5-12-2008

Knitting of Nature into an Urban Fabric: A Riverfront Development

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A Riverfront Development

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Architecture
School of Architecture and Community Design
College of Visual and Performing Arts

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Date of Approval:
May 12, 2008

Keywords: Riverwalk, Green, Public, Private, Landscape

Acknowledgements

My first thanks go out to my parents, Ronny Tun-Nyein Myat and Kay Thi Hla Myat, for their love and support. Though it might sound like a cliché, words truly cannot describe how deeply grateful I am for everything that you guys have done for me. Pa Gyi and May Gyi, thank you for all the sacrifices you have taken for the me and the rest of the family. Even though I might not show it all the time, I love you guys very much and appreciate everything.

Secondly I would like to thank my sisters and my brother. Being the youngest had really made thing easy for me. I want to thank you guys for supporting me emotionally and financially. But seriously without your love and support I could never be where I am today.

I would also like to thank all of my friends and colleagues. It have been a tough journey but all of you guys made it easier and definitely more enjoyable. Thank you all and I wish you all the best.

Lastly I would like to thank my Thesis Chair, Michael Halflants M. Arch., and Committee Members, Stanley Russell M. Arch., and Joe Toph M. Arch. I want to thank you guys very much for your help and support on this thesis and my years here at SACD. It has been an honor and a pleasure to have you all as my professors. Hope this has been as pleasant of an experience for you as it's been for me.

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Abstract

The Tampa River Walk project is one of great importance for revitalization of the waterfront of downtown Tampa. This Riverfront development will be even more important when it becomes a vital example of how a riverfront can stretch and pull together downtown Tampa and its surrounding areas: Hyde Park, Harbour Island, and Historic Ybor. The purpose of this master's project is to explore an ecological expansion design approach for the Tampa River Walk as a master plan and then zooming into to an area to design in detail of what the riverfront can be. It will start by concentrating on the areas that were not dealt with in the proposal by EDAW: the west side of Hillsborough River, and areas that are immediately adjacent. Furthermore, it will investigate future expansion of the River Walk as downtown Tampa potentially expands and connects out to the suburbs in thirty to forty years.

The main focus of this project will be to create an

iconic design that gives the Tampa's riverfront a character and identity. This unique characteristic will be created by knitting nature into the urban fabric and using the River Walk as a natural seam. The connection throughout the riverfront will be made by a natural green strip. It will explore the idea of stretching and pulling of public zones vertically and horizontally to create connectivity and identity with the River Walk.

Two resarch methods that will play important roles in this investigation are Design and History Research, and Case Study and Multi-method Approaches to Research. The research timeline will concentrate on mainly the history of development and use of Tampa's riverfront starting from 1600's when Tampa Bay was discovered by Spanish explorers, through the River Walk development proposed today. Also, case studies of Chicago Water Front, San Antonio River Walk, and others will inform various strategies taken in different geographical locations and impacts they've had on the growth of the cities.

This project will provide an expansion design approach that is not only a concern for the present time, but also looking ahead at what it might provide for the future. The result of this project will hopefully serve as a stepping stone for a new way of revitalizing Tampa's downtown and surrounding areas through knitting of nature into an urban fabric.

Chapter 1

Introduction

The City of Tampa with over 330,000 residents has the third highest population out of the cities in Florida, with Jacksonville and Miami being first and second. Tampa has been slowly growing and reshaping over the last century with high influence from its surrounding waters. Some neighborhoods and districts have taken full advantage of the waterfront location, while other areas have ignored its natural values. In order for Tampa to continue growing progressively and even at a faster rate, it must use these waterfront areas to the full advantage. Tampa has never used the Hillsborough River to its full potential, especially around the downtown business district. Tampa's Hillsborough river walk is one of great importance for revitalization of the waterfront and the City of Tampa itself. The river is a natural attraction that could bring in more businesses, residents and revenue, which would help revitalize the downtown and the surround areas.

Thesis

The purpose of this thesis project is to explore an ecological expansion design approach for the Tampa River Walk. It is important to think of the maintenance and the possible expansion of this project for the future, as City of Tampa potentially expands and connects out to the suburbs in thirty

to forty years. Drawing activity and people along the river will energize the city and bring it more to life. Ever since the 1970s there has been many attempts to develop this waterfront area, but has never been fully successful. Part of this has to do with in inability to see the river's full potential and to take a risk.

The latest attempt started in 2005 with EDAW proposing a master plan for the river walk. EDAW's master plan study area includes the eastside of the river, extending from North Blvd. Bridge to the Florida Aquarium area in Channelside. It is approximately a 2.4 mile stretch. Though EDAW has proposed a great master plan for the river walk, there are missed opportunities that cannot be ignored. This thesis project will analyze and emphasize on the areas that were not dealt with in the proposal by EDAW: the west side of Hillsborough River, and areas that are immediately adjacent.

Figure 1.1. EDAW's Study Area, image from EDAW, Inc., "The Tampa Riverwalk Master Plan" *The Tampa Riverwalk* (Tampa, July 2006, 28 June 2008, < http://www.tampagov.net/dept_riverwalk/ >)

The basic important subjects as in study of areas across the river, amenities along the river walk, renovation of existing buildings, and connections with adjacent areas were not deeply looked into. There are also opportunities to farther expand

the river walk perpendicularly from the river into the downtown business district and the neighborhoods to the west. This will give opportunities to bring pedestrians and visitors in from the downtown business district area and from the university and residential areas to the west. The river will be used as a natural seam that's pulling energy and activities from these two different zones and bringing them together.

The investigation of this thesis will involve various scales of design. It will zoom in from a macro scale of an urban project looking at master plan of the riverwalk, to a micro scale of pedestrian boulevards connecting to the water. A vital focus of this project will be the connections of the River Walk into the core of the city and the areas on the west, south, and north. These connections will be attempted by knitting nature into the urban fabric and using the River Walk as a natural seam. These connections will be made by, "natural streets", which involve pedestrian dominant, park-like boulevards, that stretch out from the River Walk, pulling in public activity and energy. It will explore the idea of stretching and pulling of public zones to create connectivity and identity with the River Walk. Another important area of study will be the edge of the water. A successful river walk will need to engage the water in various ways. Is the water being pulled into the river walk? Is a part of the river walk stretching out into the water? These are the kind of questions that will be answered during the investigation. And there are basic objectives that serve as a foundation during the research and design of this project:

1. Physical and Visual Connection: Because there is a lack of connection from Ashley Dr. the water edge. There is no physical or visual connections that provide awareness of the river being just a block away.

2. Character of the Place: Tampa's history art culture and its natural attractions, these are the things that gives it identity.

3. Appealing to Both Visitors and Residents: must be appealing to everyday users residents near the area and also to the visitor that might be there just a day or a few hours.

4. Appealing to All Ages: must provide places where children could play, adults could work, exercise, and elderlies could relax.

5. Active During Day Time and Night Time: should have different programs that are open at various times and some even are even 24 hours.

Two research methods that will play important roles in this investigation are Design and History Research, and Case Study and Multi-method Approaches to Research. The research timeline will concentrate on mainly the history of development and use of Tampa's riverfront starting from 1500's when Tampa Bay was discovered by Spanish explorers, through the River Walk development proposed today. Also, studies of San Antonio River Walk, New York City's Central Park, Chicago Water Front, Miami's Bayside Marketplace and others will inform various strategies taken in different geographical locations and impacts they've had on the growth of the cities.

Throughout history Tampa Bay area has been home to many different people at various times. Thus, explaining its rich historical background. Using a historic timeline will provide useful background information of the important events and figures.

Tampa Timeline

1528 - Narvaez, a Spanish explorer, lands near Tampa Bay.

1539 - DeSoto, another Spaniard, comes to Tampa Bay, but left when no gold was found.

1772 - The river was named after English Lord Hillsborough. During the mid and late 1700's, Native Americans began to migrate to the area. These immigrants become known as Seminoles.

1821 - Florida finally owned by US.

1824 - Fort Brooke was built at the mouth of the Hillsborough River.

1828 - A bridge was built to cross the Hillsborough River.

1830 - Congress passes the Indian Removal Act.

1846 - The first ferry crossing on the Hillsborough River is established. Transportation was improved and increased development in both sides of the river.

1891 - The Tampa Bay Hotel was opened which later became the University of Tampa.

1883 - Development of the Tampa area began with the discovery of phosphate.

1885 - Vincente Martinez Ybor moved his cigar manufacturing operations to Tampa from Key West.

1886 - Vincente built small houses around his factory. This area later became Ybor City.

1895 - An electrical dam is built on the river.

1910 - Hillsborough Bay is channelized to the mouth of the Hillsborough River with the River and Harbor Act of 1910.

1923 - A water treatment plant is built to utilize the water supply from the reservoir above the dam.

1935 - Hillsborough River State Park is opened.

1988 - The annual cleanup of the Hillsborough River begins.

1995 - The Hillsborough River is designated as an Outstanding Florida Water.

1995 - The Hillsborough River is designated as a Florida Recreational Canoe Trail.

1995 - The Hillsborough River is named a Florida Sesquicentennial Greenway.

Figure 1.2. , Narveez, image from The Library at The Mariners Museum , “History of Cuba” *The Mariners Museum* (USA, July 2006, 28 June 2008, < http://www.mariner.org/exploration/mm_images/narvaez_large.jpg >)

Figure 1.3. , DeSoto, image from Lillian C. Buttre , “Hernando de Soto” *Wikimedia Commons* (USA, March 2008, 28 June 2008, < http://images.google.com/imgres?imgurl=http://upload.wikimedia.org/wikipedia/commons/7/72/Hernando_de_Soto.jpg >)

Figure 1.4. , Hillsborough, image from Greg Gillette , “Hillsborough History” *Gillette on Hillsborough* (April 7, 2008, 28 June 2008, < http://cnhillsborough.blogspot.com/2008_04_01_archive.html >)

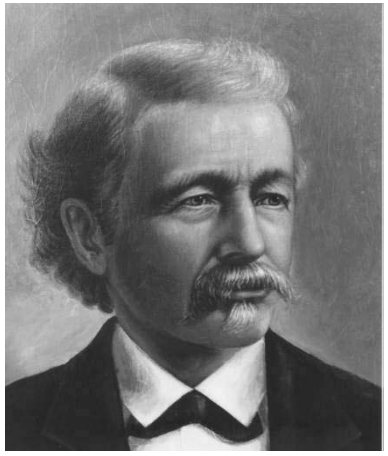


Figure 1.5. , Plant, image from Florida Photographic Collection , “Henry Plant” *Wikipedia* (March 7, 2008, 28 June 2008, < http://en.wikipedia.org/wiki/index.html?curid=3098694 >)

Figure 1.6. , Plant Museum, image from Florida Photographic Collection , "Henry Plant Museum" *Wikipedia* (March 7, 2008, 28 June 2008, < http://en.wikipedia.org/wiki/index.html?curid=30998076 >)

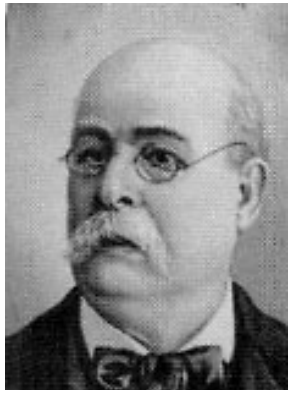


Figure 1.7. , Vincente, image from Florida Photographic Collection , "Vincente Martinez Ybor" *Wikipedia* (April 9, 2008, 28 June 2008, < hhttp://upload.wikimedia.org/wikipedia/en/6/68/Ybor_profile.jpg >)

Two main case studies for this thesis will be the San Antonio River Walk and the Central Park of New York City.

These two locations were chosen because of their great success to attract attention and people while maintaining esthetics of natural beauty. Though the San Antonio River is much narrower then the width of the Hillsborough River, the length of the development is approximately the same length as the area this thesis will be dealing with. Methods of guiding visitors along the River Walk through connections from one attraction place to another are some of many strategies that make this place successful. There are a great deal commercial design approaches that could result as a beneficial research. The Central Park will be another great case because of its important part in the New York City's urban fabric. As the Hillsborough River is the natural edge of Tampa's Downtown District, Central Park is New York City's natural core. It is a strategy of bringing nature into an urban fabric.

Chapter 2

San Antonio River Walk, San Antonio

Unlike the Hillsborough River, the San Antonio River has been used as a main place of attraction for the City of San Antonio for nearly a century now. But it wasn't always this way. There was a point in time when the river was a problem for the city instead of a money generator that it is today. Through the late 1800s and early 1900s the people of San Antonio faced problems brought from flooding. Because of this problem the city had to take action in flood control, which made it possible for later commercial development along the river. There were a few disagreements among the people of San Antonio over flood control plan. Some parts of the river were actually "covered up" at some points and also were suggested to be used as a storm sewer with a street over it.

Figure 2.1. , San Antonio Early 1800's, photograph from The San Antonio River Walk, "The River Walk History" *The San Antonio River Walk* (April 9, 2007, 29 June 2008, < http://www.thesanantonioriverwalk.com/RiverwalkHistory/History2-.asp >)

By 1926 the final flood control plan was approved and revitalization of the river started. The future of the river started to look brighter. In 1929 a young imaginative architect named Robert H.H. Hugman presented his idea of a new river walk. He envisioned the river walk to be a lively commercial boulevard with a park-like atmosphere. He titled his plan "The Shops of Aragon and Romula." Due to the Depression it made it hard to raise funds of the river development, so Hugman had no choice but to wait and keep his vision alive.

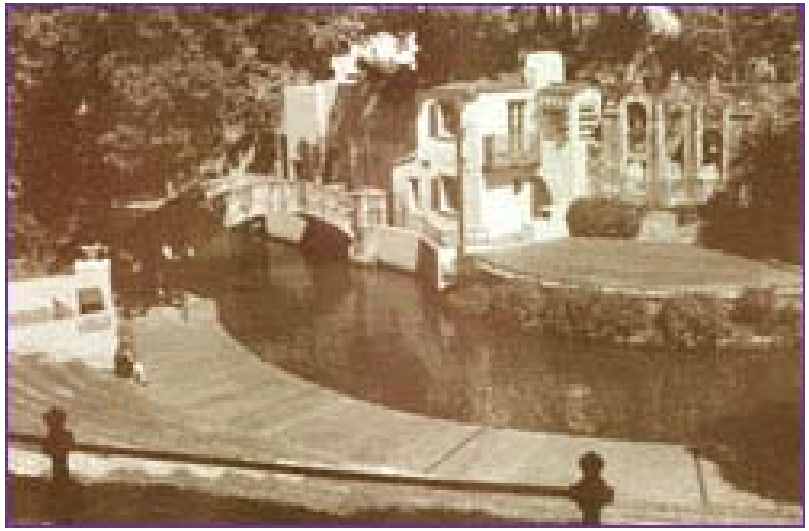


Figure 2.2. , San Antonio Early 1900's, photograph from The San Antonio River Walk, "The River Walk History" *The San Antonio River Walk* (April 9, 2007, 29 June 2008, < http://www.thesanantonioriverwalk.com/RiverwalkHistory/History3-.asp >)

In 1936, Jack White a developer urge for the clean-up and beautification of the river. Jack White soon formed a group which raised funds for the developments along the river. In 1939 Hugman's project finally broke ground. Hugman was a man whose attention to detail. "Thirty-one stairways to the River Walk were designed by Hugman. No two are alike," wrote Zunker in his book. Preservation of the trees that ran along the riverbank was very important. To add to the existing vegetation they planted over 11,734 trees and shrubs. "Seventeen thousand feet of walkways were built and 1,489 yards of carpet grass were planted."

In March 1940 Hugman was relieved of his commission due to conflicts with some city officials. Architect

J. Fred Buenz continued in his place until the completion of the project in March 1941. The city's Parks and Recreation Department is the agency that was responsible for maintaining and operating the River Walk. This Department captured and increased the river's natural beauty through progressive horticultural planning. An important factor for the success of the river walk was a set of guidelines for the development on the waterfront. The Marco report which was completed in 1961, suggested that all buildings on the river be developed in an early Mexican or Texas style. It also proposed that the buildings should, if possible, provide basement space on the river edge for commercial or entertainment uses. This became a guideline that encourages new developments to engage the water.

"By early 1960 the first River Walk Commission joined forces with the Chamber of Commerce Tourist Attractions Committee to commission a Paseo del Rio Master Plan from the San Antonio Chapter of the American institute of Architects (AIA). AIA in turn appointed a committee to do the work, headed by architect Cyrus Wagner." (The Riverwalk History)

Figure 2.3. , Dinning Near the River, photograph from Trey Ratcliff, "Sunset at the River Walk in San Antonio" *San Antonio, Texas, Travel* (March 10, 2008, 29 June 2008, < http://stuckincustoms.com/2008/03/10/sunset-at-the-river-walk-in-san-antonio/ >)

The final Paseo del Rio Master Plan included drawing, models, landscape plane, amenity plans, and suggested private

developments that lead to a $30 million municipal improvements bond. The progressive developments along the river walk have continued constantly since then. Since 1962, many restaurants have been developed to accommodate the river walk. More than 50 restaurants are developed along the river. Eight hotels and a major shopping center have been built and currently anchor positions on the River Walk. They opened in the following order:

1962 - El Tropicano

1968 - Hilton Palacio del Rio and Hotel La Posada,

1970 - La Posada reopened as La Mansion del Rio

1971 - Travelodge an the River

1979 - Marriott Riverwalk and the Hyatt Regency San Antonio

1987 - Holiday Inn Riverwalk

1988 - Marriott Rivercenter and Rivercenter Mall

Figure 2.4. , Tour the River Walk Via Boat, photograph from Elizabeth Mitchell, "Touring San Antonio's River Walk" *About.com Southwest US Travel* (2008, 29 June 2008, < http://gosw.about.com/od/sanantoniotexas/ss/Riverwalk.htm >)

Figure 2.5. , Christmas Lights, photograph from Steel Man, "Christmas... A Good Time to Visit San Antonio" *City-Data.com* (July, 2006, 29 June 2008, < http://www.city-data.com/forum/san-antonio/12149-san-antonio-insulted-2.htm >)

Figure 2.6. , Walking the River Walk, photograph from San Antonio, "Photography and Photos of the San Antonio River Walk" *SanAntonioRiverWalk.com* (2008, 29 June 2008, < http://www.sanantonioriverwalk.com/photo.html >)

Figure 2.7. , The Bridge, photograph from Elizabeth Mitchell "Touring San Antonio River" *About.com Southwest US Travel* (2008, 29 June 2008, < http://gosw.about.com/od/sanantoniotexas/ss/Riverwalk_2.htm >)

Over the years, the San Antonio River Walk has become one of the most successful attractions in the City of San Antonio and even in the state of Texas. It now has over several millions tourists visiting per year. Approximately 800 million dollars in tourist revenue is generated annually. It is a place for both tourists and locals to enjoy the natural beauty of the river.

Chapter 3

Central Park, New York City

Central Park located in the borough of Manhattan in New York City. With over twenty-five million visitors per year, Central Park is the most visited park in the United States. It is an area of 843 acres, a rectangle of 2.6 by 0.5 mile. A landscape architect Frederick Law Olmsted and architect Calver Vaux collaborate in designing of the park. Since 1963 it has been a National Historic Landmark. It is strongly rooted into the history of New York City. The history of Central Park reaches all the way back to the early 1840s, when an American landscape architect, Andrew Jackson Downing, and Evening Post editor, William Cullen Bryant brought up the issues of the necessity of a great public park in the growing New York City. In 1853 the New York legislature designated

Figure 3.1. , Central Park, photograph fromVictor Prevostl “Central Park” *Wikipedia* (2006, 29 June 2008, < http://en.wikipedia.org/wiki/Central_Park >)

a 700 acre area, which cost more than 5 million dollars for the land alone. The initial development of the park began with a landscape design contest held in 1857. Frederick Law Olmsted and Calvert Vaux won the contest with their "Greensward Plan" design. The park was "of great importance as the first real Park made in this century, a democratic development of the highest significance…," according to Olmsted.

The most innovated influences that came out of the Central Park design were the "separate circulation systems" for pedestrians, horseback riders, and pleasure vehicles. They were able to maintain the rustic scene by concealing the "crosstown" commercial traffic by lowering the roadways and covering with densely planted shrubs. The plan included over 36 bridges, all designed by Vaux, with no two alike. By 1873 the construction was well on the way, with most of the problem solved. When officially completed in 1873 more than "four million trees, shrubs and plants represented the approximately 1,500 species which were to lay the foundation for today's park."

Figure 3.2. , 5th Ave., photograph from Studio Apartments "Studio Apartments" *NewYorkApartments.ie* (2007, 29 June 2008, < http://www.newyorkapartments.ie/listings.php?&cid=1&catname=Studio%20-Apartments >)

Shortly after the completion of the park, it quickly fell into a decline. By the early 20th century, the park had to endure many obstacles as in the invention of automobiles and as the people's point of view of the parks changes. Parks were no longer viewed as just places to walk and have picnics, but

also for sports and other recreation activities. People started losing interest of the park. Maintenance efforts gradually decline, and shrubs became untrimmed and dead trees were not removed. The Park was unfortunately neglected for several decades.

Things started to change for the better in 1934, when newly elected Mayor Fiorello LaGuardia started taking actions for the clean up of the Central Park. Robert Moses was in charge of the clean up. Within a year the whole park was cleaned and renewed. “The Greensward Plan’s intention of creating an idyllic landscape was combined with Moses’ vision of a park to be used for recreational purposes—nineteen playgrounds, twelve ballfields, and handball courts were constructed. Central Park soon became a place for annual events. And the list of events grew over the decades. Events included the Public Theater’s annual Shakespeare in the Park festival, the New York Philharmonic Orchestra , the Metropolitan Opera, and other festivals, and massive concerts. Some of these events became important milestones of the social history of the Park and the cultural history of the City itself.

Figure 3.3. , Central Park., photograph from Steven Pinker “Central Park” *CentralparkII*(2007, 29 June 2008, < http://pinker.wjh.harvard.edu/photos/New_York/pages/Central%20Park%202.htm >)

Through the 1970s it suffered again due to shortage in maintenance and an abundant amount of unsupervised events. But in1980s thing began to reshape again. The restoration of

the Park began under the leadership of the Central Park Conservancy.

> "As the Conservancy rebuilt the Park beginning in the mid-1980s, it instituted a revolutionary new zone-management system, in which Central Park was divided into territories, in which a designated supervi sor was held responsible for maintaining restored areas; and as citywide budget cuts in the early 1990s resulted in attrition of the Parks Department staff responsible for routine maintenance, the Conservancy began to hire staff to replace these workers."
>
> (Central Park)

In 1996 the Park was divided into 49 zones, with day to day maintenance. As of 2007, over $450 million has been spent in the restoration and management of the Park. The money is definitely well spent, because Central Park is one of the most visited attractions in New York City. It has become extremely successful because of its strong root in New York City's history and also it is a place for people to enjoy various outdoors activities in the middle of a city. Some of these activities and attractions include walking, jogging, bicycling, open spaces for sports and recreational activities, boulders for climbing, playgrounds, and many public events are held annually.

Figure 3.4. , Central Park., "Free Wi-Fi in NYC's Central Park" *TNC netbloggers* (2007, 29 June 2008, < http://blog.tmcnet.com/blog/tom-keating/wireless/free-wifi-in-nycs-central-park-now-thats-more-like-it.asp >)

Chapter 4

The Yokohama Project: Foreign Office Architects

The Yokohama Project started around the possibility of generating organization from a circulation pattern, and as a development. It was a way to shape space with circulation. They explored the idea that this transportation infrastructure could operate less as a gate, as a limit, and more as a field of movements with no structural orientation. The no-return diagram was their attempt to provide the building with a particular spatial performance, see figure 4.1. Instead of setting the program as a series of adjacent spaces with more or less determined limits, they articulated them in the continuity of a branched sequence along a circulatory system. They did not want their building to appear in the skyline, to be consistent with the idea of not making a gate on a semantic level as well, by avoiding the building becoming a sign. This immediately led to the idea of making a very flat building and from there we moved into turning the building into a ground.

> "The association between segments of the diagram and surfaces gave us a basic metric of the main chapters of the program: every segment of the no-return diagram had an associated size in square meters, which divided by the width of the pier provided the length of every surface between

bifurcations. By proceeding in this manner we managed to produce the first approximation of the final form of the project, a 3-D version of the no-return diagram that resembled a kind of lasagna of warped surfaces. Obviously there were also some ergonomic determinations in the formal determination of that first scheme: the scale of the bifurcation was set so that it would produce inhabitable spaces of at least 3m height in section, etc."

(Albert Ferre, 28)

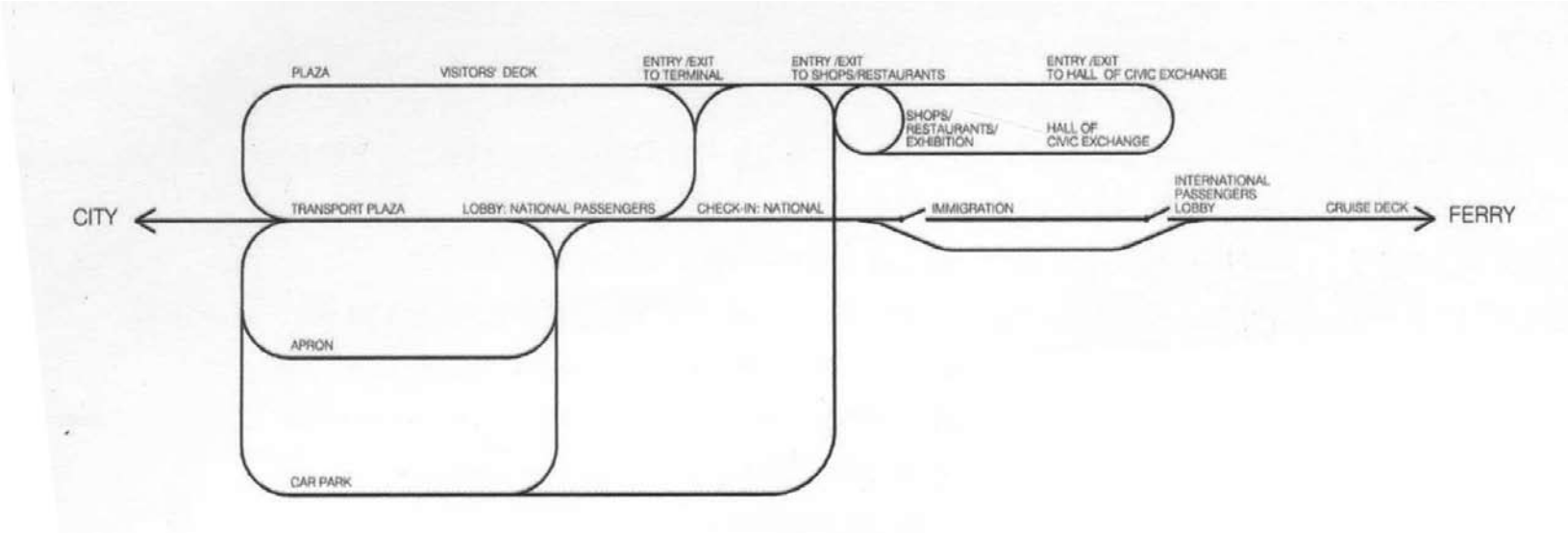


Figure 4.1. , No-Return Diagram, drawing from Albert Ferre, The Yokohama Project (Barcelona 2002) 8.

Sequence of View Relating to the Circulation Diagram

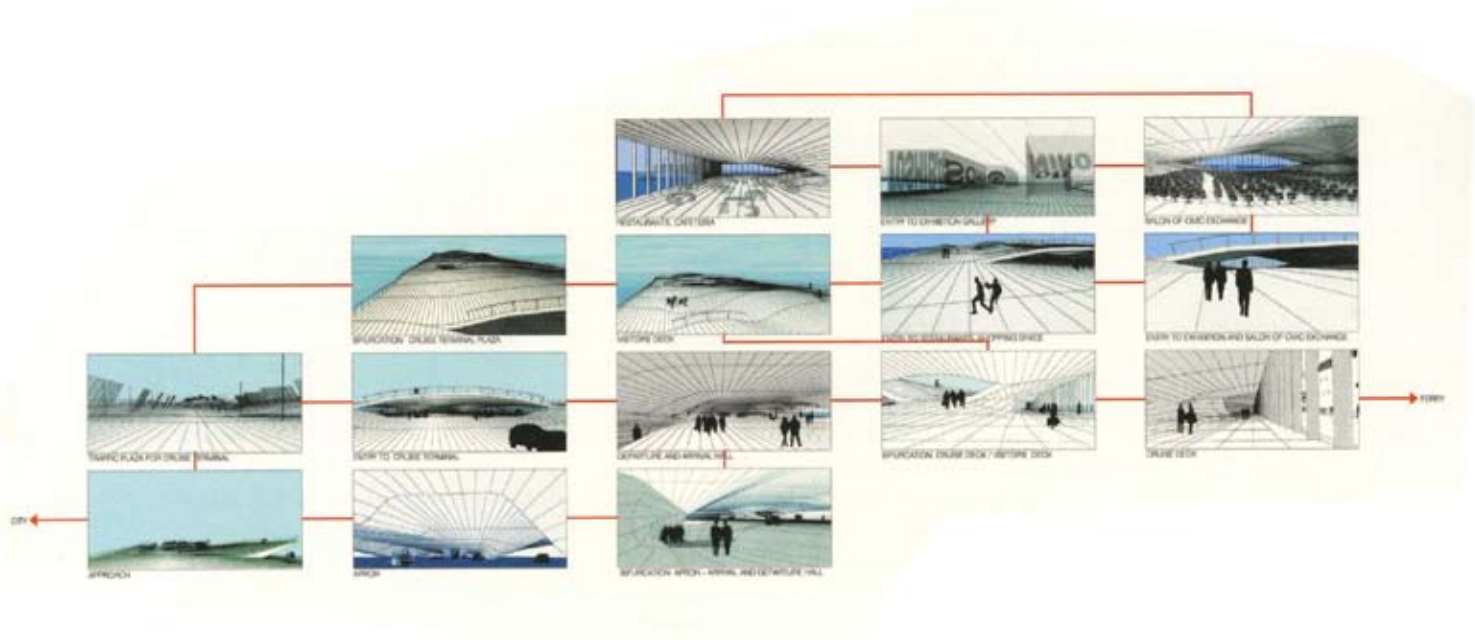


Figure 4.2. , View Sequence, image from Albert Ferre, The Yokohama Project (Barcelona 2002) 9.

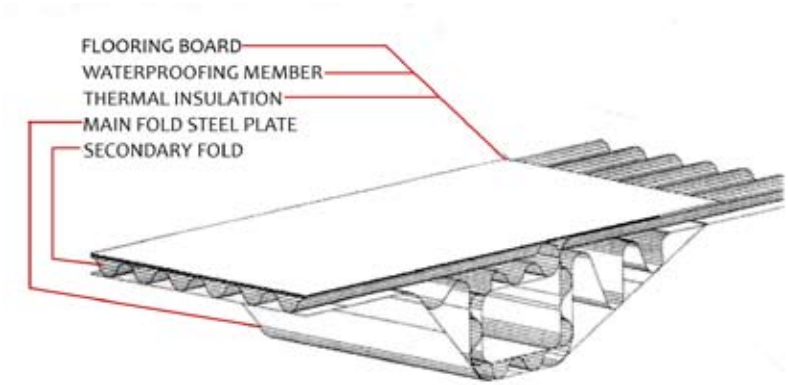


Figure 4.3. , Structural Detail, image from Albert Ferre, The Yokohama Project (Barcelona 2002) 11.

Making the Form Structural

Using columns was not consistent with the goal to produce space and organization purely out of the circulatory diagram. Corrugated steel were possible structural devices of the bent surfaces. The curved surfaces were built as a cardboard sheet, using an undulated surface between two plates to provide sufficient structural strength, as shown in figure 4.3. Higher strength zones would be produced by folding that surface at a larger scale, and this immediately became associated, as a matter of economy, with the ramp system linking the different levels of the building.

Making Continuous Space

A continuous and homogeneous space has been traditionally the instrument for flexibility, but intensive space is differentially flexible, which means that it offers multiple conditions in a continuum, in a similar way in which temperature, luminance, pressure or humidity tend to vary across a large room.

As the cruise terminal functions have a very seasonal behavior, the main advantage of the basic shed/ landscape strategy and the deployment of program as furniture is that they would allow for a constant adjustment of the building to changing programmatic requirements.

Study of the Sections

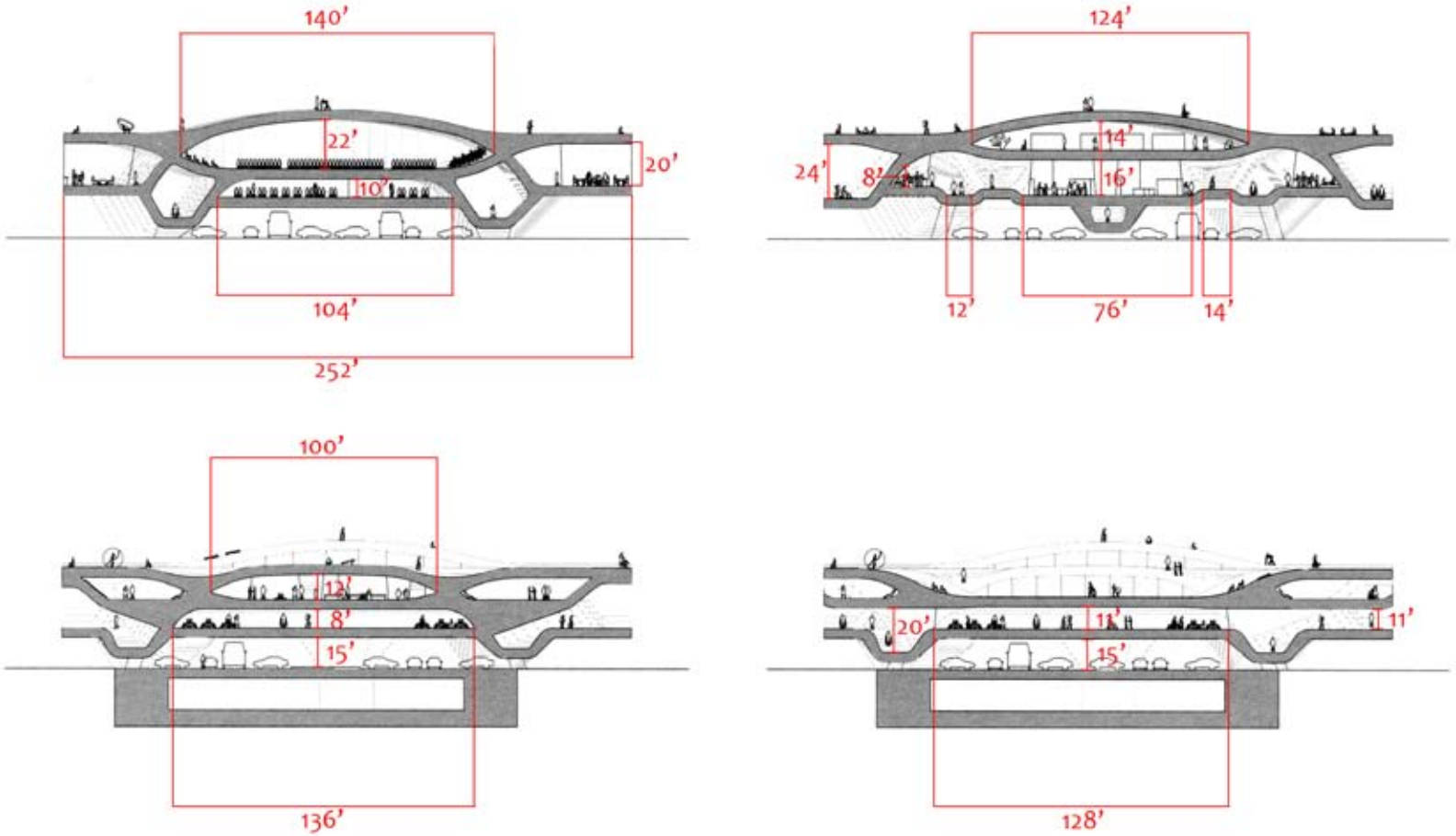


Figure 4.4. , Approximate Measurements, image from Albert Ferre, The Yokohama Project (Barcelona 2002) 23.

Figure 4.5. , Perspective of the Open Undisturbed Space, image from Albert Ferre, The Yokohama Project (Barcelona 2002) 102.

Figure 4.6. , Perspective of Garage Space With No Columns, image from Albert Ferre, The Yokohama Project (Barcelona 2002) 126.

The roof landscape is designed from looking at a calendar with the main urban events to take place in the course of a year, the coming of age, the fireworks, the throwing of beans and tried to locate them in ideal conditions within the roof topography, depending on the views, wind protection, proximity to the city or to the water, giving them a series of shifting domains that dictated the preliminary location of roof furniture, benches, canopies, fences, whose densities, orientation and quantity depended simultaneously on several programmatic conditions.

Chapter 5

Floating Gardens, Taizhou City China

The Floating Gardens is a project that provides ways of preserving nature while renovating the river's edge for public use. This 21-hectare park along the Taizhou River was designed by Turenscape Design Firm in 2002. The project was completed in March of 2004. The original park had the river's edge embanked with concrete all along the site as a part of flood control policy for the area.

The major goal Turenscape has set for this project was to provide a concept that allows accessibility for both tourists and locals, while providing an alternative design strategy for flood control and storm water management, which could be eventually used for the entire river.

Figure 5.1., Existing Riverwalk Condition, image from Kongjian Yu, The Art of Survival (Australia 2006) 116.

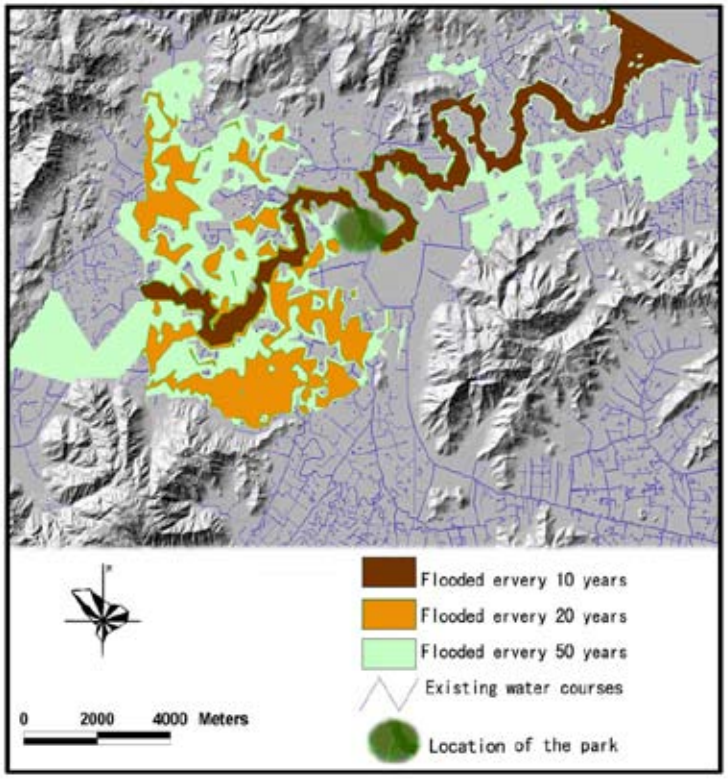


Figure 5.2., Flood Analysis Diagram, image from Kongjian Yu, The Art of Survival (Australia 2006) 117.

The Challenges

There were quit a few challenges that the design team had to face in getting this project going. A challenge was to convince the local authorities to stop channelizing the river with concrete embankments and instead taking the opposite route by reintroducing the natural landscape. The concrete embankments were ecologically destructive to the natural environment of the river and also inconsistent of the culture and history of the local inhabitants. Another drawback of the concrete embankments was that they are extremely expensive and hinder the opportunity for further growth. Another challenge was to make sure that the scheme works as a strategy for flood control and storm water management that could be use for the entire river. In a way the design team was finding a solution not just for the immediate site but for the whole river itself. Another challenge was to design a park that is environmentally friendly to the natural surroundings and also useable and enjoyable by both the tourists and the locals.

With these challenges in mind the team had come up with the concept of Floating Gardens. This park was to be

made up with two different layers: the human matrix which is floating over the natural matrix, as shown in figure 5.3. The natural matrix consists of wetland and native vegetation designed to provide a natural flood control and storm water management. The human matrix above is composed of designed tree matrix, walking path network, and story places defined with box-like structures.

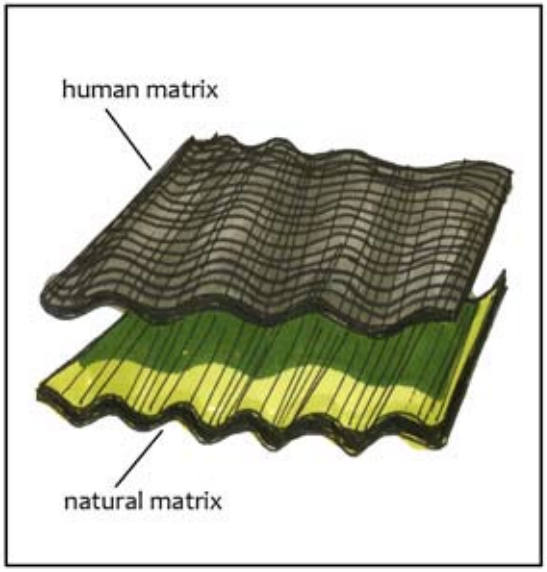


Figure 5.3., Floating Layers Diagram, shows how the human matrix floats above the natrural matrix without touching or disturbing it.

Flood Issue

To deal with the issue of drainage and flood the studied and analyzed the flood patterns at every 5, 20 and 50 years' level. With these analyses they able to effectively design a park that provides an alternative flood control with the natural matrix. This natural matrix consists of restored riparian wetland along the inner lands of the riverbank, an outer wetland runs along the river's edge, and a vase variety of native plants scattered throughout the park. During the monsoon season, some parts of the park are completely flooded. This is a way of naturally controlling the floods instead of destructively altering river's natural process during that time of the year.

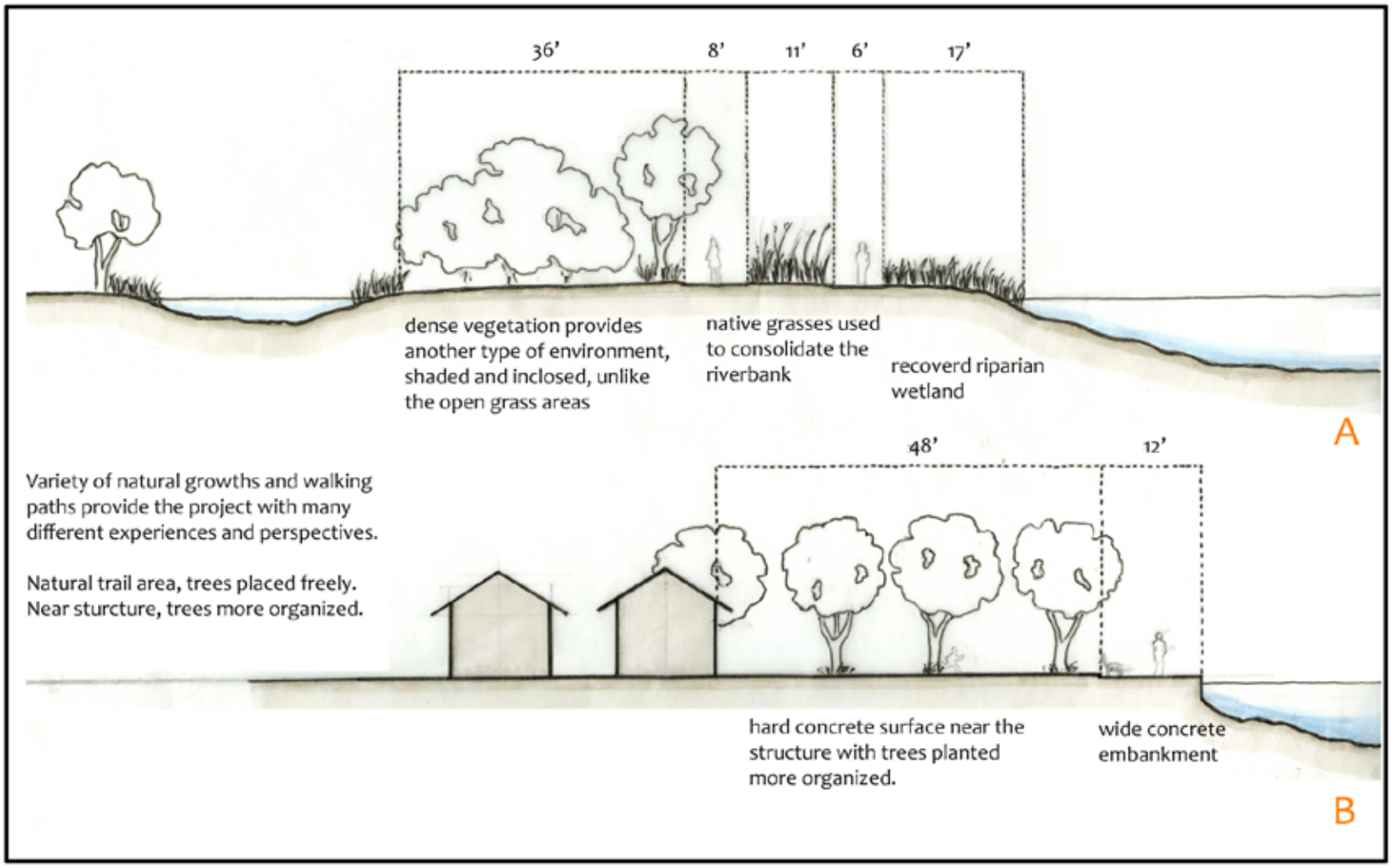


Figure 5.4., Sectional Studies of the Site, shows variaty of spaces crated by the arrangement of plants and trees, creating public and private spaces.

Figure 5.5., Connection to Fabric Diagram, shows how paths from the park are connected to the city grid in order to ground the project to the site.

The second layer of human matrix that gently floats above the seasonally flooded natural matrix, is consisted of native trees and plants strategically placed, a network of walking paths that are linked back to the existing urban fabric, and a matrix of story boxes placed along the key points of the paths. The story boxes allow the users of the park learn about the culture and history of the native land and the ways of the native people. For example is a box of rice, a box of fish, a box of hardware crafts, a box of Taoism, a box of stone, a box of mountain and water, a box of stone, a box of mountain and water, a box of citrus and a box of martial arts.

The Floating Garden was completed in March of 2004. This project demonstrates a unique approach of designing a riverfront park which is reacting to a developing area and the demand of alternative flood control solution. It shows examples of minimum and environmental friendly approaches in design, while dealing with natural habitats and providing accessibility to all visitors.

Chapter 6

Hillsborough River's Ecosystem

Abstract: Tampa Bay area has been steadily growing over the past decades and future rapid developments are expected over the next few decades. One of the effects of this rapid growth and development is the precipitous loss of habitat for wildlife and plant communities. "The habitat that remains is being degraded and fragmented" (Beever, 16). There are now great opportunities and responsibilities that must be taken in consideration. There must always a balance between what is man-made and what is nature.

Hypothesis: Preservation of natural ecosystem of the Hillsborough River should be a vital part of the developments around the Tampa Bay area. Though humans have brought identity to places their culture, still the strongest identity of a place is it natural environment. It is around this natural environment that cultures are built. Preserving nature and harnessing it will not only enhance the experience of a place but it will also greatly enhance its identity which a lot of places these days lack.

Conclusion: A natural element such as the Hillsborough River should never be seen a hindrance to a growing urban fabric, instead it should be an enhancement. A balance between nature and man should be achieve with every devel-

opment.

An ecosystem is a natural unit, an area's biological community and natural systems together with its physical environment, consisting of all plants, animals and micro-organisms in an area functioning together with all of the non-living physical factors of the environment (Hillsborough River and Bay Ecosystem and Management Plan). The interactions between these plants, animals and the physical environment are what keep the health of the ecosystem. Human activities and interferences can have significant effects on the health of the ecosystems. As developments take place near the Hillsborough River it is vital to keep in mind of the importance of the river's ecosystem and its benefits to the people and the developments.

The Tampa Bay Region contains one of Florida's fastest growing populations. One result of this rapid growth and development is the precipitous loss of habitat for wildlife and plant communities (Cox, 93). If sufficient habitat cannot be maintained, much of the wildlife in the Hillsborough River Watershed could be at risk, which will deprive its natural attractions.

> Habitat acreage has been reduced and the remaining lands do not have enough food, water, and cover to support the original number of animals and plants that once inhabited the area. The result is a reduction in population and potentially local extinction (Beever, 14).

Although most of the lower Hillsborough River is somehow developed or altered there are still areas that can be preserved or revitalized.

Upland Communities of Hillsborough River

The three most prevalent natural upland communities of the Hillsborough River Watershed are dry prairie, pinelands, and hardwood hammocks, as shown on figure 6.1. Mixed hardwood pine communities also make up a significant part of the watershed. Scrub and Sandhill communities are not as abundant but still play important roles the diversity of species in the region (Hillsborough River and Bay Ecosystem and Management Plan). Protecting these communities is vital to insure the maintenance of diversity of species in the river watershed.

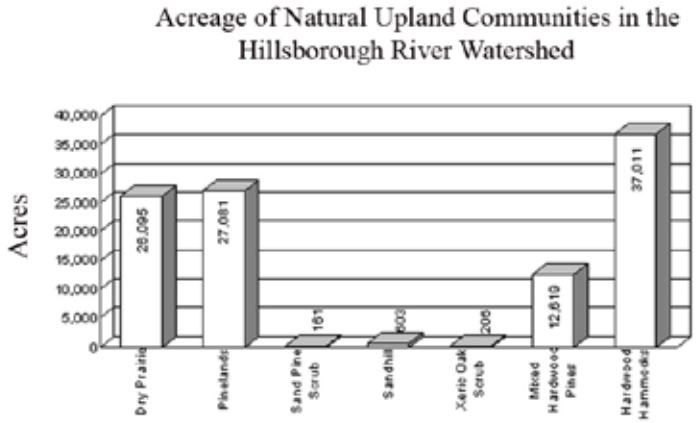


Figure 6.1., Acreage of Natural Upland Communities, Habitat and Living Resources , 14.

Importance of Natural Shoreline

The unique natural shoreline it part of the natural identity for a place. The natural shoreline plays many roles that are vital for the inhabitants of the area. It provides important substrate, refuge, and food for many animals and a natural protection from current erosion.

Natural shoreline vegetation is important in main taining the integrity of a river's natural functions.

Shoreline vegetation provides natural protection to the bank as roots and stems trap sand and soil particles to prevent erosion. The vegetation also helps absorb some of the water's energy, slowing down potentially erosive currents. In addition, shoreline vegetation can serve as a stormwater treatment and attenuation mechanism (Milner, 28).

Shoreline vegetation however can be very sensitivity to human developments, causing it to drastically change or even die out. "Preserving shoreline vegetation and structure is important to the protection of the riverine environment's quality and the food and habitat structure it provides fish and wildlife" (Feet of Shoreline Altered With Hardened Shoreline Treatments).

Most of the developments have been taken place at the lower segment of the river, while the middle and upper segments have had very little alteration of the shoreline. As shown in figure 6.2, most of natural shoreline conditions exist in the middle and upper reaches of the river. Seawalls and rip-raps are a lot more common in the lower reach. Over 200,000 linear feet of the upper reach is a natural shoreline while up to 56,413 linear feet of the lower reach is a seawall. Between the dam and Fletcher Avenue, approximately 16 percent of the shoreline had been altered primarily through the construction of seawalls.

Threatened and Endangered Plant and Animal Species

There are a number of threatened and endangered plant and animal species that are found in the Hillsborough River watershed. These species are important parts of the larger ecosystem of the Hillsborough River.

Recognizing that the Hillsborough River watershed harbors a wide diversity of plants and wildlife, it is important that

particular attention be directed towards those regional species listed as threatened or endangered because they provide an important natural resource for the region and state (Habitat and Living Resources).

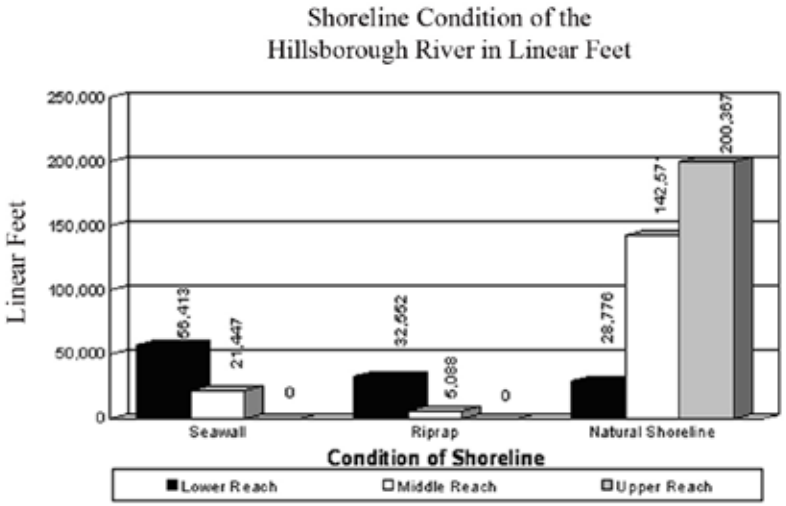


Figure 6.2., Shoreline Condition of the Hillsborough River, Habitat and Living Resources, 20.

Figure 6.3 clearly shows that plants have the most number of species that are considered threatened and birds have the most number of species that are species of special concern.

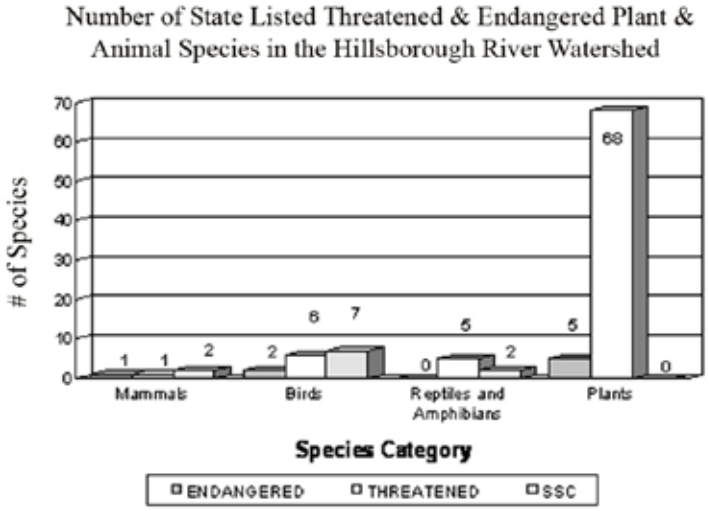


Figure 6.3., Number of State Listed Threatened & Endangered, Habitat and Living Resources, 25.

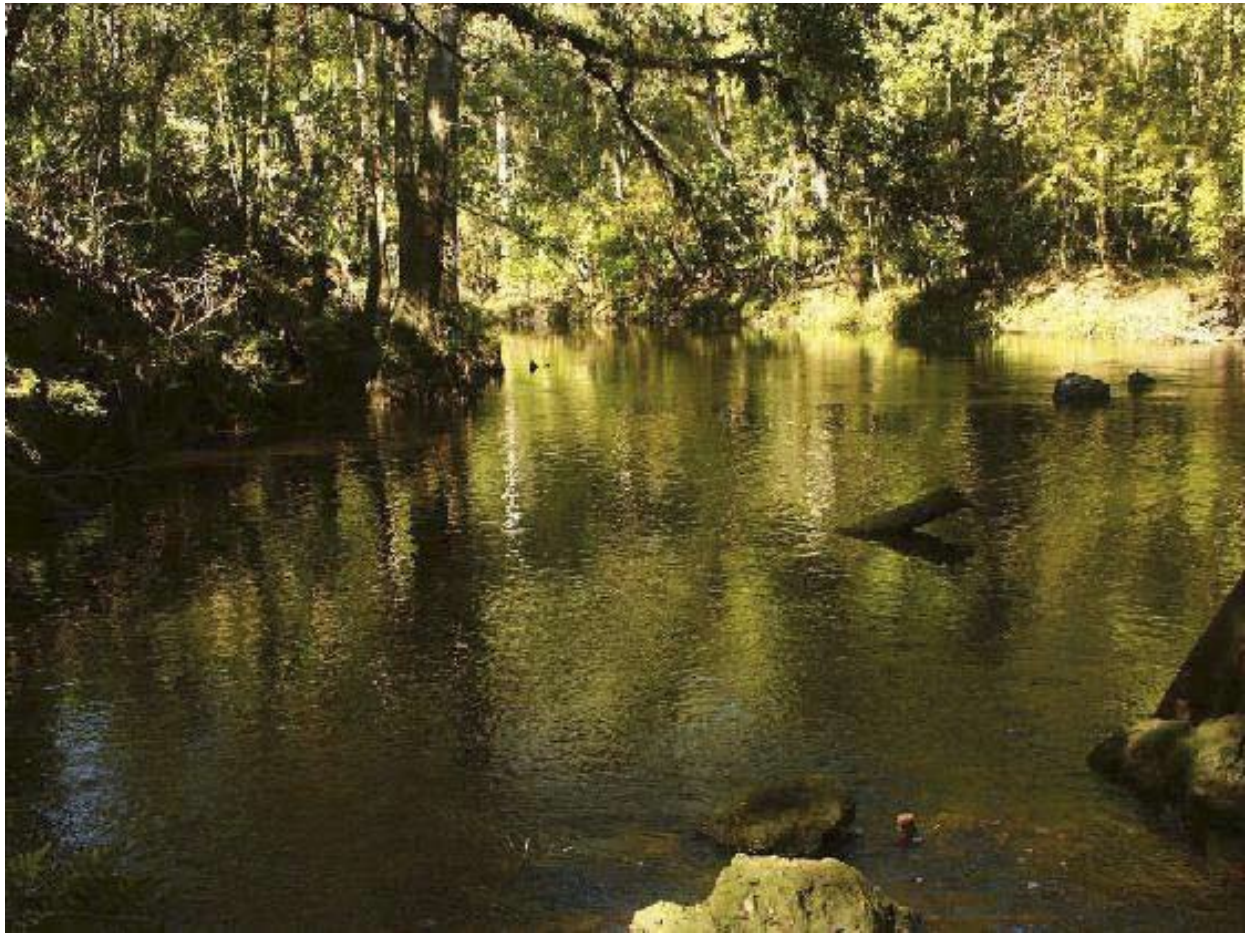


Figure 6.4., Norther Hillsborough River, photograph from Sarah Jayn, "Yup This is Tampa" *Virtual Tourist* (August 2005, June 2008, < http://members.virtualtourist.com/m/90e84/bacc2/ >)

Figure 6.5., Canoe in Hillsborough River, photograph from Nick Anis, "Discovering the Hillsborough River" *TravelWatch* (March 2007, June 2008, <http://www.travel-watch.com/canoe-escape.htm >)

Chapter 7

Site Analysis (macro)

The City of Tampa with over 330,000 residents has the third highest population out of the cities in Florida, with Jacksonville and Miami being first and second. Tampa has been slowly growing and reshaping over the last century with high influence from its surrounding waters. Some neighborhoods and districts have taken full advantage of the waterfront location, while other areas have ignored its natural values. In order for Tampa to continue growing progressively and even at a faster rate, it must use these waterfront areas to the full advantage. Tampa has never used the Hillsborough River to its full potential, especially around the downtown business district where its used more as an alley.

History

Like many cities across the country, Tampa found itself in the 1970s with a downtown that largely turned its back to the water and that was substantially depleted with the move of housing and businesses to the suburbs (EDAW, Inc., 26). Henry Plant was one of the first few to recognize the river as a potential asset of great value to the city. The Tampa Bay Hotel, a quarter-mile long luxury resort hotel was built in 1891. The hotel included 150 acres of manicure gardens along the Hillsborough River.

But that vision did not last long as industries moved into the area. Over time, as the water's edge became home to commercial fishing, maritime, and industrial uses, the experience previously enjoyed on the riverfront became dramatically less appealing. As the recreational uses slowly disappeared, the increasingly empty waterfront became some what of a bleak space (EDAW, Inc., 28).

Throughout history Tampa Bay area has been home to many different people at various times. Thus, explaining its rich historical background. Using a historic timeline will provide useful background information of the important events and figures.

Historical Timeline

1528 - Narvaez, a Spanish explorer, lands near Tampa Bay.

1539 - DeSoto, another Spaniard, comes to Tampa Bay, but left when no gold was found.

1772 - The river was named after English Lord Hillsborough. During the mid and late 1700's, Native Americans began to migrate to the area. These immigrants become known as Seminoles.

1821 - Florida finally owned by US.

1824 - Fort Brooke was built at the mouth of the Hillsborough River.

1828 - A bridge was built to cross the Hillsborough River.

1830 - Congress passes the Indian Removal Act.

1846 - The first ferry crossing on the Hillsborough River is established. Transportation was improved and increased development in both sides of the river.

1891 - The Tampa Bay Hotel was opened which later became the University of Tampa.

1883 - Development of the Tampa area began with the discovery of phosphate.

1885 - Vincente Martinez Ybor moved his cigar manufacturing operations to Tampa from Key West.

1886 - Vincente built small houses around his factory. This area later became Ybor City.

1895 - An electrical dam is built on the river.

1910 - Hillsborough Bay is channelized to the mouth of the Hillsborough River with the River and Harbor Act of 1910.

1923 - A water treatment plant is built to utilize the water supply from the reservoir above the dam.

1935 - Hillsborough River State Park is opened.

1988 - The annual cleanup of the Hillsborough River begins.

1995 - The Hillsborough River is designated as an Outstanding Florida Water.

1995 - The Hillsborough River is designated as a Florida Recreational Canoe Trail.

1995 - The Hillsborough River is named a Florida Sesquicentennial Greenway.

2006- EDAW River Walk Proposal

Study Area and Analysis

To be certain that this project will be successful, one has to be sure that all aspects of Tampa is studied and a large enough area of study is covered in order to respond to everything that's happening around the site. This way the project will be strongly rooted to the site and will have a great positive impact on the city as a whole. The study area of this thesis project will include the Hillsborough River from the North Boulevard Bridge down to the mouth of the river, near the Convention Center, and will continue all the way up to the Garrison Channel and the Ybor Channel. It will also include the surrounding areas: Tampa Heights, North Hyde Park, South Hyde Park, Downtown, Davis Island, Harbour Island, Channelside, and Ybor City (figure 7.1).

Figure 7.2 shows the main vehicular arteries going through downtown Tampa and the surrounding areas. There are two highways that connecting downtown to other areas: the Crosstown Expressway on the south end, and the Interstate 275 on the northern end.

The major roads that run east to west through the site are Cass Street, Kennedy Boulevard, Brorein Street, and Platt Street. All four of these streets bridge over the Hillsborough River, providing access for both vehicle and pedestrian. These bridges are not as pedestrian friendly as they should be. Most of the walking paths on these bridges are no wider then 6 feet, which makes it a bit uncomfortable for pedestrians as cars are zooming by. The major roads that connecting from north to south are: Ashley Drive, Franklin Street, Florida Avenue, Nebraska Avenue, and Channelside Drive. Another important transportation option is the TECO-Line Trolley, running from Ybor City to the Convention Center.

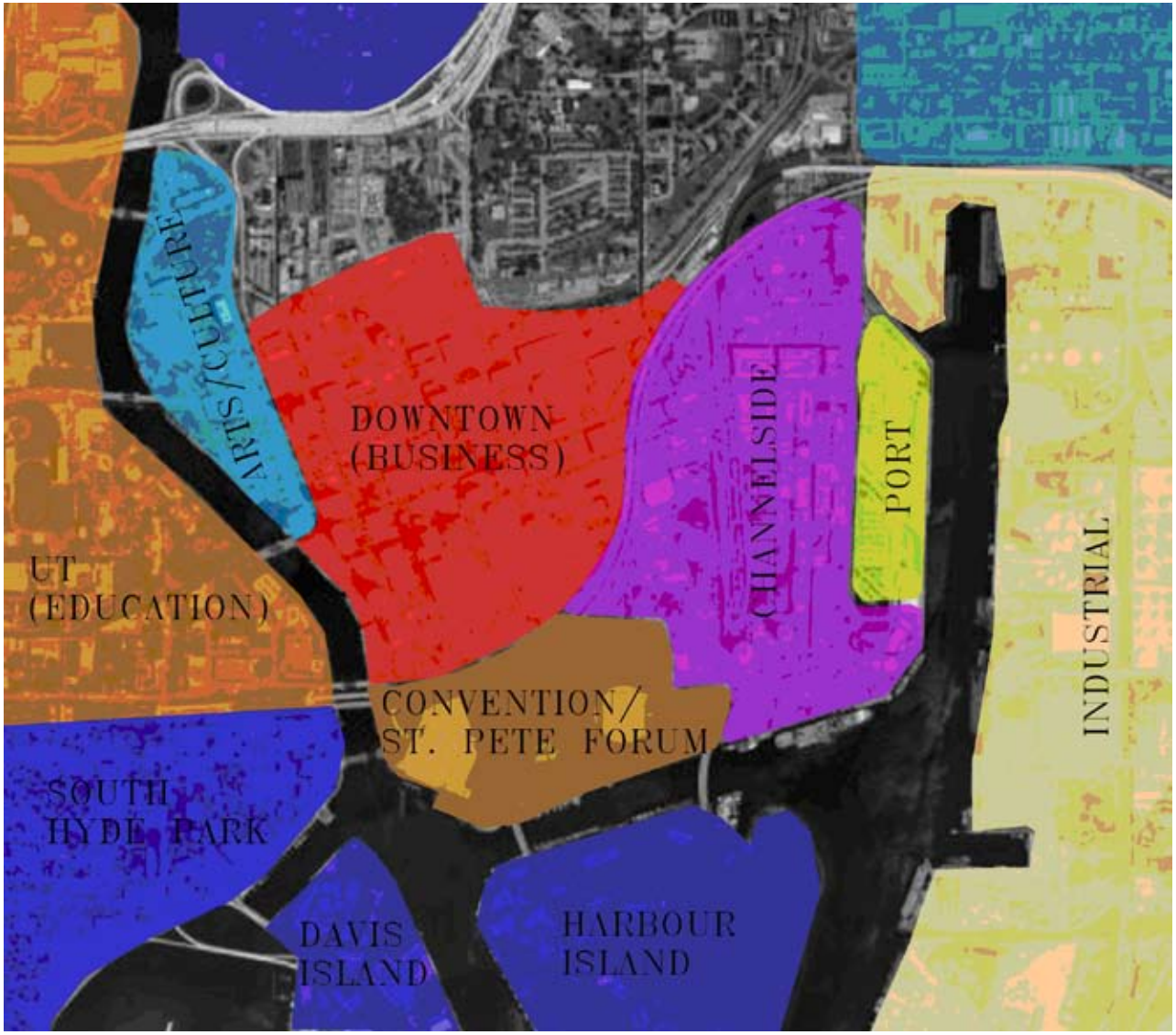


Figure 7.1., Study Area, blue areas - consists of mostly residential, purple and light blue areas are mainly entertainment, red - business.

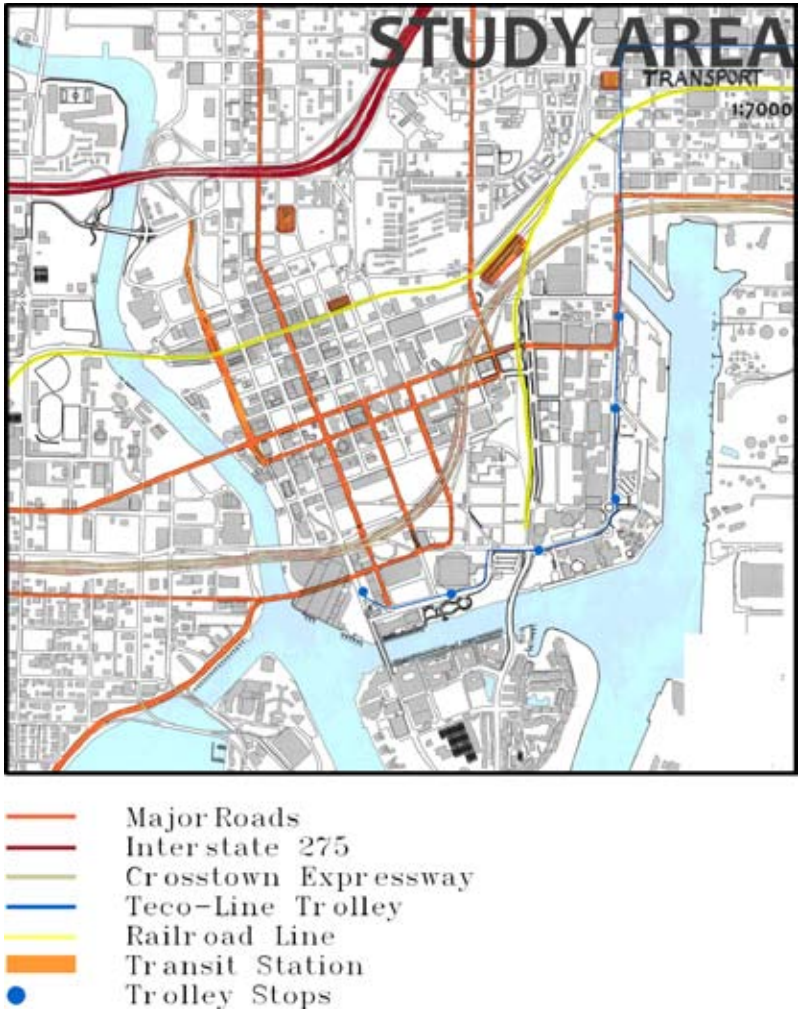
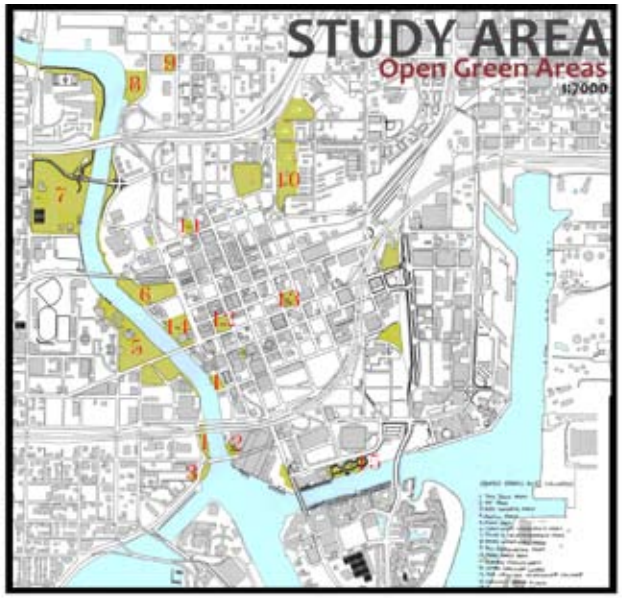


Figure 7.2., Major Transportation Arteries, shows a variety in ways of getting in and out of downtown Tampa.

There are many fragmented open green spaces and park areas in and around the downtown district of Tampa. Figure 7.3 shows the areas that are considered as either existing parks or potential green spaces. By studying the locations of these green spaces, one can arrive with an idea of where opportunities lie for connections or expansion of these spaces. Though it is true that Tampa has numerous open lots that potentially can become parks it is necessary to understand where to introduce more parks and where to bring in more density. This study also provides information on where it is appropriate to consider recreation of the natural river edge. Lykes Gaslight Square and Joe Chillura Courthouse Square show the existing pockets of relief from the urban developments. These open spaces will become vital threads of the urban fabric as grows over the next few decades. The preservation and connections of these nodes will strengthen the city's capability of expansion and interconnection.

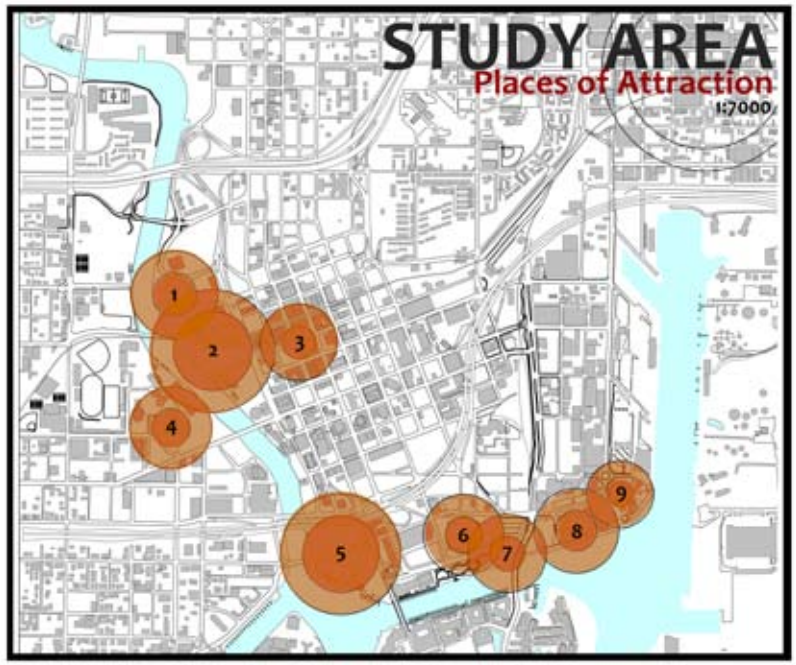
Another important aspect of the site analysis is to study the features and attractions of the site. Though Tampa has a fair amount of attractions it lacks sub-attractions. As shown in figure 7.4, the points of attraction are disconnected from one another. Main attractions like the Tampa Bay Performing Art Center, the St Pete Forum, and the Florida Aquarium need sub-attraction in between each destination to keep the visitors interested. By looking at figure 7.4 it is clear to see that there is a lack of attraction places in between the Curtus Hixon Park area and the Tampa Bay Convention center. Same conclusion can be drawn for the area between Ybor City and Channelside. In order for the new river walk to be successful there must be an intricate tie between the places of interest that provides a smooth transition from one area to another.



1. Tony Janus Park 2. USF Park 3. AIDS Memorial Park
4. MacDill Park 5. Plant Park 6. Curtis Hixon Park
7. Julian B. Lane Park 8. Tampa Water Works Park
9. Phil Bourquardez Park 10. Perry Hardy Park
11. Herman Massey Park 12. Lykes Gaslight Square
13. Joe Chillura Square 14. Nations Bank Park
15. Cotanchobee Park

Figure 7.3., Open Green Parks, the existing green parks in downtown Tampa.

Analysis of pedestrian traffic into the downtown area gives information on which major arteries are ought to be kept in same use, and which others are needed to be changed. As



1. Tampa Bay Performing Art Center
2. Tampa Bay Museum of Art/
   Children Museum
3. Tampa Theater
4. Henry B. Plant Museum
5. Tampa Bay Convention Center
6. St. Pete Forum
7. Tampa Bay History Center
8. Channelside Center
9. Florida Aquarium

Figure 7.4., Places of Attraction, the existing places that provide high activity around the area.

shown in figure 7.5, many roads are accessible to the river walk if necessary, but only a hand-full of the roads lead to potential focal points of the river walk. Two roads that show great opportunity to emphasize the connection for the river walk would be Zack Street and Whiting Street. Both of these roads are now connected to parks of the river edge. Zack Street connects to Curtus Hixon Park while Whiting Street is connected to MacDill Park. Another condition to consider is the major influx of students that could potentially be daily users of the river walk.

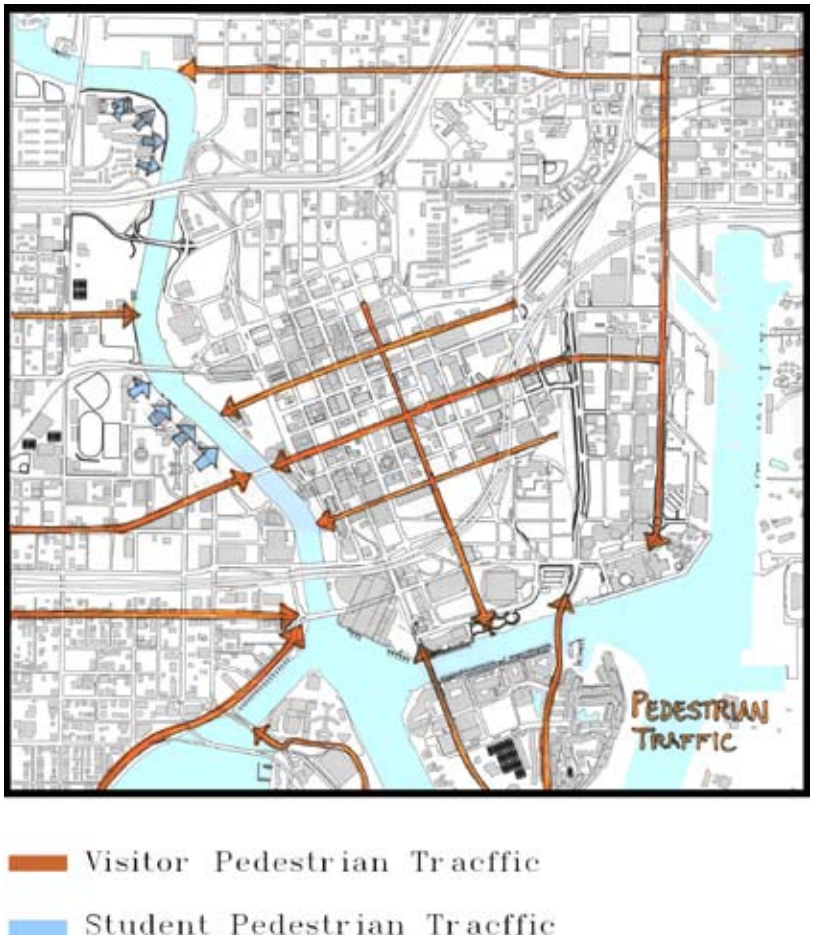


Figure 7.5., Pedestrian Traffic, shows circulation patterns of pedestrians from the surrounding area.

A figure ground map of Tampa is shown in figure 7.6 along with the section cut lines of the city. A figure ground map helps study the density of the city and it areas of major developments. Section 1 of figure 7.7 shows the condition on Ashley Drive and the large open area of Curtus Hixon. Section 2 represents the street room condition of Ashley Drive. Section 3 shows the conditions across the Crosstown Expressway. Section 4 is of the existing condition of the river edge of the Convention Center. Section 5 cuts across an existing waterfront park.

Figure 7.6., Figure Ground Map, with site section cuts.

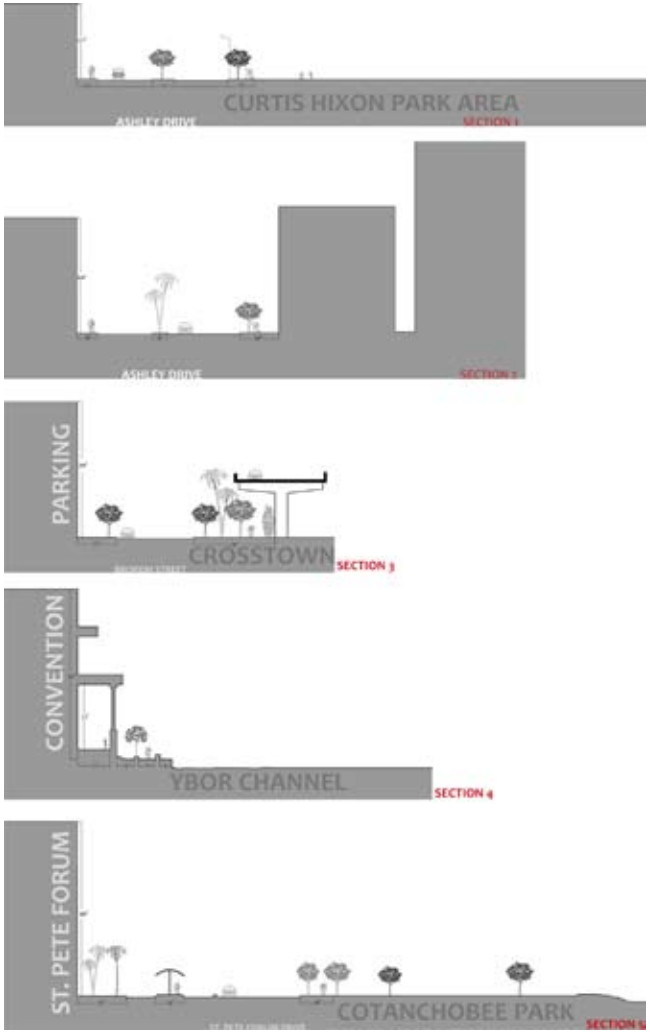


Figure 7.7., Existing Site Sections, shows different street sectional qualities near the river.

Figure 7.8., Site Sections, shows different street sectional qualities near the river.

Figure 7.9., Street Grid, shows how Tampa's downtown street grid breaks apart as it collides with the Crosstown Expressway.

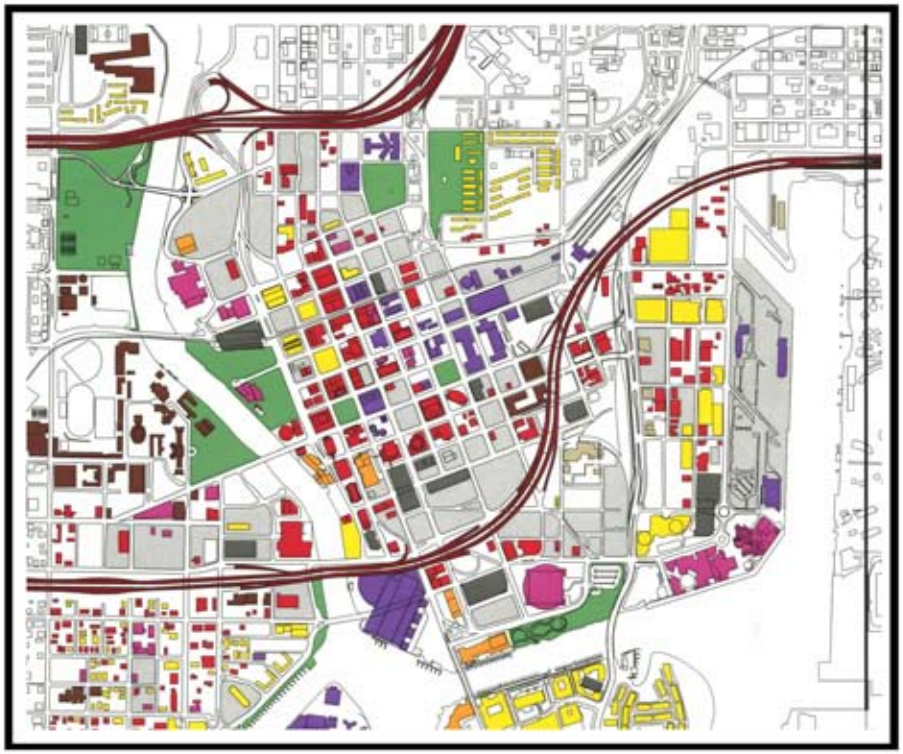


Figure 7.10., Building Uses: Existing.

Figure 7.11., Master Plan of the Entire River Walk.

Chapter 8

Site Selection

After the brief analysis of the entire river walk area, from North Blvd. Bridge to the Florida Aquarium, a specific site was needed to be chosen. The area between the Marriott Hotel and the Channelside Building was selected to be further investigated and to arrive with a waterfront development proposal. The site was chosen because it is a vital area that has all the ingredients needed to be a successful area yet lacks a development that uses full advantage of the area. Channelside area in general has a lot of potential in growth and new developments of residential buildings are also under way. With new developments to the north, Harbour Island to the south, and entertainment areas on either sides, this plot of land is extremely valuable and has great potential to be the first highly developed and activated riverfront area of downtown Tampa.

Site Analysis (micro)

Figure 8.1., Project Site.

Surroundings

The Marriott Hotel to the west has used the river very wisely with a riverfront porch area that runs along the river and also has boat slips that allows their guests to dock right in front of the hotel. The hotel's room service is also provides for the guests on the boats which makes the river walk between the boat slips and the hotel quit active. This river walk area behind the Marriott Hotel is one of the most active and pleasant area throughout the whole river walk. To the east of the Marriott Hotel is the Cotanchobee Park. Though this park has regular everyday users, it does not bring in the density that an area like this could potentially have. This park does give an area for the crowd from the St. Pete Forum to spill out but no programs are there to activate the area. St Pete Forum is another important feature in this area. The forum holds concerts, sporting events, and other events that draw thousands of people. The Channelside Bay Plaza, a mixed use building is located to the east of the site. This is a very active area that could label as an entertainment area. The plaza consists of many restaurants, bars, shopping centers, movie theaters, and dance clubs. It has functions and programs for mostly anyone that wants to enjoy their time. The problem with this plaza is that it has little or no connection with its surrounding areas

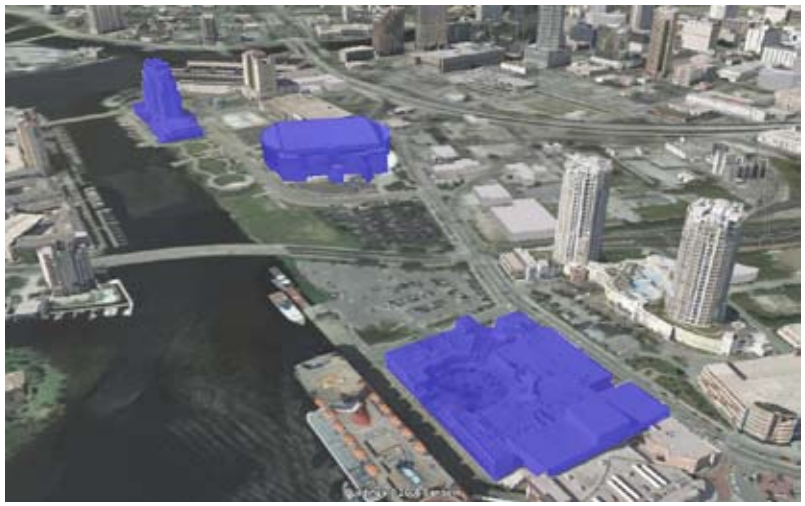


Figure 8.2., Main Context Buildings, buildings that had the most influence in the project.

and even the water. It obtains plenty of energy and activity that could be link into the site. This site also has an important visual connection to Harbour Island. This close proximity to Harbour Island can be used to bring more pedestrians into the area. This 177-arce island is packed with residential buildings, offices, and retail developments.

Views and Access

Study of the potential views from this area was extremely important as the project is focused on using the location of the site as an advantage. Studies and diagrams show that this area provides great view of Harbour Island and Davis Island, industrial area to the east, and the skyline of downtown Tampa to the north. Another important study was the connections of pedestrians' paths and ways. Finding ways to connect the new development into the existing city fabric will allow maximum accessibility and ground the project in place. Access to the site can be separated into three categories: on street vehicles, pedestrians, and boats. The major streets around the site the run from east to west are Channelside Dr. and St. Pete Forum Dr. Streets running form north to south into the site and immediate areas are Harbour Island Blvd., Florida Ave., Morgan St., and Beneficial Dr. All of the streets listed above provide sidewalks for pedestrians and bikers. Another way of accessibility is the Teco-Line Trolley which runs down Meridian Ave., crosses over at Channelside Dr., down Ice Palace Dr., then finally across St. Pete Forum Dr., going right by the site. A great way of accessibility to the site is the water, which allows boaters and water-taxi passengers to dock and walk right up to the site.

Figure 8.3., Opportunities for Views, shows all possible views that should be consider while designing.

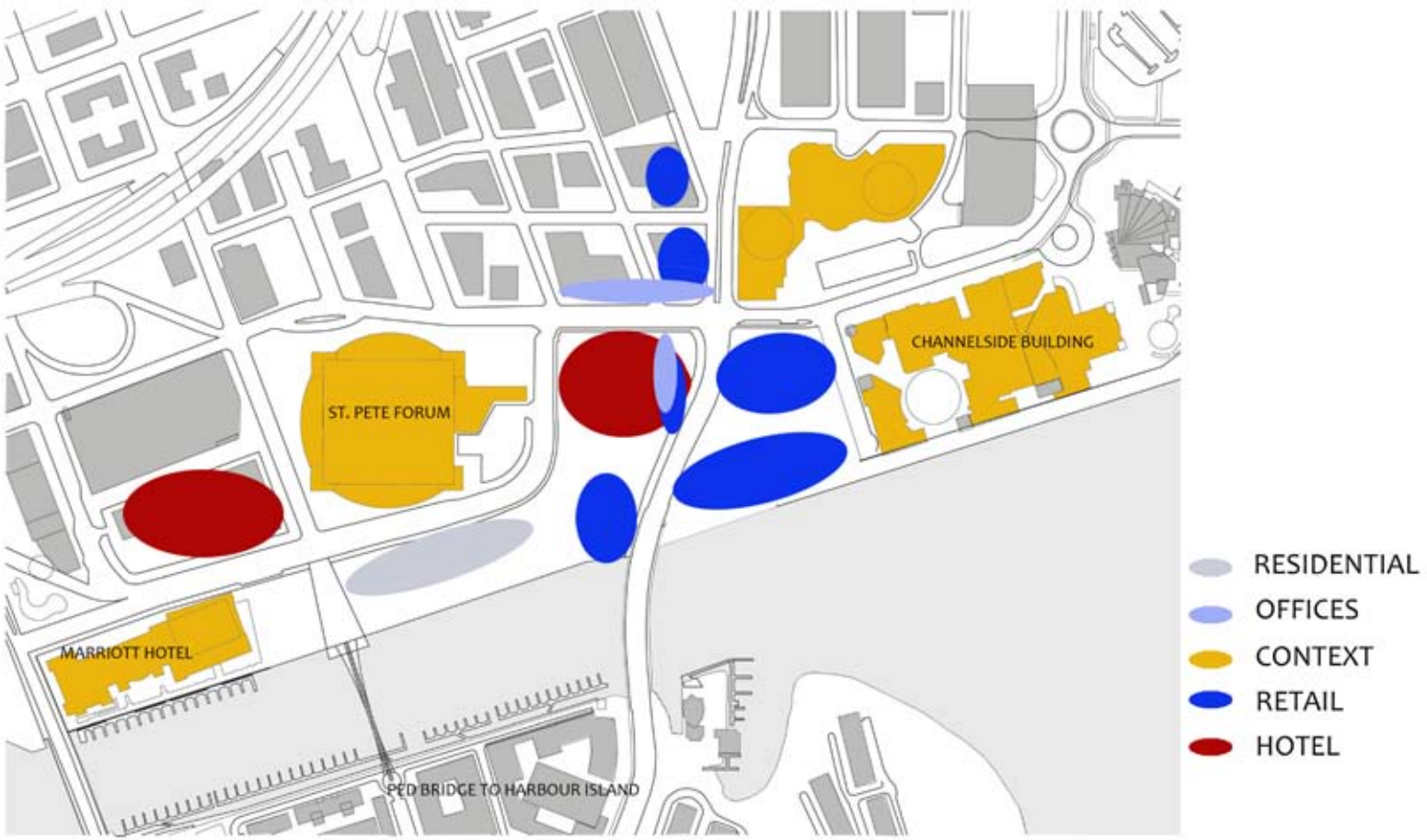


Figure 8.4., Programing Diagram, first attempt in coming up with a program that consists a mixture of functions that relates to one another.

Chapter 9

Programming

At a site location where every inch of the land is valuable, it is crucial to pay extreme attention to programming at all levels. This waterfront property has to have maximum revenue possible. A good mix of programs has to be strategically placed in order for the development to be successful. One issue that was of great important in programming was the issue of dense versus open areas. There had to be enough density in order to bring in more activity into the area, yet still keeping enough openness to allow visual or physical connections with the river.

One of main goals in this project was to design a place that is using the location to its fullest advantage. To make this a successful lively area day and night, there needs to be functions and programs that are active twenty-four hours a day. Residential buildings and hotels are programs that not only bring people into the area, but also make sure that the area is occupied by people during day time and night time. Bringing high density residential to the edge of the water is one thing the city of Tampa hasn't really done in the past. This has a lot to do with downtown Tampa using the river as the back alley for the business district.

Commercial and Retail

The riverfront program consists of restaurants, retail spaces, offices, service garages, residential buildings and a hotel. The program is split into separate levels with living on the upper level, and work and play on the ground level. The diagram on the right shows the base in blue, this is where work and play happens. The grey on top is where living takes place. The ground level consists of restaurants, retail shops and offices. There is a total of approximately 35,500 sq ft of retail space, and a total of 10,000 sq ft of office space. The area of restaurant A is approximately 3,500 sq ft, restaurant B is 8,000 sq ft, and restaurant C is at 6,500 sq ft. There are two service garages that accommodate the retail shops and restaurants in the new development. The garage on the west side of the site is also a service for the residents in residential buildings A and B.

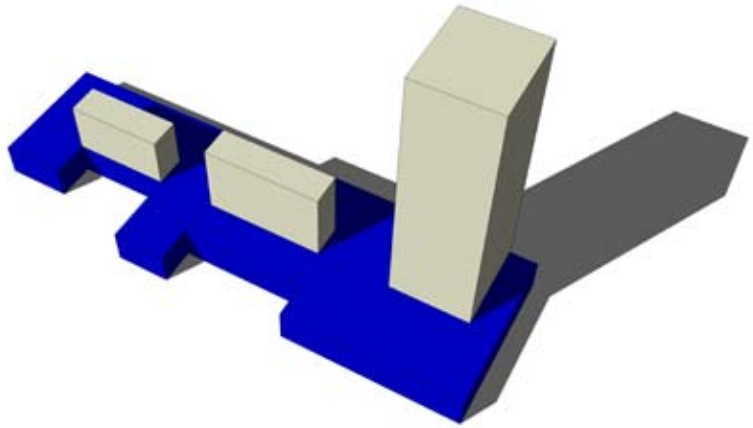


Figure 9.1., Three Building Sharing One Base.

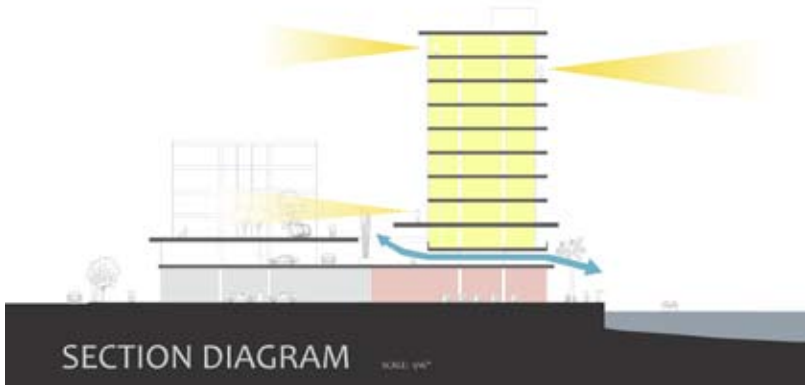


Figure 9.2., Section Diagram of Building B, veiws and air flow.

Residential and Hotel

The upper level consists of two residential buildings and a hotel tower. Residential building B is an eight level building with thirty five living units. Each unit is approximately 2,000 sq ft. The first level of the building is dedicated to amenity and community spaces for the residents. Building A is the smaller of the two residential buildings. It is a five level building with thirty living units. Each unit is approximately 1,200 sq ft. The first level of this building is also consists of amenity and community spaces for its residents. A third major building on the site is the hotel tower. The hotel tower is a twenty six level building, with the first three levels dedicated to conventions, meetings, and public spaces. The next twenty two levels are the rooms. There are three different sizes of rooms: 1,000 sq ft, 800 sq ft, and 600 sq ft. The 26th level consists of a rooftop restaurant and bar.

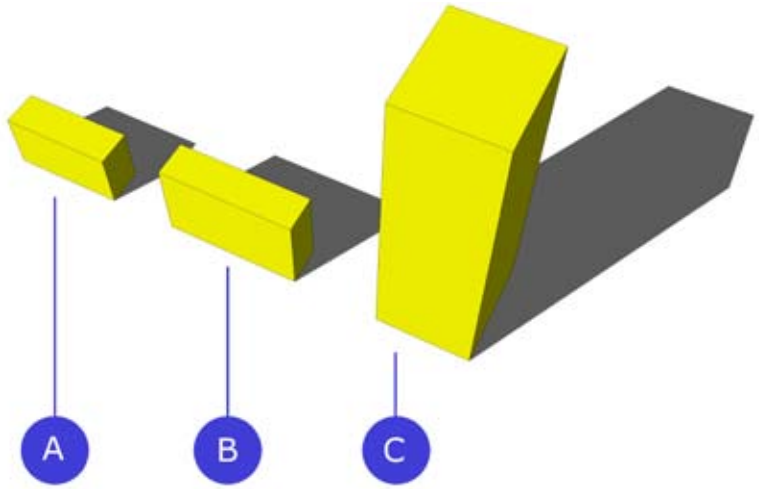


Figure 9.3., Building Types and Sizes.

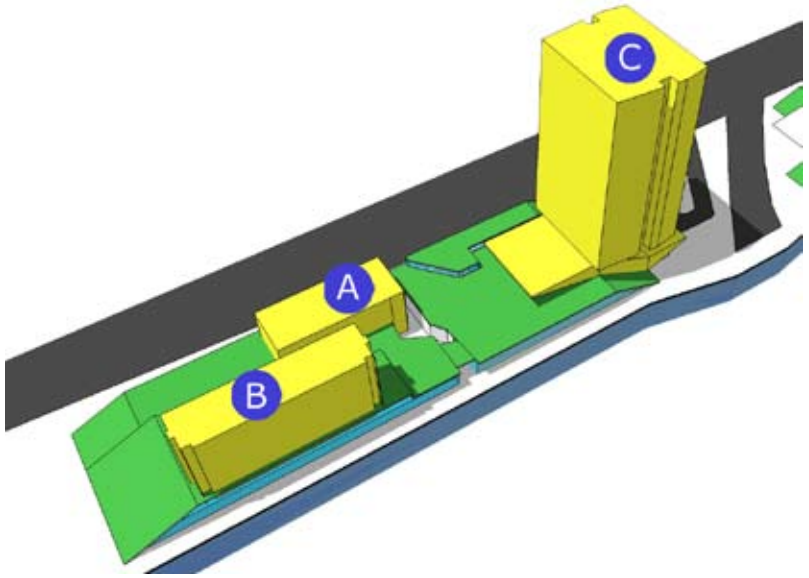


Figure 9.4., Placement of the Buildings on the Green.

Chapter 10

Design

Introduction

The major goal for the design is to create an iconic place that shows an example how the river front properties of the Hillsborough River could be dealt with. Bringing in density at the right places of the river front area is very critical. With mostly retail and commercial programs on the ground level with residential programs on the uppers, this new development will not only bring people on to the site but also keep it activated throughout the whole day. Visual and physical connections were considered greatly when dealing with orientation, position and design of the buildings.

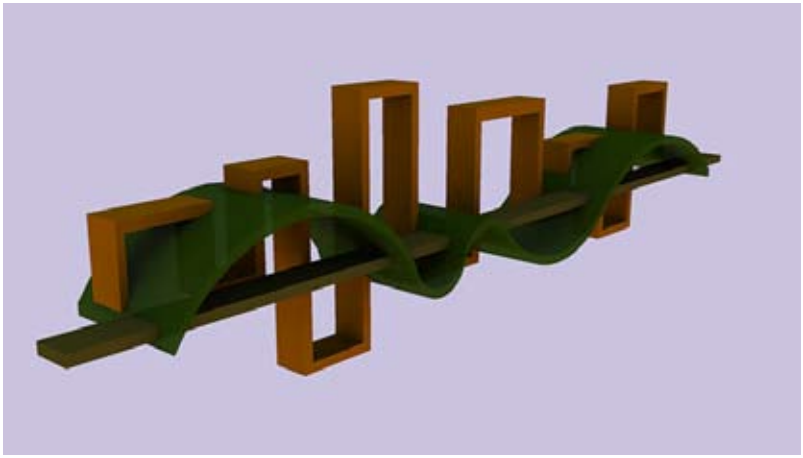


Figure 10.1., Concept Diagram, knitting of three elements: green- natural park, dark brown- the riverwalk, and light brown- building developements.

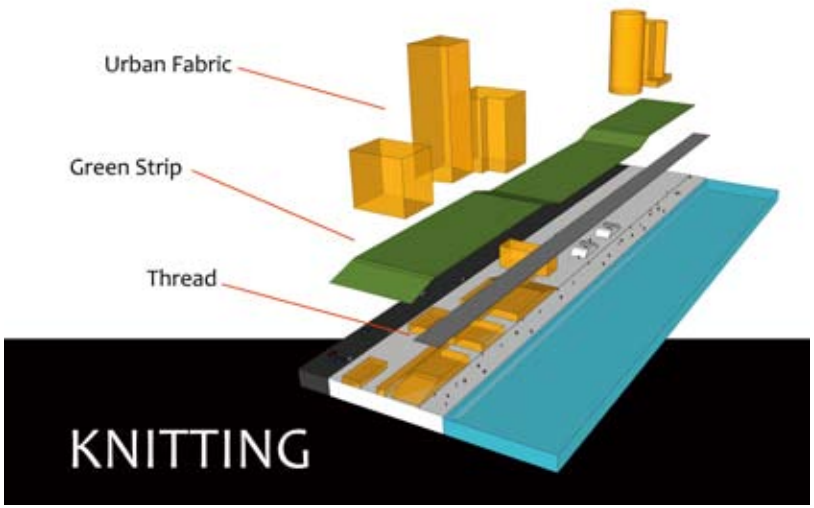


Figure 10.2., Conceptual and Pragramatic Diagram, taking the concept to the next step.

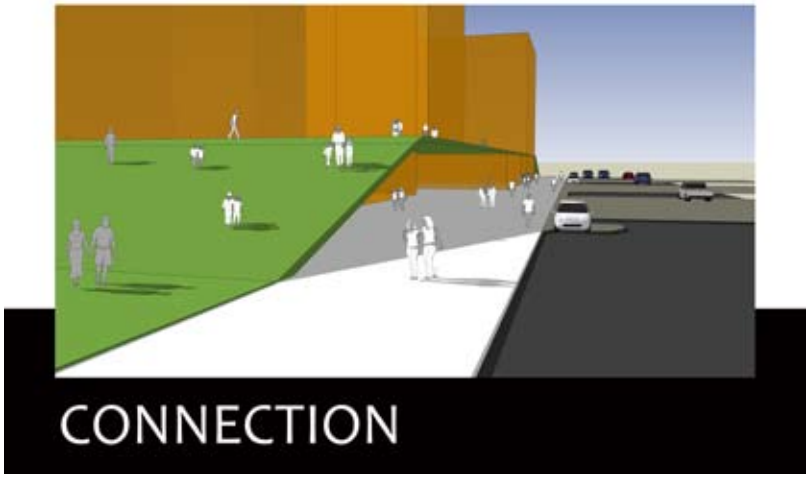


Figure 10.3., Study of Connection from Sidewalk to Green Lever.

Concept

From the beginning of this thesis the concept has been knitting of nature into an urban fabric. It is a way of bringing green spaces and buildings together. After studying the Marriott Hotel, a lot of positives and negatives features were acknowledged. The hotel was analyzed as having two parts: a base and the tower on top. The base is made up of all the community spaces, meeting rooms, and a service garage. The tower is made up of all the bedrooms. One negative feature of the base is the roof where plenty of space is left unused. With that a mind a new way of using the roof of the base was discovered. The roof will now become a ribbon of green that folds up and down running across the site. This ribbon of green will be knitted through the three main buildings. It will provide green spaces for the residential buildings and the hotel. It will also create a cooler environment around the site area. The

common paved roof, which absorbs heat and creates problems in conservation of energy, is now a roof top garden that the residents and pedestrians on the streets could enjoy. The green ribbon will become an element that could be defined with the area, and give the area identity and character. The ribbon can take on many roles. It can be seen as a gateway an entry to the river from the streets. It can also be a place to go to view the Tampa Downtown skyline or the water. It could also be a way of mental connection of the ground to the sky.

Figure 10.4., Layers and Zones of Spaces.

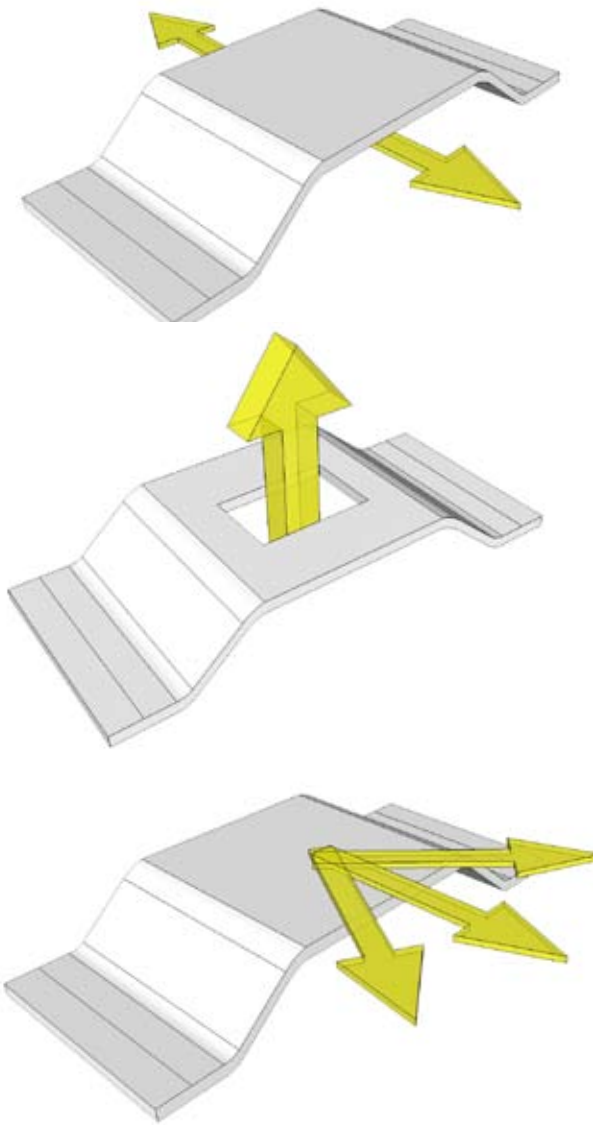


Figure 10.5., Different Functions of the Ribbon.

Process

The design of the development started out with a master plan for the entire area stretching from the Marriott Hotel to the Channelside Bay Plaza. The master plan consists of a multifunctional plaza at the far west end of the site. This plaza will be able to function for many different activities and events: public speeches, performances, concerts, weekend markets, and etc. A feature that would add alternative circulation path and also serves as a physical connection to the Harbour Island would be an iconic pedestrian bridge. This pedestrian bridge will align with Morgan Street and connects straight to Harbour Post Dr. This approach will be vital to the new development because it creates a connection through the site all the way from the downtown area to Harbour Island. This is an example of fusing the project into the existing urban fabric. St. Pete Forum Dr will be extended straight through Beneficial Dr. and to the Channelside Bay Plaza Building. This will create a west to east connection that is needed for access. The entire project can be divided into three layers: the ground layer with retail and commercial spaces, the green ribbon layer with open green spaces residents and pedestrians, and the third layer of living spaces.

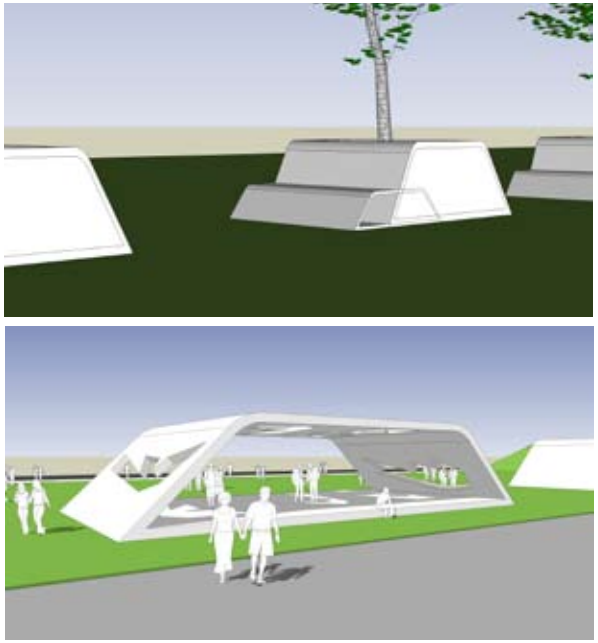


Figure 10.6., Using the Fold in Different Scales.

Figure 10.7., Early Phases of Site Plan.

The next step was to figure out the position and orientation of the buildings. The objective for this step was to allow maximum views for all three buildings. Each building should have views to the water and the downtown skyline to the north. By shifting the buildings along the river it became possible for each building to have views of either side. This method created adjacent green spaces either to the north of the building or to the south of the building. At this point of the project the green spaces were becoming more justifiable as private spaces. After more analysis and consideration, the hotel was place at the far east of the site. Placing it at the corner of extended St. Pete Forum Dr. and Beneficial Dr. will really give that corner a strong and active anchor that it needs. The hotel will also be a vertical anchoring piece for the mostly horizontal development that stretches from the pedestrian bridge. A breakage, “the Breakthrough”, at around the mid point of the development is created to create an entry and linkage to the water.

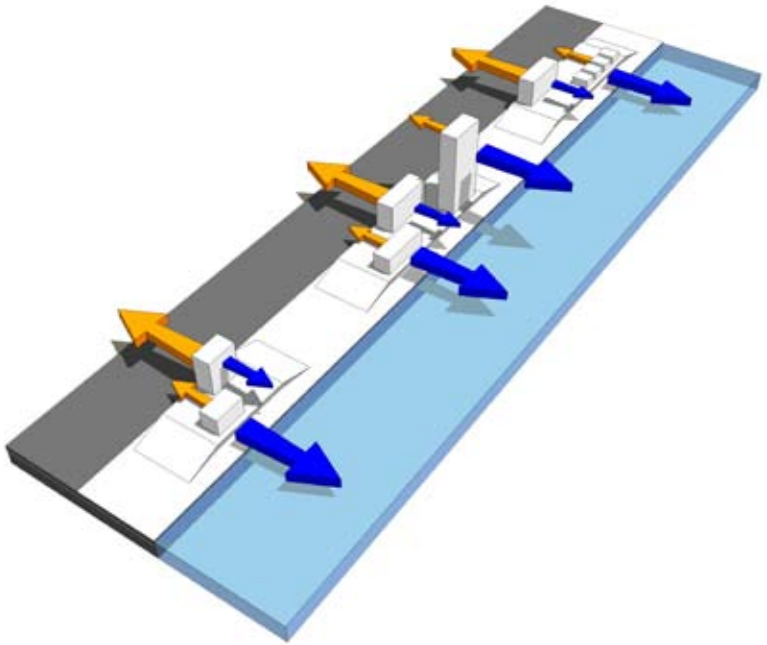


Figure 10.8., Shifting of Position, creating views and open spaces on either side.

Figure 10.9., Revised Site P lan.

Figure 10.10., Site Model, study of potential density of Tampa in 40 plus years.

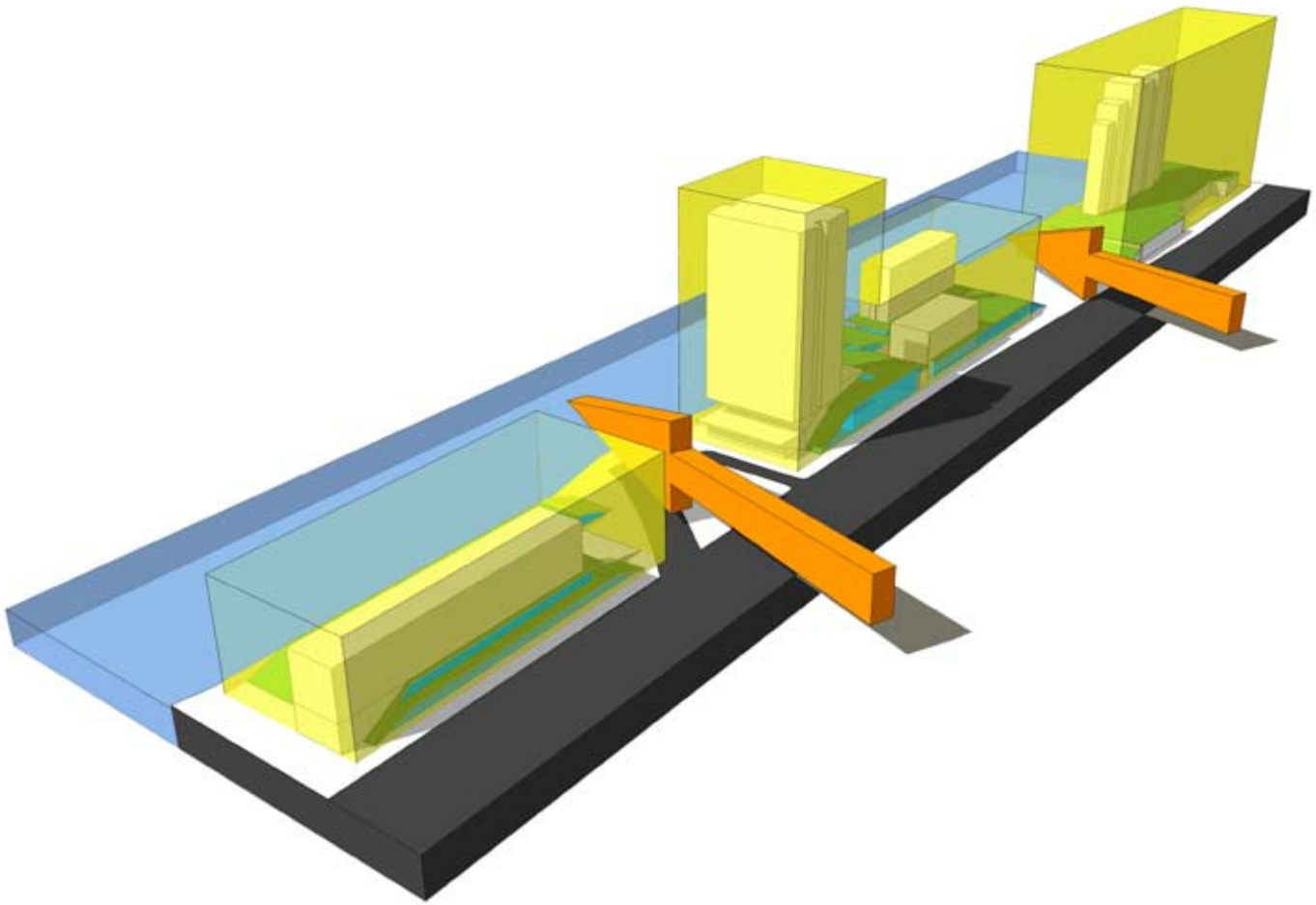


Figure 10.11., Circulation Concentration Diagram, by limiting physical access to the river circulation and activity can be concentrated into specific areas.

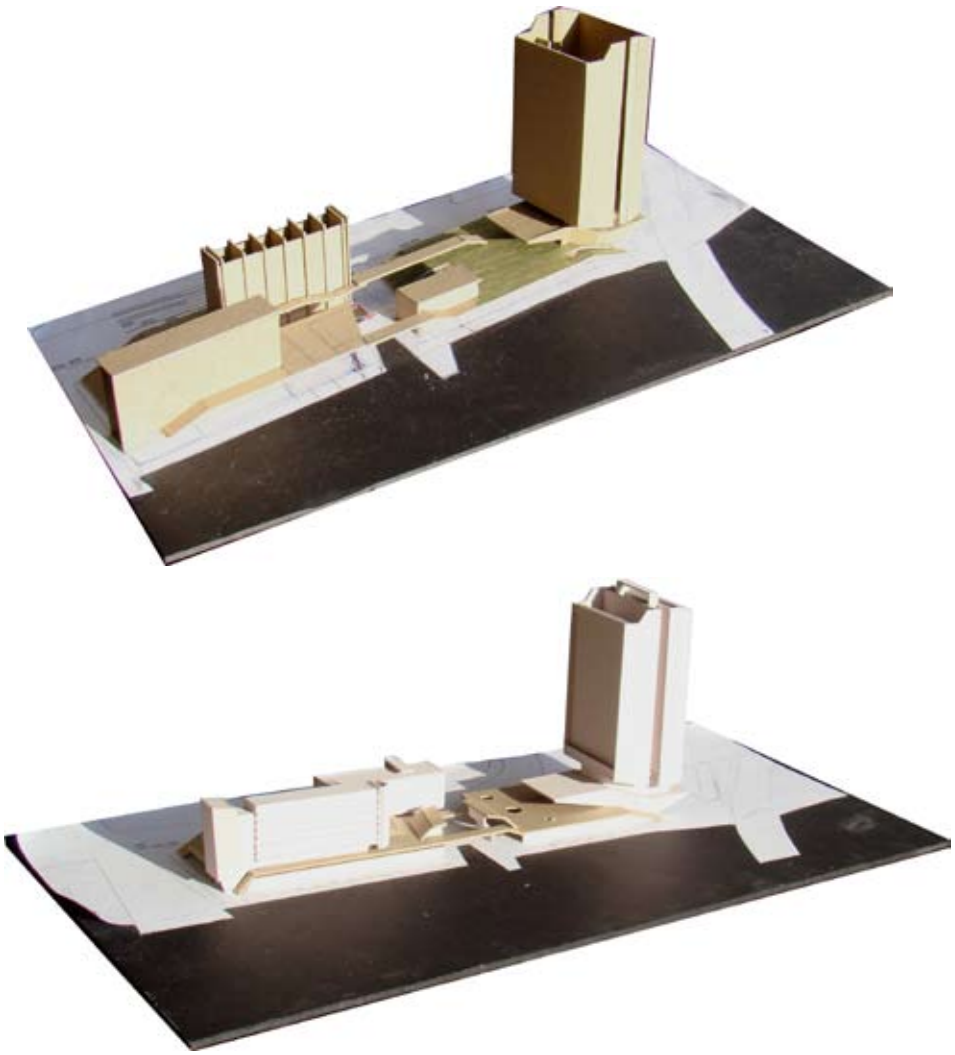


Figure 10.12., Process Models.

Figure 10.13., Site Sections.

Chapter 11

Resolution

At this stage of the project building heights and programs were defined. The design of the hotel began with its base. The hotel base itself had to be an element that houses all amenity spaces and the conventional meeting rooms. The idea behind the hotel base was its connection to the green ribbon on the second level. The hotel lobby consists of a grand staircase that leads straight to a ball room/ gallery space on the second level. The ballroom is placed here in order to allow large crowds to spill out on to the green area. The hotel base is also shaped in a way to define entrance from the street level to the lobby and from the green area to the ballroom. The roof of the hotel base at the southwest end becomes a pool deck for the hotel and at the east end it serves as an outdoor balcony extended from the meeting rooms.

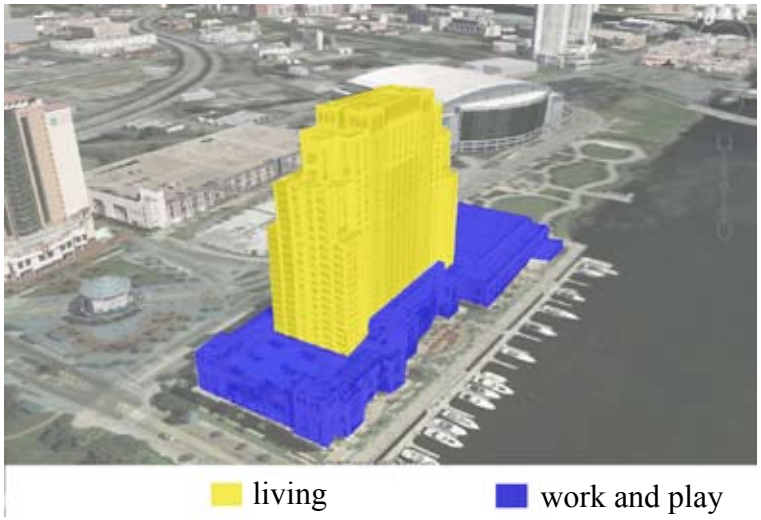


Figure 11.1., Marriott Hotel's Study.

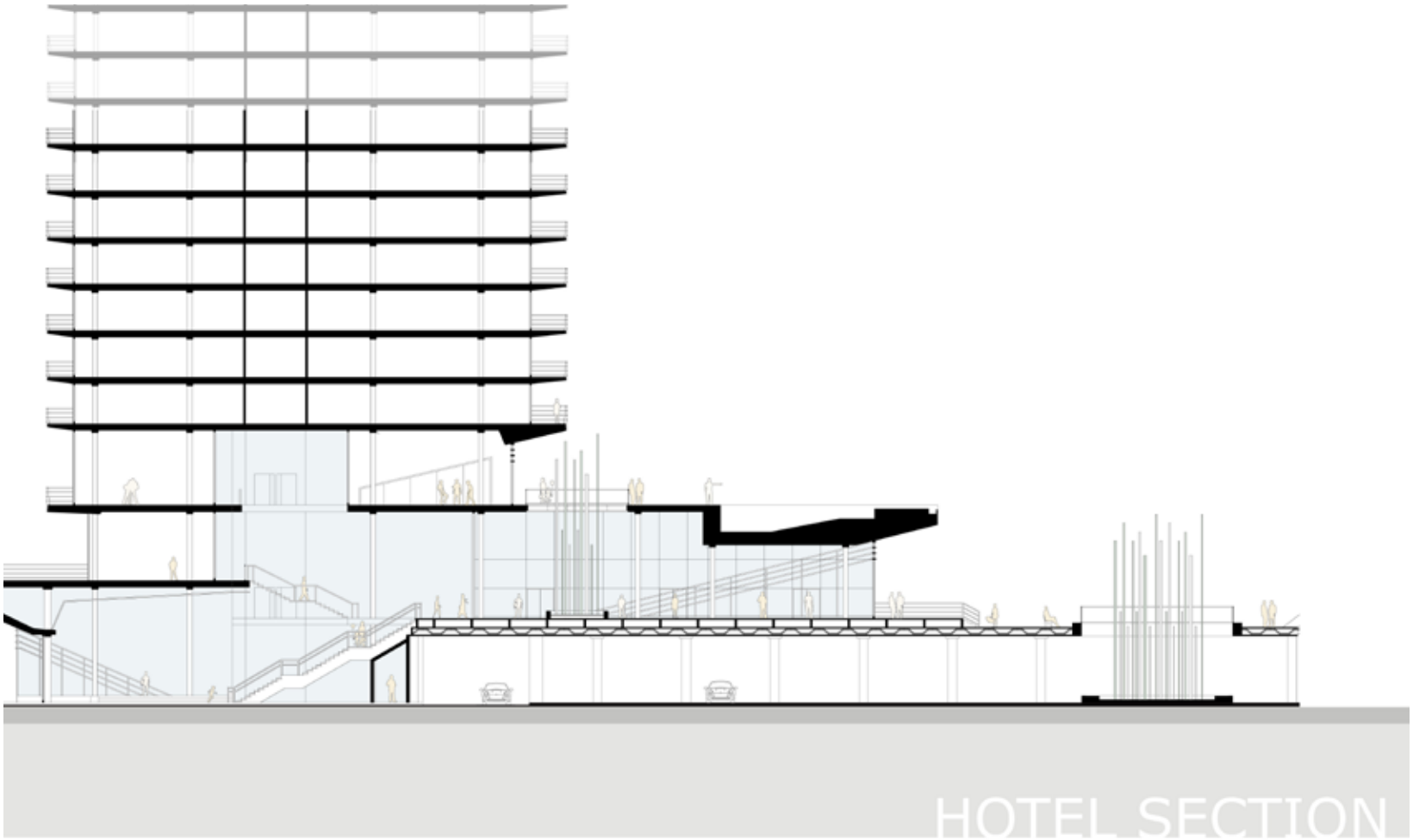


Figure 11.2., Section Through Main Spaces of Hotel.

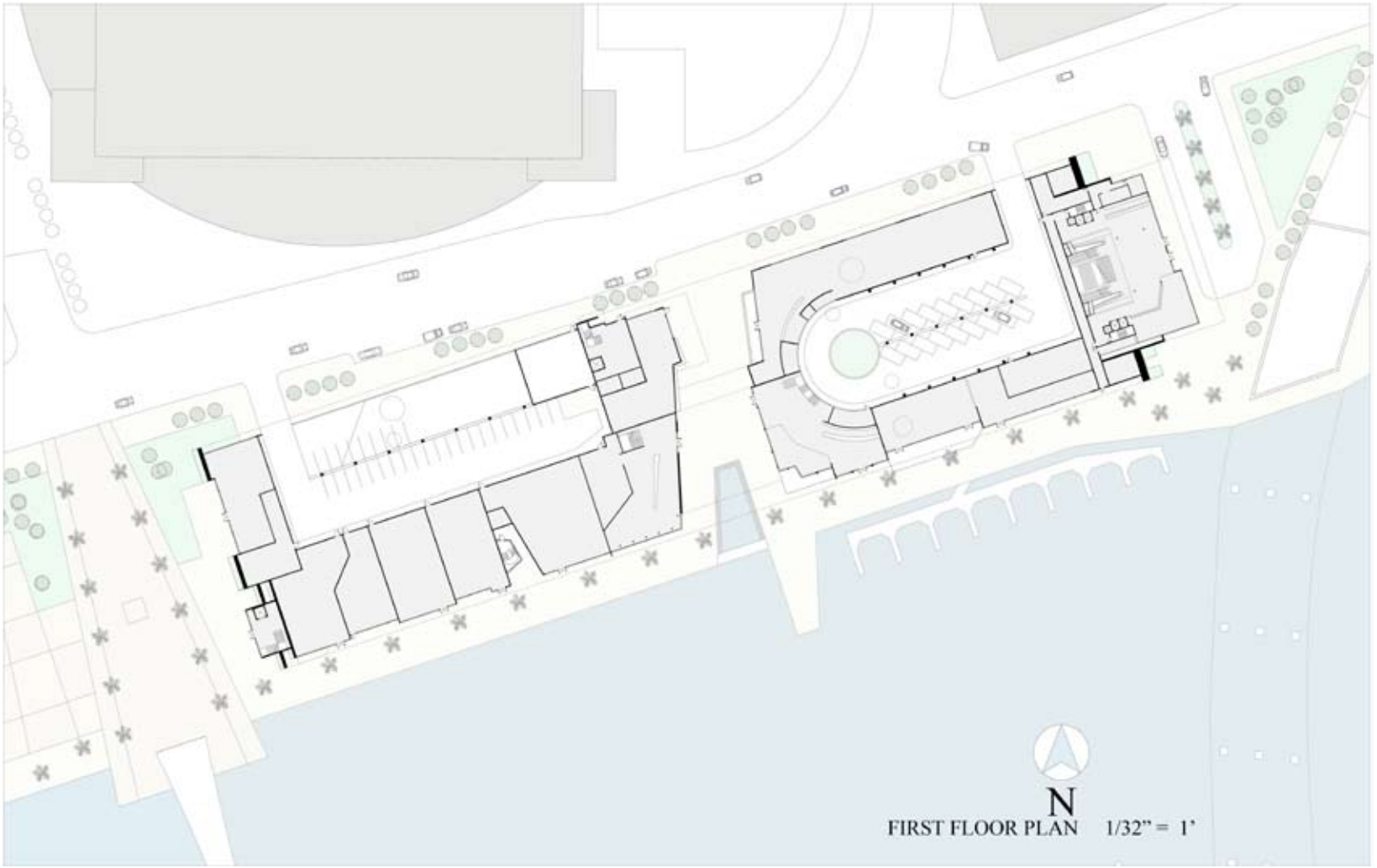


Figure 11.3., First Floor Plan, retail spaces, hotel lobby, offices, and service garages.

Figure 11.4., Third Floor Plan, common spaces of residential buildings, and green ribbon.

Figure 11.5., Perspective of the Development with Downtown in Background.

Figure 11.6., Hotel Perspective, looking at green space in front of the ballroom area.

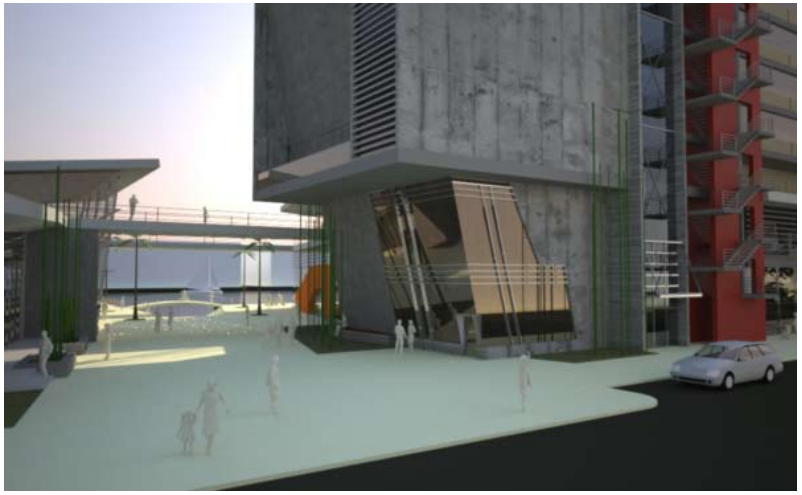


Figure 11.7., Breakthrough Perspective, looking to the water.

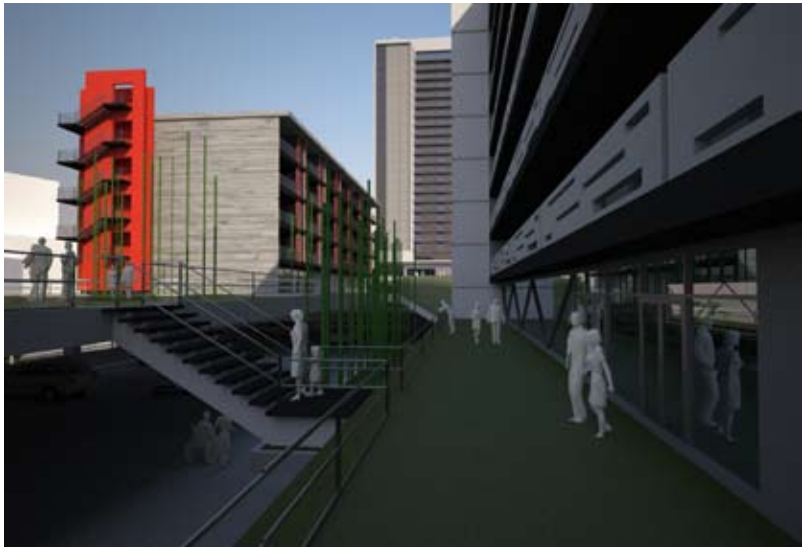


Figure 11.8., Backyard Perspective, looking at backyard and garage condition.

It became apparent that the way the buildings touch the ground was extremely critical. With the other two buildings the connection to the ground were clearly defined. Building B is conveniently located along the riverside, with its ground entrance located at the corner where the retail strip and the pedestrian bridge come together. Because it is at closer to the river, this building ended up with a “backyard” space. This became a space for the residents to enjoy the outdoors and hold small social events. Building A is located along the street side of the development. Its ground entrance it located appropriately at the entrance of the Breakthrough. Opposite from Building B, this building has a front yard that looks onto the river. There were pushes and pulls in the green ribbon itself that break it apart and help it make seem more fluid and dynamic. One of the great features of the green ribbon is where it breaks apart and creates the breakthrough entry. This

is where a part of the green folds up on either side creating a second level for the retail and restaurant spaces. The water is also pulled in on the ground area at this point to emphasize the breakthrough.

Figure 11.9., Riverwalk Perspective, looking towards the hotel at the end.

Figure 11.10., In Between Perspective, looking at Marriott Hotel.

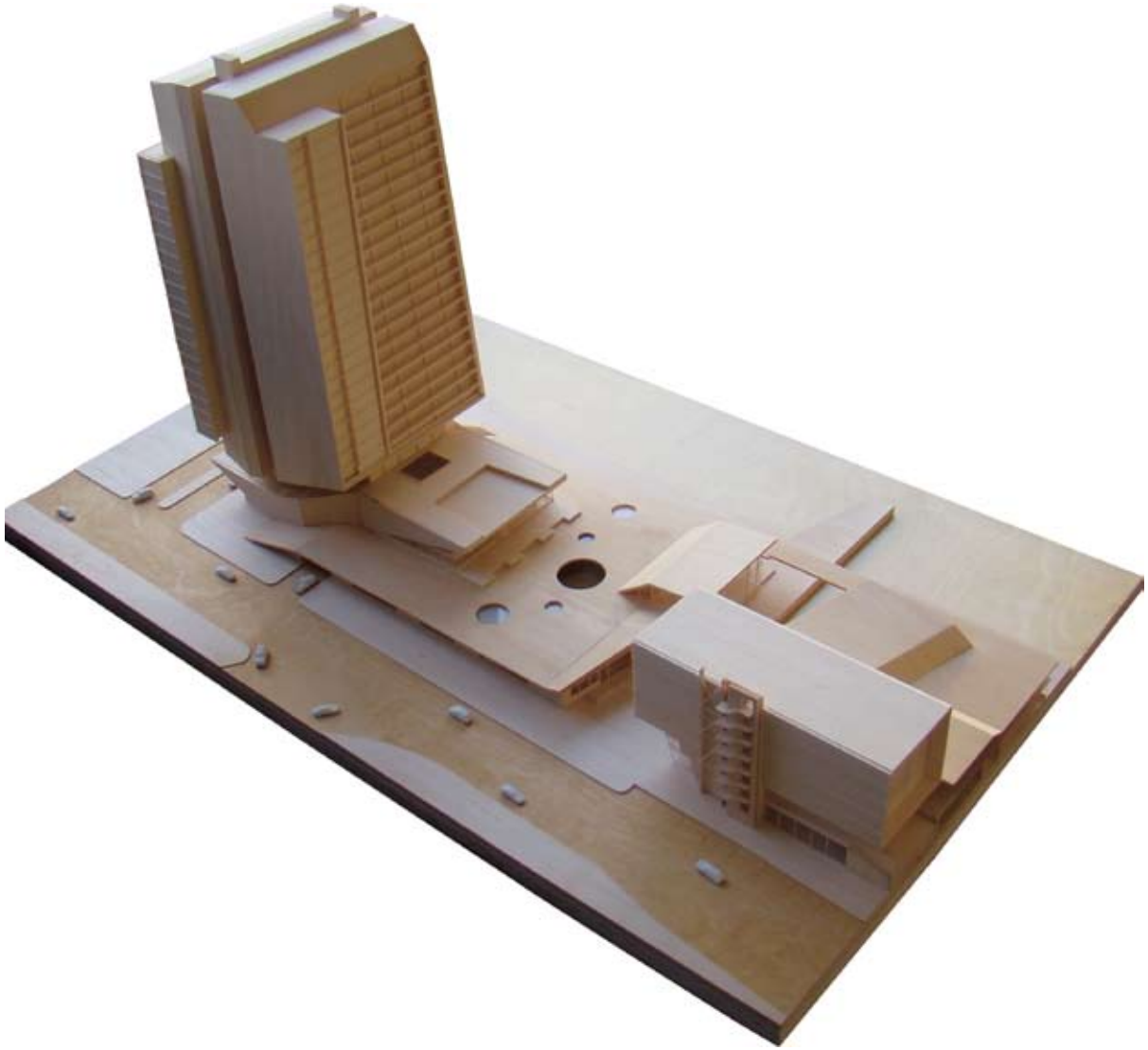


Figure 11.11., Aerial Perspective NW, looking from Northwest.

Figure 11.12., Street Level Perspective, looking at Building A.

Figure 11.13., Sunset Restaurant Perspective, Sunset at the river walk.

Figure 11.14., Perspective From Water, looking from Southwest.

Conclusion

The end result of this thesis shows a combination of master planning and design solution that could be used along the riverfront properties of downtown Tampa. It illustrates a way of bringing density and activity to the edge of the water, while keeping necessary open green spaces. I believe this thesis shows how important it is to use the Hillsborough River to its full potential in order for Downtown Tampa to expand become more successful. City of Tampa is now in its slow growing process, and the moves that will be taken in the next few years will have great impact in revitalization and success of the City. This is why the River Walk project is one of great importance for the City of Tampa. It could be the very catalyst that drives the revitalization to a more consistent and swift process. This project will provide an expansion design approach that is not only a concern for the present time, but also looking ahead at what it might provide for the future. The result of this project will hopefully serve as a stepping stone for a new way of revitalizing Tampa's downtown and surrounding areas through knitting of nature into the urban fabric.

Figure 11.15., Aerial Perspective SW, looking from Southwest.

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