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eCO.URBANism

Restitching Clearwater's Urban Fabric Through Transit and Nature

by

Daniel P. Uebler

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Architecture School of Architecture and Community Design College of Graduate Studies University of South Florida

Major Professor: Shannon Bassett, M.Arch. Robert Brinkmann, Ph.D. Stanley Russell, M.A.

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Keywords: ecology, urbanism, florida, greenways, rail

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eCO_URBANism
Restitching Clearwater’s Urban Fabric Through Transit and Nature

Daniel P. Uebler

ABSTRACT

Downtown Clearwater has grown to be disconnected from its surroundings due to an adjacent buffer area and the lack of a transit system to bring people into the city. The downtown core is also separated from its neighboring residential areas by an area of vacant land that holds in it the potential to become a gateway into the city. On a macro scale the city has grown to be separated from the Tampa Bay area due to the lack of a mass transit system.

The goal of this project is to create a new “new urbanism” in which transit and natural ecology are introduced in order to link a city with its surrounding neighborhoods and with the rest of its context. The new development will provide the area with a centralized place of commerce and social interaction, while reducing the reliance on the automobile. Utilizing a light rail station and a central bus terminal, the transit oriented development or TOD will bring people into Clearwater’s downtown core, bringing economic, social and environmental benefits to the area. Introduction of a natural ecosystem into the downtown fabric will attribute to the development’s sustainability. The natural greenway will run through the urban fabric and also use the Pinellas Trail as
an ecological corridor linking the different greenspaces of Pinellas County.

New York City’s High Line project provides a prime example of the introduction of a natural greenway into an urban core. The High Line brought a new life to an area that once served only the purpose of industry. Ian McHarg and Richard T. T. Forman provide examples and guidelines of how to bring the natural and built environments together as a cohesive whole. The design will look at Peter Calthorpe’s ideas of transit-oriented development. Calthorpe’s The Next American Metropolis will provide a set of guidelines for the design of the development.

The project will create an opportunity for downtown Clearwater to be linked within its surrounding context. Transit oriented development has been proven successful throughout the country and Clearwater will benefit from its implementation.
Chapter One

Introduction

Downtown Clearwater has grown to be disconnected from its surrounding neighborhoods because the once industrial zone surrounding its core has become vacant leaving a buffer zone between the city and its surroundings. The loss of the industry has left a scar on the downtown urban fabric that has inhibited the growth of the downtown core. On a much larger scale, Clearwater has become disconnected from the Tampa bay area due the lack of a mass transit system.

The main objective of this thesis is to create a new “new urbanism” that could serve as a link between downtown Clearwater, its suburbs and the rest of the Tampa Bay area. This development will incorporate a transit station, an ecological greenway and various mixed-use buildings. Providing a centralized place of commerce, social interaction and natural ecosystems will bring people into the downtown core and add a new life into the city that it is currently missing while reducing the area’s reliance on the automobile.

The site for this project will include the parcel of land south of Drew Street between Myrtle Avenue and South Martin Luther King Jr. Avenue, and continue south to Chestnut Street. The site measures 1,300 feet by 2,600 feet. Some of this site has already begun to be developed. A few multi family housing developments have been built in this
area and there is a mixed-use development currently being built just adjacent to the site. Also, a large park with a lake has been put on the site, which is currently used to handle the retention for the area. Much of the land on the site is currently vacant. Most of the land on this site was previously used for industrial purposes and is considered brownfield. This provides another opportunity for environmental remediation in the area. As these areas are developed, the brownfields are cleaned up and the chances of contaminants seeping into the groundwater are greatly reduced.

One of the major focal points of this thesis will be a study of environmental sustainability. In order for survival, the way in which humans interact with nature and waste natural resources has to change drastically. Currently in the Tampa Bay area, the reliance on the automobile has grown out of control. The area needs a good transit system that can reduce the use of the automobile while providing an opportunity for new development types that can greatly improve the economy and social character of the area. The idea of an ecological greenway in the downtown core will mix the urban built environment with the natural ecological systems that urban development seems to lack. This greenway will include natural ecosystems along with public farms and markets, where residence can grow their own food. This will give the public an opportunity to interact with the natural environment while adding to the sustainability of the project.

The research methodologies that will be used for gathering information for this project will include historical research, correlation studies and case studies. Historical research will look into the history of the development of the area. Historical mappings of
the area will diagram the area throughout its development and provide information about
the areas building trends. Creating a timeline of the zoning and development of the area
will provide insight into why the area is what it is now and also what mistakes might have
been made that caused this disconnect of Clearwater to its surroundings. Historical
research will also give the project insight as to what the original ecology of the site was
before the development of the area.

Correlational research will study the interactions between people and their built
environment. This will lend information as to what uses will help in the success of the
development. Studies will include what kind of densities and uses bring people into an
area. The social and economic effects of mixed-use development will be studied in order to
influence the design of the project. Another correlational topic to be studied will be the
relationship between urban built environments and open green spaces. The buildings will
have to react to the ecological corridor in order for the two to function as a whole urban
environment.

Extensive case studies will help in the design process of this project. Some of the
things that will be studied in order to understand urban development and ecological design
will be Peter Calthorpe’s ideas on transit oriented development, Ian McHarg’s concepts
of designing with nature, and Richard Foreman’s studies of the ecology of greenways.
Along with these theories and manifestoes, other areas of research will include current
metropolitan areas that have implemented transit systems and greenways into their urban
fabric.
Transit oriented development, or TOD, have been proven to be a successful alternative to the country’s sprawling development. Peter Calthorpe coined the term “transit-oriented development” as a new form of urbanism in which small, walkable, denser neighborhoods are developed around transit stops. He set up a series of guidelines as to how dense the area needs to be, how large of a radius people are willing to walk, what kinds of mixed use need to be implemented, and how park systems play a key role in the introduction of such a development. Calthorpe states that the key to a successful development is the pedestrian’s interaction with the spaces. “Pedestrian routes should be located along or visible from all streets. They must provide clear, comfortable, and direct access to the core commercial area and transit stop. Primary pedestrian routes and bikeways should be bordered by residential fronts, public parks, plazas, or commercial uses. Where street connections are not feasible, short pedestrian paths can provide connections between residential and retail areas. Routes through parking lots or at the rear of residential developments should be avoided.” (Calthorpe 1993, p.101) It is clear that interweaving the pedestrian through the major public spaces is key to the social life of an urban development. While pedestrian movement is crucial, places of congregation must also be implemented. Most likely the most important public spaces are the parks. “Public parks and plazas are fundamental features of livable and enjoyable higher-density communities. Parks and plazas in TODs act as neighborhood meeting places, recreational activity centers, childcare facilities, and lunchtime picnic spots. Because their function is primarily ‘public activity,’ they are most appropriately located central to residential or
core areas.” (Calthorpe 1993, p.90) It is important to understand the role of the parks in an urban environment because the success of the area. Another important factor Calthorpe touches on is the importance of natural ecology within the urban fabric. He states that natural environmental features should be conserved as open spaces amenities that should be incorporated into the urban design and not just be residual spaces of the design. These spaces are so important because they provide a visual relief and establish a unique character for the community.

Ian McHarg goes delves even further into this idea of how the urban design should incorporate the natural features of the area. In Design With Nature he discusses the effects that man has upon the natural ecology of a place and gives examples of how the built environment can react to the existing context in order for man and nature to live together as one. He goes into depth on how the human interaction with nature affects the population along with the natural environment. McHarg’s principles of nature and the built environment will be used in the design of this transit-oriented development.

One of the key considerations when bringing a natural ecology into an urban environment is that these greenways must be interconnected and share spaces with human habitation. It is detrimental to understand the relationships between the two when bringing them together. Richard Forman talks about how humans have laid down this giant “net” over the natural ecology of the world by paving roadways throughout the landscape. He has studied how different design strategies can allow natural corridors through the built environment. “In the face of continued habitat loss and isolation, many
landscape ecologists stress the need for providing landscape connectivity, particularly in the forms of wildlife movement corridors and stepping-stones. Despite residual discussion over the effectiveness of corridors in enhancing biodiversity, a growing empirical body of research underlines the positive net benefits accruing from incorporating higher quality linkages between habitable patches.” (Dramstad 1996, pg. 35)

A large problem when introducing natural ecology into an urban fabric is the high mortality rate of animals due to their interaction with the street. This needs to be taken into consideration when combining the built environment with the natural one.

One of the most impressive natural greenways in an urban environment is New York City’s Highline. Once an industrial rail line, the Highline is now a natural elevated park that runs through the once industrial area of the city. On of the most interesting aspects of this project is that while it was once an industrial area, now it is being developed with condos and retail spaces. It is interesting to study how the human interaction with a natural environment can cause such a drastic change in the urban fabric.

Another area of interest in this project is Portland, Oregon. Portland is a city that has become very successful due to its extensive transit system. Portland is an area with many similarities to the Tampa Bay area that could help to understand how the area could benefit from transit-oriented developments.

All of these topics will be used in this thesis in order to develop a master plan of downtown Clearwater. The master plan will introduce mixed-use development along with a natural ecological corridor. Along with developing a master plan of the area, a transit
station will be designed that functions as the catalyst for the areas growth. On a macro scale, this thesis will look into the implementation of a light rail system throughout the Tampa Bay area, and give other examples of how this new development could be used at different transit stops throughout the area. Another interesting aspect of this project is its connection with the Pinellas Trail, which is a pedestrian path that utilizes an abandoned rail line and runs throughout the entire county. This trail already acts as a sort of ecological corridor that is interrupted at downtown Clearwater. This provides an opportunity to link the ecological greenway of the site with other natural features of the area, such as the Brooker Creek Preserve and even Honeymoon Island Park. This will allow the natural ecosystems to survive in unison with the built environment of the area.

The natural corridor will be designed as an integral part of the master plan that will incorporate the surrounding context. The corridor will at points become part of the buildings and at other times be a place of transition between the buildings. The civic functions of the urban design will incorporate the greenway as a part of their structure giving the public use buildings a connection with the natural environment. Another design feature in this ecological corridor will be co-op markets and growing areas where residents could grow their own food and also sell it in a market type setting. This will give even a stronger connection between the residents and the natural environment while adding to the sustainability of the development.

Another aspect that this project will look at is the interactions between the
greenway and its adjacent development. A new prototype will be developed that connects the residences with nature that will incorporate private outdoor spaces with direct visual and sometimes physical links with the ecological corridor. This new type of housing will create a new character for the place and add a sense of individuality to each unit. This prototype will lead to the design of the buildings that are adjacent to the greenway, and bleed into the surrounding context.

In conclusion, this project will attempt to create a sustainable transit oriented development while incorporating an ecological corridor interwoven into the urban fabric. The development will add a new life into downtown Clearwater by easily bringing people in through the use of a light rail transit system. It will also reconnect the natural ecology of the area by using the Pinellas Trail as an ecological corridor linking the different ecological features of the county with possibilities of feature connections with adjacent counties. This development will provide an example of a sustainable community for future developments. The use of a light rail transit system will provide a much-needed connection throughout the Tampa Bay area that will greatly reduce the area’s reliance on the automobile and also allow for more dense pockets of growth.
Chapter Two

Case Study: New York City’s High Line

Abstract

The High Line project in Manhattan is a prime example of a natural greenway in an urban environment. The project reused an existing abandoned elevated railway that cut through the industrial section of Manhattan. After the railway was abandoned nature began to take over creating a parkspace that was elevated above the street. The city decided that it was a great opportunity to create a unique urban park.

While the High Line is a project in a major, dense urban area, the idea can be carried into a smaller mixed-use development. The ideas and principles can be used to form an interesting, linear park space that could be implemented into any urban environment. The area in which the High Line runs was once an industrial area that was specifically supported by the rail system that has since been abandoned. This gave the area a reason for change, and with the growing population of Manhattan, provided a perfect place in which to grow.

Clearwater and many other coastal cities in Florida are sprawling faster than ever with subdivisions popping up all throughout undeveloped Florida. This provides a unique challenge in which to create a new form of development that is denser and can also
incorporate natural features within the urban core. The High Line will provide examples of how a natural greenway can relate to the built environment.

**Hypothesis**

Can a less dense urban environment like Clearwater benefit from a project like the High Line in Manhattan and if so, what aspects would be the most beneficial to the city?

**Conclusion**

The High Line is so successful because it provides residents and visitors with a sort of escape from streets while still providing them with a connection and understanding that they are in an urban environment. The project also provides a sense of character to the neighborhood.
The Vision

When the High Line is converted to public open space, you will be able to rise up from the streets and step into a place apart, tranquil and green. You will see the Hudson River, the Manhattan skyline, and secret gardens inside city blocks as you've never seen them before. You will move between Penn Station and the Hudson River Park, from the convention center to the Gansevoort Market Historic District, without meeting a car or truck. The High Line will be a promenade—a linear public place where you will see and be seen. You will sense New York's industrial past in the rivets and girders. You will perceive the future unrolling before you in an artfully designed environment of
unprecedented innovation. It will be yours—public in the truest sense of the word. Public dollars helped build it in the 1930s. Public legislation empowers us to make it a place anyone can visit. It will be proof New York City no longer casts aside its priceless transportation infrastructure but instead creates bold new uses for these monuments to human power and ambition. (http://www.thehighline.org/)

The High Line District

The High Line runs through three of Manhattan's most dynamic neighborhoods: Hell's Kitchen/Hudson Yards, West Chelsea, and the Gansevoort Market Historic District. When the High Line was built in the 1930s, these neighborhoods were dominated by industrial and transportation uses. Now many of the warehouses and factories have been converted to art galleries, design studios, retailers, restaurants, museums, and residences.

In 2002, a group of business-owners in the High Line District joined together to advocate for the High Line's preservation and reuse. Called the Chelsea-Village Business Owners (CVBO), the group now includes more than 250 High Line District businesses.

CVBO members assert that the High Line is an integral part of the historic identity of the neighborhood and that its conversion to public space will be an asset to their businesses. The reused High Line will bring new customers to the district, boosting its reputation as a world-renowned destination for cultural institutions, art galleries, technologically advanced businesses, restaurants, entertainment venues, and new
residences. The High Line's linkage of three neighborhoods and the distinctive image it provides will offer new opportunities for individual businesses and the group as a whole to market their products. (http://www.thehighline.org/)

Fig. 2.2. The Highline Urban Conditions

Analysis

Because of the nature of the project at hand, the analysis will be done as if the High Line was a project built for use as a park space and not as a reuse of an existing structure. This will help in understanding why certain portions can become successful due to their interactions with the built environment.
The first, and possibly most important feature of the project is that it is elevated above the street. This allows for the pedestrians in the park space to be able to look down to the streets and spaces below them without interacting directly with the automobiles. This makes the space sort of a sanctuary away from all of the hustle and bustle of the urban environment. From up in the park people are able to see the city in a way they were not before. Another aspect of the project is that because it is elevated vertical circulation is very important. In order to get people up to the park, the placement of the
access points is crucial. Main street entrances provide grand entrances to the park, while smaller entrances are also used for convenience for the residents of the area.

The High Line is made up of different zones that are used for different purposes. Some spaces provide an opportunity for gathering, while others are design for people to move through. Different plantings provide different experiences as one move throughout the project. This makes the project interesting for the visitor by giving them different things to look at along their journey. Viewing areas are also provided to allow people to sit and enjoy the beauty of the city and the harbor. Walking surfaces also vary as you move through the park. A combination of hard and soft surfaces is used throughout different areas of the park. This also adds to the experiential quality of the park.

![Fig. 2.4. The Highline Textures](image)

Relation to the buildings is a very important part in the design of the elevated park structure. As the park runs through the city, it at points touches the buildings and at
certain points it even cuts though the buildings giving the visitor more of a connection with the urban fabric while still providing a place of tranquility. Retail uses under the structure help to bring people to the area.

The overlying theme of this design seems to be variety; variety of plantings, uses, experiential qualities, and most important urban experience. Incorporating variety is the key to creating a successful park space in an urban environment because without this variety, the project would just be another park that does not support the kind of life and excitement of an urban environment.
Lessons Learned

How the park interacts with the buildings will create different experiential qualities in the park space and the buildings. Different sectional aspects will allow the buildings to react differently to the greenway.
Fig. 2.6. Street Section 1

The greenway will allow for many different layers within the street-room conditions. These layers will allow for a variety of uses within the space.

Fig. 2.7. Street Section 2

In certain instances the greenway can become the roofs of the buildings.
Fig. 2.8. Street Section 3

The greenway can also provide shelter to the street conditions, protecting the pedestrians from the elements.

Fig. 2.9. Street Section 4

The greenway can also wrap itself around buildings providing greenspace surrounding the building.
Chapter Three

Case Study: FiberCity2050 by Hidetoshi Ohno

Introduction

One prime example of ecological urbanism is Hidetoshi Ohno’s FiberCity. He provides an alternative metropolitan design that incorporates shrinking cities using urban fibers. This idea that cities are actually shrinking while the population is growing can be related to the Tampa Bay area. The area is made up of many different small cities that have no connection between them except for the roadways. His example shows that a mass transit system can provide the link between these cities and create and cause them to function as a single large metropolis.

Green Finger

The Green Finger is an urban design that converts the areas located more than a walking distance from a transit station into a green belt. The rail line is combined with a green strip that adds to the environmental sustainability of this urban design. This forces the areas around the transit station to become more dense and walkable. The more remote properties are converted into green spaces that could be used as parks, farmland and preservation areas. With the use of suitable incentives it is possible to create green areas within walking distance for the housing districts arrayed around the train stations.
The Green Web

The Green Web is an urban design that converts the existing highway system into a linear park. The highways will not be needed anymore because of the transit system and the reuse as a green strip will allow the corridors to stay intact for emergency use and also provide for a green amenity to the city. This also helps alleviate the city’s heat island effect reducing its impact on the environment.
The Green Partition

The Green Partition is an attempt to alleviate the impact of natural disasters on the city by compartmentalizing the residential areas of Tokyo. The greatest threat facing Tokyo is earthquakes. If an earthquake struck, fire would easily spread throughout the city and the entire city would be in danger. Through the use of Green Partitions, Ohno creates voids between the buildings that would act as gaps to keep the fire from spreading. These areas would be used for vegetation offsetting the impact of the built environment.

Fig. 3.3. Green Partitions

The Urban Wrinkle

The Urban Wrinkle is an urban design strategy that seeks to improve and renovate linear places within a city in order to draw out their potential. This idea would reuse some of the existing conditions in the city and turn them into gathering places. This will add a new dimension into the city by creating places of interest spread through the urban fabric.
Conclusion

Although Tokyo is a much denser metropolis than the Tampa Bay area, many of Ohno’s ideas still relate. The use of a rail system will become a crucial factor in reconnecting the area. Also, the reuse of unused public rights of way into ecological corridors will help in the sustainability of the area. Ohno provides an example of how all of these ideas could work in unison to create an urban environment that is not only more functional, but much more appealing too.
Chapter Four

Case Study: The Irish Hunger Memorial; New York City

Introduction

The Irish Hunger Memorial was built as a tribute to all of the Irish immigrants who came into this country through New York City in order to escape the famine happening in Ireland. The building was built in Battery Park and was not only to serve as a building, but also a park space.

Fig. 4.1. The Irish Hunger Memorial Park-Like Roof

The Concept
The Irish Hunger Memorial site sits on a half-acre piece of land, significant as a clause added to the Irish Poor Law by Sir William Gregory during the famine meant that anyone who owned more than a half-acre of land was not eligible for any aid or relief. Many of the starving were poor but owned a half-acre, forcing them to abandon their homes in order to obtain food.

Fig. 4.2. The Irish Hunger Memorial Views Of The City

The authentic roofless stone cottage that was brought over from County Mayo in
Ireland highlights the decay and ruin of the time and represents the focal point of the garden. Entering from the North side of the memorial you pass through a tunnel directly into the stone cottage and then into the garden. The site also contains stones from all of the 32 counties of Ireland and over 60 varieties of Irish Flora that give the visitor a taste of the harsh but beautiful landscape found in the western portion of the country.

Fig. 4.3. The Irish Hunger Memorial Tunnel

A winding path ascends 25 feet from the corner of Vesey to the Western end of the garden, offering stunning vistas of the Statue of Liberty and Ellis Island. The exterior wall of the memorial is covered by almost two miles of illuminated text of famine poems, statistics and quotes. An audio track plays accounts of world hunger, accompanying the visitor on their tour.
Brian Tolle created and designed the structure and Gail Wittwer-Laird did the landscaping in collaboration with 1100 Architect of New York. There is no admission fee to the garden, and it offers a rare area of quiet in the busy business district of Lower Manhattan. Jane Holtz Kay wrote an article about the Irish Hunger Memorial, its creator and landscape architect and some reactions from the community. David Ebony wrote an informative piece about the memorial, the Irish Famine and its impact on America that was published in Art in America, May, 2003. The Irish Hunger Memorial was sponsored by the Battery Park City Authority.
Fig. 4.5. The Irish Hunger Memorial Roof Structure and Pond

Conclusion

The Irish Hunger Memorial serves as an example of urban structure also becoming part of the landscape. The idea that a civic building such as this becoming a tribute to the history of the area led to the idea of creating two civic buildings in Clearwater that pay tribute to the Native-American heritage of the area. This concept led to the research of the Native-American mounds that were prevalent along the coastline in Florida.
Chapter Five

Site Selection

In choosing a site for this project, three criteria must be met: #1. The site must have a link to the Florida ecological greenways; i.e., the Pinellas Trail; #2. a close proximity to the future rail line; #3. and a connection to a major roadway. Taking these criteria into consideration the site chosen for this project is in Clearwater. The site is what formerly was the industrial area of downtown Clearwater where the rail depot was once located. The site now consists of many vacant parcels and some low-income housing projects.

The site is located just adjacent to downtown Clearwater bounded on the west by Southeast Street and Northeast Street, on the east by Myrtle Avenue, on the south by Chestnut Street and on the north by Drew Street. The site is 24 acres of prime real estate that is a few blocks away from the Intercoastal waterway and directly adjacent to the downtown core. The area will create a gateway into the Downtown district. The site also incorporates the path of the Pinellas Trail and the existing CSX rail line.

This site will provide an opportunity for an example of this new type of urbanism that can be implemented throughout the Tampa Bay area and also spread through the state of Florida hopefully reconnecting the natural ecologies through the built urban environments.
Fig. 5.1. Site Area
Chapter Six

Site Analysis

The site is unique in that it contains a public right of way that cuts through the heart of the city. The right of way currently contains a two-lane road, railroad tracks and the Pinellas Trail. The Pinellas Trail and the rail line both provide an ecological corridor throughout the county. They are both bound by open land that creates a vegetative path that provides an opportunity for the natural migration of wildlife throughout the state. As they approach the site, they go from being natural pathways to being asphalt. This causes a disconnection in the ecology of Florida.

The rail line coming through the site provides unique conditions for the urban development. Because the train was only used for cargo, the existing buildings were designed with their backs facing the tracks. The buildings on the east side of the site are all using Myrtle Avenue as their frontage. Myrtle Avenue has become Alternate 19, which has changed it from being a downtown street into a route through town making it less desirable as a walking boulevard.

Cleveland Street is the main commercial boulevard in downtown. The city has invested in redeveloping this street and making it very walkable. It is lined with retail and
provides a nice, small-town atmosphere. Cleveland used to be the corridor to get out to Clearwater Beach, but since the new bridge was built, Court Street is. This took a lot of vehicular traffic off Cleveland, but also forced people to just drive right through the city rather than stopping for lunch or shopping. Court and Chestnut Street are the major thoroughfares out to the beach. The traffic moves too rapidly for them to be walkable.

Throughout the site there are many interesting voids and vacant properties that could provide for interesting public spaces but since nothing fronts them, they are just voids in the urban fabric. There are many parking garages in the downtown district that are far from capacity. There are also some parking lots adjacent to the site that are only used during the day. These could be used in the evening as public gathering spaces and markets rather than just empty lots.

The site provides many opportunities for a new development. If the downtown was home to a transit station, it would be much easier to get to and from Clearwater and allow for the city to be able to support a much larger population.
Fig. 6.1. South End of Site
Fig. 6.2. Parking Lot Adjacent to Site
Fig. 6.3. Existing Condition Between Buildings
Fig. 6.4. View Down Cleveland Street
Fig. 6.5. Existing Right of Way
Fig. 6.6. Adjacent Vacant Lot
Fig. 6.7. Existing Right of Way Frontage
Fig. 6.8. View From The North
Chapter Seven

Programming

Goals

The program for this site will consist of a mixed-use development that also incorporates a rail station and an ecological greenway/park space. The development will be intended to link the downtown core with its surrounding neighborhoods along with the entire Tampa Bay area. The project will be designed to incorporate different demographics in the same area. Currently the site borders residential areas that include a Hispanic neighborhood to the northeast, a more high-end neighborhood to the south, and a middle class suburban area to the east. The mixing of these different demographics will be an opportunity to create a very dynamic development.

The development will seek to provide an economic stimulus to the area by creating jobs, providing lower-cost living, and increasing tourism to the community. The area currently serves as a corridor to move people out to Clearwater Beach, and does not provide any amenities that give these visitors any reason to stop before they get to the beach. Providing a rail station at this location will give the area an opportunity to bring people in rather than moving people through. The parking situation out at the beach is a great inconvenience to the visitors, and providing a spot where they can easily park or
take the train to get out the beach will not only benefit the downtown area, but also the beach.

In order to create a successful development, the correct proportions of retail, office, residential and civic uses will have to be implemented into the design.

Zoning

The site is located within the central business district, which allows the site to have more density than its surrounding residential neighborhoods. This will allow the project to create a link between the denser downtown and the less dense surrounding areas. The project will focus the denser uses on the west side and gradually taper off towards the east relating to the scale of the surrounding context.

Because Clearwater is a fairly small city, the buildings will be limited in height to approximately between eight and ten stories. This will prevent the development for overpowering the existing context, but still allow for a denser development.

The Greenway

The greenway will be crucial in creating a character for the development. It will provide a unique aspect to the cities core while providing a place for socialization and recreation. The greenway’s program will include pathways for pedestrians, retail shops and restaurants, and public co-op farming areas where residents can grow their own food and have public markets where they can exchange goods. This aspect will add to the
sustainability of the area while giving the residents an opportunity for interaction with their neighbors. The greenway will include different aspects of Florida’s natural ecology including pine scrubs, palmettos and oak canopies.

Residential

Residential uses will be throughout the project with the denser areas located adjacent to the greenway. The residential buildings adjacent to the greenway will be in direct relation to the greenspace. They will react to the park space so that every resident feels a sense of ownership of a portion of the greenway. The residential areas will taper form the denser core out to the extents of the site.

Commercial

The main commercial district will follow the existing strip along Cleveland Street and continue through the new development. This will interact with the greenway creating a commercial shopping corridor including restaurants and stores. Office space will also be included in the design. The office space will react to the greenway in a similar fashion to the residential, creating a connection between the occupants and the natural feature of the site.
Civic

The two main features of the development will be a transit station that will also serve as a Native-American museum that will be located at the corner of Myrtle and Cleveland Streets, and an art museum that will be located on the block between Court and Chestnut Streets. Having these civic functions will draw more people into the downtown core and provide an economic stimulus for the new development.
Chapter Eight

Design

Introduction

The idea behind the design is to create a set of rules, or zoning, that will establish a precedent for new urban ideas. In order for this development to occur, three key factors need to be present: #1. The site must have an existing rail line or a rail line proposed; #2. The site must have an ecological corridor adjacent to or cutting through it; and #3. The site must be within 3/4 mile from the downtown center of the city. Once these criteria are met, the project can begin. The project will take advantage of a light rail system that will allow more people to move in and out of the city. The transit system will provide an opportunity for growth in the downtown district and reduce the reliance on the automobile.

The set of rules will govern how the buildings that are built along the ecological corridor in order to ensure that the city takes full advantage of the natural feature. The natural ecosystems coming through the city will spread into vacant properties and previously undesirable spaces softening the urban fabric.
Fig. 8.1. Presentation Pin-Up
Phasing

One of the key elements in this projects success is its phasing. The city will only have to put a small investment in order to fully reap the benefits of the design. The project would begin with the construction of the transit station and the art museum. The transit station will allow more people to come in and out of the city without the use of cars. This will allow the cities population to grow, which will in turn increase its housing demand. The art gallery will provide another reason for people to visit the downtown area. Once these two buildings are built, developers will see the opportunity to build in the downtown district. The increased need for residences and retail will spawn a growth spurt in the city. With the zoning laws established, the development will lead to the ecology spreading through the corridor cutting through the city. Once the development is built the greenway will start to spread throughout the surrounding areas reconnecting all of the greenspaces in the area.
Fig. 8.2. Phasing Diagram
Land Use

The development will consist of retail uses such as restaurants, cafes, small shops and some large retail, a transit station/Native-American museum, an art gallery and residential. The ground level will mostly consist of retail. The second story will begin to introduce the residential aspect to the project. Most of the residential uses on the second floor will be common areas and amenities. On the ground level as the trail comes through the site, the green belt will spread throughout the city and into outlying areas. All of buildings will be designed to allow passage between the trail and Myrtle Avenue allowing the connection between the two and preventing the buildings from having their backs to either corridor. Grey water will be used as public water features and to support the vegetation that wound normally be difficult to grow in an urban environment.

Public space is a very important feature in this development. At the ground level the plazas and courtyards will be used as public and semi-public spaces. The second story will be mostly semi-public spaces for the residents. The third story and above will be for the residences. Each residence will have its own semi-private space relating to the trail in the form of balconies with small garden spaces.
Fig. 8.3. Land Use Diagrams
Taxonomy

Creating a taxonomy in order to establish the rules that will govern the development is crucial in order to provide guidelines for the buildings. The first rule is that all buildings should feature green roofs. This will add to the sustainability of the project and reduce the heat island effect of the built environment. Most of the green roofs will be habitable and provide semi-public gathering spaces. The green roofs will be planted with native vegetation in order to add to the re-establishment of the natural ecosystems.

Fig. 8.4. Green Roofs
Grey water will be used in order to create unique public spaces through the development. A line of water will be used as a feature that will separate the pedestrians from the railway using berms. This will help in the safety of the project. Retention ponds will be used as natural elements such as cypress swamps to create a unique experience within the urban fabric.

Fig. 8.5. Grey Water Usage
The buildings will take advantage of solar energy through the use of photovoltaics. This will greatly reduce the carbon footprint of the development. The solar cells can be used as decorative architectural elements in the design. If enough solar energy is produced, the development would be able to sell some of the energy back to the power company again adding to the sustainability of the design.

Fig. 8.6. Solar Power
A key element in the design is the porosity of the buildings. In order to prevent what has happened in the past, the buildings must not have a front or a back. The buildings will front both the trail and Myrtle Avenue. Another feature is that the buildings must allow people to move between the two freely. The buildings will open up and provide passages between Myrtle and the trail.

Fig. 8.7. Porosity
Ownership is a key element in the development. In order to provide every resident with a sense of ownership of the greenway, all of the residences will have a balcony in relation to the greenway. Every balcony will include a small garden space that will allow them to grow their own food.

Fig. 8.8. Ownership
There are two parking lots directly adjacent to the civic buildings. The parking lots are only used during the day when the businesses are open, and at night they just become wasted space. These spaces could easily become multi-use spaces that serve a different function at night. At night these spaces could be used for public gatherings and also as public markets where residents would be able to exchange goods.

Fig. 8.9. Public Market Spaces
Each building will have public space adjacent to the greenway that will give the residents a place to enjoy the nature coming through their back yards. These spaces could be used as just simple places to relax or place where concerts and other public events could be held.
In order to strengthen the connection between the trail and Myrtle Avenue, the buildings will feature skins that are porous. This will allow for the pedestrians to know that there is more to the design on the other side of the block.

Fig. 8.11. Porous Skin
Residential/Retail Block 1

As the trail approaches the downtown district the two existing buildings create a threshold into the site. The trail then opens up into the new development. The corner of Drew and Myrtle is a busy intersection that provides an opportunity to catch people’s attention. The building opens up diagonally to that corner in order to give the people a glimpse of the trail thought the center of the building. This block establishes a starting point of the development from the north. Scrub pines and natural vegetation are introduced beginning the “urban wild” that cuts through the heart of the downtown district.

Fig. 8.12. Block 1 From Drew and Myrtle
Fig. 8.13. Block 1 Trail Side

Fig. 8.14. Block 1 Looking At Trail
Fig. 8.15. Block 1 East Elevation

Fig. 8.16. Block 1 West Elevation

Fig. 8.16. Block 1 Section
Residential/Retail Block 2

The second block introduces a four level parking structure and a first floor commercial residential building. The building opens up between Myrtle and the trail to allow people to move freely between the two corridors. The building incorporates an undulating façade that allows every resident to have a private outdoor area. The ground level has two ponds and a plaza as a public open space for outdoor activities and for café’s to have outdoor seating.

Fig. 8.17. Block 2 View From Southeast
Fig. 8.18. Block 2 View Through Building

Fig. 8.19. Block 2 View of Amphitheatre
Fig. 8.20. Block 2 View From Myrtle
Fig. 8.21. Block 2 East Elevation

Fig. 8.22. Block 2 West Elevation

Fig. 8.23. Block 2 Section
Transit Station Block 3

The third block consists of the transit station. The corner of Cleveland and Myrtle Streets is the prime location in the downtown district for the transit station because it is within a 3/4-mile radius of most of the downtown. Also, Cleveland Street is the main commercial boulevard in the city. The building gets its form from the Native American burial mounds that were part of the Florida coastline history. This design not only allows for a unique aesthetic, but also the roof becomes a park space within the city. In order to support the trees on the roof, the columns inside taper out as they reach the ceiling providing planters for the trees. This also forms a direct relation between the inside and out. The interior becomes a forest of columns. the interior of the building not only serves as a transit station, but also has a restaurant, small shop and a Native-American history museum. The building’s roof structure forms into ramps that go over the adjacent streets creating a threshold into the downtown district and another means of accessing the rooftop park.
Fig. 8.25. Block 3 View Down Cleveland Street

Fig. 8.26. Block 3 View Up Mound
Fig. 8.27. Block 3 Interior View

Fig. 8.28. Block 3 View of Train Platform
Fig. 8.29. Block 3 Northwest Aerial View

Fig. 8.30. Block 3 Southeast Aerial View
Fig. 8.31. Block 3 View From Southwest

Fig. 8.32. Block 3 East Elevation

Fig. 8.33. Block 3 West Elevation

Fig. 8.34. Block 3 Section
Residential/Retail Block 4

The fourth block incorporates three structures that provide plaza conditions between them. The two buildings on the east side are retail on the first floor and office space on the second. The plaza space between them becomes an entry plaza for the residential building on the west. The residential building is a single-loaded building that steps back away from the trail as it gets taller. This allows for each unit to have their own private outdoor space facing the trail. The building’s rounded shape creates a courtyard on the trail side of the block for the live-work units on the first floor.
Fig. 8.35. Block 4 View From Northwest
Fig. 8.36. Block 4 View From Myrtle

Fig. 8.37. Block 4 Aerial View From Southeast
Fig. 8.38. Block 4 West Elevation

Fig. 8.39. Block 4 East Elevation

Fig. 8.40. Block 4 Section
Residential/Retail Block 5

As the development gets farther away from the train station the spaces begin to become more private. On the south side of the fifth block there is a three level parking structure for the residents and will also serve as parking for the art museum. In this building the units are turned at an angle in order to allow each one to have a balcony either facing the trail or Myrtle Avenue. The building consists of two structures with a breezeway between them. The first level on the north side serves as the lobby space for the residents and also houses small retail. The buildings are linked together at the fourth level with a community space with a rooftop swimming pool. This allows for a place for the residents to congregate in a semi-public space.
Fig. 8.41. Block 5 View From Northeast

Fig. 8.42. Block 5 Aerial View From Northwest
Fig. 8.43. Block 5 Interior View Towards Trail
Fig. 8.44. Block 5 West Elevation

Fig. 8.45. Block 5 East Elevation

Fig. 8.46. Block 5 Section
Art Museum Block 6

The last block poses an interesting challenge. The block is isolated from the rest of the city because it is between three of the busiest streets in the city. With the amount of traffic going by this block there is a great opportunity to attract people to the district. Again, going with the theme of the burial mounds, the building becomes an earth-berm type structure with a planted roof. The challenge of this location is getting people onto the site. The sloped ramps become the access to the building and the entrance into the structure is from the rooftop park. The interior is similar to that of the transit station with the forest of columns relating to the trees planted on the roof. The interior is open space, which allows for the flexibility of the space. Interior partitions would be temporary and moveable in order for the space to change for different exhibits.
Fig. 8.47. Block 6 Aerial View From Northeast

Fig. 8.48. Block 6 View From Northeast
Fig. 8.49. Block 6 Interior View

Fig. 8.50. Block 6 Trail View From South
Fig. 8.51. Block 6 Aerial View From West

Fig. 8.52. Block 6 Aerial View From East
Fig. 8.53. Block 6 West Elevation

Fig. 8.54. Block 6 East Elevation

Fig. 8.55. Block 6 Section
The Trail

Taking advantage of the existing public right of way that cuts through the site, the trail becomes an urban wild. This introduces the natural ecosystems back into the urban fabric and provides a much needed reconnection of Florida’s ecology. The spaces throughout the site take advantage of scrub pines and palmettos and also cypress swamps. The cypress trees require a large amount of water in order to grow, which provides an opportunity for grey water usage. Rather than creating typical retention ponds, the ponds become swamps planted with cypress trees that will readily use the water and take away from the cities heat island effect. The urban wild becomes a feature of the city that is not only ecologically friendly, but also adds a character to the city that is reminiscent of historical Florida.
Fig. 8.56. View of Boardwalks Over Swamp
Fig. 8.57. View of Pond And Amphitheater
Fig. 8.58. View Of Train Down Trail
Fig. 8.59. View Down Trail
Fig. 8.60. View of Palmettos And Ramp
Fig. 8.61. View of Cypress Swamp
Chapter Nine

Conclusion

The project is meant to provide an example for cities throughout Florida that shows that a city's design can incorporate natural features without wasting land while at the same time giving the city a unique character that will attract people to live in the downtown core. The implementation of a transit system would greatly benefit the state by reconnecting all of the small cities and making it easy to work in one and live in another. Florida’s natural ecosystems are being devastated by the sprawling development throughout the state. If nothing is done to densify the urban areas, Florida’s wild landscape will be lost. This development shows that there is an alternative to the “big city” urban centers while at the same time providing a denser urban core. Every person living in the development has a sense of property ownership and does not feel confined by living in the city but instead feels as if the city is their own back yard. The city of Clearwater provided a great example of a place in which this type of urbanism could be built and if the project was built, other cities throughout Florida would see the benefits they could reap from such a venture. This new “new urbanism” could spark a change in the development of Florida, which could not only prevent the sprawl from occurring, but also save the state’s ecological treasures.
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