structure, social organization, ways of gaining a livelihood, and social relations between individuals. This is why solutions are much more varied than biological needs, technical devices, and climate conditions, and also why one aspect may be more dominant in one culture than it is in others.”⁴

The industrial town possesses a distinct culture and vernacular, in the way that it is generated in response to water source. Factories, residences and service buildings are placed within the site, taking advantage of its uniqueness and character. The traditional factory typology consists of a shed building with high glass windows that take advantage of wind and solar orientation. This vernacular established a unique tradition that was made synonymous to the industrial town. Tradition is an important aspect of vernacular buildings which is lost today for a variety of reasons including: a greater number of building types, a loss of a common shared value system, and a cultural premium on originality.

Many cultures embrace the idea of a localized neighborhood that thrives off of a tight nucleus. Members of this community exist in a symbiotic relationship in which collective guidance and protection perpetuates the whole. They stay closely connected and rarely isolate themselves. Integrating new technologies into the existing infrastructure of an industrial town can spawn and stimulate economic growth, re-stitching the industrial area of the town back to its neighborhoods and nucleus.

⁴ Amos Rapoport, *House Form and Culture* (Englewood Cliffs: Prentice Hall, 1969), page 47.

Structures are built based on lessons learned and with certain factors in mind. These may or may not influence the vernacular aesthetic or form of the structure. Industry and new technological advancements were disguised ailments in building construction. It became known that architects could control the physical envelope of a structure and incorporate systems into the architecture that would control environments with high tech, energy consuming systems. Harnessing natural resources' kinetic energy through wind power and hydroelectricity during the industrial era is a concept that only up until a few years ago seemed foreign to a modern society. The invention of the HVAC system has given the architects the opportunity to ignore the uniqueness of site situation and render the environs irrelevant. This ignorance and lack of social responsibility is a fact that must be addressed and changed before society is condemned to repetition of past mistakes, wasting energy and valuable resources. If the common conception that modern building technologies can solve all problems does not change, society will find itself in a perpetual quagmire; dependent on systems which have a floating supply.

Rapoport discusses specific characteristics that have been used by other scholars as determinants of building form. These factors are: climate and the need for shelter, materials, construction and technology, site, defense, economics, and religion. "Forms, more than other artifacts, are often modified by climatic forces, choice of site and availability and choice of materials and construction."⁵ None of these factors are the sole determinant of form although all of them have a hand in the matter.

Site selection and the relationship of building to site are key elements that shape a building or urban landscape. Significantly, there are various cultural reasons that determine why people build where they do – defense, preservation of farmable land,

⁵ Amos Rapoport, *House Form and Culture* (Englewood Cliffs: Prentice Hall, 1969), page 47.

respect for mountains, respect for plains, respect for artifact, etc. Also important is the relationship between man and nature. Are the two one cohesive whole, resulting in integrated building and land form, or is nature something to be tamed by man, resulting in buildings placed on the landscape instead of in it?

Climate is a major physical characteristic to determining vernacular form. Its role is a modifying factor in building form. Temperature is a scalar factor, climate has more factors. Changes in the structure's form may be more dramatic in other areas with the most extreme climate whereas milder locations have less climatic restrictions on their form. Overhangs, eavesments, glazing (or lack thereof), orientation, situation in the landscape are all responses to climate variation. Structures change with season and weather conditions. The impact of temperature, humidity, wind, rain, radiation and light on a building's form should influence the way the structure is designed. New "sustainable" technologies are available to address the specific needs of building and can harness energy from solar, wind and hydro-electric sources. Many of the industrial building types have the capability to be retrofitted with these new technologies, taking advantage of the site specificities regarding solar and wind orientation.

The last issue to be taken into consideration is the impact construction and materials have on form. Local materials are an indicator of vernacular architecture. Sometimes local materials aren't used because of traditions and/or the importance of the structure being built. For example, the use of Roman Columns implemented in the process of building a medieval cathedral's construction imbues qualities of permanence or strength, or the use of an old industrial waterfront building as a new center for recreational development or new housing.

It is only when all of these factors have been considered, that this reality establishes the idea of the industrial town vernacular. Rapoport put it best when he stated that “the result is the problem of excessive choice, the difficulty of selecting or finding constraints which arose naturally in the past which are necessary for the creation of meaningful form.”⁶ It is to say that one of the main reasons many of these industrial vernacular forms still exist today is because of their very flexible nature and ability to be adapted to fit many lifestyles and ways of life. They are functional and practical and can be retrofitted to accommodate just about any living situation. It is apparent why these buildings and towns have stood the test of time and why we continually find ways to express them in more modern and streamlined manors. Nonetheless, the main idea, the *parti*, the overall concept is one that has remained resilient for thousands of years. The ideal life can be found in these forms and can facilitate a vision that can be perceived from many different perspectives. Establishing a connection with this existing infrastructure and preserving the artifacts will allow these towns to remember their pasts but also enliven future opportunities for development and growth.

Minor League Baseball

“The appeal is obvious. Minor league ball, played largely in small and mid-sized cities and towns, retains a purity of spirit which the majors no longer possess. There are no mega-salaries, no enormous stadia. It is baseball in its simplest form—just balls, bats, gloves, and lifelong dreams.”⁷

- Bruce Adelson, Rod Beaton
Bill Koenig, and Lisa Winston
The Minor League Baseball Book

⁶ Amos Rapoport, *House Form and Culture* (Englewood Cliffs: Prentice Hall, 1969), page 135.

⁷ Adelson, Bruce, Rod Beaton, Bill Koenig, and Lisa Winston. *The Minor League Baseball Book*. Macmillan General Reference, May 1995.

Baseball since its inception into America in the early 1870's has had an impact on our communities both economically and nostalgically. Minor League Baseball specifically has been known by most enthusiasts as the purist form of the sport that is in existence. Players, coaches and fans can enjoy the game at a level of high performance without the distractions of big egos and high salaries. The game is played truly for the love of the sport with high intentions of making it to "The Show," which in Bull Durham terms means the Big Leagues.

The minor leagues debuted in the early 1870's around the same time the major leagues took launch. Organizational and financial instability proved to be a burden for teams lacking funding and a solid managerial structure. The teams that had strong support would be granted permission to join the National League, which is now the modern day organization of the same name that denotes one league dedicated to the majors. The other league, the American League, came shortly after. Both of these leagues fluctuate between fourteen to sixteen teams, depending on budget constraints and franchise developments.

As any baseball enthusiast knows, the game can become tainted by big salaries, budgets, gambling and the like. This first became apparent with the 1919 Chicago White Sox franchise (Figure 2), that was bribed to throw the World Series in order to fix bets that were hedged against the Sox. The game was turned into a political mess of guilt and shame. The alleged players were tried and found not guilty in the courts, but the newly appointed commissioner of baseball made it known that none of these players would ever step foot on a major league playing field again. Shoeless Joe Jackson fell into the trap of bribery and ended up finishing his career in the minor leagues; playing the game he loved and was a natural at. The sport has come a long way since 1919 and has gone through

many managerial and organizational changes. Each team can be followed online and even fantasy teams are becoming popular.



Figure 2 - 1919 Chicago White Sox (Source: <http://www.thedeadballera.com/TeamPhotos/1919WhiteSox.html>)

Currently there are thirty major league baseball teams competing in major league play. This can be compared to the staggering 240 minor league teams that are interspersed throughout the country. Lining the east and west coasts as well as the countries interior, the minor leagues are a true symbol of small-town feel, good, honest baseball.

In 1988, the movie Bull Durham premiered, painting a picture of this small town effect and the impact a minor league team had on a town (Figure 3). The team's hometown was set in Durham, North Carolina, bringing attention and attraction to an otherwise mediocre place with no reason for being. The main character, Crash Davis, finds himself torn between the big time "show," and the realities of being at age where his

career will fade in the minor leagues. Crash, being a seasoned catcher, is assigned to mentor a rookie pitcher and show him the ropes as he makes his way to the major leagues. Both men find themselves lured by the provocative and promiscuous dame Annie Savoy, a mature town beauty that has an affair with one player every season. The story weaves between these tantric senses of discovery amidst the glory of a minor league season. Each scene is packed with lessons to be learned about how the minors work in conjunction with the majors and the commitments a minor league player must make to his town, community, and team.



Figure 3 - Bull Durham iconic Imagery (Source: <http://ecx.images-amazon.com/images/I/51objmVjMkL. SS500 .jpg>)

Communities within these small towns take pride in an institutional game changer such as a minor league team. Often a big time employer that was prevalent in the past has since become a remnant of history. This is the case where industry was prevalent and where jobs were plentiful. Steel mills, textile facilities, tire manufactures, breweries, windows and sash enterprises, etcetera. The list is indefinite. Each town is specific to its own historical character and prides itself on those facts.

With the standard of living at an all-time high, many are looking for reasons to be in a certain place at a certain time. Jobs, market viabilities, educational opportunities and

security are all factors that are taken into consideration when an individual is looking to relocate. There is something to be said for many towns once industrialized, earmarked in the history books as a pearl on the chain of the country's industrial history now only to be segregated as a skeleton of a once booming past. These towns are numerous across the United States and many have taken action to deal with their plights in restoring the community and developing programs of leisure that spawn development and economic recovery. Minor league baseball is one such activity that has the capacity to incorporate a small town, blue-collar feel with the flexibility to promote economic and urban growth.

Minor league parks have the capacity to house big crowds and give the community a sense of pride and something to look forward to on any given evening. The price of admission is low enough to give the fan a sensory experience and the chance to communicate with comrades from times past. Box office seats allow companies and organization the opportunity to showcase the hometown team in the midst of discussing a business proposal for the next mixed use development south of the ballpark. Long lost friends can find themselves bumping into each other on the concourse, making plans to meet up at the local corner bar after the game to catch up. Revenue and jobs are made available to these communities through the attractions catalyzed by the ballpark.

The uniqueness and communal identity of a minor league experience separates it from a game attended at a major league complex. Minor league teams are often named or themed around a once prevalent town company or prevalent piece of history. Teams like the Altoona Curve, whose name comes from a severe bend in a stretch of railroad tracks adjacent to the city, or the Frederick Keys, who are named after the man that authored America's National Anthem are both examples of this phenomenon. The love of the game and community interaction is what keeps minor league baseball afloat. For every number

one draft pick that comes out of a minor league organization there are fifty other players that will never see or experience the big time. These are the true small town heroes that are fantastic assets to an organization. They play the crowd and are often popular among the young kids as being role models and community up-lifters.

The minor leagues have taken many small towns, often industrial in nature and turned them into vibrant and thriving communities that have experienced significant economic stimulus since the parks insertion into the town's fabric. Bill Johnson writes in his book *Minor League Baseball and Local Economic Development* that, "most of us understand that the sport [of minor league baseball] is big business, that it has important sociological functions, and that it often is a tool of public policy with political consequences."⁸ This is often compared to various forms of major league sports and is not classified as being a secondary sport market in the United States. The tax payer's money used to build each one of these small stadia is what keeps these franchises alive and the community thriving.

"The acquisition or retention of a professional sports team has become common objective for communities across the nation, regardless of their size, geographic location, or economic health. Many local officials and economic development practitioners believe that a professional sports team has direct positive impact on the local economy and helps the host community project a positive image. In essence, sports teams are valued because it is believed they promote economic growth."⁹

⁸ Johnson, Arthur. *Minor League Baseball and Local Economic Development*. Chicago, IL: Board of Trustees of the University of Illinois, 1993. Page xi.

⁹ Johnson. Page 1.

Stadium proposals are realized and advanced by studies that are conducted based on the number of jobs that will be created, the number of business that will be attracted to the area, and the success and affluence of existing business operations. The contribution of the team's presence to local the community's atmosphere is also marketed as significant bonus for local economic stimulus.

Communities and towns that have taken this plunge have found themselves proud to be known as a minor league town. The book *Minor League Baseball: Community Building through Hometown Sports* written by Rebecca Kraus, PhD, gives glimpses of this fact and materializes that essence of what it is like to live in a minor league town. The booming of the fireworks on a Saturday night and the development that has occurred across the street from the ballpark due to increased revenue and new business attractions is a theme abundant in many minor league installments.¹⁰ Minor league ball is thriving, breathing life back into the small town communities that once had bigger reasons for being all across America.

¹⁰ Kraus, Rebecca. *Minor League Baseball: Community Building through Hometown Sports*. Binghamton, NY: The Hawthorne Press, 2003. pages 2-3.

Chapter 2: Site

Site History

Cumberland, Maryland is prime example of a once industrial town that incorporated industrial practices into its waterfront. The industry has since left and has taken upon multiple forms of infrastructure including the train and the automobile. The site is rich in history and thus is due a proper introduction.

Cumberland is named after the son of King George II, Prince William, the Duke of Cumberland. It is built on the site of the old Fort Cumberland, the starting point for British General Edward Braddock's ill-fated attack on the French strong-hold of Fort Duquesne (located on the site of present-day Pittsburgh) during the French and Indian War.



Figure 4 - Map of General Braddock's Military Road (Source: http://frontierfamilies.net/family/Panhandle/Fisher/Braddocks_Road.htm)

Though Cumberland was also an outpost of Colonel George Washington during the French and Indian War and his first military headquarters was built here, there is evidence that Native American settlements pre-dated European settlement in the area. In

1787, the Maryland General Assembly established the town of Cumberland. The act simply provided the stamp of officialdom to a community that had been in existence, in one form or another, for hundreds of years. Washington later returned to Cumberland as President in 1794 to review troops that had been assembled to thwart the Whiskey Rebellion.

Artifacts pointing to civilizations in existence before the time of Christ have been found in the area. For generations it served as an American Indian village, then a western outpost of roughshod cabins established by European Americans. Cumberland eventually became a stop for many in the push west. In this role, the city grew into a transportation hub, first as the starting point of the first National Road - now known as Route 40 - and then as home to numerous railroads and the western terminus of the famous C&O Canal.

As the city raced through the 19th century and into the 20th, it became less dependent on railroads as more industry moved to the area. Cumberland was a key road, railroad and canal junction during the 19th century and at one time the second largest city in Maryland (second to the port city of Baltimore — hence its nickname "The Queen City"). The surrounding hillsides provided coal, iron ore and timber that helped supply the Industrial Revolution. In addition, the city was a major manufacturing center, with industries in glass, breweries, fabrics and tinplate. Glass manufacturing and brewing were big, as were tires and steel. However, following World War II, it began to lose much of its industrial importance and its population declined from 39,483 in the 1940 census to fewer than 22,000 today.

Cumberland experienced the same fate as many American cities in the latter quarter of the 20th century; many industries closed their doors, battering the local populace. But the natives here are resilient if nothing else, so Cumberland looked around

and noticed that a lot of people traditionally traveled there for its rich history. Small firms began to crop up focusing on the tourism trade.

Site Description

Cumberland is located in the Ridge and Valley physiographic province of the Appalachian Mountains at 39°38'52"N 78°45'46"W¹¹ at the junction of the North Branch of the Potomac River and Wills Creek. Interstate 68 runs through the city in an east/west direction, as does Alternate U.S. 40, the Old National Road. U.S. Highway 220 runs north/south. The majority of the land within the city lies in a valley created by the junction of these two streams. Parts of Wills Mountain, Haystack Mountain, and Shriver Ridge are also within the city limits.



Figure 5 - Cumberland, Maryland | Regional Proximity (Source: http://upload.wikimedia.org/wikipedia/commons/thumb/6/65/Allegany_County_Maryland_Incorporated_and_Unincorporated_areas_Cumberland_Highlighted.svg/2000px-Allegany_County_Maryland_Incorporated_and_Unin)

The abandoned Chesapeake and Ohio Canal, now the Chesapeake and Ohio Canal National Historical Park, has its western terminus in Cumberland. The canal's towpath is

¹¹ "US Gazetteer files: 2010, 2000, and 1990". United States Census Bureau. 2011-02-12. Retrieved 2011-11-23.

still maintained, allowing travel by foot or bicycle between Cumberland and Washington, D.C., a distance of about 185 miles (298 km) as illustrated by figure 5. The city has a total area of 9.1 square miles (24 km²), of which 9.1 square miles (24 km²) is land and 0.11% is water¹². Figure 6 illustrates the city proper with the zone outlined in purple as part of the Canal Place Heritage Area, under the jurisdiction of the National Park Service.

¹² "US Gazetteer files: 2010, 2000, and 1990". United States Census Bureau. 2011-02-12. Retrieved 2011-11-23.

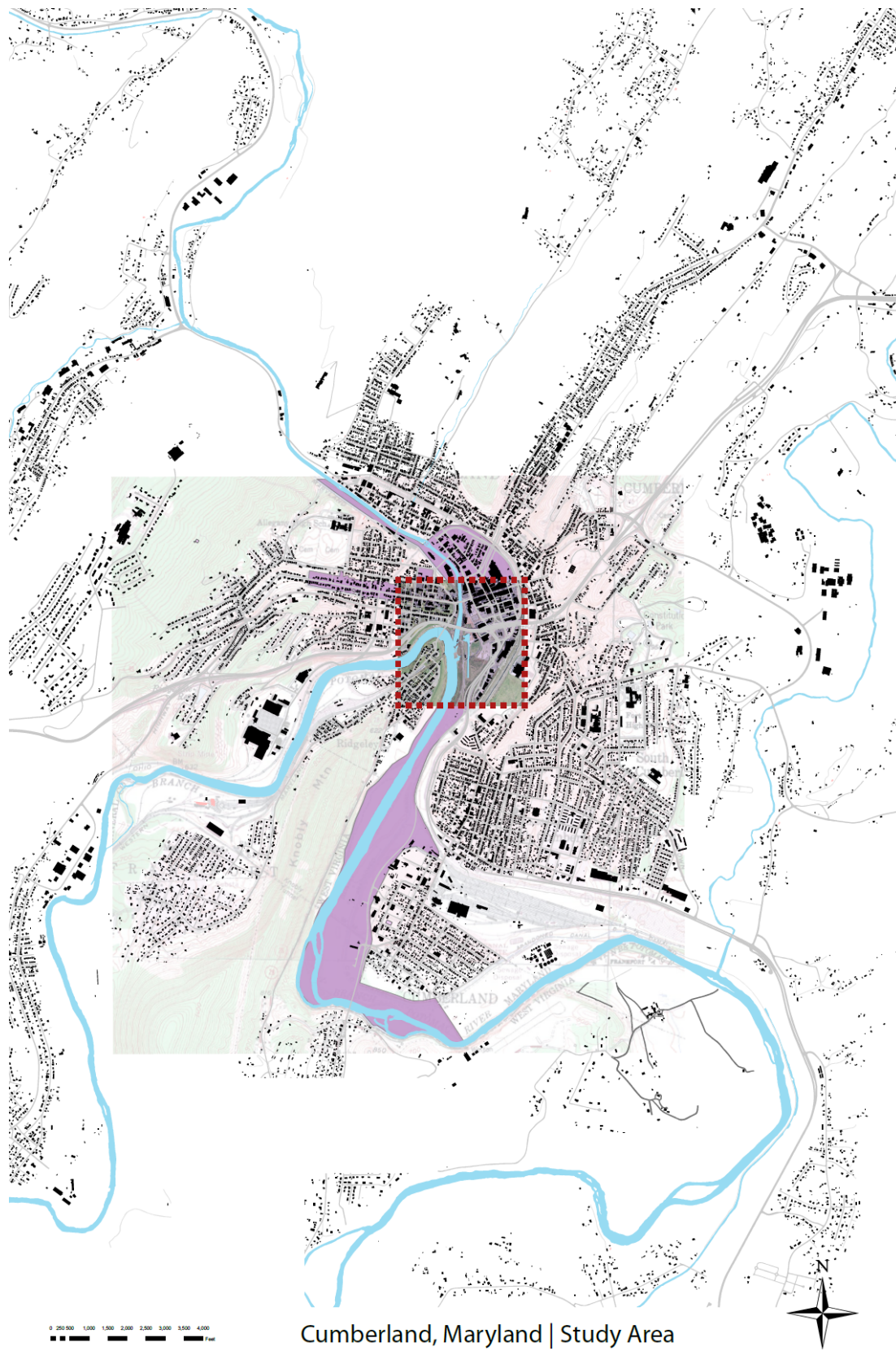


Figure 6 - Greater Cumberland Region with Study Area outlined in red. (Source: Author)



Figure 7 - Cumberland Skyline (Source: <http://www.flickr.com/photos/mrwubbs/5900456263/sizes/l/in/photostream/>)

Cumberland also has a very distinct skyline and building vernacular that is indistinguishable amidst the valley of mountains that it is situated in (figure 7).

Figure 8-10 illustrate the existing site situation with figures 11-13 highlighting the concentrated area of study where the design propositions will be focused. The site is bounded on the west by the convergence of the Potomac River and Wills Creek. The Interstate 68 highway system passes through the site, running east to west. This separates the downtown district and Historic Baltimore Street Corridor (north of the highway) from the Waterfront | Canal Place District (south of the highway).

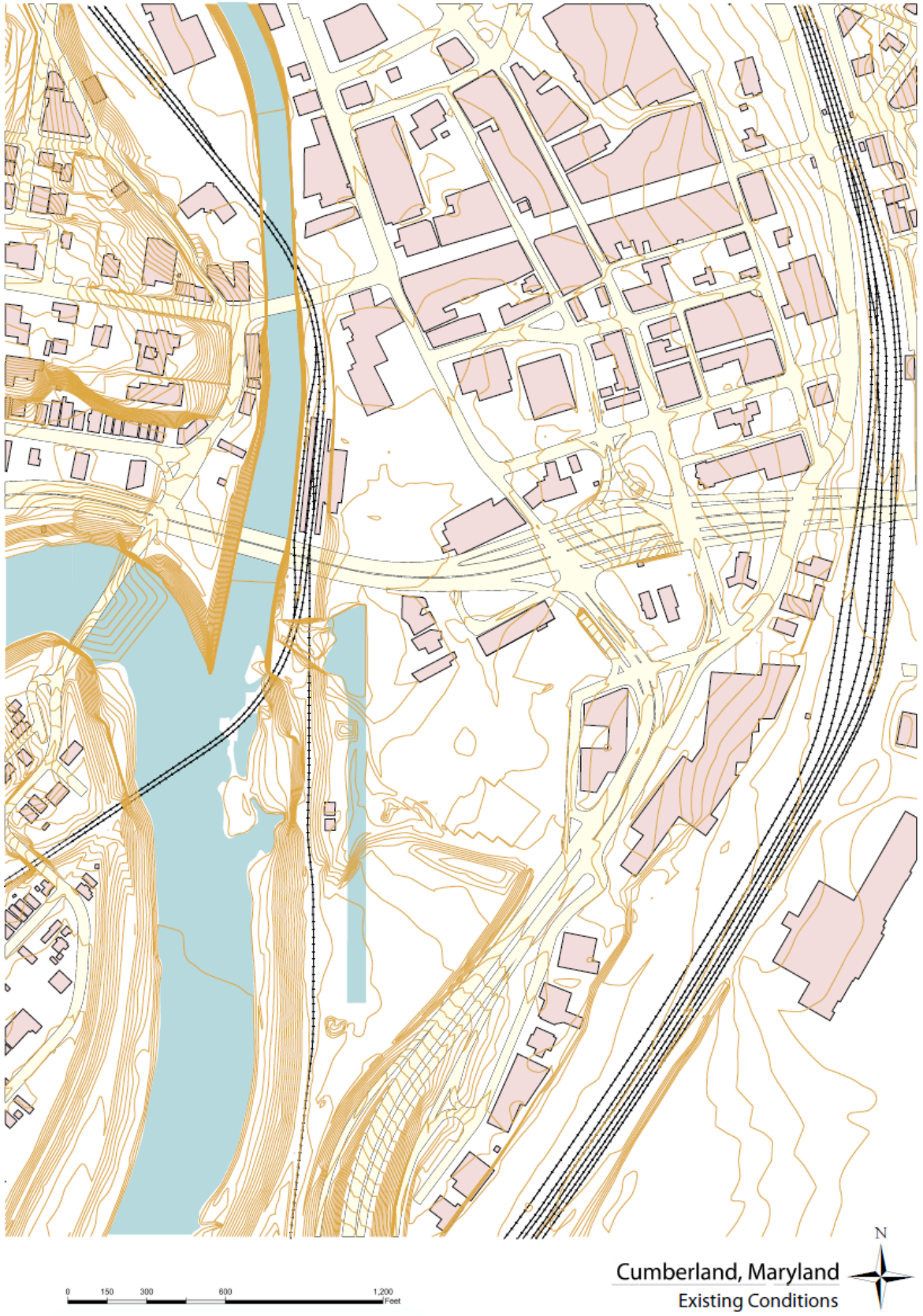


Figure 8 - Cumberland, Maryland Existing Conditions (Source: Author)

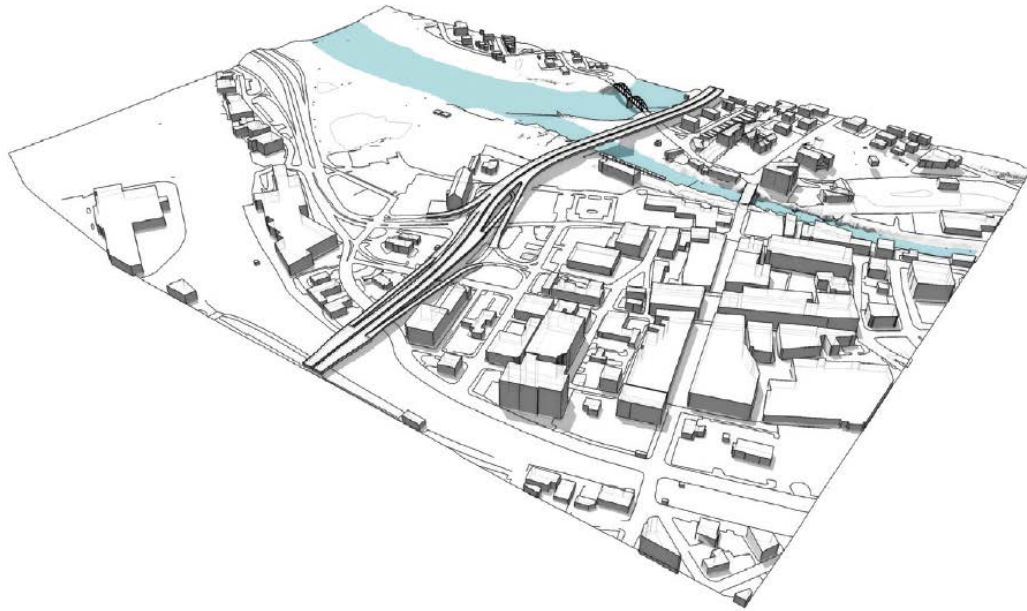


Figure 9 - Digital Model Cumberland Site Situation (Source: Author)



Figure 10 - Aerial View of Site (Source: Google Earth)

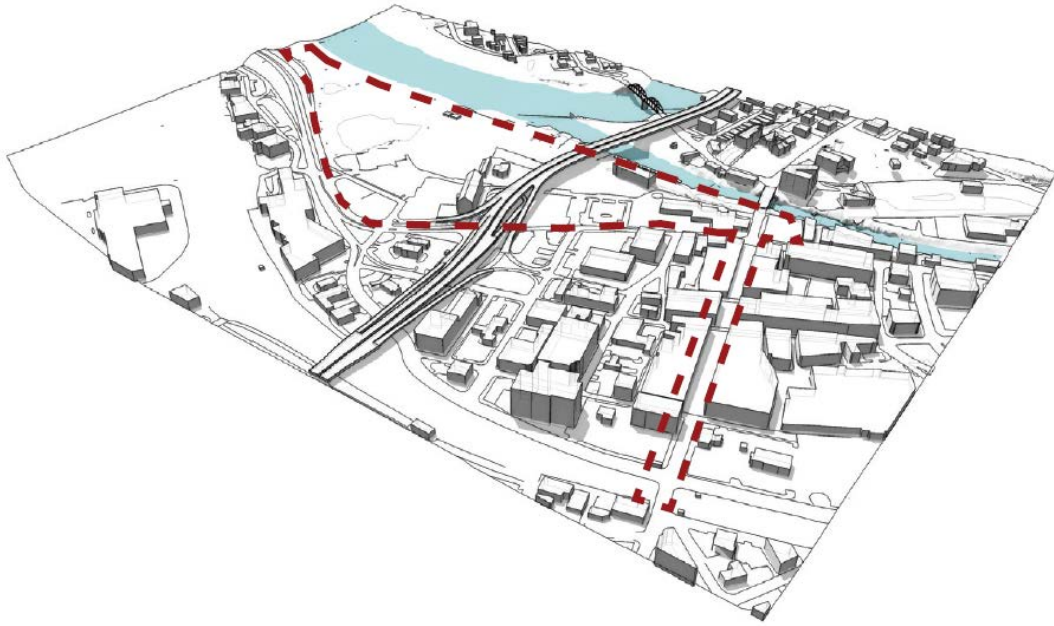


Figure 11 – Selected Study Area Situation (Source: Author)



Figure 12 - Aerial View of Site (Source: Google Earth)

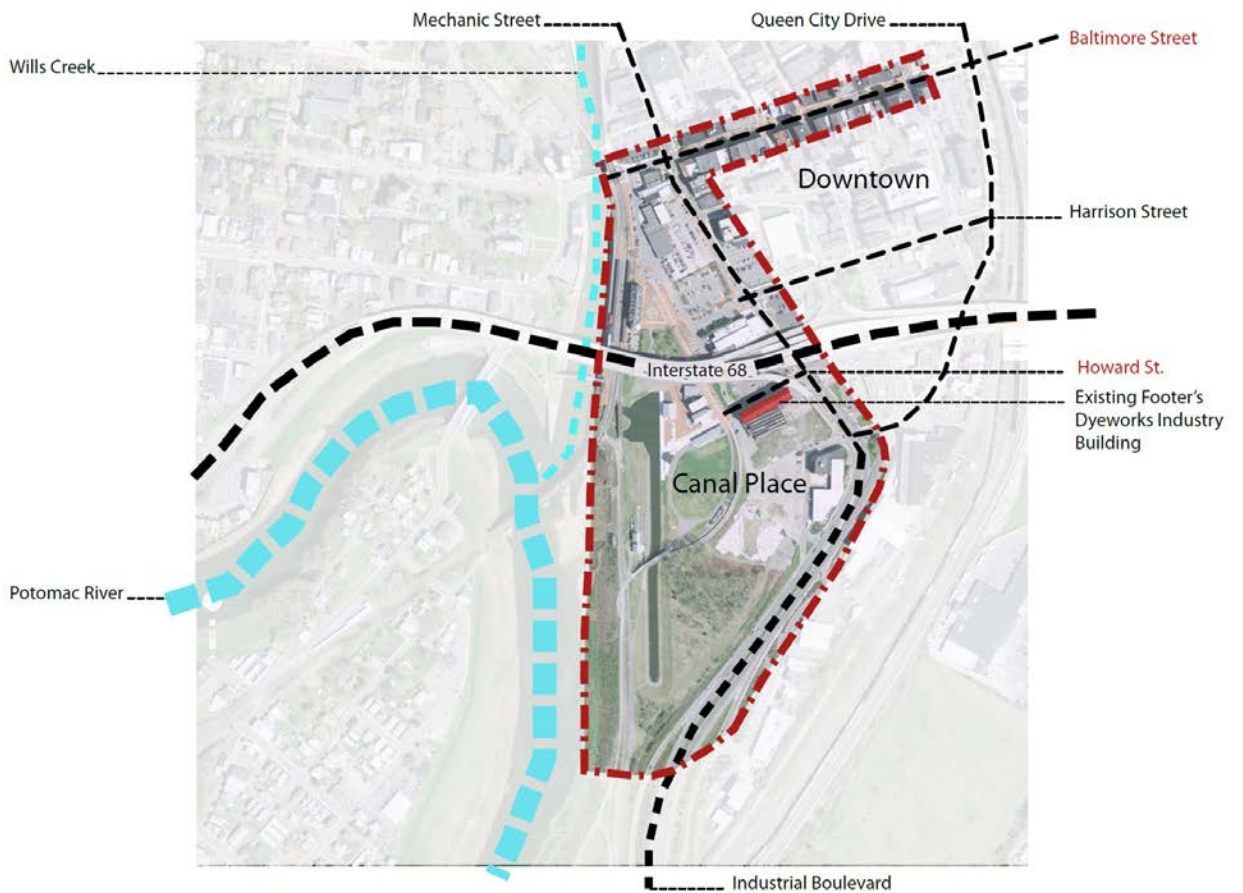


Figure 13 - Study Region with specific site boundary outlined in red. (Source: Author)

The Footer's Dyeworks building is highlighted in red and will serve as an industrial building for study (figure 14-15). It is sited at the corner of Mechanical Street and Howard Street. The building was originally part of a larger complex of buildings that existed on the site (see figure 90 in the appendices). The site can be accessed by way of Mechanical Street from the North; Industrial Boulevard from the south; Harrison Street, Baltimore, and Howard Streets from the east, and exits 43B & C off Interstate 68 (refer to figure 13 for locations).

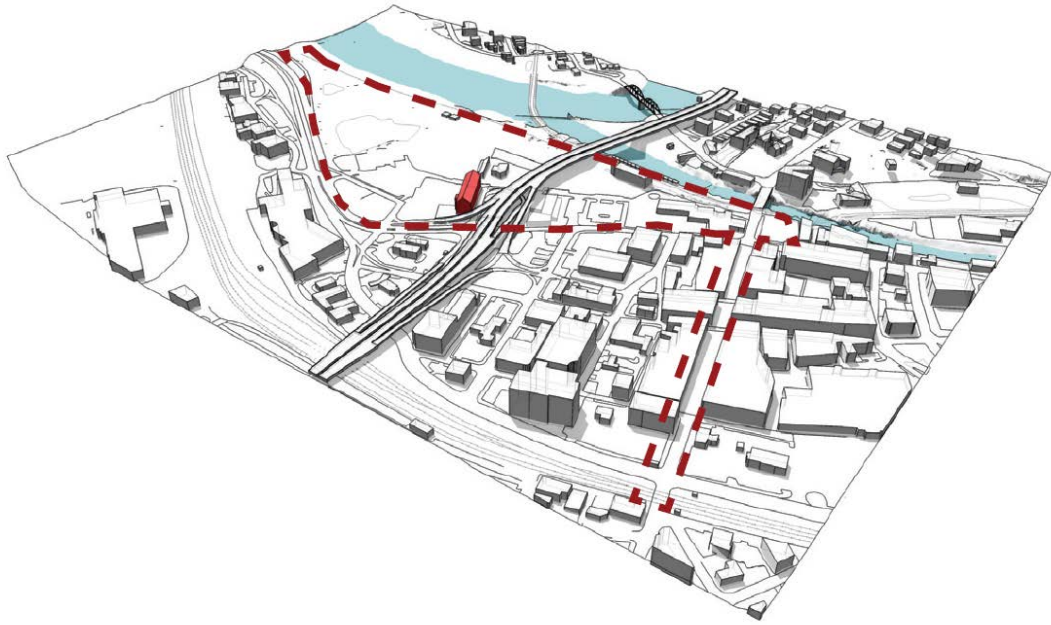


Figure 14 - Historic Footer Building Location and Situation

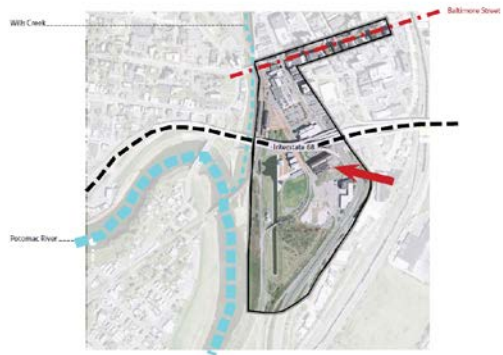




Figure 15 - Existing Footer Dyeworks Building in Existing Context (Source: Author)

Site Intervention

The existing conditions of the site area will serve as a guide to what the design process will foster. Through the course of this thesis existing comprehensive plans and proposals will be studied and considered to execute a design that incorporates the latest technologies within the existing infrastructure.

This site is the western terminus of the Chesapeake and Ohio Canal as was illustrated in a drawing completed by the Cumberland and Pennsylvania Railroad Co in 1923 (figure 16). The drawing hints at the idea of a mid-city ball park around the area. The waterfront must act as destination point for all the tourists and Canal enthusiasts. The feasibility studies of this area will incorporate infrastructure that will bind this concept into the agenda of the schemes that are proposed. The space must be accessible from all parts of the city and waterfront area including the interstate, the downtown, developments to the west of the Potomac River from Green Street and Washington Street, and all developments south coming from Industrial Boulevard. Views out of the site toward West Virginia will be considered and brought into the design's core intentions.



Figure 16 - Canal Place 1923 Mid-City Ball Park Reference (Source: National Park Service)

Site Planning

The site is light on programmatic elements and lacks a sense of clarity or clear design intent. A master plan for the area has been approved and adopted but certain aspects of the plan have not been realized. The thesis will serve as a link between this existing management plan and the aspects of the design that will collate the disconnection of this waterfront area with the surroundings of the downtown and greater Cumberland area.

The plan illustrated in figure 17 was commissioned by the Canal Place Authority in Cumberland, Maryland and delivered by Wallace Roberts and Todd (WRT) in 1996. All the buildings in this plan south of the bar building illustrated in red were part of the Footer's Dye Works Complex and have since been demolished (nos. 7 and 8 in figure 17). The area is now an open brown field site that has a great potential for new structures. The "re-watering" of the canal is illustrated in the WRT plan.



Figure 17 - Master Plan Proposal 1997 (Source: Wallace, Roberts and Todd)

The canal has not been carried through to the entrance of the train station illustrated in figure 18. The WRT plan also does not take into consideration the Baltimore Street pedestrian connection from the downtown to the waterfront area at Canal Place (figure 19-20).

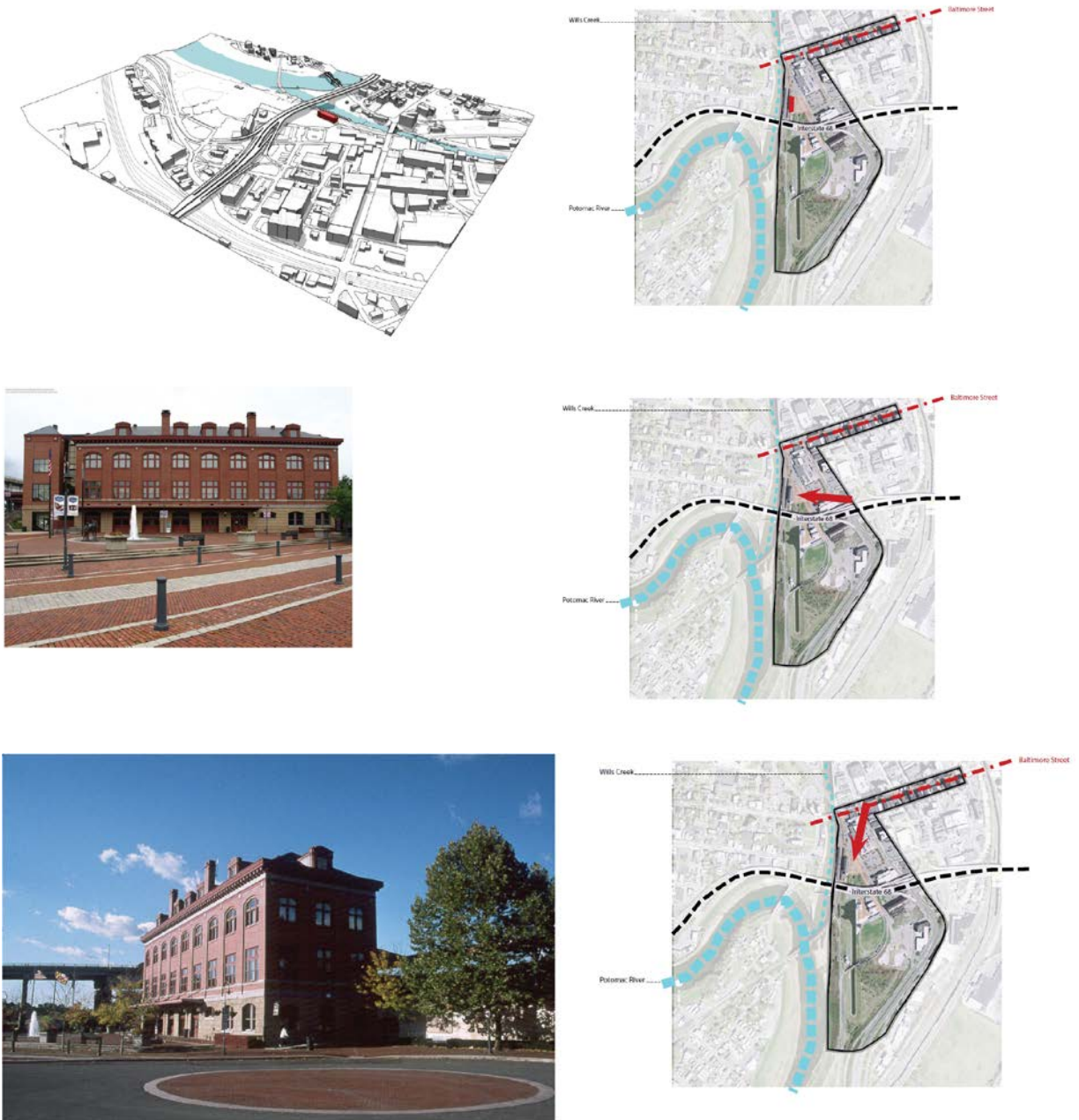


Figure 18 - Existing Historic Western Maryland Train Station (Source: Author)



Figure 19 – Existing Pedestrian Movement (Source: Author)



Figure 20 - Pedestrian Movement (Source: Author)

Site Survey



Figure 21 - Slope | Contour (Source: Author)

The plan in figure 21 illustrates the uniqueness of the site and its topographical conditions. Contour lines are at five foot intervals. The immediate site south of the Footer Building (illustrated in red) is fairly flat and could foster the idea of a variety of recreational facilities that would support a mixed use area around it.

The infrastructure of the town was transformed as a result of Eisenhower’s term in office in the 1960’s. The introduction of the highway system “through the town” had a profound impact (figure 22). A town once uninterrupted was now plagued by a brazen overhead bridge that sponsored a plethora of off ramps and intersection changes, further disconnecting and isolating the downtown with the waterfront amenity (figure 23).

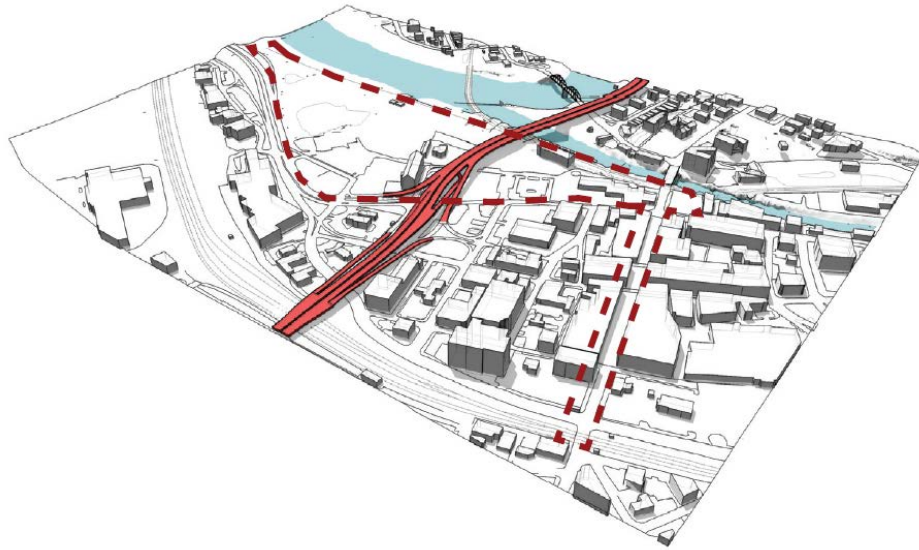


Figure 22 – Selected Study Area Situation (Source: Author)

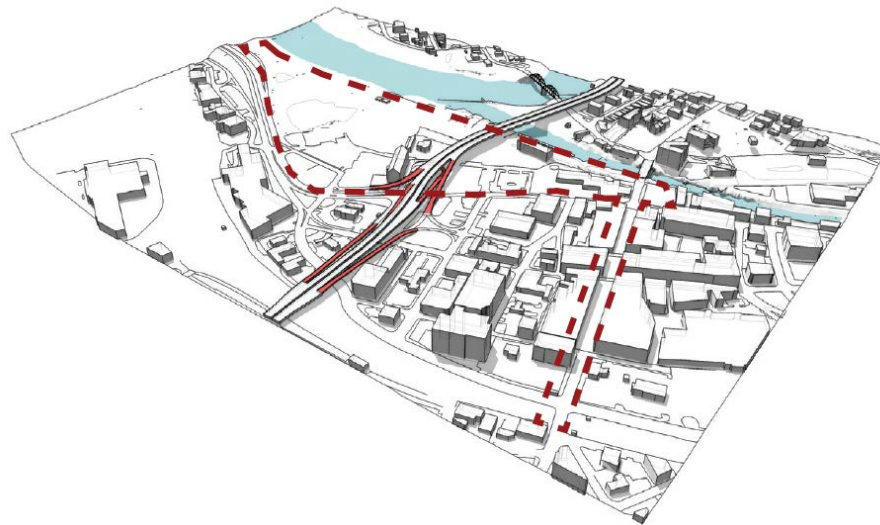


Figure 23 – Numerous Highway Off-Ramps in and Around the Site (Source: Author)

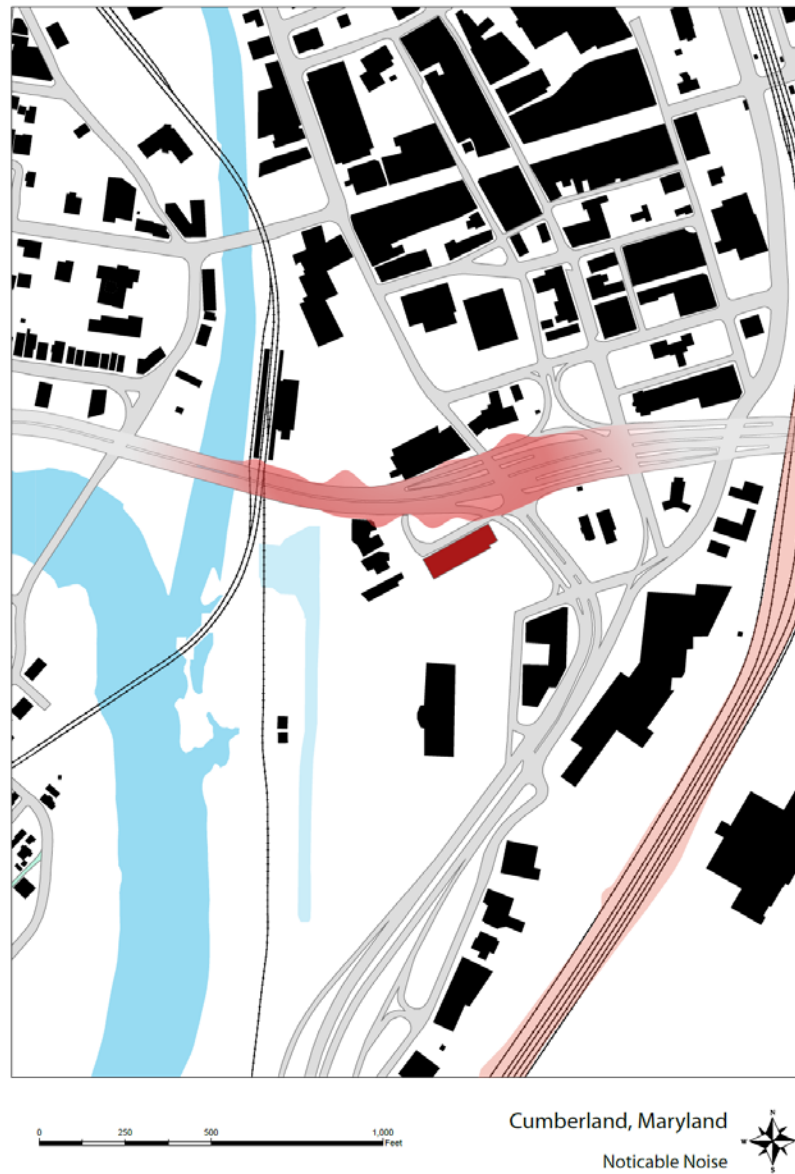


Figure 24 - Noticeable Noise in and around Site (Source: Author)

Noticeable noise from this overhead highway is illustrated in figure 24. The noticeable noise that comes from the interstate highway system and the B&O railroad tracks that flank the site. Creating connections under these conditions will prove to be a challenge as vehicular and pedestrian movement situations will have to be addressed in conditions illustrated in figure 25 and 26.



Figure 25 – Under-Highway Condition (Source: Author)



Figure 26 - Existing Vehicular Movement (Source: Author)

Parking is an issue that becomes apparent when thinking about the design of an urban scheme in the site's context. Many waterfront views are important to preserve in this situation. Parking is located and designed to support the various programmatic strategies that are proposed but furthermore re-emphasize the connection to the existing downtown, the interstate, and the areas south of the site. Ease of movement through and around the space will be given primarily to the pedestrian but will also foster a relationship to the automobile that will support movement and porosity through the design. Two existing vertical parking structures are accessible from the site and would provide ample parking for roughly 900 cars (figure 27-28).

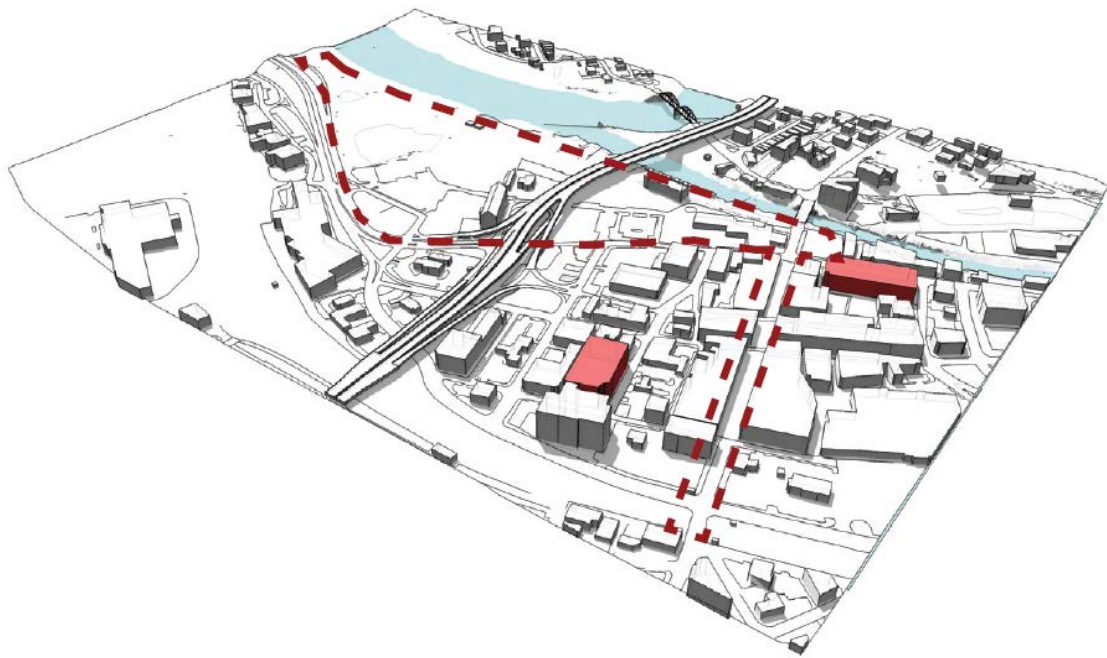


Figure 27 - Existing Vertical Parking Structures (Source: Author)

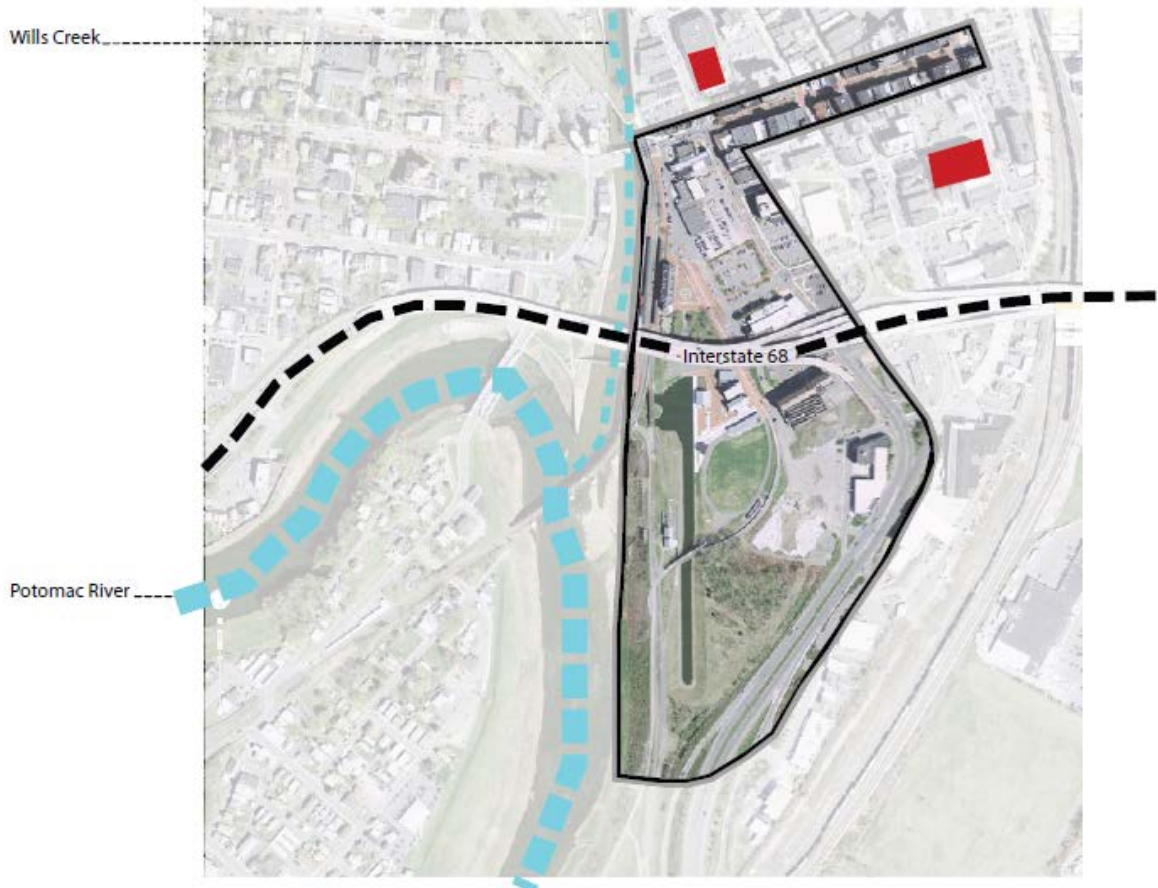


Figure 28 - Existing Vertical Parking Structures (Source: Author)

Figures 29-30 illustrates the vast amounts of impervious parking surfaces located in and around the site (18% of site area). A big issue of the design will be accommodating the vehicular traffic and parking it. Various forms of low impact development, such as pervious parking surfaces, will influence this part of the design. A majority of the parking will have to be relocated. This fact may lead to the investigation of a mixed use parking facility with retail on the ground level and parking above. A structure of this nature has the ability to take advantage of smart technologies that map and track each individual parking space and informs the motorist if any parking spaces are available and where they are located. A similar system could be implemented in and around the surface lots to facilitate parking during game days.



Figure 29 – Impervious Surface Parking Lots (Source: Author)



Figure 30 – Impervious Surface Parking Surfaces (Source: Author)



Figure 31 - Solar Exposures (Source: Author)

Solar orientation of the site is critical to the placement and orientation of a baseball stadium. The vantage point from home plate must be situated in such a way to prevent sun rays from interrupting an afternoon game. The fact that solar access is prevalent on the site because of its southern adjacency to the interstate system will bode well for integrated solar technologies into the design proposal (figure 31).

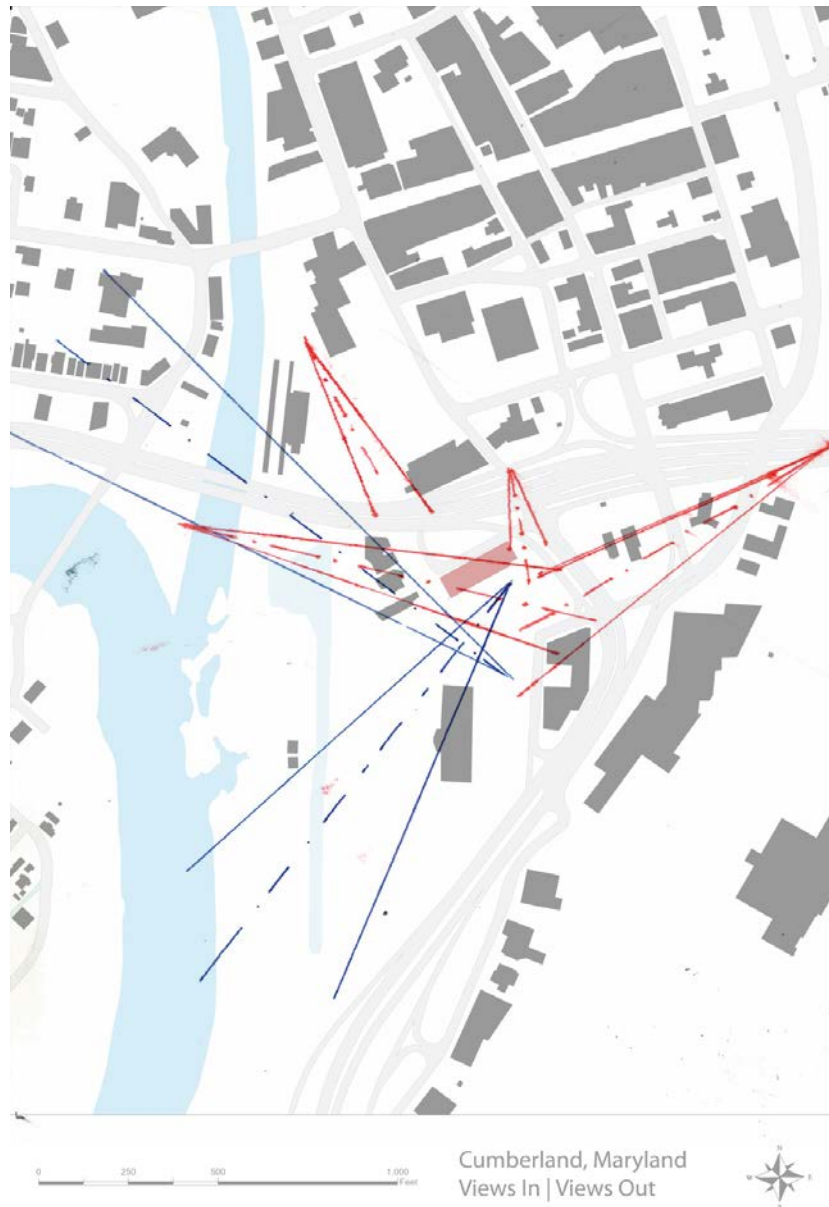


Figure 32 - Views in and Out of Site (Source: Author)

The final design proposal will take into account different views in and out of the site. The drawing in figure 32 illustrates the different view into (red) and out of (blue) the site.

Views from the site toward the southwest take advantage of the Appalachian Mountains in West Virginia. The Potomac and re-watered C&O Canal can be seen clearly from the site as well.

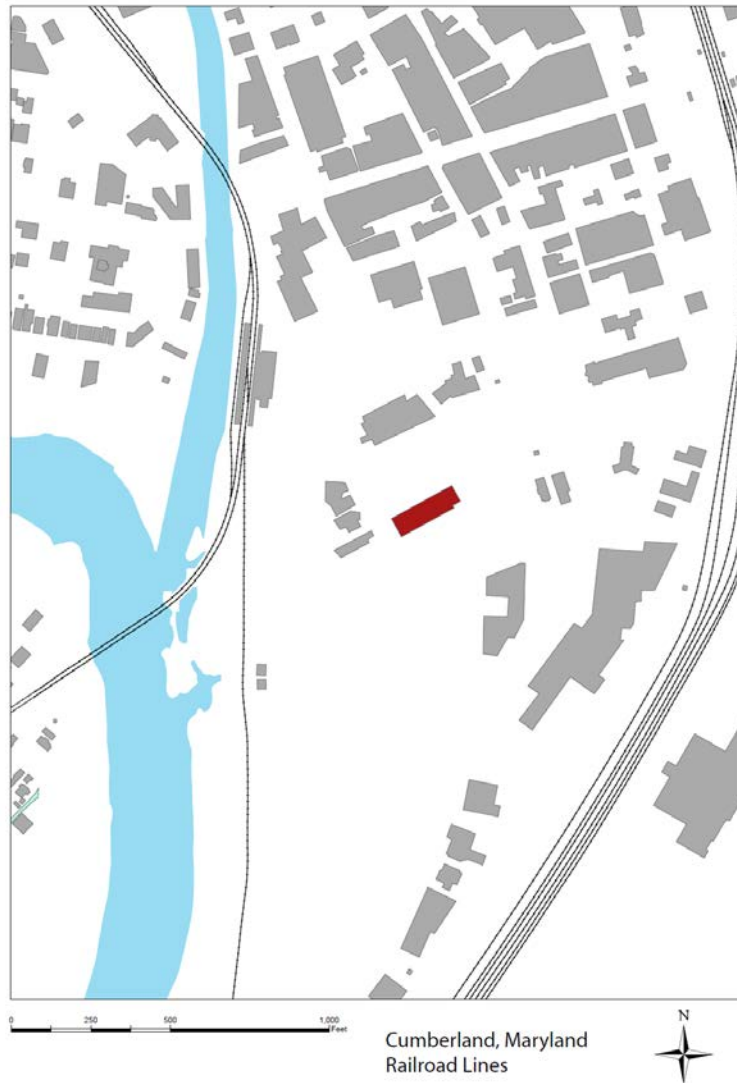


Figure 33 - Railroad Lines (Source: Author)

Over time the industry in Cumberland's waterfront area began to take advantage of the train. Rail lines were brought into this area to move goods out. As industry began to peak and slowly decline, the lines were removed as were the majority of the buildings. The drawing in figure 33 illustrate the historic Western Maryland Railroad Line to the West of the Footer Dyeworks Building (illustrated in red) and the B&O Railroad Lines to the east that are used regularly. The removal of these buildings over the years has caused an odd shift in the urban fabric with irregular and oversized blocks emerging and taking shape.

This is illustrated in figure 34. Notice the removal of the buildings directly east of the re-watered canal. The emptiness of this space will be analyzed and addressed to provide maximum urban stability for the study area.



Figure 34 - Block Sizes (Source: Author)



Figure 35 - Interstitial Zone of Re-activation [purple] between vehicular infrastructure [red] and waterfront zone [yellow] (Source: Author)

Addressing this issue requires a study and proposal to reconnect the tissue back together and to establish relationships with the existing infrastructure that would sponsor and promote community, economic stimulus, revenue and leisure. Giving the people a reason to celebrate the downtown and have a place in it would allow development to occur and breathe life back into what once was a thriving community. Figure 38 illustrates in purple the area that will be concentrated on for various urban insertions that would bode well for the community with the waterfront (yellow) becoming activated and engaged with the existing vehicular infrastructure (red).

Chapter 3: Precedent

Appalachian Power Park

Charleston, WV
HNTB
2005

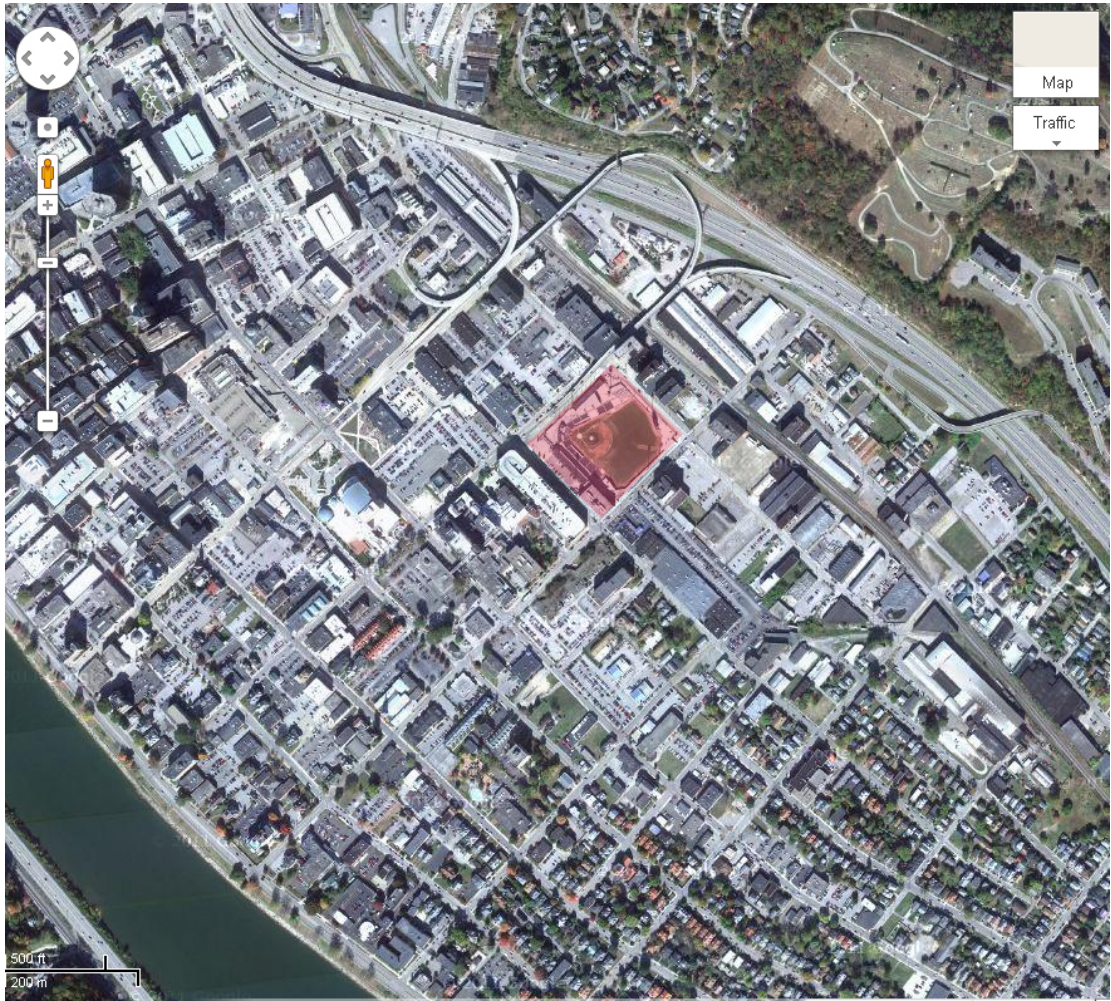


Figure 36 - Appalachian Power Park | Charleston, West Virginia (Source: Google Earth)

West Virginia's state capital, Charleston, is loaded with baseball history. Professional baseball has made its home here off and on for over 100 years, and has seen many division and league titles come to the various inhabitants of the city. Fans can still purchase reminders of the city's baseball past, as throwback jerseys of Dave Parker from the Charleston Charlie's team in the 1970s are freely sold. A lot of Charleston's baseball

memories were made in Watt Powell Park, built in 1948. That park was decommissioned in 2005, though, and the Charleston baseball franchise moved a few miles down the road to Appalachian Power Park.

Atmosphere

This is one of the more visually unique ballparks you'll see. There are historic buildings all around the park, and they are easily visible from your seat (figure 37). If you look beyond the right field wall, you can see the golden dome of the Capitol building of West Virginia. Inside the park, there is not a lot to distract you from the game.



Figure 37 - Appalachian Power Park (Source: <https://picasaweb.google.com/writersradio/AppalachianPowerPark#5635751319075067762>)

Site Lines

One of the few drawbacks of this park (the lack of an overhang to provide shade) is also a pretty large benefit to fans wishing to see the game. Virtually the entire concourse is open to the field, so if you go get an overpriced soda or food item, you can still see most of what is going on down at field level. There is netting around parts of the seating bowl, but it is kept to an absolute minimum. This is much appreciated. The bullpens are visible from the seating bowl, as they are right along each foul line.

There are a couple of things to watch out for, however, including a “blind spot” down the left field line from some of the third base seats. This may or may not be a concern, but keep it in mind on any balls hit into the corner. There is also a canopy on the third base side that could block views at times. This and the support pillars of the long modest overhang on the third base side proved to be a bit of an issue.

Parking

Parking is close, just outside the right field entrance to the park and across the street.

There are a few other lots scattered about, but to park close to the stadium costs. There is a parking garage near the stadium, but that appeared to be for the hospital next door. There may be some parking nearby for the various government offices, but it was not labeled in a fashion that was quickly identifiable.

Edward A LeLacheur Park

Lowell, MA
Populous (formerly HOK Sport)
1998



Figure 38 - Edward A. LeLacheur Park | Lowell Massachusetts (Source: Google Earth)

Edward A. LeLacheur Park is a baseball park located on the banks of the Merrimack River in Lowell, Massachusetts. It is home to the New York-Penn League Lowell Spinners, the Class A Short Season Affiliate of the Boston Red Sox. LeLacheur Park is also home to the University of Massachusetts Lowell River Hawks baseball team, which competes in the Northeast 10 Conference at the NCAA Division II level.

The park was built between a partnership with the city of Lowell and the University of Massachusetts Lowell. Named after a local civic leader who spearheaded the initial redevelopment of Lowell, the park was built adjacent to the residential section of University of Massachusetts at Lowell. Populous (formerly HOK Sport) designed the park. It offers views of the Aiken Street Bridge, Lawrence Mills and Fox Hall. The seating bowl is raised above the field. A concourse surrounds the top of the park. The refreshment, merchandise stands and bathrooms are located here. The design enables an open view while waiting in line. The park opens to the waterfront and overlooks the industrial buildings from the third base line (figure 39).



Figure 39 - Panoramic View of Edward A. LeLacheur Park (Source: http://v7.cache7.c.bigcache.googleapis.com/static.panoramio.com/photos/original/8808690.jpg?redirect_counter=1)

Two seating expansions have been considered since the park opened. One plan would have added 600-1000 seats on the third base side. The expansion would match how the first base side is angled towards the infield. The other proposal was to add a smaller version of the Green Monster with seating for approximately 200 people. This would also would have shortened the field and raised the wall to 20 ft (6.1 m). Due to lack of funds, neither have been built. The stadium also features the Giant Hood Milk Jug from Fenway Park and all Red Sox retired numbers.



Figure 40 - LeLacheur Park's Connection with the Waterfront and Old Industry Building Types
(Source: <http://www.lowellplan.org/content/related-links>)



Figure 41 - Baseball Field Orientation Study (Source: Google Earth)

A study on baseball field orientation was conducted to understand the implications on the placement of home plate relative to the sun (figure 44). Twelve major league facilities and twelve minor league facilities were studied. The study concluded that it is impractical for the batter to be facing south while at bat. This only appeared once in the study that was conducted. Most stadiums are oriented with the batter facing either northeast or southeast to prevent the sun's rays from disrupting an afternoon game. Some asymmetrical seating arrangements also took solar orientation into consideration with the design of their seating bowls. Fans often do not face due south during the afternoon sun. These factors will be taking into consideration when the placement of the stadium occurs.

Hank Aaron Stadium | Mobile, AL

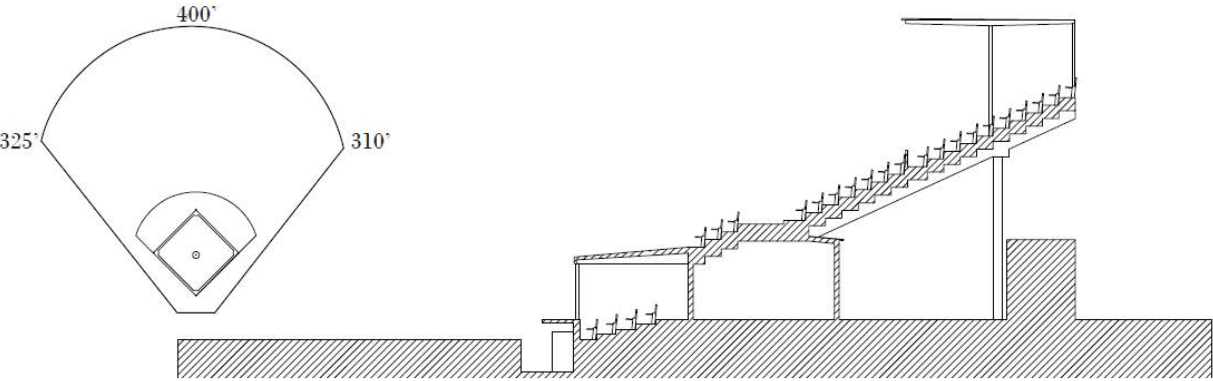
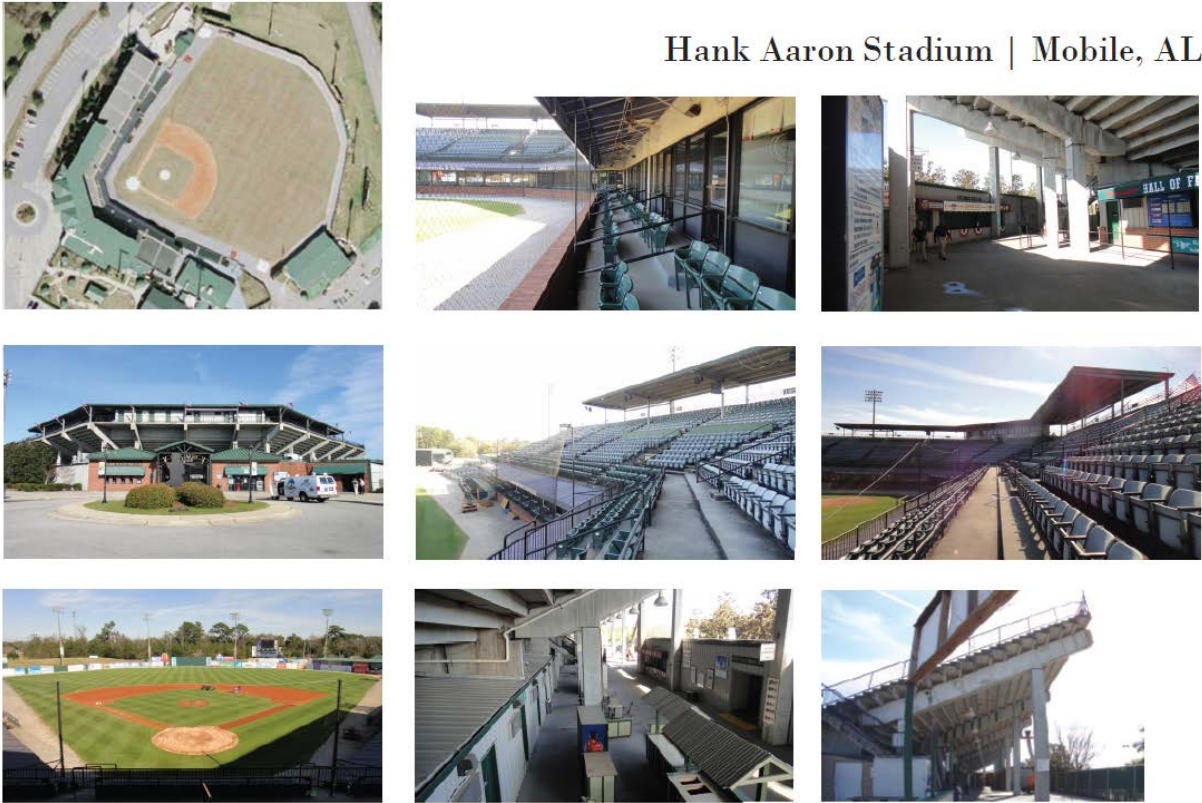


Figure 42 - Hank Aaron Stadium Study | Mobile, AL (Source: Author [Aerial: Google Earth])

Various studies were also conducted onsite at various ball parks to understand the seating bowls arrangement and configuration in relationship to the playing field. As illustrated in figure 45, the seating bowl at Hank Aaron Stadium in Mobile, Alabama favors the box level seats on playing field level. The general admission seats above the concourse start approximately 12 feet above the playing field and offer limited views of the game. Views

into the field from the main concourse are limited due to the arrangement of the box suites between the concourse and the field. The roof canopy of this field's design is very elementary as well, not offering much protection from the sun or rain. Overall, the stadium is a poor design in section and gave some cues as to what not to do in the scheme proposals for Cumberland.

Peoples Natural Gas Field in Altoona, Pennsylvania offered a completely different experience in section (figure 46). For starters, the field is sunken approximately 12 feet from the main concourse grade, allowing the lower seating bowl to be very close to the field. This provides an intimate feel for the fans, getting them very close to the game and opens up the concourse for various programmatic activities such as concession and team merchandise sales. This scheme also incorporates a split bowl design that splits the upper and lower decks, allowing views into the ballpark from multiple vantage points. This design is more applicable to Cumberland because of its transparent nature. Views into and out of the stadium are going to be critical to capture the essence of the town and surrounding area. Box offices are located at the top of the upper bowl to provide spectacular views of the field and of the town. Amenities down the left field line include a beer terrace and overflow seating for sell-out crowds. A similar terrace could be integrated into the proposal for Cumberland that would engage the existing Footer Dyeworks building, linking a ground level restaurant to the playing field. Vertical circulation through the park would be addressed similarly through the use of multiple staircases that lead to the second level concourse. Elevators could be strategically placed as well to facilitate accessibility for all fans. This would eliminate the use of long ramps that would eat up retail and concourse space, maximizing porosity and transparency through the façade from the town to the field.

Peoples Natural Gas Field | Altoona, PA

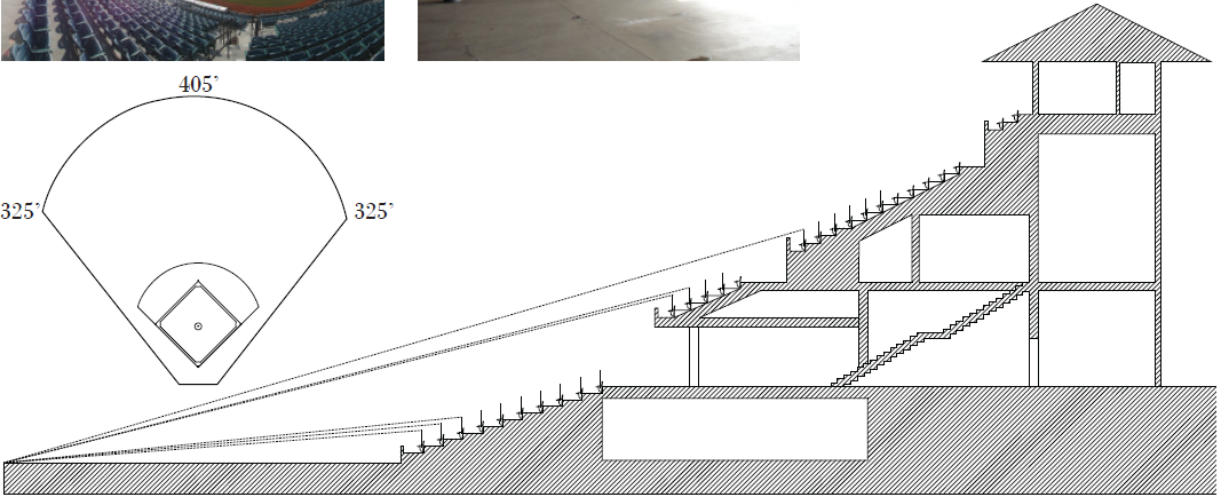
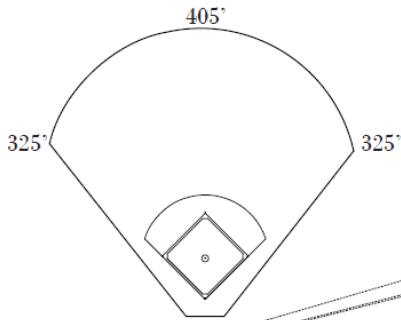


Figure 43 - Peoples Natural Gas Field Study | Altoona, PA (Source: Author [Aerial: Google Earth])

Oriole Park at Camden Yards

Baltimore, MD
HOK Sport
1992

Oriole Park at Camden Yards is considered by many to be the first modern traditionally designed ballpark. The ballpark opens to the downtown district, allowing views back into the city. The ballpark is located minutes from the downtown harbor district where shops and restaurants are located. The ballpark fits contextually within the city through the use of materials, architectural elements, and massing.



Figure 44 Aerial view of Oriole Park at Camden Yards. (Source: <http://www.city-data.com>)



Figure 45 The Warehouse at Oriole Park at Camden Yards. (Source: www.baseballmusings.com)

The warehouse was an original building of the Camden Train yards and was kept to reinforce the urban grid and define Eutaw Street as it runs adjacent to the stadium. It also integrates the ballpark with its historical context. The Footer Building at Canal Place could serve this function to a minor league baseball stadium. The warehouse sits as a backdrop to the ballpark creating a sense of enclosure.

Chapter 4: Program

Building Scale Program

Because of the size of program and the many amenities associated with a minor league ballpark, square foot assessments are general rather than specific. Pragmatic sizes were analyzed relative to similarly sized stadiums.

The line between ballpark and program elements has been blurred in order to realize the development as a multi-functional facility that will remain active all year. When there is no game or in the off-season, much of the facility would be restaurants, shops, retail, office, and housing that will be used by the city. Commercial offices designed into the surrounding fabric would support these outlets as well.

This facility could also be used for concerts and other public events. The ballpark is designed to accommodate baseball as the primary activity, but as part of a larger whole within the city.

Team

Facilities: Field Level:

Team facilities on the field level include:

Playing Field:

Locker Rooms:

Workout Rooms:

Player Dining:

Grounds Crew:

Press Facilities (for pre and post-game interviews):

Security Offices:

Green Rooms:

Concourse Level

Team facilities at the lower level include:

Team Stores:

Concessions Stands:

First Aid Stand:

Club Level

Team facilities at the Club Level will include:

Press boxes:

Club Level Suites (20)

-Private Dining

-Conference Rooms/ suites

-All of these suites will overlook the field, while others may have views of the city.

Luxury Suites (for owners and other distinguished guests)

Ground Level Exterior

Ticket Sales Offices:

Retail Space:

Office Space: Residential:

Vertical Circulation

Vertical circulation will be situated at various places and optimally sit inside of the stadium. Circulation and egress will be analyzed in order to size concourse and ramp widths. Elevators are similarly spaced throughout the stadium and are sized for private and disabled use only.

Seating:

Seating is designed to accommodate approximately 5,500 people. The various seating designations are:

Lower Box:

Field Level:

Club Level:

Bleachers:

Mechanical Spaces:

Mechanical spaces occur on all levels with the basement level housing major mechanical infrastructure.

Surface Parking:

Approximately 1,500 parking spaces are needed to accommodate the ball park and surrounding structure.

Structured Parking | Parking Garage

On-street Parking

Surface Parking

Non Ballpark Functions:

The envelope of the ballpark will occupy a mix of uses: retail, and office space.

Because the envelope will be developed in the design development phase, not concrete square footage requirements will be assigned at this time. Square foot

requirements will be based on the position, orientation, and parti of the ballpark.

Other Program elements will include:

- Ice Cream Parlor
- Movie Theater
- Outdoor Theater
- Sports Bar(s)
- Parking Garage | Retail
- National Park Service Headquarters Building
- Team Store
- Homeless Shelter
- Mixed Use Housing | South of Stadium
- Team Offices
- Restaurants

Chapter 5: Conceptual Schemes and Strategies

The existing site offers significant potential for a variety of proposals and interventions, both at the urban scale and at the building scale. Cumberland's location, often thought of as a liability, is in fact an asset. Regional proximity to other major metropolitan areas such as Pittsburgh, Frederick, Baltimore and Washington, D.C. makes Cumberland a key access point along the western interstate corridor. A new master plan that includes a minor league ballpark and supporting programmatic uses strengthens the existing site situation and its connection to the old downtown.

Some of these uses could include an extension of the industrial type buildings that flank Industrial Boulevard where Mechanic Street and Queen City Drive Converge just south of the interstate 68 off ramp. Market surveys from previous urban proposals suggest that creating a development in this area could support uses as broad as retail, commercial spaces, residential housing, as well as various amenities including a minor league baseball park.

The economic development of the area has been on a decline since World War II. The thesis will encourage a design that integrates the traditional building vernacular of the industrial town. Sustainable practices and technologies will be at the forefront of consideration and will be implemented into the design proposal. Principles and goals specific to previous management plans will be regarded and developed for Cumberland's Waterfront | Canal Place area. These objectives encompass the development of appropriate public and private facilities that encourage

the use and appreciation of the C&O Canal and other key resources of the park corridor.¹³

The thesis will develop on the objectives of development and implementation of various public and private frontiers that will harness and take advantage of the uniqueness of the site situation. Integration of programmatic elements within the existing infrastructure and understanding the implications of literal and figural connections between the downtown and Waterfront | Canal Place area is critical. The site's connection to the existing urban fabric of the downtown Baltimore Street corridor area will be addressed. The area can serve as an anchor point for the downtown, further bridging the gap that is created by various forms of infrastructure, including interstate 68 and the Western Maryland Railroad line that exist to the west of the site.

The area has a distinct architectural vernacular that will be studied and understood. Historical Preservation motives will be reviewed and taken into consideration during the project's development. Another aspect of design that must be addressed is the fact that Cumberland's Heritage area is under the jurisdiction of the National Park Service (NPS). It is the NPS's intention to finesse the infrastructure of the canal and bring to fruition a re-design that is both instrumental in the connection of the downtown to the waterfront and the "re-watering" of the canal.¹⁴ The design will include a minor league baseball park in the design scheme that would act both as an anchor to the waterfront and downtown but would also heighten the area's potential for further economic growth and stimulation. More

¹³ Canal Place Preservation and Development Authority, "Canal Place Heritage Area Management Plan Update: Cumberland, Maryland 2002," Canal Place Authority, http://www.canalplace.org/downloads/Management_Plan.pdf (accessed on November 4, 2011)

¹⁴ Canal Place Preservation and Development Authority, "Canal Place Management Plan: Cumberland, Maryland 1996," Wallace, Roberts and Todd, (accessed through University of Maryland's Maryland Room Collection on October 15, 2011)

attraction and densification of the waterfront area would potentially make the area more attractive to clients and developers. Establishing connections through existing infrastructure and back to the downtown has the potential to create a continuous fabric and harmonious urban environment. Studies that express where best these connections could be made will be explored.

Different land uses will dictate design decisions and where buildings should be located and oriented. The idea that site is located in an area south of the interstate system bodes well for solar exposure and further emphasizes the concept of integrating sustainable technologies into future developments on this site. Solar technologies will be focused on primarily. The site for the ball park situation could become a precedent to the way the future of ball parks are designed, incorporating a constructed wetland area into the proposal that could be experienced from multiple approaches.

Study of different recreational and special event facilities on this site and their relationship to a more typical retail, commercial, and residential fabric allow connections to be made back to the downtown. Understanding these relationships and how the program can support itself guides the decisions of building placement and orientation. These developments are encouraged to integrate facilities that will complement the public attractions prominent on the waterfront and may include ground level retail with housing above.

Development of physical and programmatic buildings and spaces that promote linkages between the Baltimore Street pedestrian area down toward Mechanic Street to the site is critical. The barrier of the infrastructure that is Interstate 68 will have to be dealt with, studied and designed in such a way that it

becomes a design opportunity that will engage the uniqueness of the place and make a positive connection strategy.

Uses of the buildings within the urban design scheme complement those of the surrounding area and foster a collaborative ideal that exists in this area. History, tradition and cultural identities are preserved through this project, paying homage to the Canal Era but pushing forward the ideas of technology with the integration of sustainable design, systems and practices within the existing and proposed infrastructure.

Placing the Ballpark

It was necessary to first determine the proper placement and orientation of the ballpark footprint within the existing city fabric. A relative ball park sized to meet the seating capacity of a AA Minor League team was calculated and modeled digitally. The model was then used as a tool to determine sizing and placement strategies within the context of the site. Multiple schemes and placements were explored and tested, placing the ballpark both north and south of the highway, keeping in mind the four initial objectives that the thesis set out to address. These issues included:

- The highway's impact on urban character: making the highway an amenity
- The pedestrian disconnect between the downtown and waterfront
- utilizing park areas and open space: introduction and utilization of public spaces
- harnessing the site's adjacency to the C&O Canal.

Announcer under the Highway Scheme

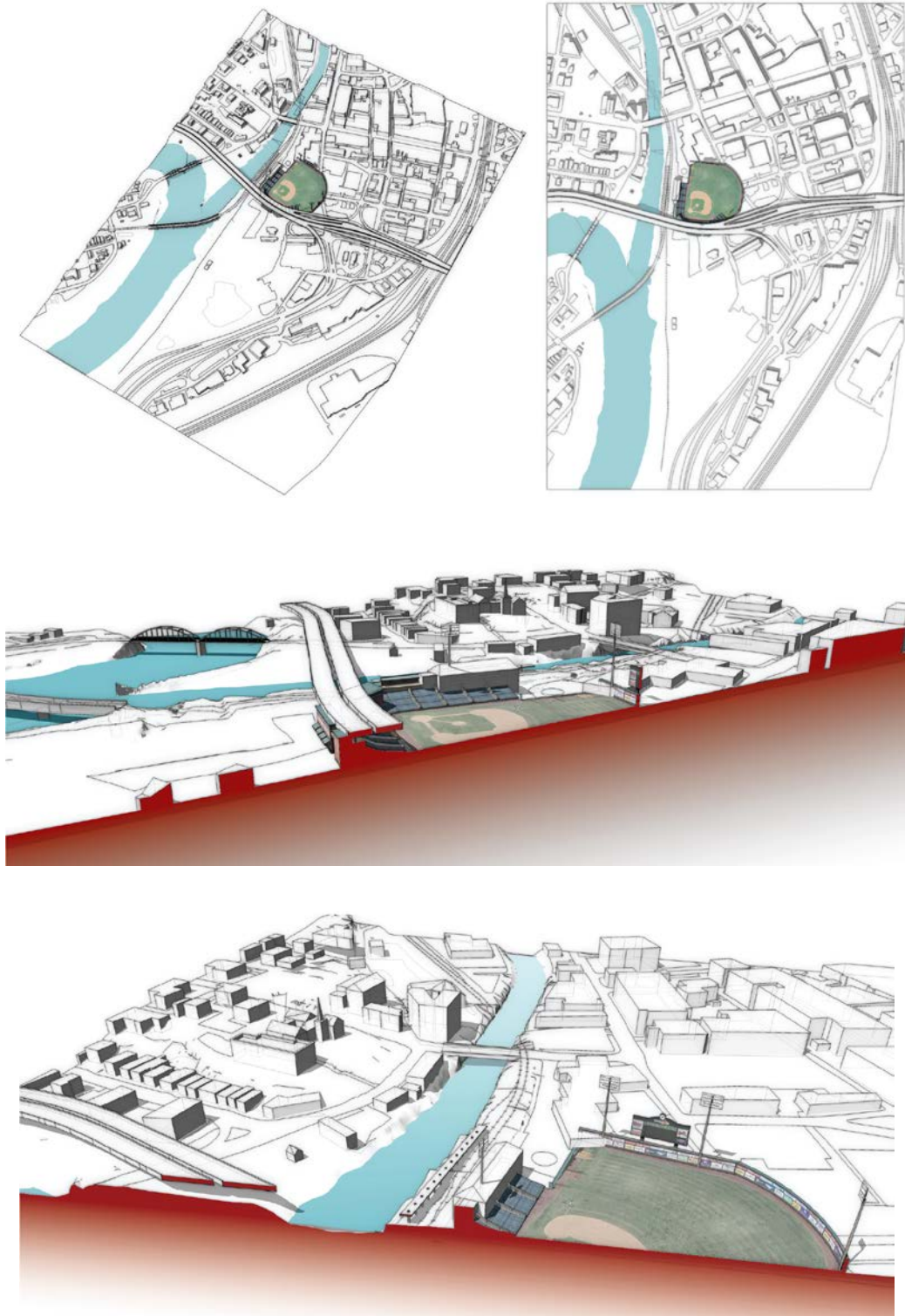


Figure 46 - Announcer under the Highway Concept Scheme (Source: Author)

One viable scheme conceptualized the idea of placing the announcer's booth of the ballpark underneath the existing highway infrastructure, loading it with program use and making it an inhabitable place (Figure 46). The overall orientation of the park in this scheme takes advantage of solar orientation and engages the local train station in its design. Areas south of the highway suffer a disconnect that is further created between the downtown and the waterfront areas. The existing Footer Dyeworks Building has the potential to be engaged by the edge of the ballpark under the highway, but it turns out that many problems and challenges plague this scheme from being pushed forward. Structurally, the scheme is very burdensome. Organization of the existing footing piers for the highway would have to be taken into consideration and the entirety of the ballparks seating bowl would have to be designed around them. The sightlines from the spectators along the first baseline would lose glimpses of pop-fly balls. This scheme would also involve a reorganization of the existing street grid and destruction of two interstate off ramps. Integrating the existing train station into this proposal also reverses itself as being problematic. The preservation and celebration of the train station will be explored in later schemes. This scheme also does not engage the pedestrian in an attempt to create a connection to the Waterfront | Canal Place area and the Baltimore Street Corridor, which is a major focus of the thesis proposition. Developing a proposal that puts this amenity at the forefront of the design is paramount and requires specific thought and strategy. Packing the urban design proposal that accompanies the stadiums placement will also be crucial in the final design proposal. The urban design needs to take advantage of specific site amenities including the train station, the highway, the existing Footer Building and the Waterfront | Canal Place Area.

Urban Plaza Scheme

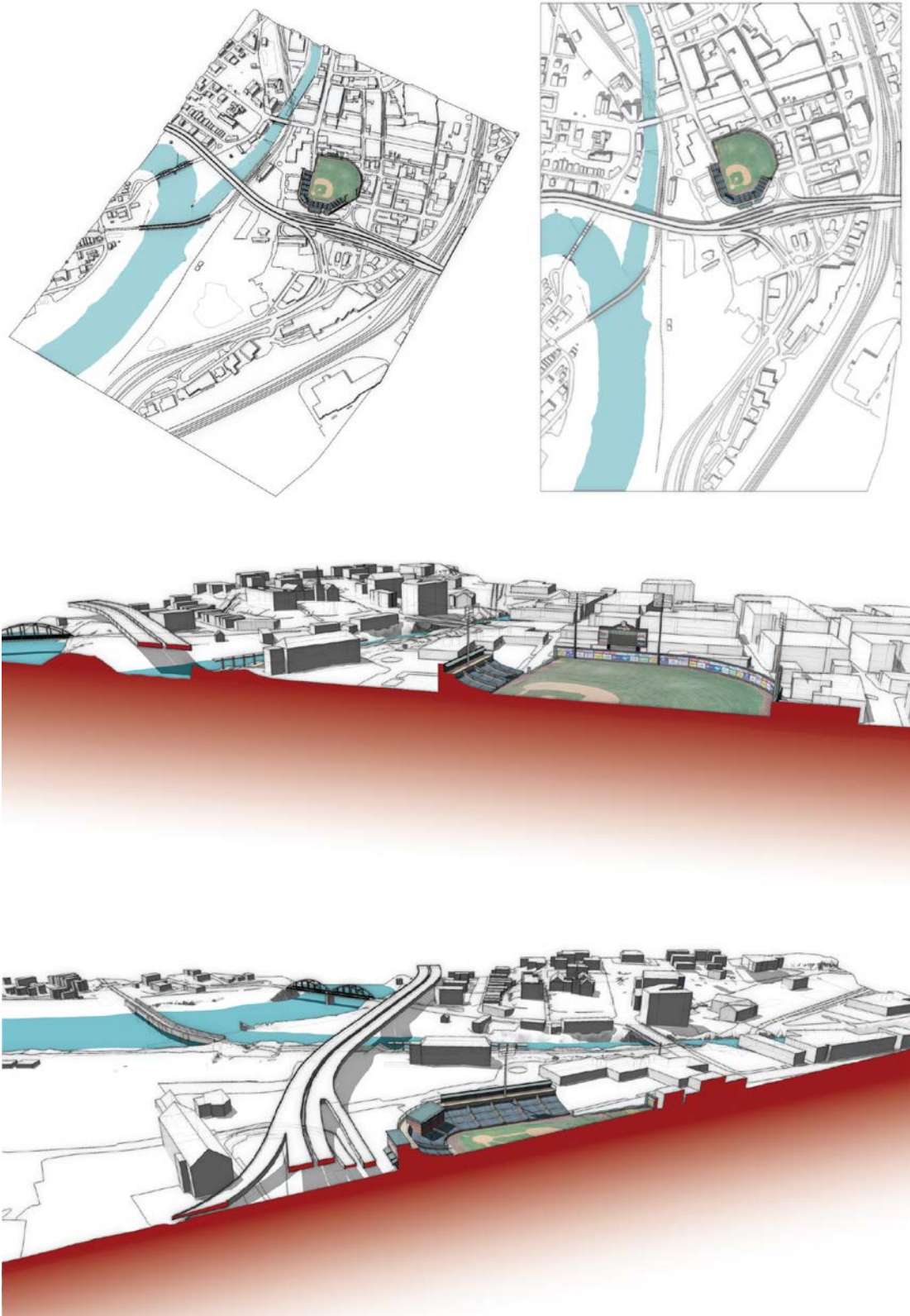


Figure 47 - Urban Plaza Concept Scheme (Source: Author)

The Urban Plaza Scheme creates new urban design experiences within the interstitial zone of the site and allows a plaza to be created between the ballpark façade and the existing historic train station (Figure 47). This scheme addresses visual and pedestrian connections from Baltimore Street to the site and facilitates movement toward Canal Place. The solar orientation of the ballpark has not changed from the Announcer under the Highway Scheme. Placement of the park facilitates retail usage on the west side of the stadium flanking the plaza space that is created. This would promote retail usage and energize that corridor as an attraction from downtown toward the water. The ballpark nestles itself nicely within the fabric of the existing downtown creating a prominent urban form all around its seating bowl. Even still, this scheme lacks the through connection under the highway. A major reorganization of downtown traffic patterns would have to be reconfigured and resolved for this scheme to work. The placement of the ballpark would result in the demolition of several significant municipal buildings in the downtown fabric including a historic Post Office and new office building. The Footer Building is not engaged at all in this design proposal, a missed opportunity in the grand scheme of historical infrastructure integration. This scheme also does not address the waterfront specifically and does not to address the re-watering of the canal. Views toward the surrounding landscape are only celebrated north of the highway, with views from the upper deck concourse being limited by the highway to the south. Creating visual cues back to Baltimore Street and the downtown would be more advantageous and promote future urban growth and economic stimulus while giving a reason for the existing Footer Building to remain. Further schemes will address this issue.

Connection to the Waterfront Scheme

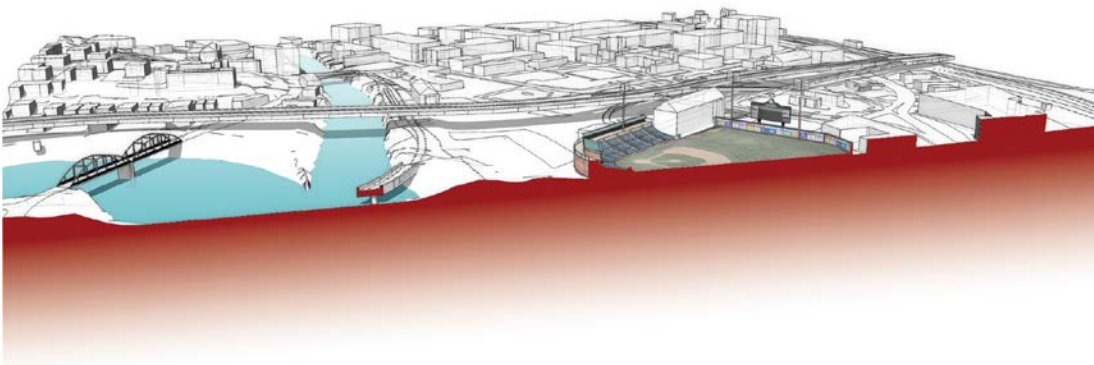
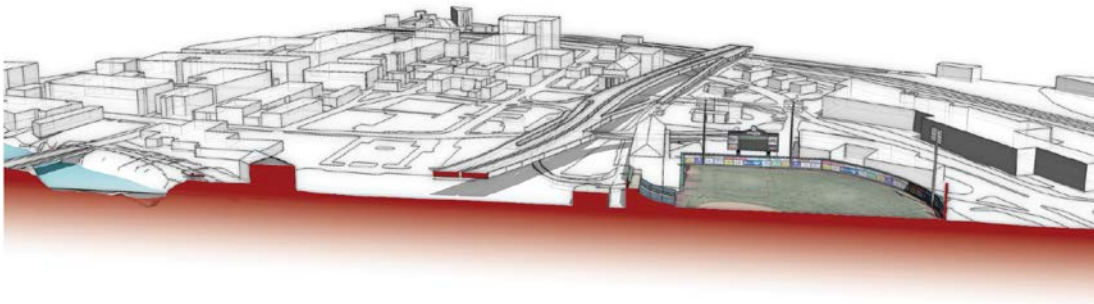


Figure 48 - Connection to the Waterfront Concept Scheme (Source: Author)

The Connection to the Waterfront Scheme (figure 48) bodes well for the placement of the ballpark within the context of the city for a variety of reasons. This scheme creates a distinct promenade from Baltimore Street to the site south of highway. The adjacency of the ballpark creates a terrace like condition next to the Footer Building, acting as a threshold that could serve as the main entrance to the stadium. The solar orientation of the park has shifted but still allows for good placement and keeps the batter out of the sun during afternoon games. The western side of the stadium now fronts the canal and creates an arrival point for all those entering from the southern portion of the site. Pedestrians using the towpath now have a sense that they have arrived in Cumberland when they see the ballpark placed next to the existing Footer Building, symbolizing a once industrial waterfront that was bustling during the industrial revolution. The Connection to the Waterfront scheme creates an opportunity for urban growth and reorganization to take place north of the highway, creating a liner that emphasizes the space in front of the train station and the promenade from Baltimore Street to the stadium and waterfront. The fact that the city, the water, and the field can be viewed from the upper deck of the stadium is key to the parks placement. Local businesses owning box seats in this area would be able to point to where they are located downtown from the box while at the same time be discussing future business proposals and watching the game. The highway in this scheme now acts a gateway which can house multiple uses programmatically such as vendor stands and retail. The highway is no longer seen as a barrier but as a connection piece. Integrating a sound urban design scheme around the ballpark both to the north and south is vital in moving this placement proposal forward. Engaging the historic buildings will help promote urban growth and establish connection with the existing fabric.

Urban Design Strategies

A variety of urban design approaches that engage the final placement of the ballpark adjacent to the existing Footer Building were explored. Each scheme was examined based on the four overarching principle stated earlier. Emphasis was placed on defining and emphasizing the promenade sequence from Baltimore Street down the corridor of the new urban proposal to a plaza in front of the train station. From this point the axis would be cranked to orient the pedestrian on axis visually to the main entrance of the stadium flanked by the existing Footer building. The following figures illustrate these strategies and explorations.

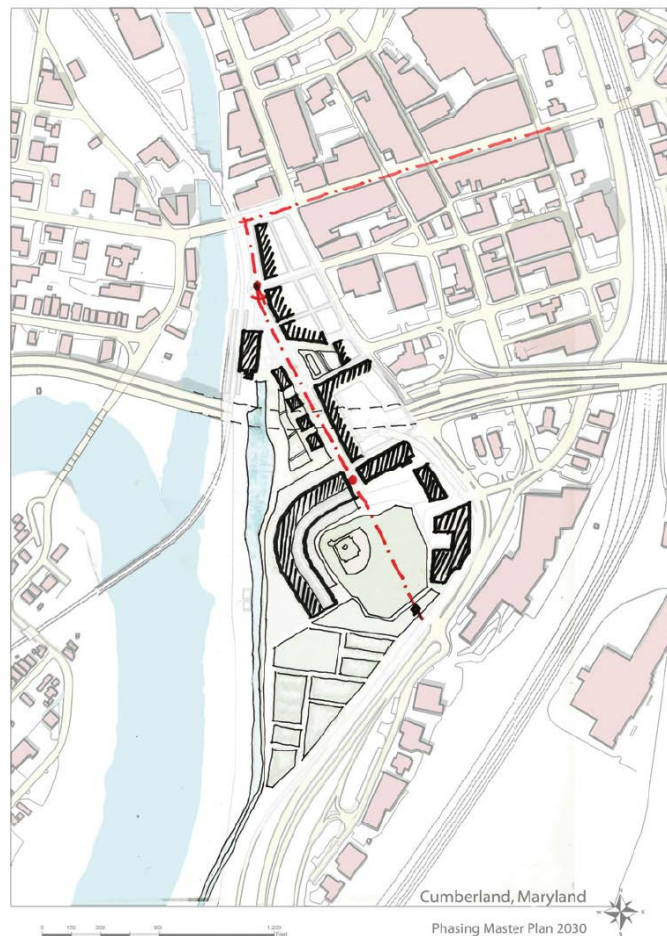


Figure 49 - Knife Edge Plaza Urban Design Scheme (Source: Author)

The knife edge plaza scheme illustrated in figure 49 pulls the plaza space in front of the train station back to engage the space. Orientation of the plaza is off axis to the train station's façade creating ambiguity between the plaza and the buildings that flank it. The resultant form of the building north of the plaza creates a sharp edge and an unusual floor plate, non-typical to a traditional block type. The size of the plaza in this scheme is also a bit out of scale, on the larger side, and could be compressed to create more intimate space.

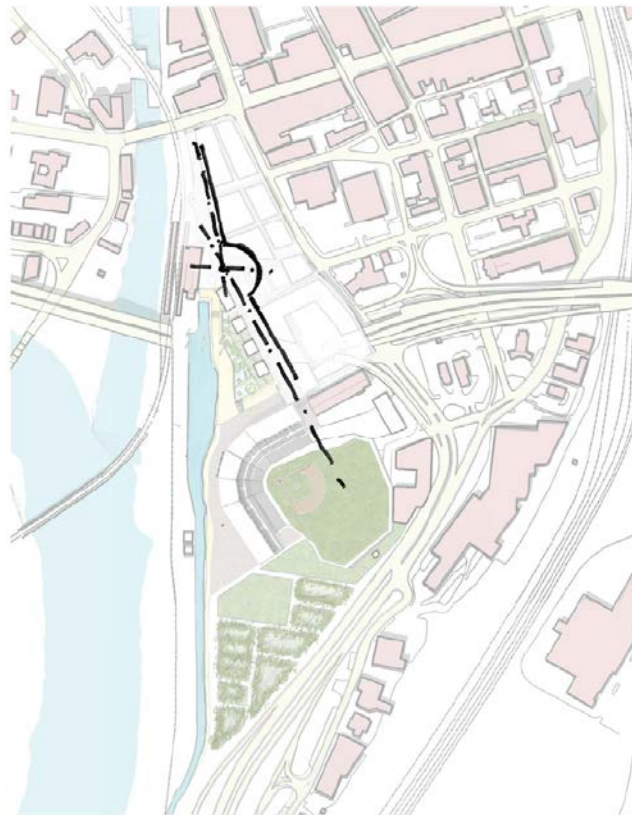


Figure 50 - Concave Arc Urban Design Scheme (Source: Author)

The geometry of the Concave Arc scheme (figure 50) keeps the strong edge of the urban network east of the promenade but carves an asymmetrical arc into the fabric, creating a plaza in front of the train station. This seems awkward in some aspects and does not engage the pavilion buildings to the west of the promenade. The space leaks out in this direction.

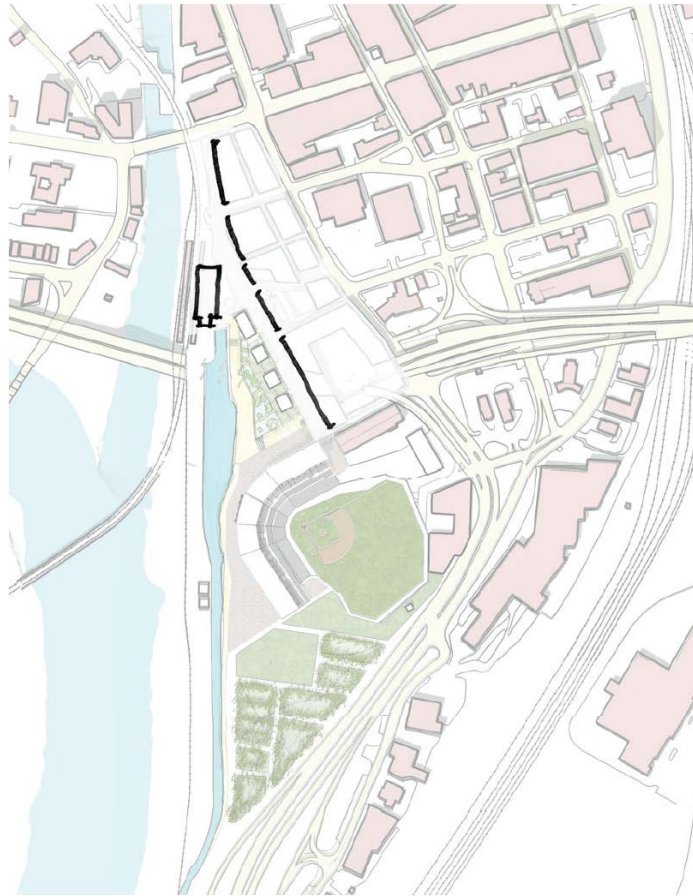


Figure 51 - Continuous Façade Urban Design Scheme (Source: Author)

The Continuous Façade scheme (figure 51) explored taking the plaza out of the promenade equation. The space lacked a sense of hierarchy and still had problems leaking out into the areas directly south of the train station. The marriage of urban fabric to the typology of each façade seemed problematic when the issue of architectural character was raised. This scheme almost seemed to create a new main street and lacked the concept of creating an urban room adjacent to the train station, an idea that was previously introduced that boded well for the overall concept. This space created a space for entry and realignment into the new proposal and will be further explored in further schemes. The idea of opening up the interior of plaza again will also be investigated and tested.

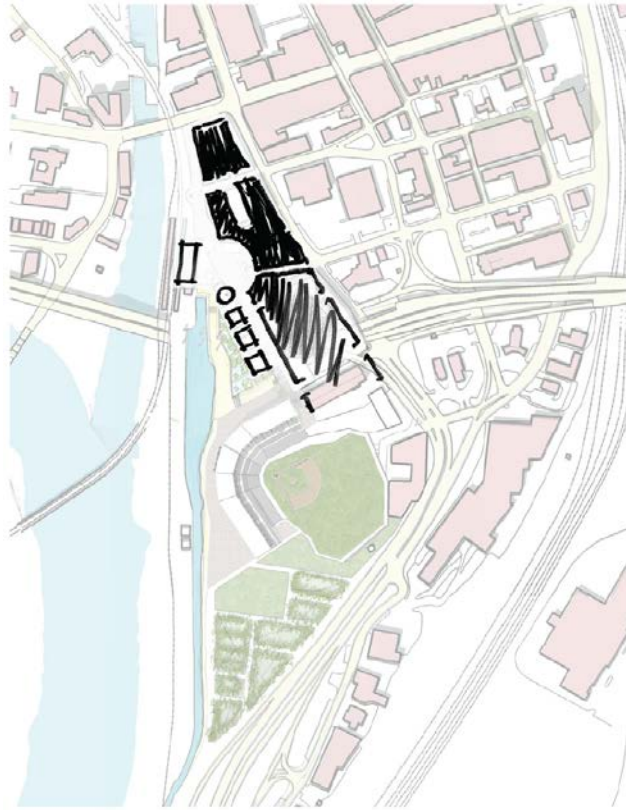


Figure 52 - Figural Closing Arc Urban Design Scheme (Source: Author)

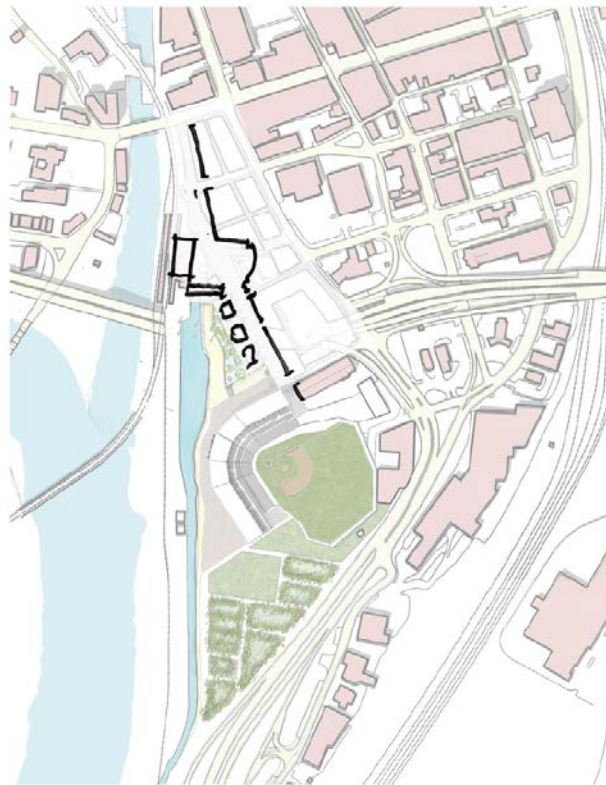


Figure 53 - Closing Arc Urban Design Scheme (Source: Author)

The geometry of the Closing Arc schemes in figures 52 and 53 sum up the urban design schemes and begins to speak to the final design solutions. The plaza has been reintroduced to inform the space in front of the train station and has been re-oriented to be on axis and perpendicular to the façade. The building that flanks the southern portion of the plaza in figure 53 defines the space of the plaza and creates an outdoor room that breaks up the promenade from Baltimore Street to the ballpark. The Urban situation around the Palazzo Massimo was studied and analyzed to get a sense of scale and relationship of street to building face (figure 54). A loggia from the plaza to an interior courtyard to the north allows access from a ground level restaurant to a public amenity that could function as an outdoor theatre. The simplicity of the geometry allows these urban forms to take shape and frame the views in and out of the site.



Figure 54 - Palazzo Massimo Urban Reference (Source: http://www.info.roma.it/foto/roma_sparita/grandi/99.jpg)

Chapter 6: Design Conclusions



Figure 55 - Final Proposal Urban Design Strategy (Source: Author)

The final design proposal takes advantage of all the issues the document initially outlined. The issues included:

- The highway's impact on urban character: making the highway an amenity
- The pedestrian disconnect between the downtown and waterfront
- utilizing park areas and open space: introduction and utilization of public spaces
- harnessing the site's adjacency to the C&O Canal.

These were brought to the forefront of the proposed intervention and create an environment where community interaction and economic stimulus can thrive and prosper. The catalyst of the development is centered around the new home of the Cumberland Hoagies. The AA minor league plays their home games at Lefty's Grove (figure 56), a field dedicated to a hometown hero of baseball that played for the Philadelphia Athletics and the Boston Red Sox. Grove was inducted into the Hall of Fame in 1947. The stadium seats approximately 5400 spectators and would host 42 home games during the regular season.



Figure 56 - Lefty's Grove Signage (Source: Author)

Approach to the ballpark is first realized while on Interstate-68. The field can be viewed from the automobile and its adjacency to the existing Footer Dyeworks Building (figure 57). Getting off the interstate a fan would be guided by a smart metered parking system that directed them to a parking lot within the city fabric. The fan would proceed through the downtown to the threshold gateway toward the ballpark (figure 58). The plaza would afford view toward the train station (figure 59) and would re-orient pedestrian on axis toward the ballpark (figure 60). The axis is terminated with a clock tower in right field. The multi-directional public plaza space created in front of the train station serves a multitude of purposes depending on the day and events that are taking place.



Figure 57 - The Grove as it would be seen from I-68 (Source: Author)

It is important to note that this plaza would be connected to a loggia that allowed access to an interior courtyard. This courtyard would serve as an outdoor movie theatre on the northeast quadrant of its boundary. The façade of the theatre during game nights (figure 61) would post highlights of the evening's events. This screen

would also be perfect for an outdoor movie as an added amenity to the post ballgame experience.



Figure 58 - The Gateway from Baltimore Street to the Train Station Plaza (Source: Author)



Figure 59 - View of the Train Station from the Plaza (Source: Author)



Figure 60 - Axis Promenade to the Grove from the Plaza (Source: Author)

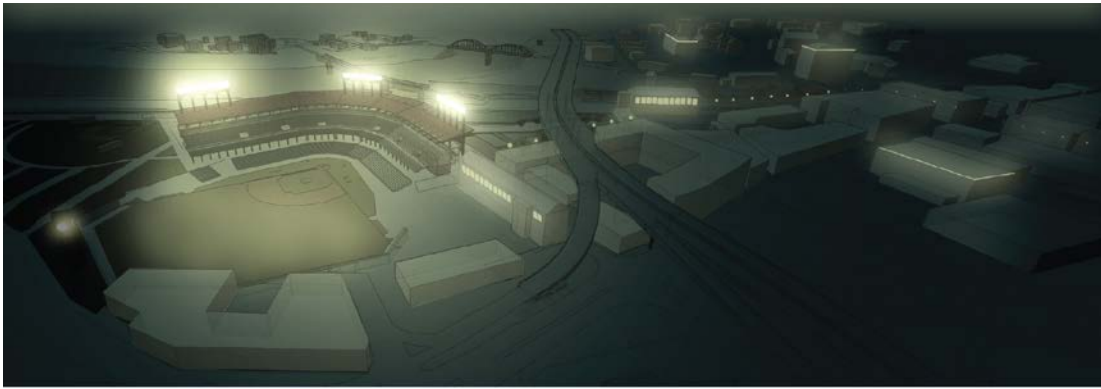


Figure 61 - The Grove at Night situated within the context of the City (Source: Author)

The east flanking restaurant building facing the train station provides a transparent connection to the North-South Mechanic Street. The restaurant would serve the Cumberland community year round and become a key moment before and after the games as a nice sit down place to enjoy a meal and take in the festivities.. The openness of the space would accommodate temporary tents for farmers markets. The fountains could also be used in the winter time as an ice skating rink. The spaces surrounding this area under the loggia then serves as a venue for community members to congregate, and experience these events.

The train station would still serve its purpose of housing the office of canal place and the C&O Canal Museum. The station would act as a transition connecting to the historic rail line that is still active in Cumberland.

A series of pavilions on the western side of the promenade create a threshold starting at the corner of the under-highway parking facility that would connect the park and existing Footer Building to the plaza (Figure 62). These would sponsor vendor type services and would be connected to a LID grid that utilizes a bio-

retention system. The pavilions flank the main promenade and the Canal Place Waterfront Promenade. The parking system building to the east would consist of ground level retail that would sponsor approximately 450 parking spaces above. Smart Technology including signage and sensors indicating the number of lots available in this garage would be implemented. Season ticket holders and sky box owners would be permitted access to this garage during game days.



Figure 62 - Promenade Under Highway adjacent to reflecting pools approaching the Stadium (Source: Author)

The promenade terminates at the main entrance to the stadium framed by the stadium's seating bowl and the Footer Building. A plaza would allow early comers to congregate and watch batting practice from this location (Figure 63). The terrace off from the Footer Building would allow the lower level lounge and restaurant to spill into the space with tables and an outdoor bar. The terrace would then continue around left field sponsoring a corn field that would grow the crop to sell during the season.



Figure 63 - View from the Left Field Terrace Marking Stadium's Main Entrance (Source: Author)

The architecture of the stadium takes cues from its adjacencies. The rhythm and repetition of the stadium's elevation compliments the straightforward nature of the Footer Building (Figures 64-65). Its expressive use of structure allows the facade to stand on its own, creating transparencies that afford views into the park from all angles.

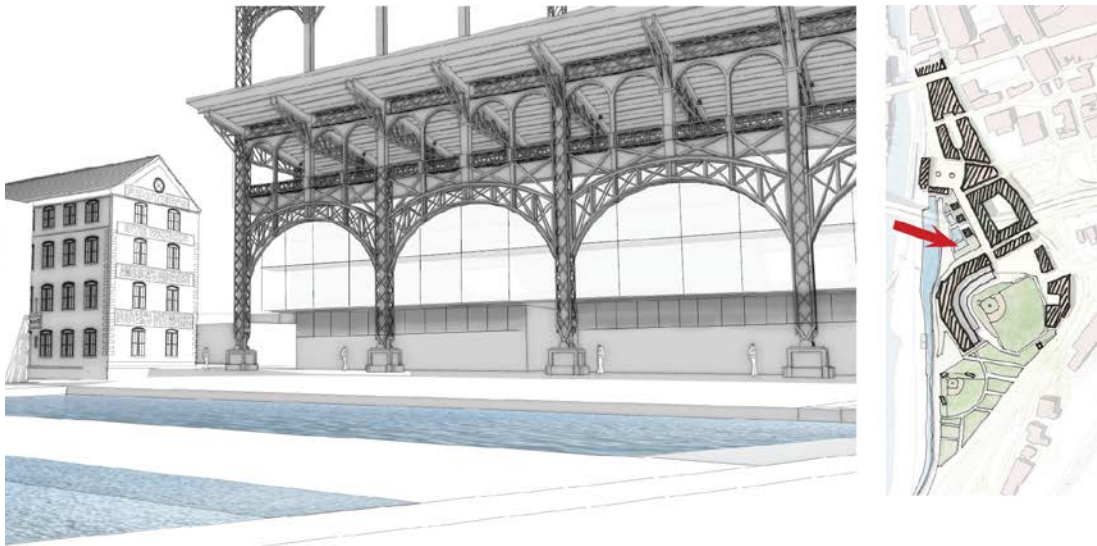


Figure 64 - Juxtaposition of old industry architecture [Footer] and new ball park architecture [taking cues from the industrial past] (Source: Author)

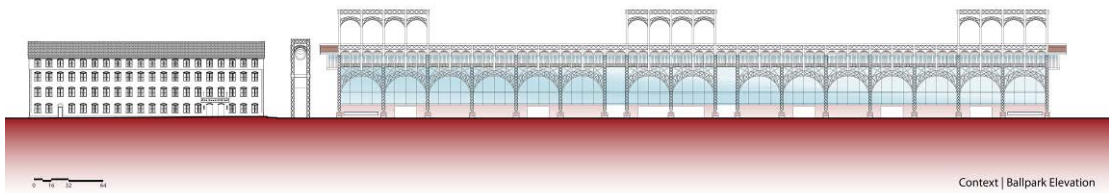


Figure 65 - Context | Ballpark Elevation (Source: Author)

The water front promenade would be activated and enlivened by the ball park. All commuters from Georgetown would know they had arrived in Cumberland as they round the last turn and see the ball park in the distance, reminiscent of the once industrial town (Figures 66-67).



Figure 66 - Lefty's Grove as it would be perceived approaching from the C&O Canal tow path to the South (Source: Author)



Figure 67 - Welcome to Lefty's Grove | Home of the Cumberland Hoagies (Source: Author)

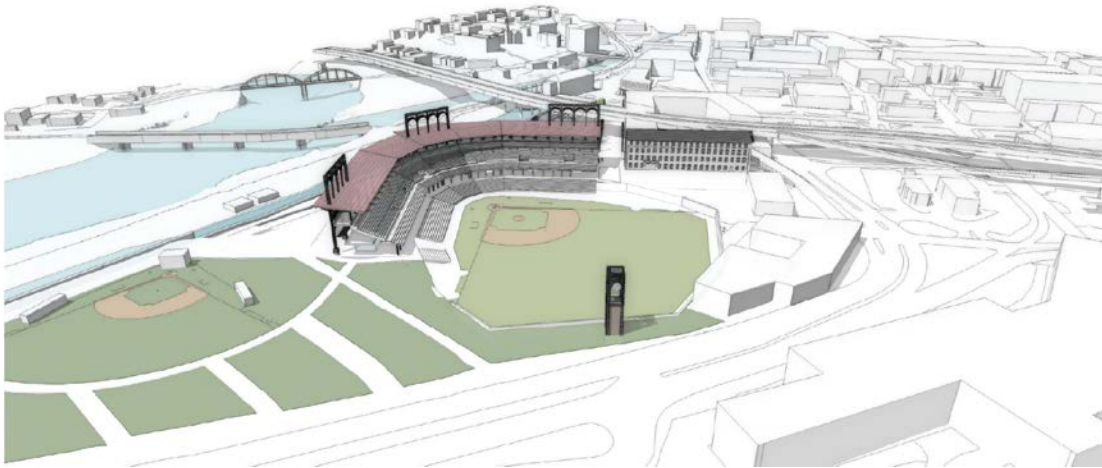


Figure 68 - Ballpark's Relationship to Existing Footer Building (Source: Author)

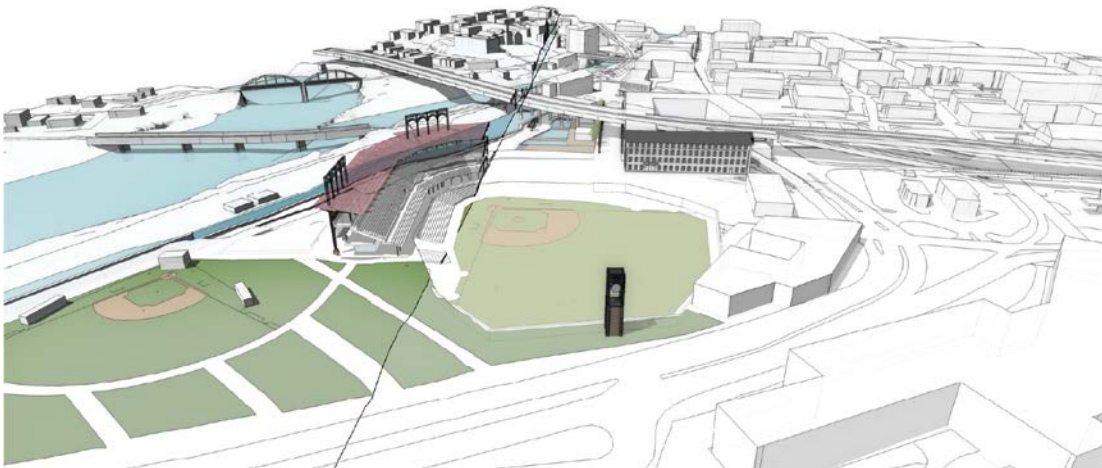


Figure 69 - Section through Stadium to Understand Relationship of under-highway Design Element (Source: Author)

The split bowl design allows for this porosity between the upper and lower decks and facilitates circulation patterns both before and after the games (Figures 70-71). Multi-functionality is supported by various entrances. Frontal entrance that is celebrate from the frontal view of the stadium would be used more so for people enjoying the amenities of the canal before the game. The entrance to the south would be utilized for community members enjoying the garden and little league complex south of the park. This area could eventually be turned into a development which

would continue the revenue energy of the area and would give the south entrance more activity.

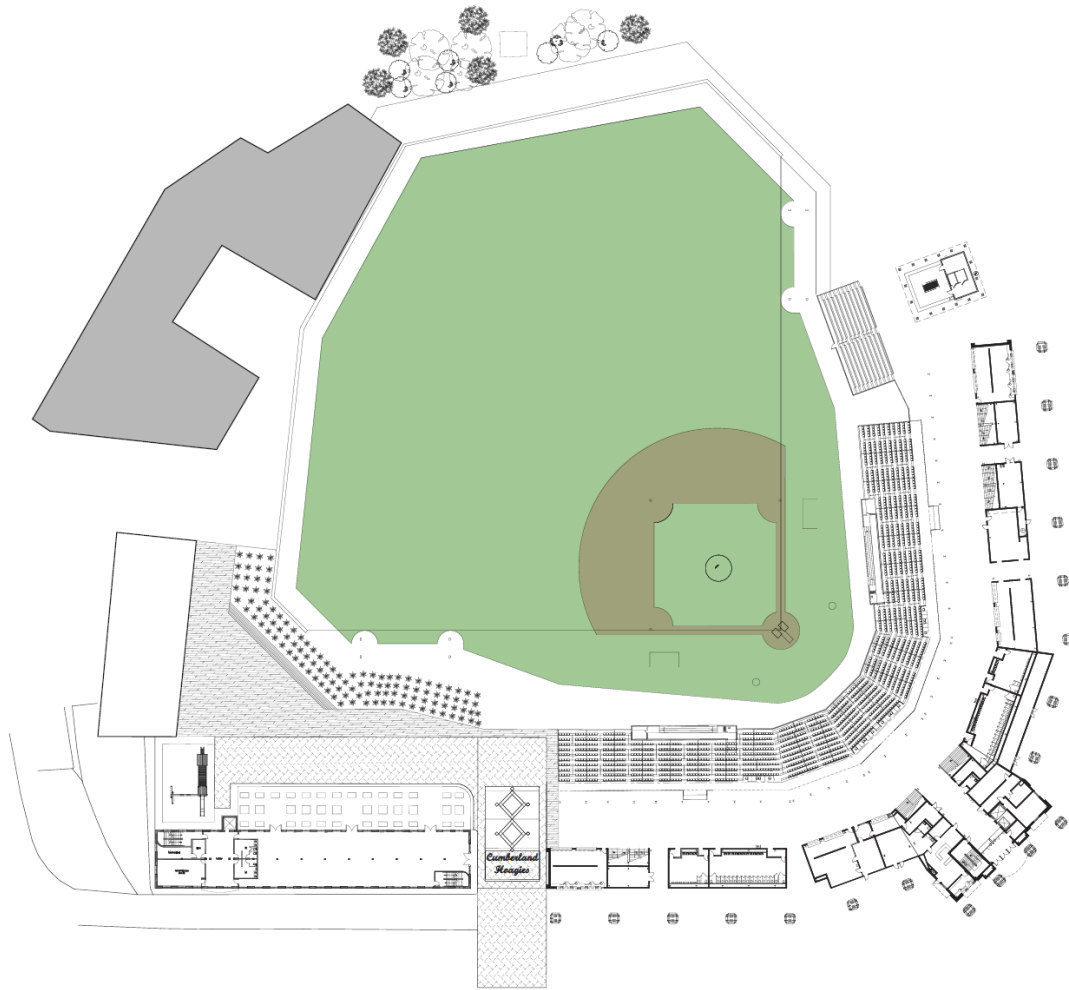


Figure 70 - Concourse Level of Lefty's Grove (Source: Author)

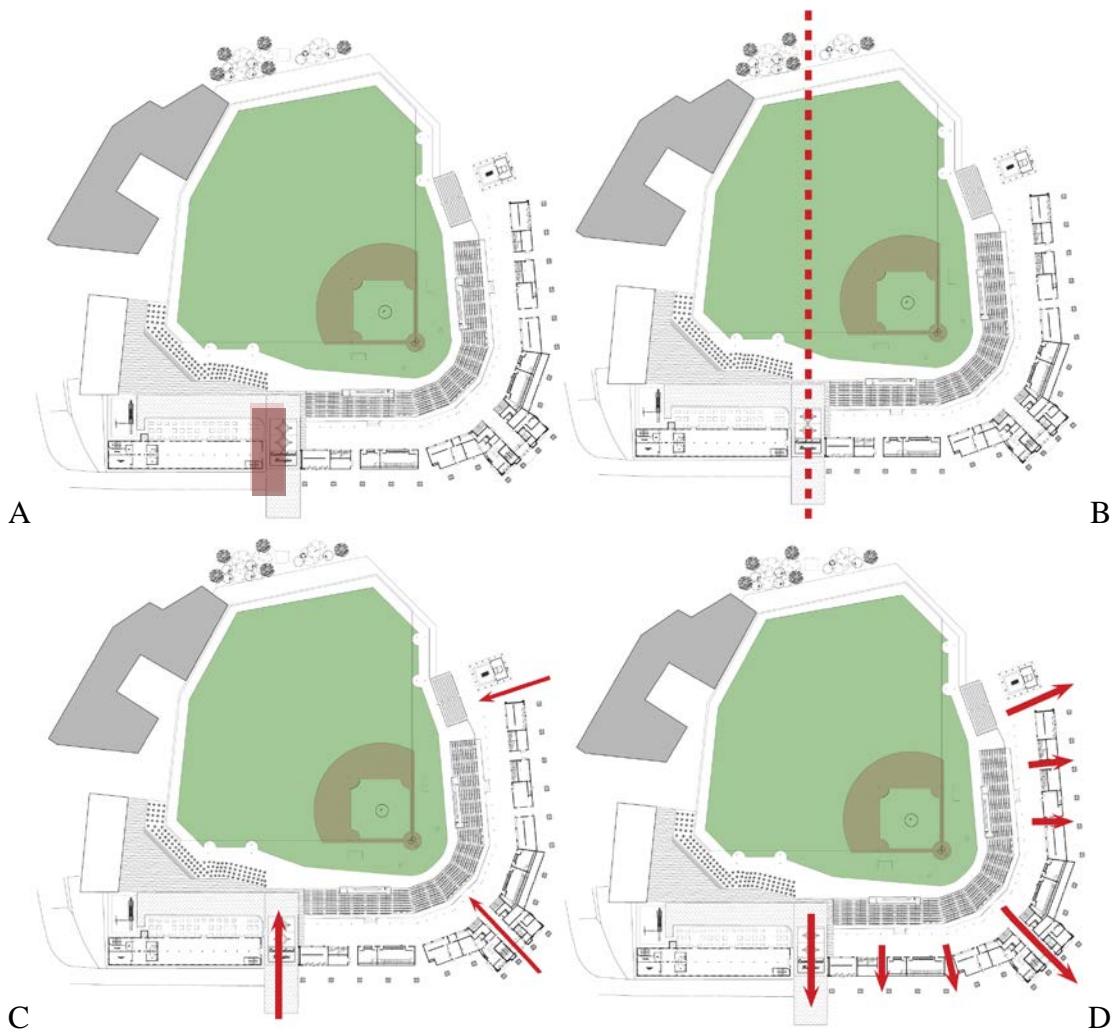


Figure 71 - Concourse Diagrams (Source: Author)

- A. Terrace
- B. Axis from Plaza Promenade
- C. Entrances
- D. Exits

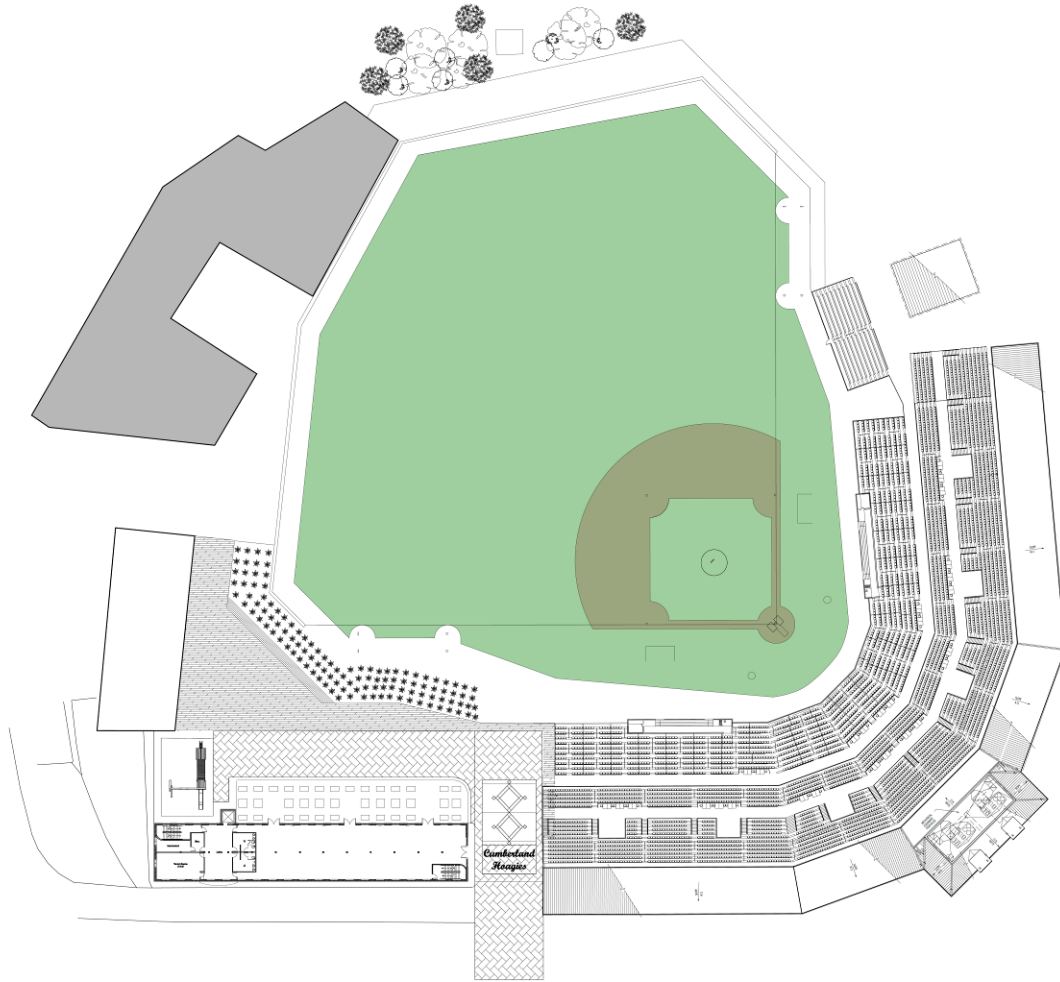


Figure 72 - Roof Plan Level of Lefty's Grove (Source: Author)

Views of the field from all perspectives take advantage of the existing context and proposed grove of trees around the clock tower (figures 73-76).



Figure 73 - View from Upper deck Toward the Clock tower (Source: Author)

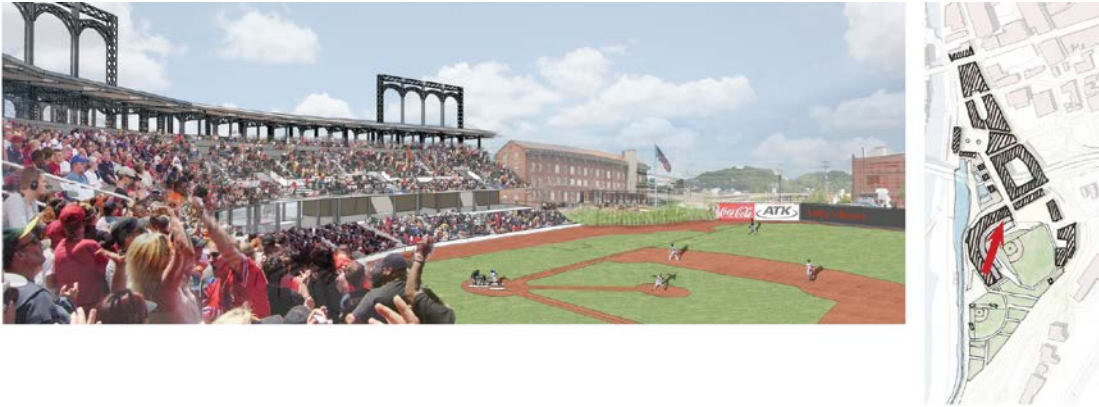


Figure 74 - View from Upper deck toward Footer Building during a Day Game (Source: Author)

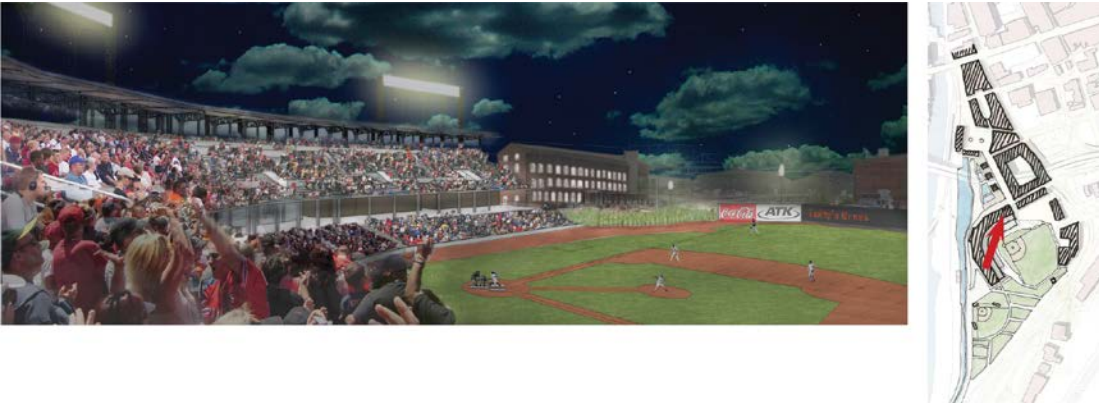


Figure 75 - View from Upper deck toward Footer Building during a Night Game (Source: Author)



Figure 76 - Behind home plate on the concourse (Source: Author)

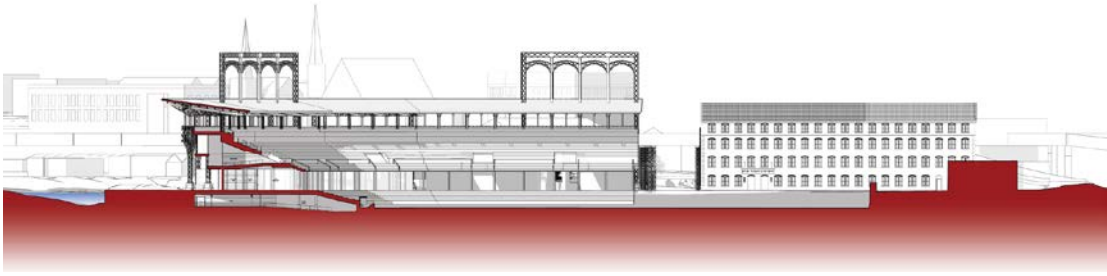


Figure 77 - Section through Ballpark | Waterfront (Source: Author)

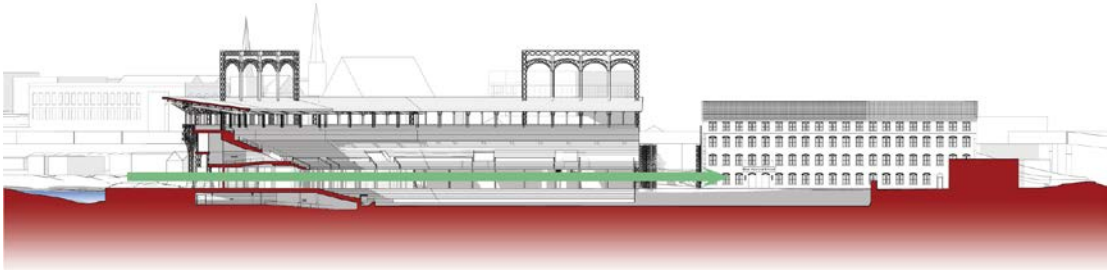


Figure 78 - Diagram of section illustrating transparency through ballpark facade (Source: Author)

The split bowl also promotes porosity through the park's section allowing views from the public area outside the park, in across the concourse, and to the field at various moments in the building façade. Anyone walking by during game day could catch a glimpse of the Hoagies battling their rivals in the 9th inning stretch. Keeping to the tradition of the reinterpreting the past, the Hoagies would sport throwback uniforms made of a new breathable fabric that looks great and is comfortable for the player (figure 79).



Figure 79 - Cumberland Hoagie Uniform (Source: Author)

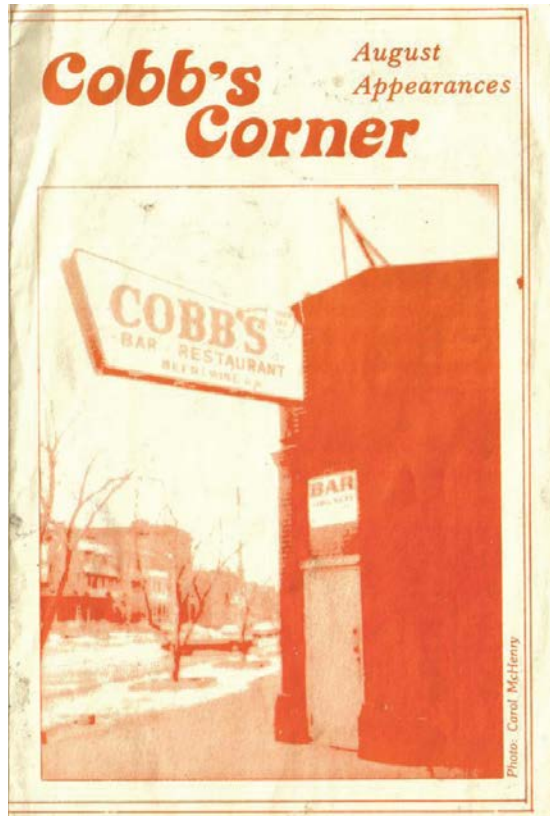


Figure 80 - Cobb's Corner | Concourse Level Restaurant at Lefty's Grove (Source: <http://home.comcast.net/~lebloom/images/Incognito%20-%20Cobbs%20Corner%20-%20outside%20cover.jpg>)

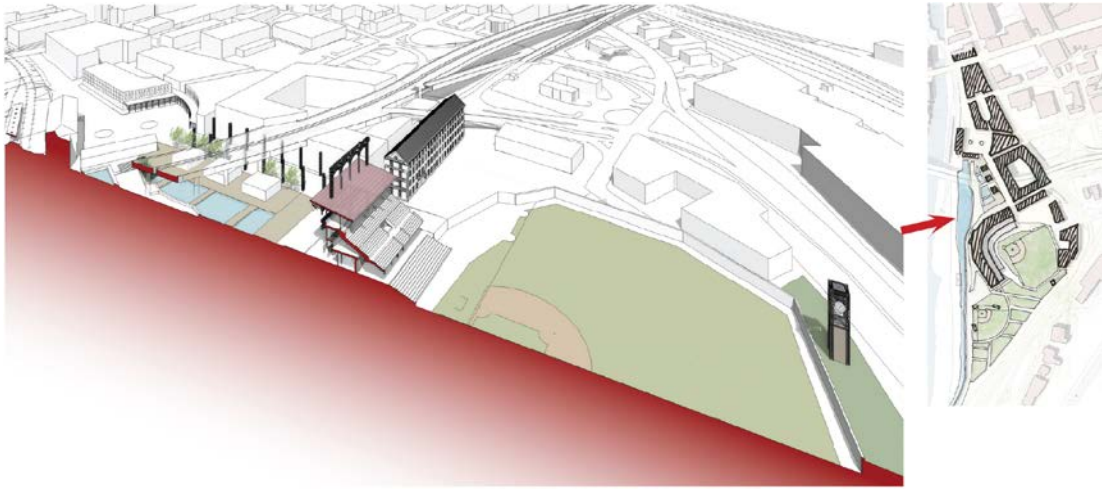


Figure 81 - Section Perspective through Intervention (Source: Author)



Figure 82 - View from the Clock Tower towards Lefty's Terrace (Source: Author)

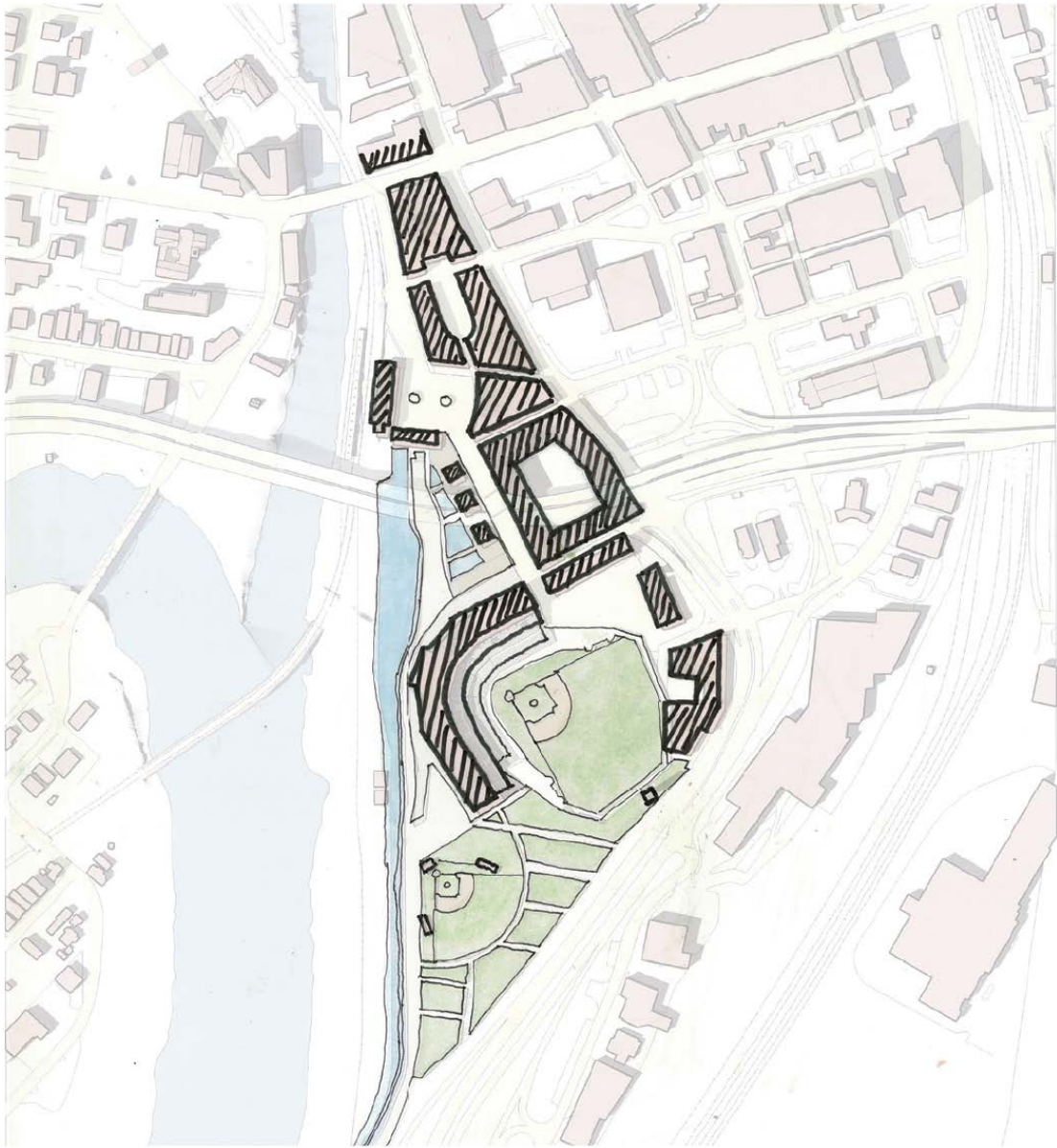


Figure 83 - Final Proposal Figural Diagram (Source: Author)

The ball park creates a hinge in the urban fabric and allows development and growth to occur overtime (figure 83).



Figure 84 - Final Proposal Design Diagrams (Source: Author)

The geometries of the urban proposal create moments that are illustrated in figure 84.

Each diagram speaks to a specific issue embodied in the thesis. The proposal

addresses the issues of:

- The highway's impact on urban character: making the highway an amenity
- The pedestrian disconnect between the downtown and waterfront
- utilizing park areas and open space: introduction and utilization of public spaces
- harnessing the site's adjacency to the C&O Canal.

Appendices

Timeline of Cumberland's History:

- 1728: Earliest record of a settlement along Wills Creek named after Indian Will
- 1749: Ohio Company establishes small fortified posts at Wills Creek Nemacolin's path blazed and cleared by Nemacolin, a Delaware chief, and Thomas Cresap, a Maryland frontiersman for the Ohio Company
- 1754: Fort Cumberland constructed by militiamen. French and Indian War begins
- 1755: Braddock Expedition launched from Fort Cumberland to capture Fort Duquesne from the French. Braddock Road cut through the wilderness following Nemacolin's path
- 1755: George Washington appointed Commander of the Virginia Regiment stationed at Fort Cumberland following General Braddock's death
- 1775: American Revolutionary War (1775–1783)
- 1789: Allegany County, Maryland created from Washington County, Maryland.
- 1795: Federal government sited post office at Cumberland
- 1799: First Allegany County Public School incorporated
- 1811: National Road construction begins following the same route as Braddock Road from Fort Cumberland to Fort Necessity
- 1812: War of 1812
- 1815: City of Cumberland incorporated
- 1818: National Road completed from Cumberland to Wheeling, West Virginia
- 1828: Chesapeake and Ohio Canal construction begins
- 1833: The Great Cumberland Fire

- 1835: Georges Creek Coal and Iron Company formed
- 1839: National Road completed from Cumberland to Vandalia, Illinois
- 1842: Baltimore & Ohio Railroad reaches Cumberland
- 1850: Chesapeake & Ohio Canal reaches Cumberland
- 1850: Emmanuel Episcopal Church built
- 1861: American Civil War (1861–1865)
- 1862: Confederate cavalry entered Cumberland
- 1871: Queen City Hotel built
- 1872: Allegany County is the third most populated county in the state leading to the formation of Garrett County, Maryland from Allegany County, Maryland
- 1873: Allegany County coal miners established Protective and Benevolent Association
- 1873: Baltimore & Ohio Railroad opens Deer Park Hotel, Garrett County
- 1874: City Hall & Academy of Music built (destroyed by fire in 1910)
- 1877: Baltimore & Ohio Railroad strike; workers went on strike along line and stopped rail service at Cumberland, rioters attacked state troops in Baltimore that were headed to Cumberland
- 1878: History of Cumberland (Maryland) published by Lowdermilk
- 1880: Warren Glass Works Company founded (operating until 1913 under various names)
- 1884: Cumberland Glass Works founded (operating until 1920 under various names)
- 1889: Floodwaters inundated Cumberland
- 1890: Cumberland Brewing Company founded (1890–1958)

- 1890: Second National Bank constructed on Baltimore St
- 1891: Cumberland Electric Railway Opened (1891–1924)
- 1893: old Allegany Courthouse burns down, City Hall used as temporary Courthouse
- 1893: Construction of new Allegany Courthouse designed by Wright Butler begins
- 1897: Rosenbaum Brothers Department Store built (1899–1973)
- 1901: German Brewing Company founded (1901–1976)
- 1906: Western Maryland Railway reaches Cumberland
- 1910: City Hall and Academy of Music destroyed by fire
- 1911: Present day City Hall built
- 1911: Brush Tunnel finished
- 1912: First National Bank constructed on Baltimore St
- 1912: Cumberland Bone Cave discovered
- 1913: Western Maryland Railway Station opens
- 1914: World War I (1914–1918)
- 1917: Fort Cumberland Hotel built
- 1921: The Kelly Springfield Tire Company opens tire factory in Cumberland
- 1921: Anna C. McCleave becomes one of the first police and fire commissioners in the United States when the Cumberland City Council and Mayor selected her to fill an unexpired term.
- 1924: first acetate yarn spun in America at Cumberland Amcelle factory
- 1924: Floods in Cumberland
- 1929: Stock market crash ushers in the Great Depression

- 1936: Congress of Industrial Organizations (CIO) strike led to riot, Cumberland
- 1936: Floods at Cumberland, National Guard called in
- 1939: Chesapeake and Ohio Canal opened as national park
- 1939: World War II (1939–1945)
- 1942: Floods in Cumberland
- 1950: Cumberland flood control system construction begins (finished in 1959)
- 1964: A B-52 Stratofortress carrying two nuclear bombs crashes 17 miles (27 km) southwest of Cumberland.
- 1972: Queen City Hotel demolished to make way for Interstate 68
- 1972: Washington Street Historic District nominated to the National Register of Historic Places
- 1976: Baltimore St paved with bricks creating an outdoor pedestrian mall
- 1981: Country Club Mall opens
- 1983: Downtown Cumberland is designated a historic district by the National Register of Historic Places
- 1993: Canal Place Heritage Area established
- 1996: The Great Snowstorm of '96
- 2006: Great Allegheny Passage opens in Cumberland

Extended Studies of Canal Place Area

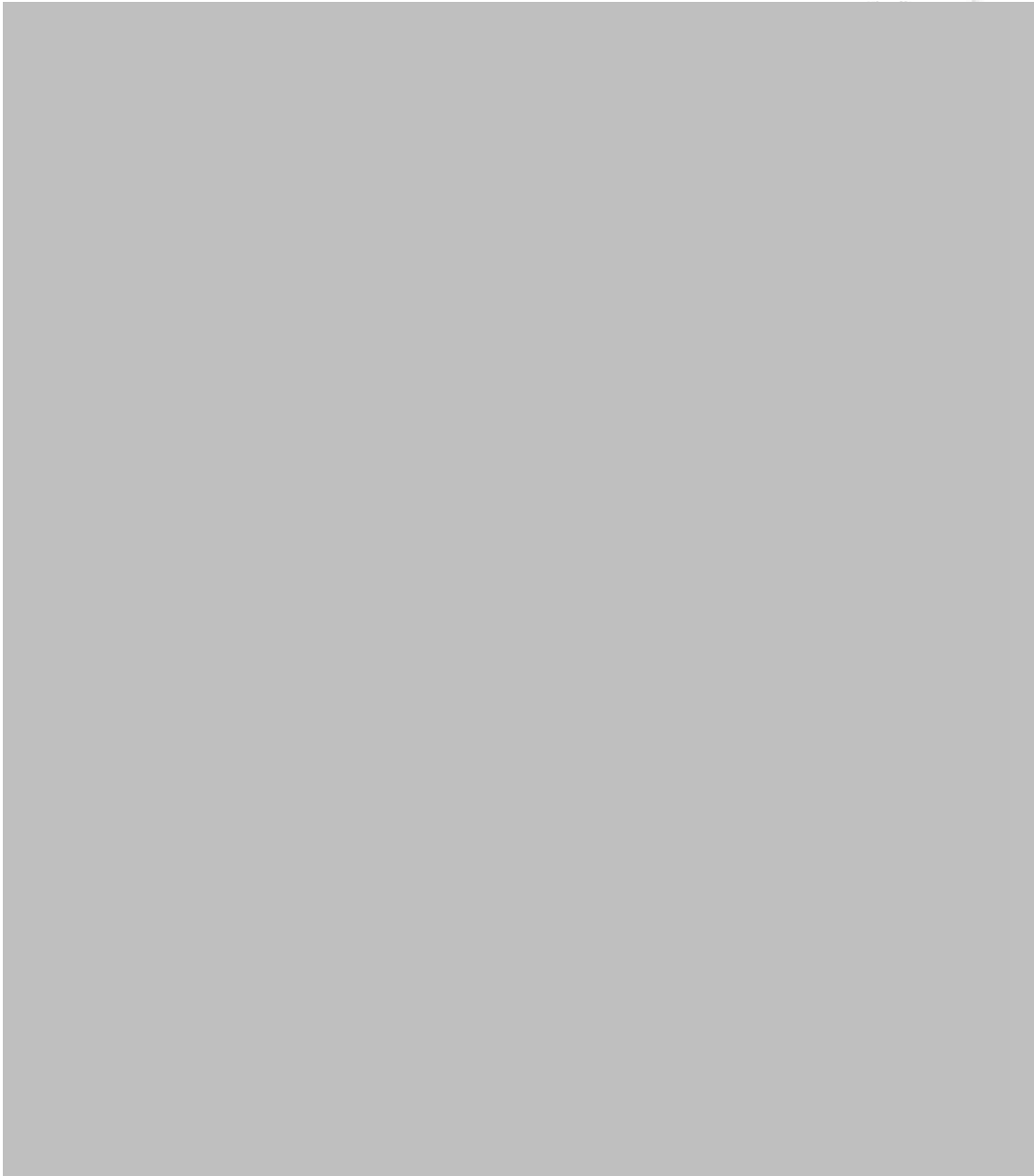


Figure 85 - Canal Place Area circa 1892 (Sanborn Map Collection) Sanborn map from April 1892 illustrates that Landwehr and Glick owned a Sash, Door and Blind Company that was sited at the intersection of Harrison and Mechanic Streets. Lumber yards that serviced this complex were located both north and south of the main complex. Queen City Foundry was located between the Canal basin and the lumber yards.



| **Figure 86 - Canal Place Area circa 1892 (Sanborn Map Collection)_Sanborn map from April of 1897 reveals that the former Sash, Door and Blind Company's building at the intersection of Harrison and Mechanic Street is also noted as a Planing Mill. The lumber yard that existed to the south of this complex has been replaced by a Company owned by C.W. Hinze that specializes in Feather Renovation and Carpet Cleaning. The yard to the south still exists but it has shrunken in scale.**



Figure 87 - Canal Place Area circa April 1897 (Sanborn Map Collection) Sanborn Maps from 1904 reveal a reestablishment of the Cumberland Sash and Door Company. It is possible that this was under different ownership. New developments include the Union Transfer and Storage Company, Enterprise Boiler Works, Cumberland Soap Company, and the Holmes Foundry. The Potomac Planning Mill Company is located on the future site of the Footer's Dye Works Complex. A portion of the Canal Basin has been filled in, upon which is sited the new Holmes Foundry. The map is shown in figure 5.



Figure 88 - Canal Place Area circa 1904 (Sanborn Map Collection) Sanborn Maps from 1910 begin to indicate the Footer's Dye Works complex. The maps note that the buildings were constructed in 1906 and cover approximately 10 acres of ground. Later maps from 1921 illustrate the complex in its most revered form. The train track that was erected on a wooden trestle bridge is apparent in these maps as well as Race Creek that runs through the middle of the Dye Works Building Complex. The Foundry owned by Holmes has been renamed the Maryland Mould Foundry and is under the jurisdiction of the Cessna Lumber Company.



Figure 89 - Canal Place Area circa 1910 (Sanborn Map Collection)

It is also important to note that the Sanborn Maps make reference to and natural spring, Race Spring that runs through the area directly east of the Canal Basin. This spring was later channeled and covered.

Later maps reveal various aspects of the site that worthy of note. A map of the City of Cumberland courtesy of the city council from 1958 shows the canal basin still existing at the termination of the Canal at the proposed site. A later map from 1961 shows the basin filled in, and an island south of the site removed. The Eisenhower interstate highway system was being designed and constructed around this time as well. A City map from 1967 is the first to illustrate the Interstate 68 system cutting through Cumberland's downtown area.

The Dye Works site slowly deteriorated over time and various parts and pieces were dismantled and demolished as a result. The only part of the complex that remains standing is the old main four story brick building that flanked Howard Street. The space has been vacant for many years and has gone through various tenants since its departure from the Footer Company. The buildings slim short dimension makes it a viable for potential office space. Testing different methods of use and its integration into the overall design scheme of the urban fabric will constitute the final decision for its programmatic response.



Figure 90 - Aerial View of Footer's Dye Works, Cumberland, Maryland (Source: <http://www.cardcow.com/302233/aerial-view-footers-dye-works-cumberland-maryland/>, accessed November 15, 2011) existing building highlighted in red.

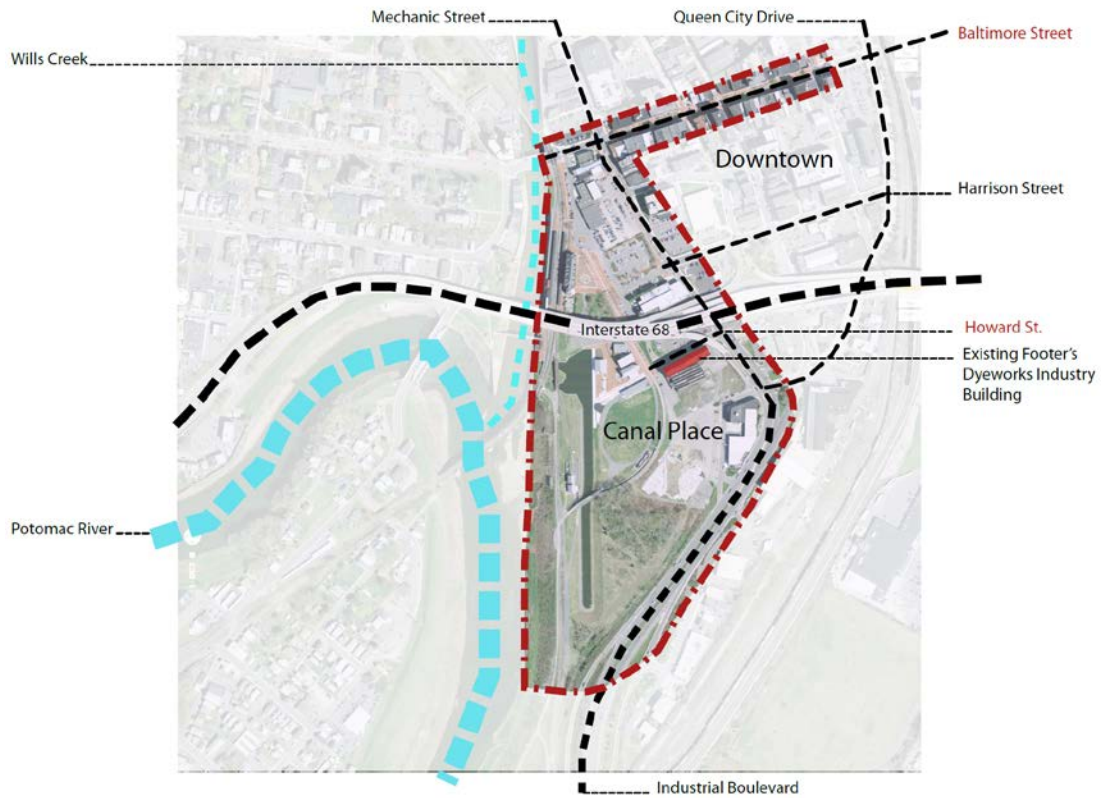


Figure 91 - Figure 4 - Study Region with specific site boundary outlined in red. (Source: Author)

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