

BUFFALO RIVER CORRIDOR

BROWNFIELD OPPORTUNITY AREA

NOMINATION DOCUMENT

JULY 2014

WORKING DRAFT

(MAPS/GRAPHICS INCOMPLETE)

*This document was prepared for the City of Buffalo and the New York State Department of State
with state funds provided through the Brownfield Opportunity Areas Program.*

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PROJECT DESCRIPTION

1.1 OVERVIEW

The City of Buffalo was awarded New York State Department of State funding to establish a Buffalo River Corridor Brownfield Opportunity Area. This funding allows recipients to plan for the revitalization of underutilized, vacant, and brownfield sites by establishing a vision for their redevelopment, and strategies to return the sites to productive use.

The BOA covers 1,052 acres – over 1.5 square miles – to the southeast of downtown. It contains a large number of brownfields and abandoned parcels; a legacy from the industries that were once located along the Buffalo River.

Redevelopment of this area will be based on its strategic location, which includes highways and rail lines that connect to destinations in both the US and Canada, as well as access to the Buffalo River and Lake Erie. Ongoing efforts to restore waterfront lands and improve public amenities will bolster interest in the area and create opportunities for land uses that match the needs of the community.

The Buffalo River Corridor BOA builds on the adjacent South Buffalo BOA, and represents a natural progression from this effort by taking into account the impact of industries located along the Buffalo River. As brownfield sites are remediated in South Buffalo, additional shovel-ready land will be needed to continue attracting development.

The BOA is being evaluated as part of a Generic Environmental Impact Statement. The GEIS will review the impacts of adopting all four Brownfield Opportunity Areas in the city (Buffalo Harbor, Buffalo River Corridor, South Buffalo, and Tonawanda Street Corridor), the Local Waterfront Revitalization Program, changes to existing urban renewal plans, and the updated land use plan and zoning code.

The Common Council was declared lead agency, and a Positive Declaration and a draft scope of work were prepared. A public comment period will take place in 2014, and the draft GEIS will be submitted to the Common Council for review and approval. Once the GEIS is in place, the majority of development proposals will be able to proceed without additional environmental review.

1.2 COMMUNITY VISION, GOALS, AND OBJECTIVES

The BOA process seeks to initiate, prioritize, and guide land remediation and redevelopment by identifying economic, social, and cultural opportunities. A vision for the future must be guided with broad-based community, municipal, and state support; and solidly grounded in current and emerging challenges, initiatives, and opportunities.

The long-term goal is to pursue both environmental enhancement and sustainable development by creating a plan designed by stakeholders, including area residents, businesses, environmental advocates, and government. Consensus building began at project inception, by ensuring that the various concerns and goals were discussed in an open fashion. Community contributions and acceptance are vital to the success of any redevelopment plan.

Planning is essential to ensure that future development does not compromise the health of the river; but instead contributes to its delisting as an Area of Concern. The need to generate employment opportunities and tax revenues must be balanced with strengthening neighborhoods, expanding recreational opportunities, preserving industrial heritage, ensuring waterfront access, and improving habitats and watershed ecology.

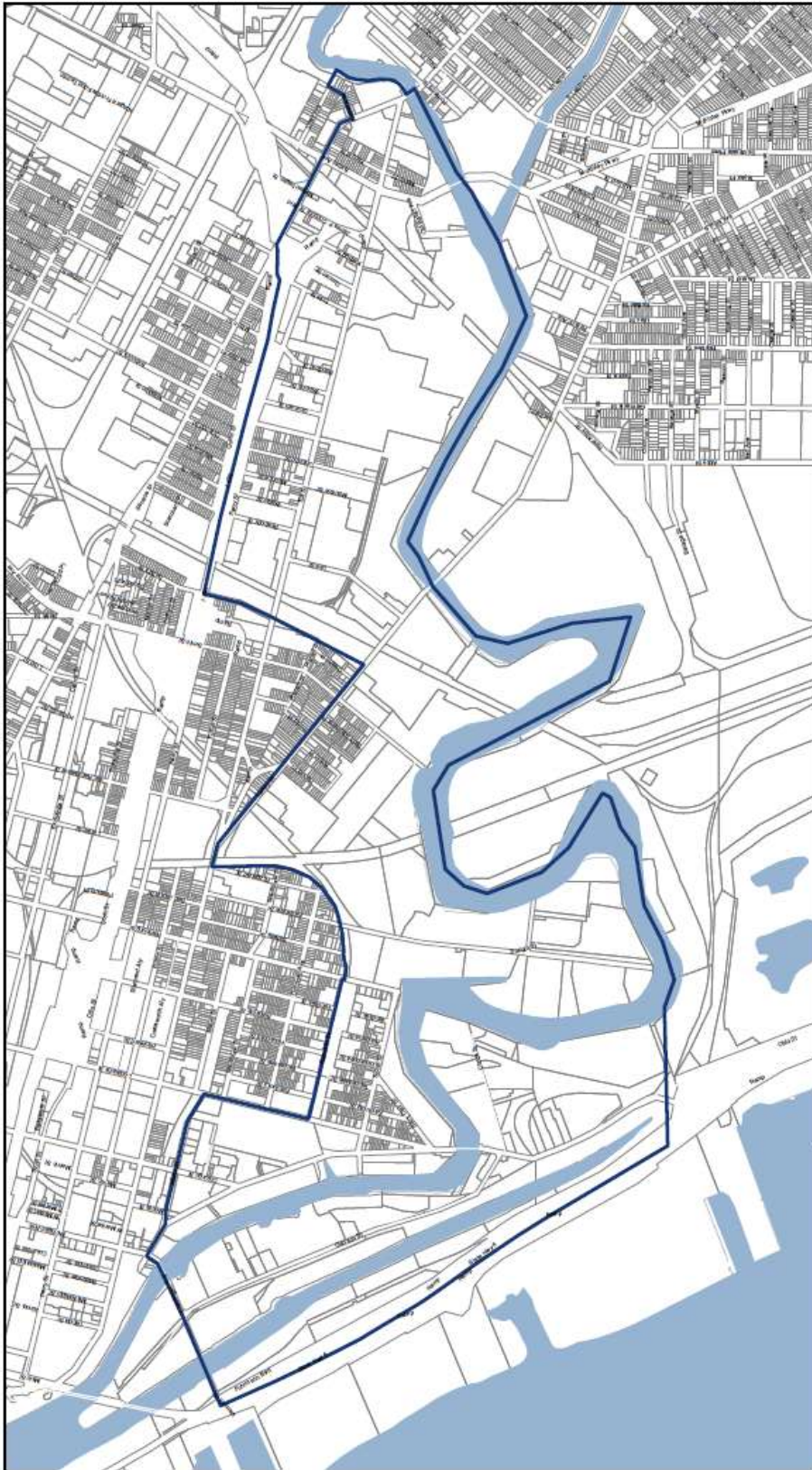
1.3 BOUNDARY DESCRIPTION AND JUSTIFICATION

The boundaries were selected to include major heavy industrial areas located along the Buffalo River, and the mixed-use residential areas surrounding these active and former plant sites. The major industrial parcels include Kelly Island and the City Ship Canal, Silo City, the Katherine Street Peninsula, and the Elk Street Corridor.

The mixed-use neighborhoods surrounding these employment centers were included so that residents most affected by the recent transitions would have a voice in future land use decisions. These areas include the Old First Ward, Seneca-Babcock, and Valley neighborhoods. Boundaries were also based on quality-of-life enhancements such as shorelines, so that redevelopment could take advantage of these amenities and make connections to these resources.

The western boundary includes the terminus of the City Ship Canal and Kelly Island, so that sensitive river environments and potential public access enhancements can be addressed. The northern boundary includes residential areas directly affected by the adjacent industries, a major rail corridor, the New York State Thruway, and arterials. The eastern boundary roughly coincides with the end of the navigable portion of the Buffalo River, where it ceases to be an industrial area. The southern boundary traces the Buffalo River, and abuts the South Buffalo BOA. [Map 1]

Map 1: Boundaries



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COMMUNITY PARTICIPATION

2.1 COMMUNITY PARTICIPATION PLAN

The community participation plan was designed to enable input at a variety of levels and stages during the development of the Nomination Document. The plan was organized around project tasks to provide timely inputs into deliverables. A range of opportunities for community involvement were identified, from public open houses to small stakeholder sessions. The project website also provided opportunities for interested parties to submit comments.

The following methods for engaging the community were employed:

- Stakeholder sessions
- Steering committee meetings
- Public open houses

2.2 TECHNIQUES TO ENLIST PARTNERS

The consultation process employed numerous outreach methods to ensure robust public and private participation. The design and production of easily accessible materials and the provision of multiple opportunities for feedback were seen as essential to a successful communication strategy.

Several different audiences were engaged throughout the course of the planning process. In order to effectively communicate with each group, contact lists were developed and updated with names, addresses, phone numbers, and e-mail addresses. These lists included residents, block clubs, non-profits and community groups; advocacy organizations, educational institutions, businesses and developers; county, state, and federal agencies; city departments and boards; elected officials; and steering committee members.

The opportunities for community participation included:

Stakeholder Sessions

A series of stakeholder sessions were held in November 2011 and January 2012, to assist the project team in understanding the dynamics of the study area. These sessions included developers and investors, businesses and large landholders, non-profits and community-based organizations, regulatory agencies, and city departments that serve the community.

These early consultations were designed to:

- Inform stakeholders about the study process and objectives;
- Discuss issues and opportunities, along with policy and development concerns; and
- Identify potential projects and initiatives that would benefit the community.

A “Business Breakfast” was also held in June 2012, to provide business owners and developers with an opportunity to more openly discuss their objectives outside of a public forum.

Steering Committee Meetings

A 20-member steering committee was appointed to review material prepared by the consultant team, provide input regarding project direction, and serve as liaisons to the larger community. Members included representatives from local businesses, developers, community-based organizations and other non-profits, institutions, and the general public. Staff from agencies providing project support were also invited to attend steering committee meetings. A total of five meetings were held during the course of the Step 2 process:

- December 2011 – the initial meeting introduced the project team; provided overviews of the BOA program and study process; and included breakout sessions to allow participants to brainstorm key issues, challenges, opportunities, and goals and aspirations.
- January 2012 – the second meeting reviewed consultant analysis and findings to date; introduced the visioning process that would be employed at the first open house; and included breakout sessions to discuss types of desired uses and locations, infrastructure needs, and phasing of proposed improvements.
- June 2012 – the third meeting reviewed and discussed three alternative scenarios for future development.
- February 2014 – the fourth meeting will review the draft Nomination Document and initial strategic sites, discuss concerns, and propose changes.
- October 2014 – the final meeting will review the revised Nomination Document and strategic sites, discuss concerns, and propose changes.

Public Open Houses

A total of four open houses were held over the course of the planning process to share information with the public and solicit comments and feedback:

- January 2012 – the first open house introduced the project objectives, provided an overview of the analysis conducted to date, and then broke out into visioning sessions to allow participants to discuss emerging principles and their vision for the BOA over the next two decades.
- June 2012 – the second open house started with a brief review of the community input from the prior meeting, discussed the economic analysis for the BOA, and laid out a set of emerging principles to guide redevelopment. The consultants provided workbooks outlining the three alternative development scenarios, and asked participants to mark these up with their thoughts and comments. The meeting concluded with a facilitated discussion on initial reactions to the alternative scenarios.

- April 2014 – the third open house will provide the community with a brief recap of project status, and review the key findings of the Step 2 Nomination Document. The consultants will identify the strategic areas that are being proposed, and accept input on their redevelopment potential.
- November 2014 – the final open house will review the final Step 3 Nomination Document and final strategic sites, and allow the community to comment on these materials before the report is submitted to DOS for approval and adoption of the BOA.

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ANALYSIS

3.1 COMMUNITY AND REGIONAL SETTING

Regional Context

Buffalo is the largest city in Upstate New York; and is the heart of the Western New York region, which consists of Erie, Niagara, Orleans, Genesee, Wyoming, Allegany, Cattaraugus, and Chautauqua counties. Erie and Niagara are the most urbanized of the eight counties, and together form the Buffalo-Niagara Falls Metropolitan Statistical Area.

Buffalo's regional context reflects long-term trends in Erie and Niagara counties. The city's population peaked at 580,000 in 1950, and declined to 261,000 in 2010. In comparison, Erie County peaked at 1,113,000 in 1970, and fell to 919,000 in 2010; while Niagara County peaked at 242,000 in 1960, and was at 216,000 in 2010.

These population declines are largely the result of job losses, particularly in manufacturing, over the past 60 years. The region was historically dependent on manufacturing and shipping for its economic base. Post-WWII, manufacturing underwent a major restructuring, which led to the relocation of industrial facilities outside of the Midwest and Northeast, and later outside the country. In addition, as production techniques became more efficient, employment declined significantly even as the value of manufactured goods remained constant.

In addition to the regional impacts of manufacturing decline, the city was also beginning to experience the effects of wide-spread suburbanization, which affected almost every urban center beginning in the 1950s. The rise of "bedroom" communities outside the historic cores initiated a massive shift in population from cities to suburbs. Yet Buffalo remains the regional center in terms of government, finance, arts, education, and medicine; which provides the city with a strong platform for future growth.

Buffalo's transition from manufacturing to a service-based economy has been slow, but appears to be firmly underway. The University of Buffalo is a major research institution that advances the technological capabilities of the region. The training provided by UB and other higher education institutions represents a significant resource. The Buffalo Niagara Medical Campus and major financial institutions reinforce Buffalo's position as a center of technology to drive the region's growth in the service-based economy.

Western New York also benefits from its relationship with Toronto and Southern Ontario, which offers significant opportunities for growth and development on both sides of the border. Increasing international trade and cross-border relationships have been a long-term trend. Spurred by the North American Free Trade Agreement, the region has become a portal for Canadian businesses seeking to access US markets.

Increased economic activity resulting from bi-national trade is expected to become a future source of growth and development in the region. As Canadian firms seek greater operational efficiencies, it is anticipated that more facilities and jobs will be located on the US side of the border, with Buffalo positioned to capture a significant portion of this growth.

Opportunities and Challenges

The opportunity, as well as the challenge, is to turn Western New York into a “region of choice.” In an interconnected world, decisions that affect economic growth are increasingly based on choice rather than necessity. In the industrial economy, decisions on where to locate facilities were based on tangible economic factors such as access to raw materials, proximity to markets, and the cost of transporting goods. Today, employment flows to places based on workforce synergies and quality of life factors. Where people want to live plays a growing role in the relative success of a region.

Quality of life is a broad, somewhat abstract concept encompassing factors such as economics, cost of living, education, public safety, housing, environmental conditions, arts and culture, and recreation. No single place can excel in all areas; yet the goal of all efforts should be to enhance the quality of life within the city and the region.

Opportunities

- Natural resources: The region should maximize its natural resources by making recreation and natural beauty part of the regional lifestyle, and by enhancing and restoring ecosystem function and resilience.
- History and heritage: The region should emphasize historic resources to enhance a sense of place and increase its appeal.
- Cultural diversity: The region’s diversity is growing with the number of immigrants and refugees who are calling the city home.
- Urban form: The heritage of the region is manifested in its physical form. The confluence of Lake Erie with the Niagara and Buffalo Rivers dictated the unique development of the city’s form; while Ellicott and Olmsted still resonate and represent an opportunity for enhancement.
- Tourism: While Niagara Falls is the region’s dominant attraction, there are many other assets that could be leveraged to broaden the appeal of the region to tourists, such as industrial heritage, architecture, arts and music, food and beverage, fishing and hunting, recreation, and natural attractions.
- Transportation: The decline in population has reduced traffic, presenting an opportunity to restructure the system to become more multi-modal and responsive to urban form.
- Workforce: The region’s industrial legacy has left a skilled workforce in place, which combined with higher educational opportunities, provides the capacity for renewed economic growth.

Challenges

- Economic diversification: This is well underway, but needs to be accelerated to achieve net economic growth.

- Attracting investment: In recent decades, disinvestment has outpaced new investment. Barriers to private-sector investment must be overcome to increase investment at all levels, including legacy industrial and commercial contamination.
- Image enhancement: The region suffers from both misconceptions and real concerns regarding quality of life. Positive demonstrations are needed to enhance the image of the city and region.
- Physical restructuring: The economic restructuring of the region will require new land use patterns, new neighborhoods, and new transportation systems, such as reconnecting the city to its waterfront.
- Addressing obsolescence: Without sacrificing its heritage, the region must upgrade its housing, transportation, and community facilities; and employ best practices and state of the art urban design for ensuring ecosystem prosperity.

3.2 COMMUNITY AND REGIONAL TRENDS

The purpose of this analysis is to identify potential development alternatives within the context of socioeconomic, employment, and real estate trends. Overall, the findings indicate that there are a number of options that could reasonably be considered for future development. However, most of the market and economic indicators are relatively weak at this time, both within the city and the region. Therefore, the rate of new development for any selected use should be expected to occur over many years, possibly decades. Low demand for both residential and non-residential land uses also suggests that subsidies and incentives will be required to attract developers and investors, at least in the short term.

Demographic Trends

Population and household growth have been constrained by the economic transition from heavy industry to other types of activities. Population changes over the last two decades reflect an overall net loss at both the city and county levels. Although the city's rate of decline has been slowing, projections indicate that little or no growth is expected over the short-term.

The median age of city residents has remained consistently below that of the county. This is at least partially due to the college student population in the city. There are also a higher percentage of residents in the 25 to 34 age group, indicating attractiveness to young households. Where the city share dips is in the 35 to 54 age group, which encompasses the prime child-raising years. Short-term projections anticipate increases in the near-retirement (55 to 64) and retirement (65 and older) age groups.

As with population, the city has seen a loss of 23,500 households over the past two decades. Although the rate of decline is slowing, further losses are projected, with a net decrease of 3,600 households in the city and 6,300 in the county. There should be a small increase in households aged 25 to 34, but this modest demand can readily be accommodated within the existing housing supply.

Median incomes in the city, when adjusted for inflation, remained flat between 2000 and 2010. A similar scenario occurred for the county, indicating that many households are being challenged in meeting the rising costs of goods and services. Projections suggest that the stagnant income levels are beginning to change, with real growth of 13 percent estimated during the first half of the decade. Yet even at these projected levels, the city's median income will represent only 67 percent of the countywide figure.

With respect to housing supply, these trends suggest that demand for new construction will remain weak, although there are market sectors that may provide opportunities for new product. Affordability levels should rise with projected income growth, particularly among older age groups. The need for affordably priced workforce housing will continue to be prevalent in the marketplace.

Employment Trends

Between 1990 and 2013, total employment in Erie County declined from 453,200 to 427,700 jobs, representing a loss of five percent. However, the most recent figure represents a gain of 3,800 jobs from the historic low of the previous year. Private sector jobs represent about 83 percent of the total, and the region has experienced private sector job growth every month since April 2010. The largest employment sectors are health care, retail trade, manufacturing, and accommodations/food services; although other sectors such as administration, professional/technical services, and finance/insurance also account for a notable share of total jobs.

The most recent forecasts project a net gain of approximately 3,700 jobs in the region between 2008 and 2018. Private sector growth is expected to create 4,500 jobs, offsetting a loss within the public sector. All growth sectors combined are expected to add 34,000 jobs. Health care will be the primary employment driver, along with professional/business services and leisure/hospitality. Educational services are also projected to continue growing through 2018, although at a reduced rate compared to the previous decade.

Like many regions across the country, the county's manufacturing sector recorded the greatest loss over the past decade, with a decline of 23,475 jobs (36 percent). These losses are projected to continue, although there have been some recent successes to point to, such as the auto industry adding 2,300 jobs in the last three years, after shedding more than 11,000 jobs between 2008 and 2010.

The lack of population growth and an aging workforce also represent an economic development challenge, since it will force businesses to be more aggressive in attracting workers. This suggests that efforts will need to focus on retraining the existing workforce to support shifts into new and emerging industry sectors as part of on-going economic diversification planning.

Sector Trends

Employment sectors that offer the best potential for growth include front office/producer services, information technology, biomedical, industrial machinery and services, food/materials processing and distribution, back office/outsourcing, and travel and tourism.

Professional and technology establishments are potential users of business parks, particularly if expanded relationships can be established with area research facilities to help support growth in these sectors. These firms require both office space and specialized flex-building space for research and development activities. Firms that design software or manage internet services generally have few employees and are not location dependent. High-speed internet linkages are necessary, and demand for electrical supply may also be high for data hubs.

Biomedical includes the manufacturing sector producing pharmaceutical, nutraceutical, and cosmeceutical products; research and development of physical, engineering, and life sciences; as well as medical equipment development and manufacturing. New or expanding firms in this cluster will most likely want to locate near research centers and existing campuses as a first choice.

Industrial machinery has been a mainstay of the region's manufacturing base, but national trends suggest that this cluster is not expected to be a source of significant future employment growth. However, the labor force from this cluster provides an asset for diversifying the sector towards advanced manufacturing with industries that produce high technology goods or use advanced technologies to produce goods.

Processing and distribution represent several industry sectors that combine to offer a dynamic relationship between the processing facilities and distribution network. These rank relatively low in terms of regional employment, but offer future growth potential based on national trends. Sustaining and growing these clusters will be dependent upon a number of factors, one of which is a strong and integrated distribution network. Buffalo is in a prime location to become more of a logistics hub due to its access to rail, water, road, and air transportation systems. Increases in energy costs are fostering a resurgence of freight rail as a means of moving goods over long distances. The region occupies a strategic position on an international border, with the potential for developing logistics facilities.

Back office and outsourcing includes telephone answering centers, telemarketing, and credit bureau operations. These uses could be readily integrated into a professional office park or within renovated commercial or industrial buildings. These types of jobs do not generally require a high skill level, so could potentially draw from the large number of service sector employees in the area.

Travel and tourism is the third largest source of employment in the region, totaling about 25,000 jobs in 2010. This cluster is one of the most diverse, encompassing accommodations; cultural, recreational, and amusement facilities; food service facilities; passenger transportation services; and travel-related retail sales.

Market Trends

Industrial

At the end of 2013, the industrial market in Erie and Niagara counties included an inventory of 64.6 million square feet. Manufacturing uses occupied half of this inventory, with warehouses accounting for another 36 percent and flex space the remaining 14 percent. For 2013, net absorption totalled 2.5 msf. This resulted in a decline in the overall vacancy rate from 9.2 to 5.7 percent. The current vacancy rate among industrial buildings is less than half the national rate of 11.7 percent.

Between 2000 and 2010, new industrial construction totaled approximately 3.4 msf, for an average annual absorption of 280,000 sf. New construction in 2013 totalled 241,000 sf, which represents a rise from the average of 100,000 sf per year added in recent years.

Only 14 percent of the region's industrial inventory consists of owner-occupied buildings, indicating that supply is primarily driven by developers. As a result, new construction will likely require pre-leasing or financial incentives, since speculative development will be limited due to the slow projected employment growth over the short-term.

The city submarket, which encompasses all areas south of the Scajaquada and Kensington Expressways, contains 12.1 msf of industrial space, and had a 2013 vacancy rate of 6.3 percent. Almost 1.5 msf was absorbed during that past year, leaving a total of 766,000 sf available. In addition, 100,000 sf of new manufacturing space was constructed during the year, representing over 40 percent of the regional total.

The land supply in Buffalo and the region is presumed to be adequate to support demand for new industrial construction. However, much of this land is not in premier locations, and will need upgraded infrastructure as well as financial incentives to compete with more marketable, shovel-ready locations such as Buffalo Lakeside Commerce Park.

Office

The regional office market has an inventory of approximately 33.4 million square feet, with roughly 39 percent in Class B, 23 percent in Class A, 21 percent in Class C, and 17 percent in flex office. Very little of the region's office inventory is owner-occupied, estimated at just over 50 buildings containing 850,000 sf.

Over the past several years the regional office market has been relatively stable from a vacancy perspective. Construction and absorption of new office space has recently become more sluggish, indicating that speculative development has slowed due to uncertainty within the economy and employment losses in sectors that typically drive office demand. The overall regional vacancy rate for all office classes (A, B, and C) rose from 10.4 percent in 2012 to 13.7 percent in 2013. The vacancy rate remains below the national level of 15.1 percent.

The city's office inventory includes approximately 16.9 msf, or just over half of the regional supply. Over three-quarters of the city's inventory is located in the Central Business District, with over 13 msf. The

CBD had a vacancy rate of 11.7 percent in 2013, which is an increase over prior years. Much of this can be attributed to the loss of tenants at One Seneca Tower, which placed 700,000 sf on the market.

While office completions nationally remain below historic averages, the city continues to post positive construction activity. New construction at One Canalside, Catholic Health, and Compass East indicate continued faith in this market.

Retail

The regional retail market had a 2013 inventory totaling approximately 26.2 million square feet. This includes freestanding stores, malls, and shopping centers. The overall vacancy across all these facilities was 11.6 percent, which represents the lowest rate in more than 10 years, and is below the national average of 12.3 percent. Across the region, net absorption over the past year increased in all submarkets, totalling 423,000 sf.

Throughout the nation, the amount of retail shopping development is at historically low levels. Construction in the region totalled just 217,000 sf, or less than one percent of the existing inventory. Even with this small amount of new retail added to the mix, the overall supply declined by 21,500 sf. Redevelopment and repurposing is a trend that continues to gain traction.

In contrast to industrial and office markets, the city contains less than 10 percent of the regional retail inventory. Retail in the city underperformed the rest of the region, with a vacancy rate of 16.2 percent. On the positive side, there was net absorption during 2013 of over 37,000 sf in the city, which brought the vacancy rate down by almost three points.

Residential

The median value for owner-occupied houses in Erie County rose from \$88,200 to \$123,400 between 2000 and 2012. Sales prices have risen steadily since 2000, with very little volatility. The average annual increase has been between 3 and 4 percent, with only a few years where growth exceeded or fell below this rate.

In the city, single-family home sales over the last four years totaled just over 2,800, representing a turnover rate of about 1.5 percent of the inventory. The median value of an owner-occupied home in the city is around \$66,700, which is considerably lower than the countywide figure. There have been about 40 annual sales in excess of \$300,000, but almost half of all home sales have been in the \$50,000 to \$100,000 range.

Duplexes comprise a significant portion of the city's for-sale market, which is not surprising given that this type of housing represents 40 percent of the total inventory. Over the four year period, duplex sales averaged 536 per year, for a turnover rate of about 1.9 percent. Duplexes represent about 28 percent of the city's owner-occupied units, offering a more affordable entry into the homeownership market.

Condominium sales ranged from under \$100,000 to over \$1.5 million, depending on location, type and size of unit, and amenities offered. Almost all were located in the CBD, and close to half of the listings were waterfront properties offered in excess of \$300,000. Away from the waterfront, properties were generally listed under \$250,000, although exceptions were found for luxury high-rise units or converted historic properties.

Rental housing represents about 60 percent of the city's stock, and units had a median contract rent of \$450 in 2010. The 10 percent vacancy rate is roughly twice that found under normal market conditions, indicating considerable weakness from a demand perspective. However, a report that examined the housing market in downtown Buffalo found low vacancy rates for apartments, many of which were fully occupied. These indicators suggest that demand is strong for better quality, appropriately positioned rental properties.

The city issued building permits for 1,560 new housing units between 2000 and 2013, with multi-family dwellings accounting for 875 and single-family 685. Buffalo's building activity represented about 7 percent of the county's 22,740 permits. The limited amount of new construction indicates both a lack of demand as well as the inability of developers to build new units at a price that can be supported within the current market.

Census data indicates that the city experienced a net loss of 12,130 housing units between 2000 and 2010, a decrease of over 8 percent. The city's vacancy rate remained stable at just under 16 percent of all housing units. A more proactive effort will be required to reduce the remaining vacant supply since the market will not be able to absorb the excess supply of 20,000 housing units through normal growth.

Market Opportunities

Industrial

Based on employment projections and targeted sectors for the region, flex/office buildings and other small-scale professional/general office space appear to offer reasonable development potential. These types of facilities can be planned and developed in an incremental manner that allows the building supply to grow as market demand dictates. Vacancy for flex buildings is relatively high at this time, which is likely to limit speculative development in the short-term.

However, industry growth projections and anticipated support from state and regional agencies to grow businesses in these clusters suggests that they could provide a viable component of future land use. Flex buildings are also more easily integrated into mixed-use business parks since they are less obtrusive than traditional manufacturing facilities.

The availability of rail access is also likely to be a positive attribute for supporting new construction, as well as the re-use of existing manufacturing/warehouse facilities, if regional economic plans to promote food/materials processing and multi-modal distribution facilities continue to receive support and incentives.

Office

The regional office market is relatively strong but demand for new construction will probably remain modest over the next few years. Based on recent absorption levels, the CBD has a 10 to 12 year supply of available space. However, continued renovation of the city's existing building inventory into higher quality space may lessen demand for new construction to some degree. Vacancy in the remainder of the city is less than 500,000 SF, but continued negative absorption would suggest that its predominantly Class B inventory will need to continue to offer competitive lease rates in order to sustain occupancy levels.

Given these market conditions, the demand for conventional office buildings is expected to be relatively modest. Competition for office development would come from existing and future development in the city's Larkin District which is successfully attracting office and mixed-use projects.

Retail

The demand for any sizeable square footage of additional retail is probably the most questionable of all the potential nonresidential market uses. The CBD is the city's strongest retail area and it appears as though demand there will remain moderate for the time being, with renovated space offering more potential than new construction. Some retail nodes could potentially be added at strategic locations that have the best highway access and as such, will not be totally dependent on local households to support sustainable sales levels. Any new retail facilities offering general merchandise would likely be created at the expense of existing businesses, since total retail demand is not expected to grow substantially given the low projected growth in regional population and employment levels.

Residential

The demand for new residential development in the city has been moderate, and low population growth is not expected to result in any marked changes to this trend over the short-term. Given the anticipated changes in the regional population over the next half decade – growth mainly concentrated in the near-retirement and retirement age groups and only modest increases in younger households – housing demand and development trends are not expected to change significantly.

Given these findings, potential demand for housing is likely to be focused within the following market niches:

- *Senior/retirement housing* – this could include senior apartment complexes, retirement villages offering a variety of housing types, and assisted living facilities. Projected increases in income levels for these age groups suggest that they may be able to afford somewhat higher housing costs if they choose to downsize into a retirement-oriented dwelling. An estimated 7,000 households will be entering this market segment in Erie County over the next 10 years.
- *Rental housing for younger households* – the county's population between 25 and 34 is projected to increase by about 2,000 households over the next five years. Although this does not represent a huge potential increase in demand, the city does have a relatively larger percentage of its

population in younger age groups overall. Housing development targeting this market segment will most likely occur at the expense of the city's existing stock, which is presently capturing these households.

- *Luxury condominium/rental housing* – although not a major component of the city's housing market, these types of units have met with success along the waterfront and downtown, although absorption has been relatively slow overall. Waterfront property is almost always a sought-after commodity in the housing market, so it is reasonable to conclude that some portion of future land use could capitalize on this fact, especially if suitable amenities are offered. Absorption is likely to remain slow, based on historical trends, and therefore, such housing may need to be part of a mixed use development in order to attract investment from the private sector.

3.3 BOA TRENDS

Demographics

The population of the BOA has been steadily declining, going from 1,250 in 1990 to 930 in 2010. The rate of annual loss is about half a percent lower than the citywide figure, but much higher than that of Erie County.

The number of households in the BOA has also declined, from 469 in 1990 to 376 in 2010. The steady decline in households indicates that any demand generated for new residential real estate will need to be sourced, at least in part, from outside the BOA.

Adjusting for inflation, the BOA's median household income increased from \$30,100 in 1990 to \$30,700 in 2010. The median was about \$1,000 lower than the citywide figure, and almost \$20,000 lower than the countywide figure.

The distribution of household incomes is relatively similar to the city, although households earning more than \$150,000 annually are practically absent, while the city's share is about 2 percent. Larger gaps are found between the BOA and the county, where more than half the households earn more than \$50,000 annually, compared to only 30 percent in the BOA. These relatively low incomes lead to relatively low purchasing power for real estate.

Residential Market

Compared to the city, the BOA is more heavily oriented towards rentals priced at \$500 or less. In fact, almost 90 percent of the rental units report rents at this level, while the citywide figure is just over 60 percent. Furthermore, almost 40 percent of the BOA's rental units are priced at less than \$250, a share three times higher than the city.

The BOA is about evenly split between renters and owners, a figure that has changed little since 2000. Its vacancy rate has continued to rise since 2000, when it was 15 percent, to a 2010 level of 24 percent. Combined with the low rent rates, this indicates relatively low demand for rental housing.

There were 10 valid residential sales transactions between 2007 and 2010 in the BOA. Four were for single-family homes, and the remainder for two- or three-family homes. All properties were at least a century old, and ranged in size from 1,000 to 2,000 square feet per unit. The average price for a single-family home was \$29,300, with a high of \$48,000. The average price for a multi-family home was \$34,700, with a high of \$57,500. These are significantly lower than the citywide averages of \$106,000 for single-family and \$78,000 for multi-family homes.

Based on an analysis of the city's assessment and permitting databases, there has been no new residential development in the BOA since 2000, although there are two residential projects currently in the planning phase – Buffalo River Lofts, a 78-apartment new build at 441 Ohio Street; and Cooperage Lofts, the renovation and conversion of the EB Holmes building at 55 Chicago Street into 22 apartments.

Nonresidential Market

There were several active or recent listings of commercial real estate space located in and around the BOA. The average lease rate was \$2.15/SF for industrial space and \$12/SF for office space. The industrial offerings were all priced fairly tightly between \$2 and \$2.25, but the pricing of office space was significantly wider, with properties at both \$8 and \$16. The industrial average is about two-thirds the citywide rate, while the office average is about a third higher than the citywide rate.

The relatively high discount assigned to industrial rents in the BOA suggests that demand may be relatively low, although the aged stock may also play a role. On the office side, given the proximity to downtown from the BOA, it is logical that lease rates would fall as they do somewhere between the CBD and the city at large.

According to the city's assessment database, there were six commercial sales within the BOA between 2007 and 2010. Four of these were industrial properties, and ranged in size from 5,340 SF to 13,470 SF. Sales prices ranged from \$21 to \$47/SF, with an average of \$30/SF. The BOA's average sale price was more than twice as high as the citywide average. While the sample size is extremely small, the data indicates that industrial properties in the BOA may be experiencing higher demand than in other parts of the city.

Commercial development since 2000 has consisted of four industrial projects and one office project. The industrial properties range in size from 4,000 to 20,000 SF, with values between \$16 and \$29/SF. The office building is about 8,300 SF, with a value of \$46/SF. There do not appear to be any commercial development projects in the pipeline for the BOA.

4

INVENTORY

The purpose of the inventory and analysis is to provide a better understanding of existing conditions; clarify the regulatory framework; recognize opportunities and potential barriers to redevelopment; and identify assets and opportunities that can leverage investments.

4.1 NATURAL RESOURCES

The Buffalo River has served as the location of concentrated industrial development since the mid-1800s. While its industrial past has dramatically altered the ecological function of the river, it remains the key natural resource within the BOA. Although active commercial, industrial, and residential uses occupy the majority of the study area, numerous vacant sites and valuable environmental resources remain.

Geology

Nearly all land in the BOA is underlain by 390-million year-old Onondaga limestone bedrock. This solid, erosion-resistant formation spans New York State from Buffalo to Albany. The bedrock within a small area east of Elk Street is comprised of the Marcellus Formation, Oatka Creek Shale member. The depth to bedrock is generally 30 to 70 feet below grade.

The BOA is comprised entirely of lacustrine silt and clay, which are laminated layers of silt and clay deposited in glacial lakes historically found throughout New York State. Lacustrine silt and clay contains slightly impermeable soil, resulting in the potential for land instability on parcels not previously graded or sufficiently compacted. As most land has already been disturbed, concerns for future development resulting from the instability of the lacustrine silt and clay are relatively low.

Soils

According to the Soil Survey of Erie County, there are a number of distinct soil types within the BOA. Since limited site-specific information is available and on-site conditions can vary among properties, investigations will be needed to confirm site suitability prior to development.

The majority of soil is mapped as commercial (Ud – Urban Land). Most areas within this soil type have been significantly disturbed through previous residential, commercial, and industrial construction activities. In most cases, the soil is completely covered with buildings, paved surfaces, demolition fill, capped remediation areas, or other man-made materials. Areas in the BOA include landfills, former marshes, and floodplains. Careful onsite investigation is essential to determine the suitability and limitations for any proposed use.

Large areas are covered with fill (Uc – Udorthents), generally near industry, urban development, or construction sites. These soils consist of various kinds of excavated earthy material that has been stockpiled for use as fill for topdressing; soil and rock material that has been trucked from other areas and leveled; or soil deposits that are left in areas that have been excavated or deeply scalped. In some places the fill is mixed with slag or cinders, in other places with concrete, asphalt, or other waste. These areas

are generally near industrial complexes, rail yards, and rights-of-way. Cut and fill areas are usually poorly suited to farm or recreational uses, and onsite investigation is essential to determine the feasibility of using these areas for any purpose.

Several small pockets are mapped as Niagara silt loam soils (NfA), mainly around areas of O'Connell Street, South Park Avenue, Perry Street, and Bailey Avenue. This well-drained soil is composed of dark brown silt loam, and found in areas not significantly disturbed by urban development. While paved and previously disturbed portions of this soil series allow for future development; unpaved, undisturbed portions are generally ill-suited for construction due to the presence of weak, poorly drained soils.

The dump (Dp) soil type consists of excavations that are filled with rubbish and debris. Landfills are commonly constructed by removing the soil and dumping trash and refuse into an excavated area that can range from 3 to 50 feet in depth. The refuse is then covered or mixed with earth material. In historically industrial areas dumps can also contain industrial and toxic wastes. These dump sites can have a pungent odor, poor stability, and unsanitary effluents that make them undesirable for reuse. Onsite investigation is necessary to determine its reclamation value for any proposed uses. [Map 2]

Topography

The topography throughout the BOA is fairly level, with the exception of several ridges that traverse its central portion. The lowest point is along the Buffalo River, at an elevation of 571 feet above mean sea level. The highest point is located along a scenic ridge in Red Jacket Riverfront Park, at an elevation of 607 feet. Steep slopes are confined to the area around the ridges in Red Jacket Riverfront Park, as well as along several natural riverbanks. Portions of the Buffalo River shoreline contain concrete or steel bulkheads, resulting in a significant drop in elevation from the adjacent land. [Map 3]

Surface Water

Buffalo River

The Buffalo River has played an integral part in the city's history. From its headwaters in the towns of Sardinia and Concord, the river winds its way for 30 miles before emptying into Lake Erie. Prior to industrialization of the waterway, the geography of this section of the city was dominated by wetland marsh, with a river water draft less than five-feet deep. Riparian zones were eliminated and replaced by hard seawalls for better access by boats, and wetlands were filled in order to be able to build the structures needed to capitalize on waterfront access. The early factories and mills that located along the river have contributed to the environmental degradation of this natural resource.

Today the Buffalo River is a navigable waterway. The US Army Corps of Engineers actively maintains a navigation channel that is dredged to a depth of 23-feet from Lake Erie to a point just west of the river's confluence with Cazenovia Creek. The waterway is slow flowing and turbid, with low dissolved oxygen.

Current river conditions include inaccessible and degraded shorelines, a loss of natural wetland buffer and filtration, and compacted and compromised upland areas that generate storm water and overload the

Map 2: Soils



Map 3: Topography



sewer system. Additionally, the loss of naturalized edges through seawall construction has removed breeding habitat for fish, and significantly impacted wildlife that depend on riparian zones.

The river is the final collection point in the Buffalo River-Frontal Lake Erie sub-watershed, which consists of 105,400 acres (165 square miles) of land. This watershed has been impacted by upper watershed agricultural runoff, faulty septic systems, and sediments affected by historical industrialization.

The river is classified by the NYS Department of Environmental Conservation as a “Class C” water body, indicating that its best use is for fishing and fish, shellfish, and wildlife propagation and survival. The water quality is suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

City Ship Canal

The City Ship Canal is located between Kelly Island and the Outer Harbor. It was constructed in 1850 to provide additional mooring and dock space. The canal was also used by businesses to transport goods from grain elevators to destination points across the country. It remains active, used by businesses such as General Mills, First Buffalo Marina, China Light Yacht Club, RCR Yachts Marina, and Port Crescent Land Company. The canal is classified by the NYSDEC as a “Class C” water body; and is part of the federally-designated Buffalo River Area of Concern.

Groundwater

An aquifer is an underground layer of water-bearing permeable rock, sand, gravel, or soil that contains extractable groundwater. According to the NYSDEC, no primary or principal aquifers are located within the BOA. The USEPA indicates that no sole source aquifers are located within the study area. The environmental assessment of a number of properties within and outside the BOA has determined that groundwater has been impacted by past industrial practices and petroleum spills; but there are no known uses of groundwater within the boundaries.

Wetlands

The City Ship Canal is the only federally-regulated wetland within the BOA; there are no state-regulated wetlands. Smaller, unmapped wetlands are present throughout, including areas of marshlands and ponds that provide highly valuable wildlife habitat. These ponded locations include areas along Red Jacket Riverfront Park behind the Valley Community Center. [Map 4]

Floodplains

According to FEMA mapping, the majority of the BOA is located in Flood Hazard Zone X, the 500-year flood inundation area where chances of flooding in a given year are minimal. The entire run of the

Map 4: Wetlands and Flood Hazard Areas



Buffalo River, as well as the shorelines of parcels fronting it and the City Ship Canal, are located within flood hazard Zone AE. This means that these parcels are within the 100-year flood inundation area, and have a 1 percent annual chance of flooding. Parcels in Zone AE include General Mills, Red Jacket Riverfront Park, Buckeye Terminal, First Buffalo Marina, RCR Yachts Marina, and China Light Yacht Club. Flooding on many of these parcels has been mitigated by the installation of concrete bulkheads that extend above mapped flood elevations. [Map 4]

Erosion Hazard Areas

According to the city's Draft Local Waterfront Revitalization Plan, there are no designated Coastal Erosion Hazard Areas within the BOA. Many properties along the Buffalo River corridor are protected from erosion by concrete bulkheads or riprap, but some portions of the stream banks are unprotected and subject to the possibility of future erosion.

Fish and Wildlife Habitats

Fish and wildlife habitat in the BOA is degraded due to development along the riverbank and routine navigational dredging. The Buffalo River is listed by the USEPA as a Great Lakes Area of Concern. To date, three habitat restoration projects have been completed in the AOC, and six more are underway or in the design phase.

The USEPA recently funded the development of the Buffalo River Ecological Restoration Master Plan, an actionable restoration plan that was developed through extensive stakeholder involvement. The ERMP identifies potential habitat restoration sites and activities that will make progress towards delisting the three habitat-related Beneficial Use Impairments possible. The ERMP identified five restoration sites: the cap area of City Ship Canal, the Ohio Street shoreline, the Katherine Street peninsula, Red Jacket Riverfront Park, and the Buffalo Color peninsula shoreline.

The Significant Coastal Fish and Wildlife Habitats program serves to protect important fish and wildlife habitats that contain a unique combination of environmental and biological conditions that fish and wildlife need for survival. No designated habitats are located within the BOA, although habitats are located to the west at the Times Beach Nature Preserve and the Small Boat Harbor.

Fish habitat is also degraded by navigational dredging that has created an over-widened, over-deepened channel lacking the natural pool/riffle regime. Some 41 native species of fish have been observed in the Buffalo River, including the longear sunfish and black redhorse, which are listed as "Species in Greatest Conservation Need."

The river is also a key location within the North American Flyway for bird migration, and lies along the direct path of a globally significant Important Bird Area. Habitat areas along the water's edge are crucial for many avian species as they pass through on their migration pattern.

The NYSDEC lists 15 endangered species that have historically inhabited the BOA. According to the US Fish & Wildlife Service's Inventory of Threatened and Endangered Species, no federally-listed species

are currently found in Erie County. Non-endangered wildlife typically found along the Buffalo River includes amphibians, snakes, and mammals.

The City Ship Canal also provides habitat for fish, amphibians, and invertebrates. Although it is an artificial channel, it has increasing value as a link between Lake Erie and Buffalo River habitats, especially for waterfowl and fish in need of nesting, spawning, and resting places. Native shoreline and aquatic vegetation have naturalized the western edge of the canal south of the active industrial area.

Air Quality Maintenance Areas

Air Quality Maintenance Areas are places that “persistently exceed the national ambient air quality standards” as described in the Federal Clean Air Act. These areas are designated as “non-attainment” areas. The city is a designated non-attainment area, earning a “subpar” rating in 2011 due to ozone levels in excess of state and federal limits.

Visual Quality

Most of the parcels along the Buffalo River have been developed for industrial and commercial uses. The river and several sections of river bank offer natural view sheds; while cultural and historic view sheds are provided by Elevator Alley – a collection of historic grain elevators lining the river, some of which remain active today. NYS Route 5 is part of the Great Lakes Seaway Trail, and provides picturesque views of Lake Erie, the Buffalo River, Elevator Alley, and the city skyline. A topographic ridge located in Red Jacket Riverfront Park also offers scenic views of the Buffalo River, Tifft Nature Preserve, and the Concrete Central Elevator.

Upland Natural Resources and Open Space

The BOA is primarily comprised of industrial, commercial, and residential properties; but also offers areas of important upland open space. Riverfest Park, the Ohio Street boat launch, Father Conway Park, Mutual Riverfront Park, and Red Jacket Riverfront Park are dedicated public spaces that preserve upland open space. A number of former industrial parcels, including several on the Katherine Street Peninsula, have also been left unmaintained over the past few decades and are undergoing the re-establishment of upland habitat.

Agricultural Lands

No agricultural land presently exists within the BOA.

Local, State and Federally-Designated Resources

No local, state, or federally-designated resources presently exist within the BOA.

4.2 INFRASTRUCTURE

As a part of the city that was largely built-out by the early 1900s, the BOA benefits from infrastructure that provides nearly complete coverage for electric, natural gas, water, and sewage disposal.

Electric

Mapping and system information for the privately owned and managed electrical distribution and transmission network was obtained from National Grid. The study area is serviced by several distribution feeders providing overhead and underground electrical service. According to system records, the city distribution network in the BOA consists of 5 kV overhead and buried feeders. High voltage distribution and sub-transmission lines are located on the Katherine Street peninsula and along Ohio Street, where they connect to a transformer at the intersection of Childs Street. High voltage service continues along Childs to a private transformer serving the grain elevators at the Silo City complex. The industrial nature of the BOA suggests sufficient access to electrical capacity for future redevelopment, although there have been reliability issues on Kelly Island. [Map 5]

Natural Gas

Correspondence with the engineering department at National Fuel indicated that all parts of the BOA are within sufficient distance of an existing supply main with available capacity to support future redevelopment.

Water

The Buffalo Water Authority provides potable water to properties in the city. Water is pumped from Lake Erie and treated and distributed at the Colonel Ward Pumping Station on Porter Avenue. The BOA is primarily supplied by public water lines ranging from 6 to 48 inches in diameter. The only private water service is a 12-inch line located along Childs Street that services Silo City.

Properties in the BOA are fed from a 48-inch supply main that loops through the city and connects with numerous service mains. A 16-inch line travels along Ganson Street to Ohio Street, continuing south to a connection with a 16-inch line along Fuhrmann Boulevard. A 20-inch line along Louisiana Street supports development to the east and north of the Buffalo River. Two 10-inch mains along South Park Avenue and Elk Street service the area south to the Buffalo River. [Map 6]

Map 5: Electric Infrastructure



Map 6: Water Infrastructure



Sanitary Sewer

The sanitary sewer system within the BOA includes separate sanitary sewers, combined storm/sanitary sewers, large interceptor sewers, and pump stations. Service within the city is provided by the Buffalo Sewer Authority, which operates a waste water treatment plant on Squaw Island. [Map 7]

Separate Sanitary Sewers

The separate sanitary sewer system within the BOA consists of 2.3 miles of pipe ranging from 10 to 24 inches in diameter. These sewers convey flows to large interceptor sewers both within and outside the BOA, which direct the sewage north to the treatment plant. Separate sanitary sewers service limited areas of the BOA, including Kelly Island, the Katherine Street peninsula, and areas south of the Buffalo River.

Silo City is serviced by a 12-inch sanitary sewer along Childs Street. At 25 percent current use, this line has the capacity to service approximately 400 residential units or 1,000 hotel rooms. The Katherine Street peninsula is also serviced by a 12-inch sanitary sewer, with the capacity to service up to 1.5 million square feet of commercial/industrial space.

A 21-inch sanitary sewer services the southern portions of Ohio Street and the Rigidized Metals facility. At 50 percent current use, this sewer has the capacity to support an additional two million square feet of commercial/industrial space or 600 housing units. The Childs Street and Ohio Street sanitary sewers meet at a pump station at their intersection with Ganson Street, and continue northward through Kelly Island as a 24-inch sewer. Taking the existing development along Ganson Street into consideration, at 50 percent current use a 24-inch sewer has the capacity to service an additional 3.7 million square feet of commercial/industrial space.

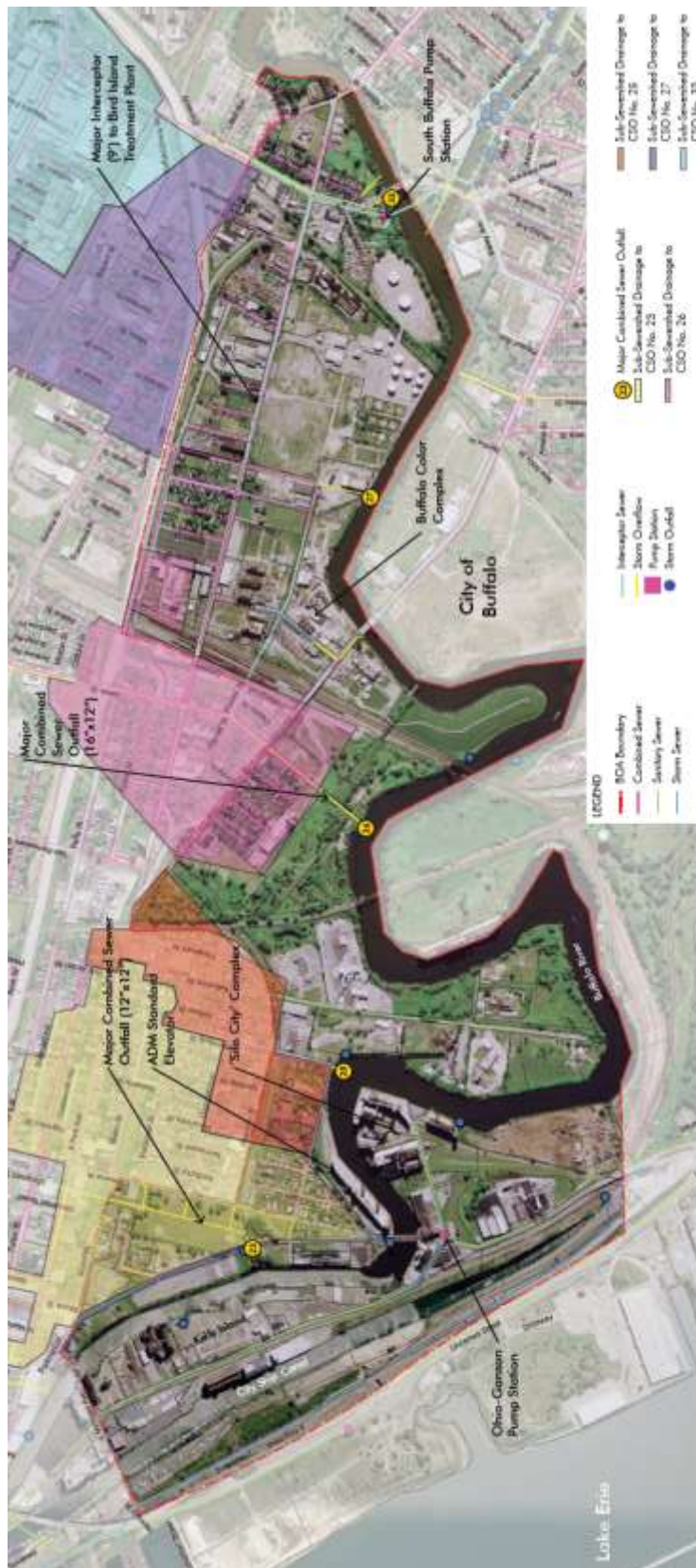
The area west of the City Ship Canal and east of Route 5 currently has no sanitary sewer service. A potential connection to an 18-inch sanitary sewer along Fuhrmann Boulevard could provide this service. A preliminary analysis of the capacity of this sewer to carry flows from future development along the shoreline, in addition to flows from future development along City Ship Canal, indicates that it would support an additional 3 million square feet of retail/office space or 900 housing units.

Combined Sewers

Portions of the BOA also utilize a combined sewer collection system that conveys both sanitary and storm sewer flows through the same lines. The system receives sanitary inflows from adjacent development and storm water inflows from impervious surfaces such as streets, parking lots, and building roofs. Localized combined sewer systems transfer flows to interceptor sewers that gather waste from large portions of the city and convey it to the treatment plant on Squaw Island.

During intense rain, the combined sewer and interceptor systems do not have the capacity to convey the significantly increased flows. To mitigate the lack of capacity in these instances, combined sewer outfalls are used to prevent storm water and sanitary sewage from backflowing into buildings.

Map 7: Sewer Infrastructure



The BOA is serviced by 6.5 miles of combined sewer, ranging from 8 to 72 inches in diameter. Apart from Katherine Street, all areas north of the Buffalo River are serviced by combined sewer. There are several areas where the combined sewer system is connected to a combined sewer outfall that empties into the Buffalo River, including Louisiana Street, Hamburg Street, Smith Street, Babcock Street, and Bailey Avenue. Connection to the combined sewer outfall indicates that the sewer service in this area is insufficient to meet peak demands during a rainfall event.

Combined Sewer Outfalls

Combined sewer outfalls are points where wastewater and storm water from a combined sewer system are discharged directly into surface waters. Generally these discharges occur without prior treatment during periods of heavy precipitation or snow melt. In the BOA, storm water carries pollutants from streets and properties and wastewater carries human waste and bacteria directly into the Buffalo River through the combined sewer system. CSOs are responsible for much of the water quality degradation in the river.

There are five CSOs located along the Buffalo River within the BOA. These CSOs drain roughly 4,350 acres, and experience an average of 255 overflow events annually. This situation is compounded by storm water and sewer overflows generated upstream of the BOA, in the watershed beyond the city limits.

CSO 026 is 16 by 12 feet, and follows Smith Street to an outfall on the Buffalo River. This concrete conduit gathers direct storm sewer inflows as well as combined sewer and interceptor sewer overflows. CSO 064 is 12 by 12 feet, and travels beneath Conway Park within the former Ohio Turning Basin to an outfall just west of Louisiana Street. Due to their large size and critical placement, these facilities are unlikely to be relocated, and should be noted on maps to avoid potential development conflicts.

Efforts have been undertaken over the past decade to improve water quality by reducing or eliminating combined sewer overflows. With its *Long-Term Control Plan*, the BSA will be able to reduce both the number and volume of overflow incidents. In addition to traditional grey infrastructure storm water/sanitary sewer pipe separations, proposed projects include a host of green infrastructure initiatives.

Interceptor Sewers

A 9-foot diameter interceptor sewer enters the BOA from the east and travels along Elk Street, where it joins with a smaller branch from the Buffalo Color Complex and continues west along Perry Street as an 11-foot concrete box. Smaller interceptors are located along Louisiana and Hamburg streets. Similar to the combined sewer system, any additional inflows of storm water to these interceptors should be avoided to maintain maximum operating capacity of the sanitary system.

Pump Stations

The sanitary, combined, and interceptor sewers all flow underground largely via gravity. To overcome the extreme depths required for extended lengths of sewer, several pump stations are used to lift sewage

from lower to higher elevations. There are three pump stations located along the Buffalo River – the Skyway Pump Station at the foot of Main Street; the Hamburg Pump Station at Hamburg Street and the I-190; and the South Buffalo Pump Station at the confluence of Cazenovia Creek and the river.

Storm Sewer

The storm sewer system is composed of separate storm sewers, combined sewers, storm overflow sewers, and storm sewer outfalls. Storm sewers are managed by the Buffalo Sewer Authority, which has adopted a storm water management plan pursuant to state and federal requirements.

The areas of greatest need for storm sewers generally have the highest levels of impervious surface coverage. Impervious surfaces capture rainfall and convey it directly into the storm (or combined) sewer system, with an ultimate outfall to the Buffalo River. The areas with the most significant levels of impervious cover are Kelly Island, the Katherine Street peninsula, and the Buffalo Color and ExxonMobil/Buckeye complexes. [Map 7]

Separate Storm Sewers

There are 2.2 miles of separate storm sewers located within the BOA. More than half of this runs along Route 5, and is not currently servicing any private development. Small segments of separate storm sewers are located along Ohio and Louisiana streets, and another small area services the Buffalo Color complex. These storm sewers convey rainfall directly to the Buffalo River. In many instances, storm water is also conveyed directly to the river from adjacent properties, without the use of sewers.

Storm Sewer Outfalls

The Buffalo River is the only stormwater outfall location for significant portions of the city south of William Street. As a result, during large rainfall events significant flows of storm water and sewage enter the River, greatly diminishing water quality. There are three primary storm sewer outfalls within the BOA – at the foot of Louisiana Street by the Ohio Street Bridge; east of Hamburg Street at the New York Power Authority ice boom storage site; and beneath the rail bridge east of Red Jacket Riverfront Park.

Green infrastructure

Green infrastructure seeks to recreate naturally occurring functions to generate positive impacts on energy use, air and water filtration, storm water management, and flood control and prevention. It includes components at multiple levels – from individual sites to neighborhoods to watersheds – each contributing to the sustainability of the natural network. The following are several green infrastructure and sustainable infrastructure developments that have occurred or are planned within the BOA. [Map 8]

City of Buffalo

Buffalo River

LEGEND

- City of Buffalo
- City of Buffalo
- Buffalo River
- Proposed Habitat Restoration Projects

City of Buffalo

Buffalo River

LEGEND

- City of Buffalo
- City of Buffalo
- Buffalo River
- Proposed Habitat Restoration Projects

Buffalo River Remedial Action Plan

This US Environmental Protection Agency plan outlines strategies to restore the health of the Buffalo River by building strong community partnerships to protect and restore shoreline buffers and habitat, secure public access, dredge the river, and provide public education. All of these measures contribute to broader public awareness and interest in green infrastructure strategies.

Buffalo River Greenway Planning

Greenway planning work has identified key environmental issues, trail connections, parks, conservation areas and community assets. The plans make recommendations for green infrastructure related to open space preservation in conjunction with implementation of the multi-purpose open space corridor.

Niagara River Riparian Restoration Program on the Buffalo River

This program seeks to develop forest buffers or other habitat features such as rain gardens, small-scale soft shoreline stabilization, meadows, and wetlands on waterfront properties along the Niagara and its tributaries. The goal is to restore ecological integrity for property closest to the water for habitat and increased filtration. Properties along the Buffalo River that have participated in the program include: China Light Yacht Club, RCR Yachts, and Buffalo Scholastic Rowing Association. Riparian restoration is a broad approach to green infrastructure and provides the groundwork for the development of smaller, neighborhood and site specific green infrastructure measures.

Buffalo Niagara Riverkeeper Water Quality Testing

The Riverwatch Team has been testing approximately 40 sites within the Niagara River watershed (including the Buffalo River). The goal is to monitor the waterways over a one-year period in order to develop a clear picture of where problem areas are located, and identify the time of year that is most problematic. Sites along the Buffalo River include: Buffalo River Commercial Slip, Ohio Street Fishing Access, Smith Street Park, the confluence with Cazenovia Creek, and Seneca Bluffs. The water quality tests are important to understand when developing plans for green infrastructure opportunities that improve water quality within the BOA.

Niagara River Watershed Management Plan

Buffalo Niagara Riverkeeper is working in collaboration with dozens of municipalities and agencies and with individual citizen participation on the development of a Niagara River Watershed Management Plan to determine what needs to be done to protect and restore water resources in our community and the Niagara River watershed. The management plan serves as a foundation for the implementation of the green infrastructure stormwater best practices.

Buffalo Sewer Authority Long-Term Control Plan

The BSA has developed a long-range plan to mitigate combined sewer overflow events. It is anticipated that up to \$100 million will be invested in green infrastructure initiatives, providing a significant opportunity to coordinate these projects with BOA infrastructure needs.

Ohio Street Reconstruction

Ohio Street links Canalside with the Outer Harbor, and will include green infrastructure in full complete green street design.

Mutual Riverfront Park

Mutual Riverfront Park includes rain gardens to capture water from the roof of the building and from the parking lot as part of the overall storm water management for the site.

Downspout Disconnection Pilot Program

The BSA and Buffalo Niagara Riverkeeper are currently studying the potential benefits of downspout disconnection in the Old First Ward neighborhood. Flow meters have been placed in area sewers to determine if downspout disconnections and rain barrels work to reduce storm water runoff.

4.3 TRANSPORTATION

The BOA contains a comprehensive network of streets and sidewalks, making most points easily accessible by foot, bike, bus, or car. There are also a number of active rail lines; and the Buffalo River provides for both recreational boating and commercial shipping.

Pedestrians and Bikes

Buffalo has had a Complete Streets policy since 2008, to ensure that streets are designed to be safe, comfortable, and convenient for all users – particularly cyclists, pedestrians, and the mobility impaired. As streets are reconstructed throughout the city, the impacts of this policy will become increasingly evident. [Map 9]

The *Bicycle and Pedestrian Master Plan* prepared by the Greater Buffalo Niagara Regional Transportation Council proposes on-road bike routes along Ohio Street, Louisiana Street, South Park Avenue, Smith Street, and Bailey Avenue. An off-road bike path linking the Niagara Riverwalk and Riverfest Park has also been proposed in conjunction with the Ohio Street improvements.

Map 9: Pedestrian / Bicycle Infrastructure



The BOA provides an extensive sidewalk network that connects residential neighborhoods such as The Valley and Old First Ward. These sidewalks also connect with a comprehensive network of sidewalks and pedestrian walkways extending beyond the BOA.

Public Transportation

The Niagara Frontier Transportation Authority operates eight bus lines within the BOA. These routes are located along Ohio Street, South Park Avenue, Elk Street, Bailey Avenue, and Seneca Street. There are a total of 36 bus stops, with the majority located near residential neighborhoods. Bus routes serving the BOA also connect with the city's subway line, which parallels Main Street from downtown to the University at Buffalo South Campus. [Map 10]

Roads

The existing road network is classified into a hierarchy based on several factors, primarily road capacity and traffic volume. Local streets, arterials, and collectors comprise the majority of the road infrastructure in the BOA. There are also two high-volume, limited access highways: Interstate 190 runs east/west and has interchanges at Smith and Seneca streets; and State Route 5 runs north/south and has an interchange at Fuhrmann Boulevard.

Recent improvements to Route 5 include a new interchange at Ohio Street, which is located just south of the BOA. This provides direct access to Fuhrmann Boulevard and the southern portion of the Outer Harbor, as well as to the BOA along Ohio Street.

There is also a proposal for a Tifft Street Arterial, which would direct commercial traffic away from the I-190/Route 5 interchange downtown. This limited access roadway would connect with the I-190 at the Seneca Street interchange and travel south along an abandoned rail corridor to intersect with Tifft Street just south of the BOA. The proposal would require the construction of a new bridge over the Buffalo River.

Finally, there is an extensive network of truck routes throughout the BOA, to allow access to the many industrial and warehousing facilities. [Map 11]

Map 10: Public Transportation Infrastructure



Map 11: Road Infrastructure



Rail

The BOA is served by two Class I railroads – CSX Transportation and Norfolk Southern. Class I railroads are defined as having annual carrier operating revenues of at least \$250 million. Other railroads operate facilities and use trackage in the BOA, including Amtrak, the Class II Buffalo and Pittsburgh Railroad, and the Class III Buffalo Southern Railroad and South Buffalo Railway.

Buffalo Junction Yard is a transfer location within the BOA, located beneath the I-190. Both CSX and Norfolk Southern interchange here prior to traveling to CSX's Frontier Yard and Norfolk Southern's Bison Yard. CSX also owns, operates, and maintains two drawbridges over the Buffalo River, both of which link to the Tifft Street Yard, a transfer location south of the BOA.

The extensive rail network offers opportunities to more effectively utilize existing lines, as well as to develop new ones. There are numerous industrial sites adjacent to existing rail lines or already connected by sidings or spurs; and abandoned rail corridors that could be put back into service. [Map 12]

Navigable Waterways

The Buffalo River and City Ship Canal are the primary navigable waterways within the BOA. The Army Corps of Engineers maintains the navigable shipping channel for the Buffalo River from its mouth to the former Conrail Bridge south by the Buckeye Terminal, as well as the majority of the City Ship Canal. Both channels are maintained to a minimum depth of 22 to 23 feet below low water datum, although slightly deeper depths may occur in localized areas. Shipping channels are dredged every two to three years to remove accumulated sediment. [Map 13]

Headwalls

The shorelines of the Buffalo River and the City Ship Canal are comprised of headwalls of varying types and conditions. The shoreline is generally more natural or comprised of rip rap on the upstream portion of the river, with higher concentrations of wall structures or bulkheads in the downstream areas.

Bridges

There are two fixed highway bridges, three active road drawbridges, two active railroad drawbridges, and two inactive railroad drawbridges within the BOA. The two fixed highway bridges carry Bailey Avenue and Seneca Street traffic over the Buffalo River, while the three drawbridges are at Michigan Avenue, Ohio Street, and South Park Avenue.

The Michigan Avenue Bridge connects Kelly Island to the mainland, and has a 20-foot clearance over the Buffalo River when down, and 101 feet when raised. The Ohio Street Bridge has an 18-foot clearance when down, and 105 feet when raised; and the South Park Avenue Bridge has a 19-foot clearance when down, and 95 feet when raised.

Map 12: Rail Infrastructure



Map 13: Navigable Waterways



The Michigan Avenue and Ohio Street bridges are raised an average of 1.5 times per weekday, with a slightly higher average on weekends. The typical operating time of a movable span is approximately eight to ten minutes. All drawbridge operations, whether for vehicular or rail traffic, are regulated and have specific requirements for operation times and advance notice periods.

The CSX Rail Drawbridge at River Mile 4.0 crosses between the Katherine Street peninsula and Red Jacket River Front Park, and provides about 18 feet of clearance when down. The Buffalo Creek Railroad Bridge at River Mile 4.4 has a clearance of approximately 12 feet.

CSX also owns the inactive drawbridge adjacent to the Buffalo Creek Railroad Bridge. Half the span is permanently locked in the upright position, while the other half is a fixed span, sitting 12 feet over the Buffalo River. A second inactive drawbridge, formerly known as the DL&W Buffalo River Draw, is located at River Mile 5.8. The lift section of the bridge has been removed, leaving the fixed portion jutting out into the Buffalo River.

Ship Traffic

Buffalo River shipping traffic is monitored by the United States Coast Guard, although the United States Department of Homeland Security, Immigration and Naturalization Service, New York State Department of Environmental Conservation, Erie County Sheriff, and Buffalo Police Department also monitor the waterway.

The average navigation season runs from April 1 to December 30. Travel out of the Buffalo River into Lake Erie may be prohibited during the winter, since no navigation channel is maintained when the lake is frozen. The river often freezes as well, although a small navigation channel is maintained for small craft travel and transport.

Regulations stipulate that all vessels requiring the Michigan Avenue drawbridge to be raised must have the assistance of a tug boat when approaching and passing the bridge. Commercial shipping to the upstream portion of the river beyond River Mile 3.0 is infrequent, with only an occasional barge serving the Buckeye facility. Most of the commercial shipping is focused on General Mills, Pillsbury, LaFarge Cement, and sand storage at Port Crescent Land.

Buffalo River traffic is significantly influenced by recreational users, largely generated by private marinas lining the City Ship Canal and Outer Harbor areas. In 2010 the Erie Canal Harbor Development Corporation conducted a Moveable Bridge Lift Analysis Report, which summarized traffic trends. It indicated that less than 10 percent of the river traffic is designated as commercial, and that half the traffic is able to clear the Michigan Avenue and Ohio Street drawbridges in their closed positions.

4.4 PARKS AND OPEN SPACE

The BOA contains a number of parks, trails, water access points, and community centers that provide the public with open space opportunities, access to the river, recreational activities, and community services.

Parks

The BOA is home to five public parks and one community-maintained open space. [Map 14]

Riverfest Park

Spearheaded by the efforts of the Valley Community Association, Riverfest is a privately-owned, publicly-accessible open space that also serves as the northern gateway to the Ohio Street corridor. The three-acre park sits along 600 feet of shoreline, and looks out over Kelly Island to give visitors a glimpse of Buffalo's industrial past. The park has paved walking trails that lead to a waterfront boardwalk and docks and slips on the river. It offers several seating areas and a band shell, along with 13 parking spaces.

Father Conway Park

This park sits on 15 acres between Ohio and Louisiana streets, to the southeast of Riverfest Park. It has a pair of softball diamonds used by recreation leagues, a playground, and several acres of open space. A comfort station is located adjacent to the playground, and there is parking across Louisiana Street.

Ohio Street Boat Launch

This DEC facility is across the street from Father Conway Park, and provides access to the Buffalo River via a hand launch that accommodates canoes, kayaks, and row boats. The park does not currently have a trailer launch for larger motorized boats. It has parking for 15 vehicles.

Mutual Riverfront Park

This park, owned and operated by the New York Power Authority, opened in 2012 at the intersection of South and Hamburg Streets. It takes its name from the historic Mutual Boat Club that was located near the present site in the early 1900s. The park offers a number of amenities, including a museum and concession building, a boat storage facility, a non-motorized boat launch, a fishing overlook, riverfront promenade, and parking. It is adjacent to the site where the NYPA stores the ice boom when not in place.

Red Jacket River Front Park

This park provides 44 acres of open space at the end of Smith Street, and is owned by Erie County and the NFTA. A former rail right-of-way and parking area for Concrete Central employees, it was purchased and remediated by Erie County in the 1990s. It includes a series of nature trails with benches that take visitors through various ecosystems, including marshlands, meadows, forests, and the riparian corridor of the river. Several interpretive exhibits are also located along the trails, detailing the history of Red Jacket, a Seneca chief. There is a kayak launch into the river and overlook areas for bird watching and fishing. A series of murals on the abandoned rail embankments celebrate the industrial, architectural, and natural history of the area.

Bailey Avenue Park

This city-owned two-acre parcel sits on the north shoreline of the river, just east of Bailey Avenue. Access is through the Communications Workers of America parking lot off Elk Street. It offers passive recreational opportunities and riverfront access.

Trails

Designated trails include the Fuhrmann Boulevard Parkway, Red Jacket River Front Park Nature Trail, and the private Buffalo Color Area D Access Trail. Opportunities exist to create an integrated trail system that ties into trails beyond the boundaries of the BOA.

The Shoreline Trail currently terminates to the west of Riverfest Park near the intersection of Ohio Street and Michigan Avenue. From this point, it extends north through Buffalo into the Tonawandas, and links up with a spur that runs along Scajaquada Creek to Delaware Park.

Making this short connection, along with one to the south along Ohio Street, would link the BOA to the entire waterfront trail system. Additional proposed trails include the Buffalo River Trail and the Heritage Trolley Line Trail. **[Map 15]**

Water Access

There are a number of water access points, most of which are located within designated parks. Hand launches at Riverfest Park, Ohio Street Park, Mutual Riverfront Park, and Red Jacket River Front Park provide opportunities for active recreation along the river.

RCR Yachts operates a marina on 14 acres of land along the City Ship Canal. It offers 125 floating boat slips, complete with potable water and electricity for visiting boaters; boat sales and repair services; and winter storage for approximately 300 boats. Marina users primarily access Lake Erie as opposed to the Buffalo River.

Map 15: Trails



The Buffalo Scholastic Rowing Center is located just north of the Ohio Street Park. It is privately-owned, but operated by the Buffalo Scholastic Rowing Association. Completed in 2010, it serves as the base for many of the rowing programs in the Buffalo School District, as well as several adult rowing programs. The center offers a large canvas boat storage facility, and a boat put-in at the historic Ohio Street Canal.

[Map 16]

4.5 ARCHEOLOGICAL / HISTORICAL RESOURCES

Archeological Resources

Locations near the confluence of Buffalo Creek (River) and Little Buffalo Creek would be considered highly sensitive if in non-urban settings. The intensive occupation by heavy industry since the late 1800s has likely disturbed the archaeological record across much of the BOA. Archeologically sensitive areas exist where past disturbances may be minimal or undocumented, such as west of the City Ship Canal and along isolated sections of the river's northern shoreline. Development is not prohibited in these areas, but consideration may be required when a project involves state or federal funding, permitting, or approval.

Historical Resources

There are a number of properties that reflect the area's heritage as a focal point of transshipment and industry. Properties listed or eligible for listing in the State or National Registers of Historic Places are afforded some protection under preservation laws, although development is not strictly prohibited.

The only property currently listed on the S/NRHP is the former E&B Holmes Machinery Company on Chicago Street. There are 14 additional properties that are eligible for listing, including seven grain elevators (Great Northern, Spencer Kellogg, Electric, American, Perot, Lake and Rail, and Marine A); five moveable bridges (Ohio Street, Buffalo Creek, South Park, and two CSX rail); and two transshipment facilities (Erie Freight House and the Truck/Transfer Building).

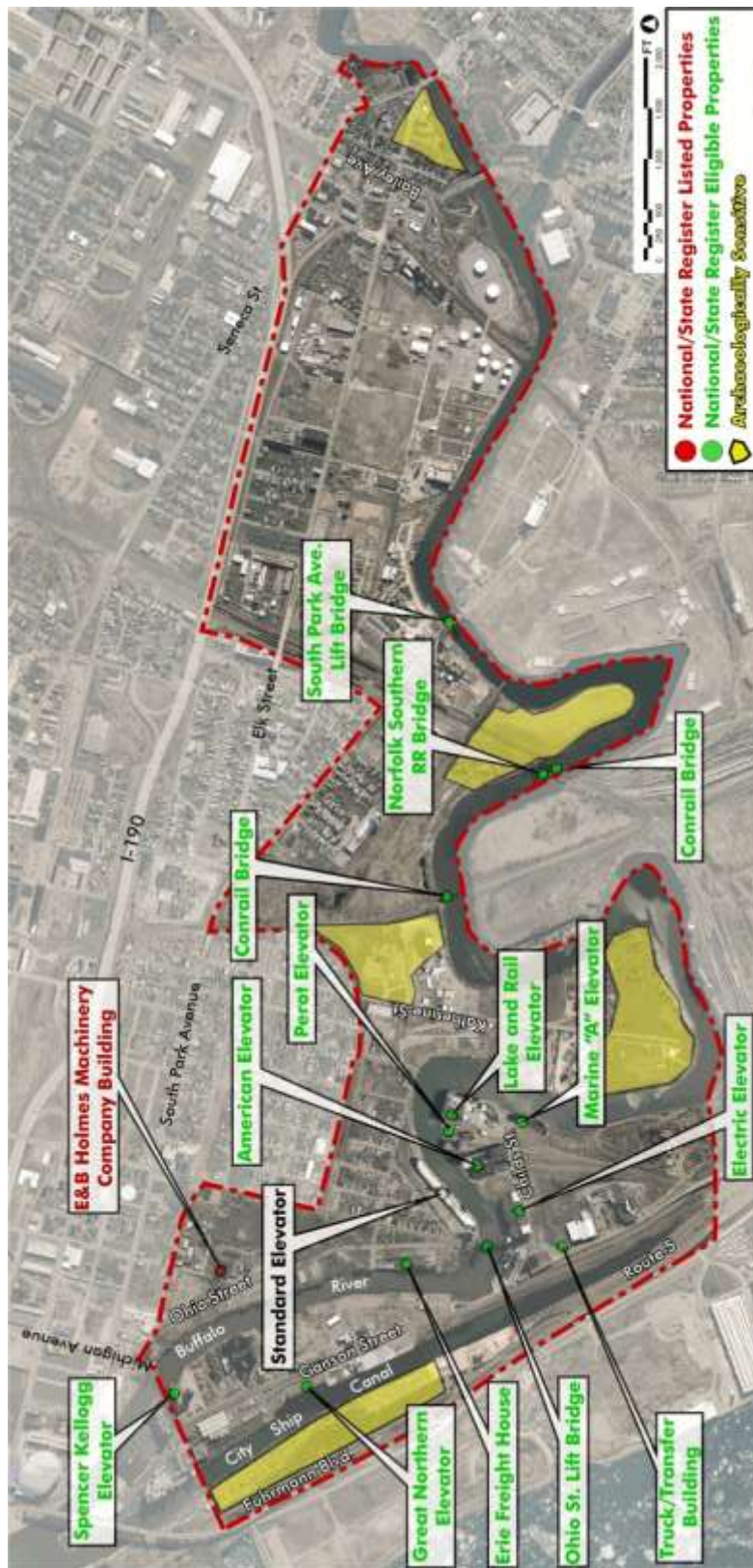
Among the historic resources, the grain elevators provide a unique opportunity for both reuse and promotion of the area's industrial heritage. They comprise the greatest collection of extant grain elevators in the country; and collectively represent the variety of construction materials, building forms, and technological innovations that revolutionized grain handling. [Map 17]

Map 16: Water Access



	<i>PROPERTY</i>	<i>LISTING</i>	<i>YEAR</i>
1	Spencer Kellogg Elevator	National/State eligible	
2	E&B Holmes Machinery Company	National/State Registers of Historic Places	2009
3	Great Northern Elevator	National/State eligible	
4	Eric Freight House	National/State eligible	
5	Ohio Street Lift Bridge	National/State eligible	
6	Truck/Transfer Building	National/State eligible	
7	Electric Elevator	National/State eligible	
8	Standard Elevator	Buffalo Elevators Multiple Property submission	2002
9	American Elevator	National/State eligible	
10	Perot Malting	National/State eligible	
11	Lake and Rail Elevator	National/State eligible	
12	Marine "A" Elevator	National/State eligible	
13	Conrail Railroad Bridge (twin)	National/State eligible	
14	Norfolk Southern Railroad Bridge	National/State eligible	
15	Conrail Railroad Bridge	Local Preservation District	
16	South Park Lift Bridge	Local Preservation District	

Map 17: Archeological / Historical Resources



4.6 LAND USE

The BOA covers 888 acres of land, of which 164 acres – or about 16 percent – is taken up by right-of-way for streets and sidewalks. The remaining 754 acres have been subdivided into a variety of uses. Industrial is the most prevalent, covering almost 40 percent of the net land area. This use encompasses a range of activities, such as petroleum refining, chemical manufacturing, flour milling, and shipping.

Vacant land, which can also contain structures with no active uses, accounts for 220 acres, and can be found throughout the BOA. Rail and utilities is the next most prevalent use, covering 14 percent of the land, largely due to the many active and inactive rail lines.

Residential uses account for only 35 acres, or about 5 percent of the land base. Most of this is located in the Old First Ward and Valley neighborhoods, although there are small, isolated pockets of housing scattered throughout the BOA. Although this is one of the smallest land use in terms of acreage, there are more residential parcels than any other kind in the BOA. Residential density averages about 10 units per acre, which supports a walkable community.

A distinguishing characteristic of the BOA is its relative discontinuity. The sweeping bends in the Buffalo River, combined with two separate north/south rail lines, make the study area a series of sub-districts rather than an integrated whole. [Map 18]

	PARCELS		ACRES	
Total			1,052	
Water			164	16%
Public right of way			134	13%
Subdivided land	730		754	72%
Residential	302	41%	35	5%
Parks / open space	5	1%	32	4%
Institutional	6	1%	6	1%
Commercial	35	5%	73	10%
Industrial	74	10%	286	38%
Rail / utilities	32	4%	103	14%
Vacant	276	38%	220	29%

Map 18: Existing Land Use



4.7 ZONING

Zoning within the BOA is dominated by industrial classifications, with over 98 percent of the land currently zoned for such uses. Small residential and commercial zones are located in The Valley, but the rest of the BOA is designated as either M1-Light Industrial, M2-General Industrial, or M3-Heavy Industrial.

The majority of land was historically used for industry, and industrial zoning classifications often extended into residential areas to facilitate potential future expansion. With the prospects for large-scale industrial expansion remote, the rationale for this policy no longer exists. Areas that have been out of active industrial use for years, or that encroach upon residential neighborhoods, should be re-examined to determine whether the zoning needs to be changed. [Map 19]

4.8 LAND OWNERSHIP

Understanding the distribution and configuration of land ownership within the BOA is essential for making sound reuse decisions. Land ownership can be viewed from two different perspectives: public versus private ownership; and large versus small parcels.

Ownership type

The majority of parcels within the BOA are privately-owned, indicating that redevelopment decisions will largely be based on market and financial considerations. Publicly-owned parcels are primarily either dedicated parkland or vacant. Land given over to street right-of-way comprises another 92 acres; and 190 acres are covered with surface water. [Map 20]

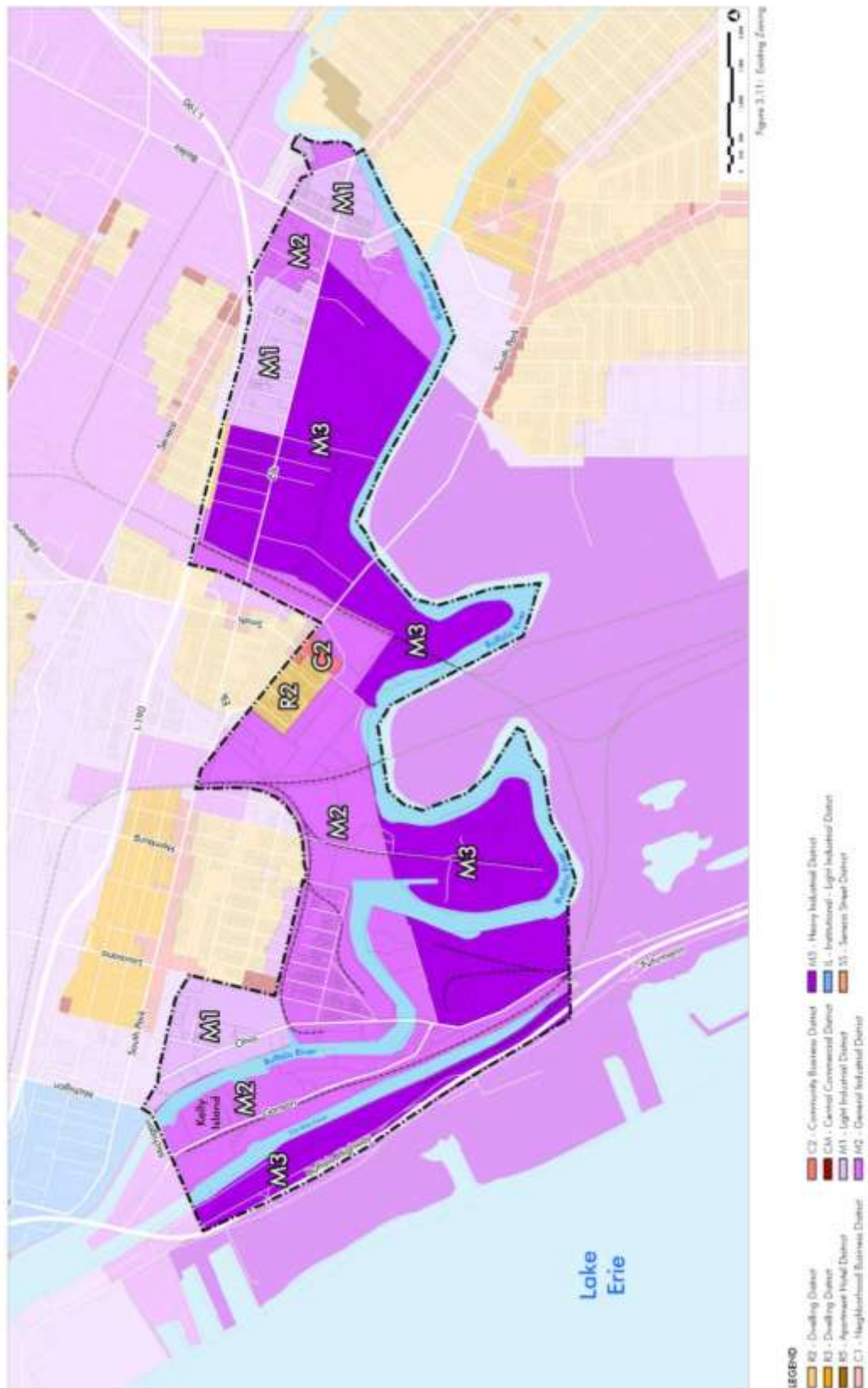
Parcel size

Ownership and control of large parcels can facilitate redevelopment by reducing or eliminating the need for land assembly. There are three public and 10 private property owners with holdings of 10 or more acres, although some of these parcels are parkland or contain deed restrictions. Combined, these large landowners control over 250 acres, or almost a third of the land in the BOA.

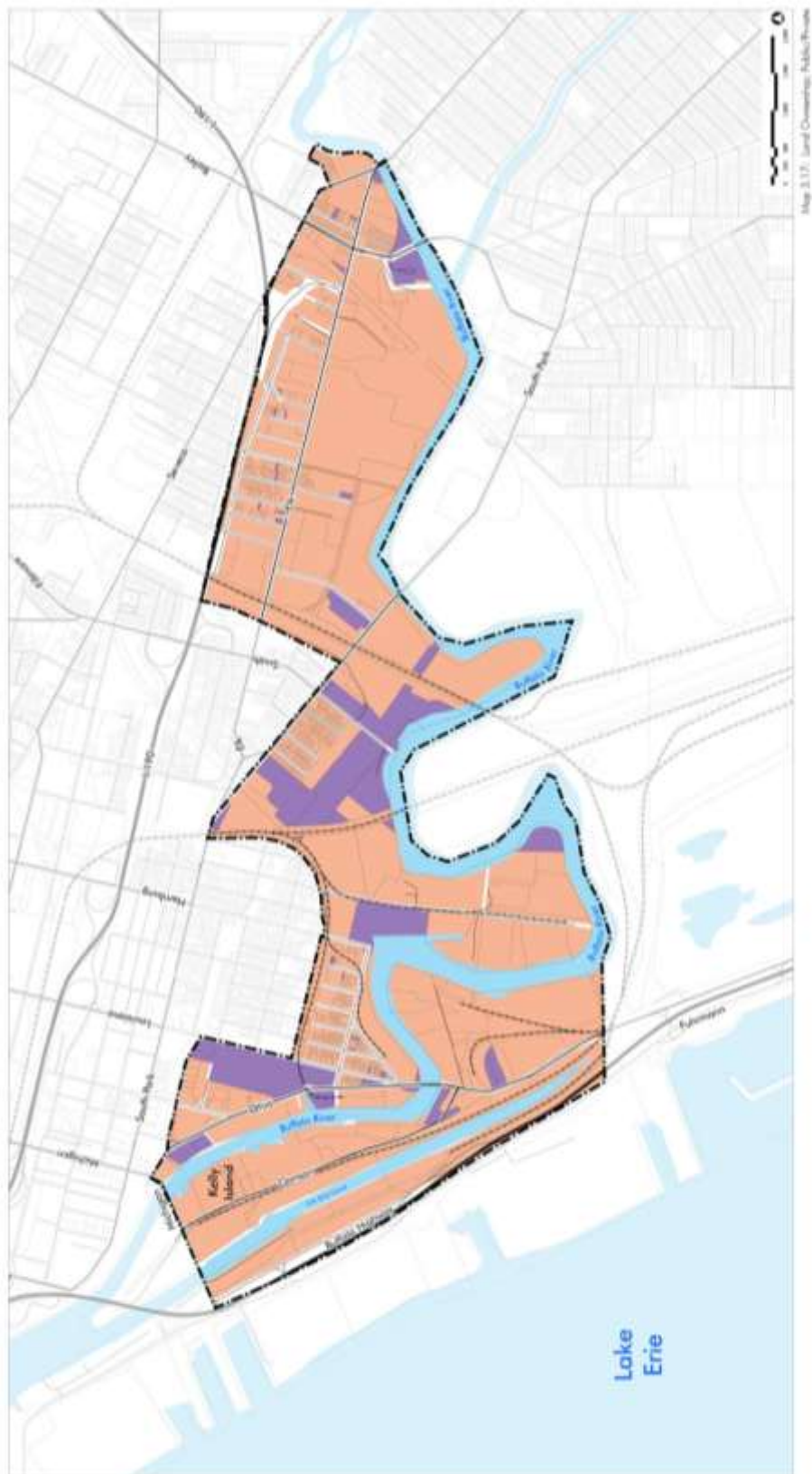
The highest concentration of large holdings is the area south of the Elk Street corridor, yet much of this land is not available for immediate redevelopment due to significant environmental constraints. Properties owned by Advance Metals Recycling, Buffalo Creek Property Group, and BOC Group may offer the best potential for a change in use based on their size and location along the riverfront.

Land in small parcels accounts for the remaining 67 percent of the BOA. Most of this land is categorized as either industrial or vacant, and most of the vacant land was previously industrial. Residential land constitutes the greatest number of parcels, but the total acreage is substantially smaller than that covered by industrial and commercial uses.

Map 19: Existing Zoning



Map 20: Land Ownership



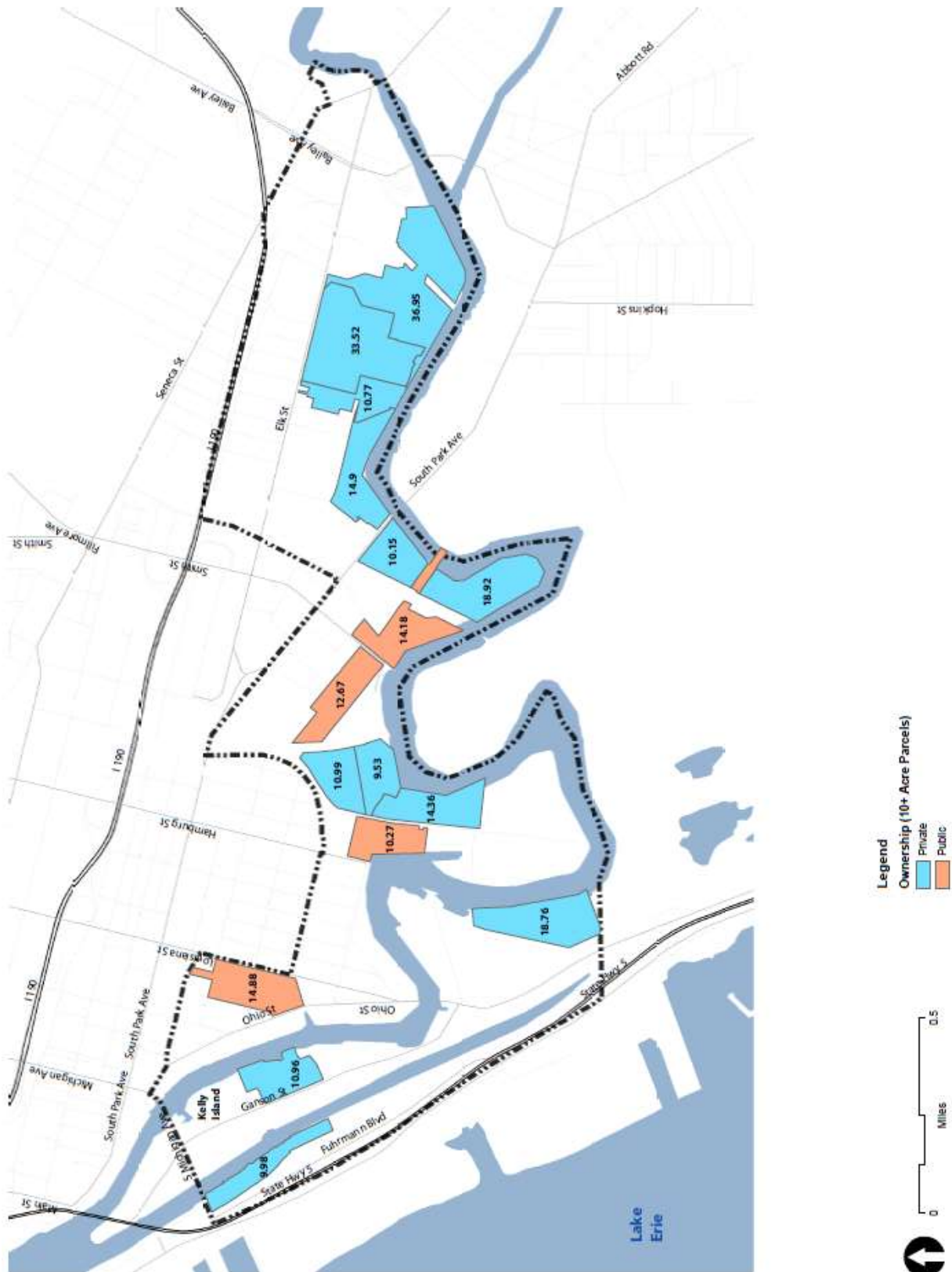
Due to the physical barriers that divide the BOA into distinct sub-districts, and the fragmented pattern of land ownership, the redevelopment of larger parcels is unlikely to have much of an impact on the reuse of smaller parcels. The redevelopment of residential parcels within the Old First Ward and The Valley will likely be influenced by market trends beyond the boundaries of the BOA, where the bulk of these neighborhoods are located. [Map 21]

Property Values

Building values in the BOA tend to be lower than the citywide averages for the same land use types. Some of the bigger differences are found among office properties (less than half the citywide figure), single family homes (about 60 percent less), and two- and three-family homes (about 45 percent less). Land uses with smaller gaps include mixed-use and institutional properties.

The variation between the assessed value of vacant land within the BOA and throughout the city is mixed. Vacant residential land is approximately the same, as compared to the city, at about \$30,000 per acre, while vacant industrial land is about \$4,000 per acre lower in the BOA, and vacant commercial land is about \$40,000 per acre lower in the BOA.

Map 21: Large Parcels



4.9 KEY BUILDINGS

More than 90 percent of the building space within the BOA is in industrial structures. Residential makes up five percent, with retail and mixed use comprising less than one percent each. This concentration of building space, compared to a more evenly dispersed land use pattern (one-third of acreage), points to the intense level of industrial development.

Key buildings within the BOA were identified based on their location, current use status, potential to serve as a catalyst for area-wide revitalization, anticipated reuse and redevelopment potential, and ability to generate additional significant economic development opportunities.

A series of site profile forms for strategic sites are included within the appendix and include whether the parcel is classified as a brownfield, as well as detailed building information including date of construction, building size, historic and current uses, and condition for all parcels which have a key structure on site. Within the BOA, 19 buildings were identified as significant structures. [Map 22]

ADDRESS		USE	ACRES
11	BOLTON	MANUFACTURE	0.5
20	BUFFALO RIVER	FEED SALES	5.9
25	BUFFALO RIVER	MANUFACTURE	8.5
139	BUFFALO RIVER	FEED SALES	3.6
145	BUFFALO RIVER	FEED SALES	2.8
151	BUFFALO RIVER	FEED SALES	5.0
1	BUFFALO RIVER PLACE	MANUFACTURE	4.9
55	CHICAGO	MANUFACTURE	0.7
8	CITY SHIP CANAL	MANUFACTURE	8.8
229	ELK	MANUFACTURE	5.7
338	ELK	MANUFACTURE	1.2
340	ELK	MANUFACTURE	6.8
500	ELK	MANUFACTURE	3.4
201	GANSON	WAREHOUSE	10.6
343	GANSON	MANUFACTURE	1.8
100	KATHERINE	AUTO BODY	9.9
100	LEE	OFFICE BUILDING	3.0
565	OHIO	MANUFACTURE	1.4
575	OHIO	MANUFACTURE	0.6

Map 22: Key Buildings



4.10 MAJOR FACILITIES

Through the BOA process, eight major commercial and industrial facilities were identified. These are generally large-scale operations that define commercial activity within the study area. Key facilities located within the BOA include Pillsbury, General Mills, Allied Chemical Corporation, Austin Air Systems, Rigidized Metals Corporation, Buckeye Partners, and PVS Chemicals. [\[Map 23\]](#)

ADDRESS		USE	ACRES
25	BUFFALO RIVER	MANUFACTURE	8.5
6	CITY SHIP CANAL	MANUFACTURE	8.2
338	ELK	MANUFACTURE	1.2
340	ELK	MANUFACTURE	6.8
500	ELK	MANUFACTURE	3.4
640	OHIO	MANUFACTURE	0.9
650	OHIO	MANUFACTURE	1.2
658	OHIO	MANUFACTURE	1.3

Map 23: Major Facilities



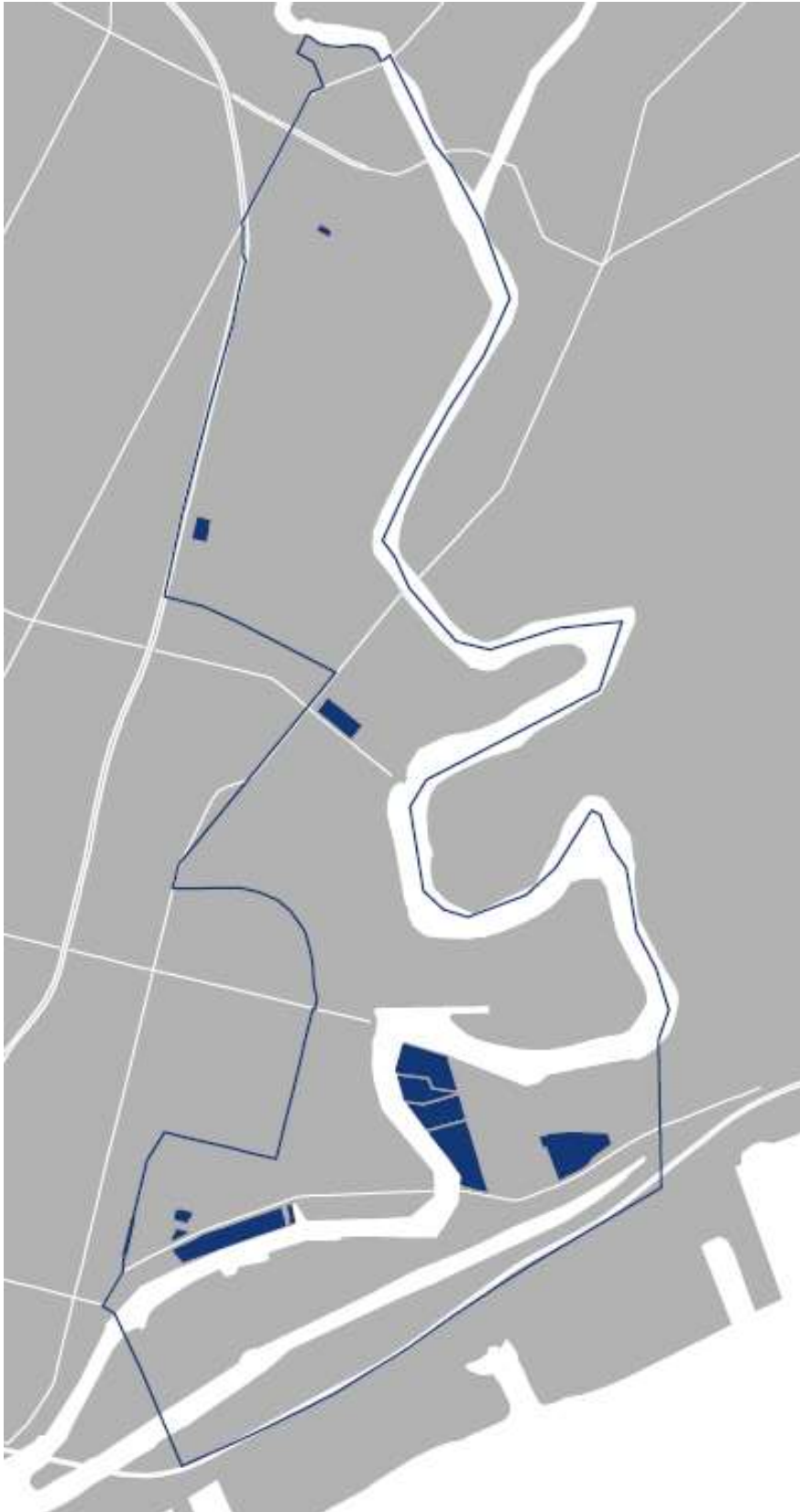
4.11 ABANDONED STRUCTURES

Abandoned structures were identified through the city's assessment database and the NYS Office of Real Property Service's Property Classification Codes. Abandoned sites also include parcels that are improved but with no active uses, parcels that are improved but do not constitute the highest and best use of the property, or parcels that are only partially developed/utilized.

A total of nine non-residential properties were identified as abandoned. This includes historic grain elevators located along the banks of the Buffalo River that are no longer used to their designed capacity. Several vacant elevators located in an area commonly referred to as Silo City are strategically located for redevelopment. [Map 24]

ADDRESS		USE	ACRES
139	BUFFALO RIVER	FEED SALES	3.6
145	BUFFALO RIVER	FEED SALES	2.8
151	BUFFALO RIVER	AUTO BODY	5.0
55	CHICAGO	MANUFACTURE	0.7
700	ELK	FEED SALES	0.4
399	OHIO	MANUFACTURE	7.1
1013	PERRY	WAREHOUSE	1.1
929	SOUTH PARK	WAREHOUSE	2.5
	NOT AVAILABLE	MANUFACTURE	6.2

Map 24: Abandoned Structures



4.12 VACANT SITES

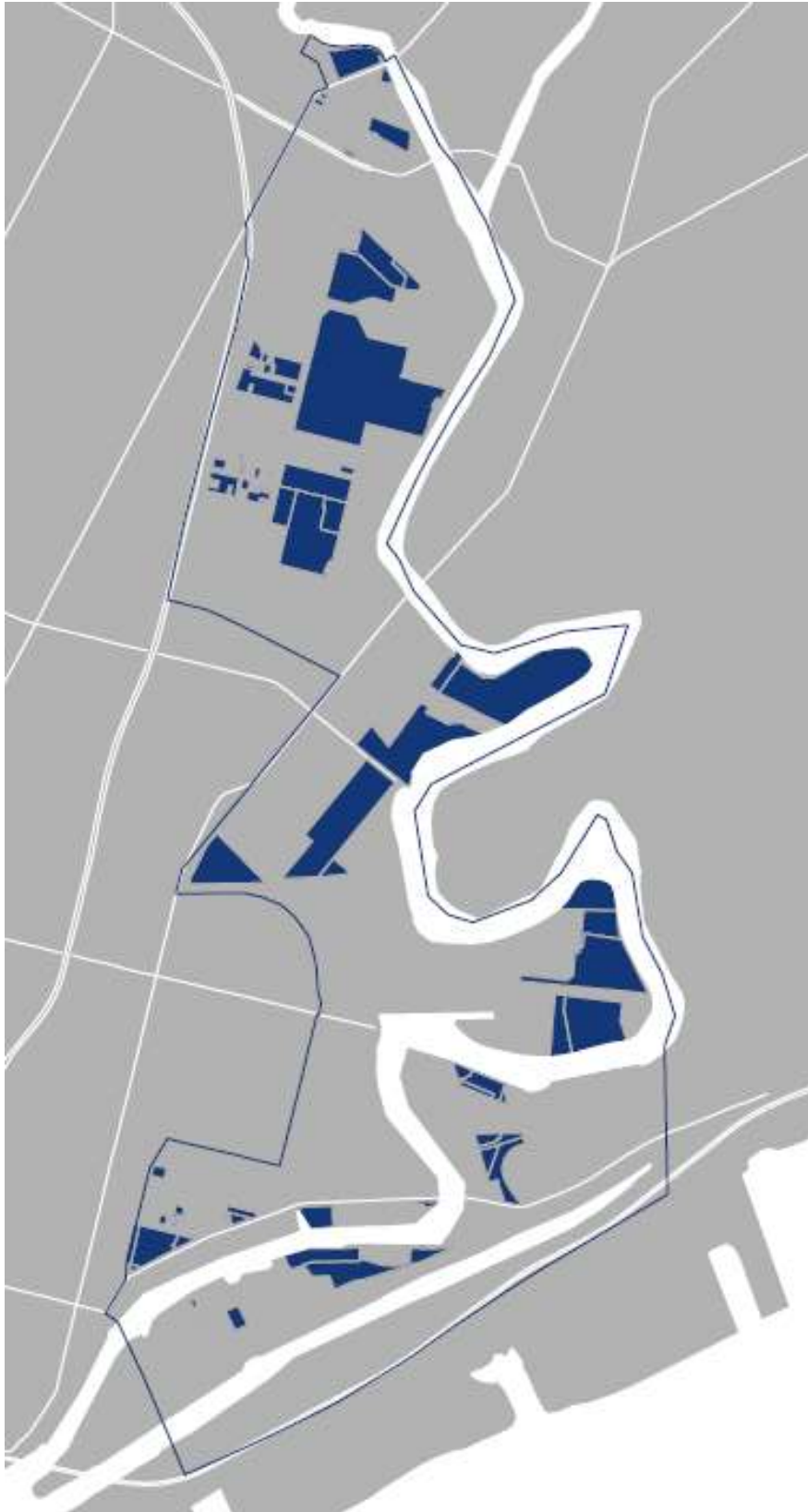
Vacant properties were identified through the city's assessment database and the NYS Office of Real Property Service's Property Classification Codes. These sites were further refined through desktop research. Vacant sites are concentrated along Ganson and Ohio Streets, the Katherine Street peninsula, and along the Elk Street corridor, where the majority of former industrial properties are located. Vacancies do not necessarily signify redevelopment opportunities. Only vacant properties that are easily accessible, located near other redevelopment efforts or opportunities, and have the potential to further the redevelopment goals of the BOA were considered strategic. [Map 25]

ADDRESS		USE	ACRES
18	BRADFORD	VACANT COMMERCIAL	0.1
22	BRADFORD	VACANT INDUSTRIAL	0.2
2	BUFFALO CREEK RR	VACANT INDUSTRIAL	16.7
55	BUFFALO RIVER	VACANT INDUSTRIAL	3.5
121	BUFFALO RIVER	VACANT INDUSTRIAL	2.8
157	BUFFALO RIVER	VACANT INDUSTRIAL	0.5
71	CHICAGO	VACANT INDUSTRIAL	0.1
73	CHICAGO	VACANT INDUSTRIAL	0.1
75	CHICAGO	VACANT INDUSTRIAL	0.0
81	CHICAGO	VACANT INDUSTRIAL	0.2
120	CHICAGO	VACANT COMMERCIAL	0.7
402	ELK	VACANT INDUSTRIAL	0.6
416	ELK	VACANT INDUSTRIAL	0.1
418	ELK	VACANT INDUSTRIAL	0.1
421	ELK	VACANT INDUSTRIAL	1.9
427	ELK	VACANT INDUSTRIAL	4.5
430	ELK	VACANT COMMERCIAL	0.1
503	ELK	VACANT INDUSTRIAL	33.5
522	ELK	VACANT INDUSTRIAL	0.3
542	ELK	VACANT COMMERCIAL	1.5
635	ELK	VACANT COMMERCIAL	6.5
792	ELK	VACANT COMMERCIAL	0.1
819	ELK	VACANT COMMERCIAL	2.1
883	ELK	VACANT COMMERCIAL	0.3
0	GANSON	VACANT INDUSTRIAL	0.1

ADDRESS		USE	ACRES
0	GANSON	VACANT INDUSTRIAL	0.1
91	GANSON	VACANT INDUSTRIAL	1.1
189	GANSON	VACANT INDUSTRIAL	4.1
305	GANSON	VACANT INDUSTRIAL	0.8
20	KATHERINE	VACANT INDUSTRIAL	7.3
21	KATHERINE	VACANT INDUSTRIAL	9.2
50	KATHERINE	VACANT INDUSTRIAL	2.4
51	KATHERINE	VACANT INDUSTRIAL	2.6
49	LEDDY	VACANT COMMERCIAL	5.7
97	LEDDY	VACANT INDUSTRIAL	0.8
85	LEE	VACANT INDUSTRIAL	8.8
49	MACKINAW	VACANT INDUSTRIAL	0.2
98	MAURICE	VACANT INDUSTRIAL	1.8
105	MAURICE	VACANT COMMERCIAL	0.1
112	MAURICE	VACANT INDUSTRIAL	0.2
142	MAURICE	VACANT INDUSTRIAL	1.3
5	MIAMI	VACANT INDUSTRIAL	3.4
67	MIAMI	VACANT INDUSTRIAL	0.4
214	OHIO	VACANT INDUSTRIAL	0.0
220	OHIO	VACANT COMMERCIAL	0.1
286	OHIO	VACANT COMMERCIAL	0.4
326	OHIO	VACANT INDUSTRIAL	0.1
328	OHIO	VACANT INDUSTRIAL	0.1
340	OHIO	VACANT INDUSTRIAL	0.4
354	OHIO	VACANT INDUSTRIAL	0.5
421	OHIO	VACANT COMMERCIAL	1.8
525	OHIO	VACANT INDUSTRIAL	0.2
610	OHIO	VACANT INDUSTRIAL	2.3
124	ORLANDO	VACANT COMMERCIAL	0.1
1079	PERRY	VACANT INDUSTRIAL	0.3
1197	PERRY	VACANT COMMERCIAL	2.9
1209	PERRY	VACANT COMMERCIAL	0.1
1211	PERRY	VACANT COMMERCIAL	0.0
1213	PERRY	VACANT COMMERCIAL	0.1

ADDRESS		USE	ACRES
1215	PERRY	VACANT COMMERCIAL	0.5
1539	SENECA	VACANT COMMERCIAL	0.1
1541	SENECA	VACANT COMMERCIAL	0.1
1561	SENECA	VACANT COMMERCIAL	0.1
1646	SENECA	VACANT INDUSTRIAL	3.2
61	SMITH	VACANT COMMERCIAL	11.8
68	SMITH	VACANT COMMERCIAL	12.7
211	WINONA	VACANT COMMERCIAL	0.1
213	WINONA	VACANT COMMERCIAL	0.2
	NOT AVAILABLE	VACANT COMMERCIAL	0.5
	NOT AVAILABLE	VACANT INDUSTRIAL	0.8
	NOT AVAILABLE	VACANT INDUSTRIAL	0.7
	NOT AVAILABLE	VACANT INDUSTRIAL	0.7
	NOT AVAILABLE	VACANT UNKNOWN	0.2
	NOT AVAILABLE	VACANT UNKNOWN	1.6
	NOT AVAILABLE	VACANT UNKNOWN	3.7
	NOT AVAILABLE	VACANT UNKNOWN	0.8

Map 25: Vacant Sites



4.13 POTENTIAL BROWNFIELDS

From the grain elevators located in Silo City to the Buckeye/Exxon Terminal at the junction of Buffalo Creek and Cazenovia Creek, the BOA has been the location of numerous industrial activities. The long-term industrial presence along the Buffalo River has resulted in areas of significant environmental impact over the past century. These brownfields, as defined by the NYSDEC, include properties where redevelopment and reuse is complicated by the historic, existing or potential presence of contaminants.

Brownfield sites may consist of active, vacant, or abandoned sites. According to state Environmental Conservation Law, a brownfield is defined as “any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.” Each brownfield site is further identified based on the potential or existing presence of contamination or causes of contamination. Owners of sites with known contamination may be participating in one of several programs available through the NYSDEC to facilitate remediation. Aside from programs providing incentives for public or private sector remediation and redevelopment, a brownfield site may alternately be designated a Superfund Site through the Environmental Protection Agency or the NYSDEC. Properties that are designated as superfund sites are inactive hazardous waste sites where contamination has been identified to pose a threat to local ecological resources or human health. Sites included on this list are not eligible for other state and federal programs that provide tax incentives for site cleanup and redevelopment (e.g. BCP).

Brownfield areas consist of both actively used properties as well as vacant and abandoned properties. While vacant and abandoned properties offer greater opportunities in terms of redevelopment, the presence or perceived presence of contamination can impact the ability to redevelop a property due to required remediation, associated costs, and project timing.

Sites listed in one or more of the NYSDEC or EPA databases that have documented contamination issues or that have had environmental studies (Phase I/Phase II Environmental Site Assessments, Remedial Investigations) performed to confirm the presence of contaminants are included as brownfields. Environmental remediation activities have occurred at some of these sites, but contamination may still be present due to the method utilized to remediate the site (such as capping of contaminated sediments).

Of the 58 parcels identified as potential brownfield sites, 16 have known contamination. Vacant brownfield sites are scattered throughout the BOA, including a concentration of parcels on the Katherine Street Peninsula. In addition, smaller brownfield sites are located in areas where existing or former auto-related businesses have operated. [Map 26]

ADDRESS		USE	ACRES
620	BAILEY OLD	VACANT COMMERCIAL	0.7
622	BAILEY OLD	VACANT COMMERCIAL	0.1
33	BRADFORD	VACANT INDUSTRIAL	0.2
35	BRADFORD	VACANT COMMERCIAL	0.0
2	BUFFALO CREEK RR	VACANT INDUSTRIAL	16.7
55	BUFFALO RIVER	VACANT INDUSTRIAL	3.5
61	BUFFALO RIVER	VACANT INDUSTRIAL	0.3
121	BUFFALO RIVER	VACANT INDUSTRIAL	2.8
157	BUFFALO RIVER	VACANT INDUSTRIAL	0.5
71	CHICAGO	VACANT INDUSTRIAL	0.1
73	CHICAGO	VACANT INDUSTRIAL	0.1
75	CHICAGO	VACANT INDUSTRIAL	0.0
120	CHICAGO	VACANT COMMERCIAL	0.7
421	ELK	VACANT INDUSTRIAL	1.9
427	ELK	VACANT INDUSTRIAL	4.5
503	ELK	VACANT INDUSTRIAL	33.5
572	ELK	VACANT COMMERCIAL	1.9
635	ELK	VACANT COMMERCIAL	6.5
37	ENSIGN	VACANT INDUSTRIAL	0.1
43	ENSIGN	VACANT INDUSTRIAL	0.8
189	GANSON	VACANT INDUSTRIAL	4.1
305	GANSON	VACANT INDUSTRIAL	0.8
20	KATHERINE	VACANT INDUSTRIAL	7.3
21	KATHERINE	VACANT INDUSTRIAL	9.2
50	KATHERINE	VACANT INDUSTRIAL	2.4
51	KATHERINE	VACANT INDUSTRIAL	2.6
97	LEDDY	VACANT INDUSTRIAL	0.8
85	LEE	VACANT INDUSTRIAL	8.8
49	MACKINAW	VACANT INDUSTRIAL	0.2
98	MAURICE	VACANT INDUSTRIAL	1.8

ADDRESS		USE	ACRES
5	MIAMI	VACANT INDUSTRIAL	3.4
63	MIAMI	VACANT INDUSTRIAL	0.3
214	OHIO	VACANT INDUSTRIAL	0.0
220	OHIO	VACANT COMMERCIAL	0.1
286	OHIO	VACANT COMMERCIAL	0.4
326	OHIO	VACANT INDUSTRIAL	0.1
328	OHIO	VACANT INDUSTRIAL	0.1
340	OHIO	VACANT INDUSTRIAL	0.4
354	OHIO	VACANT INDUSTRIAL	0.5
525	OHIO	VACANT INDUSTRIAL	0.2
610	OHIO	VACANT INDUSTRIAL	2.3
1217	PERRY	VACANT COMMERCIAL	0.1
1219	PERRY	VACANT INDUSTRIAL	1.0
137	PRENATT	VACANT INDUSTRIAL	1.4
139	PRENATT	VACANT INDUSTRIAL	1.3
141	PRENATT	VACANT COMMERCIAL	0.2
1646	SENECA	VACANT INDUSTRIAL	3.2
40	SMITH	VACANT COMMERCIAL	0.1
61	SMITH	VACANT COMMERCIAL	11.8
68	SMITH	VACANT COMMERCIAL	12.7
		VACANT COMMERCIAL	0.5
		VACANT INDUSTRIAL	0.8
		VACANT INDUSTRIAL	0.7
		VACANT INDUSTRIAL	0.7
		VACANT UNKNOWN	0.2
		VACANT UNKNOWN	1.6
		VACANT UNKNOWN	3.7
		VACANT UNKNOWN	0.8

Map 26: Potential Brownfields



The project area has numerous potential brownfields, but not all are considered strategic from an area-wide redevelopment perspective. Following is a summary description of some key brownfields. (Additional information for each strategic brownfield property will be provided in the Site Profile Forms of the Final Nomination Document.)

Elk Street Corridor

PVS Chemicals

This property at 55 Lee Street is a Class 2 NYSDEC State Superfund site (No. 915004). Since the 1900's, the site has been actively used for chemical manufacturing, including the production of sulfuric acid, oleum and ammonium thiosulfate. Between 1930 and 1977, an on-site unlined wastewater lagoon was used primarily for retention of production process wastewater. The installation of monitoring wells in 1982 and completion of Phase I and II Environmental Site Assessments in 1989 determined that contaminants in the wastewater lagoon had leached into on-site groundwater. This included nitric and sulfuric acid, sulfur drainings and nitric rinses containing cadmium and other metals. Contaminants also migrated from the PVS Chemicals site into the Buffalo River, impacting river bottom sediment with the same chemicals identified in on-site groundwater. The plant remains active today and Remedial Investigations are ongoing. This site is considered a brownfield but it is not considered a strategic site for area-wide planning and redevelopment purposes.

Buffalo Color Areas "A" & "B"

Buffalo Color Areas A (100 Lee Street) and B (1337 South Park Avenue) are Class A NYSDEC Brownfield Cleanup Program sites (No. C915230). Comprising 13.3 acres, these sites previously contained numerous process, administrative and maintenance buildings, process equipment and chemical storage tanks associated with the Buffalo Color Chemical Dyestuff Plant. Site soil and groundwater is contaminated by petroleum, chlorinated solvents, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals. To date, several remedial activities have been undertaken on-site, including the installation of several groundwater interceptor/extraction wells, the installation of a vertical hydraulic barrier around the site, demolition and removal of on-site buildings, abandonment/plugging of existing process/storm sewers, installation of a new storm sewer system, installation of a site-wide integrated cover system and the filing of an environmental easement limiting future use of the site to commercial/industrial. These sites remain vacant as remediation activities continue.

Buffalo Color Area "D"

Buffalo Color Area "D" is located on a peninsula jutting south into the Buffalo River. The property is a Class 02 NYSDEC State Superfund Program site (No. 915012). The 19 acre site was part of the historic Schoellkopf/National Analine/Buffalo Color Chemical Dye Plant complex that operated between 1879

and 2003. Operation of the plant resulted in metal sludge, process chemical, petroleum and organic compound contamination to on-site soil and groundwater within Area D. After on-site buildings were removed in 1984, remedial activities were undertaken at Area D to address soil and groundwater contamination issues. Remedial activities were completed in 1996 and included the installation of a slurry wall and impermeable cap around the contaminated property, extraction and treatment of contaminated groundwater, removal of contaminated sediments from the Buffalo River around the parcel and the installation of erosion protection measures along the bank of the Buffalo River. The site also contains an additional area of contamination along the southwest bank of the Buffalo River, outside of the cap/slurry wall, known as the “Riverfill Area.” This waste material and contaminated soil was covered by an impermeable geotextile membrane and rip rap erosion protection, but awaits a final remedial plan to permanently address contamination issues in the Riverfill Area. The property is proposed to remain undeveloped, though public access may be granted for visitors who wish to use the ridge-top trail for passive recreation activities. The property has renaturalized and no future development is expected on the property.

Buckeye Terminal

The existing Buckeye Terminal at 625 Elk Street was once part of the larger Exxon Mobil terminal located along the northern bank of the Buffalo River. The property is a Class 03 NYSDEC State Superfund Program site (No. 915040). The site was historically used by the city and Exxon/Mobil for dumping municipal waste, demolition debris, tank sediments, sewer sediments, soils containing asphalt, and general refuse. Phase I and II Environmental Site Assessments of the property have identified high concentrations of lead and organic compounds. Due to the property’s operation as a petroleum product refinery and storage terminal, petroleum products and sludges have leaked or spilled onto the property, impacting subsurface soils and groundwater. Petroleum containment and pumping systems combined with a groundwater pumping system prevent most spilled/leaked petroleum from entering the Buffalo River. However, NYSDEC has reportedly observed petroleum seeps along the banks of the Buffalo River. Remedial design and remedial actions are currently being conducted under New the New York State Brownfield Cleanup Program. Today, the property remains an active transshipment terminal for Buckeye Liquid Petroleum. In the long-term, if the site is to undergo redevelopment, additional site investigations may be required to determine whether or not substantial site impacts occurred from operations following the above-referenced remediation activities.

Former Exxon/Mobil Site and Panapinto Property

The former Exxon/Mobil site at 635 Elk is located immediately west of the Buckeye Terminal, a parcel that was previously owned and operated by Exxon/Mobil. It is a Class A NYSDEC Brownfield Cleanup Program site (No. C915201). The BCP site also encompasses the Panapinto property (Al Conte’s Truck and Auto-Electric Warehouse) located at 12 Babcock Street. The site was used continually for petroleum refining and storage between 1880 and 2006 and was significantly contaminated with SVOCs. Initial

remediation activities included the removal of over 5,600 tons of soil contaminated by SVOCs, petroleum and heavy metals, and the removal of 22 miles of subsurface process piping. Ongoing remediation activities will be focused on preventing migration of an existing subsurface contaminant plume. The vacant portions of the property will likely be available for redevelopment after remediation activities are completed.

Katherine Street Peninsula

Safety Kleen

Safety Kleen owns and operates the active oil recovery facility at 60 Katherine Street on the peninsula. Thirteen 30,000 gallon petroleum bulk storage tanks are currently present on-site, and Safety Kleen is a registered Large Quantity Generator of hazardous waste. The site was historically used to store PCB-contaminated waste oil, and was the subject of a 1994 settlement between NYSDEC and the property owner for improper handling of PCB-contaminated waste oil. The property is also the location of 37 registered waste oil spills between 1978 and 2011. Although this site is considered a brownfield, it is an actively operating site and planning criteria do not identify it as a strategic site.

Ohio Street Corridor

Former Sam's Petroleum Sales & Service

The property is a Class A NYSDEC Brownfield Cleanup Program site (No. C915257). Until the 1990s, the site at 300 Ohio Street was used as a gas station and vehicle repair shop. A Phase II Environmental Site Assessment conducted in 2010 confirmed that due to the previous use of the property and the presence of a number of petroleum bulk storage tanks, significant subsurface soil and groundwater contamination has occurred on the property. The property is currently vacant and being prepared for demolition. Remedial design is on-going due to the recent enrollment of the site into the Brownfield Cleanup Program.

Sovereign Specialty Chemical

The Sovereign Plant at 710 Ohio Street is a vacant former chemical manufacturing plant and tank farm that operated between 1924 and 2010, and was primarily involved in manufacturing solvents and adhesives. The property is a Class C NYSDEC Voluntary Clean-Up Program Site. The site has been historically contaminated with VOC's (i.e. Toluene, Methyl Ethyl Ketone, and Xylene). Portions of the site with contaminated soils were excavated and replaced with clean fill soil. Contaminated soils and groundwater are continuously treated by a high vacuum extraction system and groundwater collection/treatment system that was installed in 2004. The property is currently vacant, and future redevelopment opportunities will be limited by the presence of site development controls, including Deed Notice, Ground Water Use Restriction, Land-use Restriction (i.e. no residential), Legacy Restriction, Monitoring Plan, O&M Plan, Site Management Plan, and Zoning Restriction.

Ameristeel

The Ameristeel property at 776 Ohio Street is a 19 acre parcel serving as an active motor vehicle junkyard and metal recycling facility. The site contained four large aboveground petroleum bulk storage tanks that have been closed and removed. Seven large aboveground petroleum bulk storage tanks remain on the site. The property also has a history of a number of large hazardous material spills between 1993 and 1999. A large industrial fire in September 2011 resulted in a number of gas tank and vehicle explosions before being brought under control. These historic environmental hazards and recognized environmental concerns indicate this property is a brownfield and would likely require additional environmental investigations prior to any site redevelopment.

5

ALTERNATIVE SCENARIOS EXERCISE

The BOA provides an opportunity to develop a long-term vision for the city that builds on the asset of the Buffalo River. This vision will be driven by a set of common goals that provides clarity on future change, and leads to a community-based plan to guide development for renewed prosperity and pride.

A return to productive use will take many years for much of the BOA, so there is a need to be strategic and to prioritize. Renewal should be concentrated in targeted areas so a critical mass can be established to fuel continued renewal and long-term redevelopment.

Emerging directions:

- Restore and enhance the river's environmental quality, returning it to full use.
- Expand and diversify the role of the river, positioning it as an amenity for the local community, the city, and the region.
- Safeguard the river as a working waterfront, and balance the needs of existing water-based employers with emerging interests.
- Create mixed-use, water-enhanced places that increase the value of the BOA.
- Improve waterfront access and reduce isolation within the BOA through new connections.

The city examined three development scenarios for the BOA. These scenarios were presented to the public, and the feedback received helped to provide direction in selecting strategic sites and determining appropriate levels of recommended development.

5.1 ALTERNATIVE SCENARIOS

Scenario 1: Land and Water Based Logistics

- Existing rail, water, and transportation infrastructure creates logistics opportunities.
- Key waterside locations are preserved for water dependent uses.
- Modest park and river access improvements.
- Modest riverfront housing infill.
- Trail development along the former DL&W right-of-way just north of the BOA.
- Aquatic habitat restoration in key locations. [Map 27]

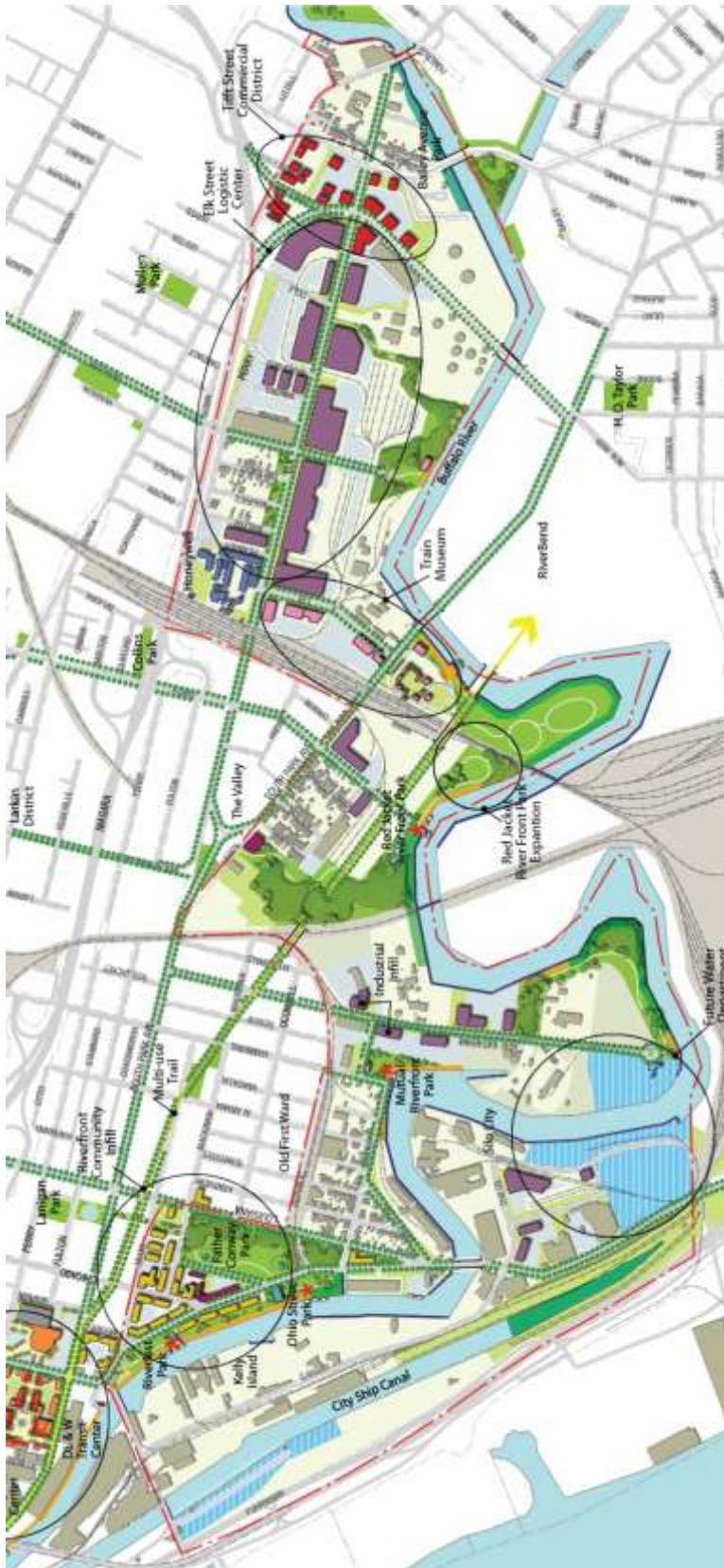
Scenario 2: Industrial Expansion and Diversification

- Builds on existing Elk Street Corridor Plan to accommodate a greater range of uses, including flex industry.
- Abandonment of waterside locations for water dependent use.
- Infill housing as in Scenario 1.
- Greater levels of recreational and open space.
- Silo City provides unique waterfront event and cultural destination. [Map 28]

Scenario 3: Employment, Recreational, and Cultural Diversification

- Greatest employment diversification.
- Heritage Discovery District and Innovation Park complement existing industrial uses along Elk Street Corridor.
- Katherine Street boating and marine hub.
- Greatest level of housing infill.
- Development of part of the abandoned DL&W right-of-way just north of the BOA as a transit corridor.
- Greatest level of park/waterfront access, and expansion of Silo City as cultural attraction. [Map 29]

Map 27: Scenario 1



[illegible]

Map 29: Scenario 3



5.2 COMMUNITY FEEDBACK

The three scenarios elicited strong commentary from residents who attended open houses or viewed them on-line. Some of the feedback included:

- Although the Buffalo River is the historic heart of the industrial city, the legacy of the working waterfront must be balanced with a new residential and recreational vision for the river as an environmentally repaired and publicly accessible amenity.
- Strong support for restoration of riparian habitats – at the toe of Kelly Island, on the Katherine Street Peninsula, and other locations along the Buffalo River.
- Clear favor for Ohio Street as a strategic corridor both for the Old First Ward and as a connection between the Outer Harbor and downtown. Housing, mixed-use development, and improvements to the public realm were all key elements of that vision.
- A mix of views on reuse of the former DL&W railroad right-of-way located just north of the BOA; with some favoring a multi-use trail and others a transit route.
- Little attention to alternative concepts for the Elk Street corridor.
- Scenario 2 was most favored, but this was primarily due to additional recreation and access rather than expanded industrial development.

6

LAND USE PLAN

This section takes the community input that was provided for the alternative scenarios, and translates it into a land use plan for the BOA. Buffalo’s Green Code represents a place-based planning approach that addresses form and character, and recognizes that the most attractive places typically have a mix of uses—residential, retail, civic, recreational, and natural—that make a city lively, interesting, and safe.

The land use plan for the BOA is built around four place types: neighborhood, campus, employment, and open space (see Appendix). Every parcel has been assigned a place-type that corresponds to a specific set of rules and regulations governing its use, form, and development character. Based on these place types, the zoning ordinance will specify what can or cannot be built and where.

6.1 PROPOSED PLACE TYPES

The Buffalo River Corridor BOA will remain dominated by employment uses – largely light and heavy industrial. There is very little residential within the BOA, but parts of two established neighborhoods – the Old First Ward and Valley – will be preserved.

Kelly Island will be zoned light industrial, with a transitional overlay that will allow other commercial uses with approval. This recognizes the transition that has begun on the east side of Ganson Street with the development of RiverWorks. Across the Buffalo River, the Ohio Street corridor has been zoned for mixed-use development, to take advantage of its future role as a primary connection between downtown and the Outer Harbor.

Silo City and the land across the river to its north will also remain light industrial, in recognition of the many grain elevators and silos, some of which remain in operation. The Katherine Street peninsula and Elk Street corridor are both divided between light and heavy industry, based on the long-term occupants in those areas, and the limited potential for remediating land for alternate uses. Some of the residential streets that run north/south between Elk and the I-190, with limited amounts of housing left, have been rezoned to light industrial to allow for future expansion of employment uses.

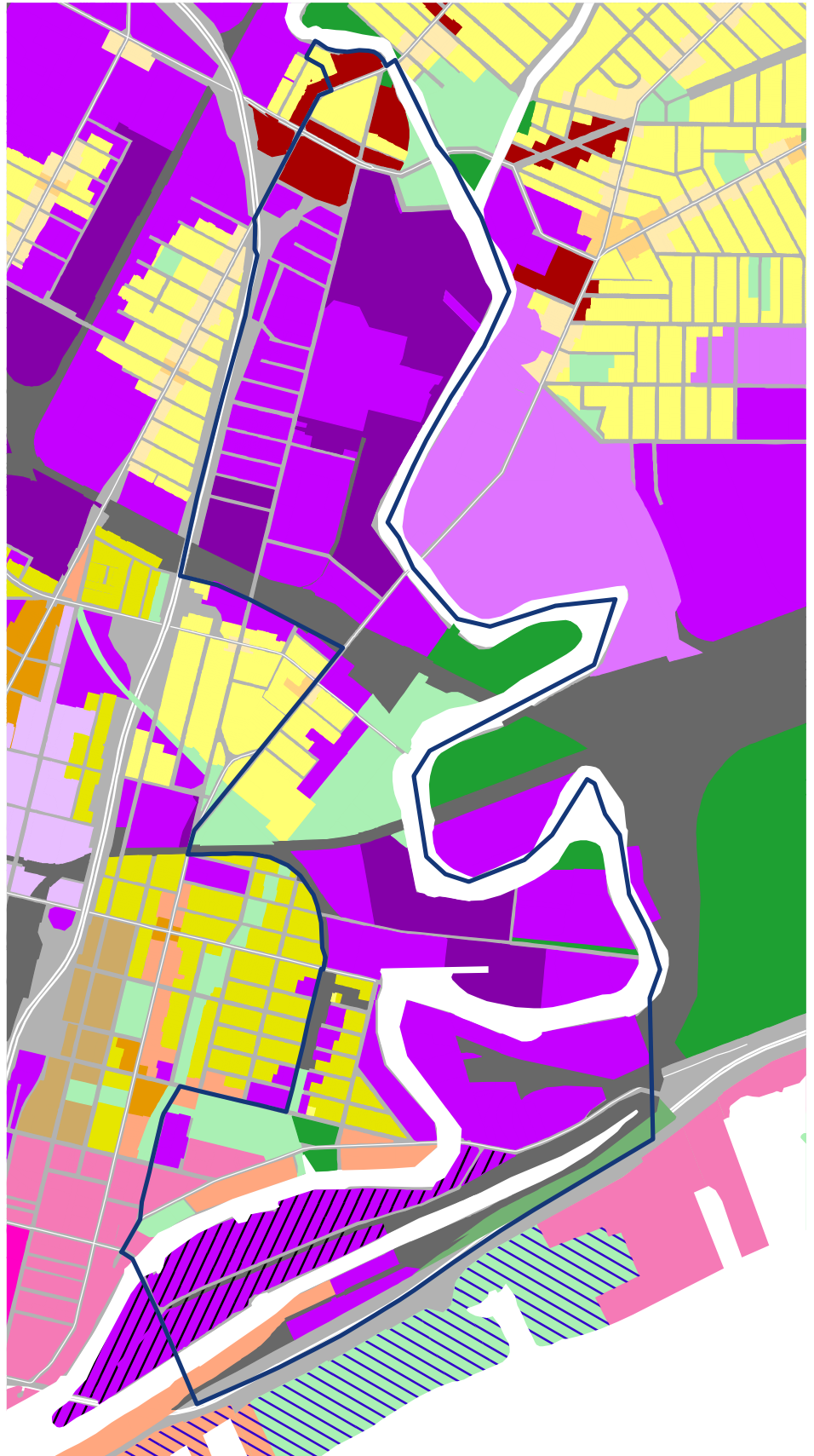
A small area near the Bailey/Elk intersection has been dedicated to strip retail, to take advantage of proximity to I-190 interchanges at Elk and Seneca. Finally, open space has been identified and formally designated in almost all corners of the BOA, to take advantage of the waterfront location, and allow previously contaminated lands to regenerate naturally. [\[Map 30\]](#)

6.2 PROPOSED ZONING CHANGES

The land uses proposed for the BOA will provide guidance for the next 20 years. These designations generally offer more flexibility than the existing zoning. The Green Code is designed to encourage mixed-use developments, so that the market is able to determine what investments make sense and where, within the parameters agreed upon by the community. It is expected that this approach will be more adaptable and result in greater levels of private investment than recently experienced. The result envisioned by this planning process will be a Buffalo River Corridor that balances the remaining manufacturing with emerging commercial, recreational, and natural uses that are driving its future.

Map 30: Proposed Place Types

- Urban Core**
- N-1D (Downtown Hub)
 - N-1C (Mixed-Use Core)
 - N-1S (Secondary Employment)
- Urban Center**
- N-2C (Mixed-Use Center)
 - N-2E (Mixed-Use Edge)
 - N-2R (Residential)
- Urban Neighborhood**
- N-3C (Mixed-Use Center)
 - N-3E (Mixed-Use Edge)
 - N-3R (Residential)
- Urban Edge**
- N-4-30 (Single Family)
 - N-4-45 (Single Family)
 - N-4-60 (Single Family)
- Campus**
- D-R (Residential Campus)
 - D-E (Educational Campus)
 - D-M (Medical Campus)
- Employment**
- D-S (Retail Strip)
 - D-C (Flex Commercial)
 - D-IL (Light Industrial)
 - D-IH (Heavy Industrial)
- Open Space**
- D-OG (Green)
 - D-OS (Square)
 - D-ON (Natural)
- Corridor**
- C-R (Rail Corridor)



APPENDIX A:

PLACE TYPE DEFINITIONS

NEIGHBORHOOD

Urban Core

- Downtown core, edges, and secondary employment centers that support a range of uses – offices, shops, restaurants, theaters, apartments; structures built to sidewalk with ground floor activity
- Central Business District, Cobblestone District, Larkinville

Urban Center

- Mostly adjacent to downtown and the waterfront; first developed in 1800s; narrow lots (25 to 35 feet); minimal setbacks; dense mixed-use, walkable centers with array of uses in smaller buildings
- Black Rock, Cold Spring, Fruit Belt, Lower West Side, Old First Ward

Urban Neighborhood

- Developed along streetcar lines in early 1900s; slightly wider lots (35 to 50 feet); deeper setbacks; heights up to three stories; strong mixed-use cores
- Hamlin Park, Kaisertown, Riverside, South Buffalo, University Heights

Urban Edge

- Often developed around parks and parkways; large lots; spacious front yards; single-family houses; no retail activity, but usually within walking distance of denser neighborhoods
- Central Park, Kensington Heights, Park Meadow

CAMPUS

Residential Campus

- Organized as large-scale, integrated development; often with internal circulation system; may be low-, mid-, or high-rise, such as garden apartments or towers in the park
- Collegiate Village, Ellicott Towne Center, Waterfront Village

Educational Campus

- Separate from surrounding activities; often have internal circulation system; with design and layout based on specialized functions
- Buffalo State College, D'Youville College, University at Buffalo

Medical Campus

- Separate from surrounding activities; often have internal circulation system; with design and layout based on specialized functions
- Buffalo Niagara Medical Campus, Mercy Hospital, Sisters Hospital

EMPLOYMENT

Retail Strip

- Typically located adjacent to broad arterials or highway interchanges; centered around one or more big box format buildings; with generous on-site parking
- Delaware Consumer Square, Seneca/Bailey, South Ogden

Flex Commercial

- Separate from, but within close proximity to, residential neighborhoods; general commercial and mixed-use areas that benefit from flexible form standards
- Buffalo Forge (former site), Hertel Commerce Center, RiverBend

Light Industrial

- Typically located adjacent to highway, rail, and water access; intended for low- and moderate-impact employment uses with clear separation from surrounding neighborhoods
- American Axle (former site), Lakeside Commerce Park, New Buffalo Industrial Park

Heavy Industrial

- Typically benefit from remote, but accessible locations; high-impact employment uses that are generally incompatible with residential neighborhoods
- Aurubis, Honeywell, Irish Propane

OPEN SPACE

Green

- Civic greens and parks; characterized by trees and landscape; designed for passive and active recreational uses
- Houghton Park, McCarthy Park, Olmsted Parks and Parkways

Square

- Formal settings, often located at intersection of important streets; generally enclosed by building facades; designed for intensive public use
- Lafayette Square, Niagara Square, Viola Park

Natural

- Maintained as predominantly undeveloped state; typically set aside for land conservation, passive recreation, and ecological restoration
- Seneca Bluffs, Tifft Nature Preserve, Times Beach