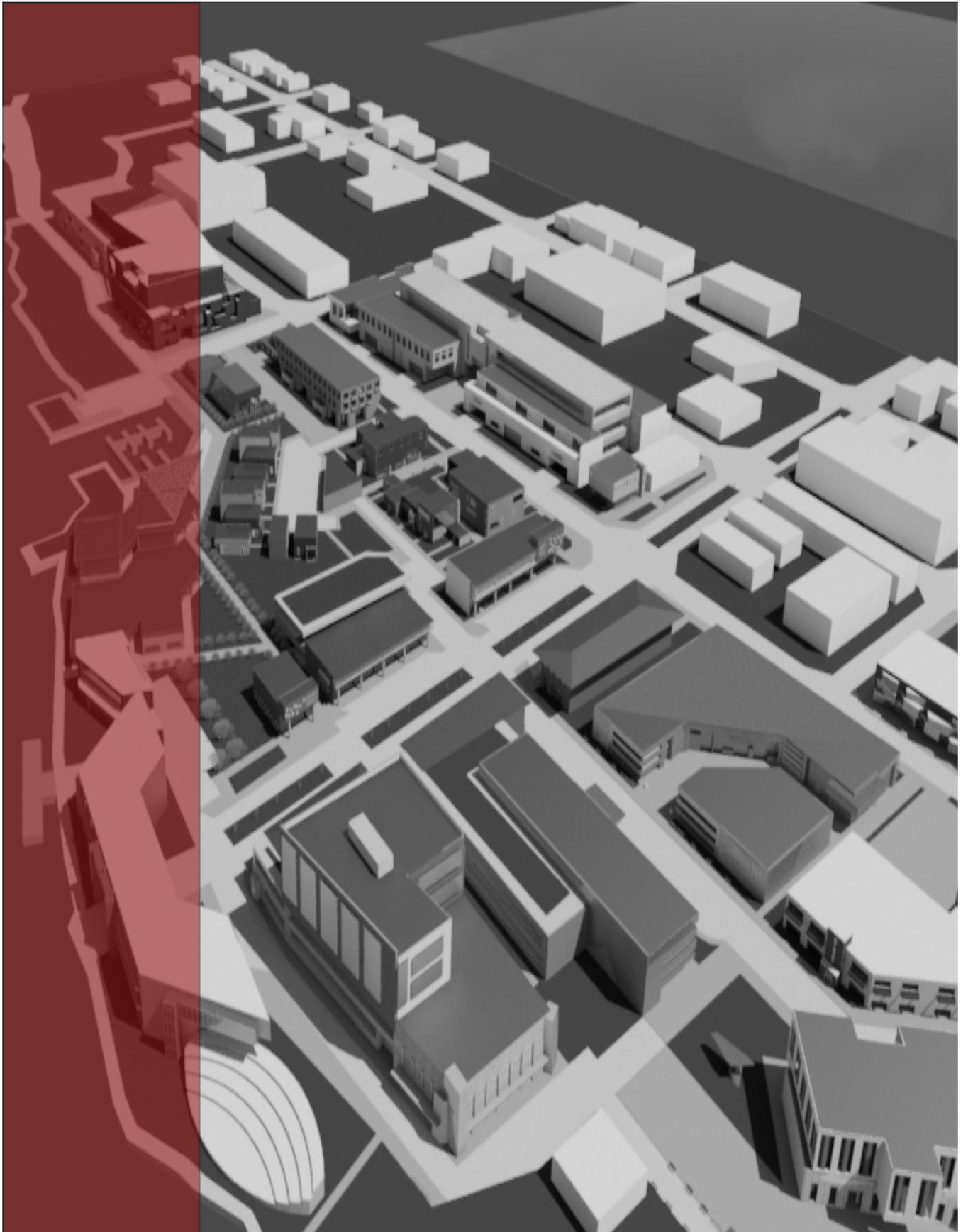


DESMOND LANDING: RIVERFRONT CATALYST



University of Detroit Mercy
School of Architecture
Christopher Pulcer
Winter 2015
Thesis Book

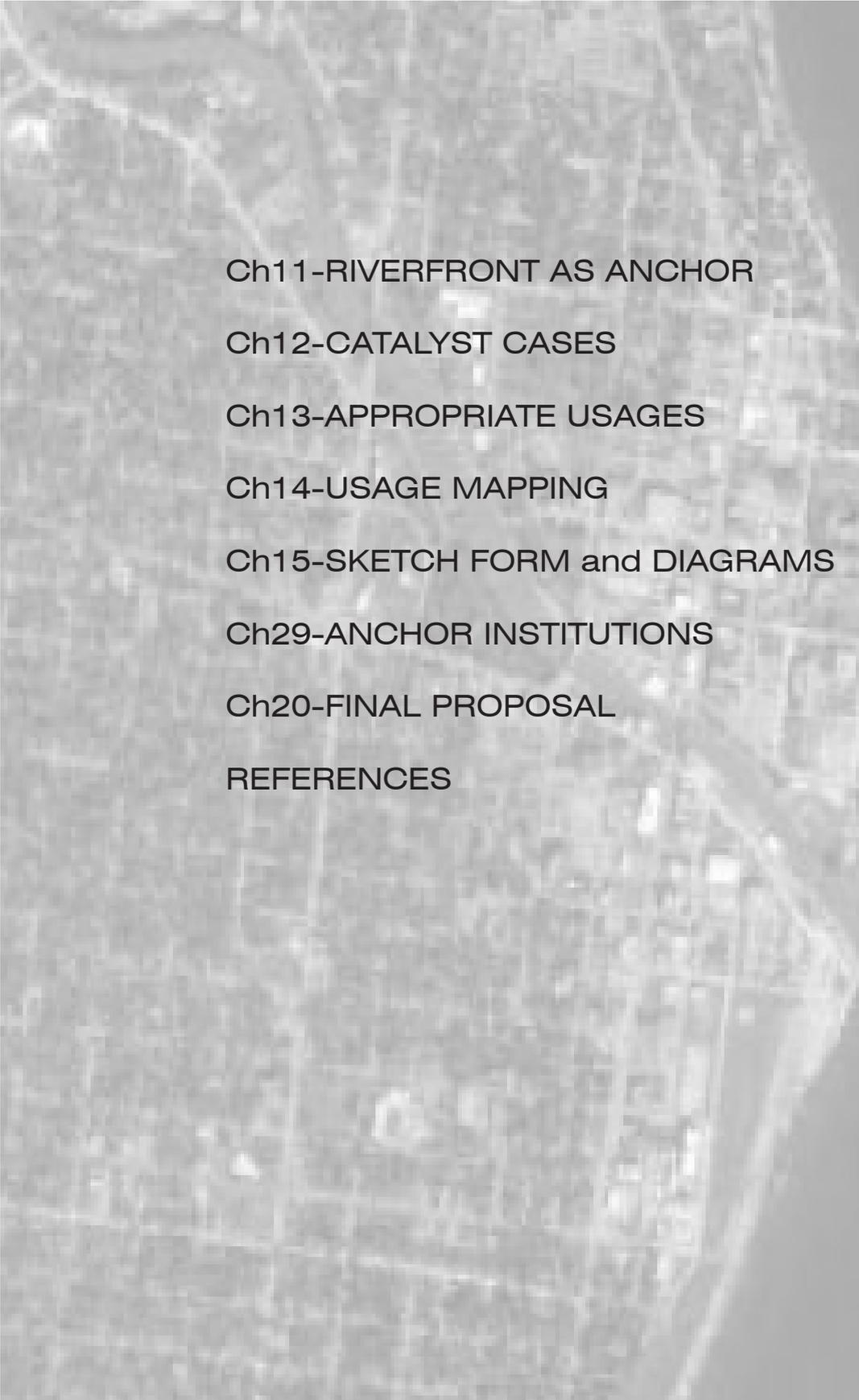


Abstract

This is a yearlong study researching, analyzing, and designing the concept of how the riverfront can become an anchor for a city's economic development from an otherwise unused and abandoned area. The study observes underutilized waterfront properties along the Eastern Michigan lakes system of the Detroit River, Lake St. Clair, and St. Clair River; locations that are in the transition out of their past roles of industrial infrastructure. The thesis will focus in on the specific property of Desmond Landing in Port Huron and take into consideration community issues identified by the Port Huron City Council and those specific to the surrounding site area. This will determine a comprehensive solution and plan that provides the Desmond Landing riverfront a role as the catalyst to impact and benefit the community of Port Huron spurring growth and future development for the betterment of the city.

Desmond Landing: Riverfront Catalyst

Ch1-BEGINNINGS	06
Ch2-THESIS TOPIC	10
Ch3-TOPIC PRECEDENT	12
Ch4-PROPERTY SCOUTING	18
Ch5-PROPERTY SELECTIONS	22
Ch6- MARINE CITY	42
Ch7-PORT HURON:	52
Ch8-PROJECT SITE: DESMOND LANDING	74
Ch9-RESIDENTIAL SKETCH PROBLEM	76
Ch10-MARKET SKETCH PROBLEM	80



Ch11-RIVERFRONT AS ANCHOR	94
Ch12-CATALYST CASES	96
Ch13-APPROPRIATE USAGES	106
Ch14-USAGE MAPPING	112
Ch15-SKETCH FORM and DIAGRAMS	116
Ch29-ANCHOR INSTITUTIONS	122
Ch20-FINAL PROPOSAL	126
REFERENCES	134

PERSONAL BEGINNINGS



PERSONAL BEGINNINGS

This focus of a thesis year revolved around a significance I have been interested and intrigued with as it relates to my location and where I reside. I am from the city of St. Clair Shores, Michigan, a population of 60,000 on average, and known as a suburb of Detroit in Macomb County. The city borders on Lake St. Clair which is part of the in-between region of the Great Lakes of Lake Huron and Lake Erie, In the Eastern Michigan lake system. Lake Huron stops at Port Huron to funnel into the St. Clair River which stretches forty one miles and flows into the heart shaped body of water of Lake St. Clair. Lake St. Clair then drains into the Detroit River between Canada and the United States becoming a bridge length away from each other. The Detroit River eventually widens back up after twenty eight miles to become Lake Erie and the Great Lakes freshwater system carries on beyond that away and out of Michigan.

Living in St. Clair Shores and growing up with freshwater lakes and rivers just a short drive away, I became accustomed to the value that the bodies of water provide, especially what the value of properties provide along the water's edge. The value is not purely a monetary one, though waterfront real estate does trend to fare higher than further inland. The value that waterfronts express are rooted with emotion, feeling, activity, views, etc... The shoreline properties northward and southward of St. Clair Shores are filled in a wide range of public and private usages from Detroit down to Wyandotte. Public shorelines and waterfront access creates social neighborhoods and atmospheres of engagement among locals and commuters alike. My interest was to investigate and/or restore that sense of social engagement by using the waterfront as the center for design. Many shoreline conditions are either not usable for the public with private residences or are taken up by industrial plants.

BEGINNINGS

A notable theme that has carried through in this region of the Eastern Michigan Great Lakes coast was that much shoreline was taken up with industrial infrastructure, particularly in the urban areas. Many are established from the shipping industry by Great Lakes freighters transporting cargo from port to port. Much or a great majority of this infrastructure has been phasing out of the regions of the St. Clair River, Lake St. Clair, and the Detroit River. This is not to say that this industrial program and culture has been wiped out permanently, for cities such as Port Huron, Marysville, and Wyandotte still retain an identity that associates its significance with shipping and the Great Lakes.





THESIS TOPIC

The concept at the beginning stages was to investigate the shoreline conditions and properties along the regions of the postindustrial corridor of the St. Clair River, Lake St. Clair, and the Detroit River and focus upon abandoned or underutilized sites in order to provide a framework of design for redeveloping those unused areas. The thesis statement at the initiation of the project was:

To investigate and ultimately provide a design that embraces social engagement along the waterfront in the urban community it services.

As the discovery phase of the project progressed, the thesis statement focused itself in stating:

How does one design to establish an anchor for a city's economic benefit causing its success to spearhead additional growth.

It is now a honed in complete plan based on using the riverfront as a catalyst for supporting anchor institutions:

The goal is to design an anchor of institutions on Desmond Landing to be a catalyst for local draw in Port Huron assisting in (providing an engine for) addressing city issues of education, residential development, athletics, and tourism. The strategies to generate the anchor usages consist of strengthening the waterfront with a market and maritime museum expansion with recreational auditorium, an athletic/sports facility, and a retail spine of shopping and offices that are supported by the second tier usages of an affordable mixed use housing plan, a manufacturing/technical trade school campus, and a port cruise terminal with designated marina access.

PRECEDENT



PRECEDENT

The process proceeded to observe case studies of past and current waterfront projects that have taken place and to research the directives that were approached with regards to program and the site's new usage of those projects.

The renovation of Pier 1 was a case study on the reconstruction on an unused existing structure. The building of Pier 1 in the financial district of the San Francisco Bay used to be an abandoned sugar cane warehouse that was used occasionally to park cars inside¹. The firm Perkins and Will overtook the task to design its new use as a conference center.

The developer and designer Benjamin C. Thompson provided multiple case studies with the focus on public waterfront areas in downtowns to develop as plazas and centers for the community. Places such as Faneuil Hall in Boston are set up as a marketplace and Jacksonville Landing in Jacksonville, Florida was created as a retail plaza.

A case study in the form of recreation was the redevelopment of the rail yards in Louisville, Kentucky creating an established recreational park called the Louisville Waterfront Park on the coast of the Ohio River.

A case study that is ongoing currently and very similar to the recreational and public agenda is taking place in Vancouver, British Columbia. There is a portion of coastline which used to be a rail yard along the Columbia River that the public has never been able to access in decades. The Vancouver Waterfront Access Project is taking a mixed use program with hotels, restaurants, and a river walk with recreational parkways along the coast to provide that much needed access.

In Bellingham, Washington the port has never had a marina built there at all and access to the shoreline has not

1. From looking at Brown on adaptable uses

existed due to a large industrial complex of a tissue factory² that had since been closed down. The coastal city is now working on developing a marina program for the first time.

There was also a case study that underwent a new resting and recreational program for the city of Toronto in an area along the water known as Sugar Beach³. The site which had been used as a parking lot for the nearby office buildings was reconstructed with a beach like program of a designated sand area for sitting, relaxing tanning etc. There was no physical access from the beach going into the water as the beach was surrounded by railings, but it provided the opportunity for a community setting. A viewing experience also takes place on the beach adjacent to the beach area where a sugar distillery is located. Every so often a barge will come and unload commodities of sugar ,in which case the beach provides an opportune viewing area for.

A few of the case studies revolve around certain themes such as redevelopment from rail yards, redesigning from closed down industrial infrastructure, and an emphasis on public access. These three themes are carried through in the discovery phases of the project.



2. More information can be found in The Waterfront District.
3. There are other projects taking place in the East bay area under “Canada’s Sugar Beach”

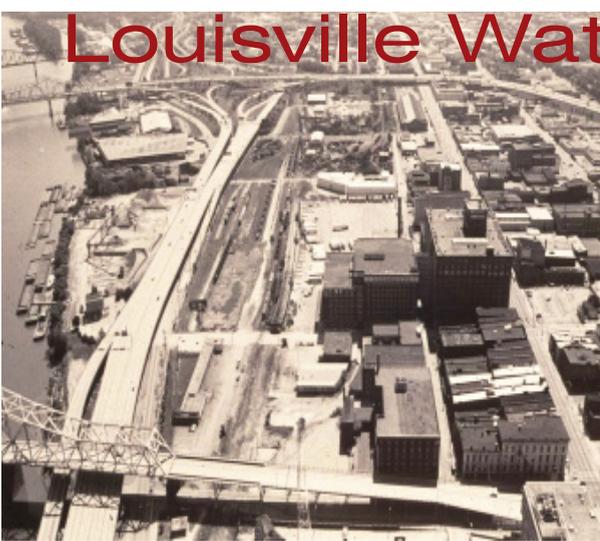
Faneuil Hall



Jacksonville Landing



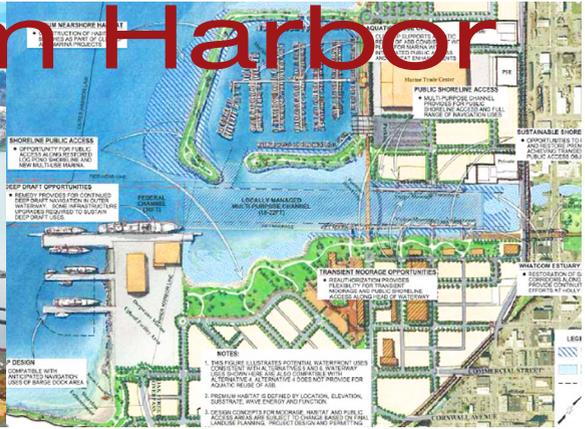
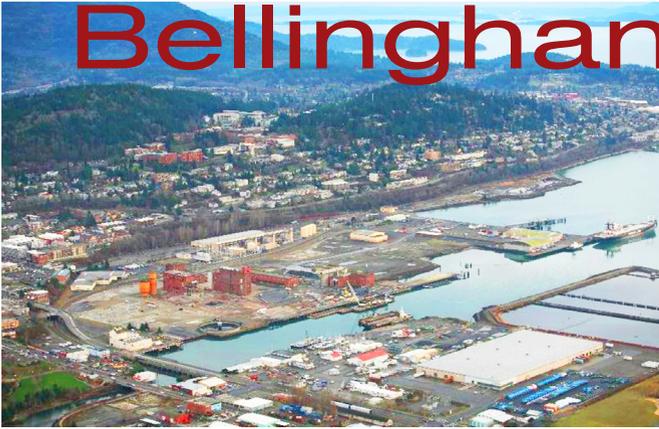
Louisville Waterfront Park



Vancouver Access Proj.



Bellingham Harbor



Toronto's Sugar Beach



Criteria for Site Potential:

Road Accessibility

Physical Water Access

Nonphysical Water Access

Connections
With Surroundings

System of travel

Protect/Enhance
Scenic Views

Historical/Cultural
Resources

Recreational Facilities

Marina Opportunities

Downtown Proximity

Parking Areas

Great Lakes Shipping

Dining/Entertainment

Tourist Opportunities

PROPERTY SCOUTING

The next step of interest was in surveying and locating multiple sites and properties that were in an abandoned or undeveloped state and multiple drives were undergone from Wyandotte north up the coast to Port Huron. The process involved searching almost eighty miles of coastline properties that would garner opportunity for public development. In order to observe and analyze each property, there needed to be a way of evaluating one site from another in order to determine which sites would be most appropriate to develop in meeting the thesis statement. A beginning framework of parameters was set similar to that of a checklist to assist in the determination of each site.

The site criteria were broken down as follows:

Road Accessibility= Can the site be accessible to automobile traffic, public transportation (buses), sidewalk friendly for cyclists, etc.

Physical Water Access= Potential to engage water directly via boat launch or beach front.

Non Physical Water Access= Potential to engage water via fishing pier, rip rap, railing etc.

Connections With Surroundings= Is there potential for convenient access to nearby facilities, parks, retail, neighborhoods etc.

System of Travel= Potential to pedestrian travel through entire property as well as off the property such as pathways, roads, open property, blocking vegetation, marsh ground etc.

Protect/Enhance Scenic Views= Potential to have picturesque views for sitting and relaxation as well as able to view the waterfront without blockage from vegetation or structures.

Historical/Cultural Resources= Potential to display cultural or historical significances on the property.

Recreational Facilities= Potential for recreation via parks, athletic venues, nature facilities etc.

Marina Opportunities= Potential to create boating and social cultures around the property as well as the neighboring properties as well.

Downtown Proximity= Potential to directly engage with downtown commercial facilities as well as a usage of mass density using the site or not.

Parking Areas= Potential to find large means of parking for crowds and gatherings as well as nearby the site.

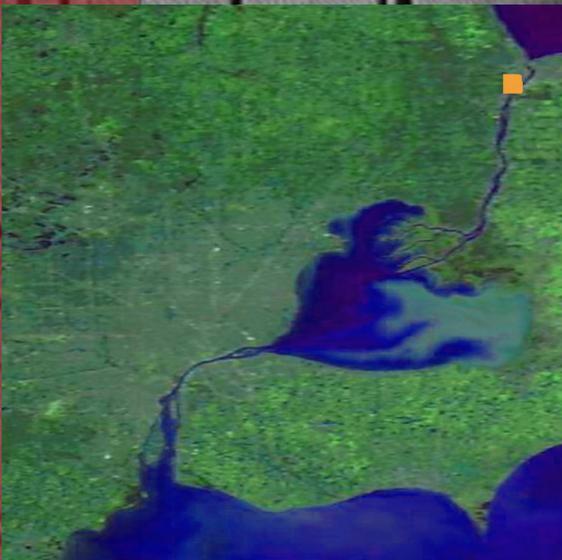
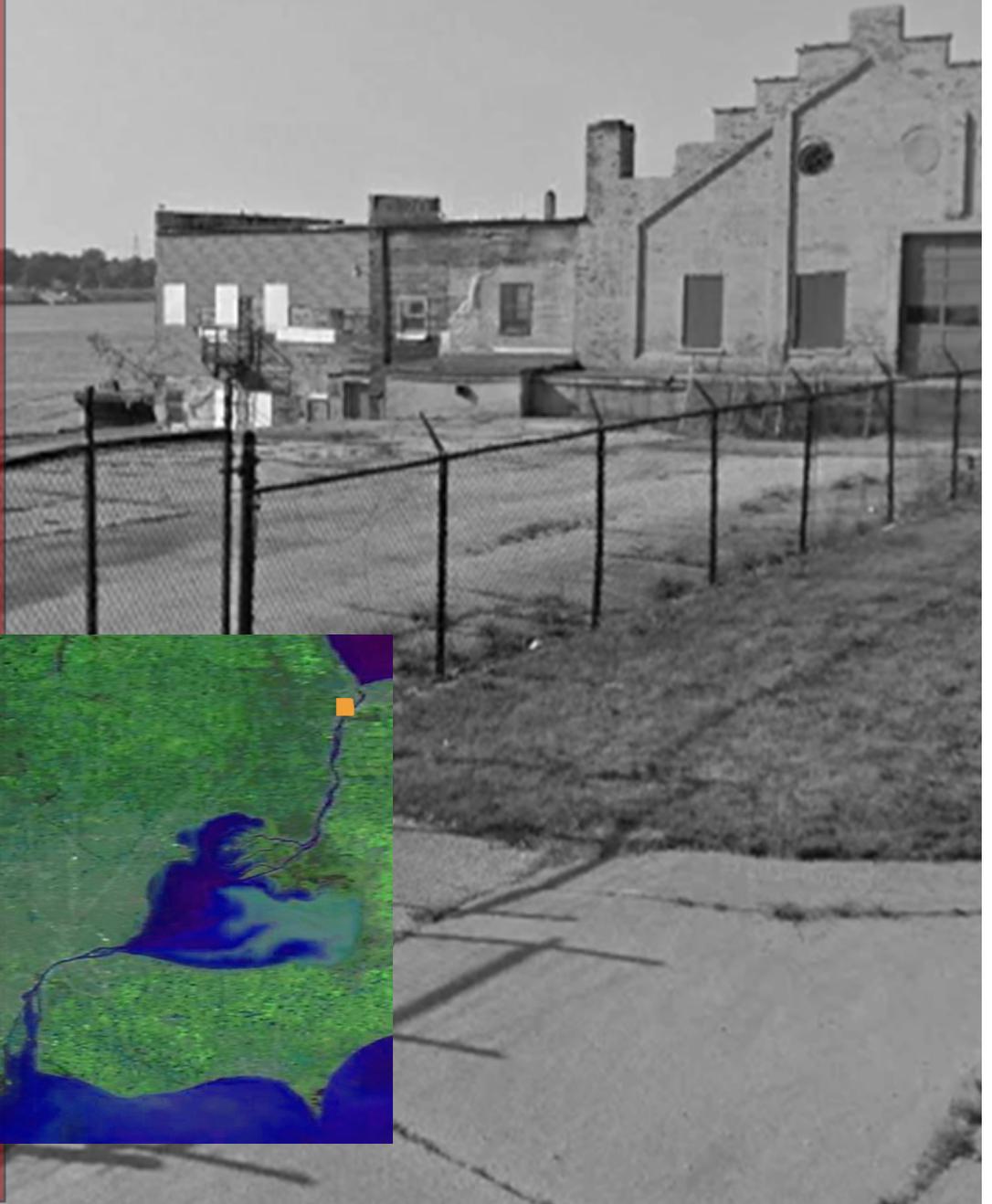
Great Lakes Shipping= Potential to view /engage with freighters passing by.

Dining/Entertainment= Potential for dining directly on shoreline or contain venues nearby.

Tourist Opportunities=Potential for bringing means of tourism onto site and streets nearby.

PROPERTY SELECTIONS

3610 Military St Port Huron



The first site property observed was along 3610 Military Street in Port Huron off of the St. Clair River just three miles from the city's downtown. The site was a small piece of property sandwiched by residential zoning and fishing retail. It appeared that the focus needed to be more in a town commercial area for the site lacked the potential for the demographics and it appeared too far away from a community connection.



Criteria for Site Potential:



Road Accessibility



Physical Water Access



Nonphysical Water Access



Connections
With Surroundings



System of travel



Protect/Enhance
Scenic Views



Historical/Cultural
Resources



Recreational Facilities



Marina Opportunities



Downtown Proximity



Parking Areas



Great Lakes Shipping

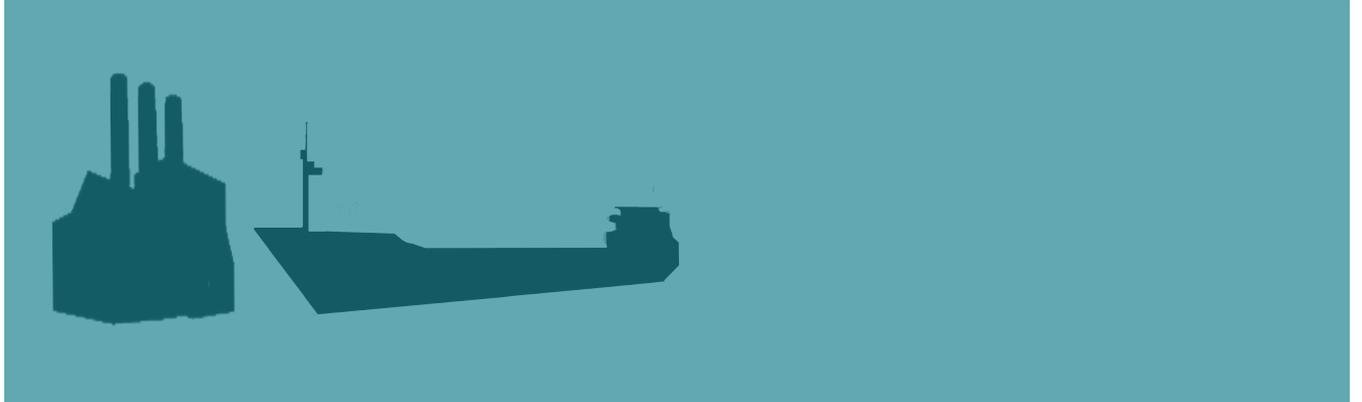


Dining/Entertainment



Tourist Opportunities





8365 Dixie Hwy. Ira

PROPERTY SELECTIONS



The next site was located in 8365 Dixie Highway in Ira along Lake St. Clair. The small square property was the site of an abandoned inn in the midst of a residential area with private residences on either side of it. The area carried some limitations such as there was a lack in connecting to the surroundings and not near an urban locale.

- Property
- Commercial
- Residential
- High Rise Residential
- Institutional
- Recreational



Criteria for Site Potential:

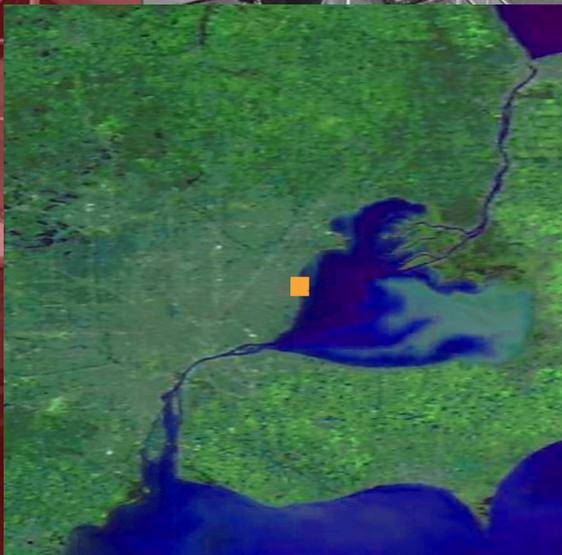
- Road Accessibility
- Physical Water Access
- Nonphysical Water Access
- Connections With Surroundings
- System of travel
- Protect/Enhance Scenic Views
- Historical/Cultural Resources
- Recreational Facilities
- Marina Opportunities
- Downtown Proximity
- Parking Areas
- Great Lakes Shipping
- Dining/Entertainment
- Tourist Opportunities





PROPERTY SELECTIONS

34800 Jefferson St. Clair Shores



The next property selected was 24800 in Jefferson Avenue in St Clair Shores, also on Lake St. Clair. The area, known as Blossom heath, is a thin strip of recreational land used for local gatherings. This is nearby a Coast Guard station and pier, however the grounds have been severely worn down and the property is in need of repair. The property creates opportunity for draw with its boat launch area and marina program, although it severely lacks in ease of site access since it is pulled back from the main road and is not connected with any means of retail, parking, or development. The Coast Guard station also limits the potential for viewing and public access to the greater lake area

- Property
- Commercial
- Residential
- High Rise Residential
- Institutional
- Recreational



Criteria for Site Potential:



Road Accessibility



Physical Water Access



Visual Water Access



Connections
With Surroundings



System of travel



Protect/Enhance
Scenic Views



Historical/Cultural
Resources



Recreational Facilities



Marina Opportunities



Downtown Proximity



Parking Areas



Great Lakes Shipping



Dining/Entertainment



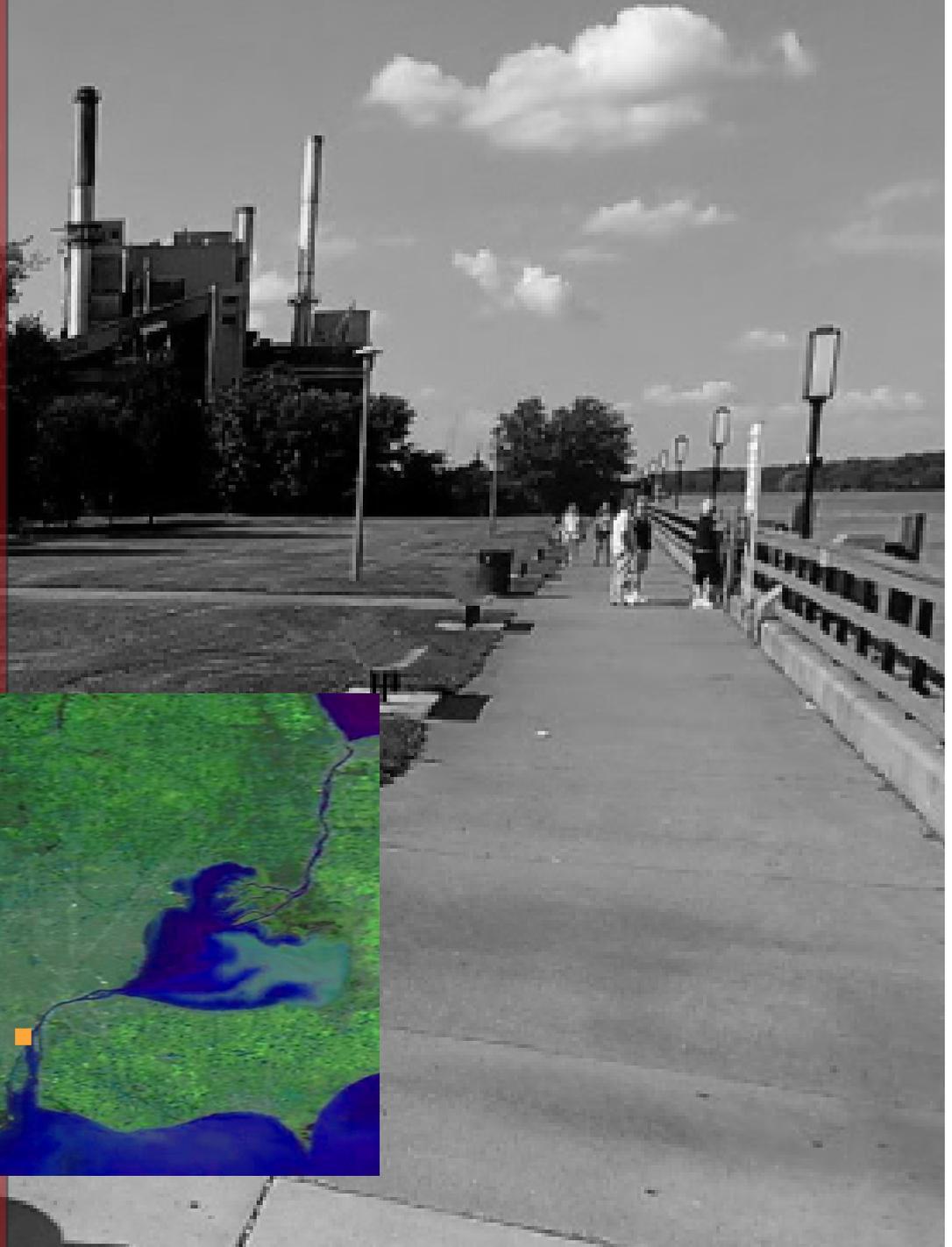
Tourist Opportunities





PROPERTY SELECTIONS

2609 Van Alstyne Wyandotte



There was a site observed in 2609 Van Alstyne of Wyandotte off the Detroit River which was part of residential area with a nearby chemical plant¹ abutted next to it. The property contained much more downtown potential in connections with its surroundings. The site's contains a strong contrast and hard-scape appearance between the chemical plant and public areas.

1. Background Information on the chemical plants can be found in "Wyandotte Waterfront Study"



Criteria for Site Potential:



Road Accessibility



Physical Water Access



Visual Water Access



Connections
With Surroundings



System of travel



Protect/Enhance
Scenic Views



Historical/Cultural
Resources



Recreational Facilities



Marina Opportunities



Downtown Proximity



Parking Areas



Great Lakes Shipping

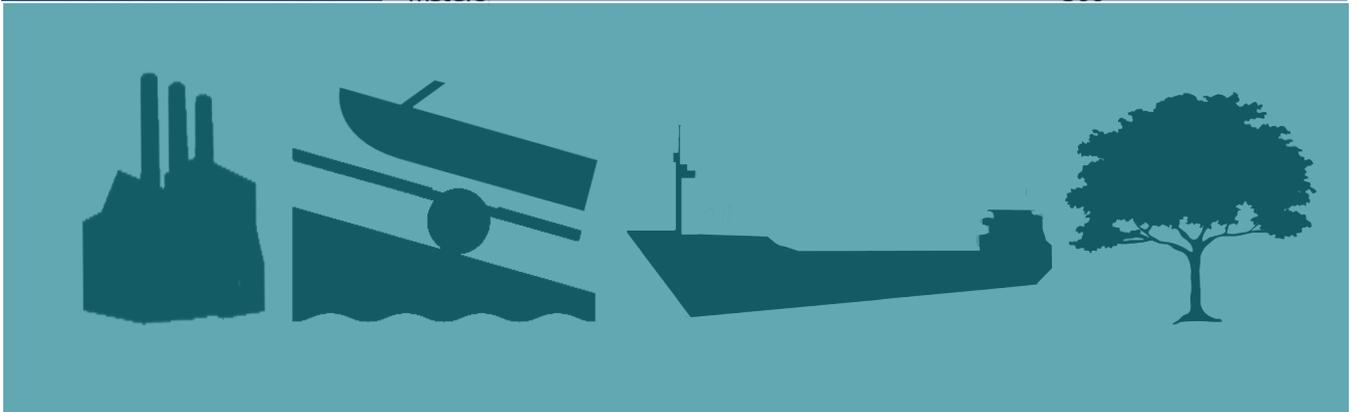
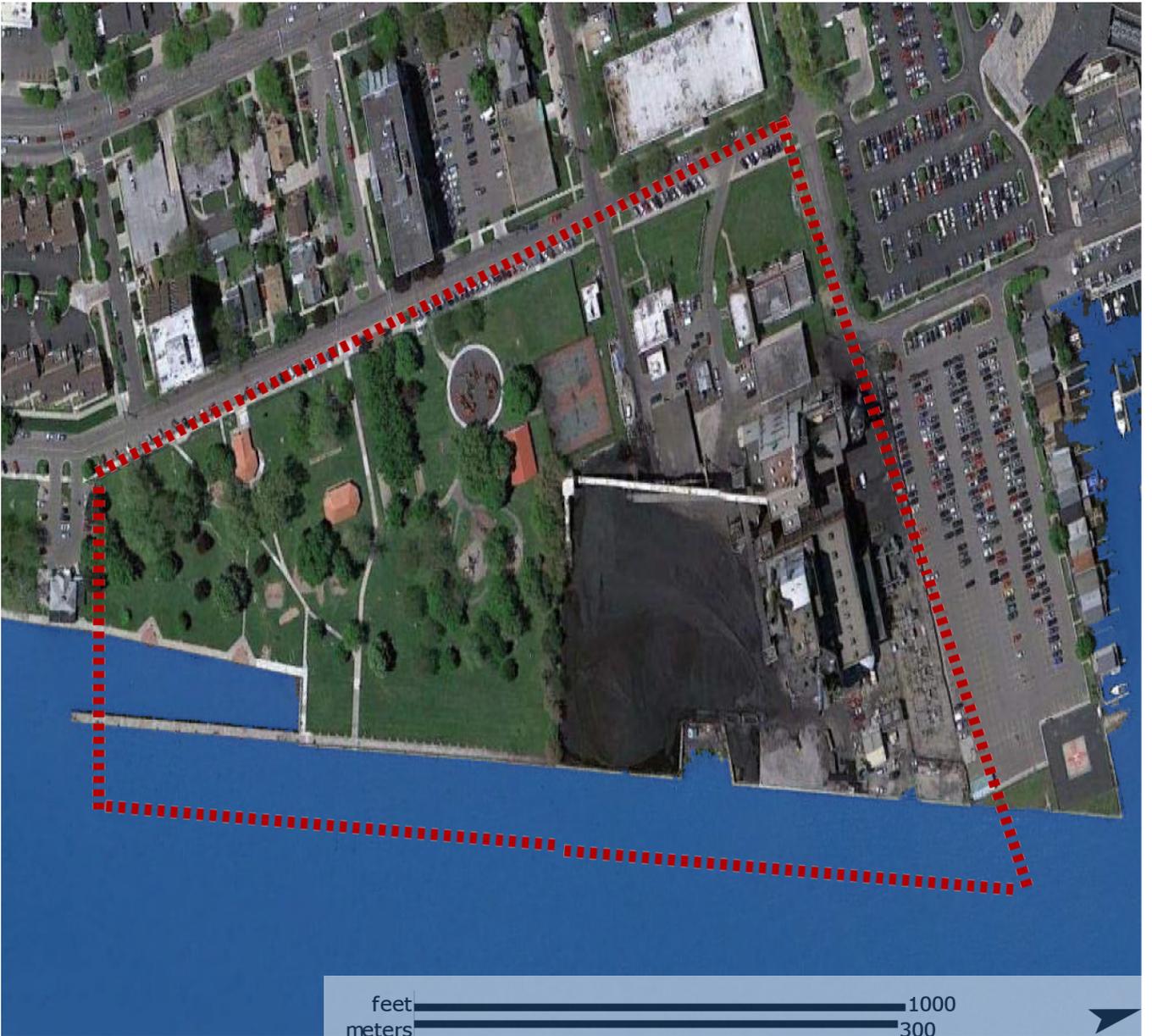


Dining/Entertainment



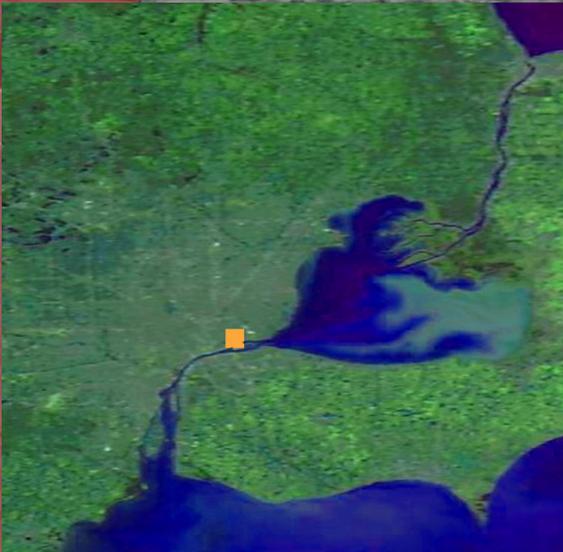
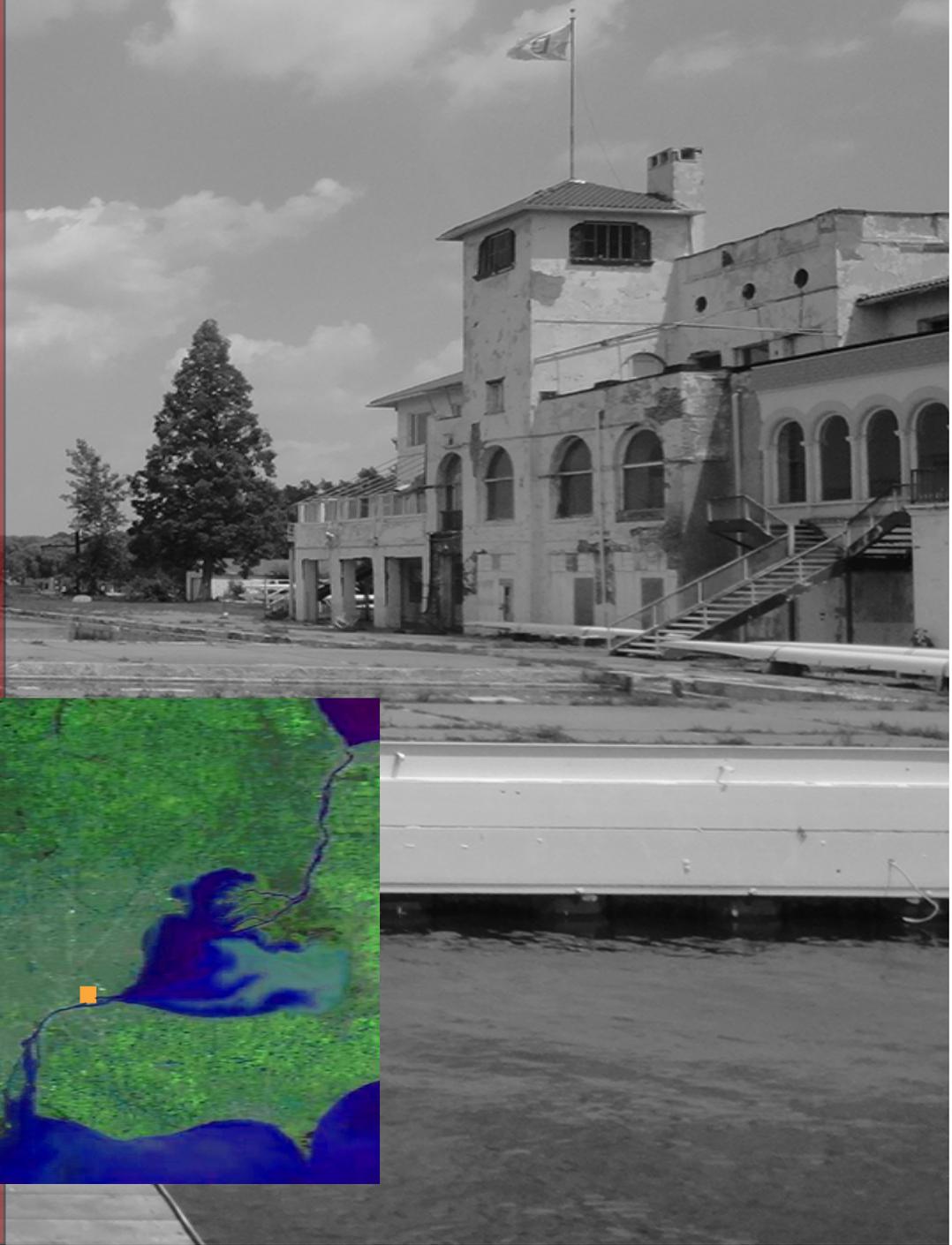
Tourist Opportunities





PROPERTY SELECTIONS

East Picnic Way Detroit



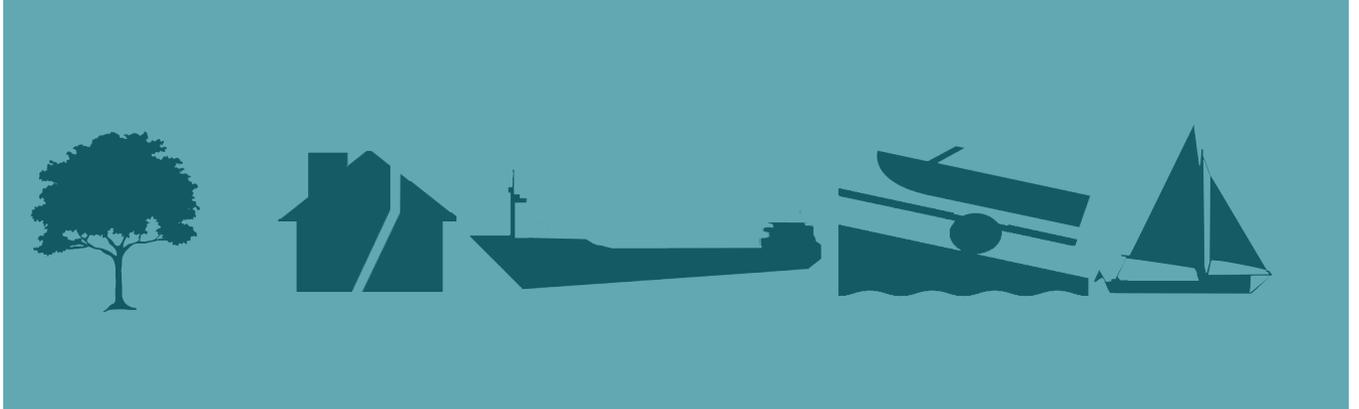
Another property that contained much more downtown appeal was located on East Picnic Way, Detroit. This was the property of the abandoned Belle Isle Boat Club on the island park of Belle Isle. The property contains a historical usage from being a recreational grounds for the city. There is an existing crumbling historical structure that was used for the rowing culture of decades ago. Currently the site is still being used by the Detroit Rowing Club. This property provides the use and opportunity for historical and cultural significances to be explored and celebrated.



Criteria for Site Potential:

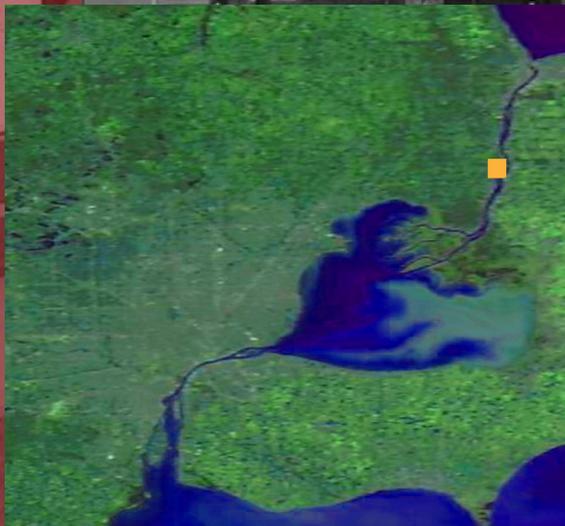
- Road Accessibility
- Physical Water Access
- Nonphysical Water Access
- Connections With Surroundings
- System of travel
- Protect/Enhance Scenic Views
- Historical/Cultural Resources
- Recreational Facilities
- Marina Opportunities
- Downtown Proximity
- Parking Areas
- Great Lakes Shipping
- Dining/Entertainment
- Tourist Opportunities





FOCUSED PROPERTY SELECTIONS

464 S. Water St. Marine City



A property was located in the downtown area of Marine City. 464 South Water Street places itself in a downtown area strip with antique shops, green pocket parks, and the Blue Water Ferry which connects Marine City to Sombra, Ontario. Many people take the ferry versus the Blue Water Bridge due to ease of access and less of a wait at customs. The Ferry runs in winter seasons as well unless there is heavy ice. The Marine City population is 4,174 with a White non-Hispanic majority of 95.6% and median income of \$39,486.

The amenities there include being within a shipping lane, the view across the river is of residences on the Canadian St. Clair River Parkway, there are historical antique shops off Water St, pockets of public space in sponsored green parks, a historic Marine City lighthouse, and railing piers for fishing along the sea wall. The edge treatment¹ of the property is mainly sea wall dock treatment along the ferry landing and nearby land property. There are stacked two story commercial buildings near the ferry landing that interrupts access to public space nearby.

The issues with the Marine City property concern themselves with a lack of continuous access on the water's edge. This has to do with public parcels seen as parks being split² and cut off with both retail structures and even some private residential structures along the coast. There needs to be a balance between the green spaces and private housing along the shoreline. There is also a breakup of interaction between the ferry terminal as well.

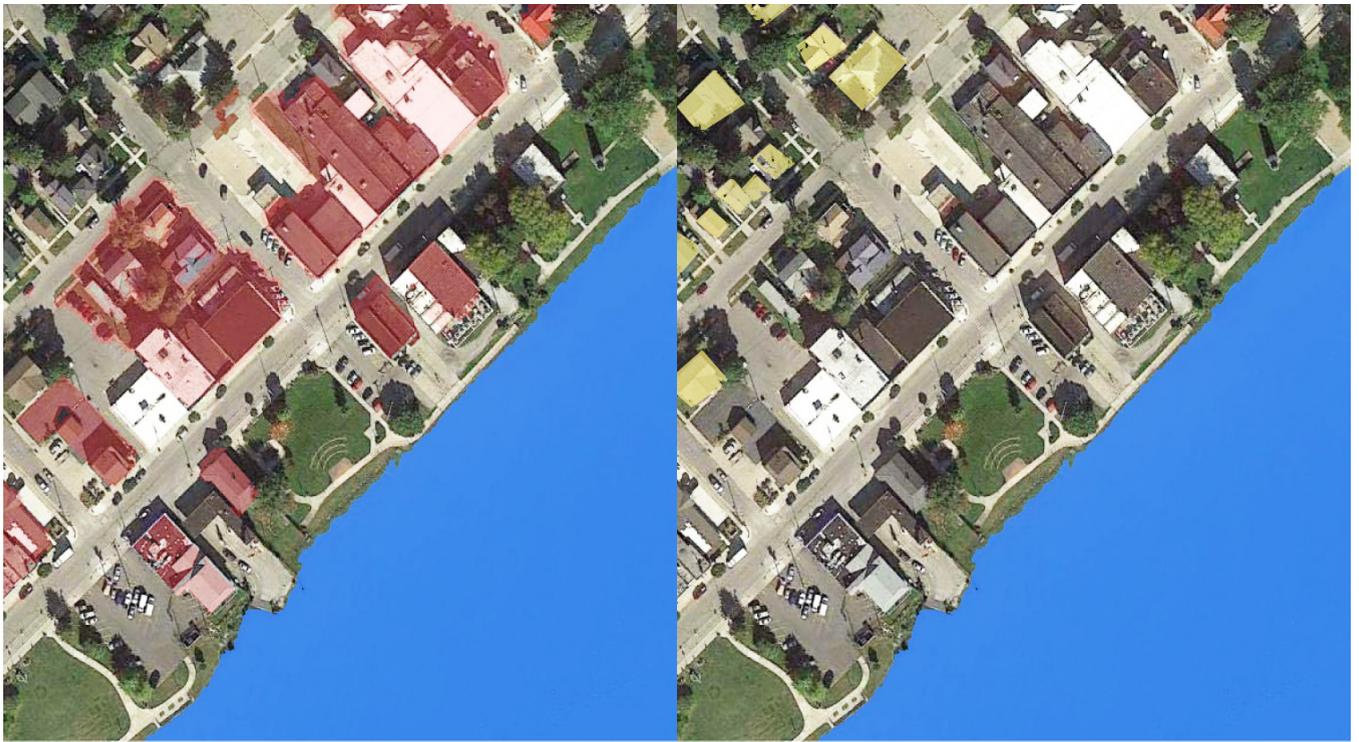
1. Documentation of city infrastructure seen in McElroy.

2. The splitting of the parks is referenced in a city town hall meeting from Packer.



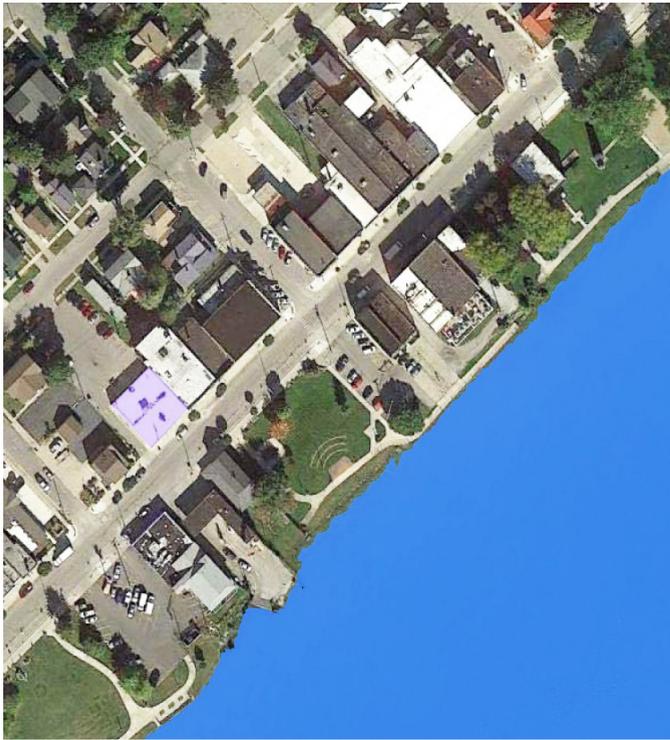
feet
meters 2000 700
Site: Water St.

feet
meters 200 800
Focused In: Ferry Terminal

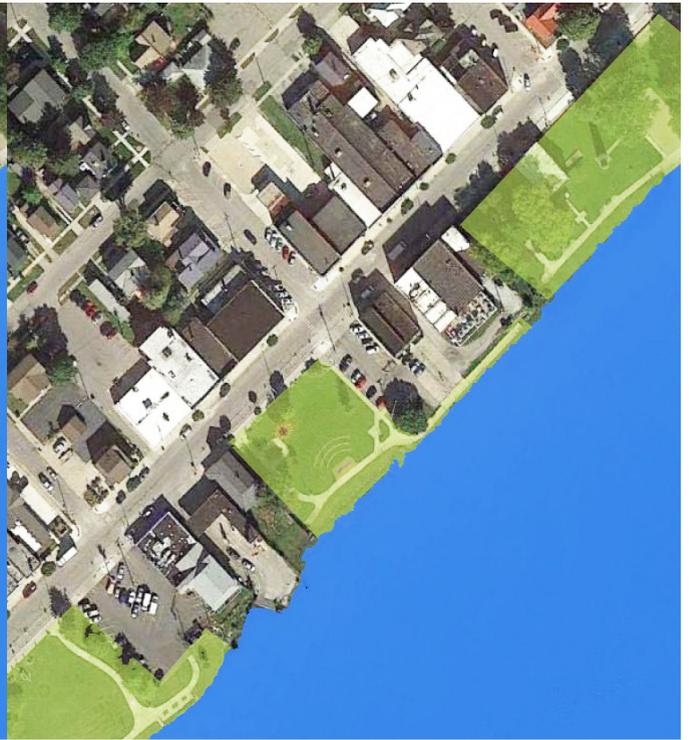


feet
meters 200 800
Commercial

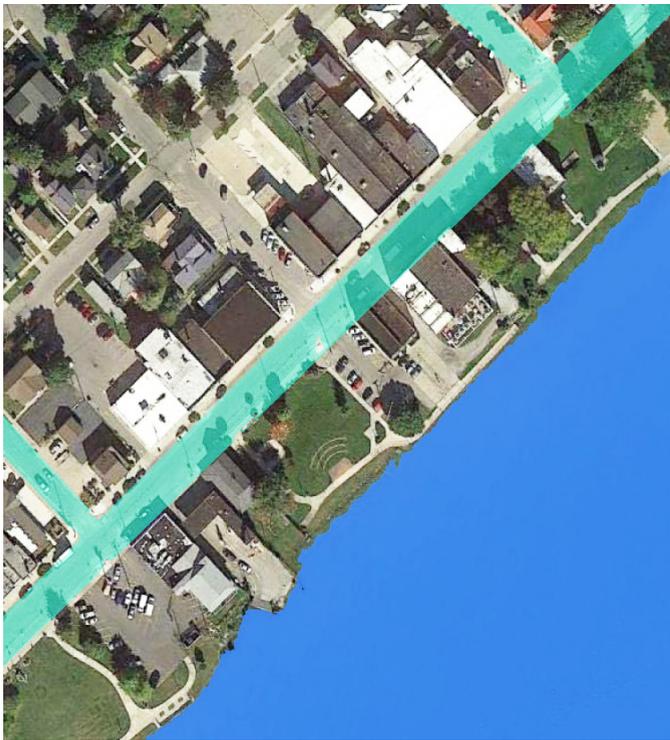
feet
meters 200 800
Residential



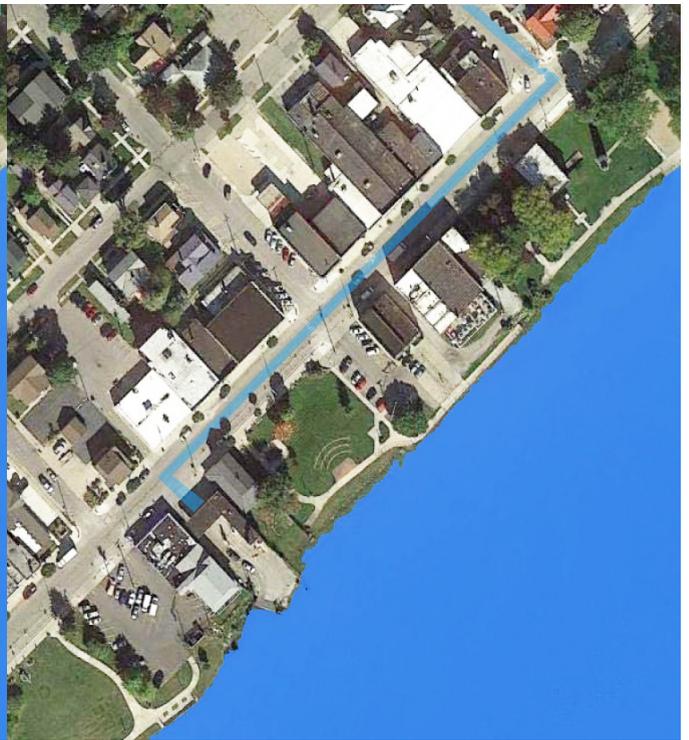
feet
meters 200 800
Institutional



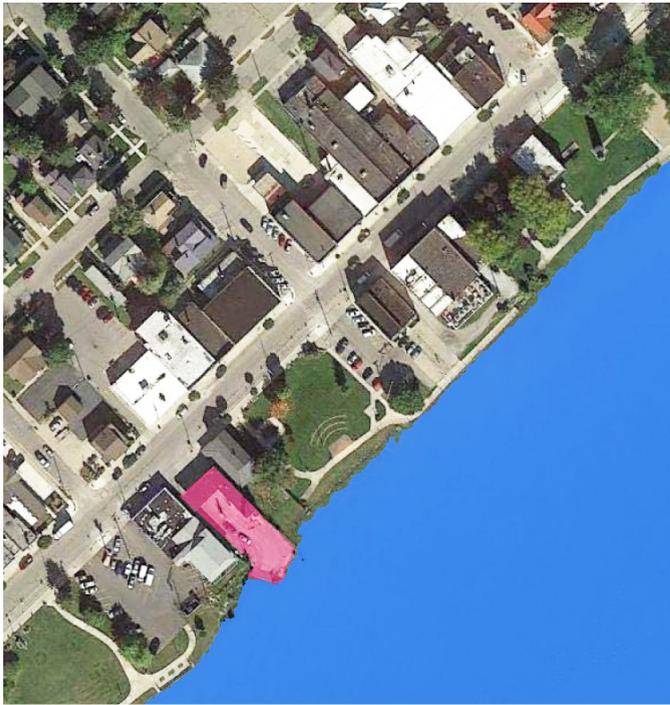
feet
meters 200 800
Recreational



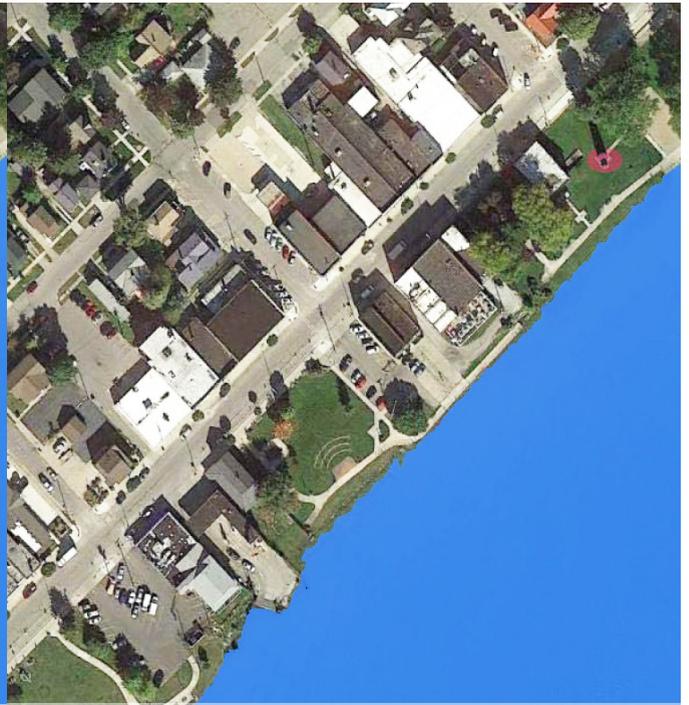
feet
meters 200 800
Main Access Points



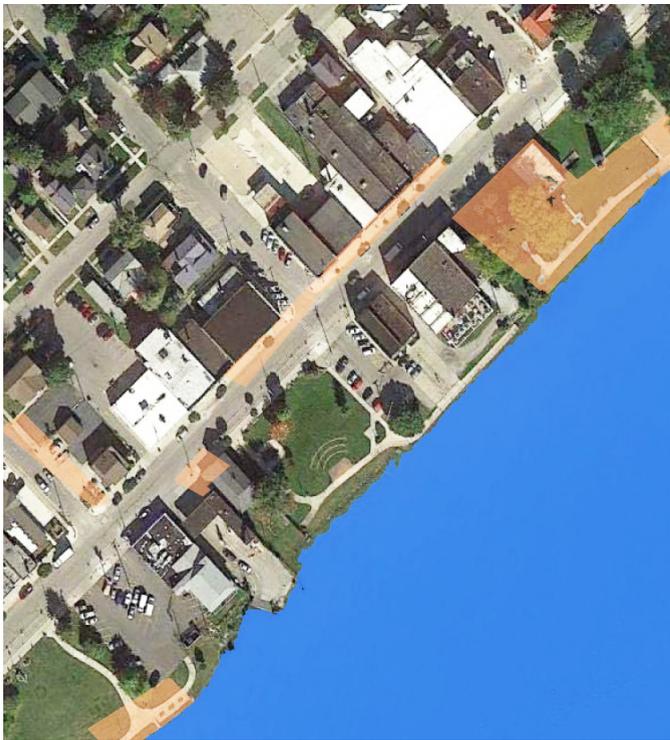
feet
meters 200 800
Ferry Access



Terminal Customs Post



Historic Marker (Lighthouse)

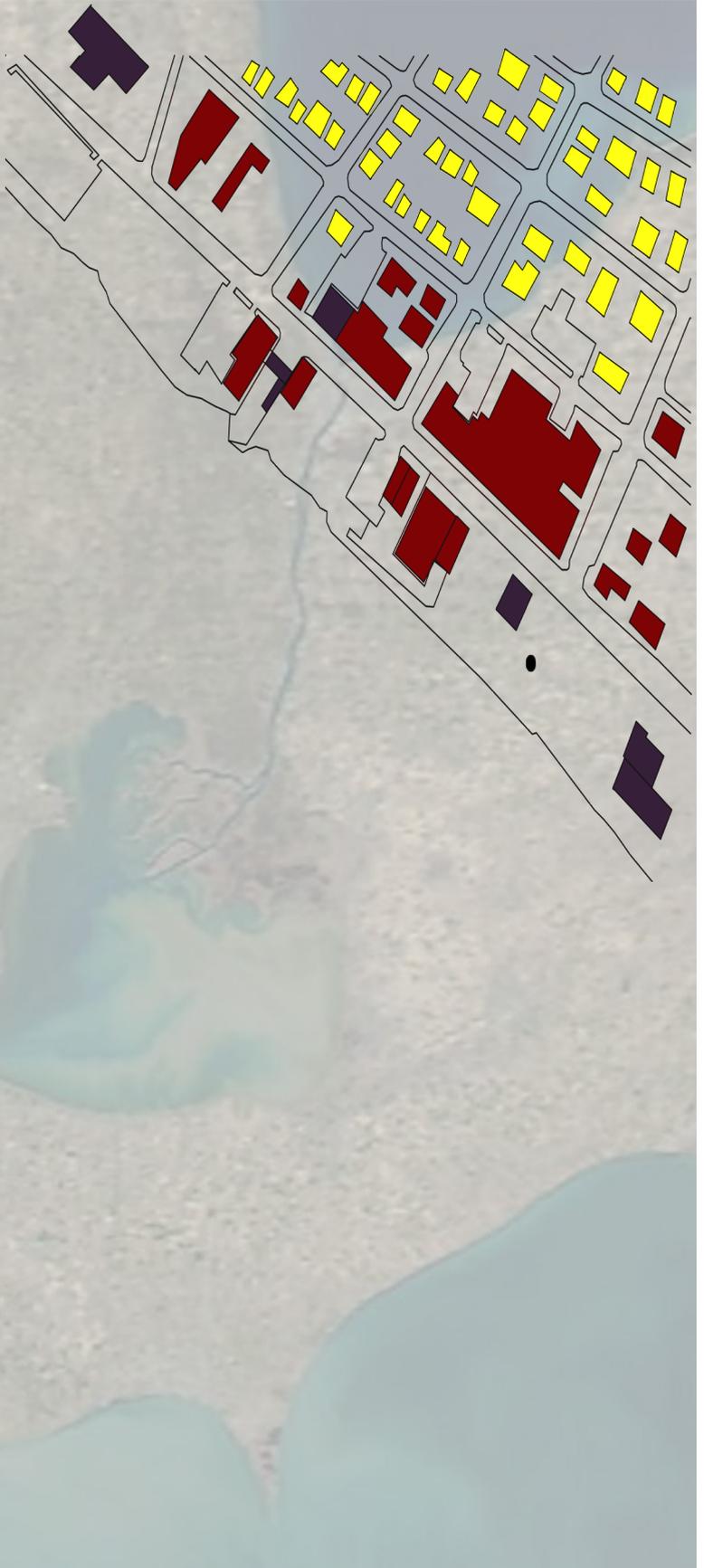


Pedestrian Usage/Travel



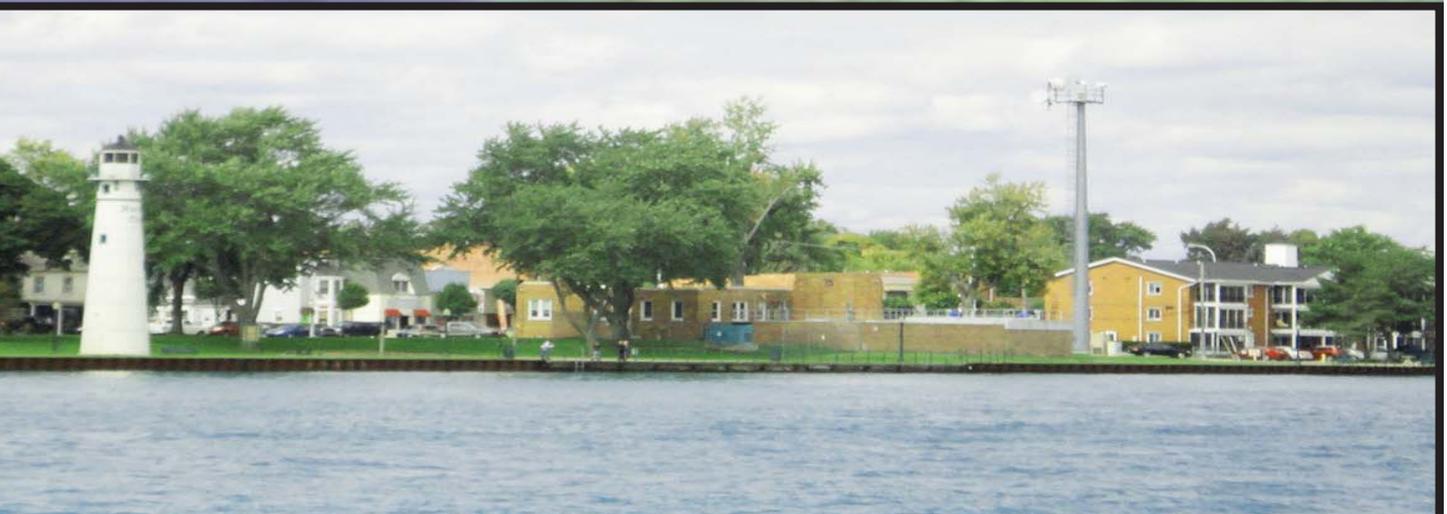
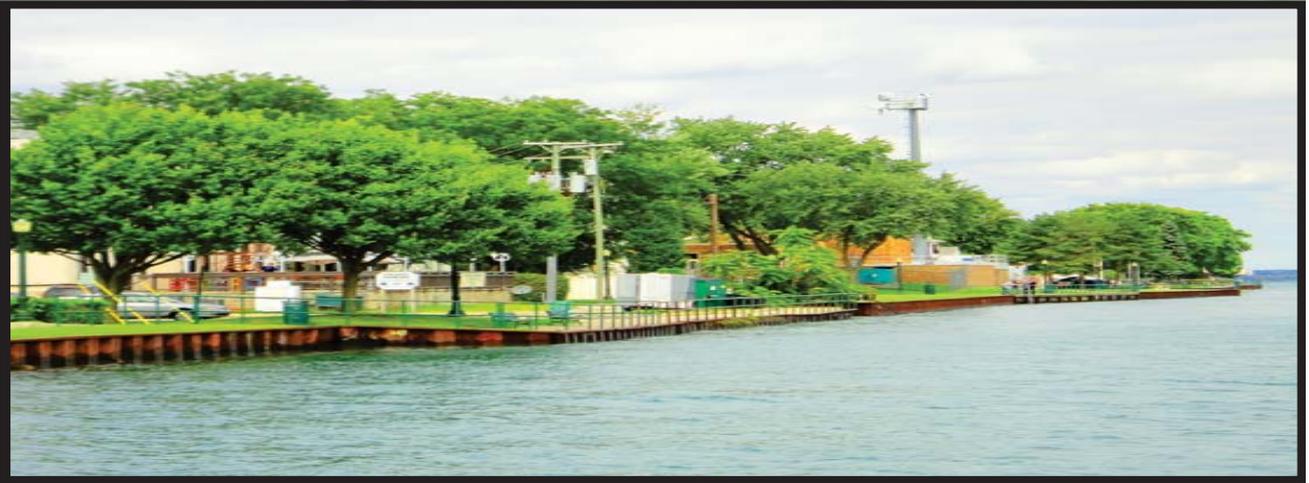
Criteria for Site Potential:

-  Road Accessibility
-  Physical Water Access
-  Visual Water Access
-  Connections With Surroundings
-  System of travel
-  Protect/Enhance Scenic Views
-  Historical/Cultural Resources
-  Recreational Facilities
-  Marina Opportunities
-  Downtown Proximity
-  Parking Areas
-  Great Lakes Shipping
-  Dining/Entertainment
-  Tourist Opportunities



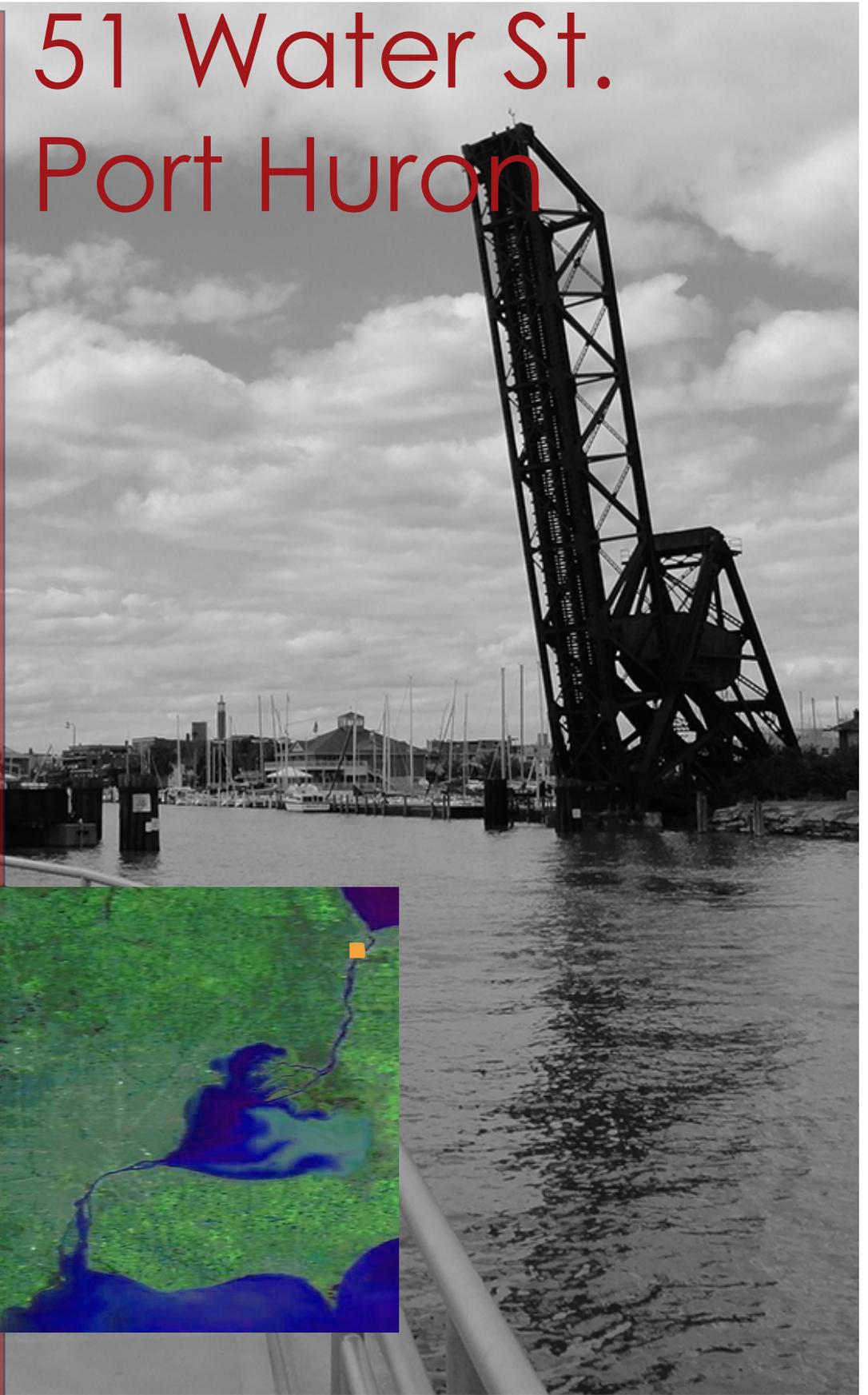
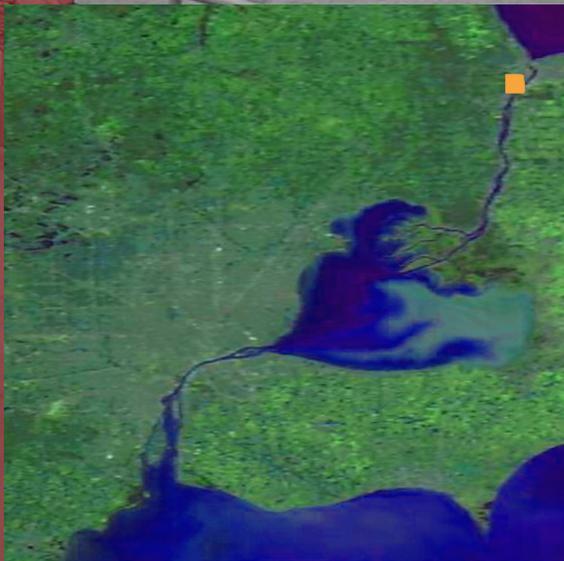






FOCUSED PROPERTY SELECTIONS

51 Water St. Port Huron



The Port Huron property at 51 Water Street near the downtown is known as Desmond Landing or Vantage Point. The community has a population of 30,184, being 82% White non-Hispanic and 9.4% Black. The median income is \$30,740 and the city holds a shoreline coast of three and a half miles. The site is located in the commercial district just two blocks east of Military Street¹, the city's main downtown thoroughfare, and south of the mouth of the Black River.

The property used to be part of an industrial waste lot with a cement plant, scrapyards, and rail yard by the Canadian Rail line CSX. When the cement plant was abandoned and torn down, in 2005 a land developing company, Acheson Ventures purchased thirty one acres of land from the rail company for 1.8 million² dollars as well as neighboring land from the city in hopes of redeveloping the area for the public to re-access it. The rail lines were taken out and the brown field was regenerated leaving an open site to build on. Acheson Ventures is formulating a twelve year plan to develop the land around Desmond Landing.

At the present the amenities that Desmond Landing holds is the small museum and freighter viewing center known as the Great Lakes Maritime Center, a weekly farmers market from the counties nearby that use the property in white canopied tents, a river walk with inviting gathering and sitting spaces along it, and a sightseeing boat concession. Across the Black River is a historic railroad bridge that stopped being in use in 1973³, and connected with it is the Port Huron Yacht Club. Nearby the site are offices, marina retail, commercial dining services, and mixed use development. The edge treatment along the property contains rip rap and gradient sloped edge shoreline conditions along the St Clair and Black Rivers and there currently is an empty and open feeling from being an expansive property space of 30 acres that is mainly a gravel lot with waterfront views on two sides.

The issues with the Desmond Landing property are around the sheer size of the site and the future role of the property as it is positioned in a gap between the residential zones downriver, the busy commercial road of Military Street, and the point of the Black River where the maritime center and farmers market is being held currently.

1. Many historical documentation on shops of Military Street found in Gaffney.
2. Documented in further detail of the Acheson company purchase in Kosnae.
3. Rail history in the region read under "The City of Port Huron".

Criteria for Site Potential:



Road Accessibility



Physical Water Access



Nonphysical Water Access



Connections With Surroundings



System of travel



Protect/Enhance Scenic Views



Historical/Cultural Resources



Recreational Facilities



Marina Opportunities



Downtown Proximity



Parking Areas



Great Lakes Shipping

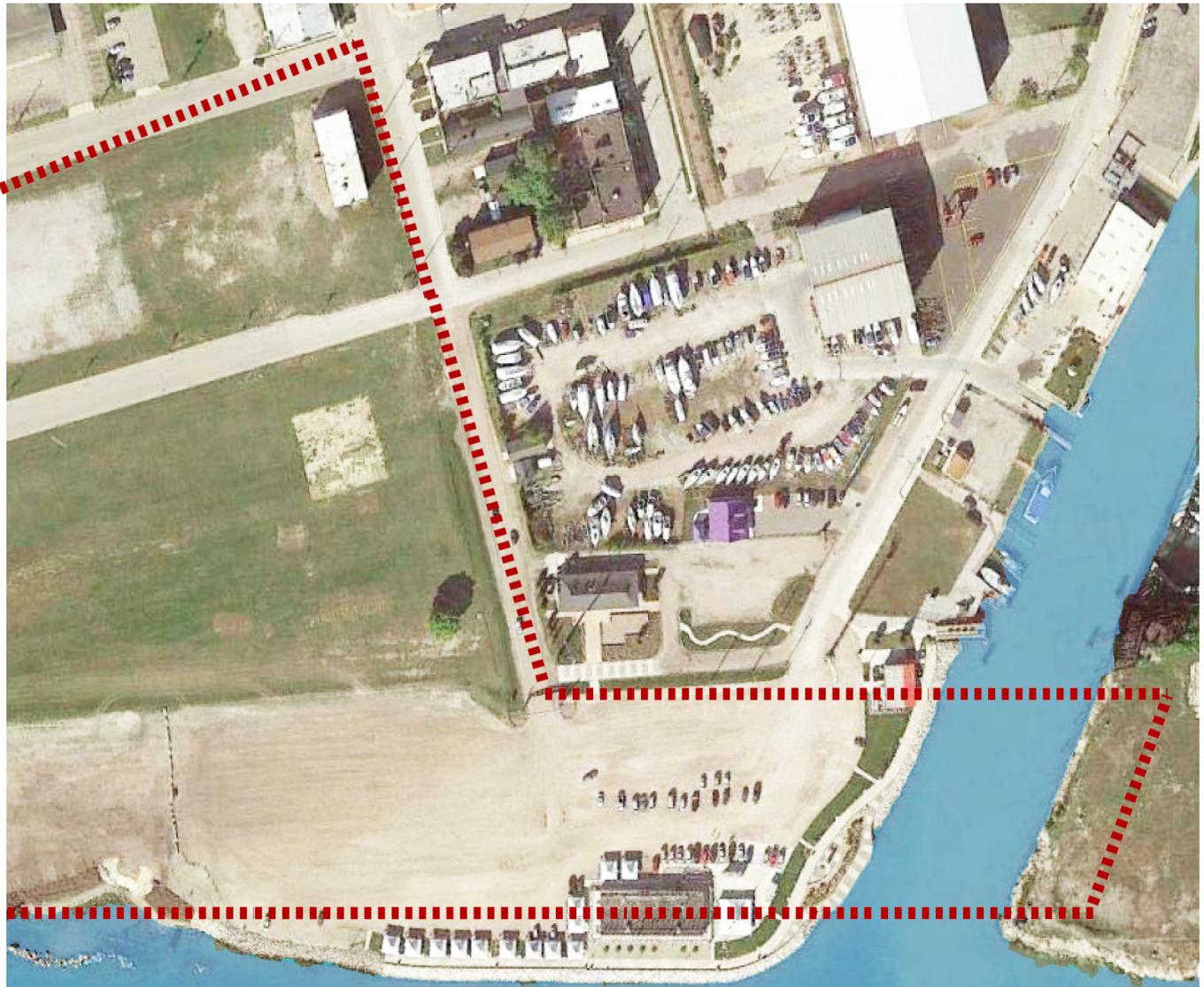


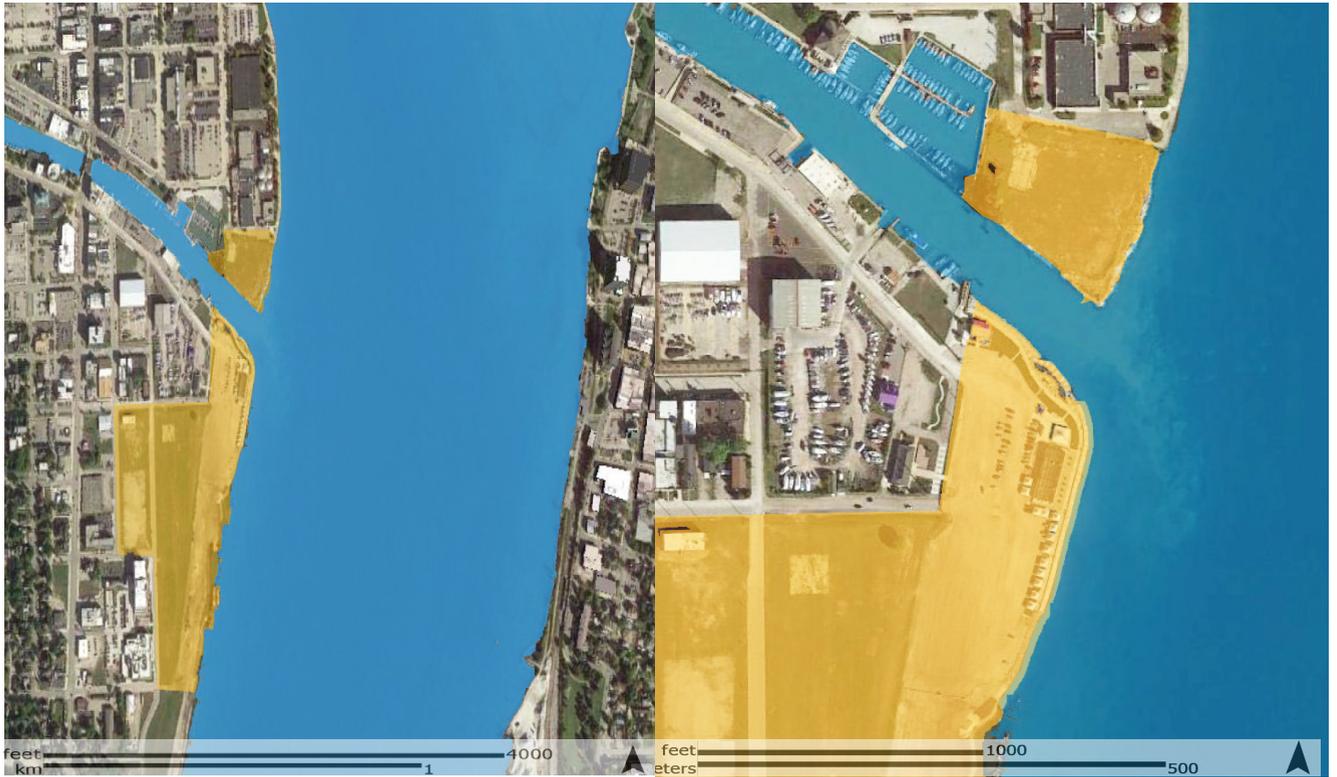
Dining/Entertainment



Tourist Opportunities







Site:Water St.

Focused In: Former CSX yard



Commercial

Residential



Institutional



Recreational



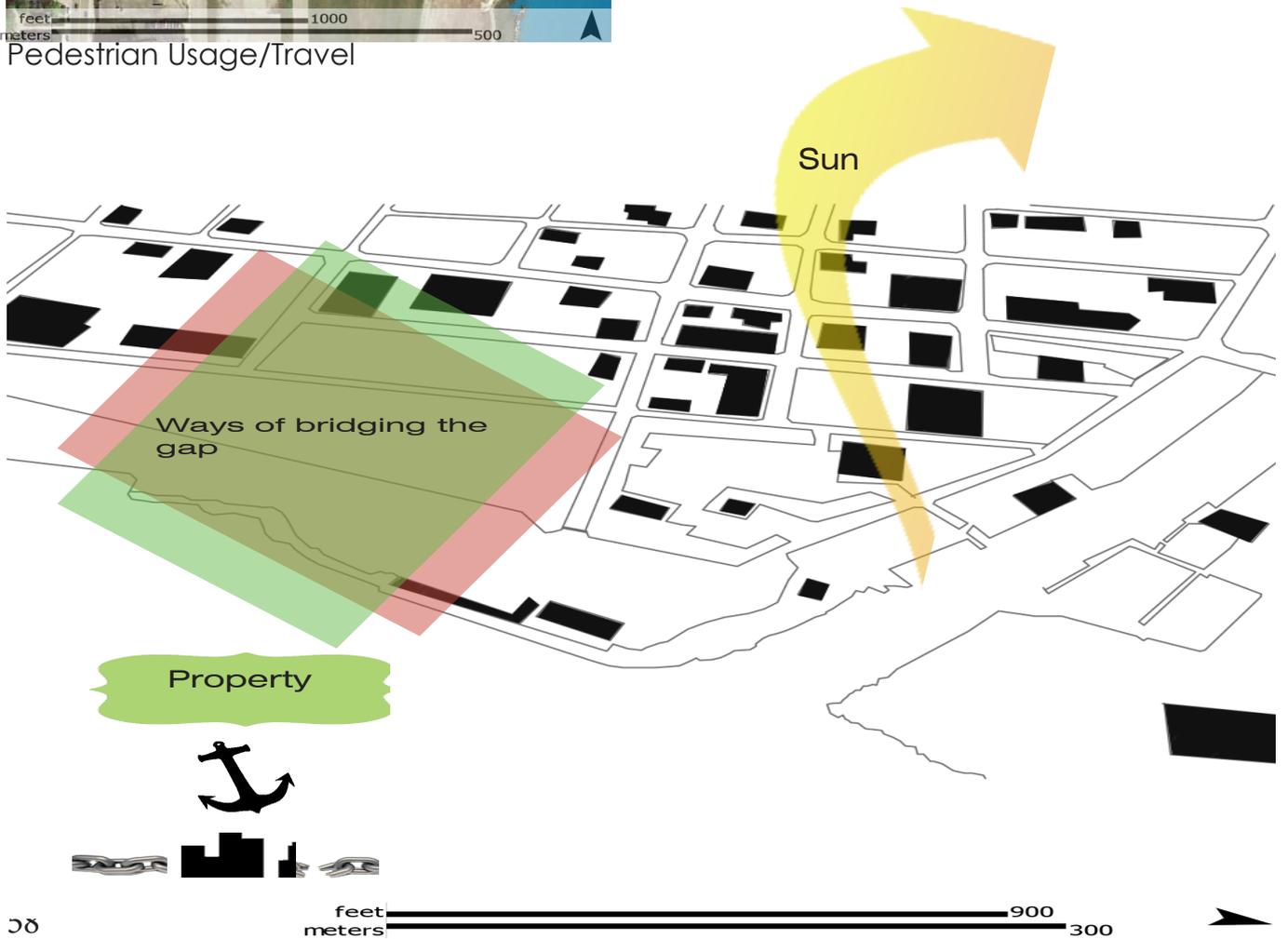
Main Access Points

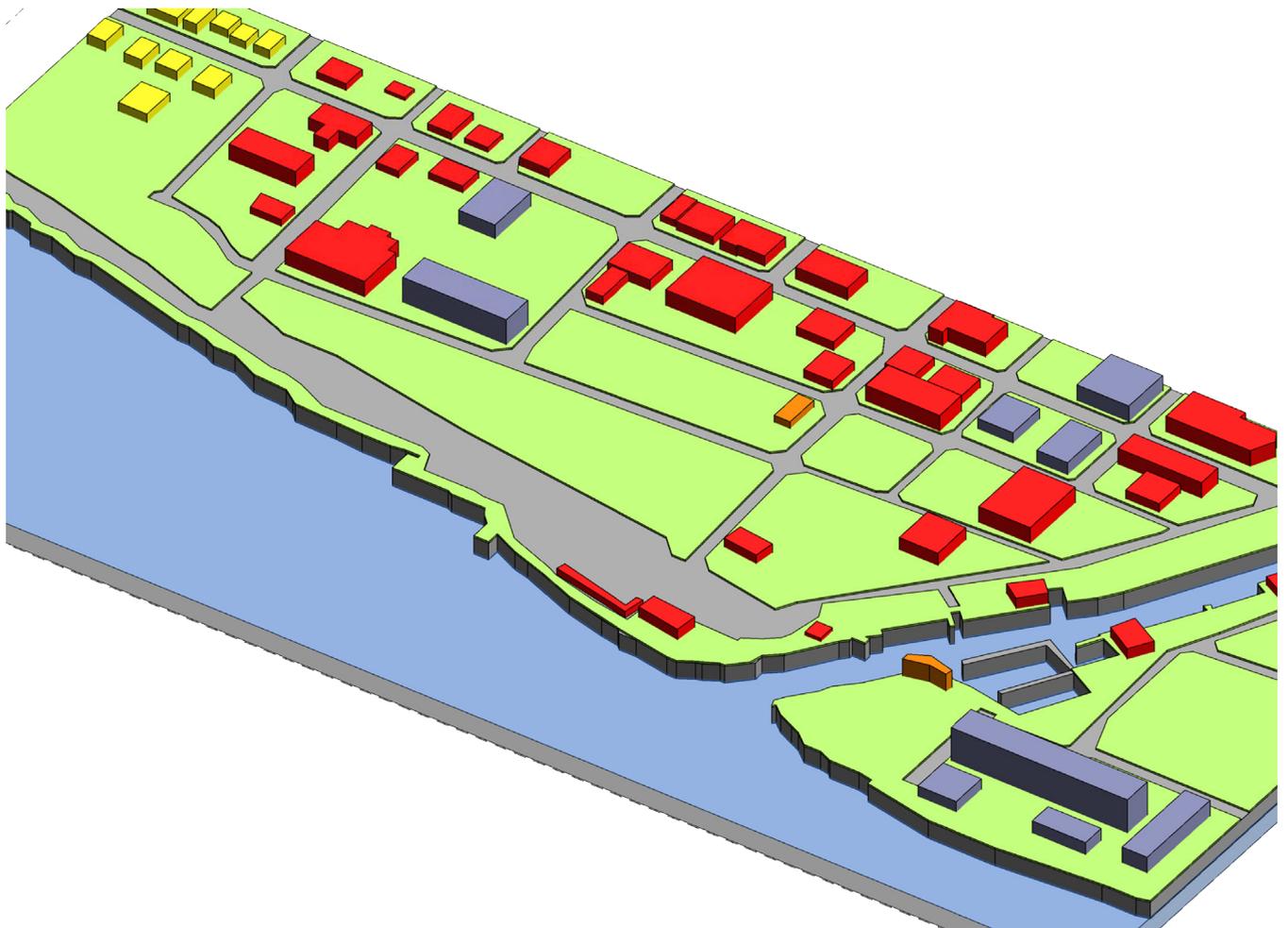


Historical (Rail Bridge)



Pedestrian Usage/Travel





Desmond Landing at present time





Port Huron City Time Line

1814- Fort
Gratiot built at
mouth of St.
Clair River

1833 -1st
bridge over
Black River
opens on
Military St

1825- Erie
Canal Opens/
Post office built
at Fort Gratiot

1837 - Proposal
to unite towns of
Desmond and
Gratiot to a
community called
Port Huron

1837-\$70,000
spent on rail
line from Black
River to Lake
Michigan

1846-

Fort Gratiot troops leave for Mexican War

1855-Soo

Canal opens/
Area becomes grounds for shipping manufacturing

1861-65

Civil War has 2,000 soldiers from St. Clair County join Union.

1869-

Added construction spawns 5 story high school, 3 story grade school and 3 city drawbridges

1848- Village of Port Huron Incorporated

1857-City of Port Huron Incorporated

1863-Thomas Edison leaves home of Port Huron to work at telegraph company in Ontario.

1870-Port Huron Gas Co. produces artificial gas/ county seat switches to Port Huron

1872-

Waterworks opens and replaces the town pump

1881- Village of Fort Gratiot incorporates/ 75 mile telephone line from PH to Detroit

1889- Port Huron merges with city if Fort Gratiot doubles its land size

1901- Sebastian Kresge opens up K Mart in city becoming second chain.

1920- Smuggling operations begin from the Prohibition

1877- City Customs House and Wolverine Drydocks built (Seaway Terminal)

1889- 6,025 foot St. Clair River Tunnel in construction

1908- Electric engines replace steam locomotives in St Clair River Tunnel

1926- Electric streetcars stop running in the city

1927-
Bus
Service
in city
begins

1936-
Tashmoo
Luxury
Steamer
sinks from
Port Huron
to Detroit

1949-
City
County
Building
burns
to the
ground

1959-
Pedestri-
an ferries
service to
and from
Sarnia

1967-
200 acres
of Port
Huron
Industrial
Park opens

1976-
Bus Service
Switches to
Blue Water
Transit

1932-
Coast
Guard
opens
station at
Fort Gratiot

1950-
City unveils
master
plan

1960-
Population
reaches all
time high
at 36,084

1970-
Lightship
Huron
retires from
service

1977-
Passenger
rail returns
to city/
Amtrak
station
opens

1984-
CSX rail
station
located
on
riverfront

1992- Last
segment of
I-69 from Port
Huron to
Indianapolis

2000-
Population
of 32,338

2002-
Acheson
Ventures
announce
31 acre
proposal to
public

1970-
Lightship
Huron
retires from
service

1989-
Birchwood
Mall opens

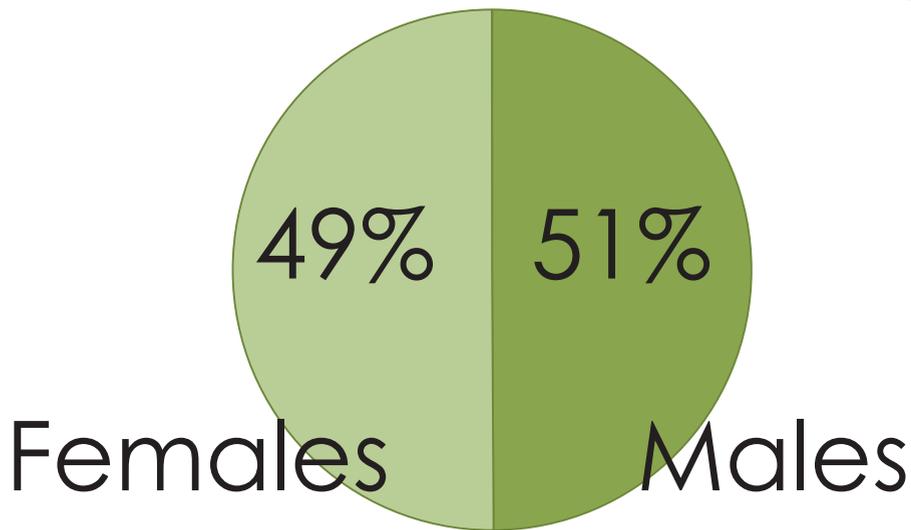
1995-
Construction
on second
span of
Blue Water
Bridge/Rail
ferry service
ends

2001-
Acheson
Ventures
announces
plans for
riverfront

2005-
Acheson
Ventures
removes
CSX rail
yard



Port Huron Data Sets



Median Age **35.8 years**

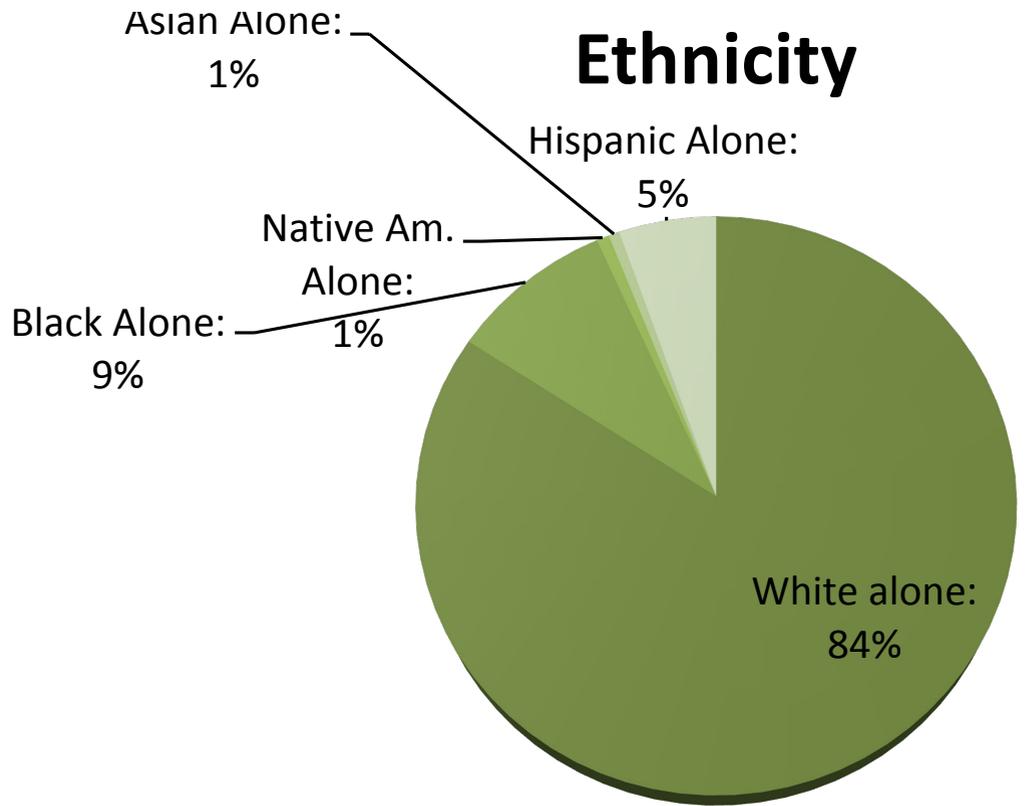
Persons under 5 yrs: **7.9%**

Persons under 18 yrs: **25.6%**

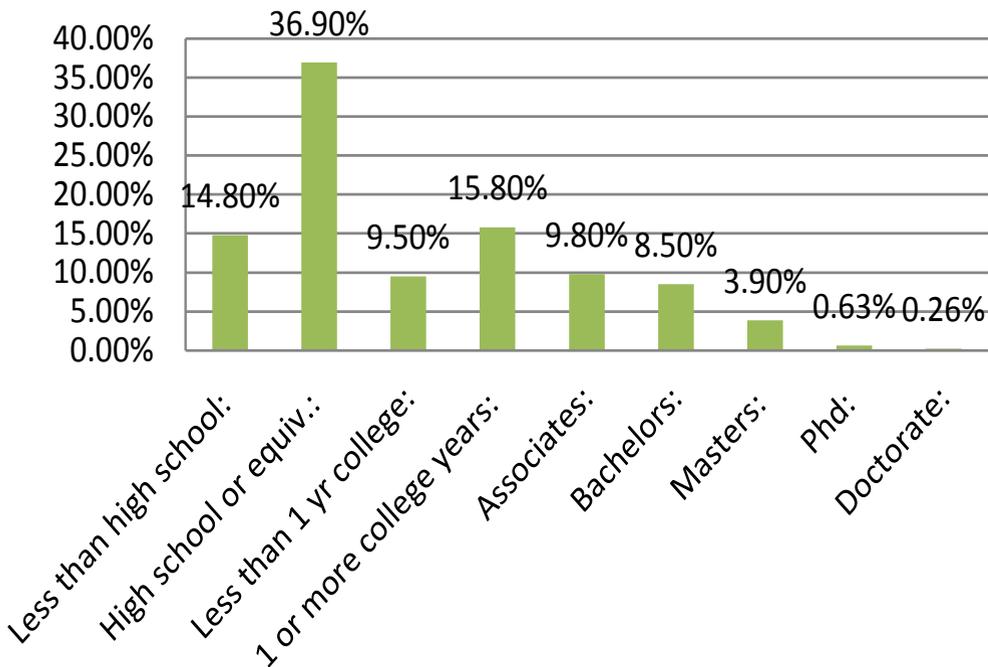
Persons 65 and over: **13.1 %**

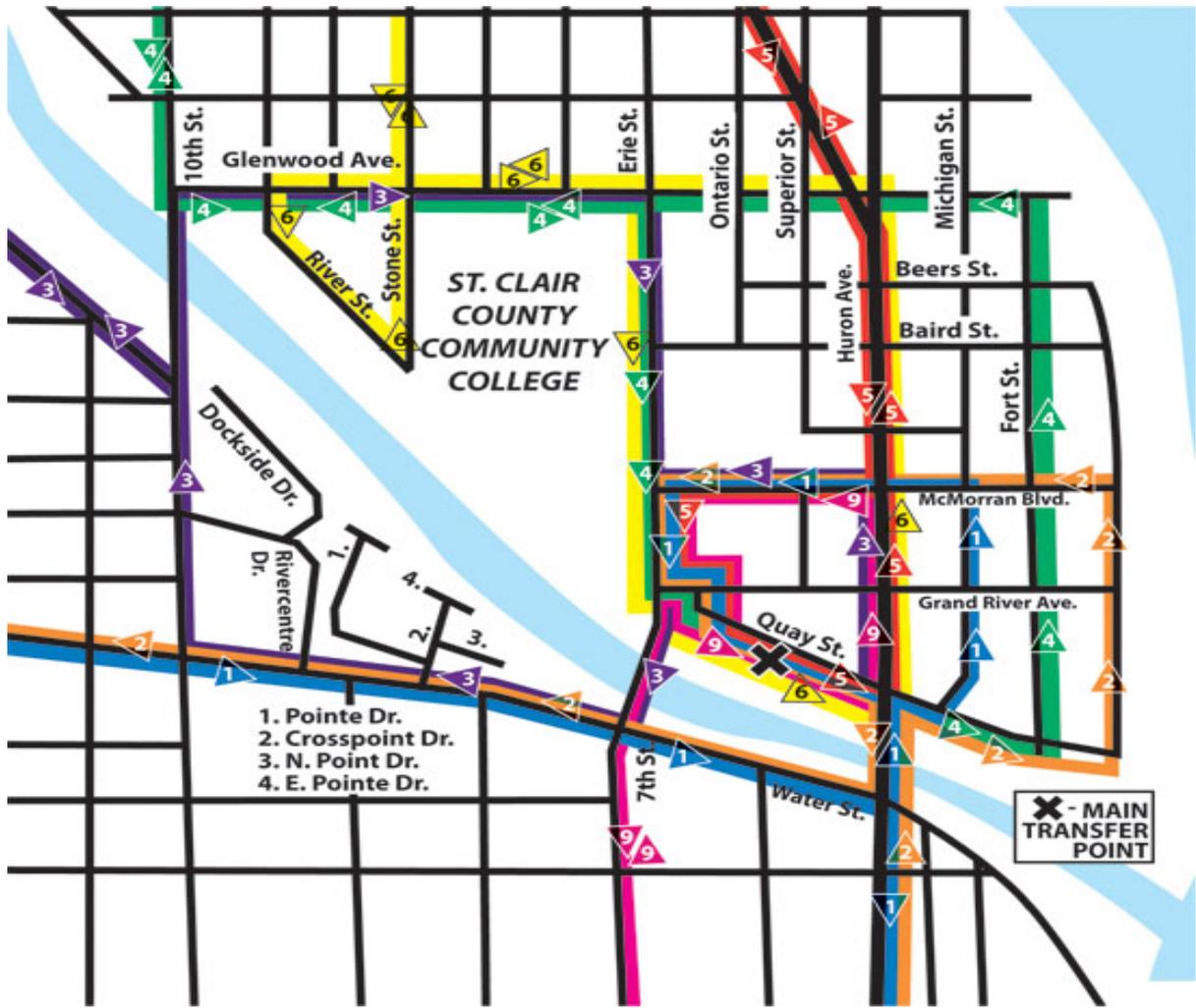
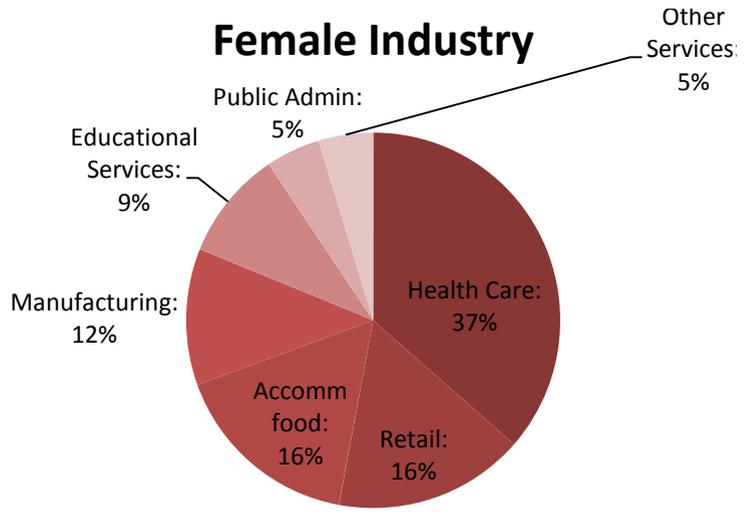
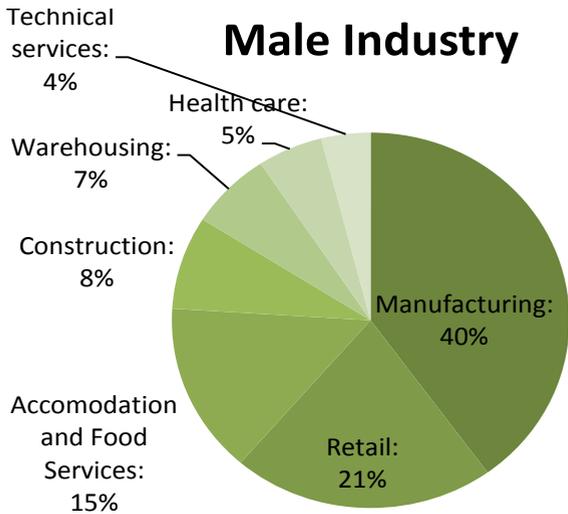


Ethnicity



Education Attainment





Blue Water Transit System in downtown

Blue Water Bridge



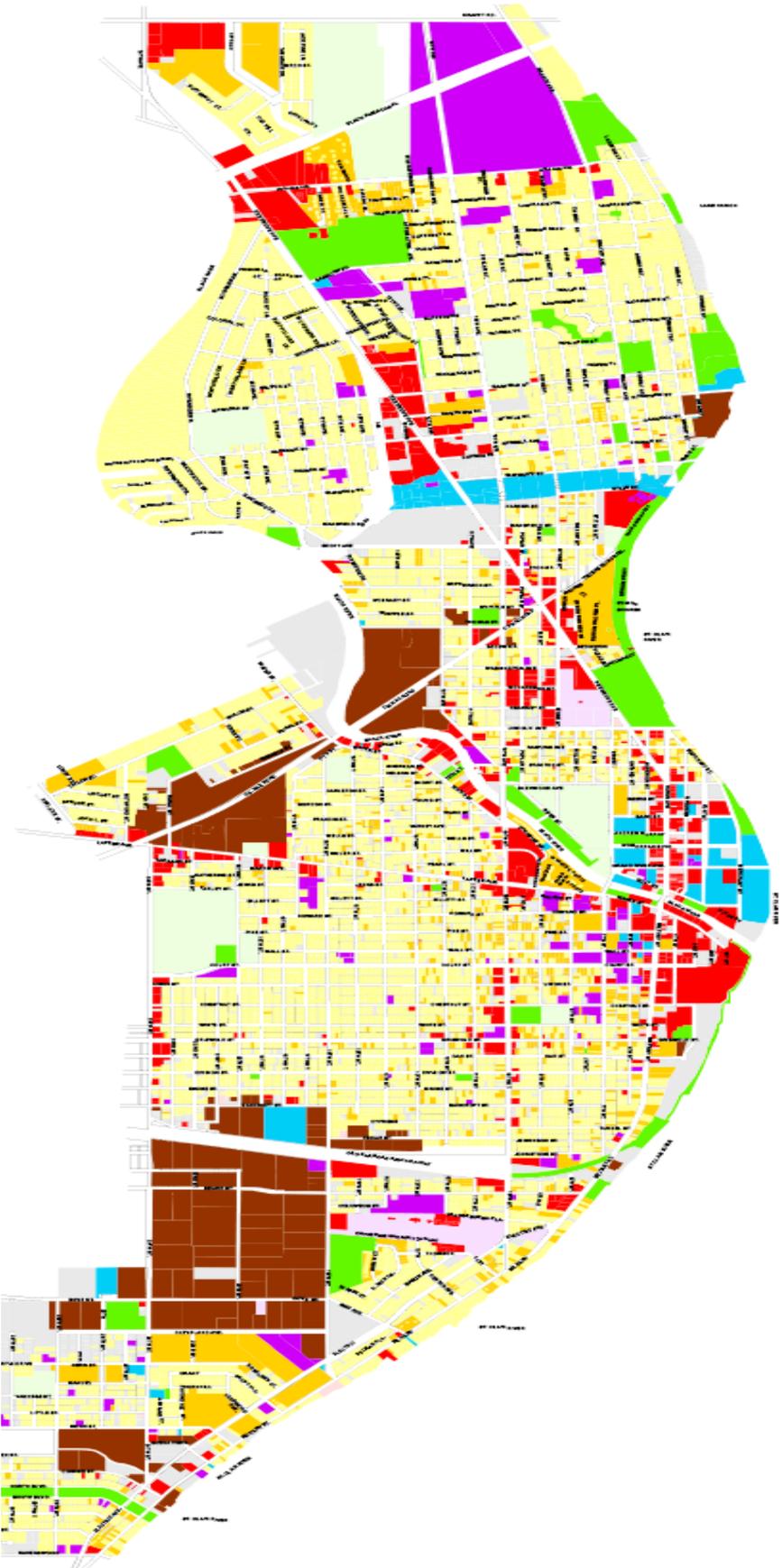
Total Average Daily Auto Traffic: 325,030

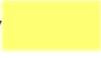
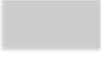
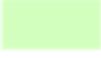
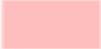
Total Average Daily Truck Only Traffic: 28,760



Desmond Landing

Land Use



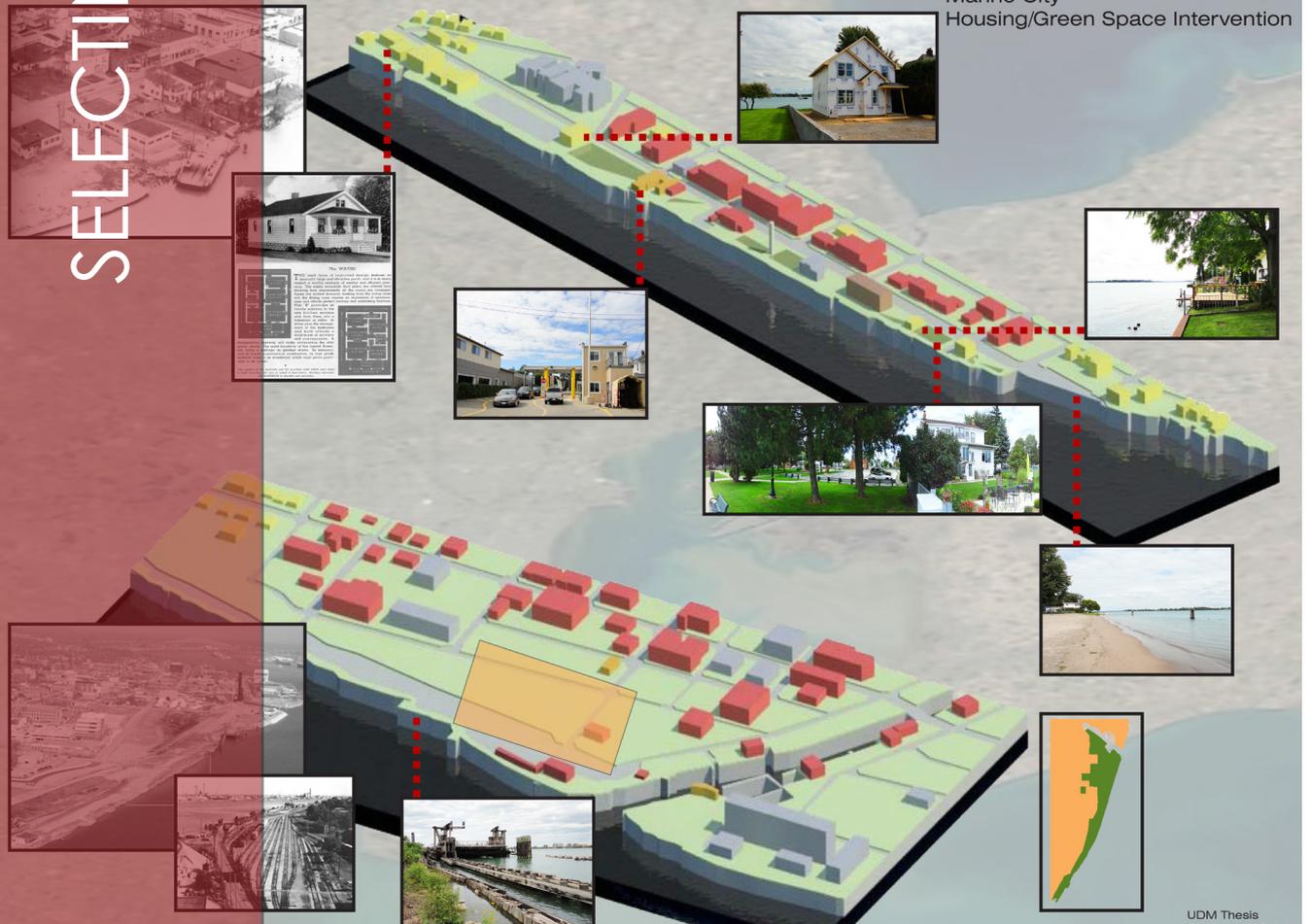
- Single Family 
- Multi Family 
- Commercial 
- Industrial 
- Institutional 
- Recreational 
- Vacant 
- Government 
- Schools 
- Medical 
- Mixed Use 

SELECTING PROJECT SITE

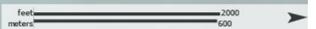
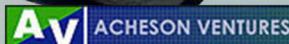
Multiple sketch problems were undertaken to research and evaluate the opportunities, challenges, and potential community impact posed by the development of each site. After reviewing the research, it became apparent that the Desmond Landing site, while a more daunting task due to its size and the challenge of blending its purpose in with the existing surrounding environments, could result in a project that would result in a greater impact for its community.

The site's concept of phasing out of its past industrial role as rail infrastructure and now overturning into a blank slate is a very beneficial factor for the city and the property of Desmond Landing. The site is in the heart of Port Huron's downtown and offers the opportunity for greater accessibility for more people to interact with the site. Coincidentally, there is a land developing firm that is currently attempting to process the site and determine its new role which is the issue that this thesis project is ultimately attempting to determine as well.

Marine City
Housing/Green Space Intervention

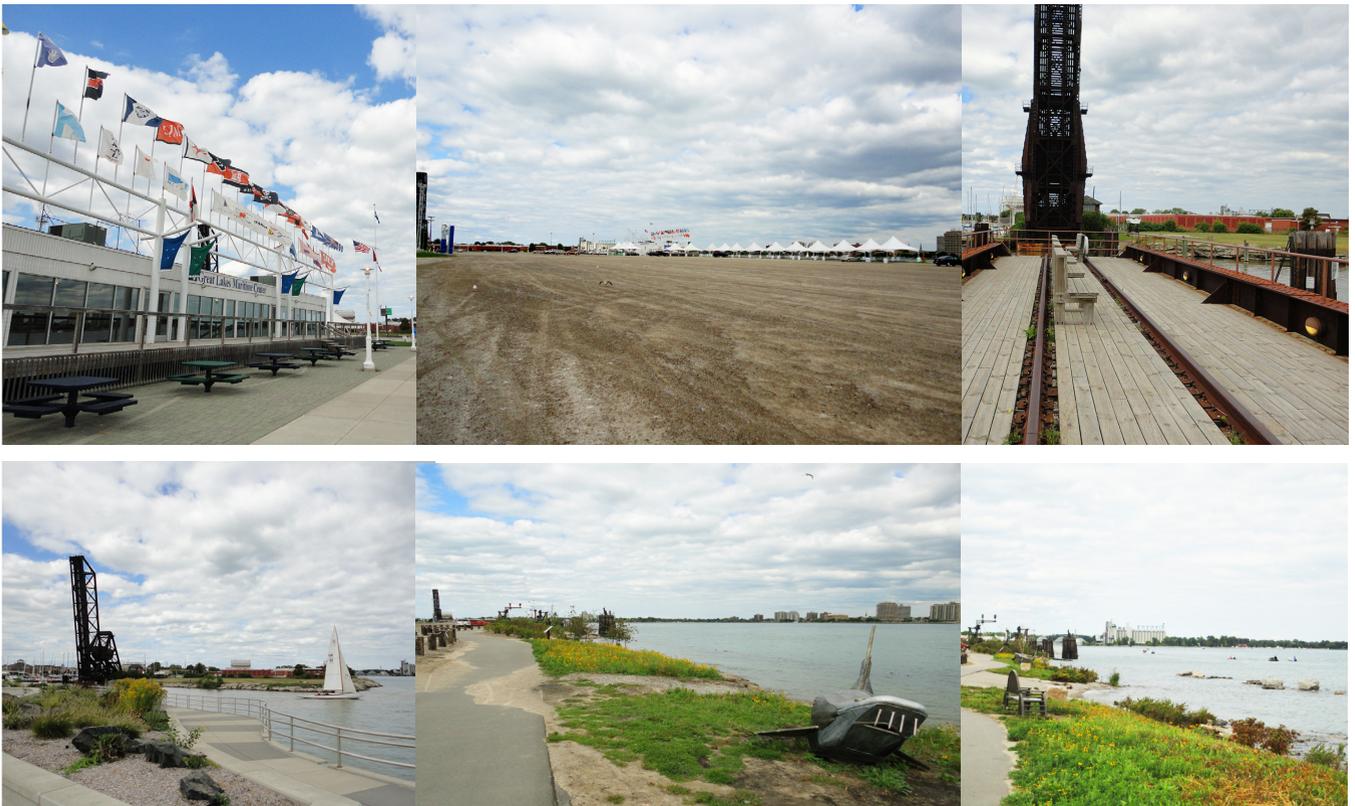


Port Huron
Scale and Property Intervention



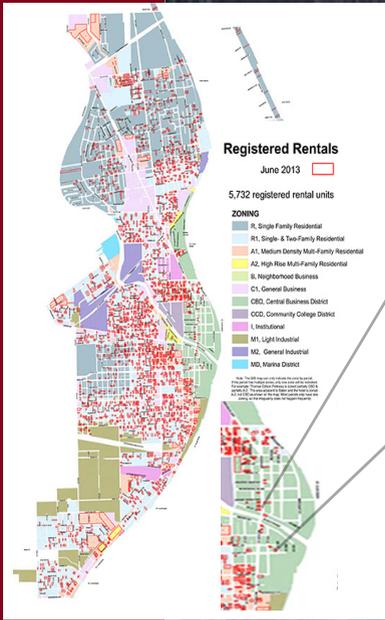
The Desmond Landing site is chosen as the site for the thesis project. The thesis project will look at the problems and concerns that the Desmond property and surrounding city area is facing in order to develop and progress into a suitable solution for the property and the city. The city council of Port Huron has analyzed and listed issues and concerns with the city's infrastructure and how to benefit the community and the thesis project will hold those issues in consideration.

DESMOND LANDING/VANTAGE POINT



RESIDENTIAL SKETCH PROBLEM

Port Huron Housing Sketch Problem



City Council Housing Summary Report (2013)

- Issues:**
- Blight in Neighborhoods
 - City contains unreasonable amount of rental units
 - Tenants do not upkeep their property condition
 - Problem of "Rent-to Own" business
 - Eliminate conversions of single family homes to rentals
 - Economic incentives for developers to build new infill housing



Executive Summary Target Market (2007)

Household Type:

Empty-Nesters & Retirees	=35 %
Traditional & Non-Traditional Families	=26 %
Younger Singles & Couples	=39 %

"6. Desmond Landing Area: Its location next to St. Clair River, being adjacent to downtown, and percentage of available land, makes it an excellent location to add housing units for middle and up-per-end of the optimum market."



Russeville Commons
Portland, Oregon
MCM Architects

Waterfront Apartments
Petaluma, CA
Midstate Construction



Mixed Residential Townhome/Condo Complex

- (6) 1 Bedroom = 600 SF
- (8) 2 Bedroom = 1200 SF
- (16) 3 Bedroom = 1500 SF
- (2) High Rise Ap. = 8800 SF Build Footprint
- (1) High Rise Ap. = 16,800 SF Build Footprint
- (1) High Rise Ap. = 24,000 SF Build Footprint



2738 Wright St (\$79,000)

835 N. Pointe (\$250,000)

747 Pointe Dr (\$171,000)

350 Front St, (\$2,750/mo)



RESIDENTIAL SKETCH

In moving forward with the Desmond Landing property in Port Huron, a sketch problem took place on the residential situation with the city of Port Huron. In the Port Huron City Council Housing Report of 2003 there were statements that the city is undergoing issues of blight due to its heavy presence of rental units in the area. The city contains an unreasonable amount of its rental units for as of June 2013, there are reported 5,732 registered rentals¹. Out of 13,000 homes forty five percent are registered rentals and there are even ten percent that are unregistered. Tenants do no upkeep their property conditions and the units fall into disrepair quickly. Another issue that the city council has taken notice of is the problem of "Rent to Own" business. This happens when vendors buy up large properties of land cheaply on the internet and sell them to people on a land contract which means that people do not have to go through a traditional homeowners application process in order to determine if they qualify for the home or not. The report noted that the council wanted to eliminate conversions of single family homes to rentals as well as provide economic incentives for developers to build new infill housing.

There was also an Executive Summary Target Market Report of Port Huron done in 2007 analyzing household types and areas in the city. It was stated in the report that the property of Desmond Landing with its waterfront appeal, proximity to downtown, and availability of land is an ideal location for the opportunity of middle class housing unit development. The report contained three main categories of household type with empty nesters and retirees occupying thirty five percent of the city population, traditional and non-traditional families occupying twenty six percent, and younger singles and couples occupying the remaining thirty nine percent². There is a form of transition that is taking place for homes as a startup situation with younger and single couples and is also an ending situation with retirees and empty nesters. A plan can be set and arranged for a residential program to serve that clientele in their transition periods. A condominium or apartment type program could look to benefit the needs of the younger and single couples that are just starting out without a big family and do not need to take care of a house,

1. Rental Demographics and surveys are red in Bruce Brown.
2. Additional data can be found in the "Executive Summary".

but could situate themselves in a condo setting. This concept will adhere to an ending situation as well with empty nesters that do not need to have their larger house type anymore as their kids are all starting their own family and a mixed use condo arrangement could be seen as a finer transition.

The existing condo programs in the city of Port Huron lent themselves more to a less affordable clientele with expansive condo property and private boat slips. The condominium complex of 747 Point Drive in the city off the Black River is served toward one of those clients with a rate of \$171,000 and the wide spaced condos along 835 North in the city are rated at \$250,000. A more suitable goal for a condo complex in the city is located at 2738 Wright Street which is a rate of \$79,000.

The buildings in the commercial district as well as the whole downtown do not generally go beyond three stories, however just across the river in Sarnia, Ontario there are office and residential structures that rise up to ten to twelve floors. For example, 350 Front Street is a twelve story residential condo and apartment building that goes for 2,750 per month.

This project will experiment and consider the balance and composition of high rise programs for the developing property. The sketch problem for the residential mixed use condo arrangement was concluded with a proposal for residential structures being placed mainly downriver from the point of the Black River. There contained three high rise structures with build footprints of 24,000 SF, 16,800 SF, and 8800 SF. There were also staggered separate complex structures along the shoreline and property with a mixture of sixteen three bedroom units of 1500 SF, eight two bedroom units of 1,200 SF, and six one bedroom units of 6,000 SF.

The residential sketch problem was done to experiment and visualize an issue that the city council has and provide a solution such as the condo and mixed use program. The sketch problem was not to have a concrete proposal plan for what should be on the site, but it assisted in determining a possible programmatic solution for the need for a housing solution in the city.

MARKET SKETCH PROBLEM



MARKET SKETCH

Another sketch problem of the Desmond landing site was taken this time regarding the role of Acheson Ventures and the city's plan of a farmers market. The Acheson Ventures land developing firm's twelve year goal is designed with a node of activity to take place on the site with a program of a convention center. The convention center is to be planned at the point similar to where the maritime center is now, but built more in the center away from the water and there will be retail stemming out in development from that. After doing research on the buildings and current development situation in the area, there is already a convention center for the city currently being built not even two mile up the road from Military Street. The city's new convention center, the Blue Water Area Convention, is in construction and located near the Blue Water Bridge on the Thomas Edison Parkway. Taking a different approach, the project will look at what is happening right now at the Desmond Landing site. There is a community framework already beginning to take shape that can be researched and expanded upon further with the farmers market.

On the point of the Black River, existing is the temporary trailer structure of the Maritime Center and nearby is a row of ten twenty by twenty white canvas tents that provides the vending area for the Vantage Point Farmers Market. The community market is made up of forty local vendors and takes place three days a week from eight a.m. to two p.m. Right along the waterfront there is many activity and local interactions taking place. The site's Blue Water River Walk plays an important role with the market as well since the vendors all line up right along the pathway. Joggers and passersby not even intending to visit the market as their destination will have to traverse through it and interact with the activity taking place. There is also a small cluster of food trucks that park themselves near the maritime center for people to sit, eat and relax at.

The city of Port Huron is looking to expand this strategy into a more permanent setting. The market currently goes from May 9th to October 31st, but a program for permanent structures could provide the opportunity to expand the market to an annual arrangement. The city also wants to expand the quantity of vendors and double their size from forty vendors to eighty vendors needing more shed space and area to 81

develop. The event of the farmers market on the property could provide the potential to become a focal point or node for the area to bridge the gap and create a retail spine towards Military Street.

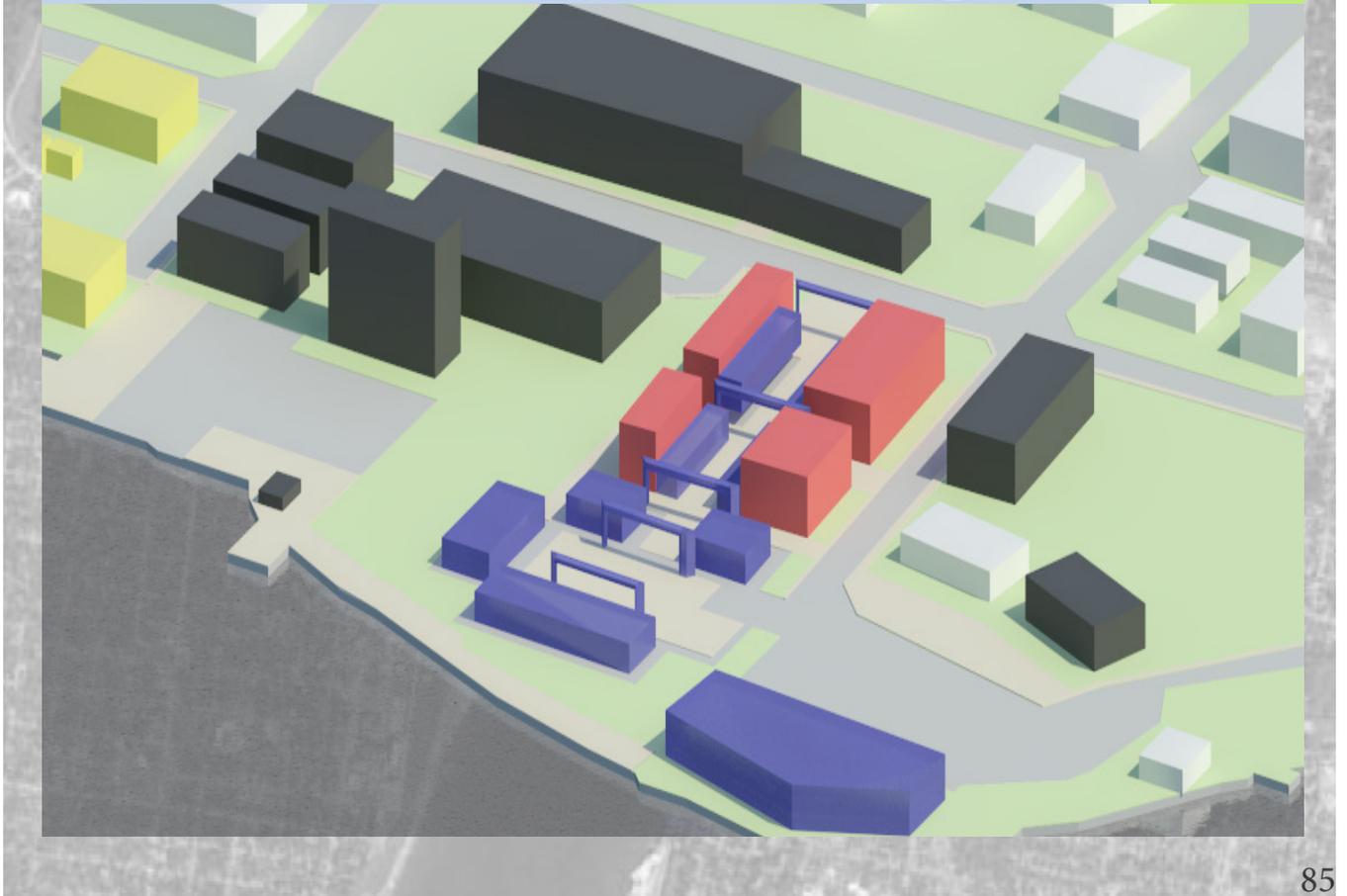
For the sketch problem of the market's design role, a few schemes for the Desmond Landing property were worked out where the farmers market and maritime center provides a community node and spine for redeveloping the surrounding area. In all three schemes the maritime center was also redeveloped in a more permanent structure as the city and property both contain a heavy significance with shipping and wanting to preserve the shipping culture. The reconstruction program for the maritime center has opportunity through adding tourist draw and interactive education into the area.



SCHEME 1

The first scheme that was undergone set itself up as a linear market walking corridor with rectangular market sheds on either side leading down to a plaza of smaller market sheds. To support the corridor area seasonally commercial and retail structures were designed along the pathway so that there is always some form of activity taking place. The maritime center is reconstructed on the point of the Black River. There was also a direction to cut inward in the form of a marina program, as it is prohibited to build out into international waters and there are no marina programs existing south of the Black River.

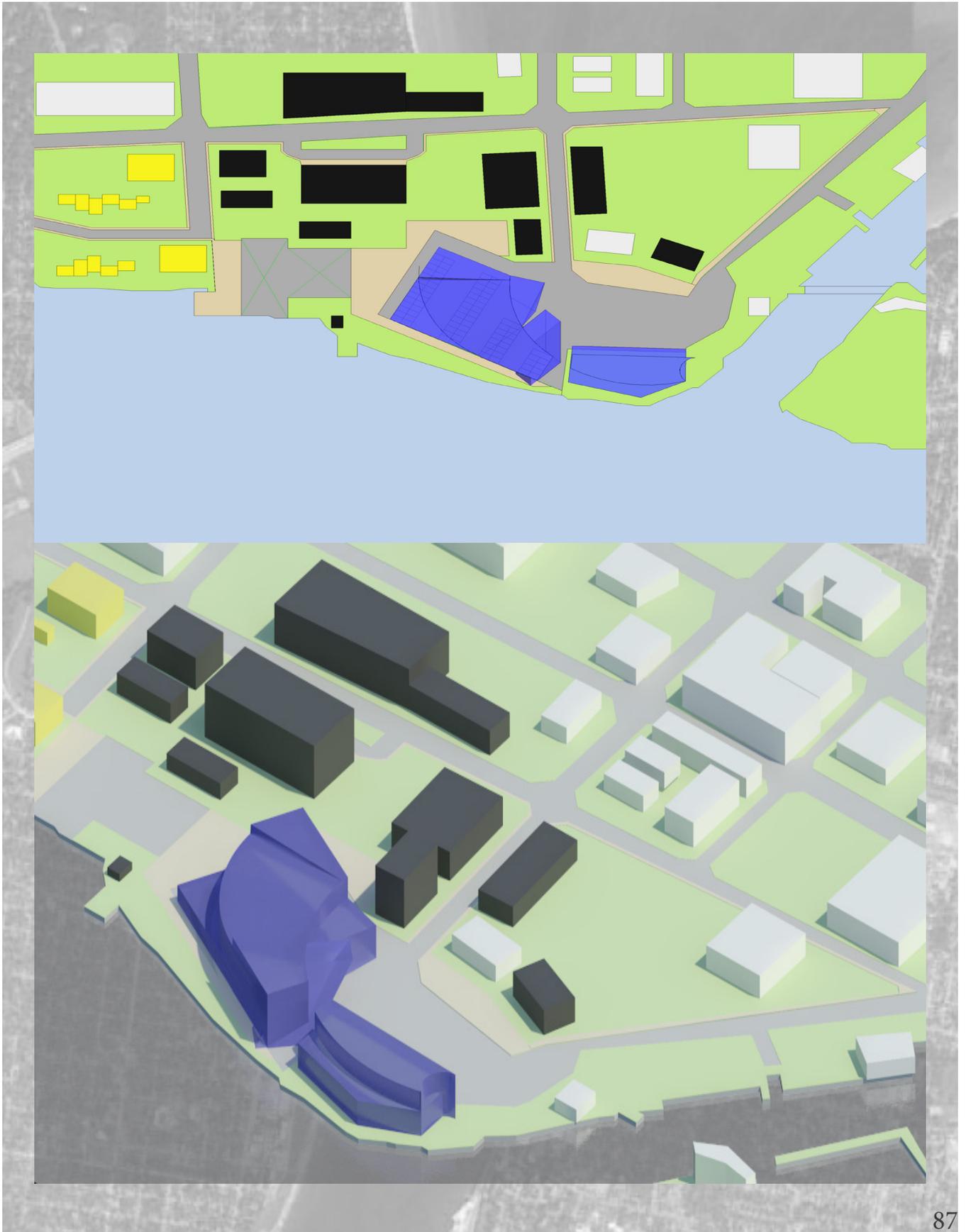




SCHEME 2

The second scheme took on the role of a single permanent market structure with the adjacent maritime center. A walking plaza surrounds the exterior of the market building. The experiment of arranging and placing all the vendors in one indoor structure lost the experience of interactivity that the farmers market holds currently outdoors. The connection to passersby is absent and there is not an integration of the site's ground and views displayed from it.

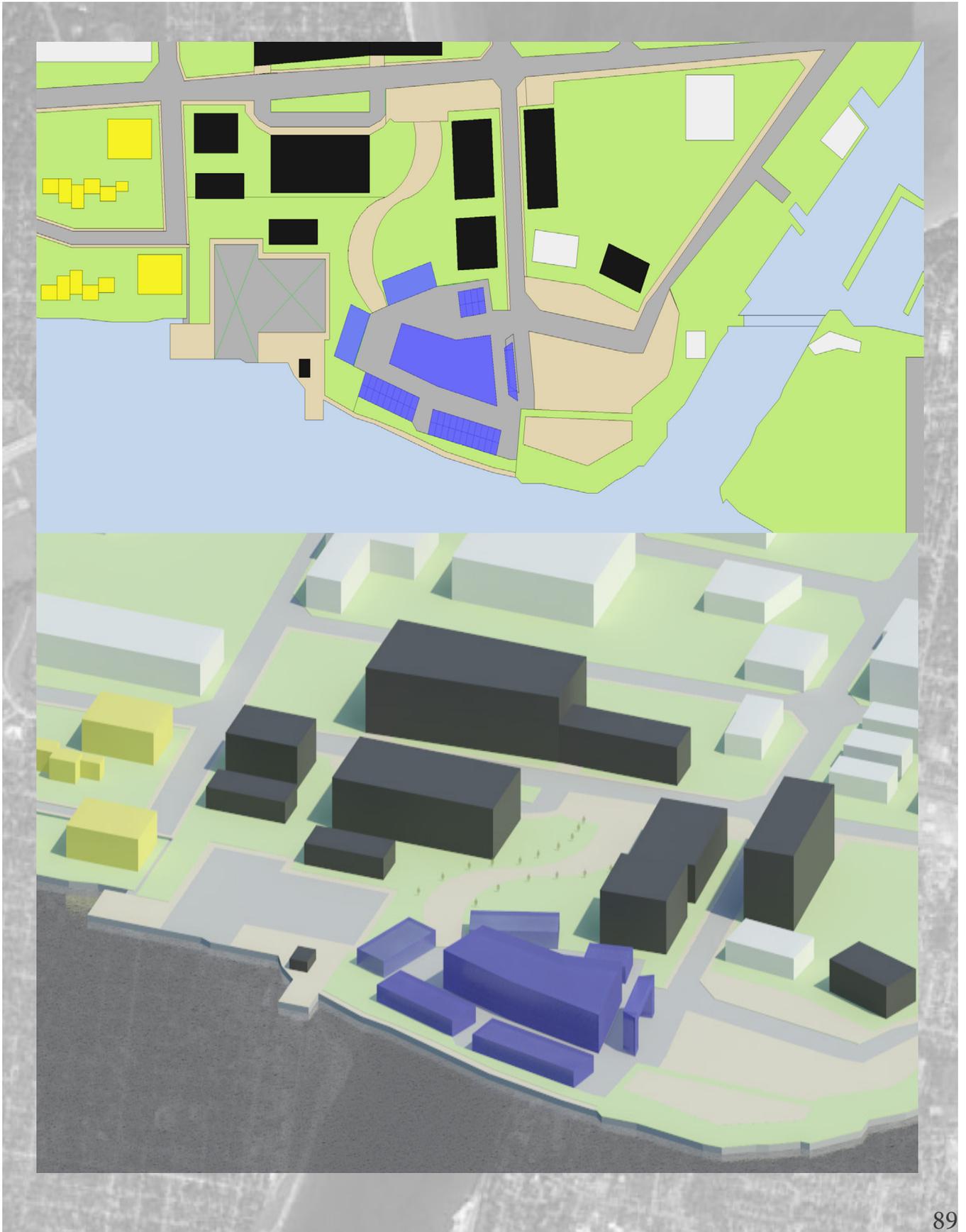




SCHEME 3

A third scheme was undertaken set up as a cluster of market sheds in a plaza surrounding a newly developed multi story maritime center. The ground floor of the maritime center could have the opportunity to be used as market space using the second floor as the freighter viewing area and education center. In this space visitors can look out over the market sheds to the river.





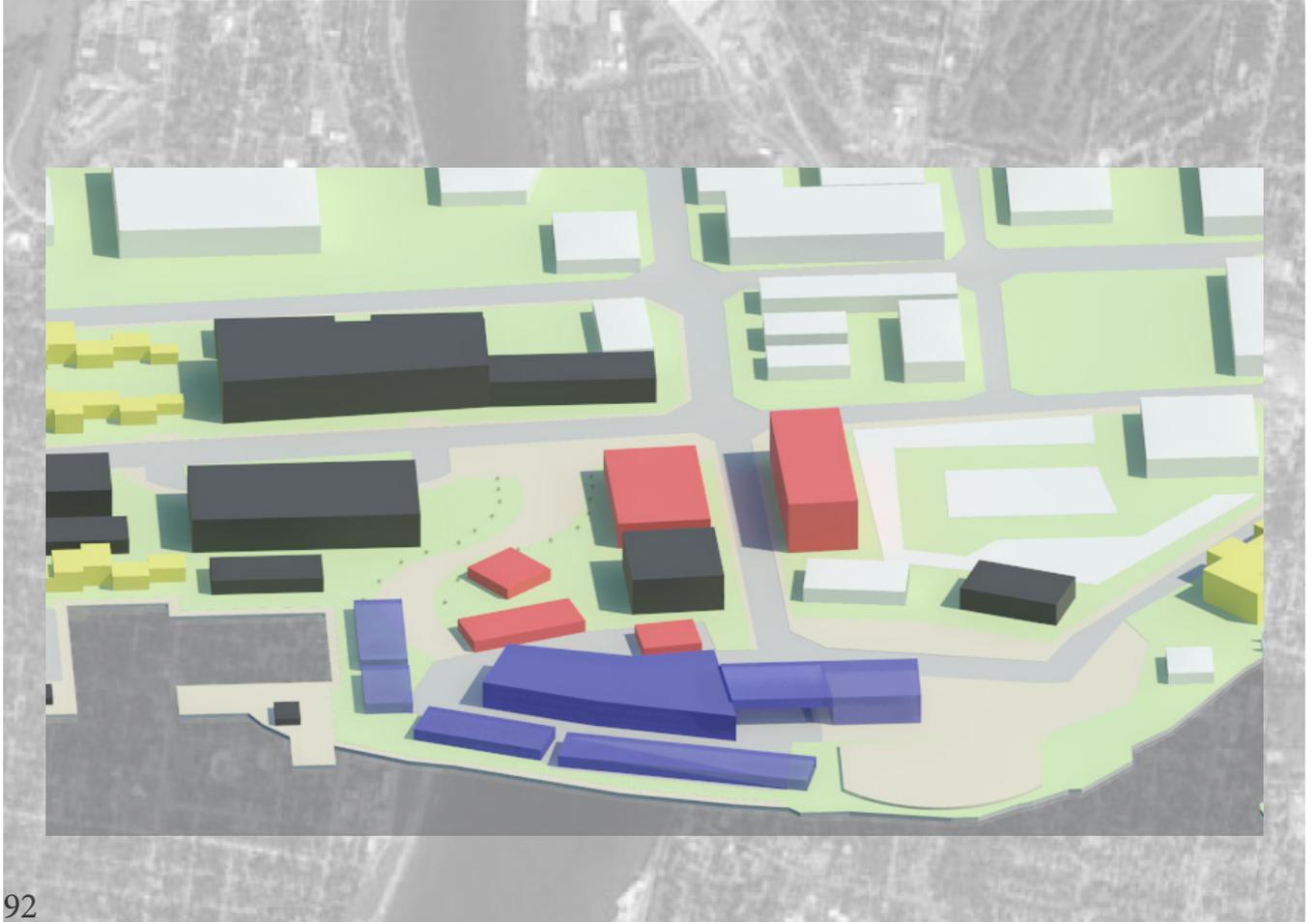
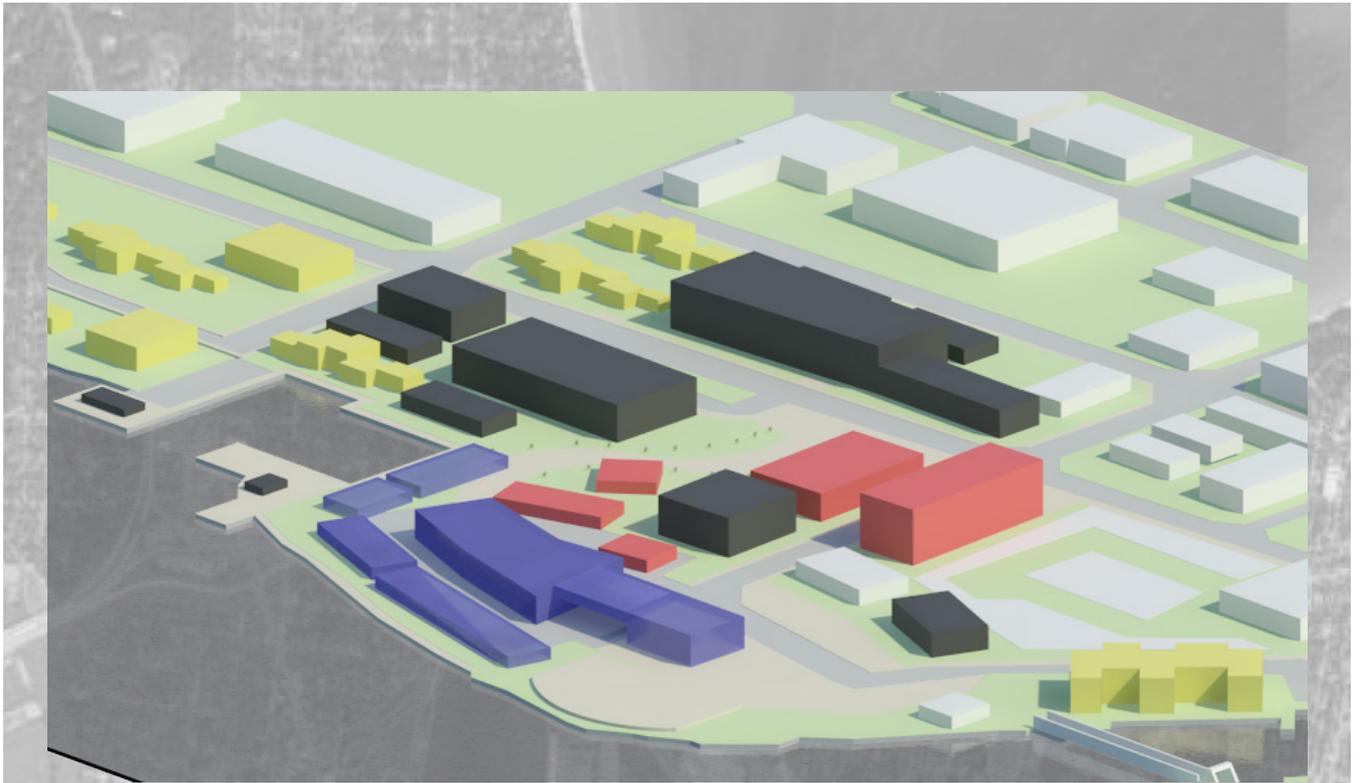
CONSOLIDATED SCHEME (1 and 3)

Schemes one and three were consolidated to arrange a more comprehensive proposal. All the market sheds were taken and placed along the riverfront and marina area. A commercial spine was created up from Military Street down to the point where the newly developed maritime center is segmented and split with education and viewing areas in separate areas. There is a space on the point allotted for an outdoor auditorium and there is a lot designed off of Water Street for the potential of a food truck area and outdoor dining program. The scheme continues to add the proposal for the mixed use condo program of complexes to be sprinkled downriver to blend near the cut in marina with pavilions and a boat launch on the residential side. The historical railroad bridge will also be used in the scheme to be renovated and reused for pedestrian access across the Black River.

The market proposals and sketch problem was done again to experiment with the market issues taking place at the Desmond Landing site currently. This assisted in visualizing how to expand from a focal point or node to provide various roles to the property in search of impacting and benefiting the community. The sketch problem contributed in determining a possible programmatic arrangement for developing the farmers market and maritime center as the node to situate and design a spine of development on the 30 acre site area.







RIVERFRONT AS ANCHOR FOR REDEVELOPMENT

The core of the thesis shifts to revolve around the concept of using the waterfront as a catalyst for the city's growth and development, posing the question how does one design to establish an anchor for Port Huron's economic benefit causing its success to spearhead additional augmentation and constructional growth. This implementation of anchors for Desmond Landing will adhere to the issues and opportunities taking place in Port Huron.

In reviewing the research and data of the city, there are some concerns of the community that can be found and recognized. There is a concern with maintaining the younger population to remain and live in the city and take advantage of the manufacturing job opportunities in the



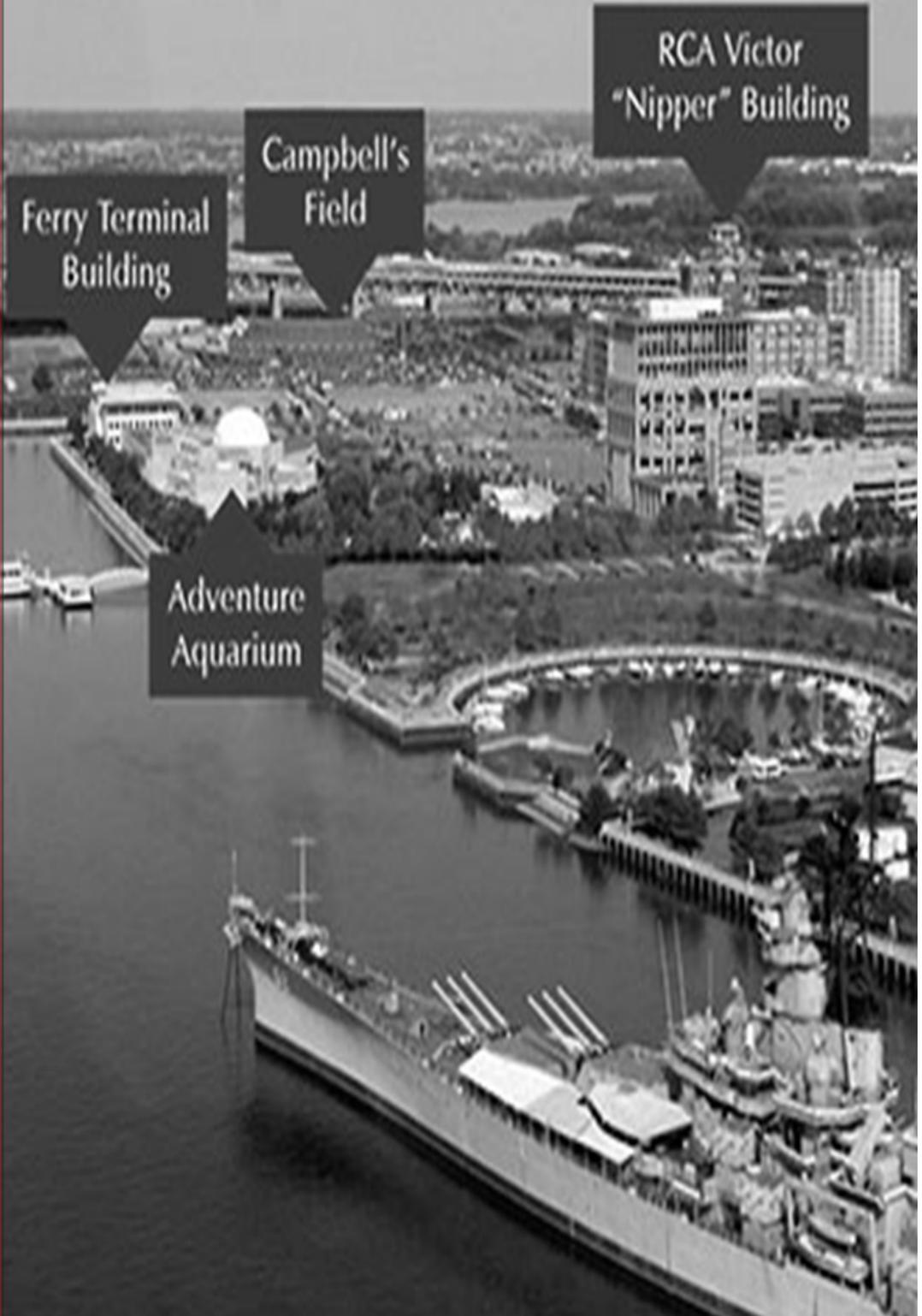
region. This is to ensure a proper education to further increase the education level as sixty percent of the city has less than a year of college and below. The city's lack of density also plays as a concern with the majority of residences being single family homes and limited apartments. There are no buildings over three stories, which contrasts to Sarnia's multiple high rises of eight stories and more.

The city is lacking in athletic venues , such as the city lost their hockey team due to their rink where they played at, the McMorran Place, was not in regulation of UHL hockey standards. In looking at other usages of athletics, the closest indoor soccer facility is forty miles away in Shelby Township.

There is also a lacking in bringing in tourism draw to the riverfront, and as being stated as the maritime capital of the Great Lakes, the city could better take advantage of its maritime heritage. This effect could draw in maritime tourism in conjunction with additional riverfront activities.



CATALYST CASES



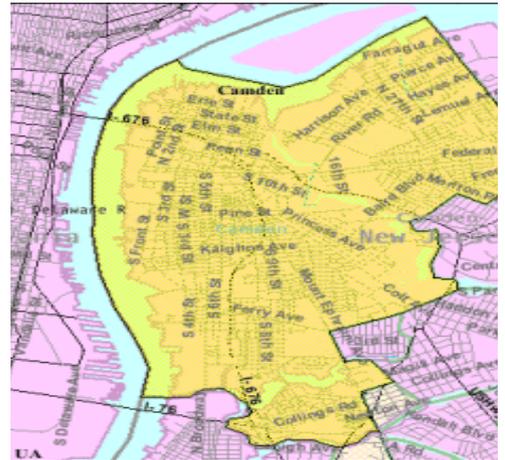
In reviewing case studies that based themselves with designing riverfront catalysts, there were two studies of the research ,in particular, that were at a stage comparable to Port Huron. Both cities of the case studies also took it upon themselves to use the riverfront as their catalyst to develop.

The two cases were in Camden, New Jersey and Dubuque, Iowa and each took different approaches at dealing with their anchors in determining how to draw in people into their riverfront and benefit the city as a whole. One plan was more strategic and successful than the other. The catalyst in Camden took an approach to focus on a single institution as an expanded aquarium. Dubuque's plan for their catalyst was set in phases and became a framework of multiple institutions of a museum, aquarium, harbor resort, and riverfront marina.

Along with the differences in the mentioned case studies being ethnicity, location, and the allocation of money given for the project, Dubuque's usage of multiple anchors deemed itself more successful because each institution was able to support the other and benefit from the project phases.

The Desmond Landing project will utilize that ideal and follow the model of the diversified multiple institution approach

CAMDEN, NEW JERSEY



One approach that a city attempted at using the river as a catalyst was done in Camden across the Delaware River from Philadelphia. Camden's waterfront became a center of industry in the 1800's¹. During the mid 20th century there was a new highway system and a post industrial economy turned the waterfront to a symbol of decline eventually stopping the ferry service in 1952. State politicians sought to give new life to the Camden by converting its waterfront.

In 1992 Camden's aquarium opened up along with a concert arena, children's garden, Campbell's Field, and the USS Jersey. This concept of bringing in tourism did not create the vibe it was going for, and eight years later, the city continued to have problems. Camden was listed as the second dangerous city in America and the poorest medium sized city with 40% living under the poverty line, The state of New Jersey stepped in enacting the Municipal Rehabilitation and Economic Recovery Act. One of the main strategies for this was to aid the city by enhancing its strengths, in which case the waterfront was seen as to play the engine of economic development.

Other than the plans for the waterfront, the state planned to build health and education systems with three colleges and two planned medical centers. There was 175 million total dollars invested the recovery efforts and while the hospital expansions and Camden

1. The financial gains and losses can be found further in Katz

City Data (as of 2012)

Population: 77,250

Median Income: \$25,681

Race: Hispanic (49.6%), Black (42.8%),
White (4.1%), Asian (1.6%)

Land Area: 8.82 Square Miles

Unemployment: 16.8%

Industries: Construction (9%),
Waste Management (8%),
Accommodation/food (7%),
Education (5%),
Public Admin. (5%),
Metal Products (5%),
Health Care (4%)

College benefited the city, the waterfront was not as beneficial. Millions of dollars were used to expand the aquarium and other neighboring anchor institutions to increase the opportunities for tourism. Policy makers told city residents that the aquarium expansion will provide jobs and that there would be job training for city residents, however the aquarium operations were sold to another company two years after and the training stopped. Before the recovery act approximately 43% of aquarium employees were from Camden, but after the act that number dwindled to twenty eight.

The Camden aquarium expansion overall failed to meet expectations and attendance dropped sharply soon after the first year. Other proposed projects for the riverfront in the city such as Coopers Crossing, an office complex on the river, were shelved and have been suspended. Overall the use of making an aquarium expansion as the catalyst for increased tourism and development was unsuccessful.





Plan:

Policy makers plan to attract people to return to Camden, thus leading to more jobs (state appointed aquarium to be anchor for catalyst of critical mass of development)



Result:

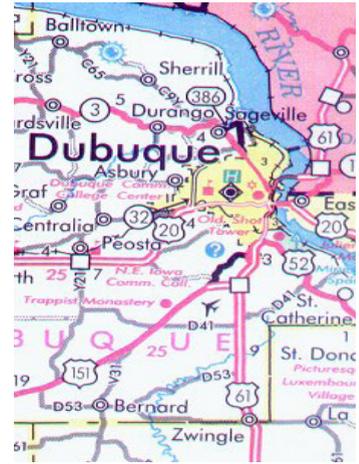
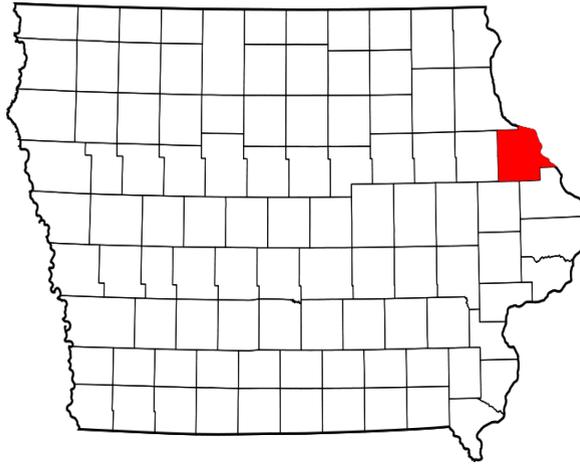
Failed to meet expectations as attendance went down first year and proposed developments (Coopers Ferry) were suspended

Municipal Rehabilitation and Recovery Act



Overall: Unsuccessful

DUBUQUE, IOWA



Another example of a city with the action to use their riverfront as a means of sparking additional development is along the Mississippi River in Dubuque, Iowa in a city of 57,000 people. The city was settled in 1788 and quickly became a big business in lead mining. The mining gave way through the years to button making, boat building and meat packing. Presently the major industries are in medical services and education.

In the 1980's, the city of Dubuque was in a rough economy struggling with 23 % unemployment. John Deere, one of the city's biggest suppliers, closed down in 1985. Many companies moved out of town and the residents followed suit. Community leaders began seeking plans for a renovation. A challenge was called to redevelop a connection for the community's unused waterfronts, which were leftover industrial rail lots and brown-fields hazardous to build on. The plan was to regenerate the majority of the brown-fields and use the riverfront as the catalyst for growth. Vision 2000 was a economic and financial plan carried out with specific goals for city residents to provide for job security, new industries of insurance, and tourism.

In the 1990's the city's historical society set up plans for the America's River Project ultimately raising 25 million to redevelop the harbor. One of the goals in the plan was to celebrate the Mississippi River and since there was no building or museum celebrating the Mississippi River yet, the city took the opportunity. The first phase of America's River Project were joint programs for the National Mississippi River Museum and

City Data (as of 2012)

Population: 77,250
Median Income: \$25,681

Race: Hispanic (49.6%),
Black (42.8%), White (4.1%),
Asian (1.6%)

Land Area: 8.82 Square Miles
Unemployment: 16.8%

Industries: Construction (9%),
Waste Management (8%),
Accommodation/food (7%),
Education (5%),
Public Admin. (5%),
Metal Products (5%),
Health Care (4%)

Aquarium in 2003. During this time the city constructed a tourist accommodation, the Grand Harbor Resort/Water park along with their regenerated marina on the riverfront. Both projects generated revenue, and began spurring additional development. A newly constructed casino, Diamond Jo was constructed in 2008 nearby, an old casino, Mystique, was renovated along with a refurbishing of the city's 150 year old Hotel Julien. In fall of 2013 a Midwest conference center and amphitheater was built along the river preceding an adaptive reuse of a abandoned warehouse into the Star Brewery and winery production.





Plan:

Policy makers to connect citizens back to riverfront and use it as an anchor for growth and tourist expansion, thus leading to more jobs (Renovated brown-fields and constructed aquarium/river museum to be anchor for critical mass to spur additional development)

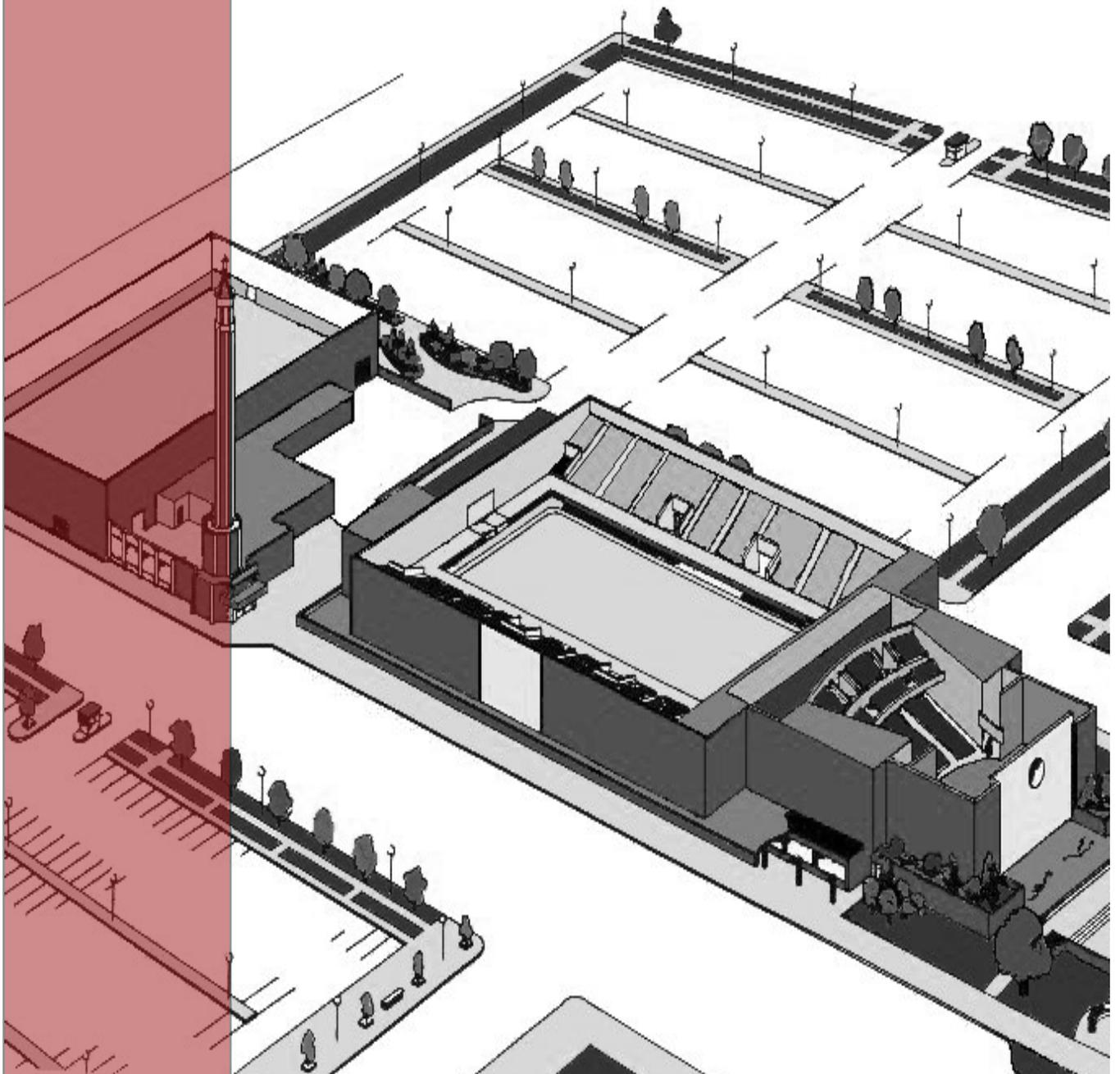


Result:

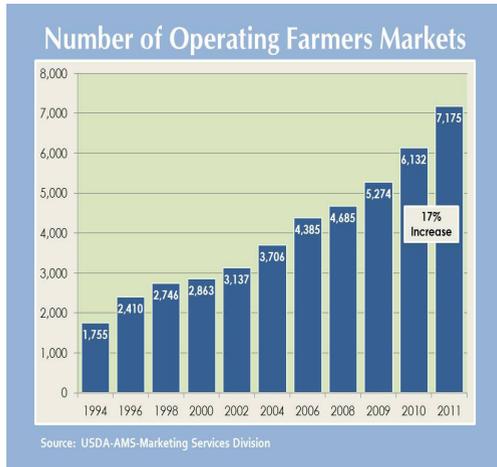
Ignited organizations of development and sparked the growth of new casinos and renovating old casinos; additional company headquarters moved into town.

Overall: Successful

APPROPRIATE USAGES



Farmers Market/Museum Backdrop



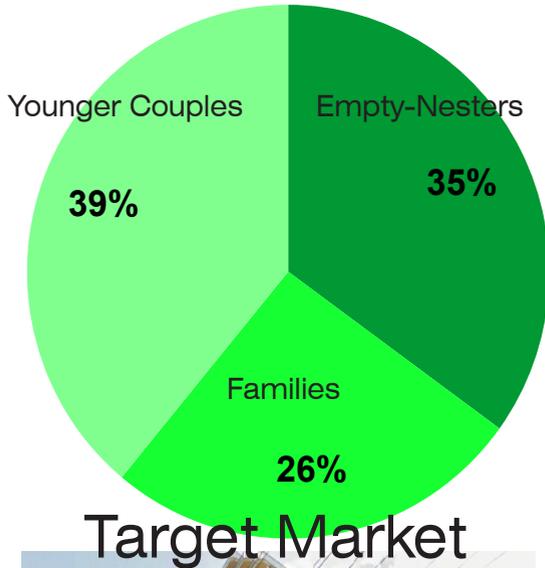
Acheson Temporary Solution

The Plan

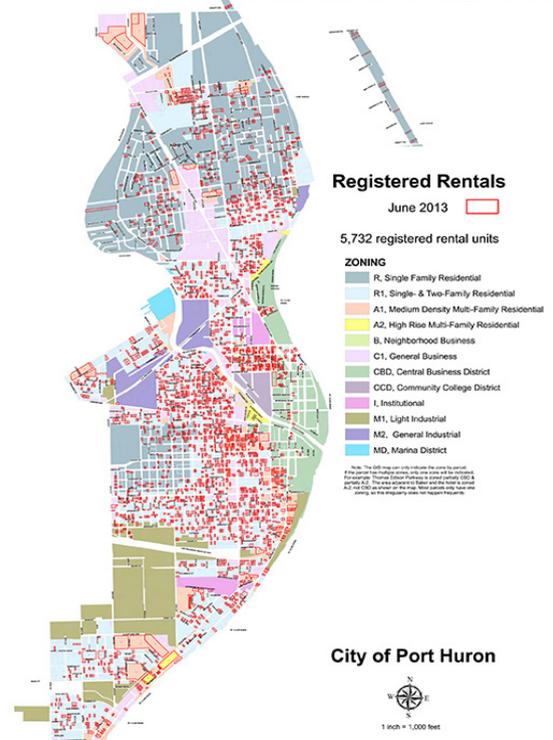
The project for Desmond Landing will celebrate the St. Clair River with a catalyst to generate the area by addressing the education, residential, athletic, and tourism issues taking place in Port Huron. The project will look toward garnering from the local impact of the surrounding downtown, and secondarily from the Blue Water Bridge's impact with the commuters and out of towners nearby Port Huron.

The main anchors will consist of a market and maritime museum expansion with recreational auditorium, athletic facility, and a retail spine of shopping and offices. This is supported by a second tier of usages being an affordable residential plan, manufacturing trade school, and port terminal with marina access.

Affordable Housing Plan Backdrop



Target Market



Breaking Down the Institutions

1 by1



With the concept of the market, the plan would be to use the pieces already in place taking the temporary Acheson Ventures farmers market and bring it to a permanent basis of all seasons including doubling the size of the vendors from the previous forty up to eighty.



With the concept of the museum, at the present the temporary structure of the maritime center has the opportunity to expand itself in a matter similar to Dossin's Museum on Belle Isle. A maritime museum can

Manufacturing /Trade School

Backdrop

Main Occupations:

M-Metals

F-Fabricators



St. Clair Community



Baker



Paul Mitchell



Ross



Lakewood

37% Highschool Equivalent



Bureau of Labor Statistics

Middle-skill jobs will make up about **45%** of all job openings projected through **2015**.

be constructed on the site and celebrate Port Huron's vast history and industrial effect on the Great Lakes.

 With the concept of the residential situation, the main target markets for the city of Port Huron are stated for younger couples, students, and empty nesters. The approach to scale and density will be done in a makeup of various residential typologies. There will be an implementation of high rise apartments that are four stories and higher, urban density apartment units from two to four stories, a segment of multi family condo units with two stories, single family condos at one story, and there will also be residential units for administering to college catered dormitories.

 With the concept of the manufacturing trade school, the Bureau of Labor Statistics reports that trade jobs will increase up to forty five percent through 2015¹ also stating that four out of five students will get a job in their manufacturing field within six months of graduating from a trade school². There are currently six trade schools in the immediate city of Port Huron that deal in medical, cosmetology, culinary arts, and therapeutic careers. However currently there are not any focusing on the

1. Additional labor statistics found in Driscoll.

2. Incentives of trade school data can be seen in Kavilanz.

Sports Facility/Athletics Complex Backdrop

McMorran Place

1st since 1995 without hockey team

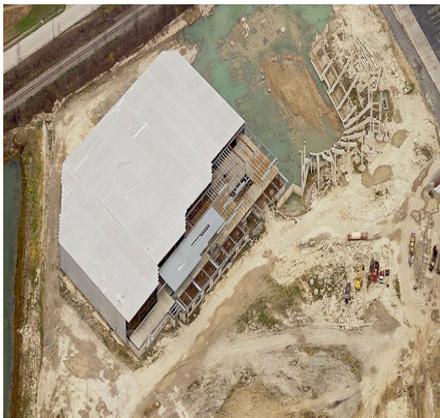
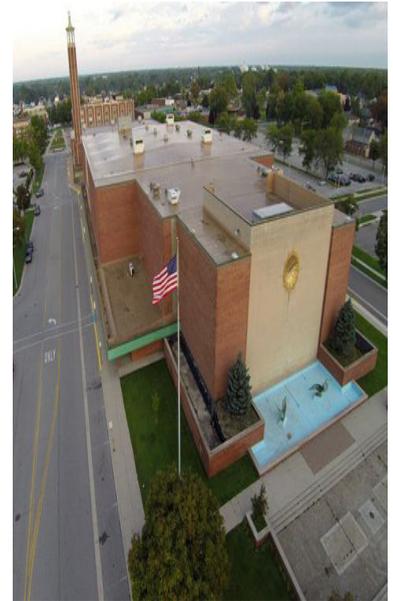
185 * 85

NHL-USHL 200 * 85

Kimball Ice Rink: 1999

220 Million=10,00 seat rink

Void of \$40,000



Closest Indoor Soccer Facility:

Shelby Twp.
(41 miles)



metals, fabrication, and technology of manufacturing. A manufacture industry related trade school can prepare students to take advantage of the manufacturing careers in the city.



With the concept of the athletic facility, the city lost forty thousand dollars a season for not having their minor league hockey team. The plan would be to replace the loss³ of the city's no hockey team due to their rink dimensions⁴ with a thirty eight hundred seat hockey facility. The complex will also be used for other athletic indoor events for the city as well.

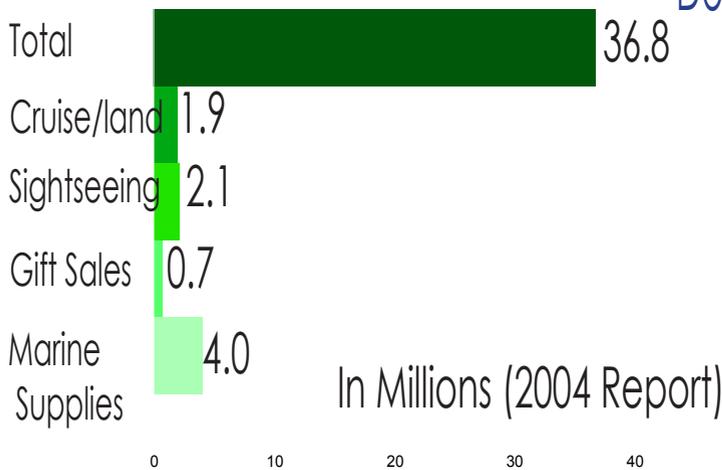
3. The failed plans of a neighborhood rink can be found in "Kimball Entertainment and Sports Arena".

4. The effects of the limited rink dimensions can be found in "McMorran at a Crossroads".

Port Terminal Backdrop



Great Lakes Cruising Coalition Generating \$36.8 million (2004)



Detroit Port Authority

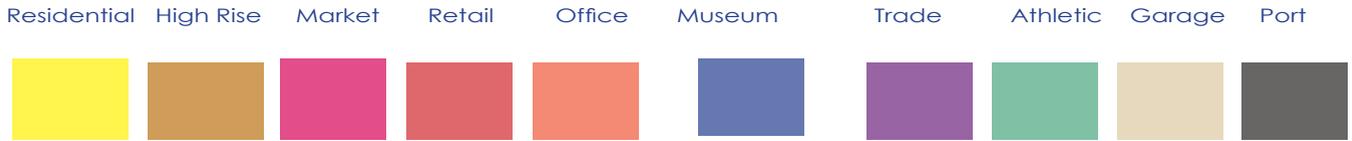
Invested
\$11 million
30,000 SF
Passenger
Terminal



With the concept of the port terminal, The Great Lakes Cruising Coalition generates a thirty six million dollar industry. This is in regards to sales, sightseeing, gift purchases, and marina supplies. There are Michigan and Canadian based cruise lines such as the Great Lakes Cruise Company and Pearl Cruises that have a scheduled business season that goes from July to October⁵. Recently Detroit invested in their own passenger terminal and other port cities along both Michigan and Canadian coasts are adopting this strategy. Placing a port terminal in the area would not only increase the Great Lakes cruising infrastructure, but also benefit the city with their sightseeing amenities and tourist activities.

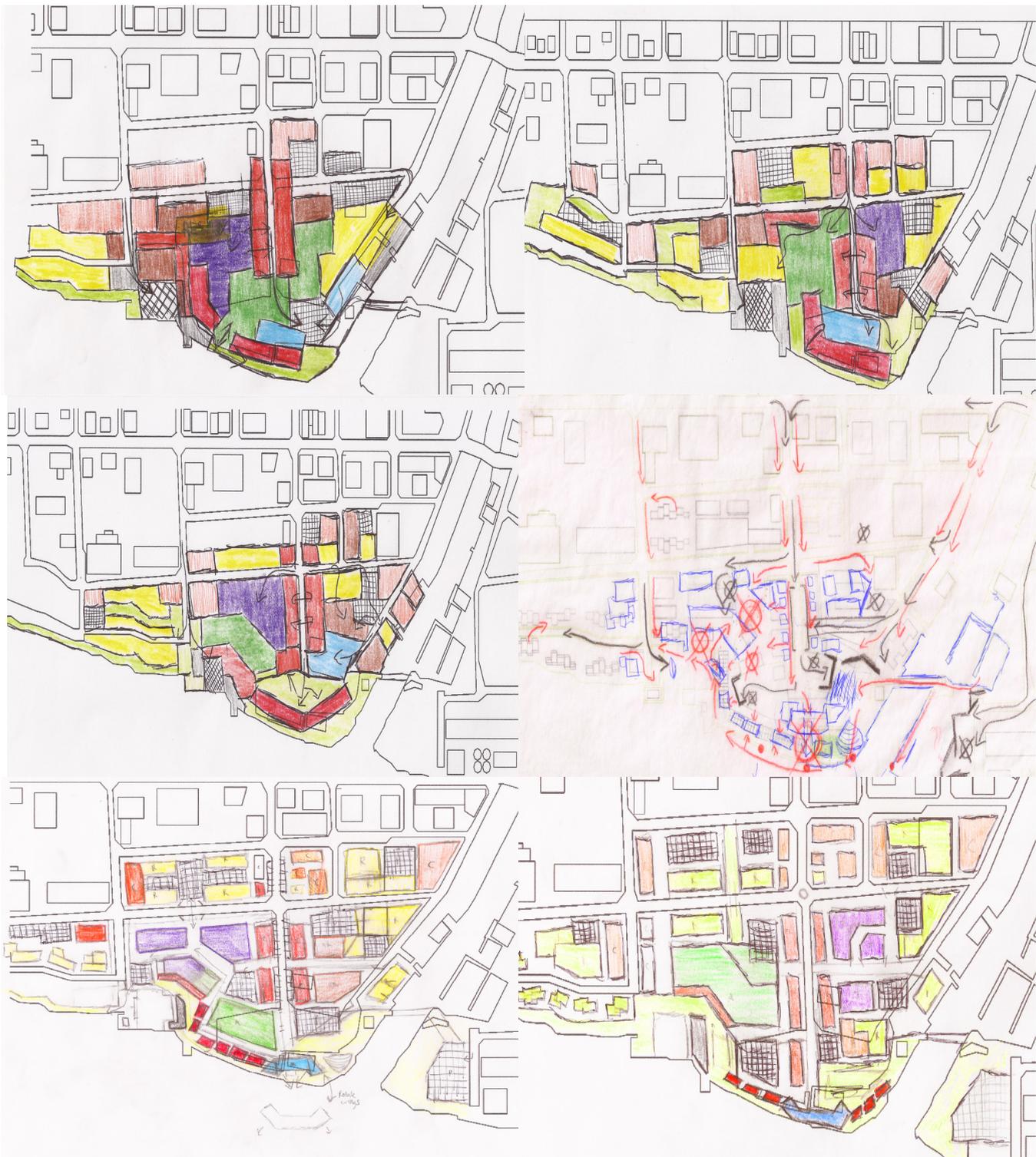
⁵ Additional cruise line seasons information can be found in Davis.

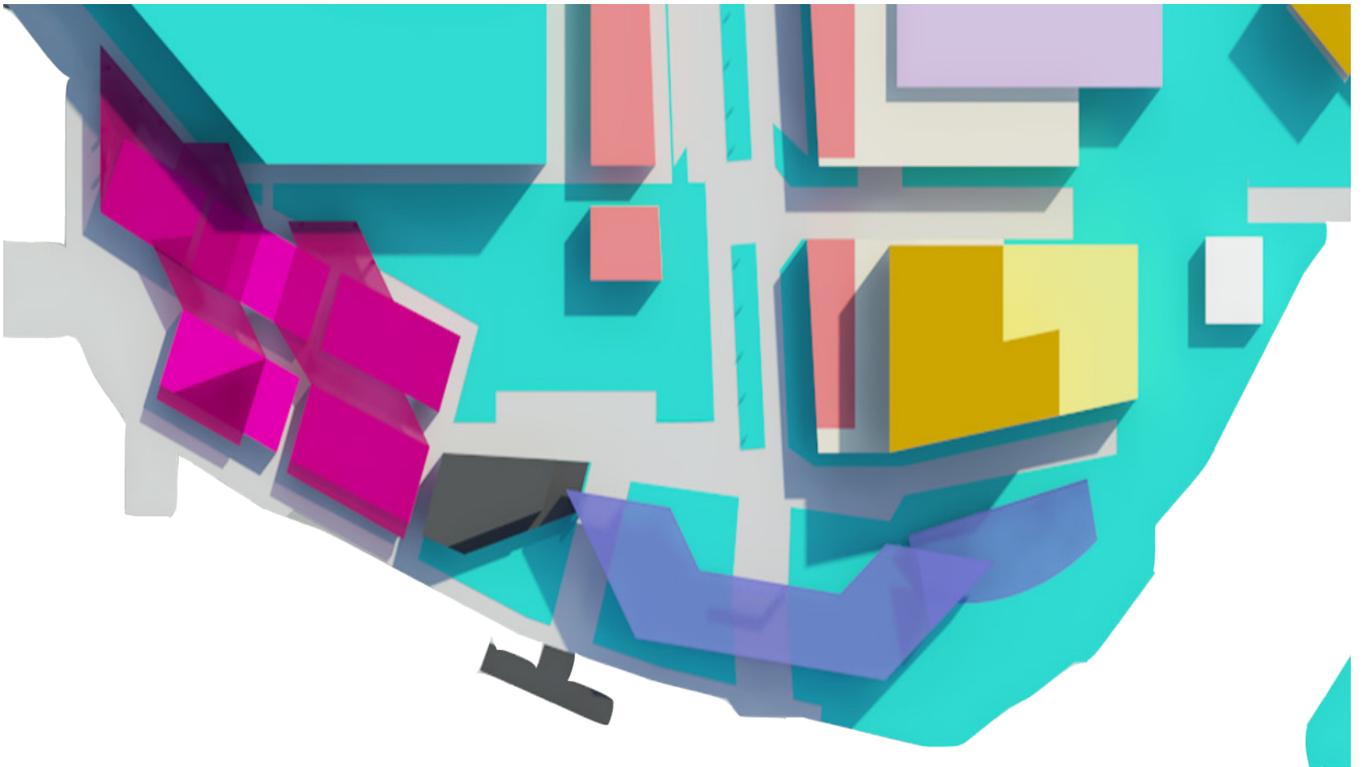
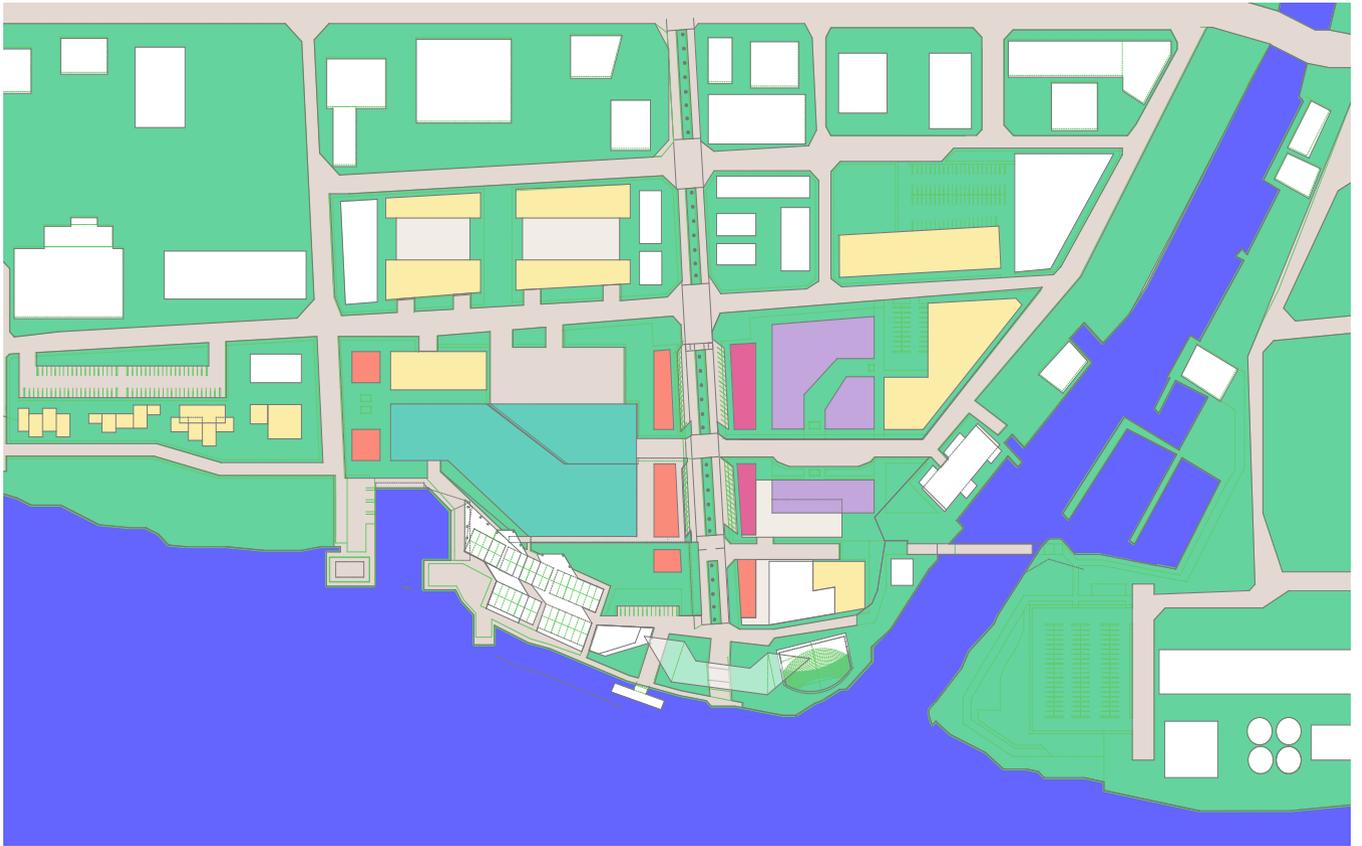
USAGE MAPPING

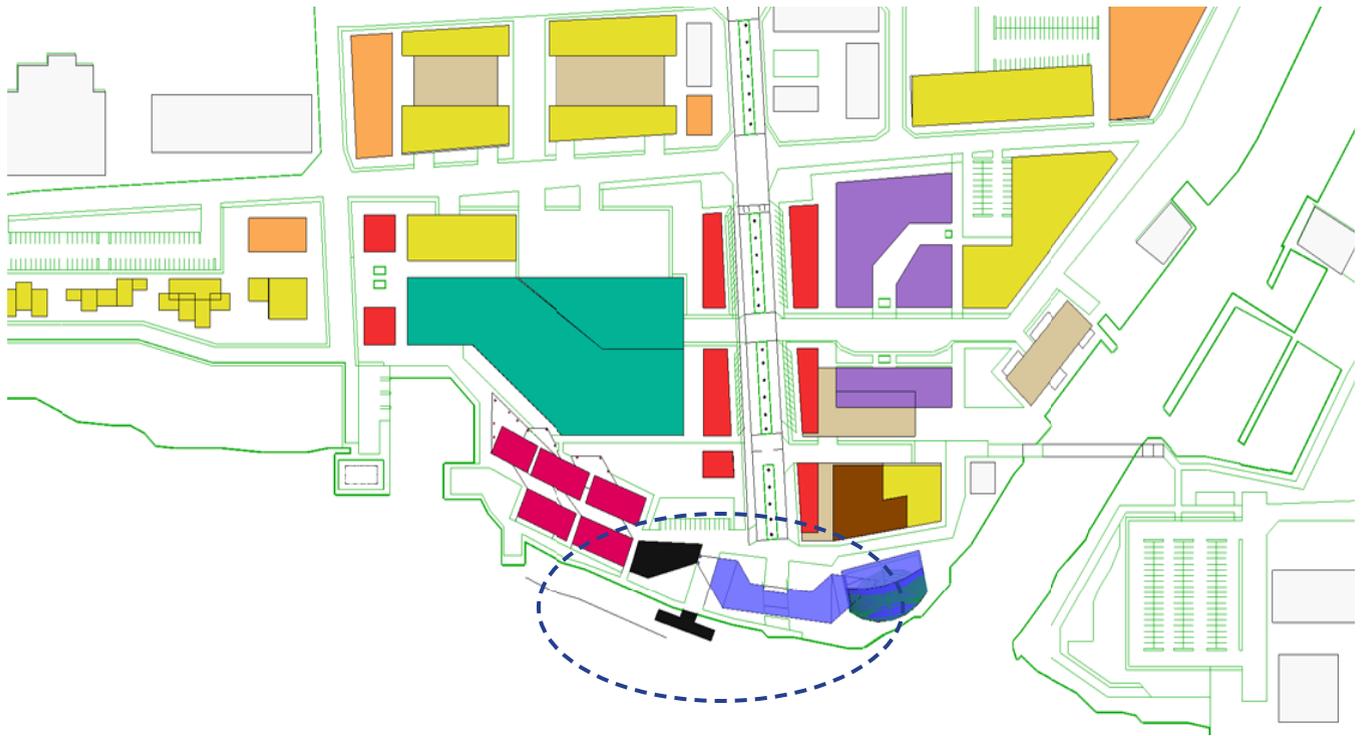


In determining the appropriate placements for each institution, several illustrations of mapping were taken. The various schemes involved grouping the various usages into separate zones or combining the zones together to indicate how one would travel through and access each institution. The riverfront was used as the main reference point in placing the institutions with where a correct proximity to each would be.

The riverfront acquired the main anchor institutions as the supporting usages were proposed to be further inland. As the usage mapping evolved from zoning to building footprint, the usages began splitting up into several buildings rather than just one per usage. Building footprints were switched out and substituted, such as the hockey facility and the multi family condo complex, to incorporate a better balance with the density and provide open views and access points to the river walk.

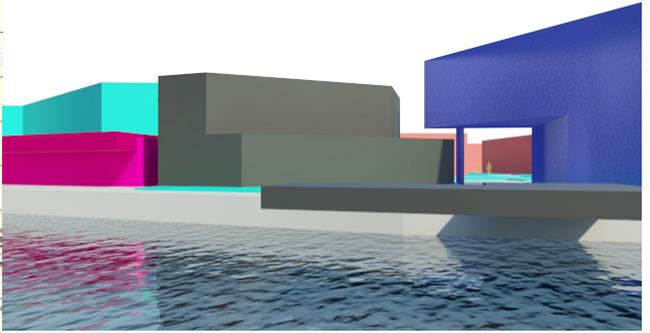
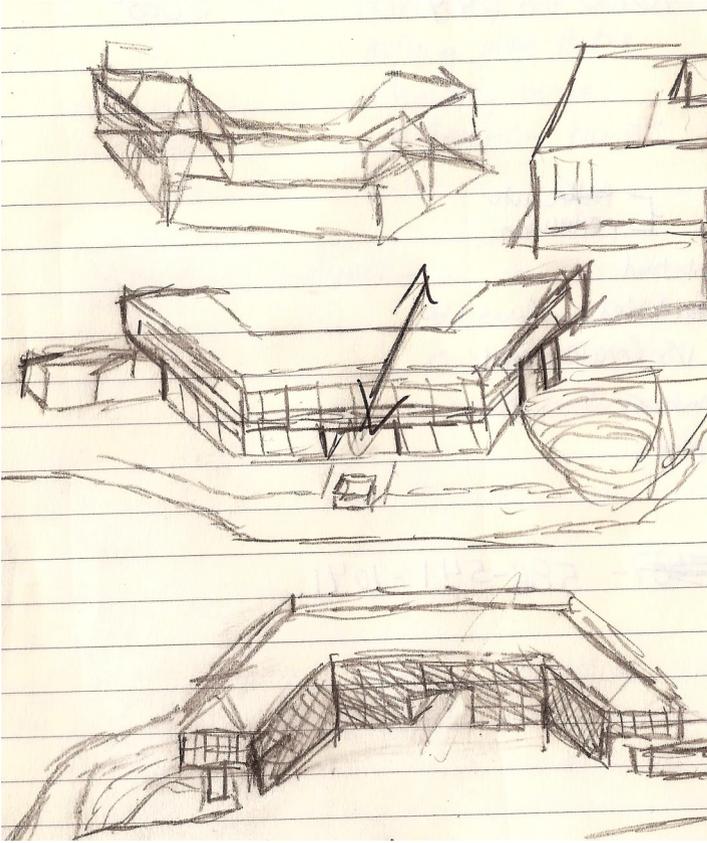






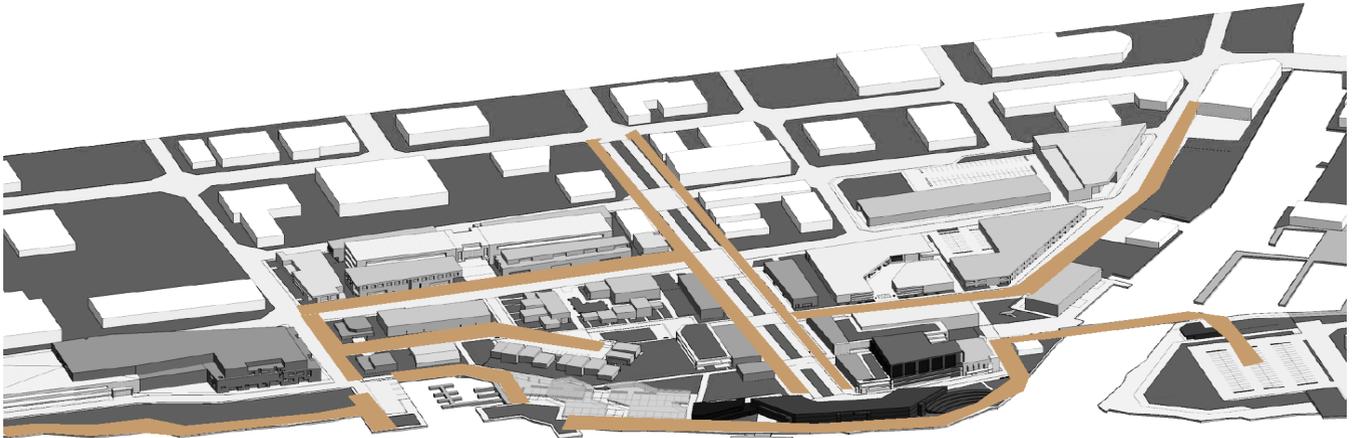
SKETCH FORM and DIAGRAMS





SITE TRAVEL

Site Access
AUTO/PEDESTRIAN

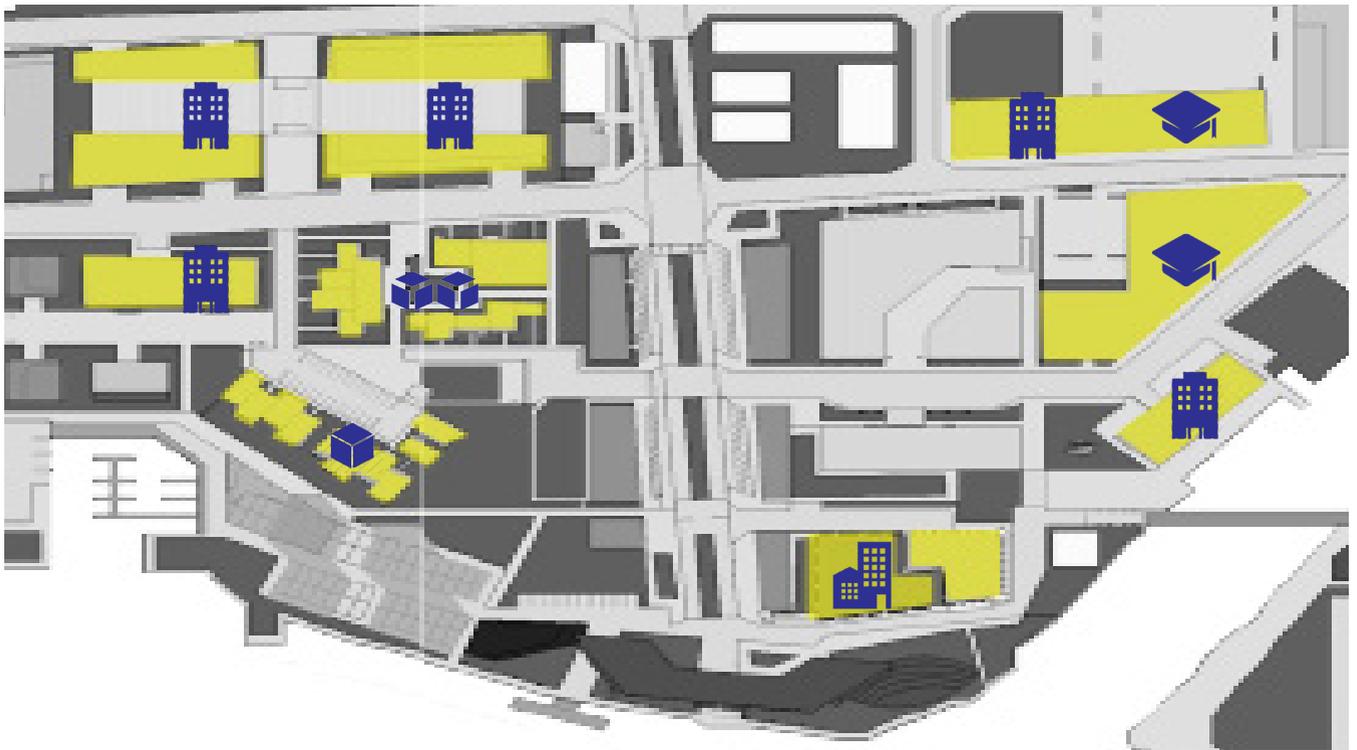


SITE PROGRAM USES



Residential Units

Proposed



Typology

-  High Rise=4+
-  Urban Density=2-4
-  Multi-Family Unit=2
-  Single Family Unit=1
-  College Catered

SITE PARKING



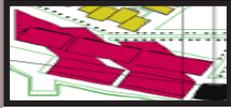
- Proposed
- Existing



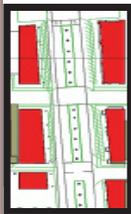
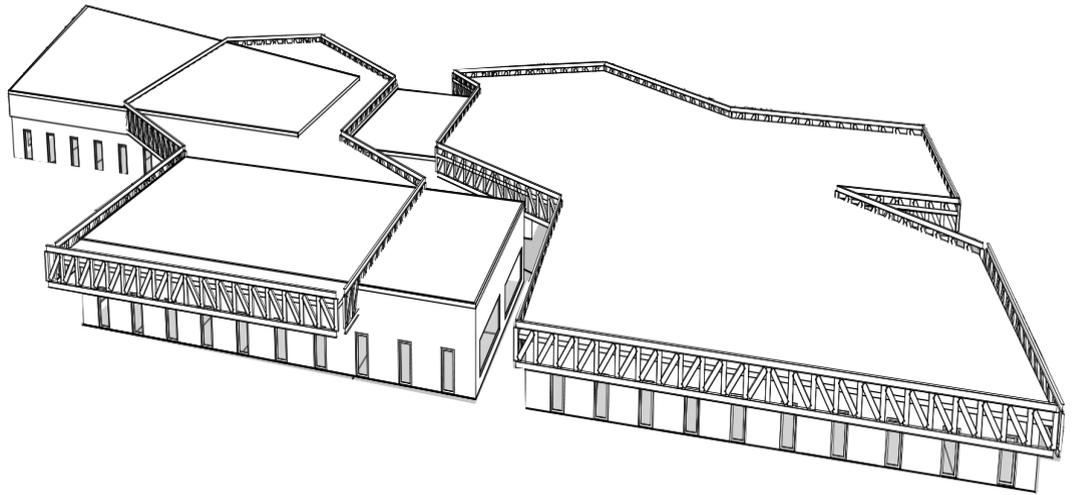
Typology

- Blue Water Transit
- Public
- Residential
- Office
- College
- Hockey Arena

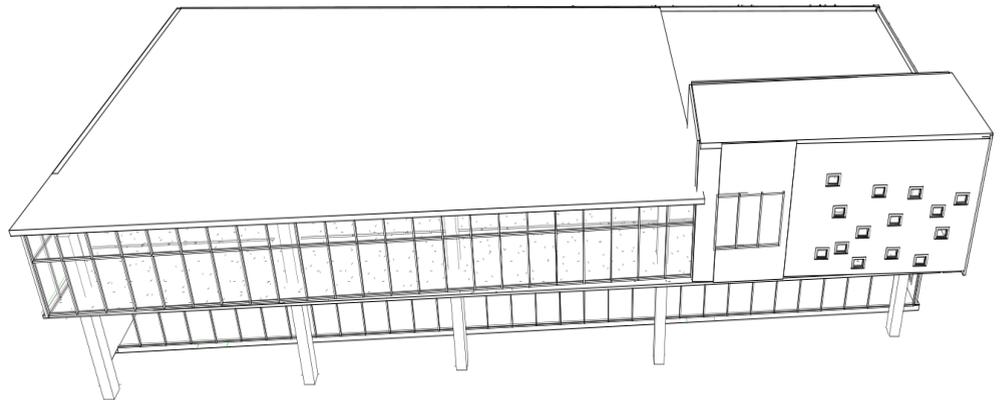
ANCHOR INSTITUTIONS



Market

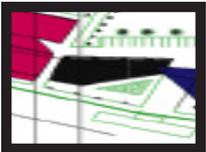
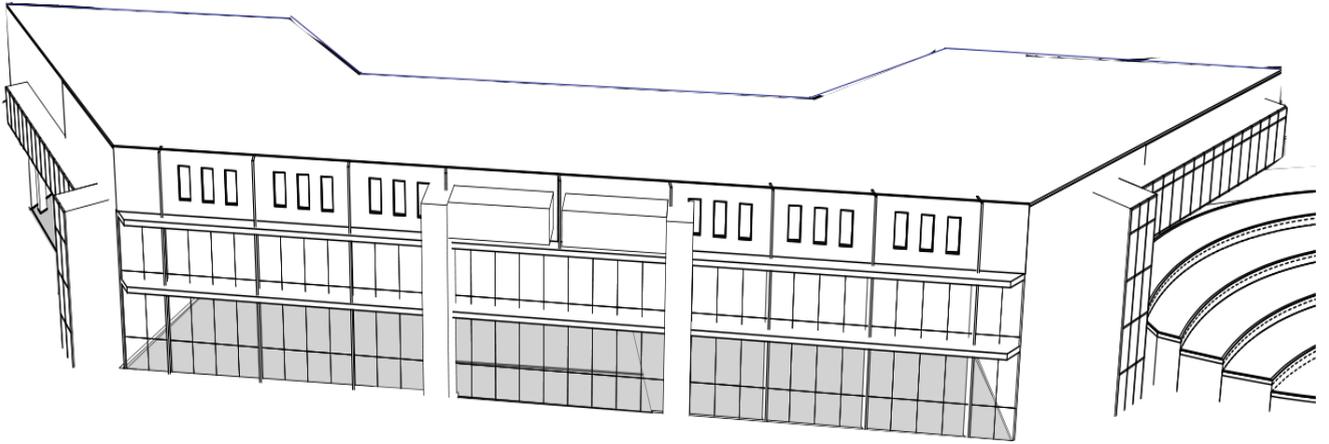


Retail





Museum

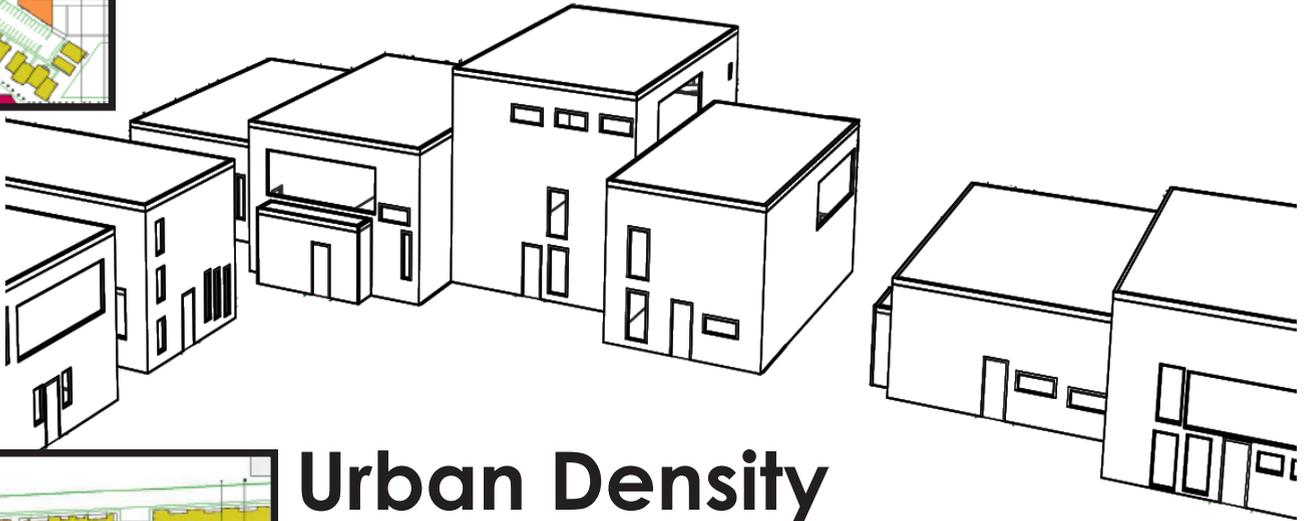


Port Terminal

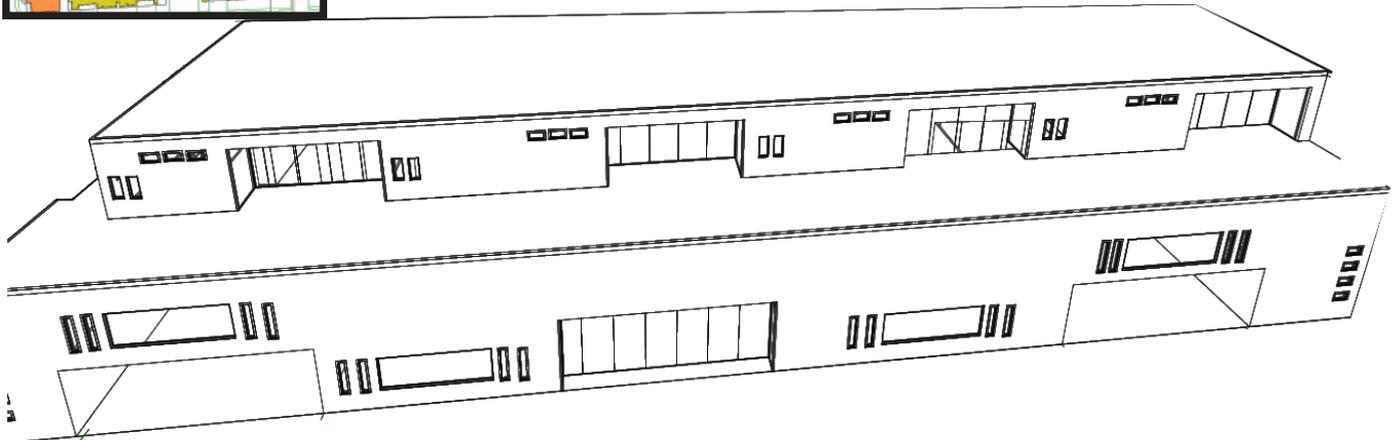




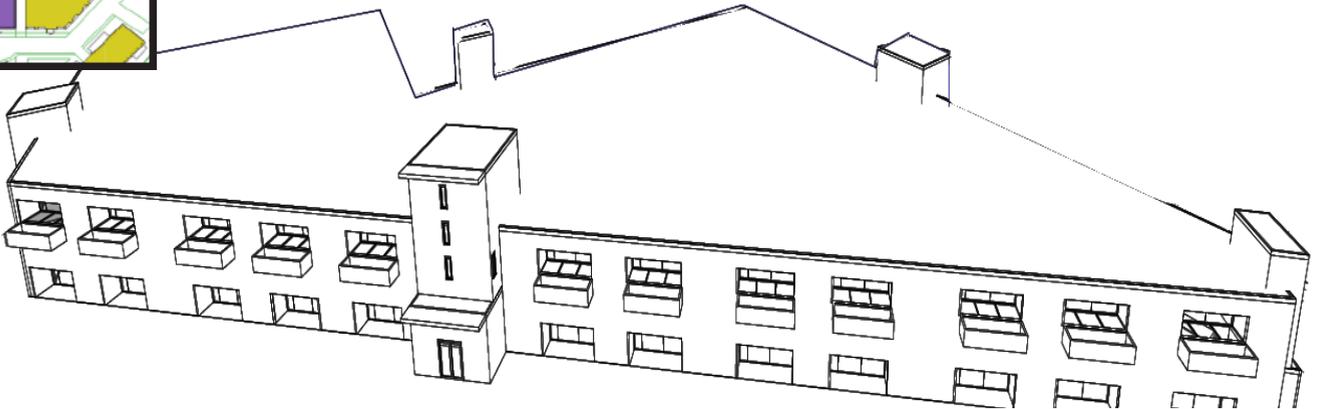
Multi-Family/Single Family

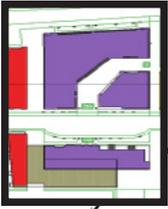


Urban Density

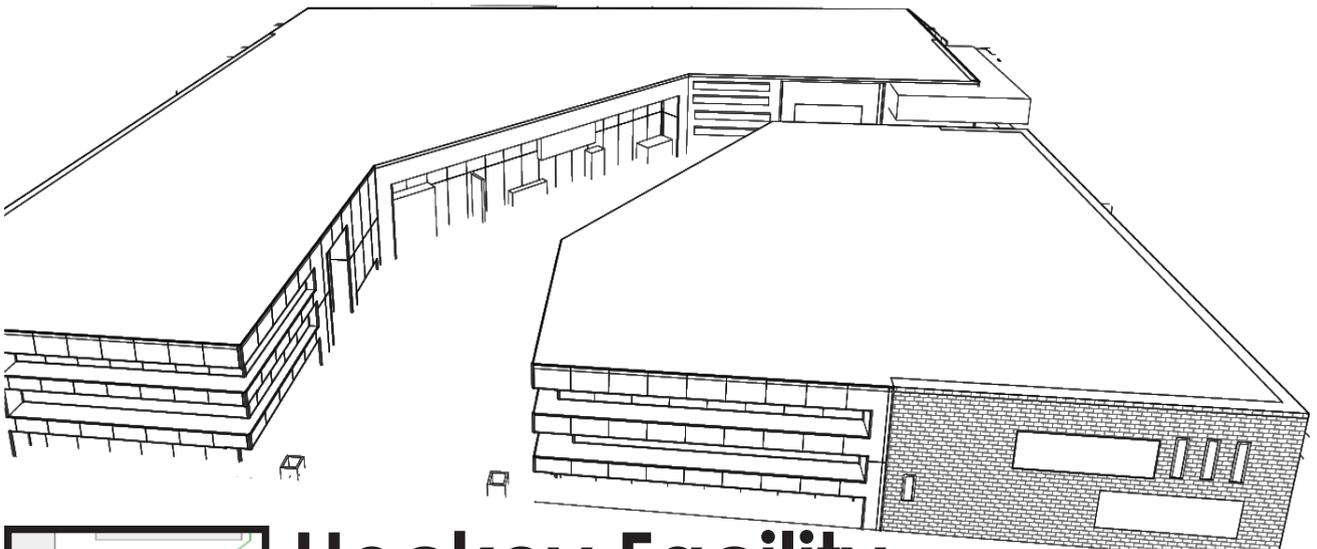
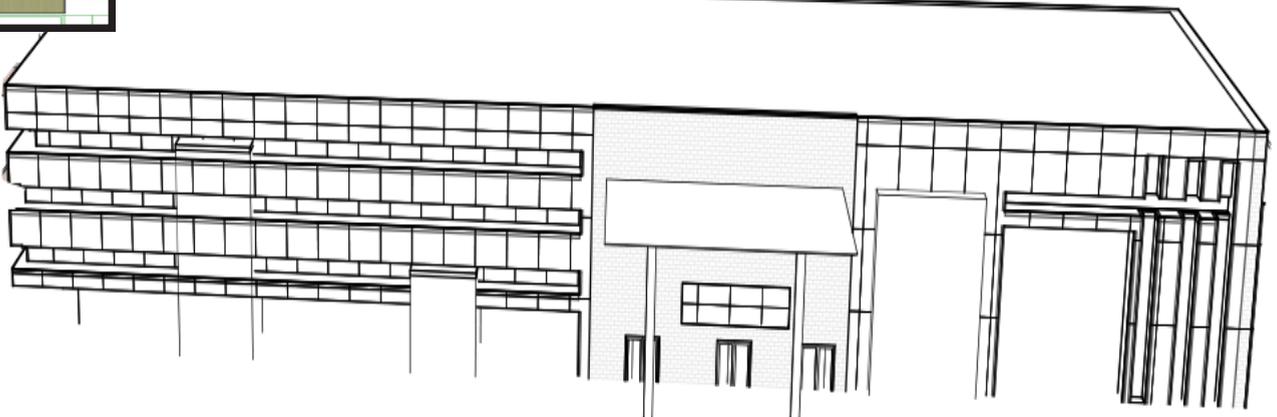


College Catered Dormitory

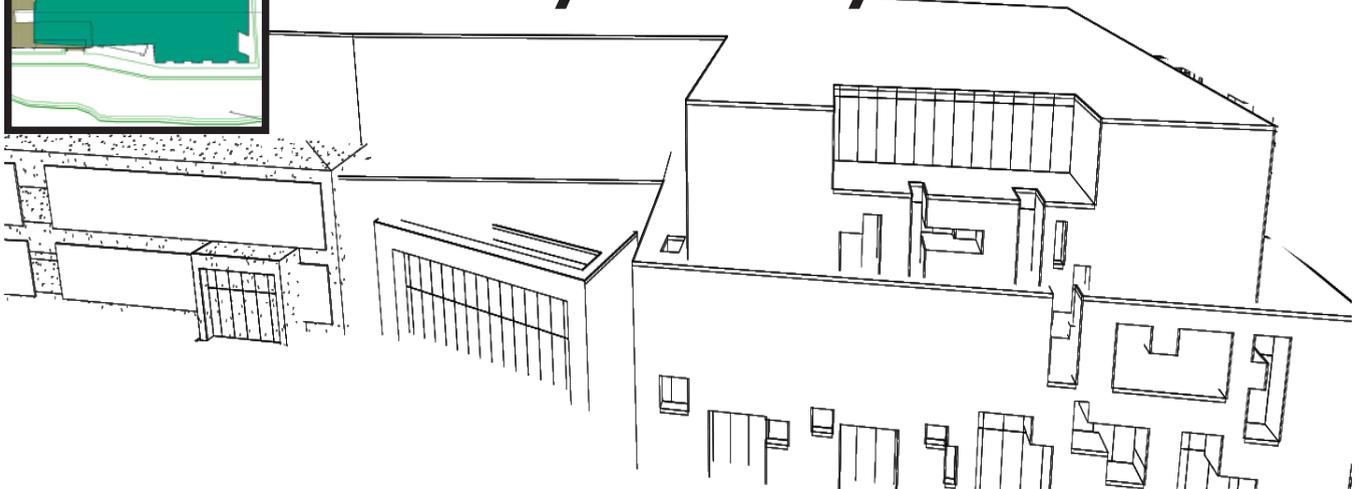




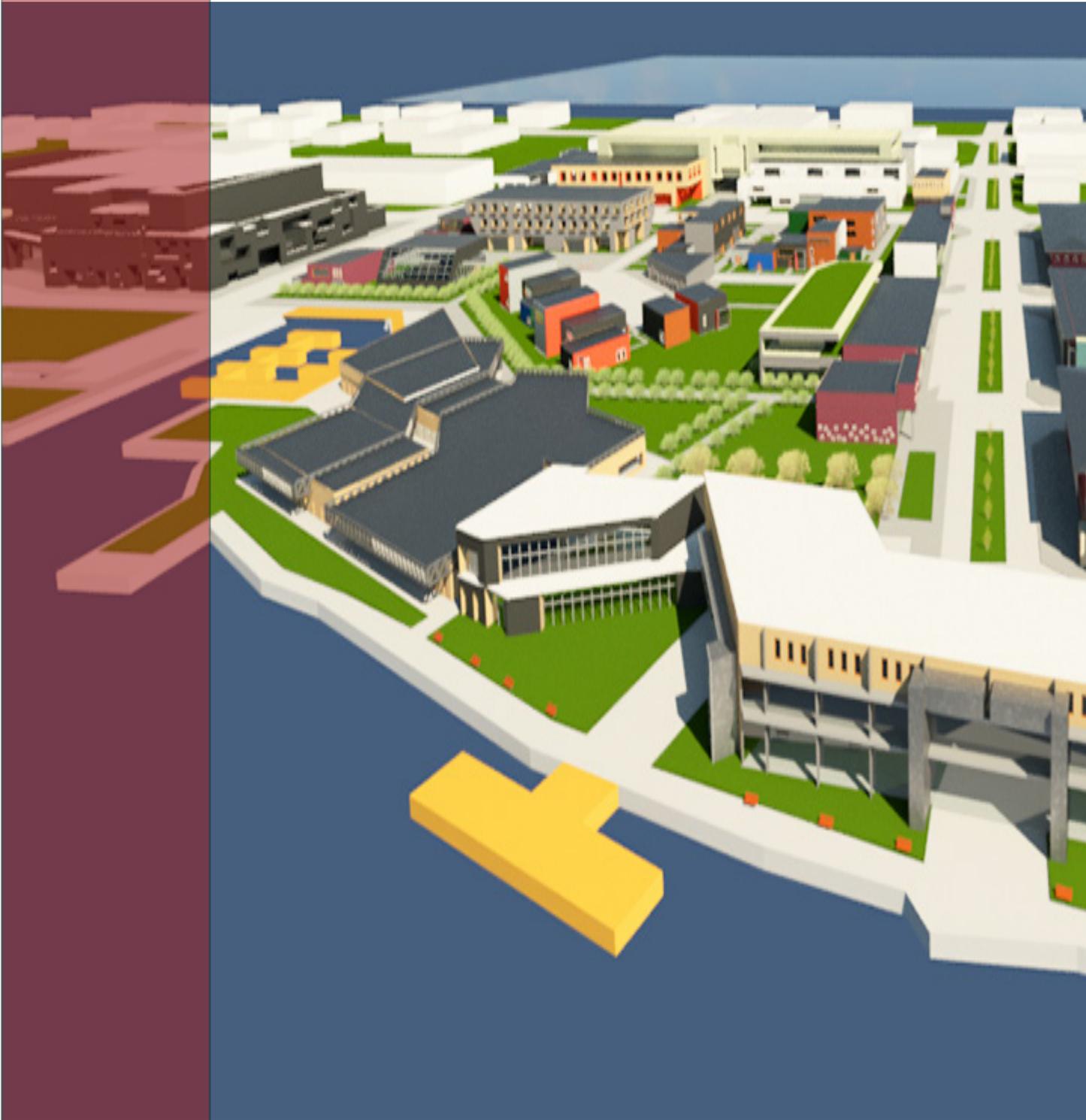
Manufacturing Trade School

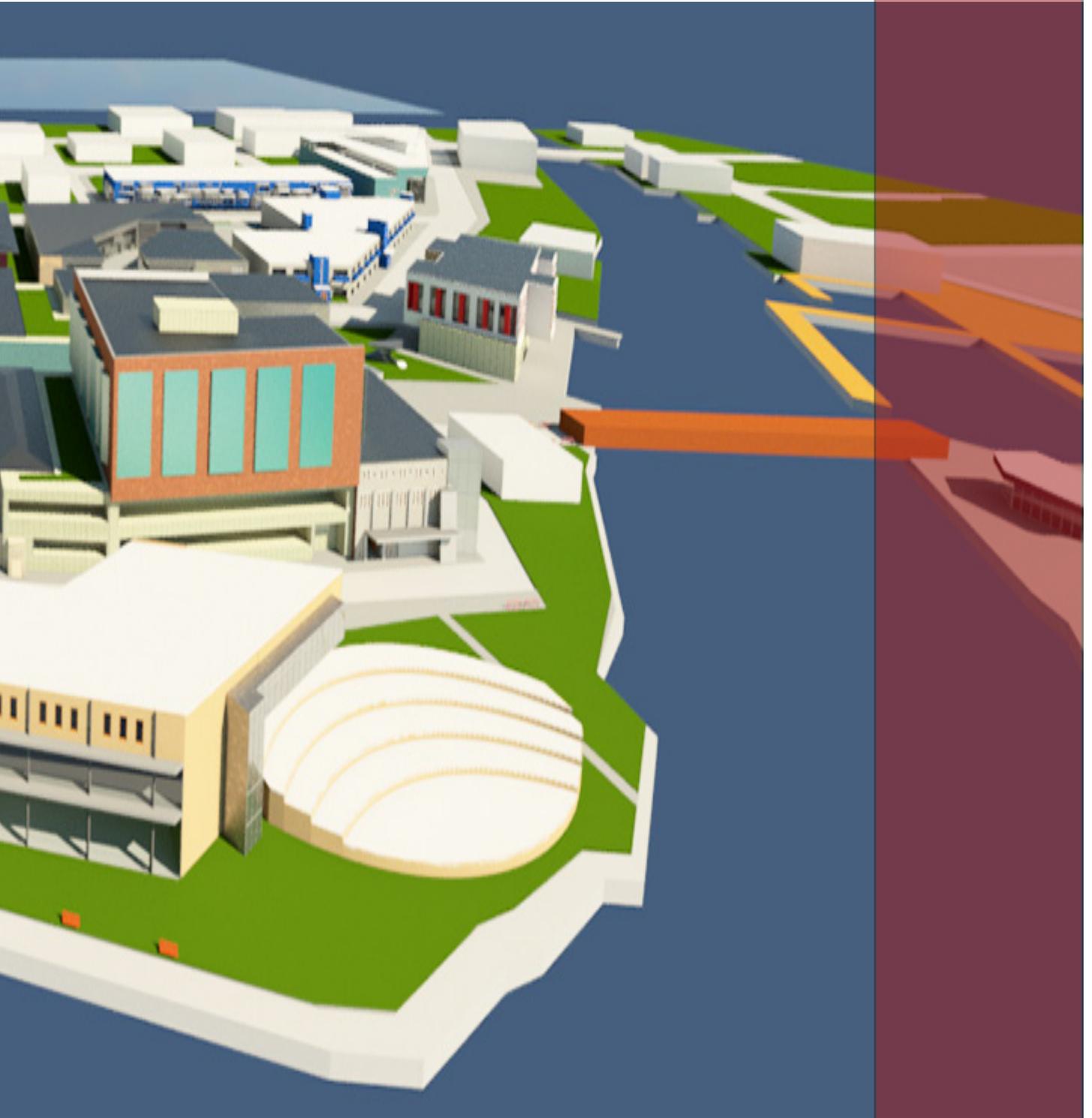


Hockey Facility



FINAL PROPOSAL





FINAL PROPOSAL

Riverfront

Court Street is expanded into a boulevard with a retail spine dotted with street parking. The boulevard leads down to the focal point of the maritime museum with an auditorium at the point. The cruise terminal is then adjacent to the museum complete with its dry dock and connecting to the Blue Water River Walk. Further along the river walk is the all seasons farmers market structure with a transitory marina and boat launch. The majority of those participating with the river walk area will come from a parking area across the river using the historic rail bridge as a pedestrian footbridge and tourist attraction.

Inward Right Side

Moving inward from the point are structures of high rise and urban density apartments. The trade school is located in a complete self contained area and administers to the college catered dormitories. Just beyond that are offices nearing Military Street.

Inward Left Side

Moving inward from the farmers market buildings is a region of single family and multi family condo units. There is a shared parking structure between urban density apartments and office spaces. There is also a pedestrian mall that incorporates uses of office, urban density residential, retail components, and additional public parking for the area. On the far left is the hockey facility with its own attached parking structure and the complex overlooks the Blue Water recreational wetland.

Site Master Plan at 1/64"=1' scale

Residential	High Rise	Market	Retail	Office	Museum/Municipal	Trade	Athletic	Garage	Port Terminal

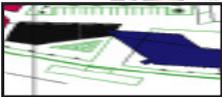


ARCHITECTURAL INTENT

VISUALIZING PURPOSES

With the views of the individual institutions, the renderings and architectural designs of each anchor institution are for visual purposes only and not to be associated with exact architectural aesthetics.









REFERENCES

- Brown, Bruce. Port Huron Housing Summit Report. N.p.: Port Huron City Council, 2013. Print.
- Brown, Peter. America's Waterfront Revival. Philadelphia: Pennsylvania Press, 2009. Print.
- "Canada's Sugar Beach." Waterfront Toronto. N.p., n.d. Web. 1 Nov. 2014. <http://www.waterfrontoronto.ca/explore_projects2/east_bay-front/canadas_sugar_beach>.
- Cassidy, Robert. "River, Front and Center." Planning (2013). Print.
- Davis, . "Study Shows the Great Lakes Cruising Industry's Impact ." Great Lakes Cruising Coalition Pressroom. N.p., Sept. 2004. Web. 12 Feb. 2015. <http://www.greatlakescruisingcoalition.com/press_a10.html>.
- Driscoll, Emily. "Going to Trade School, Should You Do it?" Fox Business Apr. 2012. Web. 7 Feb. 2015.
- Executive Summary of the Target Market Analysis. Port Huron: Zimmerman Volk Associates, 2007. N. pag. Print.
- Gaffney, T.J. Port Huron 1880- 1960. Chicago: Arcadia Publishing, 2006. N. pag. Print.
- Jacobs, Karrie. "Nature: Newark Style." Metropolis (2013). Print.
- Katz, Matt. "Camden's waterfront - and its woes." The Philly Nov. 2009. Print.
- Kautz, Ryan. Reclaiming the Annapolis Waterfront: Towards an Architecture of Place. N.p.: n.p., 2003. Web. 7 Sept. 2014
- The Waterfront District: Bellingham Washington. N.p.: Port of Bellingham, 2013. Web. 18 Sept. 2014.

- Kavilanz, Parija. "Nine Months in Trade School. Job guaranteed." CNN July 2012. Web. 24 Jan. 2015
- "Kimball Entertainment and Sports Arena." Detroiturbex. N.p., n.d. Web. 10 Feb. 2015.
-
- Kosnae, Erin. "The One Stop Philanthropist's Shop." Planning (2005). Print.
- "Highways and Waterfronts." Planning (2006). Print.
- Mack, Linda. "Riverfront Revival." Planning (2006). Print.
- Mack, Linda. "The Tale of the Lakewalk." Planning . Print.
- Packer, Jeri. "Town Hall meeting questions next step in Marine City." The Voice 19 Feb. 2012. Web.
- McElroy, Frank. A Short History of Marine City Michigan. Marine City: Rotary International, n.d. Print.
- "McMorran at a Crossroads." Herald Times Sept. 2014 [Port Huron] . Print
- "Michigan Coastal Community Waterfronts Best Practices." Michigan Sea Grant. N.p., Web. 8 Sept. 2014.
- Otto, Betsy, Kathleen McCormick, and Michael Leccese. Ecological Riverfront Design: Restoring Rivers, Connecting Communities. Chicago: American Planning Association, 2004. Print.
- "The City of Monroe." Michigan Sea Grant. N.p., n.d. Web. 8 Sept. 2014.
- "The City of Port Huron." Michigan Sea Grant. N.p., n.d. Web. 8 Sept. 2014.

-“Why Camden, N.J., is Still Failing Despite State Intervention.” *Governing* Aug. 2013. Print.

-“Wyandotte Waterfront Study.” US Government Printing Office, 5 Sept. 2014. Web. 10 Sept. 2014.