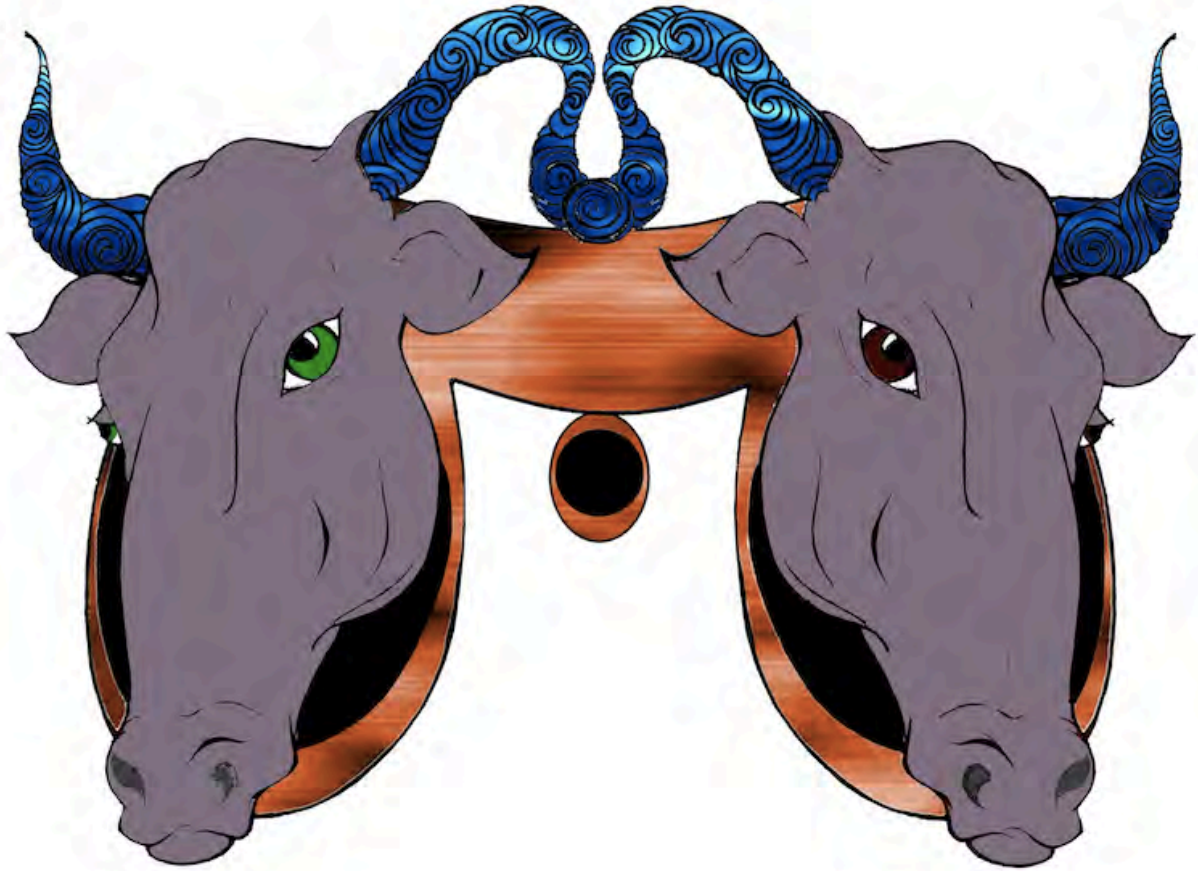


Oxbow Apartments



Dan Kennedy
UST 623
Spring 2018



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Executive Summary

The Oxbow Apartments will be the first residential development project located on the Columbus Peninsula, also known as Oxbow Bend or Cleveland Centre Historic District. The project will consist of 333 new market-rate apartments, 64,000 square feet of retail, and a riverfront boardwalk and public space along the bank of the Cuyahoga River. This seven-story transit-oriented development was inspired by European cities who utilize their riverfronts as a place where people work, live, and play. The site was selected because it is primed and ready for a development project and perfect for mixed-use.

The Columbus Peninsula is currently an underutilized area in the Flats of Cleveland known for being a recreational hub. The Cleveland Metroparks have created Rivergate Park on the eastern end of the peninsula which is home to Merwin's Wharf restaurant, Crooked River Skatepark, Cleveland Rowing Foundation, and Cleveland Dragon Boat Association. The Foundry (Cleveland's rowing club), Ohio City Bicycle Co-op, and CTOWN Cross Fit are other examples of the thriving health and recreational culture of the peninsula. Leveraging this existing culture along with its prime location downtown, will make Oxbow Apartments desirable to the next generation of downtown residents.

After performing a highest and best use analysis, along with a multi-family market analysis, I decided the best use for this site would be a Mixed-Use, Mid-Rise, Transit-Oriented Development. The HBU Analysis showed that residential, retail, and public space would be the preferable use. While performing the market analysis, it became apparent that there is a demand for mid to high range market rate apartments.

Because this is a unique location it was hard to create a PMA that could reflect its potential. Using similar apartment complexes along the waterfronts



and downtown, I was able to pull information and have solid comparables to support my findings.

The market could support the proposed 333 new market-rate apartment units downtown. Comparable projects are seeing vacancy rates well below 5%, so for this project I assumed a 3% vacancy rate. Initial absorption rates of comparable properties have a range from 8% to 100% absorption in the first month of operation. To keep a conservative estimate, I am assuming a 10% absorption rate in the first month or 32 units per month. With this rate, stabilization will occur after Oxbow Apartments are on the market for about 10 months.

The project is a "Go" from a market standpoint. In order to really make this project feasible, I am using HUD221(d)(4) as my first mortgage. The HUD221(d)(4) is a non-recourse, 40-year amortized, 83.3% LTC loan. A second traditional mortgage will also be utilized to help pay for the project. These two loans mixed with a few public subsidies and equity will help fund the entire project.

Potential fatal flaws of the project are issues with structural, congestion & parking, ownership, and time frame. In order to begin construction along the riverfront we are going to have to make sure the bulk heads are stabilized and that the land can support a project of this scale. Columbus Road is already congested. In order to make sure that congestion is placated, I will suggest a round-about at the corner of the property. This part of the project will need local, state, and federal cooperation. Lastly, the current owners of the parcels are notorious for buying real estate around Cuyahoga county and holding it. This perhaps may be the greatest flaw in the project.



Project Concept

Two of the greatest planning follies to have affected modern-day Cleveland, were the demolition of historic buildings and structures for the creation of parking lots and the exclusion of Clevelanders to the waterfronts. Historically, Cleveland's downtown was densely populated, bustling with development. Cleveland started seeing a population decline post WWII, when the City started losing residents not only to other cities around the country, but more importantly, it's suburbs. Simultaneously, highways were being built around the country and automobiles were becoming more and more prevalent. Due to this shift, Cleveland became a "commuter city" where the majority of people lived in the surrounding municipalities and commuted to the city center for work or entertainment. The City of Cleveland has seen a population decline over the past 80 years and with this decline, abandonment of buildings, disinvestment, and ultimately the demolition and repurposing of buildings into parking lots to support the needs of commuters.

As a planner/developer I wanted to target a site that could remedy these two problems. The Columbus Road site is an underutilized parking lot located on the bank of the Cuyahoga River. This three-acre lot is in an area of the City that if developed, could be the catalyst to connect the Ohio City neighborhood and Downtown. On top of that, the peninsula where Oxbow is located has the potential to be a thriving neighborhood itself.

The second planning misfortune was the separation of Clevelanders to both the lake and river fronts. When Cleveland was first becoming an industrial city, rail lines were built along the lake and industry was developing along the river. Rail lines were targeted for the lakefront, because the land was flat. Naturally, the river became a hub of industry because transporting heavy material was easiest and fastest via waterways. As highways became



more ubiquitous, they too were built along the lake front, further separating Clevelanders from the water.

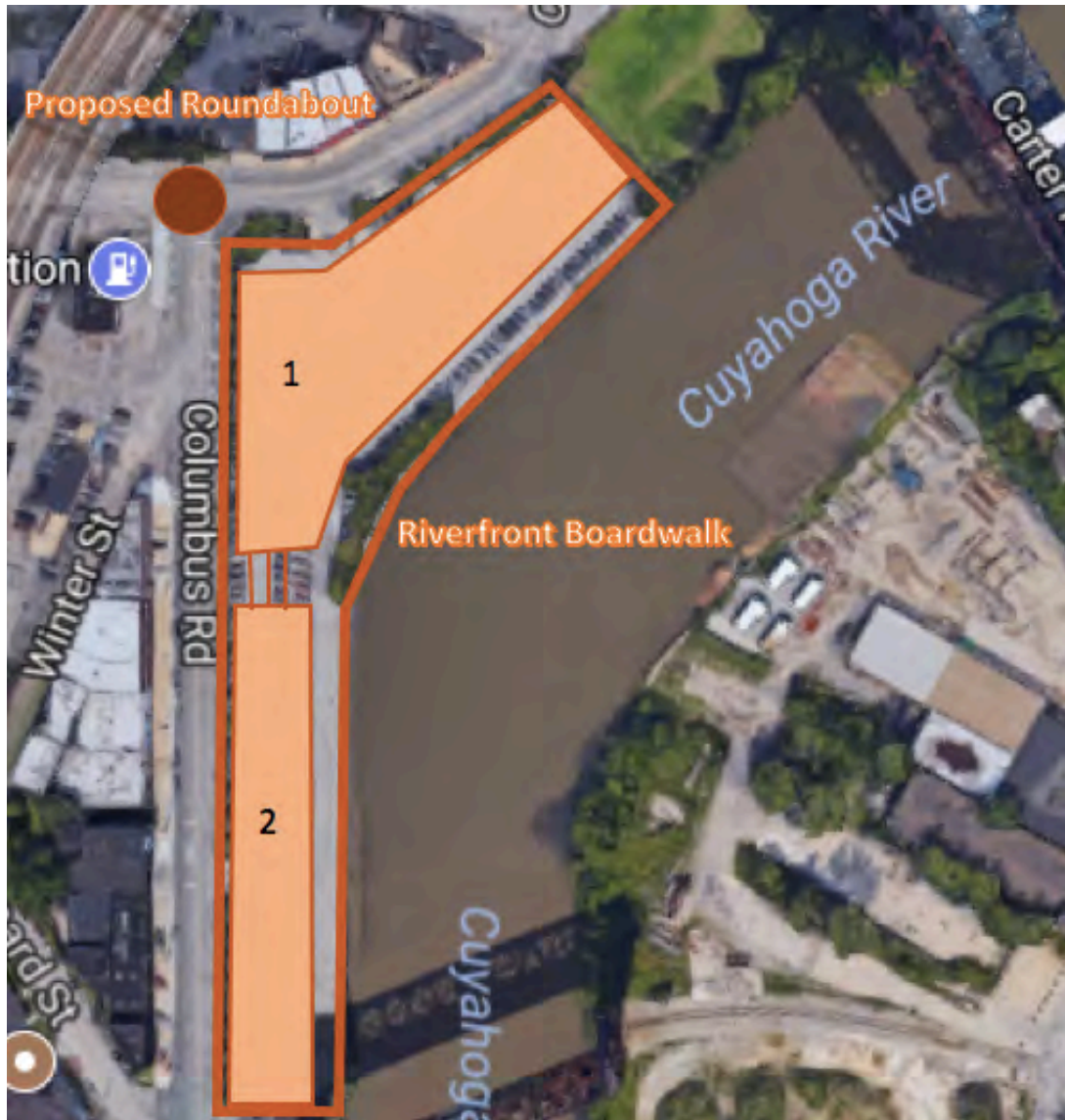
As industry began to develop and thrive in Cleveland, rail companies bought up the land. The Columbus Road Site was once the home to the Cleveland Terminal & Valley (CT&V) and Baltimore & Ohio (B&O) Freight houses (1898). It operated as a freight house for B&O until 1934. After Tower City was constructed, rail lines were rerouted and the space where the tracks once laid were paved over and became parking lots.

Although it seems that there will be little to no environmental remediation needed for the project site, since I will be utilizing HUD money, it will be required to perform a Phase I and Phase II Environment Assessment. The County offers grants to perform these assessments. This grant money was secured by the Northcoast Brownfield Coalition, which is a body made up of the City of Cleveland, Cuyahoga County, and the inner-ring suburbs. They applied together to receive the funding.

Once the land is assessed and funding is secured, I will start developing the parking lot into two seven-story buildings on the river. The first floor of the two buildings will be retail, the second floor will be parking, and floors three through seven will be market-rate apartments. On the roof of the larger building will be a pool, hot tub, and club house. While on the roof of the other building will be an apartment co-op rooftop garden. Proposed steel bridges will be connecting the two buildings, inspired by the bridges and trestles up and down the Cuyahoga River.



Figure 1: Site Layout



Source: Google Maps

2018



Historic District

The site is just west of the historic Ohio & Erie Canal Basin. This basin was constructed between 1825-1832 by German and Irish immigrants. This canal became the nation's first transcontinental shipping route, bringing goods and manufacturers to Cleveland. The canal almost instantly turned Cleveland into a major commercial center. The city became the hub of a continental transportation network that connected with New York City via Lake Erie and New York's Erie Canal as well as with the nation's developing frontier areas and New Orleans via the Ohio and Mississippi Rivers. Goods like wheat, corn, coal, and lumber came north to Cleveland from the frontier while manufactured products from factories in the northeast arrived in Cleveland in return.

Because of its historic cultural relevance, the peninsula was recently designated a historic district. In late 2013, Canalway Partners worked with the Downtown Cleveland Alliance and Historic Warehouse District to contribute funds to a study that led to the creation of the Cleveland Centre National Register Historic District. This designation promotes development by opening funding opportunities through historic tax credits and easements. With increase popularity, this district has been seeing momentum with smaller rehabilitation and development projects.

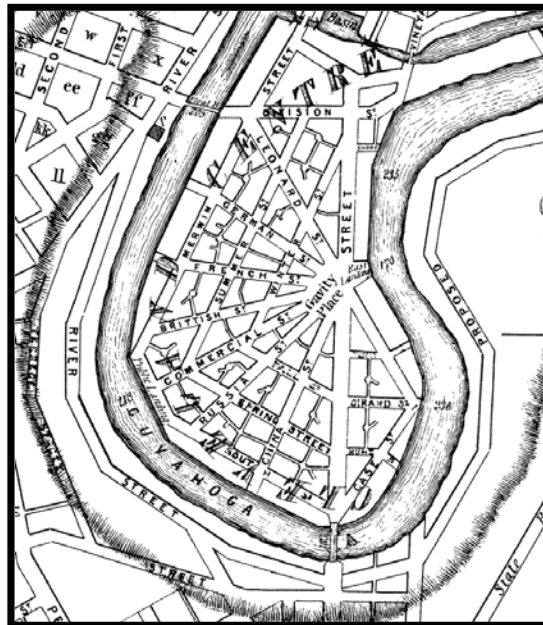


Figure 2 – 4: Historic Cleveland Centre



Down in the hollow in the bend of the river below Water street was a village known as Cleveland Center, the streets of which ran out like spokes from a hub, and the hub, an open square at the bottom of the ravine, was known as Gravity Place.

Cleveland Plain Dealer, July 10, 1896

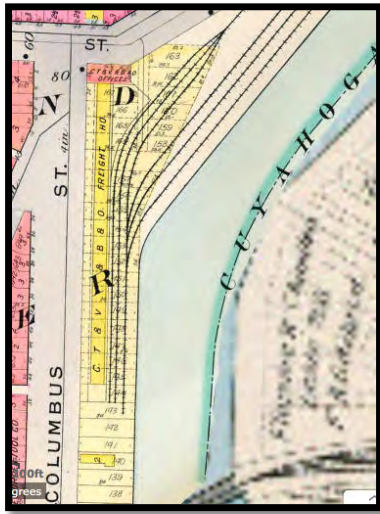


Source: Clevelandmemory.org

Maps:1835



Figure 5-6: Sanborn Maps



Source: Esri

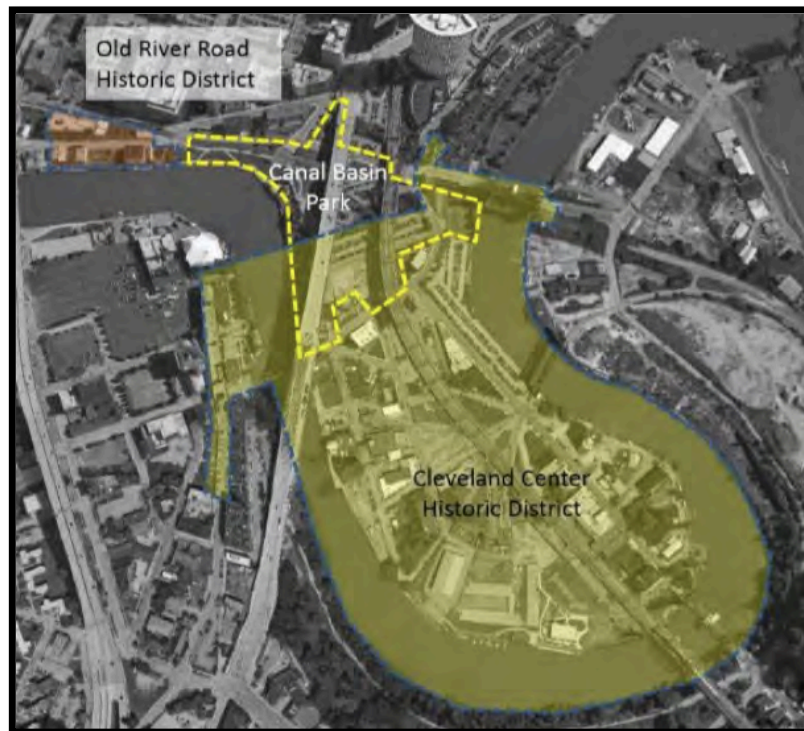
1898



Source: Esri

1932

Figure 7: Cleveland Centre Historic District



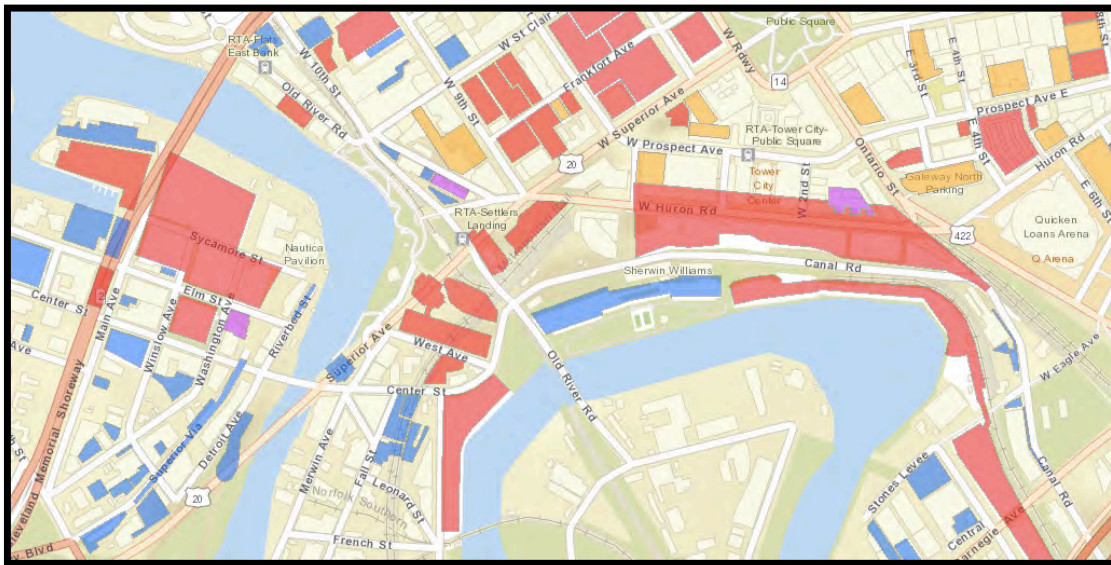
Source: City of Cleveland

2015



As the City of Cleveland began to decrease in population and its residents moved further and further away from the urban core, there became a larger demand for parking. With the majority of the workers in Cleveland driving to work, the City began to see an increase in parking all over downtown. Currently, this site is just one parking lot in a sea of downtown parking. The map below shows public parking in red and private parking in blue and orange. I provided this map to showcase the amount of real estate being held for parking.

Figure 8: Area Parking Map



Source: NOACA

2018

With the urbanization and redevelopment of the Flats, there has been a shift from industrial, to commercial and residential. Currently, the “Crooked River” is home to massive redevelopment projects all along its banks.

There are several large-scale community projects with the intent of revitalizing the Flats. The Flat’s East Bank was a massive project that was able to turn the area into a thriving entertainment district. Nautica Entertainment, LLC.,



owns most of the West Bank. This area is home to a riverfront music venue, aquarium, and luxury party space. A newer development is in the initial phases on Duck Island. Great Lakes Brewing Company has purchased a large portion of the land and is currently going through environmental assessments and predevelopment analyses. The last example of riverfront development is the South Flats District. The property is currently on the market with the hopes of potentially turning this portion of the riverfront into a mixed-use community. It is still in the inception phase, but could very much be a reality if the trend to live, work, and play near the water continues and grows. This would be the first time in Cleveland's post-industrial history where the shift of ownership will go from industry to commercial in the interest of the citizens.

One more substantial riverfront development is the proposed Canal Basin Park, which sits just east of the Oxbow Apartment site. Once complete, this project will consist of 20 acres of greenspace, Ohio & Erie Canal Towpath Trail connectivity, animated water features, and innovative lighting and video exhibits. The Park will celebrate the Canal Basin itself and the mission is to:

- Educate about our history
- Embrace the Cuyahoga River
- Reclaim the remnants of industry
- Unify the Flats
- Celebrate the terminus of the 101-mile Towpath Trail

With Oxbow Apartments just steps away from the Park and Towpath head, interests and ultimately demand for housing will increase in this area.



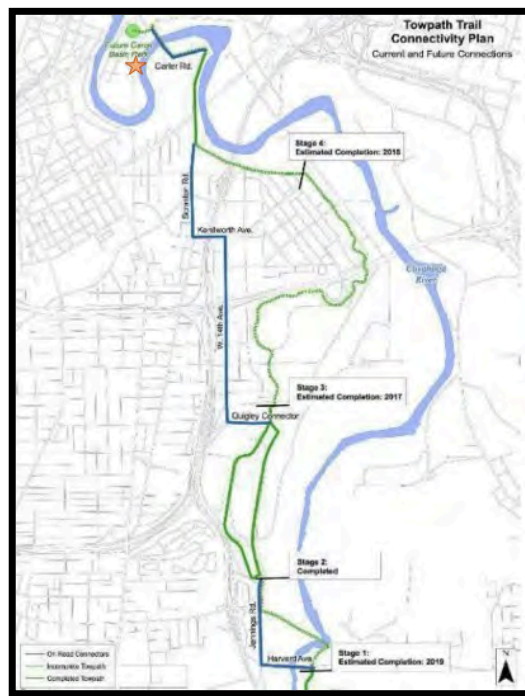
Figure 9: Canal Basin Park



Source: City of Cleveland

2015

Figure 10: Towpath Trail Map



Source: ohioanderiecanalway.com

2018

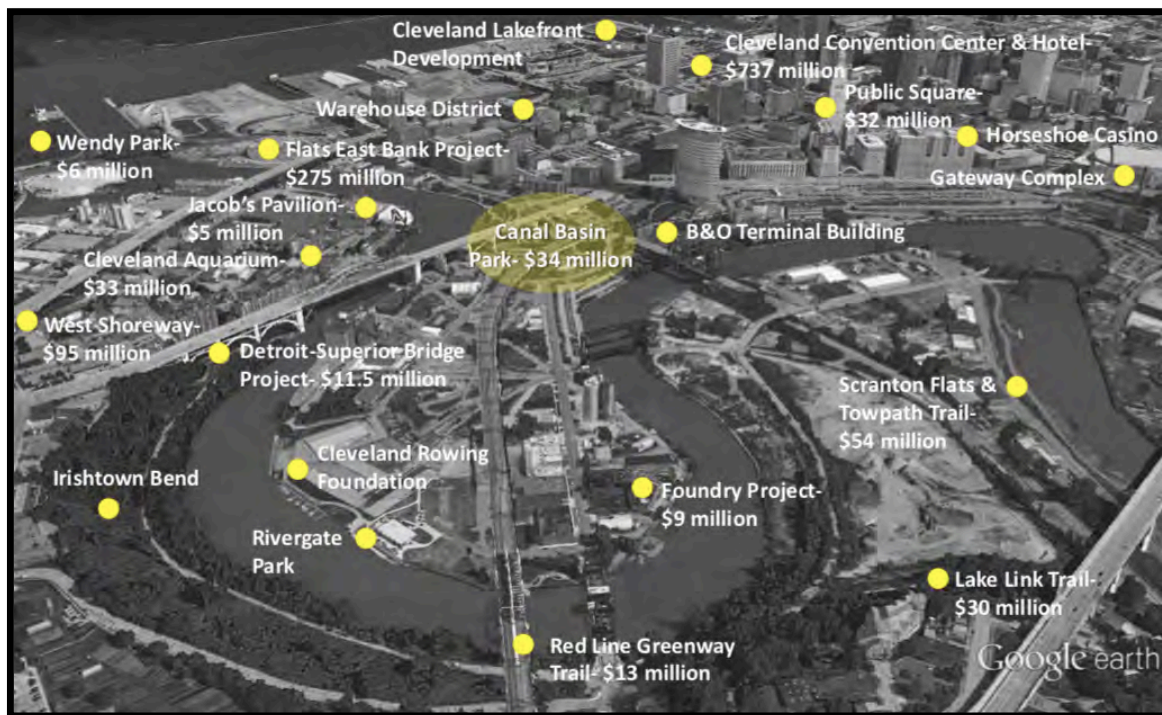


Another proposed project along the riverfront that is gaining momentum is the Irish Town Bend (ITB) park project. This park will be situated just around the bend from the Oxbow Apartment complex. The park would span about 17-acres along the river and would be the missing link in the Ohio Bike Trail. When ITB is complete, the popularity could be leveraged to draw the residents needed to occupy this project.

With proposed projects popping up along the river (i.e. Canal Basin Park, GLBC on Scranton, South Flats, ITB), it's not to say that Oxbow is the next phase in the flats development, but a phase in the next generation of flats development.

Not only are the Flats seeing development, but the entire City of Cleveland. A city that in recent history seen little to no development, is now witnessing massive projects throughout. Below is a photo of recently completed and projects underway.

Figure 11: Completed & Proposed Projects Near Site



Source: Cleveland Planning Commission

2015

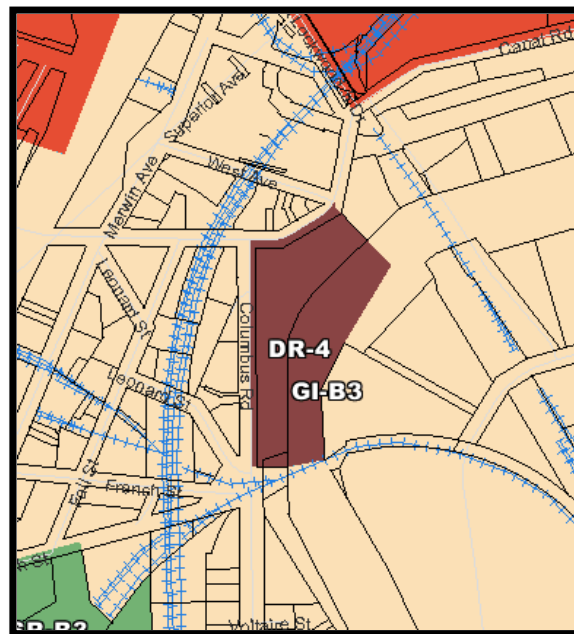


Site Layout

This 3-acre parking lot lies downriver from the East and West Banks, and across the river from Duck Island; its address is 1681 Columbus Road, Cleveland, Ohio 44113. The site is currently zoned as DR-4, which is Downtown Residential with a height limit of 175 feet. (For a zoning map legend, please look at the appendix).

The fact that the site has already been zoned for downtown residential shows that the City already sees the potential for the site and supports the development of the parking lot. This is a huge advantage for the project, because it will be easier to maneuver the City's legislative process.

Figure 12: Zoning Map



Source: City of Cleveland

2018



Parcel assembly for this site seems to appear relatively simple. Currently, Columbus Road Realty LTD owns parcel numbers 101-17-011 and 101-17-012 (the Site). The most recent acquisition of the two parcels originates from a Deed Transfer on Death executed on March 18, 2002. Eleven years later, on January 31st, 2013, a mortgage was taken out from Fifth Third Bank for \$1,000,000 for the parking lots. Columbus Road Realty LTD, is a partnership which currently runs a parking lot operation on the site. Benjamin Cappadora is one of the partners, while the others are anonymous.

Table 1: Parcel Information

Parcel	Owner	Total Value	Lot Size (SF)	Property Class	Address
101-17-012	Columbus Rd. Realty	\$ 1,403,000	126,324	Parking Lot	1681 Columbus Rd
101-17-011	Columbus Rd. Realty	\$ 49,700	3,485	Parking Lot	Columbus Rd
Total		\$ 1,452,700	129,809		

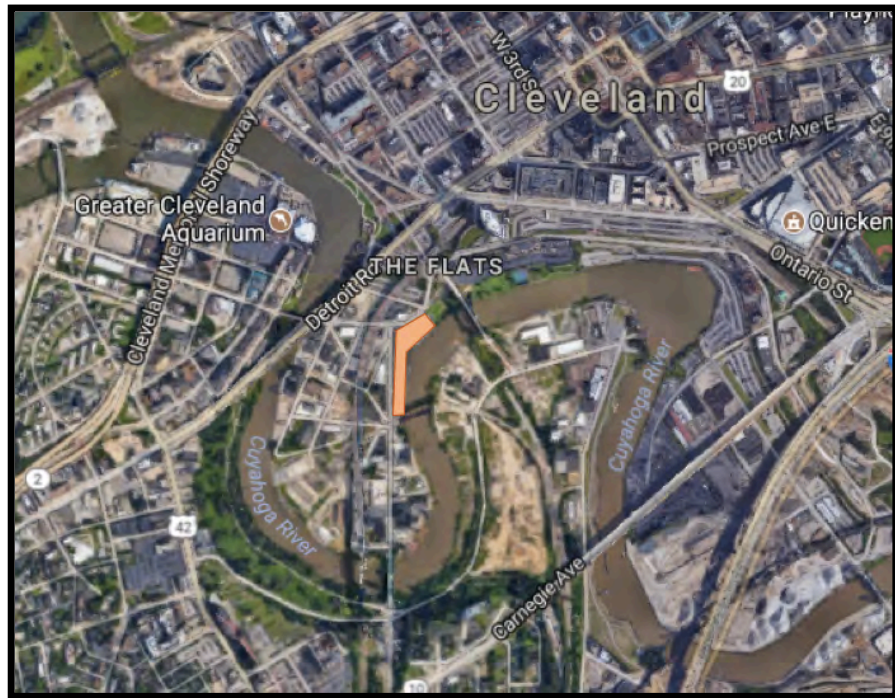
Source: Cuyahoga County Auditor

2018

The site is currently operating as a parking lot. I reached out to the lots parking manager and acquired some information. There are 365 parking spots on the site. Individuals can buy a parking pass for \$50 a month for day time use only. The lot is close to capacity, but still has about a dozen or so parking passes available. In general, the individuals who park on the lot work downtown. There are also individuals who work at Sherwin Williams who utilize the lot. There is not shuttle service available, so they will walk from the lot in the Flats to work.



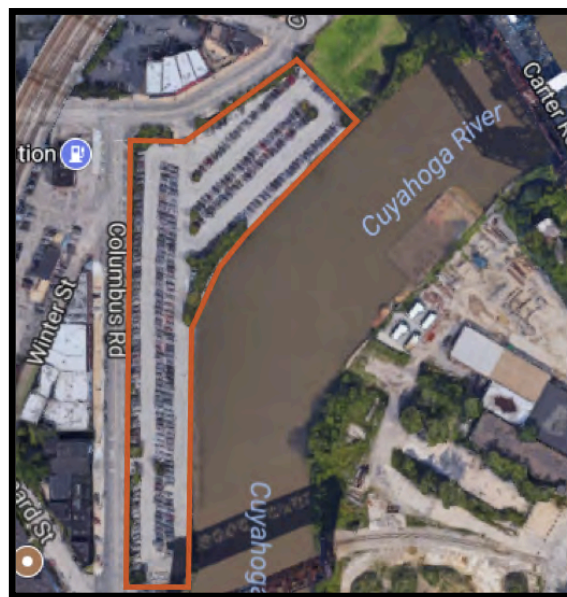
Figure 13: Greater Area Map



Source: Google Maps

2018

Figure 14: Immediate Area Map



Source: Google Maps

2018



Neighbors

A major neighbor just east of the site is one of Cleveland's largest employers, Sherwin Williams. There is a grass parcel next to the development site that belongs to Sherwin Williams. I would try and foster a relationship with SW and see if we can create something on the lot in the future, whether it be additional public space or a development project.

Connectivity

A key component of this development is multimodal transit incorporation. Three key advantages of this site are its central location, access to public transportation, and proximity to recreational bike paths. Leveraging these benefits can help with creating a complete, transit-oriented mixed-use development.

The site is located less than half a mile away (5-minute walk) from the RTA stop Settlers Landing which is on the green and blue lines. Also, the site is less than a mile (10-minute walk) from Tower City, which all RTA lines stop. Ideally, with the increase in residents on the peninsula, it would be great to have a shuttle or neighborhood bus that passes the site. I would propose a small bus that goes from Ohio City to Public or Playhouse Square. This short route would allow both residents and visitors a swift and easy passage across the river and city and continue with the City of Cleveland's goal of reweaving downtown with the neighborhoods.



Figure 15: RTA Map



Source: RTA

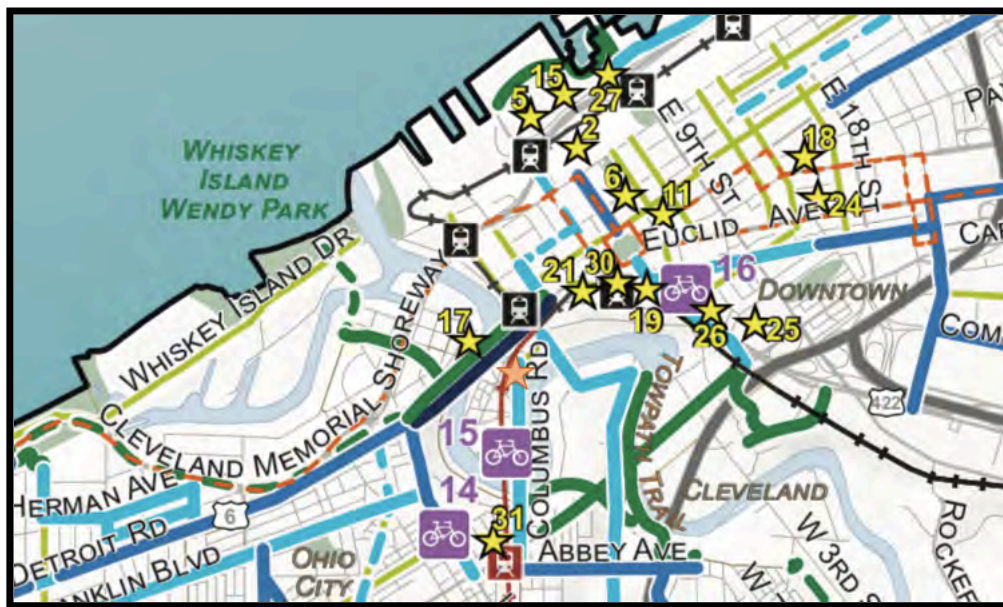
2018

A huge advantage of the site is its proximity to existing and future bike paths. Currently, Columbus Road is a bike route that connects the east and west banks of the river. The peninsula is home to Ohio City Bicycle Co-op which is a thriving non-profit volunteer-driven cooperative bicycle education center.

UH Bikes is a fairly new bike-sharing system throughout the City of Cleveland. Currently, there is only one bike station in the Flats near the Settlers Landing RTA stop, and according to their website, it is one of the most popular stations. I would try to partner up with UH Bikes to install another bike-share location on Columbus Road by the Oxbow Apartments.



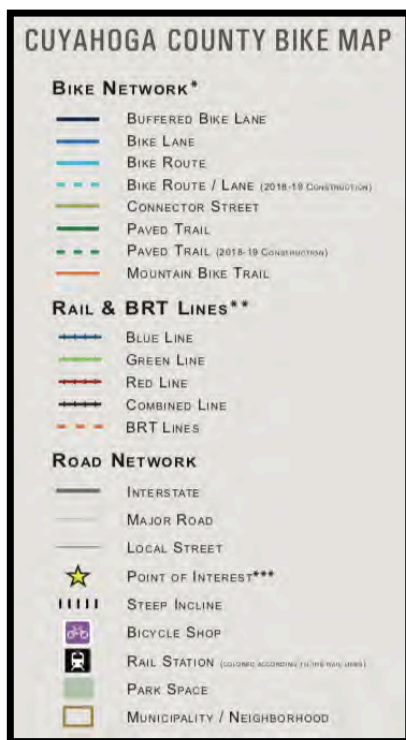
Figure 16: Bike Path Map



Source: NOACA

2018

Figure 17: Bike Map Key

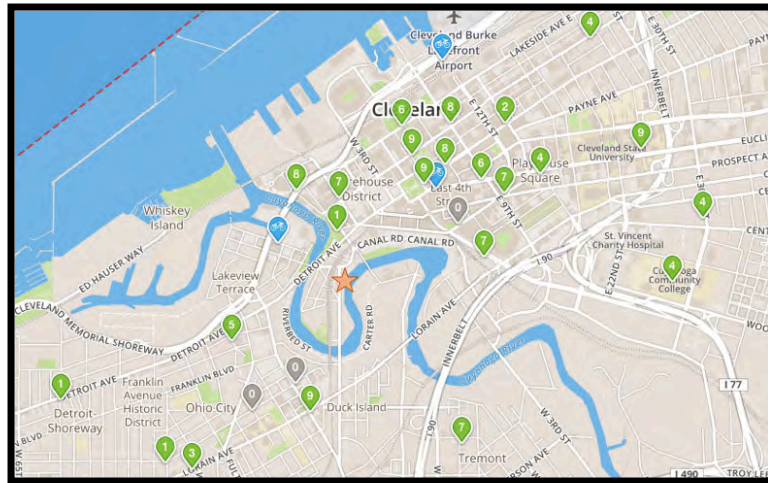


Source: NOACA

2018



Figure 18: UH Bike Map



Source: UH Bikes

2018

A huge asset of the proposed Oxbow Apartments is its location on the riverfront. Since there will be a boardwalk and first floor retail, it will be important to include areas for boats and other watercrafts to easily dock. The Cuyahoga River is fairly narrow and an important commercial and industrial waterway. I searched the City of Cleveland website to make sure that docking on this part of the river would be allowed. Thankfully, this part of the river is free for docking. Below is a map of the areas of the river in which docking is prohibited.

Figure 19: "No Docking" Safety Zone Map



Source: City of Cleveland

2018



Partnerships

In order for a project of this scale to really be successful, it is going to take dozens of partnerships. Having a mix of individuals working together from the private, public, and non-profit sectors will help create a project that is beneficial to the development team while at the same time has the public's interest at heart. As the developer, I am going to have to foster these relationships for the good of the project.

One of the first problems I am going to encounter is acquiring the land from its current owners. There is a partnership of owners who currently own the parcels. This partnership has been sitting on this secret with no real plans to develop. They are notorious for owning key real estate throughout Cuyahoga County, especially in the City of Cleveland, and holding it. However, no matter how long they hold the properties, there is an inevitable breaking point. Money or time shall be the determinant.

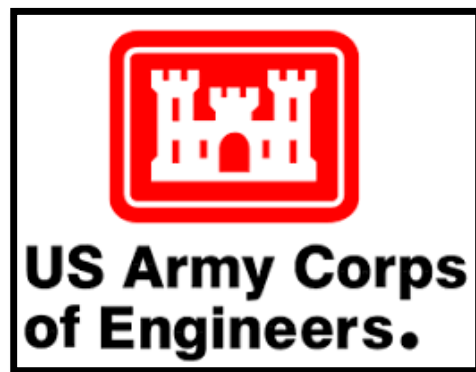
Ideally, I would buy the property from the partnership outright, but for the sake of moving the project forward, I would be willing to form a new partnership with the existing owners and new development partners. I will look for a development partner with a strong reputation and capacity to execute a project of this scale. Although I will be a lead developer, a strong development partner will be needed in order to secure the HUD loan.

I would propose that we create a new LLC and split the partnership in three. Oxbow Apartments, LLC will be the name of the new entity. This LLC will protect the members from any personal liabilities due to unforeseen business debts that may occur. I will be one-third owner of the new entity, the existing owners of the property will be one-third owner, and our (to be decided) development partner will be the third owner.



Riverfront Stabilization

A large part of this development project is the boardwalk along the river. This will be owned by the developer, but given to the city through a dedication. In order to fund this, I will need to seek grants from both local and federal entities.



The US Army Corps of Engineers have experience servicing not only the Cuyahoga River, but riverfronts all across the country. They would be a key partnership in stabilizing the riverbank. Although there are no grants available for flood prevention, there are grants available for stabilization of waterfronts.



The Port of Cleveland will be a major partner in this development. The Port controls any goings-on down the river. Due to the nature of this development, securing funds from the Port as well as assistance, will be necessary.





The Clean Ohio Recreational Trails Fund is a grant given to projects that aim to provide links in urban areas to support commuter access and provide economic benefit. This grant requires a 25% local match.

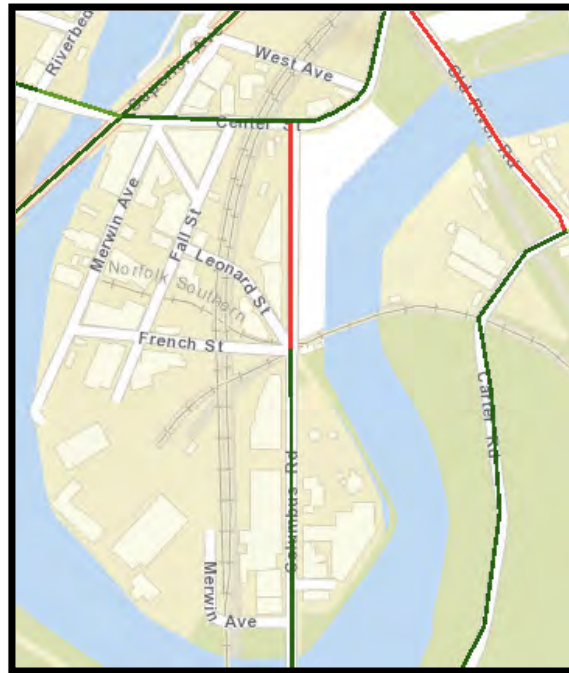
Transportation

As a part of the development project, there is going to need to be an upgrade to Columbus Road. Also, I am proposing the insertion of a round-about at the intersection of Columbus Road and Center Street.

The Site is the area of the Flats that is the doorway between Ohio City and downtown. As more development is done both in Ohio City and downtown, there will be a correlating increase in traffic. Looking at the annual average daily traffic (AADT) count in NOACA's database, in 2015 there were only 3,580 vehicles on Columbus Road a day. The AADT in 2016 was nearly double, with 6,195 vehicles a day. The congestion of Columbus Road can be seen on the map below.



Figure 20: Congestion Map



Source: NOACA

2018

*The red signifies severe congestion *



Ohio Development Services Agency (ODSA) has a 629 grant which can be utilized for roads and infrastructure. This grant requires a 50/50 match with a local municipality. We will have to work with the City's Planning and Transportation departments to work together to apply for the grant. If the grant is secured, the money will flow through the Mayor's Office of Capital Projects (MOCAP).



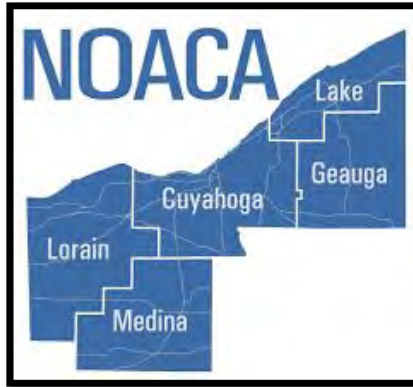


The US Department of Transportation has just unveiled a new program called the Better Utilizing Investments to Leverage Development (BUILD) grants. These have replaced the TIGER grants that were used for roads and infrastructure. Grantees are rewarded with funds upward to \$25 million. These funds would flow through NOACA. If Oxbow and the City can explain that this funding will go to not only the congestion problem of the peninsula, but can potentially remedy an unstable infrastructure. We would have a good chance in winning this grant.



The Ohio Department of Transportation is another entity that could provide grants or low interest rate loans to the project. These funds would flow through the City. A partnership with both ODOT and USDOT will help with the modernization of the roadwork in the Flats.





The Northeast Ohio Areawide Coordinating Agency (NOACA) is responsible for transportation and environmental planning for greater Cleveland. Not only would NOACA be the entity to administer the BUILD grant, they would be an essential partner for the planning of pedestrian, bike, bus, and vehicle routes around the site. This partnership may perhaps be the most important.



Not only is the actual roadway an important piece of this project, but the increased access to public transportation. Although the site is centrally located in the City, the peninsula under-serviced by the Regional Transit Authority (RTA). As mentioned earlier, Settler's Landing rapid station is only a 5-minute walk from the apartments. However, I would be in serious talks with the RTA to try and extend or change a bus route to travel down Columbus. The ultimate goal of the RTA is to reweave downtown with the neighborhoods. This project, with an added bus line, could change the culture of the area.



Highest & Best Use

The highest and best use analysis (HBU) evaluates a property's existing attributes, compared to the needs of various end uses. The purpose of this analysis is to determine which uses could be the most suitable for the subject property. For the Columbus Road Site, I am using relative judgments, on a -2 to +2 scale, where -2 is highly unsuitable, and +2 is optimum or highly suitable. The land use with the highest sum score is most suitable and some uses with near-high sums are also potentially viable. Low-ranked uses are generally unsuitable.

The advantage of this site is its position on the river. Also, the peninsula is considered a recreation hub and is home to a Cross Fit gym, Skate Park, and rowing facilities. A market strategy targeting an active, dynamic demographic could potentially draw in a more enthusiastic populace. An approach to utilizing the asset of the waterfront along with continuing with the recreation trend could be to encourage lifestyle-centered retail or housing in this area. For example, apartments with river front access could be very desirable for active kayakers. Another example for retail could be restaurants with local ingredients or a store selling/renting kayaks and paddleboards with docking on the river. As more people move to the waterfront, more will want to explore and utilize it.

Preferable, I would like to create a retail ecosystem that encourages local entrepreneurship. The Flats East Bank was created as a riverfront entertainment district. I would prefer to stay away from bars/clubs that are open late night, and focus more on daytime attraction and recreational support.

The HBU below reveals the top three uses for the site to be Multi-Family Housing (24), Public Space (22), and Retail (21). According to the HBU, it's current use as a parking lot scored relatively low with only self-storage scoring lower.



Table 2: HBU Analysis

Site Attributes	Multi-Family Housing	Public Space	Retail	Office	Hospitality	Low Income Housing	Warehouse	Parking Lot	Self Storage
Visibility/Views	2	2	2	1	2	2	-2	-2	-2
Auto Traffic	2	2	2	2	2	2	2	2	2
Adequate Parking	2	2	2	2	2	2	2	2	2
Pedestrian Access	0	0	0	0	1	-2	0	0	0
Highway Access	1	0	1	0	-1	-1	-1	1	-2
RTA Bus	-2	-2	-2	-2	-1	-2	0	0	-1
RTA Rapid Transit	2	2	2	2	0	2	0	0	0
Noise Level	1	2	2	2	1	2	2	0	2
Resident Base	2	0	1	1	1	1	1	0	-1
Day Time Use	2	1	1	2	1	2	2	2	1
Infrastructure	2	2	2	2	2	2	2	2	2
Zoning	2	0	2	2	2	2	2	2	2
Condition of Parcel	2	2	2	2	2	2	2	2	2
Size of Parcel	2	2	2	1	2	2	2	2	2
Future Expansion	0	0	0	0	0	0	0	-2	0
Competition	1	2	1	-1	1	-2	-1	-2	-2
Market Window	1	2	0	1	0	1	-2	-2	-2
Value of Land	2	2	1	1	1	1	-2	0	-1
Niche Filling	0	1	0	0	0	-1	-2	-2	-2
Total	24	22	21	18	18	15	7	5	2
Rank	1	2	3						

Market Analysis

The Primary Market Area (PMA) is the geographic area where the majority of support for the proposed site is expected to originate; where comparable housing alternatives exist. Because of the unique location of the Site, the PMA comprises downtown and the neighborhoods of Ohio City, Detroit-Shoreway, Playhouse Square and the Flats. Overall, the subject Site PMA encompasses just under 6 square miles.

The PMA boundaries were influenced by the area's population densities, geographical and socioeconomic factors and the presence of industrial areas, railroad tracks, freeways, and the lakefront. East 17th forms the eastern boundary of the PMA. This was decided because individuals who live just east of the PMA boundary and are interested in multi-family housing would more likely look for options in the University Circle, Cedar-Fairmont, or Larchmere neighborhoods. Also, communities in that area are generally



populated by homeowners with higher income levels who do not seek multifamily housing. Lake Erie is a natural norther boundary, and areas to the west of West 65th were also excluded from the PMA because similarly these areas are populated with homeowners who are not seeking multifamily housing. The southern border is Interstate 490.

Figure 21: PMA Map



Source: Google Maps

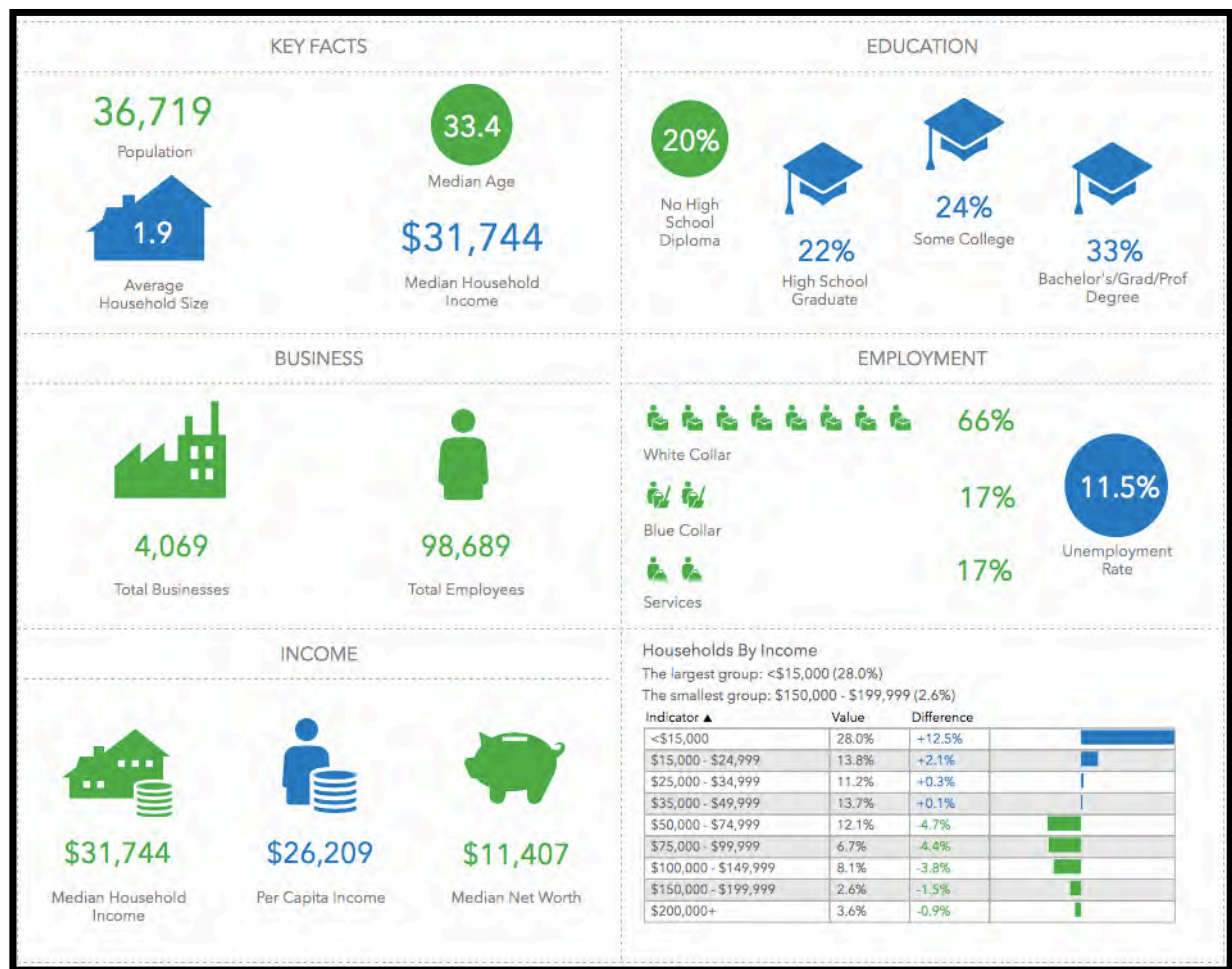
2018

The median household income for the PMA is \$31,744, which is relatively poor in relation to the national median household income of \$57,230. The population is a majority White at 48.1% with 43.8% African-American and 10.7% Hispanic. The population from age 24-35 are the highest within the PMA at 20.5%. About 80.7% of individuals are over the age of 18.



There are a high number of both businesses and employees within the PMA. This reflects the commuter culture of the City. Although there is a high number of employees at 98,689, there is still an 11.5% unemployment rate. Most of these positions within the PMA are white collar at 66% of all employment.

Figure 22: Key Infographics for PMA



Source: Esri Business Analyst

2018



Supply

When calculating the supply of rental units within the PMA, I first decided to look at housing rental data. These numbers are important because they capture a large number of individuals within the PMA who don't own property and are therefore more transient. These numbers can be used to find the total supply of rental units within the PMA.

Homeowner households are estimated to occupy 22.2% of all occupied housing units in 2017, while the remaining 77.8% are occupied by renter households. The share of renters is high and the number of renters is projected to increase over the next five years, reflecting a continued interest in downtown area living.

In 2017, 18.8% of the 16,908 total housing units in the market were estimated to be vacant. This is a high vacancy rate, and typical of urban neighborhoods considering the age and condition of some homes throughout the market. Most of these vacant units are not comparable to modern housing units and do not have an impact on potential support for the project.

Something to note is that as the total number of units increases, the number of owner-occupied units are decreasing. This is showing a shift from the desire to own verses rent.

Table 3: Rental Housing

Housing Status	2010 (Census)		2017 (Estimated)		2022 (Projected)	
	Number	Percent	Number	Percent	Number	Percent
Total-Occupied	13,155	81.2%	13,735	81.2%	13,855	81.3%
Owner-Occupied	3,435	26.1%	3,050	22.2%	3,045	22.0%
Renter-Occupied	9,720	73.9%	10,685	77.8%	10,810	78.0%
Vacant	3,053	18.8%	3,173	18.8%	3,196	18.7%
Total	16,208	100%	16,908	100%	17,051	100%

Source: Esri Business Analyst

2018



Table 4: Comparables - One

Project Name	Year Opened	Total Units	Vacancy	Distance to Site	Waiting List	Rent Specials
Oxbow Apartments	2021	320	3%			
West 25th Street Lofts	2016	83	6.5%	.8 Miles	None	None
Mariners Watch Apts	2014	62	6.7%	.9 Miles	None	None
Edge 32	2017	60	26.2%	1 Mile	None	None
The Apartments at Nautica	2006	55	0.0%	.5 Miles	None	None
Stonebridge Waterfront	2001	159	1.3%	.3 Miles	None	None
Flats at East Bank	2015	231	1.2%	.8 Miles	None	None
The 9	2014	104	1.9%	1.2 Miles	None	None
The Edison	2017	306	3.0%	2.2 Miles	None	None

Source: CoStar

2018

As the above table illustrates, all project types identified within the PMA are reporting good to excellent occupancy ratings. Among the various project types, only a segment with available units are within market-rate properties. This indicates a rental housing market where demand continues to exceed supply. A stable rental market should have at least a 5% vacancy factor to allow for normal tenant turnover.

The limited area vacancies are concentrated within the market-rate properties that are recently opened and in lease-up. Within the PMA, 5 of the 8-existing market-rate projects are fully occupied (One has just completed construction and the other two are still fairly new to the market).

Initial absorption rates of comparable properties have a range from 8% to 100% absorption in the first month of operation. To keep a conservative estimate, I am assuming a 10% absorption rate in the first month or 32 units per month. With this rate, stabilization will occur after Oxbow Apartments are on the market for about 10 months.



Table 5: Absorption

Project Name	Year Opened	Total Units	Percent Occupied	Initial Absorption	% Absorbed in 1st Month
Oxbow Apartments	2021	320	-	30-34 UPM	10%
Fairmont Creamery	2014	30	100%	>30 UPM	100%
Mariners Watch Apts	2014	62	95.2%	>9 UPM	15%
The Lofts at Softworth	2015	18	100.0%	>18 UPM	100%
The Schofield	2016	52	96.2%	>25 UPM	48%
The Ivory on Euclid	2015	29	96.6%	>14.5 UPM	50%
Flats at East Bank	2015	241	93.4%	>19 UPM	8%
The 9	2014	194	95.9%	>19 UPM	10%
The Shoreway	2014	45	97.8%	>15 UPM	33%

Source: CoStar

2018

Demand

In order to find the demand within the PMA, I performed a housing niche analysis. A housing niche analysis is a detailed analysis that will help to find the net demand for housing in various income categories and price points. In this analysis, I utilized data provided by Esri Business Analyst, CoStar, and the U.S. Census Bureau on household incomes within the PMA.

Once I determined the income ranges and how many household income segments were in each, I calculated the number of rental units in each segment for the year 2021, which is the year Oxbow Apartments will be coming online. Once I calculated supply, I totaled the existing rental units in the targeted area. To this total, I added in estimated vacancy, units under construction, and planned/proposed units and subtracted any projected demolitions. For the sake of the analysis I estimated about 95 units annually.

Based on this evaluation, there will be a shortage of rental units for all household segments within the PMA. I estimated about 433 additional high-end units are needed within the PMA through 2021. In addition, I identify



potential demand for an estimated 507 moderate rent units, and 295 low or affordable units. These deficits are also an explanation for the very high occupancy rates currently in the market at stabilized properties and reflect a potential pent-up demand in the market.

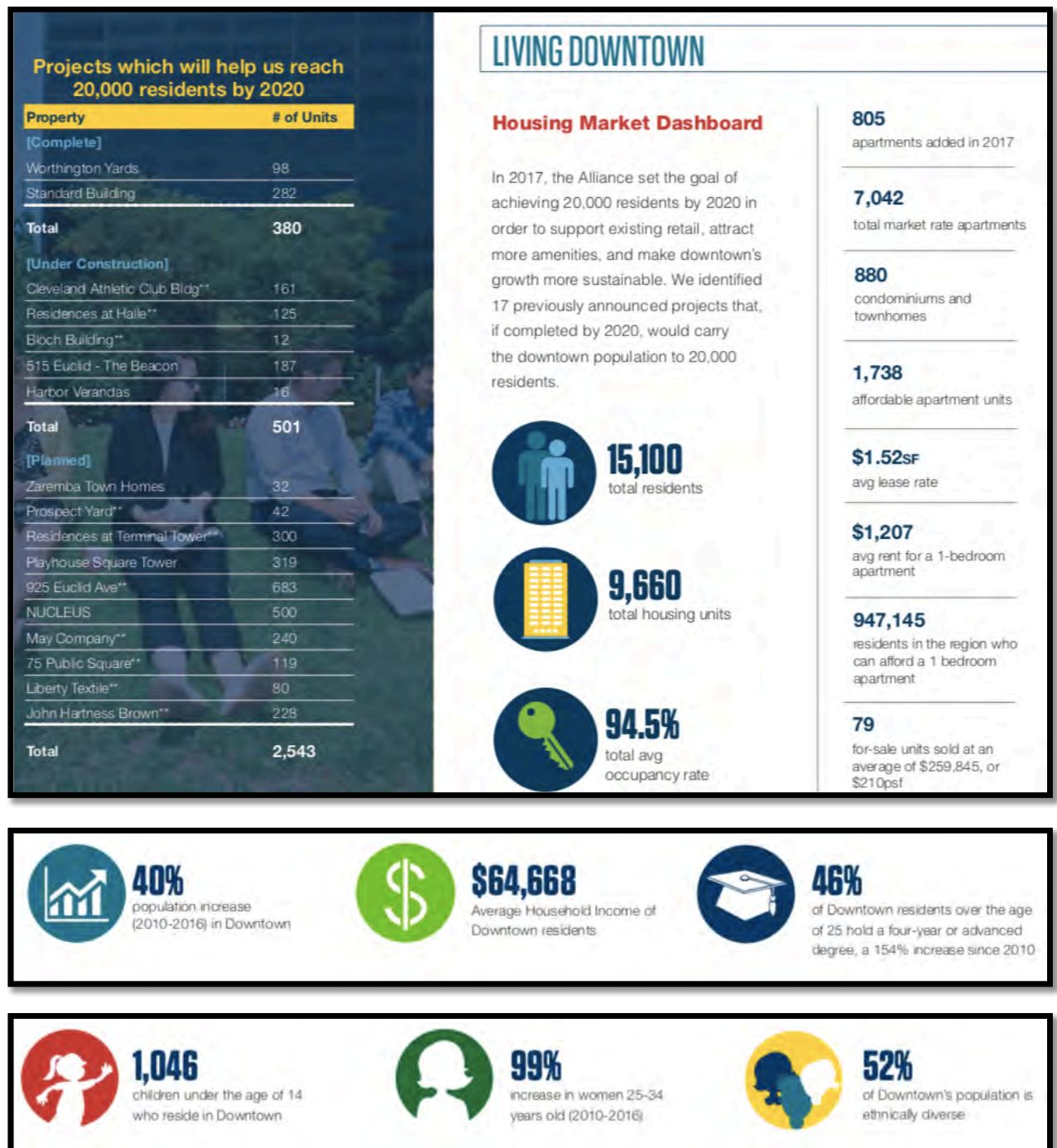
Table 6: Market Analysis

	Household Income Segments		
	Low & Affordable	Moderate	High-End
	Area Renter Households		
Total Renter HH Income in 2021	12,211	5,624	4,687
Total Targeted Rental Units, Balanced at 95% Occupancy	12,822	5,905	4,921
(+) Estimated Internal Market Support*	0% (0)	15% (844)	30% (1,406)
(=) Net Existing Rental Supply in 2021 when Oxbow Opens	12,822	6,749	6,327
Existing Rental Product			
Total Occupied Targeted Rental Units in 2021	12,401	5,617	4,459
(+) Estimated Vacant Units**	1% (124)	1.1% (62)	4% (178)
(+) Under Construction (1,017) Units	55	255	707
(+) Planned/Proposed (1,850) Units	42	608	1,200
(-) Area Rental Demolitions from 2010-2021 (~ 1045 [95 Units Annually])	95	300	650
(=) Net Existing Rental Supply in 2021	12,527	6,242	5,894
Total Supply and Demand			
Total Targeted Rental Units, Balanced at 95% Occupancy	12,822	6,749	6,327
(-) Net Existing Rental Supply	12,527	6,242	5,894
(=) Total Targeted New Units Needed in 2021	295	507	433
* Renters (occupied units) moving up in the area that seek new housing alternative			
** Based on current overall Census data; reflects on units in PMA			

Downtown Cleveland Alliance releases an annual report on the trends of downtown. I utilized this data to show the demand for new apartments. Although the total numbers are slightly different from my PMA, due to the fact that I also include parts of Ohio City, Tremont, and Detroit-Shoreway, the findings are just as relevant to my analysis. The most important numbers to note are the 94.5% total average occupancy rate, the 40% increase in downtown population from 2010 – 2016, and the average income of downtown residents of \$64, 668. All of these findings can justify demand for new housing units.



Figure 23-25: DCA Living Downtown Dashboard



Source: DCA 2017 Annual Report

2018



Lease Rates

Lease rates were calculated by averaging the rent rates of similar properties within the PMA and slightly adjusted to match similar projects coming soon to the market. The asking price per square foot is \$2.10, with the average unit sized at 1,095 square feet. When at capacity, the annual rent would be \$672,052.50.

Table 7 includes market-rate units that are located at mixed-income properties (properties that offer both market-rate, subsidized and/or tax credit units) along with projects that offer only market-rate units. Among the projects that were captured, only 237 units are vacant out of 5,900, which is about a 4% vacancy rate.

The distribution of unit types is typical of a well-developed urban market, 52% studio and one-bedroom units and just less than 43% two-bedroom units. This unit distribution is in response to the increasing share of one- and two-person renter households in the market and the number of single-family rental homes in the PMA serving larger households.

The proposed project will offer a mix that includes 66 studio units, 75 one-bedroom/ one-bath units, 40 one-bedroom units with one and a half baths, 65 two-bedroom units with one and a half baths, 60 two-bedroom/two-bath units, and 27 three-bedroom/two-bath units.

Vacancy rates for all of the properties compared are pretty low. The highest vacancy rate from my comparables, is Edge 32 with a vacancy of 26.2%. This is due to its recent opening so is still working to fill up. In order to calculate the assumed 3%, I took the average for all of the other properties within the PMA.



Table 7: Market-Rate Unit Distribution

Bedrooms	Baths	Units	Distribution	Vacancy Units	Vacancy Rates	Median Net Rate
Studio	1	632	10.7%	17	2.7%	\$ 625
One-Bedroom	1	2385	40.4%	93	3.9%	\$ 1,035
One-Bedroom	1.5	39	0.7%	0	0.0%	\$ 1,000
One-Bedroom	2	36	0.6%	0	0.0%	\$ 1,345
Two-Bedroom	1	194	3.3%	9.00	4.6%	\$ 1,330
Two-Bedroom	1.5	94	1.6%	1	1.1%	\$ 1,025
Two-Bedroom	2	2168	36.7%	103	4.8%	\$ 1,721
Two-Bedroom	2.5	56	0.9%	5	8.9%	\$ 2,545
Three-Bedroom	1	1	0.0%	0	0.0%	\$ 1,930
Three-Bedroom	1.5	12	0.2%	0	0.0%	\$ 1,265
Three-Bedroom	2	107	1.8%	7	6.5%	\$ 1,865
Three-Bedroom	2.5	14	0.2%	2	14.3%	\$ 6,318
Three-Bedroom	3	62	1.1%	0	0.0%	\$ 2,402
Three-Bedroom	3.5	4	0.1%	0	0.0%	\$ 2,500
Four-Bedroom	4	96	1.6%	0	0.0%	\$ 2,916
Total Market-Rate		5900	100%	237	4.0%	
Overall Median Market-Rate Rent						\$ 1,343

Source: CoStar

2018

Table 8: Unit Breakdown

Total Units	Bedrooms	Baths	Square Feet	Rent	PSF	Annual Rents
66	Studio	1	600	\$ 1,260	\$ 2.10	\$ 83,160.00
75	One-Bedroom	1	800	\$ 1,680	\$ 2.10	\$ 126,000.00
40	One-Bedroom	1.5	850	\$ 1,785	\$ 2.10	\$ 71,400.00
65	Two-Bedroom	1.5	940	\$ 1,974	\$ 2.10	\$ 128,310.00
60	Two-Bedroom	2	1250	\$ 2,625	\$ 2.10	\$ 157,500.00
27	Three Bedroom	2	1865	\$ 3,917	\$ 2.10	\$ 105,745.50
333						\$ 672,115.50

Source: CoStar

2018

Table 4: Comparables – One

Project Name	Year Opened	Total Units	Vacancy	Distance to Site	Waiting List	Rent Specials
Oxbow Apartments	2021	320	3%	-	-	-
West 25th Street Lofts	2016	83	6.5%	.8 Miles	None	None
Mariners Watch Apts	2014	62	6.7%	.9 Miles	None	None
Edge 32	2017	60	26.2%	1 Mile	None	None
The Apartments at Nautica	2006	55	0.0%	.5 Miles	None	None
Stonebridge Waterfront	2001	159	1.3%	.3 Miles	None	None
Flats at East Bank	2015	231	1.2%	.8 Miles	None	None
The 9	2014	104	1.9%	1.2 Miles	None	None
The Edison	2017	306	3.0%	2.2 Miles	None	None

Source: CoStar

2018



Table 9: Comparables – Two

Property	Units	Average SF	Asking Rent/Unit	Asking Rent/SF
Oxbow Apartments	320	1,095	2,300	\$ 2.10
West 25th Street Lofts	83	1,160	\$ 1,504	\$ 1.30
Mariners Watch Apts	66	819	\$ 1,597	\$ 1.95
Edge 32	60	1,027	\$ 1,750	\$ 1.70
The Apartments at Nautica	55	1,009	\$ 1,032	\$ 1.02
Stonebridge Waterfront	159	1,083	\$ 1,521	\$ 1.40
Flats at East Bank	231	1,149	\$ 2,588	\$ 2.25
The 9	194	1,002	\$ 2,037	\$ 2.03
The Edison	306	931	\$ 1,698	\$ 1.82

Source: CoStar

2018

Design & Amenities

After performing a market analysis, there is a demand for low/affordable, middle-range and high-end apartments. I've decided to propose high-end units at Oxbow. Each unit at Oxbow will come with 12 foot ceilings, hardwood flooring, stainless steel appliances, en suite washer & dryer, and granite counter tops, to name a few. Some community amenities will be a rooftop clubhouse with pool and hot tub access, bike racks, kayak & paddleboard rentals, and rooftop community gardens. With all of these amenities, I assumed a \$700 per unit "fit out".



Figure 26: Unit Rendering



Source: Flats East Bank

2016

Because Oxbow Apartments is located in a historic district, there will be a critical eye on the design of the buildings. I would propose a brick and glass façade with steel bridges attaching the buildings. Most of the buildings on the peninsula are redbrick, so brick would be the ideal material to blend the structures in with the surrounding areas. The bridges are reflective of the existing trestles and bridges that cross the Cuyahoga River.

Costs and Caveats

Total development costs for the project are \$67,518,467. Construction costs are estimated below with a mix of assumptions provided by Roby Simons, Arne Goldman's "Rule of Thumb – Northeast Ohio," Julie Quinn with First Interstate Properties, and market comparables. Expenses are broken into "Controllable" and "Non-controllable" costs. These assumptions were from a Pro Forma in a



Confidential Offering Memorandum from a downtown apartment building I had access to through work.

After calculating total development costs, I ran several pro formas to try and predict if the project would be feasible. The gap was massive. Because this is new construction, I am not able to utilize New Market Tax Credits or Historic Tax Credits. Also, because it is market-rate, Low-Income Housing Tax Credits were off the table. I searched for a non-conventional loan that I could utilize to fund the project. That is when I discovered the HUD221(d)(4).

Sources and Uses

In order to calculate total project costs, I made some assumptions provided by Julie Quinn of First Interstate Properties and Arne Goldman of Marous Brothers Construction. First, the cost of the land was doubled in order to acquire. This is under the assumption that I will be able to purchase the land outright from the current owners. If they don't want to sell and instead become part of the development team, this price will be taken off of the Sources and Uses.

Next, Goldman estimates that there is about \$250,000 per acre in site development. I increased this amount to \$300,000 because I predict there will be extra costs associated with the stabilization of the bulk heads. Also, extensive structural studies will have to be done on the sight by engineering professionals to make sure that it is safe to construct the buildings. The \$110 per square foot for multifamily "core and shell" and \$700 for "fit-out" were figures provided by both Goldman and Quinn. A huge expense is the structure parking lot located on the second floor. This was something that I was unable to get around. Lastly, I included a 10% building contingency. I realize that this may be higher than standard contingencies, but I wanted to be able to cover any unexpected expenses shall they arise.



The uses are a mix of Federal, Local, and Private contribution. The equity portion will be contributed by the development partners.

Table 10: Sources and Uses

Project Cost Details								
Uses	Cost	Per	Total Cost	% of Cost	Sources			% of Cost
Land Value	\$ 1,452,700	Site	\$ 2,905,400	4.30%	HUD221d		\$ 56,242,883	83%
Site Development	\$ 300,000	Acre	\$ 900,000	1.33%	Conventional Loan		\$ 7,926,636	12%
Hard Cost - Multifamily (Core & Shell)	\$ 110	SF	\$ 35,200,000		City - VPI		\$ 1,000,000	1%
Hard Cost - Multifamily (Fit-out)	\$ 700	Unit	\$ 224,000		TIF		\$ 1,379,765	2%
Hard Cost - Parking	\$ 15,000	Space	\$ 5,333,333		Equity		\$ 969,184	1%
Hard Cost - Retail	\$ 50	SF	\$ 3,200,000					
Total Hard Costs	\$ 110	-	\$ 43,957,333	65.10%				
Building Contingency		10% of Total Hard Costs	\$ 4,395,733	6.51%				
Total Soft Costs	\$ 30	SF	\$ 15,360,000	22.75%				
Total Project Costs			\$ 67,518,467	100%	Total		\$ 67,518,467	100%

Pro Forma

The project is financially feasible. Oxbow can generate over \$10 million in yearly rent and an NOI of over \$6 million. Because of the low-interest, long amortization term of the LTC, the debt service coverage ratio is high throughout the length of the holding period. Even with a second traditional loan, the project will be able to pay its debt service. The BTCF and ATCF are both positive, also reflecting the strength of the project.

My pro forma will begin with year 3 because year one and two will be predevelopment and construction. Year three has been adjusted with inflation and that continues throughout the pro forma. The first year will have much lower revenues due to the vacancy during the absorption period. The expenses are broken into controllable and non-controllable costs



Table 11: Controllable & Non-Controllable Expenses

Controlable	Non-Controllable
Payroll & Benefits	Real Estate Taxes
Landscape & Snow Removal	Insurance
Trash Removal	Gas Electric
Elevator	Water/Sewer
Courtesy Officer/Doorman	
Security & Fire Systems	
Maintenance & Repairs	
Unit Turnover	
General & Administrative	
Advertising & Promotion	

Table 12: Pro Forma

Tenants	SF	\$/SF	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Aparments	320,000	\$25.20			\$ 8,658,654	\$ 8,866,462	\$ 9,079,257	\$ 9,297,159	\$ 9,520,291
Less Vacancy (3%)	0.2	0.03			\$ 1,731,731	\$ 265,994	\$ 272,378	\$ 278,915	\$ 285,609
Retail	64,000	\$25.00			\$ 1,717,987	\$ 1,759,219	\$ 1,801,440	\$ 1,844,674	\$ 1,888,947
Less Vacancy (10%)		0.10			\$ 171,799	\$ 175,922	\$ 180,144	\$ 184,467	\$ 188,895
Parking	320	\$1,800.00			\$ 618,475	\$ 633,319	\$ 648,518	\$ 664,083	\$ 680,021
Less Vacancy (5%)		0.05			\$ 30,924	\$ 31,666	\$ 32,426	\$ 33,204	\$ 34,001
Net Leasable Space	448,000								
Leasing Fees		15%							
TOTAL REVENUES					\$ 9,060,663	\$ 10,785,417	\$ 11,044,267	\$ 11,309,330	\$ 11,580,754
	SF/Year								
Property Tax Residential	0 for 15 years	\$2.14			\$ -	\$ -	\$ -	\$ -	\$ -
Property Tax Commercial	3.55% of (2/3)	\$0.22			\$ 114,527	\$ 117,046	\$ 119,621	\$ 122,253	\$ 124,943
Non-Controllable		\$3.94			\$ 1,884,200	\$ 1,925,652	\$ 1,968,016	\$ 2,011,313	\$ 2,055,562
Controlable		\$2.98			\$ 1,425,105	\$ 1,456,458	\$ 1,488,500	\$ 1,521,247	\$ 1,554,714
Replacement Reserve		\$0.24			\$ 114,774	\$ 117,299	\$ 119,879	\$ 122,517	\$ 125,212
Refinishing Fees	\$20,000	If lease rolls over							
Management Fee	4%	of collected gross rent			\$ 362,426.52	\$ 431,416.70	\$ 441,770.70	\$ 452,373.19	\$ 463,230.15
TOTAL EXPENSES					\$ 3,901,032	\$ 4,047,871	\$ 4,137,787	\$ 4,229,702	\$ 4,323,661
=NOI					\$ 5,159,631	\$ 6,737,546	\$ 6,906,480	\$ 7,079,627	\$ 7,257,093

Table 13: Debt Service Coverage Ratio

BTCF	Year 1	Year 3	Year 4	Year 5	Year 6	Year 7
NOI	\$ 5,159,631	\$ 6,737,546	\$ 6,906,480	\$ 7,079,627	\$ 7,257,093	
Interest (-)	\$ 2,784,763	\$ 2,747,676	\$ 2,708,737	\$ 2,667,847	\$ 2,624,901	
Principal (-)	\$ 790,566	\$ 827,653	\$ 866,592	\$ 907,482	\$ 950,428	
BTCF	\$ 1,584,302	\$ 3,162,217	\$ 3,331,151	\$ 3,504,298	\$ 3,681,764	
DSCR	1.44	1.88	1.93	1.98	2.03	



HUD221(d)(4)

For multifamily developments, HUD has the 221(d)(4) construction loan program for developers of both market rate and affordable housing. This program is non-recourse and provides borrowers with 83.3% loan to cost, with a 40-year term and amortization at a fixed rate. Unlike conventional bank financing, these terms are not subject to change along with market conditions which has made the 221(d)(4) particularly attractive in today's economic environment. Arranging a HUD loan takes a bit of patience, which is generally the biggest drawback for using the program.

Loans generally range from \$2,000,000 to \$100,000,000 or more. There is no hard cap or bottom for the loan amounts but because of the costs involved with originating a HUD Insured multifamily development loan, oftentimes developers of smaller multifamily projects are intimidated by the pricing, as well as the process.

As with a lot of government programs, there is a lot of paperwork and it is very time consuming. The underwriting process is going to be 180 days total. 90 days for a soft commitment that basically says "yes, we like your project and it will be approved contingent on these stipulations." And, 90 days for a firm commitment. For each stage in the process, soft and firm commitment, there is paperwork and reports that are required.



Table 14: HUD221d Amortization Table

HUD 221d		Mortgage LTC: 0.833		
Loan Amount	\$ 56,242,883			
Mortgage Constant	0.050523489			
Years	40			
Rate	4.00%			
		Annual		
Year	Debt Service	Principal	Interest	OPBalance
1	\$ 2,841,586.69	\$ 591,871.38	\$ 2,249,715.31	\$ 55,651,011.36
2	\$ 2,841,586.69	\$ 615,546.23	\$ 2,226,040.45	\$ 55,035,465.13
3	\$ 2,841,586.69	\$ 640,168.08	\$ 2,201,418.61	\$ 54,395,297.05
4	\$ 2,841,586.69	\$ 665,774.80	\$ 2,175,811.88	\$ 53,729,522.24
5	\$ 2,841,586.69	\$ 692,405.80	\$ 2,149,180.89	\$ 53,037,116.45
6	\$ 2,841,586.69	\$ 720,102.03	\$ 2,121,484.66	\$ 52,317,014.42
7	\$ 2,841,586.69	\$ 748,906.11	\$ 2,092,680.58	\$ 51,568,108.31
8	\$ 2,841,586.69	\$ 778,862.35	\$ 2,062,724.33	\$ 50,789,245.96
9	\$ 2,841,586.69	\$ 810,016.85	\$ 2,031,569.84	\$ 49,979,229.11
10	\$ 2,841,586.69	\$ 842,417.52	\$ 1,999,169.16	\$ 49,136,811.59
11	\$ 2,841,586.69	\$ 876,114.22	\$ 1,965,472.46	\$ 48,260,697.37
12	\$ 2,841,586.69	\$ 911,158.79	\$ 1,930,427.89	\$ 47,349,538.58
13	\$ 2,841,586.69	\$ 947,605.14	\$ 1,893,981.54	\$ 46,401,933.44
14	\$ 2,841,586.69	\$ 985,509.35	\$ 1,856,077.34	\$ 45,416,424.09
15	\$ 2,841,586.69	\$ 1,024,929.72	\$ 1,816,656.96	\$ 44,391,494.37
16	\$ 2,841,586.69	\$ 1,065,926.91	\$ 1,775,659.77	\$ 43,325,567.45
17	\$ 2,841,586.69	\$ 1,108,563.99	\$ 1,733,022.70	\$ 42,217,003.47
18	\$ 2,841,586.69	\$ 1,152,906.55	\$ 1,688,680.14	\$ 41,064,096.92
19	\$ 2,841,586.69	\$ 1,199,022.81	\$ 1,642,563.88	\$ 39,865,074.11
20	\$ 2,841,586.69	\$ 1,246,983.72	\$ 1,594,602.96	\$ 38,618,090.39
21	\$ 2,841,586.69	\$ 1,296,863.07	\$ 1,544,723.62	\$ 37,321,227.32
22	\$ 2,841,586.69	\$ 1,348,737.59	\$ 1,492,849.09	\$ 35,972,489.73
23	\$ 2,841,586.69	\$ 1,402,687.10	\$ 1,438,899.59	\$ 34,569,802.63
24	\$ 2,841,586.69	\$ 1,458,794.58	\$ 1,382,792.11	\$ 33,111,008.05
25	\$ 2,841,586.69	\$ 1,517,146.36	\$ 1,324,440.32	\$ 31,593,861.69
26	\$ 2,841,586.69	\$ 1,577,832.22	\$ 1,263,754.47	\$ 30,016,029.47
27	\$ 2,841,586.69	\$ 1,640,945.51	\$ 1,200,641.18	\$ 28,375,083.97
28	\$ 2,841,586.69	\$ 1,706,583.33	\$ 1,135,003.36	\$ 26,668,500.64
29	\$ 2,841,586.69	\$ 1,774,846.66	\$ 1,066,740.03	\$ 24,893,653.98
30	\$ 2,841,586.69	\$ 1,845,840.53	\$ 995,746.16	\$ 23,047,813.45
31	\$ 2,841,586.69	\$ 1,919,674.15	\$ 921,912.54	\$ 21,128,139.31
32	\$ 2,841,586.69	\$ 1,996,461.11	\$ 845,125.57	\$ 19,131,678.19
33	\$ 2,841,586.69	\$ 2,076,319.56	\$ 765,267.13	\$ 17,055,358.63
34	\$ 2,841,586.69	\$ 2,159,372.34	\$ 682,214.35	\$ 14,895,986.29
35	\$ 2,841,586.69	\$ 2,245,747.23	\$ 595,839.45	\$ 12,650,239.06
36	\$ 2,841,586.69	\$ 2,335,577.12	\$ 506,009.56	\$ 10,314,661.94
37	\$ 2,841,586.69	\$ 2,429,000.21	\$ 412,586.48	\$ 7,885,661.73
38	\$ 2,841,586.69	\$ 2,526,160.22	\$ 315,426.47	\$ 5,359,501.51
39	\$ 2,841,586.69	\$ 2,627,206.62	\$ 214,380.06	\$ 2,732,294.89
40	\$ 2,841,586.69	\$ 2,732,294.89	\$ 109,291.80	\$ (0.00)



Public Subsidy

A massive part of this project will need to be funded through public funding. I performed a cost-benefit analysis on behalf of the City of Cleveland. For the incentives provided, every dollar invested by the City, there will be a \$1.31 in benefits from the project, both directly and through positive externalities. I assumed the City will provide three types of assistance: residential tax abatement, tax incremental financing, and a vacant property initiative forgivable loan.

The first incentive is a 15-year residential tax abatement. This tax abatement is the standard for the City of Cleveland for any new residential construction. Since the entire project is not residential, only 75% of the property taxes will be abated.

The second City incentive is a 30-year non-school TIF. In order to calculate this amount, the City will take the final projects projected value and subtract its current market value. This number is the incremental increase which would be subject to the TIF agreement. How this works is that I as the developer would pay my taxes to the County. The County then would give the School Board their share, then the other share will be put into escrow and redirected to me to pay for debt service. Because the first fifteen years of the TIF is subject to abatement, only in years 16-30 would I receive substantial TIF funds.

The third incentive is a Vacant Property Initiative forgivable loan. This loan is funded through the City of Cleveland's Department of Economic Development. Since this is an underutilized parking lot, and "vacant" in sense of employment, this project would be eligible. The City provides loans in different amounts depending on the project, scale, and benefits. Because this is such a large project that will spur economic development in the area, I believe that I could secure a large forgivable loan from the City.



Table 15: Public Subsidy Cost-Benefit Analysis

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Total Property Value-development	\$ 4,330,944	\$ 4,482,527	\$ 4,639,415	\$ 4,801,795	\$ 4,969,858	\$ 5,143,803	\$ 5,323,836
Average Value/Unit	\$ 13,534	\$ 14,008	\$ 14,498	\$ 15,006	\$ 15,531	\$ 16,074	\$ 16,637
New Units	320	0	0	0	0	0	0
Cummulative New Units	320	320	320	320	320	320	320
Sum of Units in Tax Abatement	320	320	320	320	320	320	320
Abated Part	\$ -	\$ -	\$ 10,394	\$ 10,758	\$ 11,135	\$ 11,524	\$ 11,928
Non-abated Part	\$ -	\$ -	\$ 3,465	\$ 3,586	\$ 3,712	\$ 3,841	\$ 3,976
Tax Post-Abatement							
Construction Income	\$ 454,859	\$ -	\$ -	\$ -	\$ -		
Income new 25%, inc= 4of House price		\$ 164,694	\$ 168,318	\$ 172,020	\$ 175,805	\$ 179,673	\$ 183,625
Residential Income Tax (Neighbors)			\$ 263,616	\$ 271,524	\$ 279,670	\$ 288,060	\$ 296,702
sum of the appreciation of surrounding HH							
SUBSIDIES (COSTS)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
VPI	\$ 1,000,000						
Non -School TIF		\$ -	\$ -	\$ -	\$ -		
Tax Abatement	\$ -	\$ -	\$ 10,394	\$ 10,758	\$ 11,135	\$ 11,524	\$ 11,928
Total-Subsidy Costs	\$ 1,000,000	\$ -	\$ 10,394	\$ 10,758	\$ 11,135	\$ 11,524	\$ 11,928
Discount Rate	0.9639	0.9290	0.8954	0.8631	0.8319	0.8018	0.7728
pv/yr	\$ 963,855	\$ -	\$ 9,307	\$ 9,285	\$ 9,263	\$ 9,240	\$ 9,218
sum of pv- costs	\$ 6,904,388						
subsidy/unit	\$ 20,734						
% subsidy /unit	157.79%						
BENEFITS (REVENUES)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Construction Income Tax	\$ 454,859	\$ -	\$ -	\$ -	\$ -		
Indirect Tax (Residential Income Tax from Neighbors)	\$ -	\$ -	\$ 263,616	\$ 271,524	\$ 279,670	\$ 288,060	\$ 296,702
Property Tax	\$ -	\$ -	\$ 3,465	\$ 3,586	\$ 3,712	\$ 3,841	\$ 3,976
Second Mortgage Repay			\$ -	\$ 53,350	\$ 80,025	\$ 106,700	\$ 133,375
New Residents - Residential Income Tax	\$ -	\$ 164,694	\$ 168,318	\$ 172,020	\$ 175,805	\$ 179,673	\$ 183,625
total-benefits	\$ 454,859	\$ 164,694	\$ 435,398	\$ 500,481	\$ 539,211	\$ 578,274	\$ 617,678
disc rate	0.9639	0.9290	0.8954	0.8631	0.8319	0.8018	0.7728
pv/yr	\$ 438,419	\$ 153,004	\$ 389,872	\$ 431,951	\$ 448,558	\$ 463,666	\$ 477,359
sum of pv-benefits	\$ 9,058,365						
NPV benefits-costs	\$ 2,153,978						
Cost:Benefit Ratio	1.31						



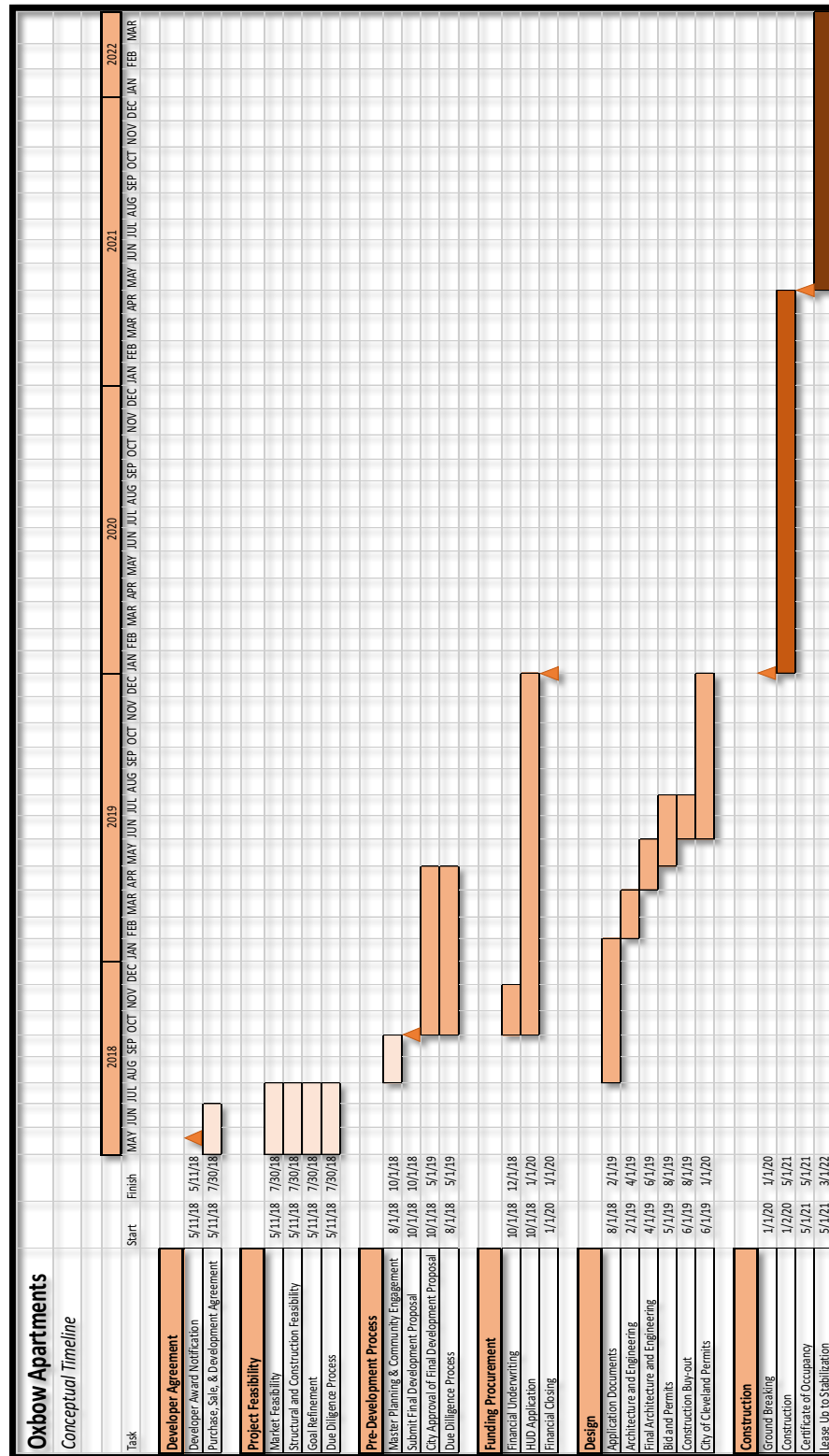
Table 16: TIF Estimator

CURRENT VALUES			
PPN	LAND	BUILDING	TOTAL
101-17-012	\$ 1,403,000.00		\$ 1,403,000.00
101-17-011	\$ 49,700.00		\$ 49,700.00
			\$ -
			\$ -
TOTAL	\$ 1,452,700.00	\$ -	\$ 1,452,700.00
TOTAL VALUATION ESTIMATE			
Est. Construction Cost	\$ 43,957,333.33		
Est. Bldg. Value (66% of Construction Cost)	\$ 29,011,840.00		
Est. Taxable Value (Land Value + Est. Bldg. Value)	\$ 30,464,540.00		
PILOTS ESTIMATE			
Est. Tax Increment (Est. Tax Value - Current Value)	\$ 29,011,840.00		
Est. Annual PILOTS (3.56% of Tax Increment)	\$ 1,032,821.50		
Est. School Share (60.12%)	\$ 620,932.29		
Est. Non-School (39.88%)	\$ 411,889.22		
HOUSING VALUATION ESTIMATE			
Est. Construction Cost	\$ 44,857,333.33		
Est. Bldg. Value (66% of Construction Cost)	\$ 29,605,840.00		
Est. Taxable Value (Land Value + Est. Bldg. Value)	\$ 31,058,540.00		
HOUSING VALUE - PILOTS ESTIMATE			
Proportionate Current Value (% Housing Costs * Current Value)	\$ 1,482,443.16		
Est. Tax Increment (Est. Tax Value - Proportionate Current Value)	\$ 29,576,096.84		
Est. Annual PILOTS (3.56% of Tax Increment)	\$ 1,052,909.05		
Est. School Share (60.12%)	\$ 633,008.92		
Est. Non-School (39.88%)	\$ 419,900.13		
FINANCING ESTIMATE			
Est. Financing 30-Year TIF @ 6%	\$5,669,585.51		
Est. Value of Financing Abated (15-Yr New Housing)	\$4,078,174.59		
Est. Total Financing	\$1,591,410.91		
City of Cleveland Fee (0.5% of Total Financing)	\$ 7,957.05		
10% Bond Reserve	\$ 159,141.09		
3.5% Issuance Fee	\$ 55,699.38		
Est. Pro. Services Fees			
Est. Net Proceeds	\$1,368,613.39		



Timeline

Table 17: Conceptual Timeline



Final Recommendations

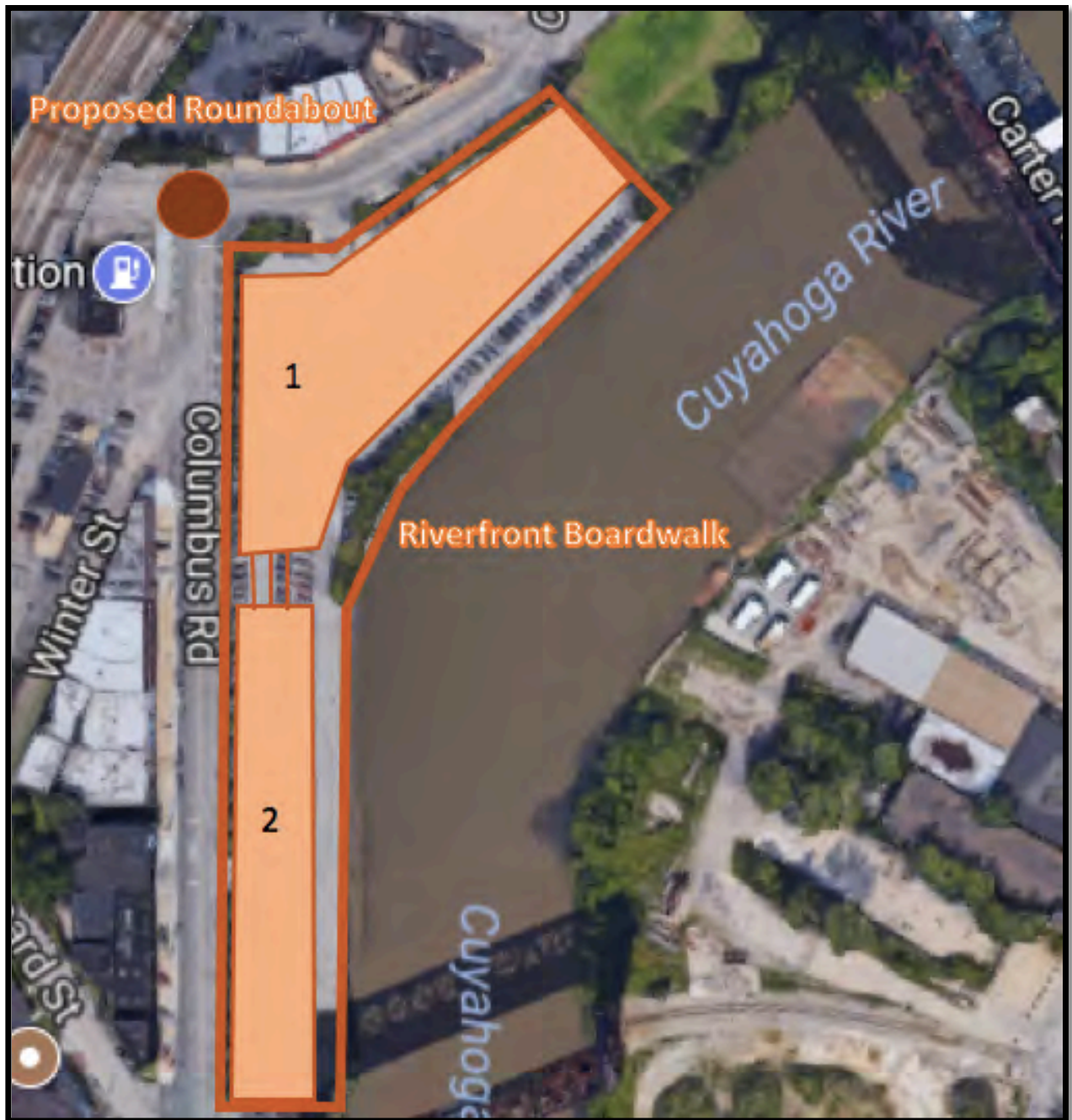
I would proceed with this project for the following reasons: there is a positive cash flow throughout the duration of the project, both BTCF and ATCF, I will be providing housing units in a market full of demand, and there is the potential to spearhead a catalytic development project on Columbus Peninsula. This project's capital expenditure costs and yearly operating costs are less than the amount of potential revenue. I am projecting \$2.10 a square foot in rents, which in time could definitely be increased to match similar projects throughout the PMA.

The riskiest variables in this project are the stabilization of the river bank for construction, parking, acquisition of the property or partnership with current property owners, and the acquisition of the HUD221(d)(4) loan. Although projects have been built along the river and lake, there will need to be extensive structural research to make sure that this project is feasible. Structured parking is going to cost a lot of money. Because there is nowhere to have ground parking on the site, structured parking is essential. However, it may be the downfall of the project. Lastly, having strong development partnerships is required to secure the loan. Also, because the loan from HUD takes a long time to secure, partners may need to reallocate funds for the project. Timing everything is going to be the biggest challenge.

All that being said, I believe the project is a GO! With strong partnerships and dedication, Oxbow Apartments could be the newest and ultimate riverfront development, and be a true catalyst to a new, refreshing neighborhood.



Figure 1: Site Layout



Source: Google Maps

2018



Appendices

- 1 List of All Partnerships
- 2 PMA Demographics
- 3 Competitor Profile
- 4 Zoning Map Legend



List of All Partners





**Development
Services Agency**



**US Army Corps
of Engineers.**



PMA Demographics

Summary	Census 2010	2017	2022	2017-2022 Change	2017-2022 Annual Rate
Population	35,975	36,719	36,655	-64	-0.03%
Households	16,062	16,908	17,051	143	0.17%
Average Household Size	1.96	1.90	1.88	-0.02	-0.21%
Median Age	32.3	33.4	34.2	0.8	0.47%
Median Male Age	33.4	34.4	35.1	0.7	0.40%
Median Female Age	30.9	32.2	33.0	0.8	0.49%

Total Population by Age	Census 2010		2017		2022	
	Number	Percent	Number	Percent	Number	Percent
Total	35,977	100.0%	36,720	100.0%	36,656	100.0%
0 - 4	2,522	7.0%	2,376	6.5%	2,369	6.5%
5 - 9	1,972	5.5%	2,002	5.5%	1,967	5.4%
10 - 14	1,749	4.9%	1,703	4.6%	1,708	4.7%
15 - 19	2,157	6.0%	1,904	5.2%	1,853	5.1%
20 - 24	3,459	9.6%	3,309	9.0%	2,933	8.0%
25 - 29	4,608	12.8%	4,547	12.4%	4,152	11.3%
30 - 34	3,344	9.3%	3,707	10.1%	4,021	11.0%
35 - 39	2,464	6.8%	2,685	7.3%	2,885	7.9%
40 - 44	2,351	6.5%	2,274	6.2%	2,415	6.6%
45 - 49	2,518	7.0%	2,272	6.2%	2,162	5.9%
50 - 54	2,564	7.1%	2,395	6.5%	2,197	6.0%
55 - 59	2,153	6.0%	2,327	6.3%	2,194	6.0%
60 - 64	1,458	4.1%	1,857	5.1%	1,971	5.4%
65 - 69	956	2.7%	1,319	3.6%	1,462	4.0%
70 - 74	651	1.8%	899	2.4%	1,070	2.9%
75 - 79	486	1.4%	539	1.5%	672	1.8%
80 - 84	294	0.8%	307	0.8%	340	0.9%
85+	269	0.7%	298	0.8%	285	0.8%
18+	28,574	79.4%	29,629	80.7%	29,610	80.8%
21+	26,974	75.0%	28,153	76.7%	28,224	77.0%

Demographic Summary			2017	2022
Population			36,719	36,655
Households			16,908	17,051
Average Household Size			1.90	1.88
Families			6,337	6,240
Median Age			33.4	34.2
Median Household Income			\$31,744	\$36,499

	Spending Potential Index	Average Amount Spent	Total	Percent
Total Expenditures	68	\$47,145.63	\$797,138,288	100.0%
Food	71	\$5,964.38	\$100,845,747	12.7%
Food at Home	72	\$3,602.42	\$60,909,634	7.6%
Food Away From Home	71	\$2,361.97	\$39,936,113	5.0%
Alcoholic Beverages	71	\$393.90	\$6,660,093	0.8%
Housing	71	\$15,185.28	\$256,752,788	32.2%
Shelter	72	\$11,741.56	\$198,526,241	24.9%
Utilities, Fuel and Public Services	68	\$3,443.73	\$58,226,547	7.3%
Household Operations	64	\$1,193.50	\$20,179,775	2.5%
Housekeeping Supplies	68	\$481.22	\$8,136,502	1.0%
Household Furnishings and Equipment	66	\$1,284.94	\$21,725,739	2.7%
Apparel and Services	70	\$1,505.96	\$25,462,846	3.2%
Transportation	69	\$5,595.05	\$94,601,152	11.9%
Travel	61	\$1,262.99	\$21,354,649	2.7%
Health Care	62	\$3,463.00	\$58,552,430	7.3%
Entertainment and Recreation	66	\$2,060.28	\$34,835,291	4.4%
Personal Care Products & Services	68	\$538.35	\$9,102,391	1.1%
Education	74	\$1,072.55	\$18,134,736	2.3%
Smoking Products	80	\$334.69	\$5,658,987	0.7%
Lotteries & Pari-mutuel Losses	75	\$41.54	\$702,419	0.1%
Legal Fees	74	\$136.86	\$2,313,978	0.3%



Competitor Profile



Building

Type	4 Star Multi-Family Apartments		
# of Units	83	Year Built	1872
Avg. Unit Size	1,160 SF	Renovated	2015
Property Size	138,517 SF		
Stories	2		
Vacancy Rate	6.5%		

Unit Mix

Beds	Units	Avg SF	Asking Rent/Unit	Asking Rent/SF	Concessions
Studio	3	672	\$1,055	\$1.57	0.7%
1	34	899	\$1,237	\$1.38	0.7%
2	41	1,340	\$1,712	\$1.28	0.7%
3	5	1,746	\$1,882	\$1.08	0.7%
Totals	83	1,160	\$1,504	\$1.30	0.7%



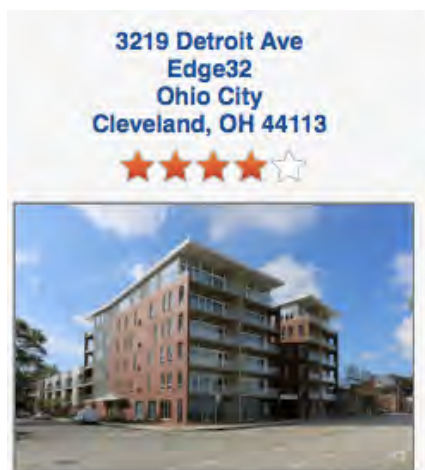
Building

Type	3 Star Multi-Family Apartments		
# of Units	66	Year Built	Feb 2015
Avg. Unit Size	819 SF	Land Area	3,789,720 SF
Property Size	58,775 SF		
Stories	4		
Vacancy Rate	6.7%		

Unit Mix

Beds	Units	Avg SF	Asking Rent/Unit	Asking Rent/SF	Concessions
1	56	742	\$1,445	\$1.95	9.5%
2	10	1,250	\$2,454	\$1.96	18.7%
Totals	66	819	\$1,597	\$1.95	11.7%

Updated April 15, 2018



Building

Type	4 Star Multi-Family Apartments		
# of Units	60	Year Built	Aug 2017
Avg. Unit Size	1,027 SF	Land Area	31,363 SF
Property Size	75,000 SF		
Stories	6		
Vacancy Rate	26.2%		

Unit Mix

Beds	Units	Avg SF	Asking Rent/Unit	Asking Rent/SF	Concessions
1	36	747	\$1,346	\$1.80	4.2%
2	24	1,446	\$2,356	\$1.63	4.2%
Totals	60	1,027	\$1,750	\$1.70	4.2%

Updated April 12, 2018



**1231 Main Ave
Apartments at Nautica
Ohio City
Cleveland, OH 44113**



Building

Type	3 Star Multi-Family Apartments		
# of Units	55	Year Built	1920
Avg. Unit Size	1,009 SF	Renovated	1995
Property Size	118,368 SF	Land Area	24,176 SF
Stories	6	Parking Spaces	60 Spaces

Vacancy Rate 0%

Unit Mix

Beds	Units	Avg SF	Asking Rent/Unit	Asking Rent/SF	Concessions
1	20	1,025	\$904	\$0.88	0.3%
2	35	1,000	\$1,106	\$1.11	0.2%
Totals	55	1,009	\$1,032	\$1.02	0.3%

Updated April 06, 2018

For Sale

This property is not currently for sale.

**2018 Center St
Stonebridge Waterfront Apartme...
Ohio City
Cleveland, OH 44113**



Building

Type	3 Star Multi-Family Apartments		
# of Units	159	Year Built	2007
Avg. Unit Size	1,083 SF	Land Area	6,264 SF
Property Size	42,534 SF	Parking Spaces	40 Spaces
Stories	7		

Vacancy Rate 3.2%

Unit Mix

Beds	Units	Avg SF	Asking Rent/Unit	Asking Rent/SF	Concessions
1	12	1,000	\$987	\$0.99	0.0%
2	147	1,089	\$1,543	\$1.42	0.0%
Totals	159	1,083	\$1,501	\$1.39	0.0%

Updated April 10, 2018

For Sale

This property is not currently for sale.

**1055 Old River Rd
Flats at East Bank
Downtown Cleveland
Cleveland, OH 44113**



Building

Type	4 Star Multi-Family Apartments		
# of Units	231	Year Built	Jul 2015
Avg. Unit Size	1,149 SF		
Property Size	270,000 SF		
Stories	8		

Vacancy Rate 1.2%

Unit Mix

Beds	Units	Avg SF	Asking Rent/Unit	Asking Rent/SF	Concessions
1	112	916	\$2,002	\$2.19	0.0%
2	99	1,321	\$3,059	\$2.32	0.0%
3	20	1,602	\$3,811	\$2.38	0.0%
Totals	231	1,149	\$2,612	\$2.27	0.0%

Updated April 26, 2018



**2017 E 9th St
Iconic Living at The 9
Downtown Cleveland
Cleveland, OH 44115**



Building

Type	4 Star Multi-Family Apartments		
# of Units	104	Year Built	Sep 2014
Avg. Unit Size	1,002 SF	Land Area	6,991 SF
Property Size	323,706 SF		
Stories	29		
Vacancy Rate	1.9%		

Unit Mix

Beds	Units	Avg SF	Asking Rent/Unit	Asking Rent/SF	Concessions
1	76	719	\$1,458	\$1.99	0.4%
2	24	1,564	\$3,293	\$2.11	0.4%
3	4	3,004	\$6,375	\$2.12	0.4%
Totals	104	1,002	\$2,065	\$2.05	0.4%

Updated April 27, 2018

For Sale

**6060 Father Caruso
The Edison at Gordon Square
Detroit-Shoreway
Cleveland, OH 44102**



Building

Type	4 Star Multi-Family Apartments		
# of Units	306	Year Built	Apr 2017
Avg. Unit Size	931 SF	Land Area	487,785 SF
Property Size	198,400 SF		
Stories	4		
Vacancy Rate	3.0%		

Unit Mix

Beds	Units	Avg SF	Asking Rent/Unit	Asking Rent/SF	Concessions
1	181	742	\$1,611	\$2.17	0.0%
2	117	1,167	\$1,995	\$1.71	0.0%
3	8	1,757	\$2,858	\$1.63	0.0%
Totals	306	931	\$1,791	\$1.92	0.0%

Updated April 27, 2018



Zoning Map Legend



CITY OF CLEVELAND

Mayor Frank G. Jackson

CLEVELAND CITY PLANNING COMMISSION Zoning Map Legend

Example: 2F-B1

2F (Use District) | *B* (Area District) | *1* (Height District)

USE DISTRICTS

L1F	Limited One Family
1F	One Family
2F	Two Family
RA	Townhouse
LMF	Limited Multi-Family
MF	Multi-Family
MMUD	Midtown Mixed-Use District
DR	Downtown Residential
IR	Institutional-Research District
RO	Residence Office
LR	Local Retail Business
UR	University (College) Retail
SC	Shopping Center
LLR	Limited Retail Business
GR	General Retail Business
RI	Residence-Industry
SI	Semi-Industry
GI	General Industry
UI	Unrestricted Industry
P	Parking District
UGD	Urban Garden District
OSR	Open Space & Recreation

OVERLAY DISTRICTS

PRO	Pedestrian Retail Overlay District
Urban Overlay	Urban Form Overlay District

HEIGHT DISTRICTS

District	Height Limit
1	35'
2	60'
3	115'
4	175'
5	250'
6	600'
7	700'
8	800'
9	900'

AREA DISTRICTS

		Minimum Lot Area (Square Feet)			
	Max Gross Floor Area	One-Family	Two-Family	ROW-House	Multi-Family
AA	1/2 x Lot Area	7200			
A	1/2 x Lot Area	4800	3600		
B	1/2 x Lot Area	4800	6000	2400	2400
C	1/2 x Lot Area	4800	6000	2400	NONE
D	1 Lot x Area	4800	6000	2100	NONE
E	1 1/2 x Lot Area	4800	6000	2100	NONE
F	2 x Lot Area	4800	6000	2100	NONE
G	3 x Lot Area	4800	6000	2100	NONE
H	4 x Lot Area	4800	6000	2100	NONE
J	5 x Lot Area	4800	6000	2100	NONE
K	6 x Lot Area	4800	6000	2100	NONE

