ACCESS

AsiaTown

CULTURE

COMMUNITY

CONNECTIVITY

A Strategic Vision for South AsiaTown

Cleveland State University
MUPD Planning Studio
Spring 2021

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Executive Summary

Access AsiaTown is a project designed with the intentions of being a positive, transformative plan that can help this site become a more well-connected, livable, and accessible area for people of all walks of life. The site is located in the south west area of AsiaTown, with boundaries being Payne Avenue, Chester Avenue, I-90, and E 36th Street.

This report is broken into several sections. The first lays out the purpose of this project, including the mission, vision, goals, and objectives informing the plan. Next, an in-depth analysis of the area's existing conditions is presented to contextualize this project. The third section outlines applied concepts, gleaned through literature review. Following this, we outline the results from a community survey and stakeholder interviews we conducted. The report's fifth section contains the results from our market analysis of the site area. We then present our suggestions for planning augmentations, breaking our suggestions into three major categories. The first contains a general plan for two major corridors in the site, Payne Avenue and Perkins Avenue. Besides general planning concepts, this section includes zoning recommendations and streetscape improvements for each corridor, which we envision being longer-term improvements to be implemented over the next 10 to 15 years. We then present our development vision and suggestions for the area's residential core. Finally, we present five concrete catalyst projects, or intended to spur future development and occur within the next 5 to 10 years. The final catalyst project is centered on transportation suggestions.

Our recommendations aim to densify this area while still preserving its valuable and unique cultural identity. AsiaTown is one of Cleveland's most vibrant neighborhoods, and we were honored to work with area organizations and residents to envision how this neighborhood should grow over the next few decades.


Parking Garage & Circulator Shuttle Hub
People's Steets Pocket Park
Payne Avenue
Art Deco Garage
Park Vistas on Payne
Courtyard Public/Private Parkspace
Surface Parking
"Accordion" Building
Parkspace w/Playground
Community Center
I-90 Innerbelt
E27th Street
E30th Street
E31st Street
E32nd Street
E33rd Street
E36th Street
Community Garden
Twin Lanes Bowling
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Senior & Inter-generational Housing
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ACCESS AsiaTown
Illustrative Site Plan
Catalyst Sites
Buildings to Preserve
Proposed Park
Existing Commercial
Existing Residential
Existing Industrial
Parking Lot
Streetscaping Focus Areas
N

Purpose

Vision

We envision AsiaTown as a community that is inclusive, connected, and accessible to all. It will be a multicultural destination with a unified neighborhood character throughout. AsiaTown will have efficient connections to nearby neighborhoods, as well as safe streets for pedestrians and vehicles traveling within AsiaTown. With universal design standards implemented throughout, it will be accessible for residents and visitors of all ages and abilities.

Mission

- *To celebrate AsiaTown as a cultural center*
- *To ensure that it is friendly, safe, and accessible for residents and visitors*
- *To strengthen the identity of the neighborhood and enhance the sense of community*
- *To increase prosperity for the businesses and residents of AsiaTown*
- *To provide residents the ability, both financially and through universal design infrastructure, to age-in-community*

Goals & Objectives

1. **Celebrate the area's diverse population to maintain current residents and attract new ones**
    a. Facilitate Aging in Place
        i. Expand senior-friendly housing options
        ii. Implement universal design standards
        iii. Provide a seniors-focused greenspace
    b. Enhance and support extant multicultural character
        i. Employ wayfinding
        ii. Promote public art & murals
        iii. Emphasize culture in community center & greenspaces
2. **Improve connectivity among neighborhoods and within AsiaTown to increase accessibility**
    a. Connect to CSU and Downtown
        i. Expand Payne bridge
        ii. Improve streets
    b. Improve public transit access
        i. Add circulator shuttle
        ii. Build a transit hub on Payne
    c. Facilitate better pedestrian connections through area
        i. Create complete streets
        ii. Improve safety
        iii. Calm traffic on main corridors
3. **Enhance neighborhood usability to improve quality of life**
    a. Provide much-needed green & recreation space
        i. Add large park space
        ii. Adapt vacant school into a community center
        iii. Design green space to meet needs of seniors
    b. Implement universal design standards for public spaces
    c. Improve health and safety
        i. Increase pedestrian traffic for eyes on the street
        ii. Phase out industry through zoning overlays
        iii. Calm traffic
    d. Increase amenities
        i. Create space and support for general retail spaces the area's market can support
        ii. Provide community cultural center
        iii. Add grocery store
        iv. Centralize multimodal transportation at the transit hub
4. **Expand residential market to provide a diverse range of housing options**
    a. Increase number and variety of housing choices
        i. Facilitate addition of ADUs to extant single and two-family homes
        ii. Encourage residential infill
        iii. Create market rate housing options
        iv. Create low-income housing options
    b. Provide opportunities for intergenerational living
        i. Support seniors to age in place
        ii. Provide opportunities for CSU students to live in area
    c. Implement & encourage universal design standards for housing
5. **Encourage economic development to attract visitors and provide financial opportunities for residents**
    a. Support new and existing local businesses
        i. Establish small business incubator
        ii. Develop space for small retail businesses through adaptive reuse and new development
        iii. Increase variety of local businesses to fill gaps
    b. Utilize zoning tools to promote universal design and attract developers
        i. Implement urban core overlay
        ii. Implement urban form overlay

Existing Conditions

History

The Road to AsiaTown

Today

2013 — Renewed interest emerges in Rockwell Avenue and East 22nd Street as historic Chinatown. A few buildings are rehabilitated, some restaurants open, and Night Market Cleveland is held there.

2008 — Asia Town Center constructed, bringing new life to an 88-year old lighting factory.

1991-2006 — Diverse set of Asian restaurants and residents continue to grow around Asia Plaza. Area is branded "Asiatown" in 2006.

1991 — Asia Plaza opens at Payne Avenue & East 30th Street, pioneered by the Hom family, owners of Hall One Chinese Imports.

1970-90 — Decline in the number of businesses and residents in Rockwell's Chinatown. By 1985, there are 250 Chinese restaurants in Northeast Ohio and only 2 are located on Rockwell Avenue. Also see decline in society membership as fewer new immigrants are arriving in the city.

1940-70 — Rockwell's Chinatown thrives through this period, with an abundance of shops and restaurants. Racial hostility begins to decline and an increasingly diverse set of patrons can be found shopping and eating in the area.

1930 — City of Cleveland razes Chinatown on Ontario to make space for U.S. Parcel Post building as an urban renewal project. Community moves east, to Rockwell Ave. and East 22nd St., where On Leong Tong builds a new headquarters.

1911-1930 — Tong Wars: period of rivalry and clashes nationally, and in Cleveland, between the two preeminent Chinese societies.

1910 — U.S. Census records 225 Chinese residents in Cleveland. Community moves to Ontario Street between Lakeside and St. Clair Avenues with construction of the headquarters of two rival Chinese societies, On Leong Tong and Hip Sing Tong.

1890 — U.S. Census records 94Chinese residents in Cleveland. Chinese Freemasons create Masonic Lodge out of old three-story residence on West 3rd Street, with shops, a boardinghouse, and meeting rooms.

1880 — U.S. Census records 23 Chinese and Japanese residents in Cleveland. Chinese residents form a community on West 3rd Street.

Sources: Dutka, 2014; ASIATOWN, 2020; AsiaTown Cleveland

Exhibit 1 On Leong Tong headquarters on Ontario Street, circa 1910 (Dutka, 2014).

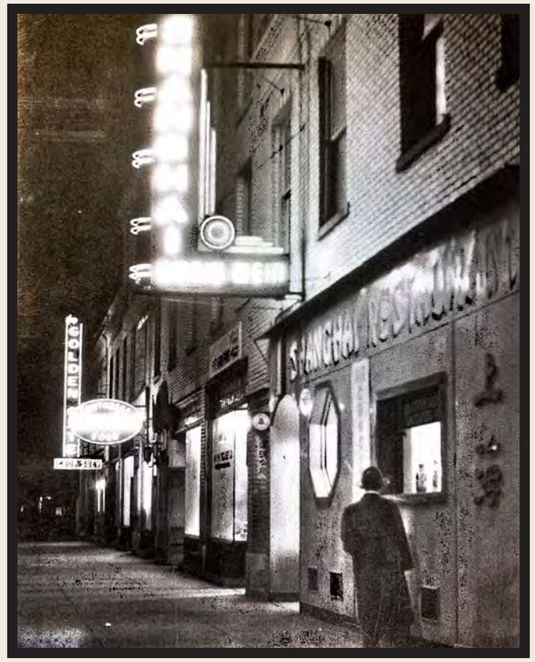
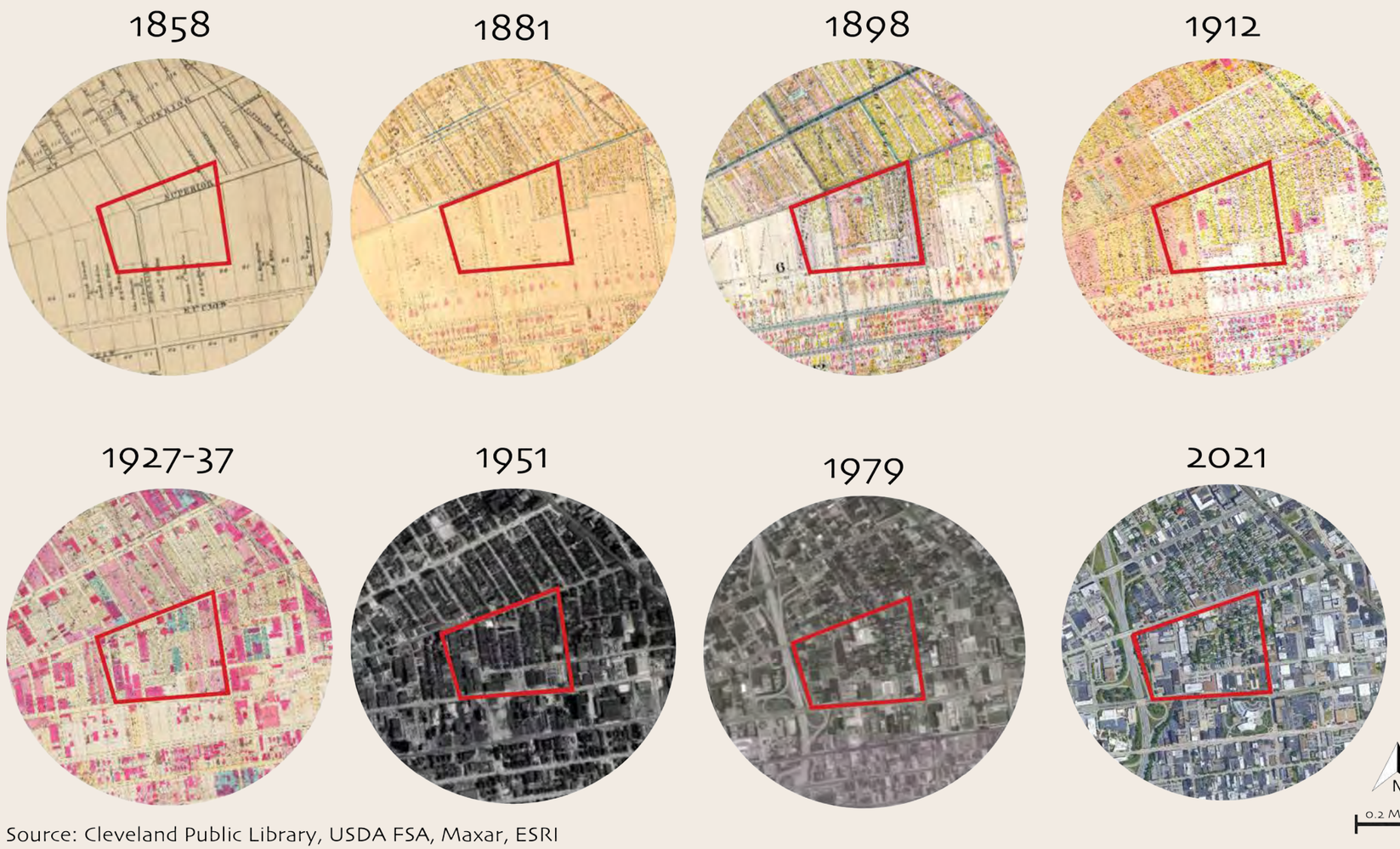


Exhibit 2 A Chinese restaurant on Rockwell Avenue, 1950 (The Cleveland Press Collection).

Exhibit 3 Asia Plaza's planners and developers celebrating its construction, 1991 (Dutka, 2014).

Site Area Before Becoming AsiaTown

Today's AsiaTown was, following the early 20th century, a mostly industrial area with smaller-scale factories. Many of these factories produced goods, such as boxes, clothing, and furniture, or materials, such as metal finishing. There was also a variety of smaller scale automobile-related industry on the eastern end of the area. Thriving residential communities grew in pockets around industry, inhabited by mostly Eastern European immigrants that worked in the surrounding factories. Payne and Chester Avenues as well as East 30th street was home to commercial businesses, such as restaurants, liquor stores, groceries, and the like, that served the needs of the areas workers and residents (Dutka, 2014). Much of the industrial activity in the area shut down starting in the 1970s, though some factories are still in operation today (ASIATOWN, 2020). The status of these formerly industrial buildings varies, with some having been demolished and others sitting vacant, used for storage, or rehabilitated into residential or office space.



Source: Cleveland Public Library, USDA FSA, Maxar, ESRI

Exhibit 4

As for the area's urban form, East 30th was the earliest current street to exist, shown to the left in the earliest available historic Sanborn Fire maps. Payne avenue was constructed to be a downtown connector in the 1870s. This area of Chester Avenue, originally called Chestnut Avenue, was not built until 1928, and was subsequently extended to University Circle in the 1930s. I-90 was built in 1975, demolishing area homes and businesses and creating an edge that disconnects present-day AsiaTown from downtown.

Despite much of the building stock being around 100 years old, there are currently no buildings in the study area listed on the National Register of Historic Places. Midtown Cleveland is in the process of applying for all of Midtown to be designated a National Historic District.

Community Assets

Existing Conditions

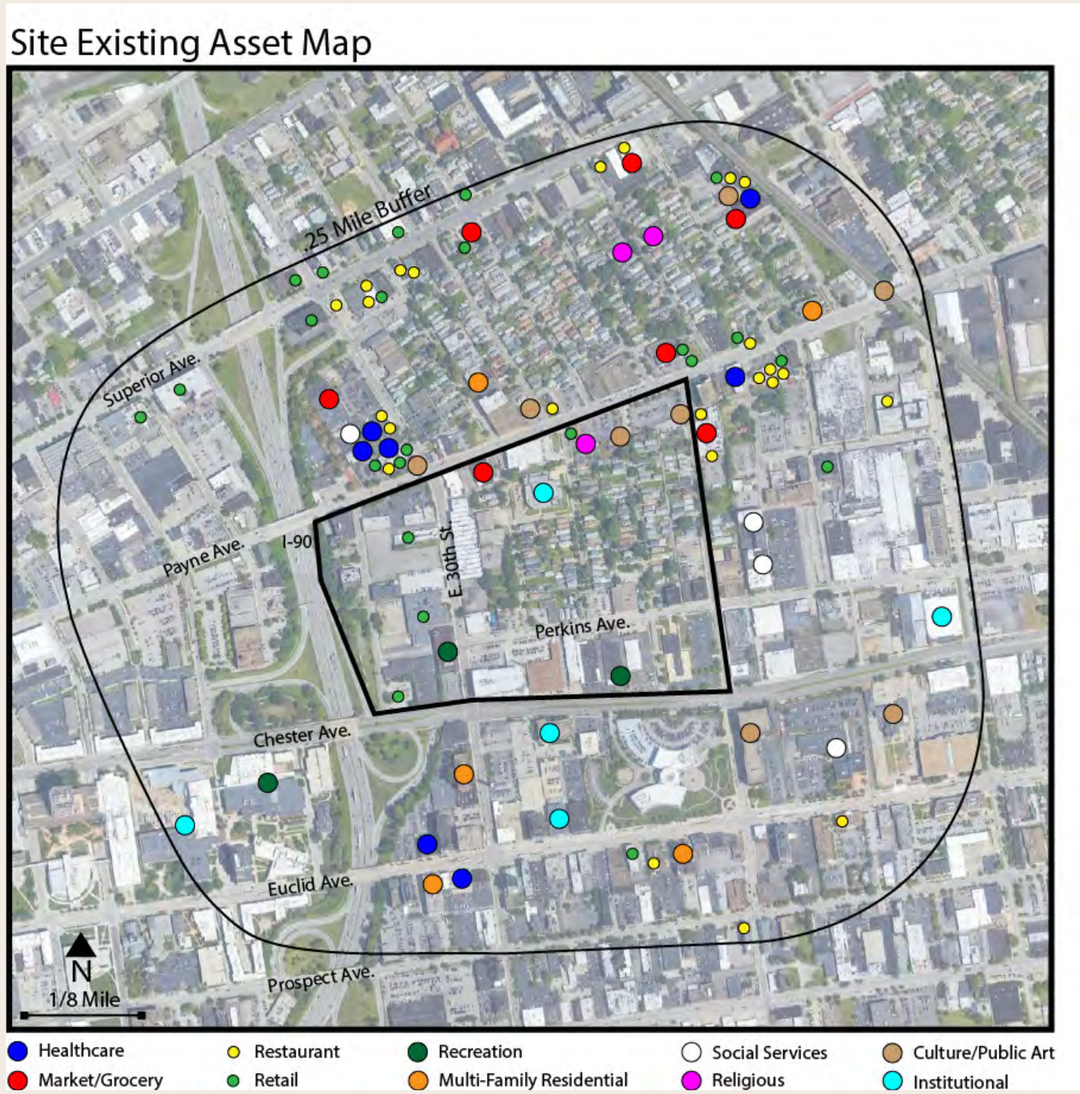
Site Area

The site area, despite having few assets within its bounds, is surrounded by valuable resources. The area consists of a mix of larger semi-industrial properties as well as 4 retail businesses along the East 30th and Payne corridors. Within this mix, there exists a cluster of single-family housing. The site contains the Good Harvest Foods Market located along Payne Avenue as well as two recreation opportunities in the form of a bowling alley and boxing gym. Other important assets include the Design Lab Early College and the Midtown branch of the Cleveland Chinese-Christian Church. Despite the small number of assets within the site, there are a multitude of important resources within a walkable quarter-mile distance.

Quarter-Mile Area

There are numerous notable community assets located within a quarter-mile of the primary study area. These assets include 6 markets and 24 restaurants, many of which represent the variety of cultures that live within AsiaTown. These establishments are one of the greatest strengths of AsiaTown and provide a reflection of the cultural diversity within the small geographic area. Along with food needs, the area also has around 19 neighborhood retail stores. There are 7 healthcare-oriented resources including the ASIA ICHC Clinic, a few pharmacies, and herbal stores, as well as 2 dental offices. Coupled with the healthcare access in the local area, the site is located only 2-3 miles from both the Cleveland Clinic Main Campus and the University Hospitals Main Campus. Accompanying the healthcare resources, there are 4 social service organizations located within the quarter mile radius, chief among them being the Asian Services in Action offices. Educational resources are also plentiful with 4 school buildings around the site and higher learning institutions such as Cleveland State University and Bryant and Stratton College. The walkable radius also includes 5 multi-family residential buildings, including the Asian Evergreen Apartments which house many aging area residents. Finally, from a cultural perspective, the area contains a few public art installations varying from murals to decorative utility boxes that line Payne Avenue. Along with the public art installations, there are also a variety of worship facilities, ranging from the Sam Tak Buddhist Association to the Spanish Pentecostal Church of God.

Exhibit 5



Missing Amenities

Despite the wealth of resources located around the study area, there are several critical holes in the neighborhood. The primary need of the site is dedicated greenspace. Outside of vacant lots and parking lots, there are no parks or areas for residents to recreate. An accessible park with amenities for people of all ages would be a welcome and valuable addition to the neighborhood. Another lacking resource is easy access to a recreational facility. The closest rec centers are located across the I-90 freeway on the CSU campus and outside of the quarter mile walking distance to the north of the site. While the CSU facility possesses all the necessary amenities, it is not easily reachable as it currently stands. A smaller recreational facility located on site or a more pedestrian friendly means of reaching the CSU facility would be a useful addition. Finally, the AsiaTown community would benefit from some form of dedicated community space. Currently, this role is being filled by shopping plazas such as Asia Plaza or Asian Town Center. The addition of a flexible community space along Payne Avenue would provide opportunities for community meetings, events, and other forms of programming. While these are just a few potential recommendations for improvements to the site area, it is important to build off the existing assets to provide a functional, varied, and accessible neighborhood for residents and visitors.

Total Area Assets by Type within 1/4 Mile	
Type	Number
Healthcare	7
Market /Grocery	7
Restaurant	24
Retail	23
Recreation	3
Multi-Family Residential	5
Social Services	4
Religious	3
Culture/Public Art	8
Institutional	5
Dedicated Greenspace	0
Community Center	0

Exhibit 8 .

Exhibit 6 Area assets, including Part to Shop Grocery Store at Asia Plaza, Asia Plaza Pharmacy, and restaurants on Superior Avenue.

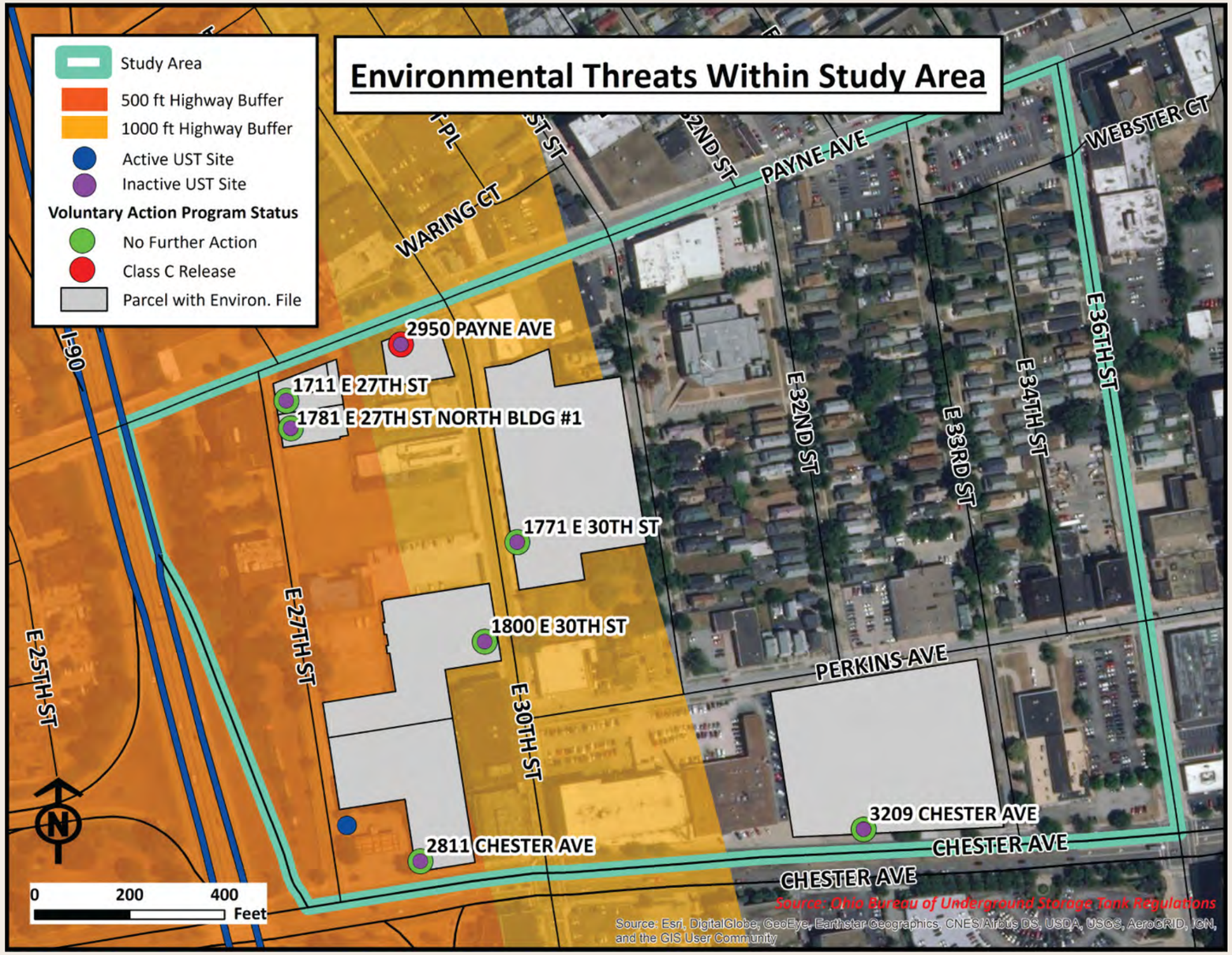
Exhibit 7 The former Dave's Market parking lot, above, and vacant lot, right, are used for recreation given the lack of park and other gathering space in the area.

Environmental Conditions

Pollution

When considering development in an urban setting, there are many environmental factors that should be evaluated. This report will focus on five areas of concern: air pollution, ground pollution, impervious surfaces, tree canopy, and access to parks and greenspace. The first area of analysis concerns the I-90 Innerbelt that abuts the study area along its western portion, and more specifically the air pollution generated by the cars and trucks that frequent the roadway. Health effects from prolonged exposure to air pollution from high traffic arterial roads and highways are numerous and severe. Pollutants like particulate matter, carbon monoxide, nitrous oxides, ground level ozone, and other mobile-source toxins have led to documented negative health effects including, but not limited to, asthma, reduced lung function, impaired lung development, cardiovascular disease, childhood leukemia, pregnancy complications such as pre-term birth and low birth weight, and premature death (US EPA, 2014). Those who are especially affected by these airborne pollutants include children and elderly individuals (Health Effects Institute, 2010). In order to prevent these wide-ranging negative health outcomes, the Environmental Protection Agency recommends a 500-foot highway buffer (US EPA, 2014), while the Health Effects Institute and the California State Air Resources Board recommend a 1,000-foot buffer (Health Effects Institute, 2010). It should be noted, however, that concentrations are generally lower near "cut-section" roads (roads below grade with steep walls) (US EPA, 2014).

Exhibit 9



As shown in Exhibit 9, the 500-foot highway buffer recommended by the US EPA pushes a block and a half into the study area, while the more conservative 1,000-foot buffer encompasses nearly three blocks, half the total study area. While the block directly east, due to its extreme proximity to the highway, should not be developed for any use that would involve a long term human presence on the site, the block east of that could be developed for commercial and residential uses with careful planning and mitigation. Planting trees and large bushes along the highway can serve both as a beautification tool for the neighborhood as well as provide relief from the airborne pollution caused by the neighboring highway (US EPA, 2014). Tree selection is critical, however, not just for suitability to the harsh urban environment of Cleveland, but also for the plant's physical characteristics as it relates to deposition and dispersion of air pollutants. Physical traits such as the plant's height, width, thickness, species, leaf area density, porosity of foliage, as well as the tree and bush spacing, play an important role in impacting air pollution concentrations. Ideally, the vegetation selected should retain their foliage characteristics year-round and not be subject to significant changes in the fall and winter months (US EPA, 2016). Therefore, coniferous trees, as well as shrubs and bushes that are not subject to seasonal changes, should be selected, with a preference for foliage with waxy needles or hairy leaves (Janhäll, 2015).

Facility Name	Address	Contents (# of USTs)	Date Removed
KRABER INDUSTRIES	1711 E 27TH ST	Gasoline (1)	19-Apr-96
PROCLEVE INVESTMENTS LTD	1781 E 27TH ST NORTH BLDG #1	Used Oil (1) Unknown (1)	1-Oct-95 31-Oct-95
PROCLEVE INVESTMENTS LTD	1800 E 30TH ST	Gasoline (1)	27-Dec-93
GEORGE R. KLEIN NEWS CO	1771 E 30TH ST	Gasoline (1) Diesel (1)	21-Jun-93 21-Jun-93
GEORGE R. KLEIN NEWS CO	2950 PAYNE AVE	Gasoline (2) Used Oil (1)	22-Sep-98 22-Sep-98
PEPSI COLA BOTTLING	3209 CHESTER AVE	Gasoline (3) Diesel (2)	26-Feb-91 26-Feb-91
UNKNOWN	2811 CHESTER AVE	Diesel (1)	1-Dec-87

Source: Ohio Bureau of Underground Storage Tank Regulations (2021)

Exhibit 10 .

A second environmental consideration involves underground storage tanks (USTs) and the possible release of petroleum and other hazardous substances into the soil and groundwater. Until the mid-1980s, most USTs were made of bare steel, which is likely to corrode over time and allow its contents to leak into the environment (US EPA). Within the study area there are seven sites where underground storage tanks were previously utilized. While the Ohio Bureau of Underground Storage Tank Regulations reports that each of these tanks have been removed and that six of the sites have received a No Further Action letter from an Ohio EPA approved Certified Professional (CP), the remaining site has a documented release of a petroleum-based substance. As shown in Exhibit 9 and 10, following the Phase I evaluation the CP determined that the property at 2950 Payne Ave experienced a release of gasoline or used motor oil (Ohio State Fire Marshall, 2021). Following this determination, the next step in the Voluntary Action Program and remediation of the ground contamination involves obtaining a Class C release. This financial release is provided when no viable, responsible person is available, due either to bankruptcy or death. Once the release in obtained, the property will become eligible for state and federal funding sources to assist in the clean-up and, following environmental mitigation, a Covenant Not to Sue will be issued by the State of Ohio and Ohio EPA as a legal release from any further action related to the prior contamination (Ohio EPA, 2014).

Impervious Surfaces

The percentage of impervious surfaces within the urban built environment is considered an important quantifiable indicator of an area's overall environmental quality and level of urbanization. While they do not directly generate pollution, impervious surfaces are a key contributor to negative hydrologic changes that lead to degraded water quality and altered hydrologic function. By preventing natural soil infiltration, increasing the volume and velocity of stormwater runoff, and efficiently transporting pollutants into waterways during storm events, impervious surfaces have a strong negative impact on overall water quality of an area (Chithra et al., 2015). These impacts extend to the sewer system and grey infrastructure as well, with 20% impervious surface levels equating to twice as large runoff during storm events, and 100% impervious surface area contributing to stormwater runoff that is five times greater than natural areas (Arnold et al., 1996). Impervious surfaces are also the driving force behind the phenomena known as the urban heat island effect, which refers to the higher atmospheric and land surface temperatures that occur in urban areas, as opposed to the surrounding rural areas. A strong linear relationship between land surface temperature and percent impervious surfaces has been observed across all seasons (Chithra et al., 2015), with 10% increases in surface temperatures resulting in land surface temperature increases of more than 3 degrees Celsius. Impervious surfaces also have a six times greater impact on raising land temperatures than greenspaces and water contribute to lowering them, indicating the most effective strategy to mitigate the thermal impacts is an overall reduction in impervious surface coverage. It has been found that for each 10% decrease in impervious surface area, along with a corresponding 10% increase in green space, land surface temperatures could be lowered by up to three degrees Celsius. Strategies like implementing green infrastructure can be effective at both mitigating the urban heat island effect as well as decreasing stormwater runoff. Features like permeable pavers, bio-swales, raingardens, and tree plantings are most effective when used in conjunction with de-paving (Xu et al., 2013).

2019 Study Area Impervious Surfaces

Land Use Categories	% Impervious Surfaces
All Residential	67.7%
Single-Family	*62.8%*
Two-Family	*70.4%*
Multi-Family	*68.5%*
Retail	93.4%
Office	78.8%
Industrial	91.7%
Institutional	74.6%
Vacant Land	16.1%
Overall	**78.7%**

Source: Cuyahoga County Planning Commission (2019)

Exhibit 12 .

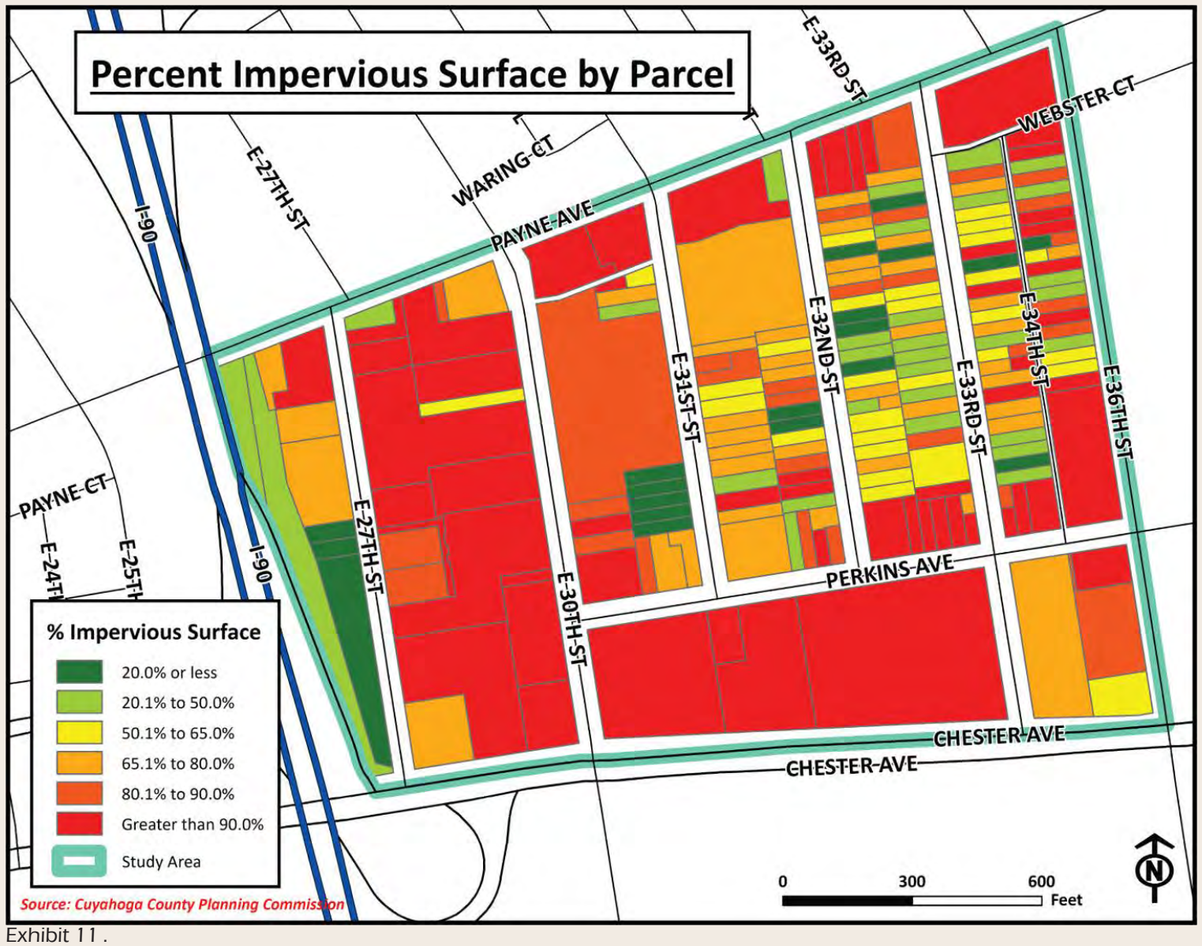


Exhibit 11 .

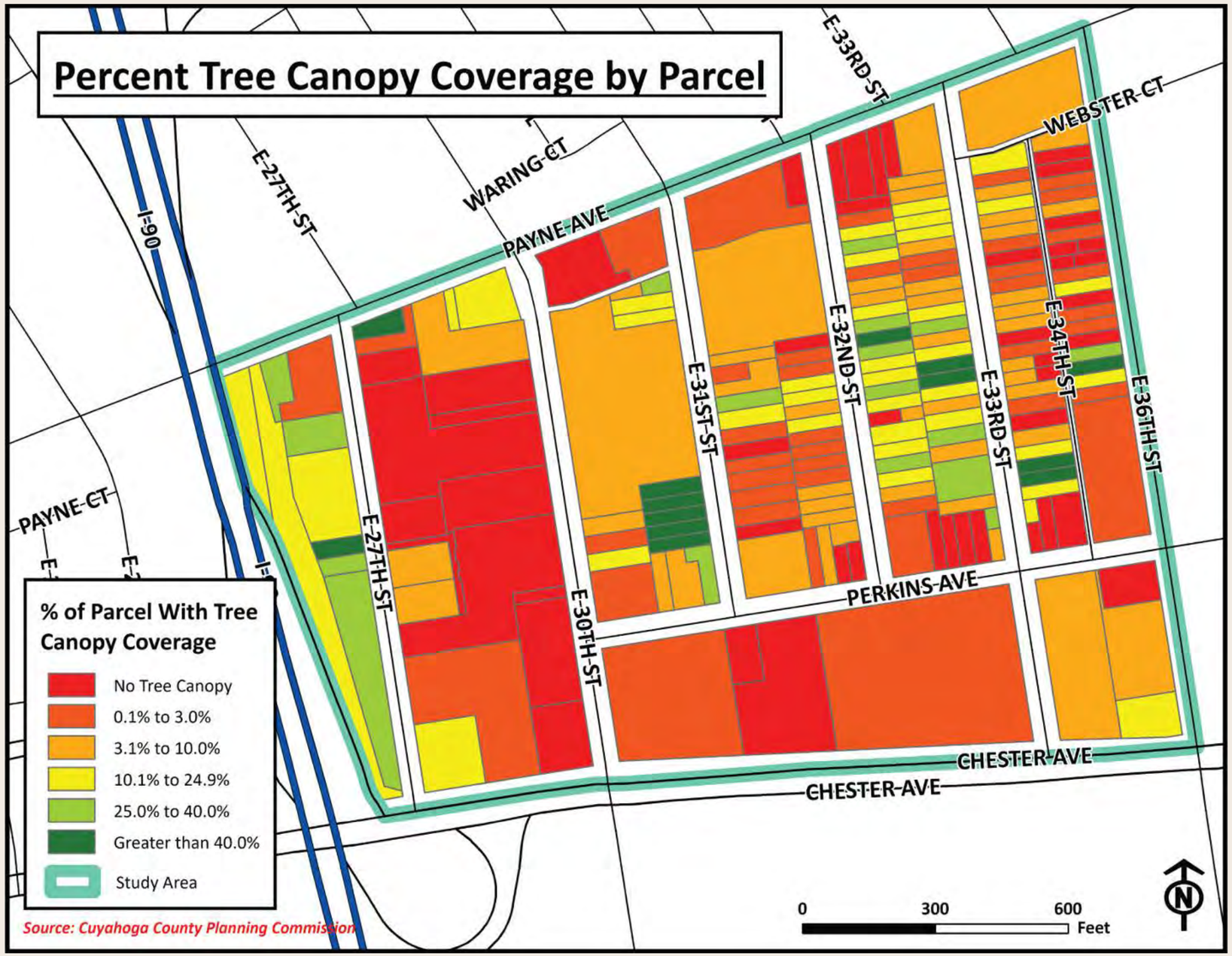
Exhibits 11 and 12 show the percent impervious surface area by parcel within the study area. While the study area overall is nearly 80% impervious surfaces, the land uses with the highest percent are retail and industrial with each well over 90%, attributable to the large structures and parking lots associated with these land uses. The uses with the lowest percent impervious surfaces are residential, with single-family residential the lowest of the three residential categories, and, unsurprisingly, vacant land being lowest overall.

Urban Tree Canopy

Trees provide numerous ecological benefits and, unlike other urban infrastructure that loses value over time, trees appreciate and provide greater benefits as they mature, making them a vitally important feature in the urban environment. Trees provide economic benefits ranging from energy savings for surrounding buildings, increased property values, and lower construction and maintenance costs associated with grey infrastructure, to a boost in commercial activity in retail corridors with a higher concentration of trees. Their environmental benefits include improved air and water quality, carbon storage and sequestration, reduced urban heat island effect, and managing stormwater runoff. As social benefits, trees can promote public health and well-being, discourage crime, and create a sense of place and community (Leff, 2016). For every 5% of tree canopy added to the urban environment, stormwater runoff is reduced by 2%. For every $1.00 spent on trees, a return value of $1.50-$3.00 is accrued through the ecological benefits over the life of the tree (Davey Resource Group, 2015).

While the American Forest Tree Canopy Guidelines suggest that cities should have 40% overall tree canopy coverage, with urban neighborhoods and the central business district at 25% and 15% respectively, the study area falls far short of these standards (Davey Resource Group, 2015). With regards to Exhibit 14, the

Exhibit 13 .



2019 Study Area Land Cover							
Land Use Categories	Acres	% Tree Canopy	% Grasses and Shrubs	% Buildings	% Other Paved Surfaces	% Roads	% Impervious Surfaces
All Residential	9.9	10.8%	21.6%	41.2%	26.2%	-	67.7%
Single-Family	*3.1*	*12.1%*	*25.1%*	*37.7%*	*24.9%*	-	*62.8%*
Two-Family	*4.9*	*9.9%*	*19.7%*	*41.6%*	*28.5%*	-	*70.4%*
Multi-Family	*1.9*	*10.7%*	*20.7%*	*46.1%*	*22.3%*	-	*68.5%*
Retail	6.9	4.1%	2.4%	22.8%	70.6%	-	93.4%
Office	2.5	8.1%	13.1%	32.3%	46.5%	-	78.8%
Industrial	20.6	4.0%	4.3%	50.7%	41.0%	-	91.7%
Institutional	2.6	8.2%	17.1%	46.7%	27.9%	-	74.6%
Vacant Land	2.5	20.2%	63.6%	0.7%	15.4%	-	16.1%
Overall	**60.5**	**9.3%**	**12.0%**	**30.1%**	**35.6%**	**13.0%**	**78.7%**
Source: Cuyahoga County Planning Commission (2019)							

Exhibit 14 .

Study Area Tree Benefits			
Tree Benefits	Current Tree Canopy (9.3%)	Increase in Canopy to 25%	Increase in Canopy to 30%
Carbon Storage			
Sequestered annually	$1,383	$3,718	$4,461
Stored in trees	$34,725	$93,347	$112,016
Air Pollution Mitigation			
CO removed annually	$4	$11	$13
NO2 removed annually	$8	$22	$26
O3 removed annually	$372	$1,000	$1,200
SO2 removed annually	$1	$3	$3
PM <2.5 microns removed annually	$779	$2,094	$2,513
PM >2.5 microns removed annually	$255	$685	$823
Property Value			
Value added by trees	$2,287	$6,149	$7,378
Est Total Annual Benefits	**$2,802**	**$7,532**	**$9,039**
Est Total Benefits Over Expected Lifespan of Trees (30 years)	**$121,072**	**$325,463**	**$390,556**
Source: i-Tree Canopy (https://canopy.itreetools.org/survey) & Cleveland Tree Plan			

Exhibit 16 .

study area overall has just over 9% tree canopy coverage, with residential parcels at just under 11%, office and institutional at 8%, and retail and industrial at 4%. Vacant land had the highest percent tree canopy coverage at just over 20%, still far below the recommended standards for urban neighborhoods even with no structures present. Also disconcerting is the decrease in canopy coverage over the past decade. Exhibits 13 and 15 show the percent tree canopy coverage by parcel within the study area, as well as the change in canopy coverage from 2011-2019. Over that time, the study area overall lost over 5% of its canopy coverage, with residential land uses losing over 12,000 square feet and nearly 21% of their canopy coverage. Single-family residential parcels experienced the greatest losses of all land uses at over 30%. Important to note, is that while retail and office uses did dramatically increase their canopy coverage percentage, their relatively small size in relation to residential and industrial uses saw their gains more than offset by the losses in other land uses.

Study Area Tree Canopy			
Land Use Categories	% Tree Canopy (2019)	Change in Canopy SF (2011-2019)	% Change in Canopy (2011-2019)
All Residential	10.8%	-12,179	-20.8%
Single-Family	*12.1%*	*-7,033*	*-30.3%*
Two-Family	*9.9%*	*-4,323*	*-16.9%*
Multi-Family	*10.7%*	*-823*	*-8.5%*
Retail	4.1%	2,275	22.7%
Office	8.1%	3,469	64.5%
Industrial	4.0%	-2,278	-6.0%
Institutional	8.2%	-1,366	-13.0%
Vacant Land	20.2%	2,440	12.3%
Total	**9.3%**	**-7,639**	**-5.4%**
Source: Cuyahoga County Planning Commission (2019)			

Exhibit 15 .

Exhibit 16 shows the current study area tree benefits at 9.3% canopy cover, as well as the increased benefits that could be realized through increasing the tree canopy coverage to the recommended levels of 25% (American Forests "urban neighborhood" level) and 30% (City of Cleveland Tree Plan goal by 2040). While the current tree canopy will provide an estimated $121,000 of benefits over its 30-year lifespan, this figure increases to over $325,000 and $390,000 when the canopy levels are raised to 25% and 30% respectively. Calculations were made using i-Tree Canopy software and based on land cover within the study area, as well as calculations derived from the Cleveland Tree Plan and the 2013 study "The Effect of Landscape Trees on Residential Property Values of Six Communities in Cincinnati, Ohio" (Dimke, 2013).

Access to Public Parks and Greenspace

A final environmental consideration of this analysis concerns access to public greenspace and parks. Exhibit 17 shows the proximity of public parks and greenspace in relation to the study area with bands of one-quarter mile to three-quarters of a mile. With no public greenspace or park within one-quarter mile of the perimeter of the study area, and only two located in the half-mile band, lack of access to parks and greenspace is a serious concern for residents of this neighborhood. Utilizing ParkServe software from The Trust for Public Land, Exhibits 18 and 19 display the levels of increased access that could be achieved with the creation of parks in four potential locations within the study area. While the range of new individuals who are now within a 10-minute walk to a public park or greenspace demonstrate that the most effective location for a park would be in Site 1 or 3, each of the potential greenspace locations gives access to hundreds of households and individuals who did not previously live within a 10-minute walk to a park.

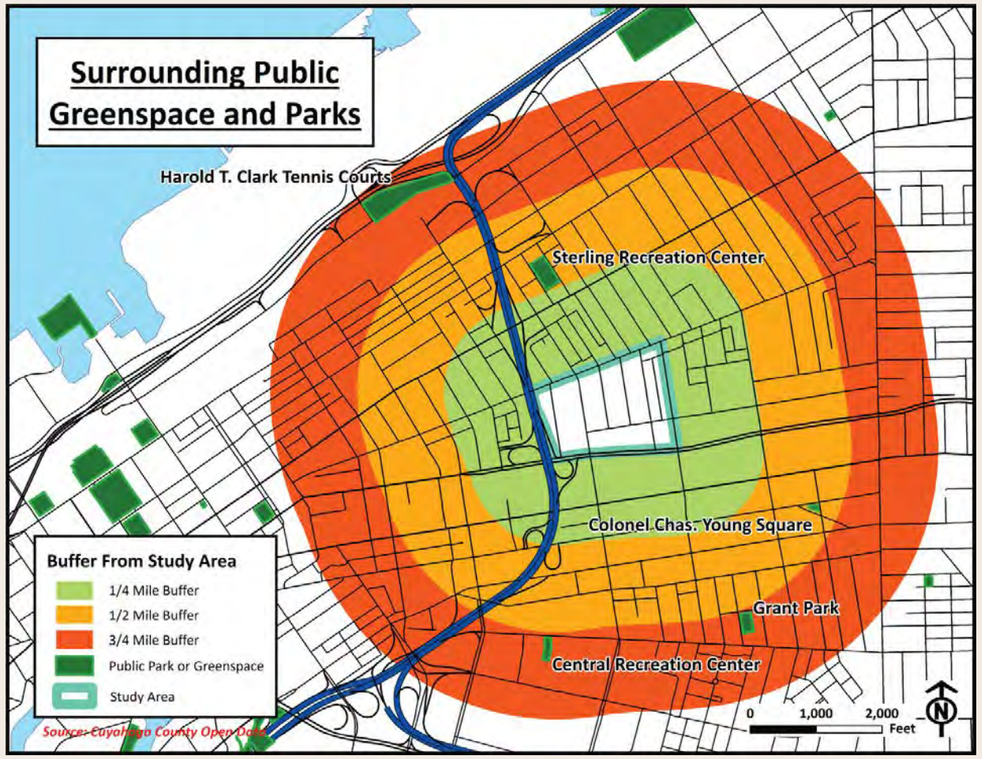


Exhibit 17 .

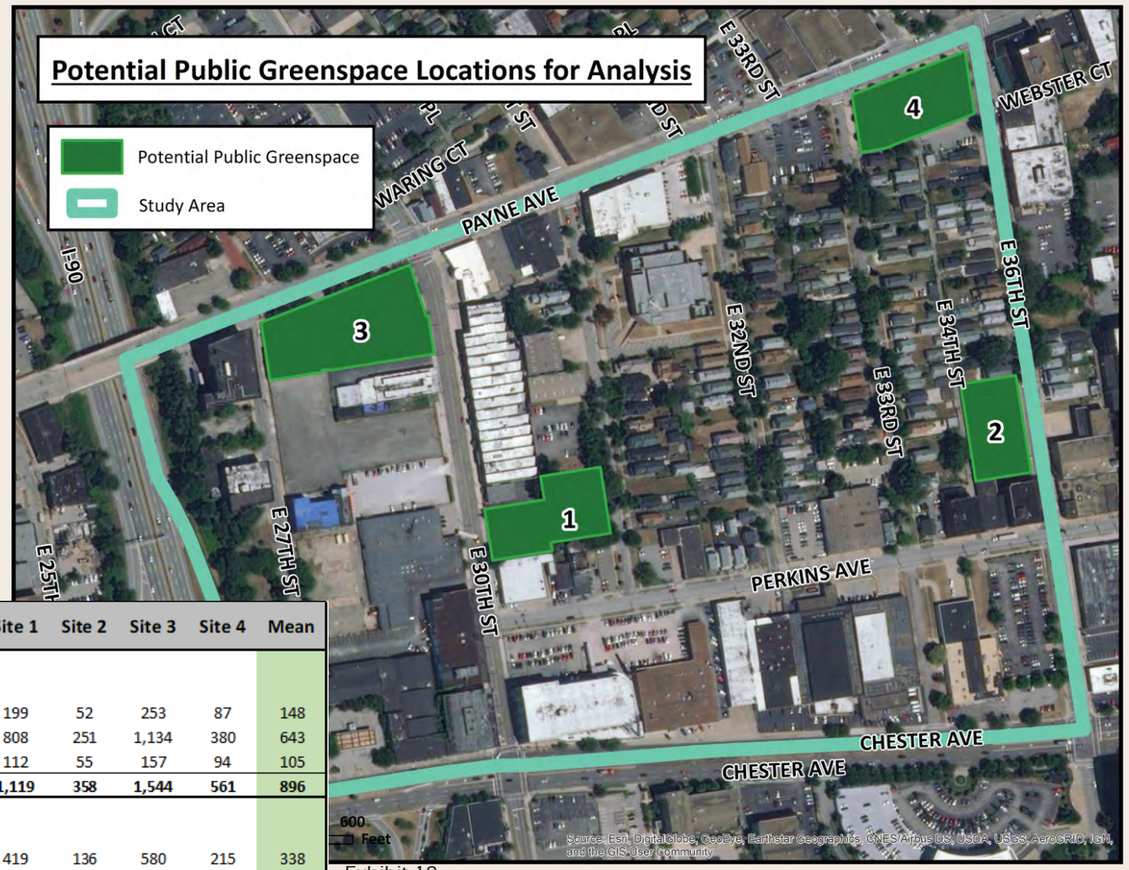


Exhibit 18 .

Park Access	Site 1	Site 2	Site 3	Site 4	Mean
New Population Served					
Children (< 20)	199	52	253	87	148
Adults (20-64)	808	251	1,134	380	643
Seniors (65 or >)	112	55	157	94	105
Total	**1,119**	**358**	**1,544**	**561**	**896**
New Households Served					
Low-income	419	136	580	215	338
Middle-income	73	15	105	22	54
High-income	65	14	95	22	49
Total	**557**	**165**	**780**	**259**	**440**

Source: The Trust for Public Land, ParkServe (https://parkserve.tpl.org/mapping/index.html)

Exhibit 19 .

Land Use

Buildings, Blocks, and Vacancy

The site area has a heterogeneous mix of size, scale, orientation, and land use. This mix is clear in the variety of zoning classifications and land uses, as well as the differences between building and lot sizes and the orientation of the blocks in the site area.

Beginning with the layout of the site, the figure diagram (right) shows the variety in the site and surrounding area. The site area, represented by the dotted red border, shows our blocks are rectangular. This longer rectangular shape creates issues with connections and walkability. Also represented in this image are the variety of building sizes. There is an obvious association between the large-scale industry and warehouse buildings compared to the small footprint residential housing. There is also minimal to no buffer between these two uses.

Additionally, vacancies are shown on the map in red. These parcels, as identified by the City of Cleveland, indicate there is ample opportunity for infill development. These vacant lots are scattered throughout the quarter-mile radius of the site area. The vacancies exist both in the area's commercial corridors as well as the residential core. Within the site area, there are large vacant parcels adjacent to I-90, on the very western edge. Other vacant parcels are located within the otherwise densely developed single- and two-family residential blocks.

Exhibit 20 .

Zoning

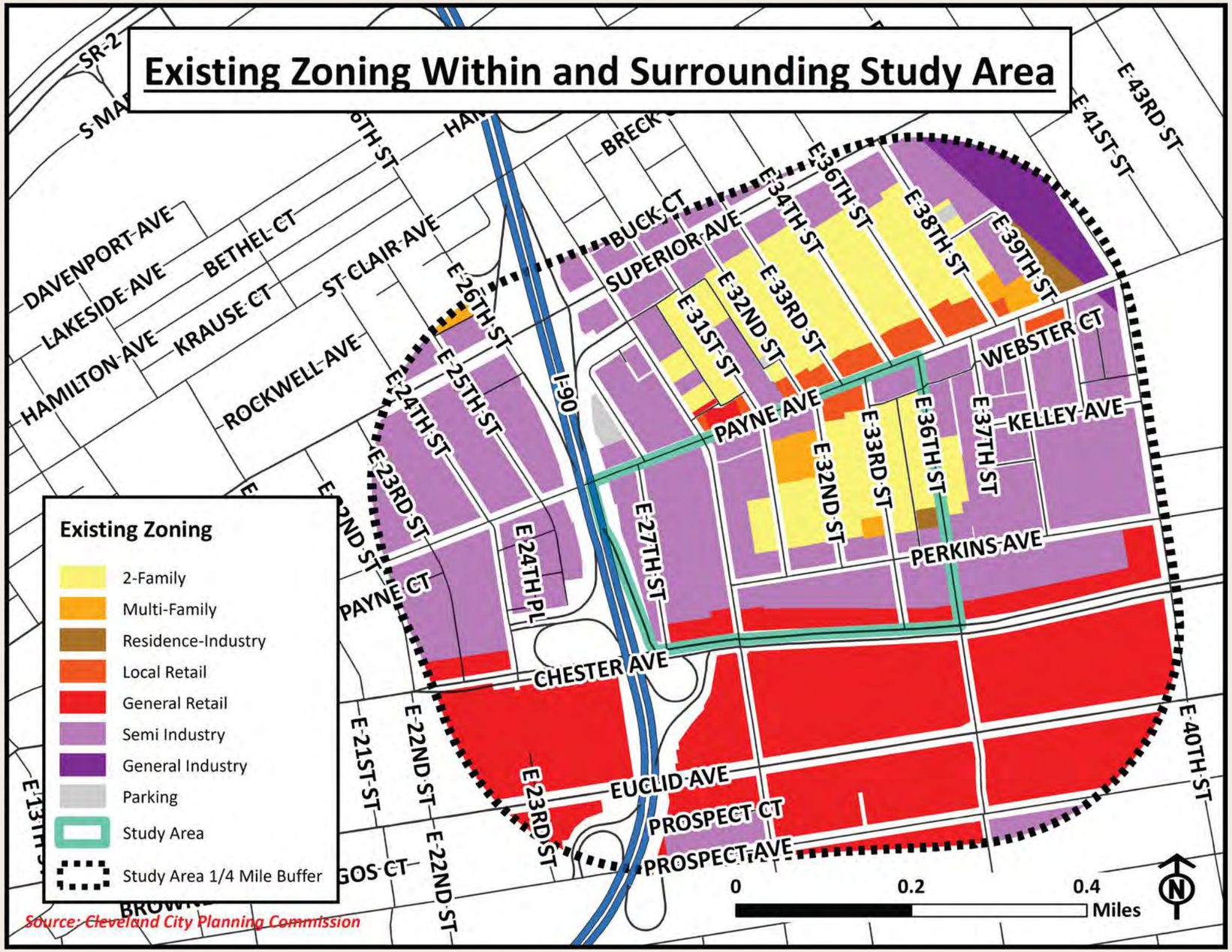
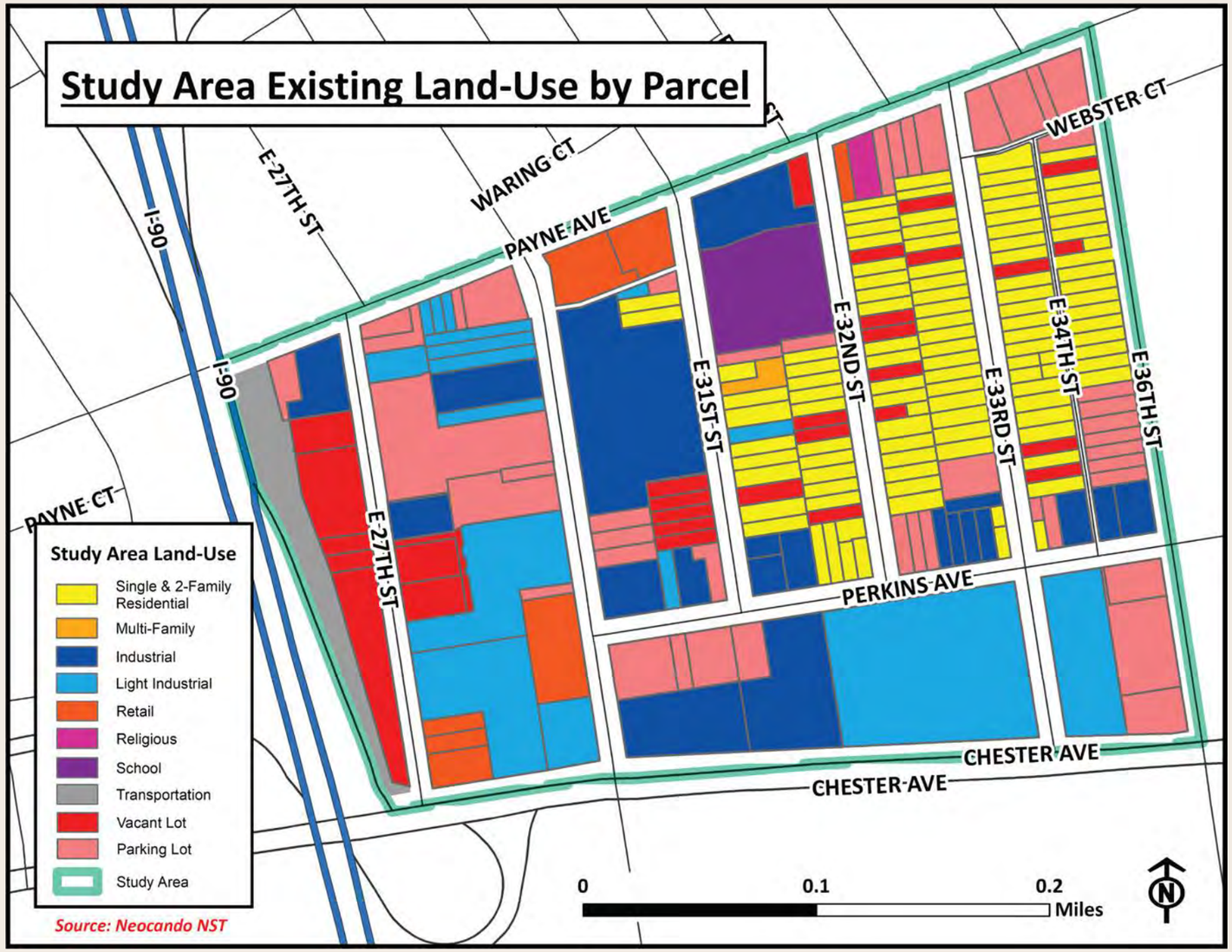


Exhibit 21 .

Shifting focus to the area's current zoning, displayed to the left is the same site area and surrounding neighborhoods to highlight the current zoning classifications. The dominant zoning classification both in our study area, as well as the surrounding area, is the semi-industry zone. Zoning ordinances from the City of Cleveland indicate that this classification is a zoning type that is designed to control industries adjoining retail business uses. While that may be the case in the ordinance, it is not the case in practice, as much of our two-family residential zones directly abut the semi-industry. In addition to the aforementioned two-family residential that is clustered in the center, our other residential zone is the multi-family. An industry zone that complements the residential zones is the residence-industry classification. Where the semi-industry is designed to border retail business, residence-industry is meant to control industry to uses that better abut a residential unit.

The site area has local retail business zones along the Payne corridor. Further, the area borders some general retail business along Chester Avenue, as well as a parcel on Payne. The surrounding area adds the general industry zone, and a parking zone along I-90.

Exhibit 22 .



Finally, an analysis of the proposed land use for our site area as determined by the City of Cleveland shows this competition between uses. The figure (below) shows these uses border between industry, light industry, residential, and retail uses. Of note are some of the mixed-use and commercial designations along the main streets, Payne and Chester. The analysis of parcels by use also highlights the vacancies and the large areas of parking that is not the highest use for the parcel.

Market Values

The Market Values map displays the range of prices of what each parcel costs. The cost of the parcels was calculated by adding the land values plus the building value to get the current market value of the parcels. The lower and medium land values are either vacant parcels or are where single and two-family housing is located. The parcels with the highest land values are where the industrial buildings are located. There is a wide range of housing prices within the study area. This map also illustrates how concentrated the area's residential core is, and how close the industrial buildings are located to that residential area. This information was collected from Cleveland City Planning Commission data.

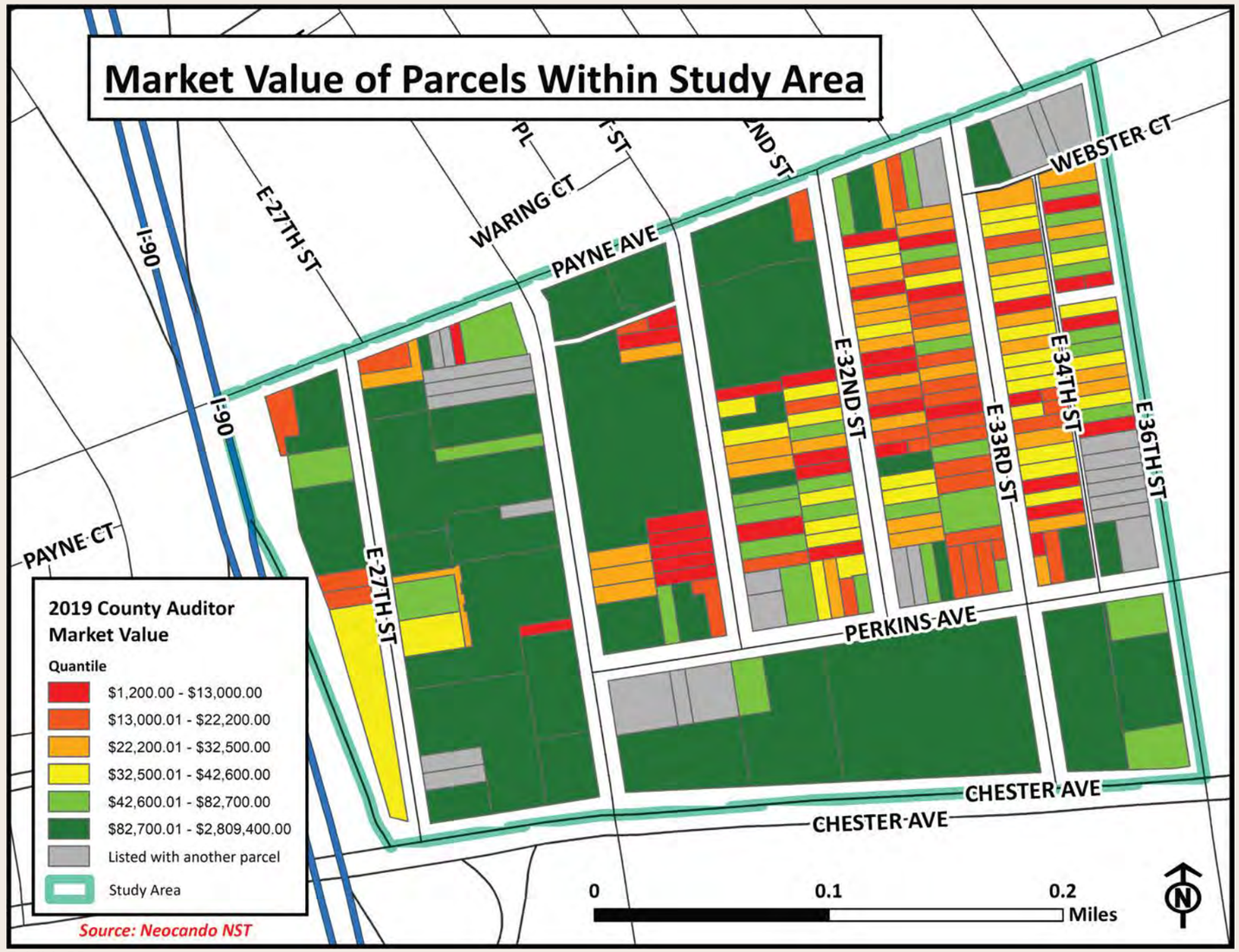
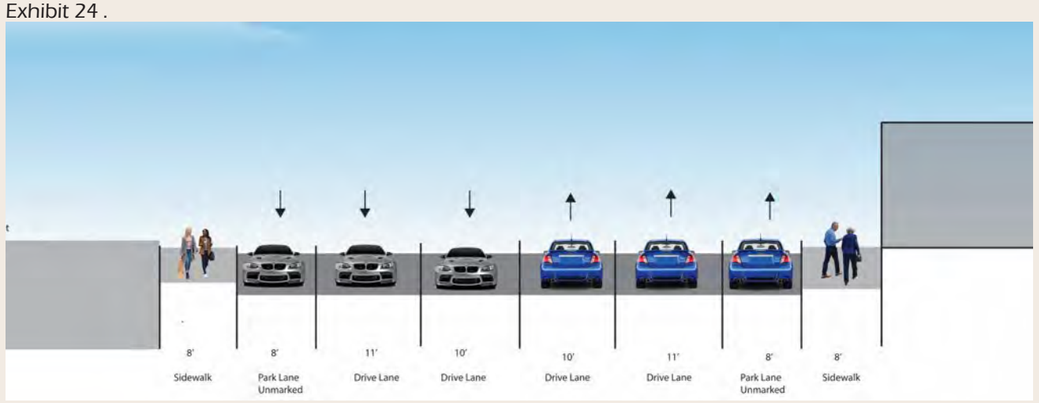


Exhibit 23 .

Transportation

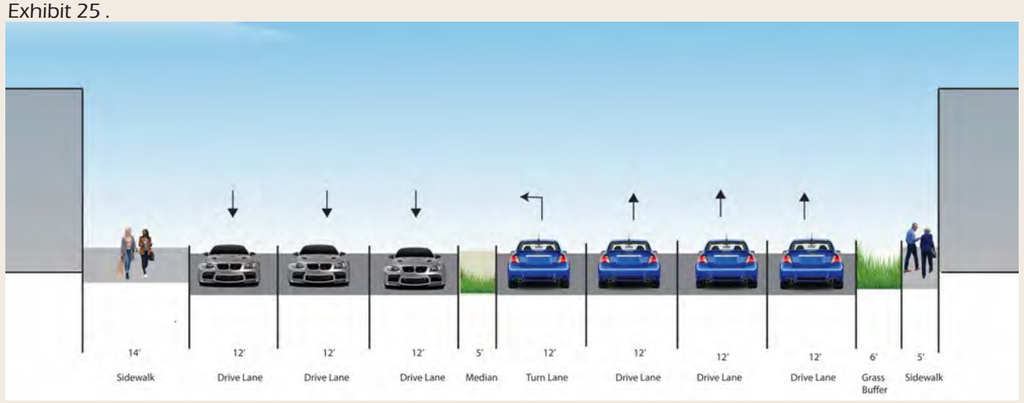
Street Sections

Exhibit 24 .



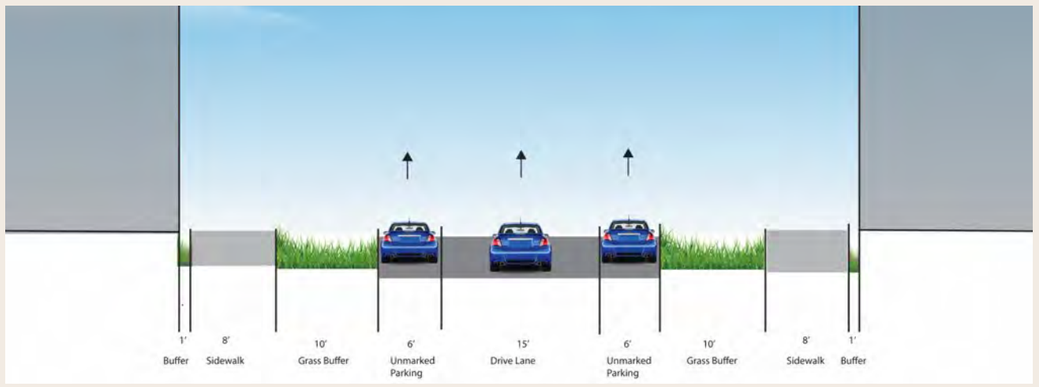
The above street section for **Payne Ave** is a two-way street with parking lanes on each side. However, the street parking lanes are currently unmarked as being parking lanes. There are currently two lanes, with the outside lanes being eleven feet, and the inside lanes being ten feet.

Exhibit 25 .



The above street section for **Chester Ave** by East 30th is currently a three-lane road, with a turn left turn lane and a median. All the lanes are currently twelve feet. The side with the left turn lane currently has a grass buffer while the other side of the road does not.

Exhibit 26 .



The above street section shows the typical **one-way residential** streetscape located in the area's residential core. This example shows E. 33rd street. These are narrow throughways, typically with one driving lane and parking on both sides of the street. Given the dense residential development and lack of driveways, most residents park on the street. The measurements for this image were taken from Google Earth, through which it was difficult to discern between the houses and the 1' buffer indicated between the sidewalk and lots. This buffer was measured from one specific location; the buffer length seems to vary from house to house.

Demographics

Population

The AsiaTown site area is incredibly diverse in its demographic and socioeconomic makeup. The area falls within census tract 1083.01 and more broadly within the 44114-zip code (pictured right). All census tract- and zip code-level demographic data were retrieved from the U.S. Census Bureau's American Community Survey 2019 5-year estimate tables.

The site area's greater census tract has a total population of 1,309 and a median age of 32.8. Exactly 50% of residents are between the ages of 20 and 39, while just under 30% of are aged 55 and older. This is comparable to the age demographics in zip code 44114, as shown in the figures below.

Exhibit 27 .

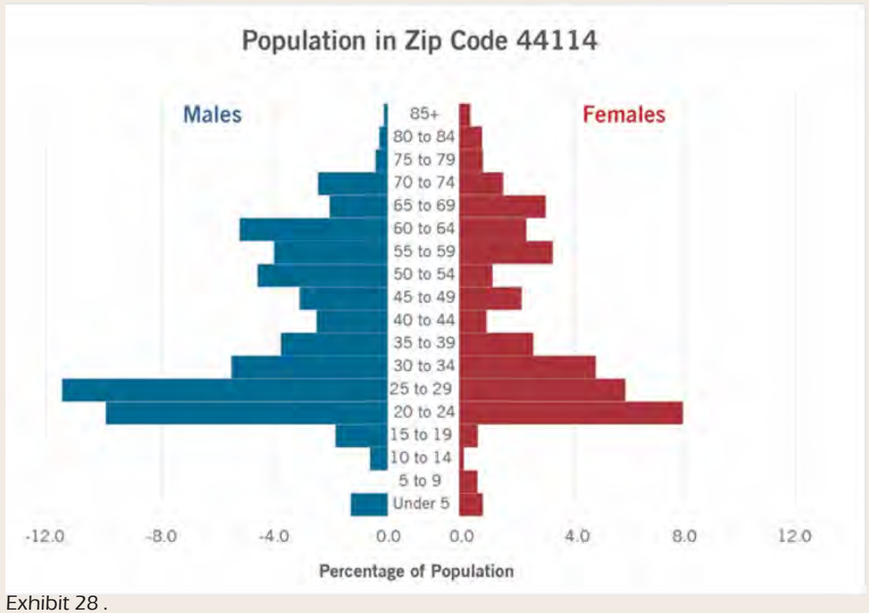


Exhibit 28 .

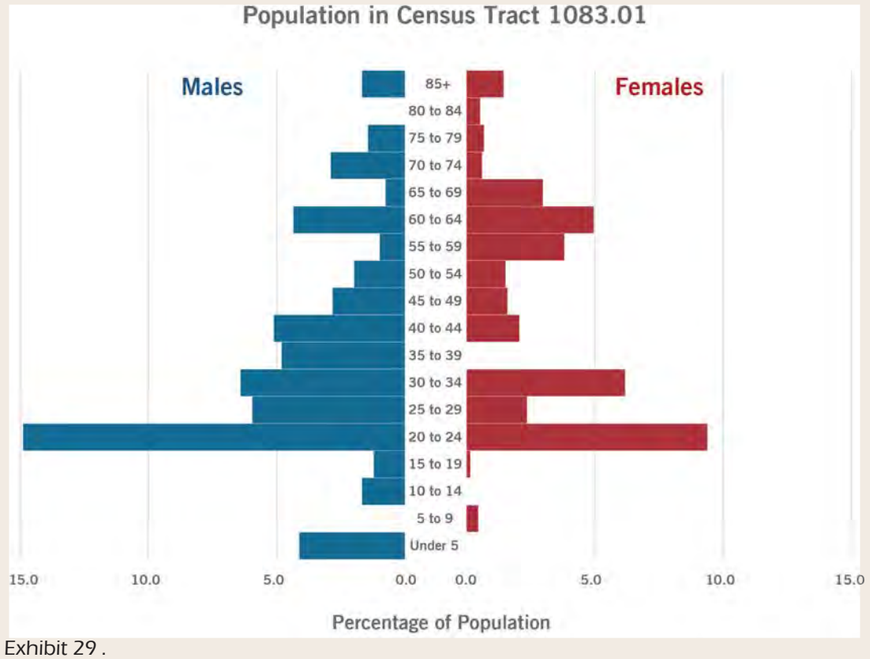


Exhibit 29 .

Race

The census tract is around 43% White, 26% Black or African American, and just under 25% Asian. While the census tract's Asian population is made up of only Chinese and Asian Indian residents, the site area's respective zip code is home to Filipino, Korean, Vietnamese, and other Asian residents. This is much different than demographics at the city level, which is predominantly White and Black or African American and less than 3% Asian.

Exhibit 30 .

Population By Race in Zip Code 44114		
Race	**Estimate**	**Percent**
Total population	6,896	100.0%
White	2,944	42.7%
Black or African American	1,971	28.6%
American Indian and Alaska Native	79	1.1%
Native Hawaiian and Other Pacific Islander	0	0.0%
Asian	1,675	24.3%
Asian Indian	606	8.8%
Chinese	882	12.8%
Filipino	41	0.6%
Japanese	0	0.0%
Korean	47	0.7%
Vietnamese	3	0.0%
Other Asian	96	1.4%
Some other race	49	0.7%
Two or more races	178	2.6%

Population By Race in Census Tract 1083.01		
Race	**Estimate**	**Percent**
Total population	1,309	100.0%
White	570	43.5%
Black or African American	341	26.1%
American Indian and Alaska Native	0	0.0%
Native Hawaiian and Other Pacific Islander	0	0.0%
Asian	323	24.7%
Asian Indian	29	2.2%
Chinese	294	22.5%
Filipino	0	0.0%
Japanese	0	0.0%
Korean	0	0.0%
Vietnamese	0	0.0%
Other Asian	0	0.0%
Some other race	0	0.0%
Two or more races	75	5.7%

Source: ACS 2019 5-Year Estimates, Table DP05

Language

The diversity of the AsiaTown site's population lends itself to a similarly diverse number of languages spoken in the area. While around 65% of the area's population only speaks English, over 20% speak an Asian or Pacific Island language, nearly 10% speak Spanish, and around 5% speak an Indo-European language. For reference, the City of Cleveland's population is made up of over 80% English-only speakers and under 2% Asian and Pacific Island language speakers. Of the Asian-language speaking population in the census tract, over 80% speak English less than very well.

Exhibit 31 .

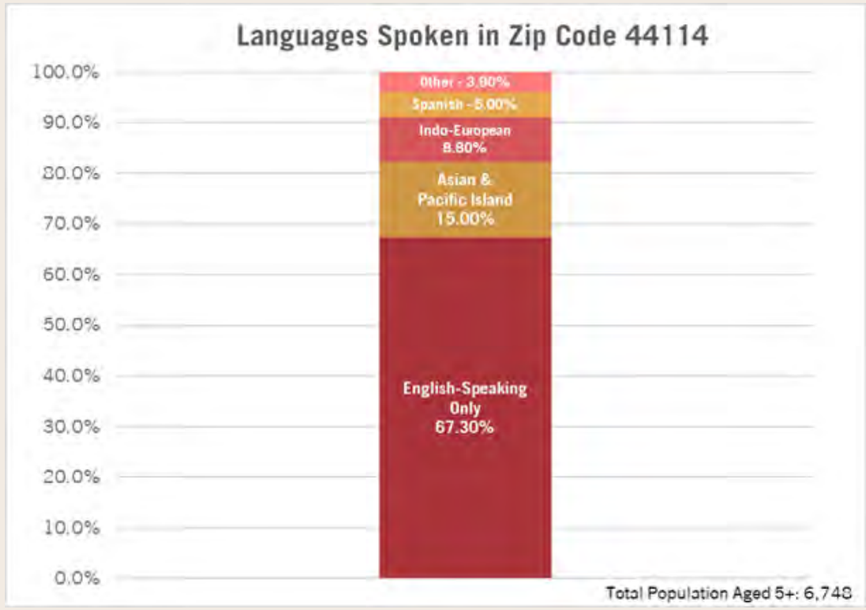


Exhibit 32 .

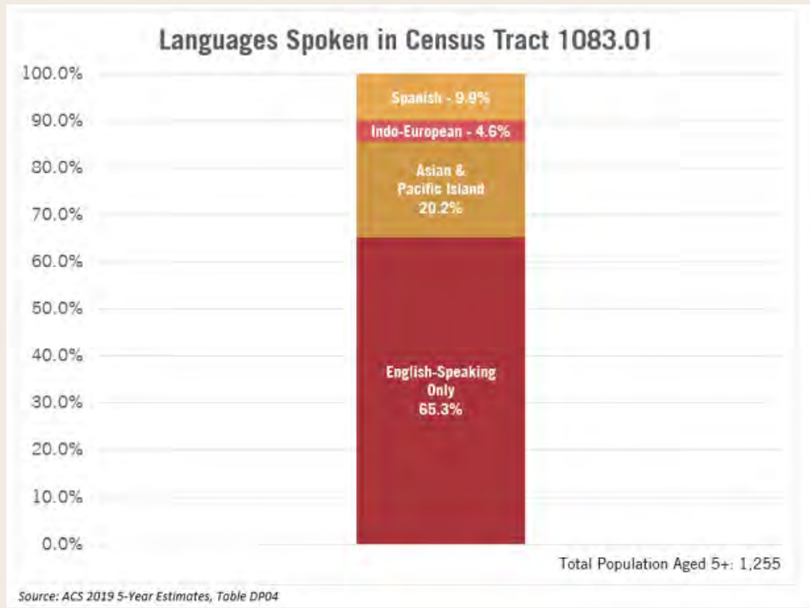


Exhibit 33 .

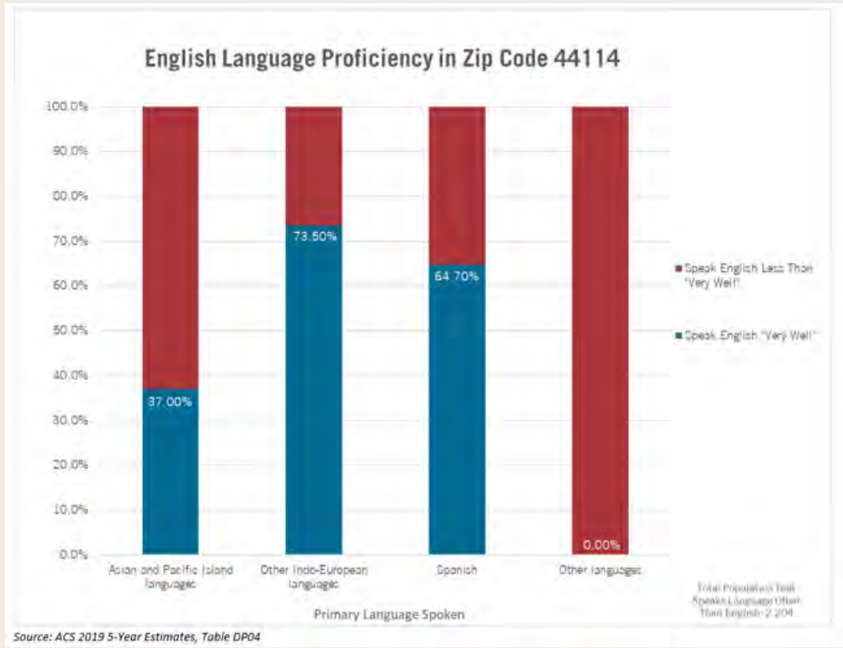
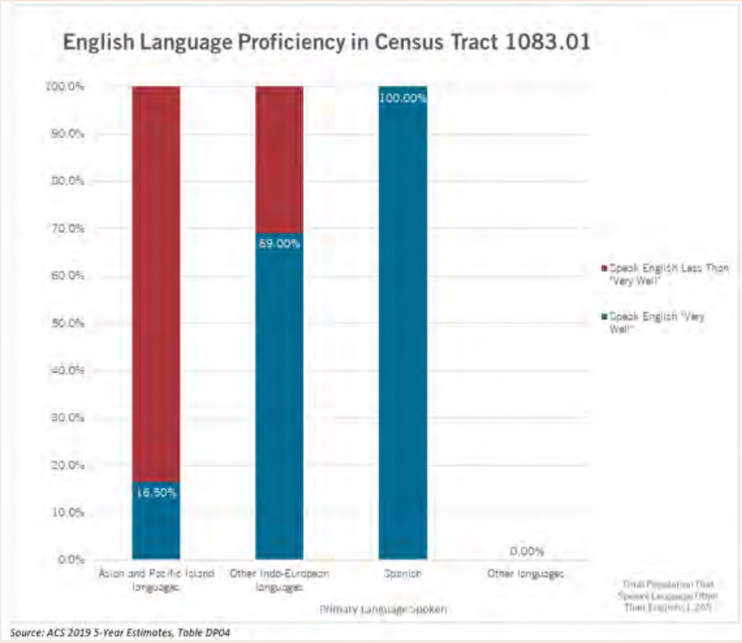


Exhibit 34 .



Households

The median household income of the census tract is $25,403. This is less than Cleveland's median household income of $30,907 and significantly lower than nation's $62,843. Over 35% of the census tract population falls below the poverty level, and nearly half of the tract's households are rent-burdened. Nearly 40% of households in the site area do not own a personal vehicle, compared to 23% in the City of Cleveland.

	Census Tract 1083.01		Zip Code 44114	
Gross Rent as a Percentage of Income	**Estimate**	**Percent**	**Estimate**	**Percent**
Occupied units paying rent	555	100.0%	3,248	100.0%
Less than 15.0 percent	85	15.3%	439	13.5%
15.0 to 19.9 percent	98	17.7%	463	14.3%
20.0 to 24.9 percent	59	10.6%	455	14.0%
25.0 to 29.9 percent	36	6.5%	527	16.2%
30.0 to 34.9 percent	25	4.5%	337	10.4%
35.0 percent or more	252	45.4%	1,027	31.6%
Total Paying 30.0%+	**277**	**49.9%**	**1364**	**42.0%**

Source: ACS 2019 5-Year Estimates, Table DP04

Exhibit 35 .

Number of Vehicles Available	Tract 1083.01	Zip Code 44114
Zero	37.9%	38.6%
One	46.6%	43.6%
Two	11.3%	15.1%
Three+	4.2%	2.7%
Total	100.0%	100.0%

Source: ACS 2019 5-Year Estimates, Table DP04

Exhibit 36 .

	Census Tract 1083.01	Zip Code 44114
	Estimate	**Estimate**
Total Population	1,309	6,849
Income in the past 12 Months Below Poverty Level:	470 (35.9%)	2,798 (40.9%)
Median Household Income	$25,403	$36,182

Source: ACS 2019 5-Year Estimates, Tables DP03 & B17001

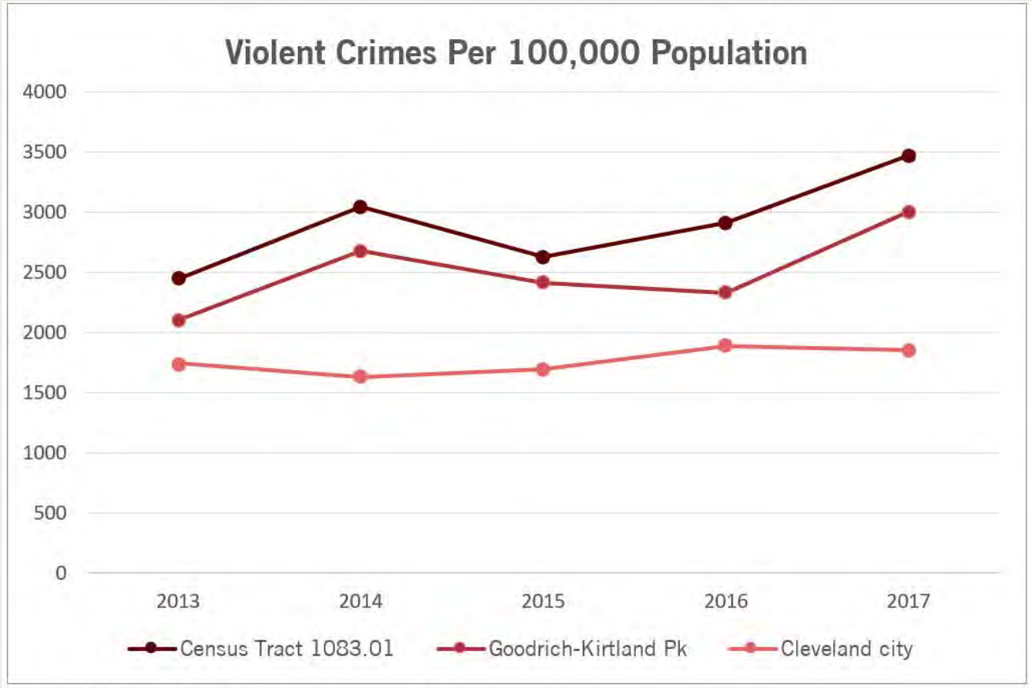
Exhibit 37 .

Crime Statistics

Crime statistics for the site area were found using NEOCANDO's Neighborhood Data Warehouse. NEOCANDO's crime data were collected from Cleveland Police reports from 2010 through 2017 and aggregates crimes into either violent or property crimes. Violent crimes are made up of homicides, rapes, robberies, aggravated and non-aggravated assaults, and domestic violence assaults, while property crimes include burglaries, larceny and auto thefts, illicit drug violations, and liquor law violations.

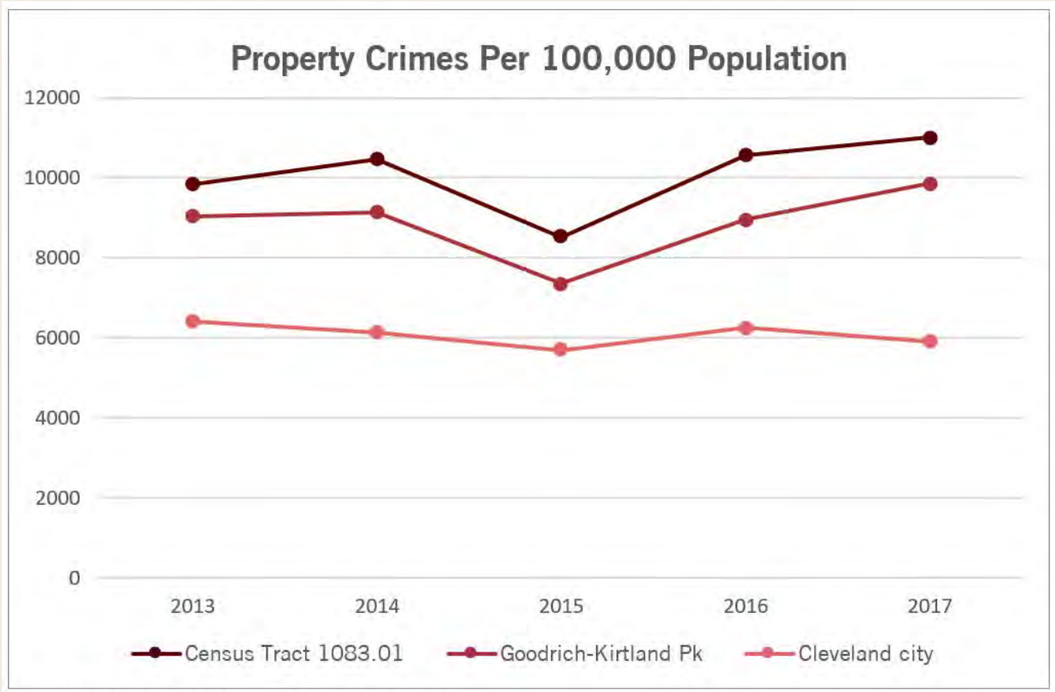
The following figures show 5-year trends in violent and property crimes per 100,000 population between 2013 and 2017 at three geographic levels. For comparison, we collected data for the site area's census tract, the broader neighborhood it falls within, as well as its greater city. As illustrated below, the violent crime rates per 100,000 in the site area's census tract are higher than those of the Goodrich-Kirtland neighborhood and the City of Cleveland. Violent crime rates in the census tract peaked in 2017 at just under 3,500 per 100,000 population. A similar trend can be seen in property crimes, where crimes reached just over 11,000 per 100,000 in 2017. It should be noted that these findings don't necessarily reflect steadily increasing crime rates through current years, but just offer a snapshot of recent statistics. This data, coupled with our findings on public perception of safety in the area, will help shape our final recommendations.

Exhibit 38 .



Source: NEOCANDO, "Neighborhood Data Warehouse"

Exhibit 39 .



Source: NEOCANDO, "Neighborhood Data Warehouse"

Community Engagement Process

Exhibit 40 .

"Community Engagement is...the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people It is a powerful vehicle for bringing about environmental and behavioral changes that will improve the health of the community and its members It often involves partnerships and coalitions that help mobilize resources and influence systems, change relationships among partners, and serve as catalysts for changing policies, programs, and practices (CDC, 1997)."

A community is individuals who come together in a unified manner for a common purpose. It brings people from all walks of life to connect diverse minds and talents in creating a vision for a better world. It is imperative to understand the disparities and issues of social inequalities that plague our communities. In the midst of the pandemic, this is more prevalent than ever. Due to COVID-19, it restricted us from engaging with the community to gather feedback to identify the concerns of the residents and creating comprehensive information needed to complete our research.

This is a short summary of the insights from the surveys that were previously conducted by the Midtown and AsiaTown community development corporations. The goal was to combine this with the information collected from our team's online survey and compare input from the residents regarding the current and future conditions of their neighborhood, which includes some of the following: Eliminating barriers to walking, biking, using public transportation. Better streetscaping elements such as enhanced crosswalks, decorative planters, and seating along with multilingual banners and directional signage. Other interests include a multilingual public library. Incubator space for startup businesses and entrepreneurs. Family-oriented restaurants. Diversified and affordable housing options. Community gathering spaces. Programs that teach arts and cultural appreciation offer job training and other workforce preparation courses. Furthermore, residents also addressed the concerns of safety. Other key takeaways also included: Elevating Asian and African American voices in decision-making efforts. Creating strategies that foster unity and celebrate cultural aspects of the community. They would like art galleries to display the works of local artists. Establish a better connection to surrounding neighborhoods. A vivid color scheme to enhance the AsiaTown identity through murals and art in public spaces. Finally, residents would like Community Services and Hospitality Ambassadors such as Midtown, Ohio City, and University Circle. The objective of this portion was to recognize the value of residential input and implement their feedback to the following recommendations provided in this report.

Exhibit 41 .

Strengths, Weaknesses, Opportunities, Threats

Strengths	Weaknesses
• Active local Community Development Corporations • Cultural Identity • Location • Retail and Restaurant Options	• No green space • Not pedestrian friendly • Poorly maintained streets and sidewalks • Industrial zoning that is unfriendly to pedestrians
Opportunities	**Threats**
• Build identity through placemaking • Partner with local businesses to enhance streetscape • Sites available for new development • Partner with local institutions	• Funding • Possible environmental issues identified • Difficult to gain trust of residents

Applied Planning Concepts

Gerontology

Exhibit 42 Image source: Avila Institute of Gerontology https://avilainstitute.org/

Gerontology is a broad field of study which examines the social, cultural, psychological, cognitive, and physical components of aging. In the context of urban planning, understanding gerontological facts and trends can inform the development of more livable communities, the design of more accessible and attractive public spaces, and the coordination of programs to aid aging residents. The need for a built environment that enhances the quality of life for residents as they age is a complex manner in developmental practices where all can benefit. Oftentimes, input from the senior population is underrepresented in the decision-making process for new development. Studies show the majority of our senior population desire to remain in their communities, however, find limitations in affordable and accessible options. Additionally, they may be unaware of community-based services that could help, and limited access to transportation for some residents produces a challenge in connecting to resources. Such resources are becoming increasingly important as the number of the senior population without family members who can care for them grows. As a result, residents who are socially isolated are at a higher risk of developing mental and physical health issues. This concept encourages participatory engagement in influencing decisions that foster residential mobility, the provision of health and social services, and housing options. Age-friendly and livable communities benefit from planning strategies and policy implementation that promotes greater street connectivity, provides access to key services, encourage community engagement, and are supportive of affordable and accessible housing (AARP, 2020). The creation of more age-friendly cities supports the structures and amenities needed to accommodate for physical and social changes that correlate with aging. Community leaders, families, and individuals are the nucleus in establishing the foundation of what it means to age in place.

Aging in Place

Exhibit 43 Image source: Safe Living Solutions https://www.safelivingsolutionsllc.com/aging-in-place/

Aging in Community is a concept wherein an individual is able to stay in their neighborhood of choice as they age, remaining close to their friends, family, and neighbors. Aging in Place refers, more specifically, to remaining in one's home as they get older, as opposed to moving to a senior care facility or nursing home. Conceptually, Aging in Community and Aging in Place is only possible with both programmatic support, such as "Whole Person" care, and physical changes, typically through universal design. Aging in Place is a priority for many groups operating locally, nationally, and internationally. For example, the World Health Organization (WHO) and the American Association of Retired Persons (AARP) are working on the Livable Cities initiative and the City of Cleveland is implementing an Age-Friendly Action Plan.

World Health Organization (WHO)

The WHO has a similar initiative but is more focused on aging than the livability plans which are more universally in design. The World Health Organization (WHO) established the Global Network of Age-Friendly Cities as "an international effort to help cities prepare for two global demographic trends: the rapid aging of populations and increasing urbanization (AARP, 2016)." WHO defines an age-friendly city that is "an inclusive and accessible urban environment that promoted active aging", they also identified eight domains that have an influential component on health and the quality of life for senior populations:

1. Outdoor Spaces and buildings: Make public places and areas safe and accessible for older adults.
2. Transportation: Maintain accessible, clean, and safe public transportation systems.
3. Housing: Diverse housing stock with options available for different living situations, as well as affordable options and accessible ones.
4. Social Participation: Provide options for seniors to be involved in social events, with accessible facilities and transportation to and from events.
5. Respect and Social Inclusion: Involve older residents in the community and allow them to stay involved.
6. Civic Participation and Employment: Provide opportunities to be involved in the city and gain meaningful employment if desired.
7. Communication and Information: Disseminate information about local events and issues.
8. Community and Health Services: Offer a variety of health and social service options.

Exhibit 44 Image source: World Health Organization https://www.who.int/ageing/projects/age_friendly_cities_network/en/

AARP Livable Communities

The AARP's Livable Cities initiative strives to encourage cities to be more accessible for everyone. It centers around 7 different topics, that when combined make for a city that is more livable for all. These areas are:

1. Housing: Create housing options for everyone, regardless of age, income, or ability.
2. Neighborhoods: Provide access and convenience. Make it easy for residents to access what they need within the city.
3. Transportation: Facilitate movement around the city by providing safe alternatives to driving.
4. Environment: Maintain a clean environment and create programs that give resiliency against the environment to its residents.
5. Health: Provide access to a variety of quality health care, healthy activities, and healthy food options.
6. Engagement: Engage residents in their communities, for example through volunteer opportunities and civic action.
7. Opportunity: Offer opportunities to everyone, regardless of age and background, to earn a livable wage and improve residents' well-being.

Exhibit 45 Image source: AARP https://www.aarp.org/livable-communities/

Cleveland's Age-Friendly Action Plan

Exhibit 46 Image source: City of Cleveland, Ohio https://www.city.cleveland.oh.us/sites/default/files/forms_publications/AgeFriendlyClevelandPlan.pdf?id=9607Aging/AgeFriendlyCleveland

The City of Cleveland has developed an Age-Friendly Action Plan, submitted to the AARP's Livable Cities initiative, to create a more livable city for all its residents. The process, which started in 2014, is a continuous cycle. The city found this to be an opportunity to reassess the needs of the community and develop an action plan based on existing programming while cultivating innovative solutions. The study heavily relied on participation from older residents to assess the age-friendliness of the city as to identify areas that were in need the most as outlined within the eight domains established by WHO. A diverse mix of community leaders, service providers, and stakeholders also participated in the survey. It began with the planning process, then the implementation of strategies, and suggest recommendations based on their progress. Plans such as Age-In-Place, Access to Cultural Events, Medical Equipment Exchange, Transit-Oriented Development, and Home Repair Coordination were strategies compiled as a result of this study. These, along with other projects, are working to help make the city of Cleveland a better place for people of all ages and for people to age in place.

Physical Aging

Exhibit 47 Image source: Greying with Grace https://www.grayingwithgrace.com/mobility-aids-elderly-people-need/

As the population grows older, it is important for them to consider and plan for changes that can have an impact on their livelihood and well-being. Understanding physical aging processes provides essential context for urban planners working to improve aging residents' quality of life. As people age their capabilities change. Older adults may experience mobility challenges ranging from reduced stamina, muscle strength, and flexibility to increased dependence on mobility support devices such as walkers, wheelchairs, and scooters. Vision can become a problem for older adults due to reduced pupil size, the thickening and yellowing of the lens, and a lowered field of vision due to worsening posture. These visual impairments can diminish reaction time to changes in brightness, reduce color contrast and saturation, lessen the ability to see the color blue, and limit awareness of surroundings.

A range of hearing impairments is typical in older adults, including presbycusis, conductive hearing loss, sensorineural hearing loss, central auditory processing disorder, tinnitus, and Meniere's disease. Lastly, aging can bring about a reduced sense of touch, physical awareness, mental processing capabilities, and an increased risk of falling and injury due to imbalance issues. This could hinder the senior population from enjoying and engaging in such activities as navigating their home space safely, commuting, socializing, and the upkeep and maintenance of their homes ("What is aging in place?," 2008). Furthermore, it can be a complicated and costly manner for families to remodel their homes based on universal design and accessibility. In addition, finding adequate care for aging parents and grandparents produces its own issues in making informed decisions. Individuals who lack social and family support systems experience economic hardship and a decline in their overall wellbeing. These common challenges have motivated architects and urban designers to develop universal design principles, identifying techniques for developing a more inclusive built environment.

Living Spaces

The key to aging in community is the providing housing that is accessible and livable for seniors. Universal design principles can be applied to housing units to address physical needs, but the manner in which those units are arranged and the support that goes along with them can address social and health needs.

Home & Health Needs

The home and health needs associated with Aging in Place come down to the basic principle of universal design. Homes should be built with the needs of all people in mind, regardless of ability. This may include features such as zero step entrances to the bottom floor, wide halls are easy to navigate, & half baths on the bottom floor to eliminate the need for steps.

These factors and others can help anyone be able to navigate homes and buildings in the area. The Whole Person Approach ensures that health and safety needs are met. This may include access to a variety of healthcare options, whether directly in the neighborhood or easily accessible through transit. Safety is also crucial in a city that promotes aging in place. Features like good lighting, open spaces, visibility, wide sidewalks for people to walk down, places to sit, and visual and audible cues at intersections help make an area safer. Lastly, green space helps both the physical, mental and emotional health of residents. Green spaces give people places to interact socially and multi-generational. They also help improve people's mood and help the environment which can help people's overall health.

Example Accessory Dwelling Unit (ADU)

Exhibit 48 Image source: Cunine Design Studio https://www.cucinedesignstudio.com/blog/tag/ADU+Ideas

Types of Senior Living Arrangements

Accessory Dwelling Units (ADUs) are smaller dwellings on the same property as an existing home and can be attached or detached. These can allow for older residents to live in a home independently while being on the same property still as family that can help if needed and provides affordability for everyone involved.

Group Living is similar to dorm housing, where residents have a bedroom and bathroom that are private, they have shared living areas with other residents. This allows for affordable housing, multi-generational housing, and universal design housing.

Naturally-Occurring Retirement Communities (NORCs) are neighborhoods where many seniors happen to live. In a NORC, a community service organization will connect seniors to transportation, funds for home repair assistance, social programming, and other services to enable them to remain in their homes.

Continuing Care Retirement (CCR) communities offer a continuum of care as a person ages, typically in a single building. CCRs contain different levels of care depending on individual needs. These might include senior living (apartments where seniors live independently but have access to social services and other amenities), assisted living (where seniors will be provided meals, minimal medical care, and other supportive services), and memory care (special services for elders with dementia).

Villages are a membership-based non-profit program that supplements senior services provided by the government. These services may include access to a senior center, meals, transportation to doctor's appointments, home maintenance, and other support that helps elderly residents remain in their homes. Seniors pay a nominal fee for access to these supplemental services.

Multi-generational Living Communities are any type of senior living that is strategically placed to take advantage of college courses, high school plays & concerts, or volunteer opportunities at an elementary school, to name a few examples. In these ways, seniors can interact with their community in a meaningful way.

Intergenerational Living refers to a new phenomenon that houses seniors and college students in the same place. Both seniors and young people suffer from isolation and limited incomes. These facilities often give the college students a financial incentive – reduced or free rent – in exchange for volunteering with the senior population.

(See next page for further details on Intergenerational Living).

Intergenerational Living

Intergenerational living is a model where younger and older residents live together (Intergenerational Housing, 2021). The intergenerational housing model proposed for AsiaTown will involve seniors living with upper-level college students. This housing model will build off of some similar situations around the country but is a new and exciting concept to Greater Cleveland and the AsiaTown community.

Exhibit 50 .

Case Studies

Cleveland, Ohio. The City of Cleveland and surrounding suburbs have a number of intergenerational living arrangements where grandparents live with minor children whom they have guardianship over (most often their grandchildren) or with some other association with children. These include senior housing complexes such as Fairfax Renaissance, Griot Village, Judson Manor, Marymount Intergenerational Campus, Rogers Intergenerational Services, and St. Luke's Manor. Although the listed senior housing options are desirable and provide necessary housing for grandparents with grandchildren, they provide a categorically different experience than living with unrelated, upper-level college students, as we propose in AsiaTown.

Columbia, Missouri – TigerPlace. TigerPlace demonstrates how an institutional partner can support the intergenerational living arrangement. They have created an intergenerational community where in their proximity to and relationship with local institutions has improved the lives of both students and seniors. TigerPlace is an independent living community supported by the University of Missouri Center for Eldercare and Rehabilitation Technology (CERT) and the Sinclair School of Nursing (TigerPlace, 2021). Cutting-edge research designed to keep residents as healthy and independent as possible has been conducted with voluntary residents of TigerPlace. Embedded sensors in apartments can record and report changes in an individual's physical condition or gait, thus warning of potential health complications including a possible fall risk (TigerPlace, 2021). A five-year study found TigerPlace residents with sensors had an average length of stay of 4.3 years as compared to 2.6 years among residents living without sensors (TigerPlace, 2021). This research done by students at the college was implemented to improve the lives of residents, while also helping the students learn, thus benefiting both groups. We envision a similar joint effort with Cleveland State University.

Exhibit 49 Image source: Bloomberg https://www.bloomberg.com/news/articles/2015-10-02/a-nursing-home-that-s-also-a-college-dorm

Portland, Oregon – Bridge Meadows. Bridge Meadows highlights the social and communal benefits of intergenerational living. It provides housing for seniors, foster families, and young people who were formerly in foster care who may not have as much family or support as their peers. The seniors in the community provide mentorship and care to the young adults. This gives the seniors a sense of purpose and an opportunity to contribute, while providing the former-foster children with the community they require to thrive (Bridge Meadows, 2021). This has resulted in many benefits for all involved. 85% of seniors in the community report an increased sense of purpose and 85% of young people are better able to manage their "trauma-related mental health issues" (Bridge Meadows, 2021). With the many international students at CSU, an arrangement that encourages

Intergenerational support could provide them with the community they may be lacking in traditional student housing. At the same time, the connection to young people will also benefit the senior residents.

Intergenerational living is an exciting and vibrant approach to housing. It will provide the convenience of aging in community, along with the institutional and community resilience that can be achieved through the proposed intergenerational housing model. Research on the impacts of seniors living in cohabitation with younger generations has shown positive results for both young and old. Taking cues from the case studies above, a similar effect could be achieved in AsiaTown. Below you will find the benefits and positive results of the intergenerational housing model the strategic vision for South AsiaTown seeks to implement.

AsiaTown

- New housing stock
- Affordable housing
- Senior residents' ability to age in place
- Connectivity to surrounding institutions and people
- Reduction in isolation and loneliness
- Healthier living

Cleveland

- Variety of housing stock
- Affordable housing
- Senior attraction to living in urban communities versus suburban communities
- Increase in volunteerism
- Increased awareness of intergenerational model

Cleveland State University

- Reduced student housing cost
- Mentorship
- Availability of cultural alliance for foreign students
- Access to unique culture of AsiaTown community
- Creates additional security/ safety for CSU students

This intergenerational housing model will allow residents to age in community instead of leaving the neighborhood. It will also provide opportunities for seniors to continue contributing to the AsiaTown and Greater Cleveland community.

Underlying Principles

Universal Design

Exhibit 51 Image source: Forrec https://www.forrec.com/blog/universal-design-creating-spaces-and-places-for-all/

The concept of universal design (also known as barrier-free and inclusive design) consists of the composition of the built environment so that it could be used to the greatest extent by all walks of life regardless of a person's age, size, sex, or ability. Universal design also embodies the ideas of walkability (the ability to have pedestrian-friendly environments for people of all ages), livability (the measurement of a community's quality of life), and visitability (the idea that communities should not only be built for the people that are in them but also so that people of any ability can functionally use the area as well).

It is imperative to create spaces that offers a wide range of needs which provides the maximum level of accessibility possible. This model can be applied to homes, businesses, parks, or any space within a community that people would have to use to make spaces that are usable by everyone.

Exhibit 52 Image source: University of Nevada, Las Vegas https://www.unlv.edu/studentwellness/about

Whole Person Approach

The "Whole Person Approach" is a multidimensional framework for promoting wellness, particularly within aging communities. To promote wellness, organizations or institutions using this approach look to ensure access to high-quality medical care while also developing opportunities to address the physical, emotional, intellectual, social, spiritual, environmental, and vocational needs of residents. These efforts often include providing services such as transportation assistance, social club organization, health and safety information workshops, health screening opportunities, volunteer home repair, exercise classes, or educational programs among many others. The coordination of these non-medical services and programs has proven to significantly improve the quality of life for senior citizens. To support those aging in place, "Whole Person" care programs can be organized by community service providers through the Naturally Occurring Retirement Community (NORC) model, or they can be organized by representative members of an aging community through the Village model. This approach can also be provided within Continuing Care Retirement Communities (CCRCs) for those who choose to live in a senior care facility.

Exhibit 53 Image source: Yaletown https://yaletowninfo.com/event/design-thinking-oscar-malpica-envisioning-labs/design-matters1/

Americans with Disabilities Act

Commercial and civic buildings must abide by standards set forth in the Americans with Disabilities Act (ADA). In the vein of universal design, the changes required by the ADA make public spaces accessible to anyone with physical limitations. The ADA has specific design requirements to make public accommodations friendly to patrons in wheelchairs, which by extension makes them more accessible to those with other mobility challenges. These design requirements include wide access routes and doorways, ramps instead of steps, low counters and sinks, and spacious restrooms with grab bars. In addition to mobility accommodations, the ADA provides specifications for communication elements, such as fire alarms with lights and sound, signs with specific sized lettering, and braille and symbols to convey crucial information such as restroom location. Unfortunately, ADA enforcement is inconsistent at best. Patrons can submit ADA complaints to the Department of Justice and can sue businesses to remedy non-compliance.

Design Considerations

Street Design

While roadway design of the twentieth century prioritized moving cars efficiently, the current best practices of roadway design encourage developing a "complete" streetscape that is safe for people of all ages, physical abilities, and transportation modes. Along commercial streets, sidewalks should be wide enough for two-way pedestrian traffic (~8' minimum) and allow space for outdoor seating and dining. At crosswalks, elements such as curb extensions and mid-street pedestrian islands can help improve safety by reducing the street crossing distance, providing refuge for pedestrians stuck in the middle, and reducing the drivable roadway size – encouraging slower driving. The addition of trees and landscaping along the road can provide many benefits, including street beautification, calming traffic, and reducing the roadway's impervious area contributing to more sustainable stormwater management. At a minimum, roadways should include a "bicycle sharrow" marking, reminding drivers to look out and make space for cyclists; however, dedicated bike lanes and protected bike lanes provide a significantly safer and more comfortable riding experience thus encouraging more bicycle traffic. Lastly, oversized roadways, particularly common in Cleveland, should have unnecessary lanes removed and lane widths reduced to 10' (or 11' where used by bus traffic) to slow traffic down by the roadway design itself rather than merely posting a slower speed limit.

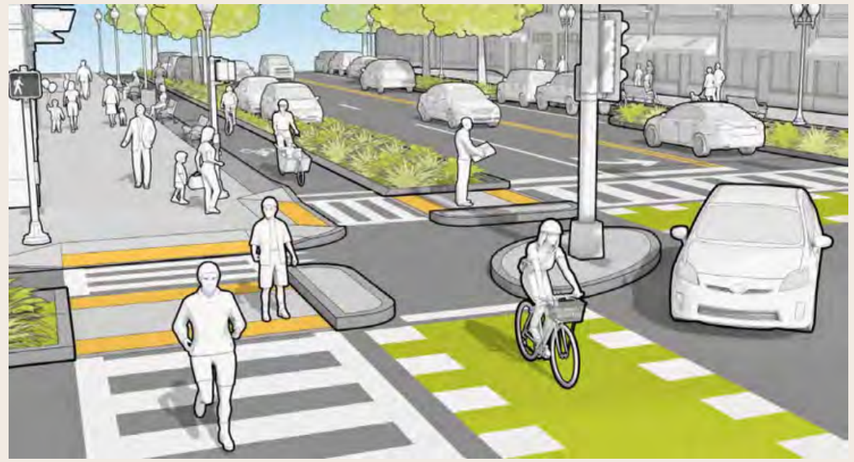


Exhibit 54 Image source: Pasadena Now https://www.pasadenanow.com/main/city-reconfigures-how-it-completes-street-plans-designs/

Exhibit 55 Transit Stop Concept

Transit Services

Accessible and affordable transportation options are vital in allowing aging citizens to meet their health, social, civic, and personal needs. While many American cities, including Cleveland, have developed to prioritize the personal automobile, this form of transportation is not ideal for many older adults. Driving can become a difficult or even dangerous task for many seniors and owning a vehicle can be prohibitively costly for those on a fixed income.

Public transportation is one way for older adults to access the destinations they need. In general, public transit providers should strive to offer frequent, reliable, ADA accessible, and affordable service to everyone. To make public transit more appealing to the elderly, service providers should ensure that routes stop at destinations particularly needed by seniors and install shelter, seating, and clear wayfinding signage at these stops. Some transit services even offer free transport to those accompanying an older person, reducing transit costs for those in need of assistance. Cities should also ensure that the walk to transit stops heavily used by seniors are safe and comfortable – minimizing the need for most users to cross major roadways.

Other transportation solutions can include subsidized taxi programs and nonprofit volunteer driving services. The State of Delaware currently offers the Senior Citizens Affordable Taxi program, which covers fifty percent of taxi fares for people over 65. One creative nonprofit model is The Independent Transportation Network of America. Members can either pay for this service directly or donate their unused vehicles for transportation service credit, and drivers can earn future credit for themselves through their service.

Exhibit 56 Image source: Cleveland.com https://www.cleveland.com/metro/2013/04/rtas_healthline_gets_internati.html

Exhibit 57 Image source: Sustainable Cleveland https://www.sustainablecleveland.org/vibrant_greenspace_celebration_years

Parks & Green Space

In accordance with principles of universal design, creating parks and greenspaces that are welcoming to older adults also makes those spaces more effective for people of all ages who wish to use them. Most importantly, a park must be located close by, ideally within walking distance. Complete streets facilitate a safe walk to these greenspaces. Small parks tucked into creative spaces such as alleyways and underused parking lots can be scattered throughout an area and therefore provide walking access to parks for more residents. Some features that make parks more friendly to the aging population are places to sit and pedestrian paths that are well-maintained and wide enough to push a wheelchair or stroller. Spaces to play games aimed at those with limited ability – such as tables for chess or bocce ball courts – can give older adults a purpose to come to and spend time in a park while socializing with others. The elderly can also volunteer to maintain a park, including gardening or trash pick-up. As well as being another opportunity for socializing with other seniors, this gives them ownership over the space.

Cultural Placemaking

Creative placemaking is a process by which individuals and community stakeholders strategically shape their neighborhood's character around arts and cultural activities. This effort seeks to engage the neighborhood residents to realize and celebrate their individual and collective identities in a way that addresses the social and economic issues within the community. This process should highlight the characteristics that make the community unique by building on local history and cultural influences while expanding old and developing new traditions that invite and engage the broader public. A key to creative placemaking efforts is for planners and organizers to build strong relationships with established community partners and a diverse set of stakeholders, including local artists and performers, early on in the process.

For Asiatowns specifically, these neighborhoods across North America have had success drawing visitors in several ways. These neighborhoods typically provide a collection of authentic dining, shopping, and entertainment options within walking distance, helping to establish the neighborhood as a year-round destination. On top of this, hosting cultural celebrations, such as Chinese New Year parades and Autumn Moon festivals, offers the broader public exciting opportunities to learn about and engage with the neighborhood residents' history and culture. Lastly, a distinct sense of place can be furthered through traditional East Asian architectural features and public art speaking to Asian-American history and culture. Ideally, these neighborhood features together should help to make Asian-American residents feel comfortable and at home while allowing visitors to learn about and enjoy a culture different than their own.

Exhibit 58 Image source: Public Art in Chicago http://chicago-outdoor-sculptures.blogspot.com/2009/09/chinatown-gateway.html

Public Engagement

Public Survey
Process

Community meetings and surveys provide the foundation necessary in building a plan that is equitable, sustainable, and that ultimately best serves its current and future residents. With this in mind, we conducted a months-long survey and stakeholder interview process to help shape our final recommendations.

Due to COVID-19, we were unfortunately unable to administer in-person surveys and interviews as was standard in previous Capstone projects. To accommodate for the unforeseen circumstances, we created a fully-online survey and held stakeholder interviews over phone and Zoom. The survey and stakeholder interview questions were created through a class-wide collaboration with guidance from Mr. Kastelic and Dr. Hilde. The survey questions, interview questions, and the interview consent form were then submitted and approved by Cleveland State University's Institutional Review Board (IRB) for Human Subject in Research prior to continuing with the community engagement process. Special considerations had to be made as the survey and all materials promoting the survey were in both English and Mandarin.

Exhibit 59 .

Exhibit 60 , Showing our survey on display in Asia Plaza

The online survey was created using Qualtrics and was made available to the public from mid-March through mid-April. Display stands were set up in Asia Plaza and in the CSU Student Center to promote engagement with the survey. After gaining written consent from local business owners, postcard-sized handouts were also distributed in select AsiaTown locations, including Park to Shop Supermarket, Asia Plaza Pharmacy, and Koko Bakery. The displays and handouts provided both a link and a QR code to the online survey. These links were also sent out to Midtown Cleveland's mailing list in their April e-newsletter.

In order to start the survey, respondents were required to answer one default question block in which they confirmed they were 18 years or older and provided their consent for participation. To adhere to IRB guidelines, survey results were anonymous and all questions were optional. It should be noted that, with 20 total responses, our survey response rate is considerably less than in previous years. This is due in large part to the pandemic and to the entirely remote format that we had to conduct the public engagement process through. To account for this less-than-ideal response rate for the survey, we required all students to conduct at least one stakeholder interview.

Findings

The survey consisted of two sections, with the first intended to gain insight into respondents' relationships to AsiaTown and the second to collect key demographics of the respondents. Of the 20 respondents, only 2 indicated they live in AsiaTown. Most respondents shop and run errands in the area, dine at local restaurants, and visit family or friends who live in AsiaTown. There was a mostly even spread of those who visit businesses in AsiaTown weekly, monthly, and less than once a month, with few indicating they visit daily.

Regarding safety, the majority of respondents indicated they feel somewhat safe in AsiaTown. Four respondents said they feel very safe, three said neither safe nor unsafe, and one indicated they feel very unsafe. We then asked questions regarding amenities and features that would make it easier and more enjoyable to visit AsiaTown. The key takeaway from these questions is that respondents would like the area to have better lighting, more greenspace and outdoor gathering spaces, and a central community or cultural center.

We also asked where respondents would like to live as a senior citizen. Nearly 40% of responses indicated that living with family is their preferred choice, other responses included in a retirement facility, in their current neighborhood, and other options.

To conclude the first section of the survey, we asked two extended response questions. When asked to describe their favorite things about AsiaTown, nearly every response indicated a love of the unique and authentic restaurants and of the rich cultural diversity of the neighborhood. Regarding improvements respondents would like to see in AsiaTown, safety was a recurring answer. Respondents also indicated the need for improved walkability, improved greenspace areas, and the desire to be more connected to the surrounding neighborhoods.

Just over 40% of respondents were between the ages of 18-29, 26% were 50-64, and the remaining were equally spread throughout the 30-39 and 40-49 ranges. Most respondents were Asian (52%), and the second-largest response group was Caucasian (37%). Nine respondents (47%) had an annual household income of more than $60,000, and over half indicated they live in a household made up of two people.

Stakeholder Interviews

Process

In conjunction with the community online surveys, our team conducted stakeholder interviews via Zoom or over the phone. The overall goal was to identify key stakeholders and their roles or relationships with the AsiaTown community, as well as their insights on how the neighborhood has changed over time, the biggest challenges for the senior population, its strengths and weaknesses along with sharing their visions for the future. Stakeholder participants were community and city leaders, developers, businesses, and others who have an interest or concern for the AsiaTown community, which included representation from the City of Cleveland, AsiaTown, Campus District, Midtown, and St. Clair Superior Community Development Corporations (CDCs), Dorsky & Hue International, North Coast Commercial Group, the Organization of Chinese Americans, RDL Architects, and Stantec Inc.

Findings

Results from the surveys concluded that the majority of the participants would all agree there is less activity in the neighborhood since the relocation of Dave's grocery store which has impacted residents significantly. The lack of walkability proves to be a challenge for seniors and residents who has mobility issues. The absence of greenspaces and public parks leaves a void in the neighborhood to encourage physical activities and social gatherings. AsiaTown possesses a strong cultural environment, however, it needs more to establish its own identity and a sense of belongingness among its residents. Technological and language barriers need to be addressed in order to better enhance the communication of existing neighborhood programs and services that are available for residents.

The strengths of the AsiaTown community were identified based on its location near major highways and interstates and its potential for future development, its proximity to institutions such as Cleveland State University (CSU), specialized grocery stores, selection of restaurants, and the support of small businesses. Weaknesses included poorly maintained infrastructure (sidewalks, buildings, and landscaping), environmental issues such brownfield sites and the shrinking tree canopy, concerns of safety and the lack of proper lighting, the need for cultural placemaking, wayfinding, and the promotion of the neighborhood's assets. The housing market is also lacking as it is limited on diverse options for people with different incomes, ages, and family situations. The majority of the existing housing stock is old and in dire need of renovations. Additionally, the availability of rental and for-sale units are usually passed through family members or word of mouth which limits newcomers to the area. There is also a need for multifamily, senior, student, and intergenerational developments which promote the aging in place concept and is built with universal design in mind.

In conclusion of the stakeholder interviews, participants said they see the future of the AsiaTown community as a vibrant, accessible, inclusive, walkable, and age-friendly community where all are welcome. The process should include promoting the uniqueness of the neighborhood's cultural assets and bringing additional resources closer to residents. It comprises of building a synergistic partnership between CSU and AsiaTown through physical connections such as improving visibility, streetscaping, and the connectivity between the two. It was mentioned programmatic connections that offer Asian Studies and programs for senior and immigrant populations at CSU could foster multi-generational connections. It is in agreeance in order to bring this into fruition, it will take a collaborative effort from all who seek the best interests of the residents as a whole.

ACCESS

AsiaTown

Market Analysis

Multi-Family Housing Analysis

In order to determine the gaps in the products and services available to the surrounding communities that our plan should look to fill, a market analysis was undertaken to establish the current and future supply and demand for a range of uses, including multi-family, senior, and student housing, as well as retail and office. The first facet of the market analysis concerned Multi-Family (MF) Housing, and the initial step in the inquiry involved creating a Housing Primary Market Area (PMA), shown in Exhibit 61. To generate the housing PMA, a ten-minute drive time buffer with regular traffic conditions was created from the proposed project site to represent a reasonable area to expect to attract possible tenants (Peiser, 2012). Within the PMA, all 4- and 5-star MF properties were inventoried, and their rent and unit composition were categorized to establish a comparable to guide and inform any potential project. Results of this inventory can be seen in Exhibit 62. Within the PMA, there are just under 8,700 units spread across 57 buildings, with another 659 units under construction. Units are currently renting for an average of $1.74 per square foot and nearly $1,700 per unit. The current vacancy rate of 23.3%, however, is nearly twice as high as the 10-year average (CoStar, 2021).

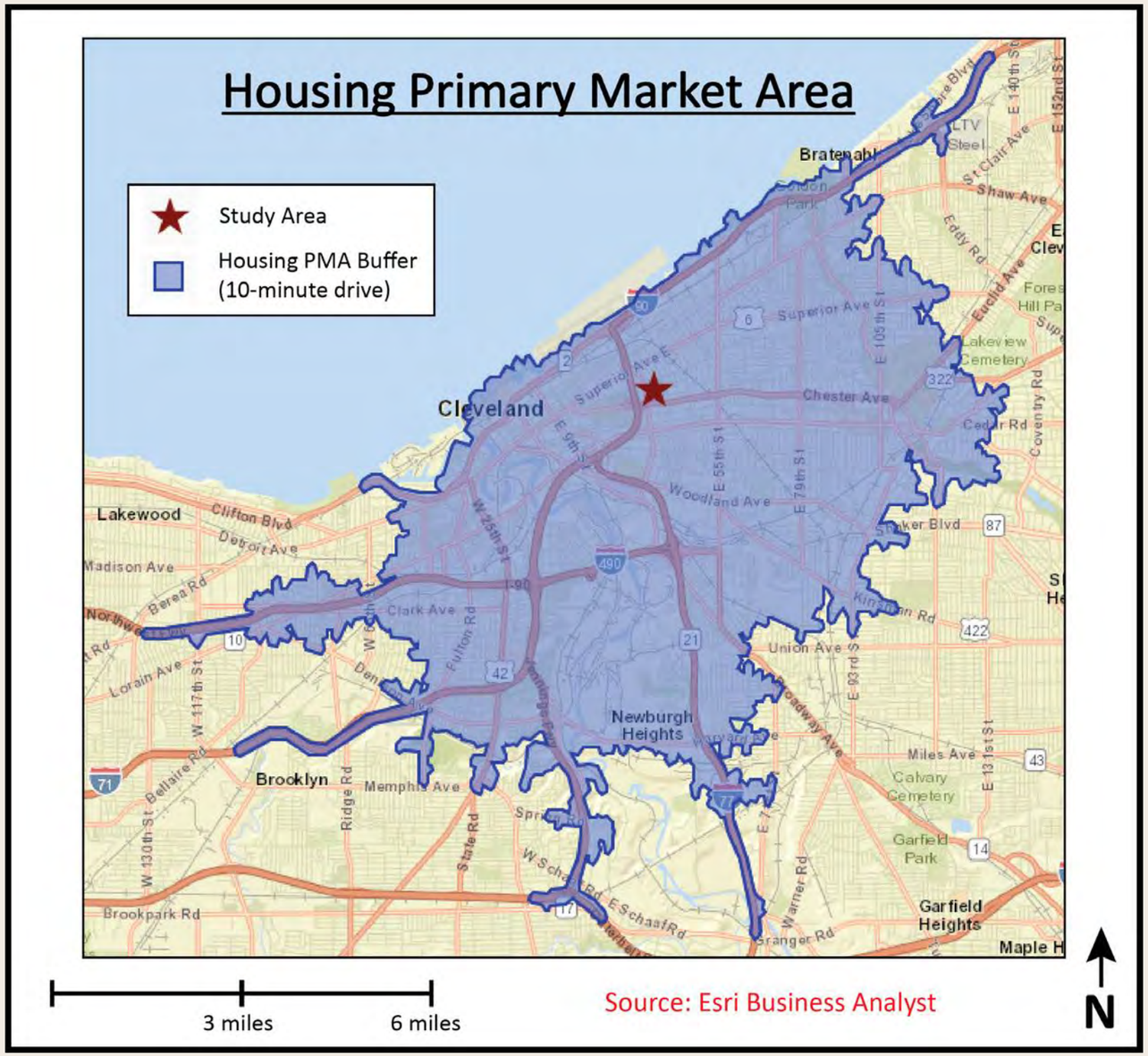


Exhibit 61 .

4 & 5 Star MF Housing Within PMA	
Inventory	
Buildings	57
Units	8,658
Avg Units/ Building	152
Avg SF/ Unit	945
Units Under Construction	659
Vacancy Rate	
Current	23.3%
Frictional	11.0%
Average Rent	
$/SF	$1.74
$/Unit	$1,652
Studio	$1,068
1 Bedroom	$1,375
2 Bedroom	$2,037
3 Bedroom	$2,742
Source: CoStar	

Exhibit 62 .

Exhibit 63 .

Housing Niche Analysis Results				
House Price Affordability Range		**Rental Price Affordability Range**		**Net Demand**
$105,000	$119,997	$875	$999	(958)
$120,000	$134,997	$1,000	$1,124	(83)
$135,000	**$149,997**	**$1,125**	**$1,249**	**487**
$150,000	$164,997	$1,250	$1,374	(156)
$165,000	**$179,997**	**$1,375**	**$1,499**	**39**
$180,000	**$194,997**	**$1,500**	**$1,624**	**209**
$195,000	**$209,997**	**$1,625**	**$1,749**	**742**
$210,000	**$224,997**	**$1,750**	**$1,874**	**772**
$225,000	**$239,997**	**$1,875**	**$1,999**	**59**
$240,000	**$254,997**	**$2,000**	**$2,124**	**99**
$255,000	**$269,997**	**$2,125**	**$2,249**	**380**
$270,000	**$284,997**	**$2,250**	**$2,374**	**380**
$285,000	**$299,997**	**$2,375**	**$2,499**	**380**
$300,000	**$314,997**	**$2,500**	**$2,624**	**33**
$315,000	**$329,997**	**$2,625**	**$2,749**	**118**
$330,000	**$344,997**	**$2,750**	**$2,874**	**142**
$345,000	**$359,997**	**$2,875**	**$2,999**	**142**
$360,000	$374,997	$3,000	$3,124	142
$375,000	$389,997	$3,125	$3,249	160
Sum of Green Range: 3,983 Units Needed				
10% project capture: 398 Units				

A housing niche analysis was undertaken to establish the gaps in housing supply and the rental ranges that fall within these differences. First, 2020 household income data was collected for the PMA, inflated to 2021 values, and distributed across the income spectrum (Esri Business Analyst, 2020 Community Profile). Data for owner-occupied homes, rentals, and vacant homes within the PMA was then collected to compare existing supply against demand, with the data for all three sets manipulated to fit the appropriate ranges (Esri Business Analyst, 2020 Housing Profile & 2014-2018 ACS Housing Summary). The process for owner-occupied homes used a 3X multiplier of the annual household income for the home price affordability range, the process for rental price affordability used 30% of monthly household income, while the process for distributing the vacant properties follow a two-step system that assigned a proportion of rental and owner-occupied homes that were vacant for each income band using national figures on vacancy rates for both categories, as well as the proportion of each category as the PMA is currently comprised. A ten percent secondary demand was added as well, and a selection of the results can be seen in Exhibit 63. From the niche analysis, it was revealed that within the PMA homes valued from $45,000-$135,000, as well as units renting for $375-$1125 a month, had a large negative net demand and were substantially overbuilt. In contrast, the housing values and rental units with prices higher than $135,000 and $1,125 respectively were shown to have a large positive net demand. Within the green price bands shown in Exhibit 63, a total of just under 4,000 units is needed to meet the net demand. Assuming a capture rate of ten percent, projects within our study area could absorb nearly 400 units of housing within a rental range that corresponds very favorably with the average rents achieved by the current 4- and 5-star competitors within the PMA.

Senior Housing Analysis

The next area of the market analysis addresses senior housing. The Primary Market Analysis (PMA) that was used to assess the multifamily housing market was also applied based on all 3- and 4-star senior housing properties that were inventoried, along with their rent and unit composition were categorized (exhibit 64) as with the multifamily properties mentioned in the previous section. Results determined there are just over 2,700 units within the PMA spread across 21 buildings, with no units currently under construction or planned in the next three years. Units are currently renting for an average of $1.09 per square foot and just over $900 per unit. The current vacancy rate is 4.7%, nearly 10% less than the 10-year average of 5.2%, and 19 of the 21 competitor properties are considered "affordable" rent types (CoStar, 2021). A housing demand estimate was then used to understand the number of units needed to satisfy the demand for senior housing with the PMA moving forward. The data consisted of the anticipated units that will be absorbed and units that will be demolished, the difference in current vacancy and historical vacancy, and the difference in current construction and historical construction and delivery of units (CoStar, 2021; Fanning, 2015). From this calculation, estimated annual demand for senior housing within the PMA can be established, and from that annual demand, the possible unit absorption a senior project within the study area could reasonably expect to achieve. The results of this analysis are shown in Exhibit 65 and, assuming a 30% project capture rate (a conservative assumption considering the absence of any competing new projects in the near future), the project can look to absorb 109 units over a three-year period. Along with this analysis, and displayed in Exhibit 66, it should be noted that the senior population within the primary market area is projected to increase in both number and percentage of the total population over the next five years (Esri Business Analyst, 2020 Age 50+ Profile).

Exhibit 64 .

3 & 4-Star Senior Housing Within PMA	
Inventory	
Buildings	21
Units	2,715
Avg Units/ Building	129
Avg SF/ Unit	793
Units Under Construction	0
Vacancy Rate	
Current	4.7%
Frictional	5.2%
Average Rent	
$/SF	$1.09
$/Unit	$941
Studio	$823
1 Bedroom	$820
2 Bedroom	$921
3 Bedroom	$1,315
Rent Type	
Affordable	19
Market Rate	1
Mix	1
Source: Costar	

Exhibit 65 .

Senior Housing Demand Estimate	3 Star+ Senior Housing Demand Within PMA
(Yearly Net Absorption of Units +	53
Anticipated Demolitions)	0
minus	**minus**
(Actual Vacancy -	128
Frictional Vacancy)	141
minus	**minus**
(Units Under Construction -	0
Avg Units Under Construction)	55
equals	**equals**
Current Annual Demand for 3 Star Plus Senior Housing Units	121
Estimated 3-yr PMA Demand	363
Project Capture Rate	30%
Possible Project Absorption	**109**
source: CoStar & Market Analysis for Real Estate (Fanning, 2005)	

Exhibit 66 .

Senior Population Within PMA (65+)		
	Count	% of Total Population
2020	17,357	12.6%
2025 Estimate	19,895	14.3%
Increase	2,538	1.7%
% Increase	14.6%	13.5%
Source: Esri Business Analyst		

Student Housing Supply and Demand

The proximity of the site to the Cleveland State University campus makes it a potential destination for students living in off-campus housing. The proposed plan's goal to introduce new intergenerational housing that will mix college students with seniors requires a demand for student housing. To gauge potential demand for student housing, data describing the student population of Cleveland State was necessary. As seen in Exhibit 67, Cleveland State's student population has hovered around 16,000 over the last 5 years with little growth or decline (CoStar, 2021). Using similar trends over the next 5 years, demand will increase little. Assuming that roughly 25% of students live near campus, which is on par with similar sized institutions, the total bed demand is around 4,027, as noted in Exhibit 68. (CSU Campus Master Plan, 2014). The supply of student housing includes dorms, non-dorm student focused housing as well as other multi-family units that are not targeted towards students. Exhibit 69 shows that within a half-mile of campus, there are an estimated 10,046 beds based on an average bed to unit ratio of 1.82 (CSU Campus Master Plan, 2014, CoStar, 2021). Of these, there are 1,442 student-only beds as well as 2,883 beds that are targeted towards, but not exclusive to, CSU students (CoStar, 2021). Assuming a generous 50% capture of students, this equates to about 1,442 beds occupied by students. Within the half-mile area, there are another 7,163 beds that are not targeted towards students but, assuming about 15% of these beds are occupied by students, that equals about 1,075 student occupied beds (CoStar, 2021).

Exhibit 67 .

CSU Student Enrollment		
Year	Projected Students	% Growth
2023-2024	16,110	0.02%
2022-2023	16,106	0.00%
2021-2022	16,106	0.61%
2020-2021	16,008	-0.60%
2019-2020	16,104	0.22%
2018-2019	16,069	-1.84%
2017-2018	16,371	-2.92%
2016-2017	16,864	-0.30%
2015-2016	16,915	-0.12%
2014-2015	16,936	-1.00%
2013-2014	17,107	-0.99%
2012-2013	17,278	0.28%
2011-2012	17,229	3.03%
2010-2011	16,722	3.12%
2009-2010	16,216	7.11%
2008-2009	15,139	-
Source: Costar		

Exhibit 68 .

Current Student Housing Demand		
Assumptions		
	Bed to Unit Ratio	1.82
	Students living on or near campus	25%
Demand		
	Current Students	16,106
	Bed Demand	4,027
	Unit Demand	2,212
Source: Costar, 2014 Campus Master Plan		

Exhibit 69 .

Potential Student Housing within .5 Mile of Campus		
Inventory	Buildings	34
	Units	5520
	Estimate of Beds	10046
	Avg Units/Building	117
	Avg SF/Unit	829
Units Under Construction		0
Vacancy Rate		
	Current	19.9%
	Frictional	12.2%
Average Rent		
	$/SF	$1.68
	$/Unit	$1,469
Source: Costar		

Based on these results, the total number of beds available to students within a half-mile of campus equals 3,959 as illustrated in Exhibit 70. With a demand of about 4,027 beds, there is a current demand for about 68 student focused beds, or around 37 units, within a half-mile of campus. Assuming a 10% capture of the gap, the project could support about 7 student units, as shown in Exhibit 71. During the process of conducting the market analysis for student housing, the University announced the CSU 2.0 Plan which sets the goal of increasing the student population by nearly 4,500 to a total of 20,610 students by the year 2025. Using this projection, and the same process outlined above, this creates a larger gap between demand for student focused housing and the current supply. Estimating the number of students interested in living near campus to be 25% of the total student body, the projected increase in student population results in a demand for 5,153 beds available to students (CSU Campus Master Plan, 2014). Without further construction, the supply will remain around 3,959 which results in a net demand of 1,194 beds or around 656 student focused units. Again, assuming a 10% capture of the gap, around 119 student units could be supported. Should CSU succeed in attracting even a fraction of their goal, there will be an increase in demand for student housing within a half-mile of the Cleveland State Campus.

Exhibit 70 .

Potential Student Housing in .5 Mile Radius of CSU		
Multi-Family Type	**Beds**	**Units**
Student-Only	1442	655
Student-Focused	2883	2052
50% Capture of Students	1442	1026
Non-Student	7163	3468
15% Capture of Students	1075	520
Total	3959	2201
Source: Costar		

Exhibit 71 .

Student Housing Demand and Supply Gap		
Current Gap		
	Current Student Demand	4,027
	Current Beds Available	3,959
	Current Bed Gap	68
	Supportable Units, Assuming 10% Capture of Gap	**7**
Projected Gap (CSU 2.0 Plan)		
	Projected Student Demand	5,153
	Current Beds Available	3,959
	Projected Bed Gap	1,194
	Supportable Units, Assuming 10% Capture of Gap	**119**
Source: Costar, 2014 Campus Master Plan, CSU 2.0 Plan		

Retail Market Analysis

Market Area

Determining the retail market around the site was a multiple step process beginning with defining the primary market area (PMA), determining the supply and demand, and then identifying specific retail uses that are in demand within the outlined PMA. The primary market area for retail was defined based on a desire to include a medium sized, all-purpose grocery within the site area. To this end, the gravity model, shown in Exhibit 72, was utilized and used surrounding non-specialty grocery stores such as the Heinen's downtown, the Dave's in Midtown and the Save A Lot on Superior Avenue as competitors. The resulting boundaries were then adjusted based on road linkages and perceived boundaries to obtain the defined retail primary market area.

Retail Gravity Model					
Grocery Store	**Address**	**SF**	**Distance**	**SF Ratio**	**Distance Boundary**
Proposed Grocery Store	Study Area (NW section)	42,000	-	-	-
Dave's Market & Eatery	1929 E 61st Street	56,190	1.1	1.34	**0.5**
Save A Lot	7210 Superior Ave	14,500	1.8	0.35	**1.1**
Heinen's	900 Euclid Ave	27,000	1	0.64	**0.6**

Exhibit 72 .

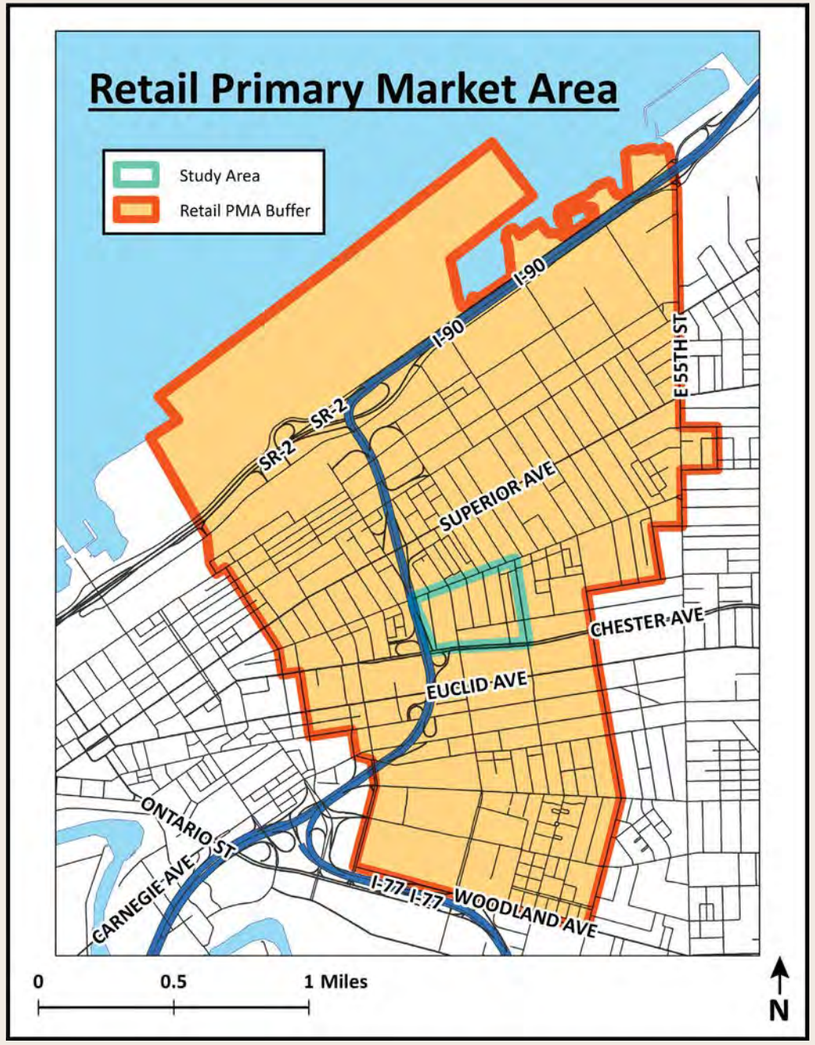


Exhibit 73 .

Supply & Demand

The next step was to obtain market area demand statistics, summarized in Exhibit 74. Based on data obtained from the ESRI Business Analyst, the defined PMA contained roughly 4,828 households and had a median household income of $15,074 and an average household income of $35,021 (ESRI Business Analyst Community Profile, 2020). Due to the low median income, a low-income multiplier was added to account for additional non-work income. Raw income data from 1990 was inflated to 2021 to get the multiplier income brackets and then the median household income was divided by the 99% bracket to find that the proportion of the PMA income was around 86% of the multiplier (Simons, 1996). The average household income of $35,021 was then multiplied by the 4,828 households in the area to get a non-inflated PMA income of $169,081,388. The income was then inflated to 2021 which yielded a PMA income of $171,955,772. The low-income multiplier of 86% was then multiplied and added to this amount to generate an estimated aggregate PMA household income of $319,837,735. The final step in determining the retail PMA spending power was to take the number of daytime workers which, based on data from Esri Business Analyst, totals about 13,930 and calculate their expenditures within the PMA (Esri Business Analyst Community Profile, 2020). Workers within a 30-minute drive of the PMA have an average individual income of $33,666 which, when multiplied by the 13,930 workers in the PMA, gives them about $468,967,380 of total spending power (Esri Business Analyst Community Profile, 2020). The final step was to estimate the amount of time spent at work which was calculated by taking a 40-hour work week and multiplying that by 50 weeks out of the year to get about 2,000 hours spent at work in a given year. The total amount of hours in a year was then calculated to be 8,736 and, when divided, it is estimated that workers spend roughly 22.8% of their time within the retail PMA. The $468,967,380 of worker spending power was multiplied by this 22.8% and to get around $108,890,371 of worker-driven spending within the retail PMA. This amount was then added to the household spending to get a total estimated PMA spending power of $428,728,106.

Retail Demand Table

PMA Information	Amount
Total Population	11,985
Households in PMA	4,828
Average HH Income	$35,021
Total Income in PMA	$169,081,388
Total Income (2021)	$171,955,772
Low Income Multiplier	86%
Additional Income	$147,881,964
Total Household PMA Income	$319,837,736
Workers	13,390
Average Income of Workers within 30 minutes of PMA	$33,666
Estimated Time Workers Spend in PMA	22.80%
Estimated Income from Workers	$107,070,178
Total Worker Income (2021)	$108,890,371
Total PMA Spending Power	$428,728,106

Source: Esri Business Analyst, ACS Population Summary

Exhibit 74 .

Niche Analysis

Following the calculation of retail demand, the next step was to inventory supply and then conduct a retail niche analysis, the partial results of which are shown in Exhibit 75, to identify gaps where there was potential for new retail projects. Using information from the ULI Dollars and Cents of Shopping Centers book and information provided by a previous market analysis report, a table was created that separated retail uses into 3 broad categories and, within those categories, more specific sub-categories (Urban Land Institute, 2008, Simons, 2013). Within each sub-category, there is a percentage of household income spent on each use, a capture rate, average sales per square foot, and a typical square footage per use (Urban Land Institute, 2008). The calculated PMA spending power was then multiplied by the percentage of household income spent and the 70% capture rate to get a potential sales number for the use. From there, the potential sales were divided by the 2021 average sales per square foot to generate a total supportable square footage for each use within the PMA. In order to assess the gaps in the retail uses, a survey of every retail use in the PMA was conducted to identify their first-floor square footage and then categorize them based on type. These uses were totaled to create an existing square footage for each retail use which was then subtracted from the supportable square footage to obtain a net supportable square footage for each sub-category of retail. The final step was to divide the net supportable square footage by the typical store square footage which created an estimate of the number of stores that the PMA could support. The retail niche analysis yielded important information on the supportable retail types within the PMA. Based on the results, the most needed retail types include a women's clothing store, jewelry stores, optical goods stores, and a family clothing store. As part of the plans for the site area, the intention was to include a medium-sized grocery which, based on the retail analysis, the PMA could support around a 44,338 square foot grocery. Other possible supportable uses include a small community and recreation center, a record store, a liquor store, and a candy store.

Retail Niche Analysis

Category	Spending Power in PMA	% of HH Income Spent	Capture Rate	Potential Sales	Supportable SF	Existing SF	Net Supportable SF	Typical SF/Store	Stores Needed
Retail Goods									
Women's Clothing & Specialty Stores	$428,728,106	1.51%	70%	$4,531,656	23,974	4,841	**19,133**	6,000	**3.2**
Jewelry Stores	$428,728,106	0.39%	70%	$1,170,428	3,035	500	**2,535**	1,250	**2.0**
Optical Goods Stores	$428,728,106	0.22%	70%	$660,241	2,207	0	**2,207**	1,500	**1.5**
Family Clothing Stores	$428,728,106	0.56%	70%	$1,680,614	4,819	0	**4,819**	4,400	**1.1**
Supermarket or Grocery Store	$428,728,106	8.17%	70%	$24,518,960	44,338	0	**44,338**	42,000	**1.1**
Community & Recreation Services	$428,728,106	1.94%	70%	$5,822,128	32,311	27,683	**4,628**	5,000	**0.9**
Candy, Nut, & Confectionery Stores	$428,728,106	0.07%	70%	$210,077	554	0	**554**	800	**0.7**
Record Stores	$428,728,106	0.21%	70%	$630,230	1,808	0	**1,808**	3,250	**0.6**
Beer, Wine, & Liquor Stores	$428,728,106	0.37%	70%	$1,110,406	2,697	1,500	**1,197**	3,000	**0.4**
Home Improvement Stores	$428,728,106	0.37%	70%	$1,110,406	6,231	5,800	**431**	7,500	**0.1**
Consumer Services									
Laundry, Dry Cleaning, & Tailor	$428,728,106	0.72%	70%	$2,160,790	9,845	6,700	**3,145**	1,500	**2.1**
Accounting & Tax Preparation	$428,728,106	0.35%	70%	$1,050,384	2,144	1,000	**1,144**	1,000	**1.1**

Exhibit 75 .

Office Space Analysis

The final portion of the market analysis involves an assessment of the current and future supply and demand for Class B Office Space. Referencing Exhibit 76, the stock of Class B office space in the Midtown submarket has contracted by just over 4% in the past 12 years, with the vacancy rate dropping by over half to a low of 5%. Along with this, the overall 5-year employment forecast for the Cleveland market as a whole shows an increase in both "financial activities" and "professional and business services," two areas that would be consumers of office space. Finally, although the vacancy rate has been below 10% for the past five years, there has been very little construction, with insufficient construction planned to meet the anticipated 5-year net absorption (CoStar, 2021). With these factors in mind, the inclusion of office space within the project would be appropriate, with a recommendation for 12,000-15,000 square feet of Class B space.

Midtown Class B Office Space			
	2009	2021	% Change
Total SF	3,708,801	3,550,888	-4.3%
Average Annual Rent/SF	$15.15	$18.30	20.8%
Vacancy	10.1%	5.0%	-50.5%
Anticipated 5-yr Net Absorption	57,231		
SF of Anticipated Construction	45,000		
Difference	12,231		
5-yr Employment Forecast for Cleveland Market			
Financial Activities	0.6%	increase	
Professional and Business Services	1.6%	increase	
Source: CoStar			

Exhibit 76 .

Single and Two-Family Residential Analysis

The two census tracts included in the current housing trends analysis include 1083.01 and 1084. The two census tracts have a total of 1,600 total housing units. Exhibit 77 describes the total housing units and vacancy rates in the two census tracts compared to the Cleveland-Elyria Metropolitan Statistical area. Homeowner vacancy rates are significantly lower than the vacancy rates on rental properties. The combined tracts have a total of 2.9% homeowner vacancy versus 12% rental vacancy. These vacancy rates are slightly higher than the. Cleveland-Elyria MSA. Exhibit 78 details the mortgage status of owner-occupied housing units. The census tracts have very low mortgage rates. Tract 1083.01 has a mortgage on 20.9% of owner-occupied homes and tract 1084 has a mortgage of 27.1%. The mortgage rate in the city as a whole is 62.7%.

Housing units in the area are much older than the city at large. Exhibit 79 details the year in which the housing units were built. Sixty-eight percent of the housing in the area was built before 1939. Almost 75% of housing was built before 1940. The table also illustrates the lack of current housing development in the census tracts. Only 2% of the housing was built after the year 2000. The majority of the housing in the study is single-family or doubles. Home values in the neighborhood are relatively low. More than half of the homes have a value under $50,000 and 70% have a value under $100,000 (Exhibit 80). Low home values can make conventional bank financing for purchases or renovations difficult to obtain. There are programs that can be promoted to current residents who wish to renovate. The Cleveland Restoration Society has a program called the Heritage Home Program. Owner-occupied as well as rental properties with less than 3 units that were built before 1970 are eligible for low-interest renovation loans (Cleveland Restoration Society). CHN Housing Partners has also launched a program targeted at loans for under $100,000. Low-income home buyers are also eligible for down payment assistance with the Cuyahoga County DPA Program (CHN Housing Partners).

Exhibit 77 .

Housing Vacancy Rates

Location	Total Housing Units	Occupied Housing Units	Vacant Housing Units	Homeowner Vacancy Rate	Rental Vacancy Rate
Census Tract 1083.01	944	746	198	0	9
Census Tract 1084	656	541	115	2.9	3
Cleveland-Elyria, OH Metro Area	962179	861912	100267	1.5	6.2

Source: www.data.census.gov Table DP04: 2019-ACS 5 Year Estimates

Exhibit 78 .

Mortgage Status

Location	Total Owner Occupied Units	Housing Units with a Mortgage		Housing units without a mortgage	
		# of Units	% of Total	# of Units	% of Total
Census Tract 1083.01	139	29	20.9	110	79.1
Census Tract 1084	170	46	27.1	124	72.9
Cleveland-Elyria, OH Metro Area	559157	350525	62.7	208632	37.3

Source: www.data.census.gov Table DP04: 2019-ACS 5 Year Estimates

Exhibit 79 .

Year Built

	2014 or Later		2010 to 2013		2000 to 2009		1990 to 1999		1980 to 1989		1970 to 1979		1960 to 1969		1950 to 1959		1940 to 1949		1939 or earlier	
Location	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total
Census Tract 1083.01	0	0	6	0.6	0	0	22	2.3	82	8.7	93	9.9	67	7.1	0	0	73	7.7	601	63.7
Census Tract 1084	0	0	0	0	29	4.4	23	3.5	12	1.8	48	7.3	9	1.4	37	5.6	4	0.6	494	75.3
Cleveland-Elyria, OH Metro Area	10075	1	11649	1.2	68212	7.1	83820	8.7	65258	6.8	119213	12.4	128645	13.4	173853	18.1	73132	7.6	228322	23.7

Source: www.data.census.gov Table DP04: 2019-ACS 5 Year Estimates

Exhibit 80 .

Home Value of Owner Occupied Units

	Less than $50,000		$50,000 to $99,999		$100,000 to $149,999		$150,000 to $199,999		$200,000 to $299,999		$300,000 to $499,999		$500,000 to $999,999		$1,000,000 or more	
Location	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total	# of Units	% of Total
Census Tract 1083.01	82	59	36	25.9	11	7.9	0	0	1	0.7	3	2.2	6	4.3	0	0
Census Tract 1084	46	27.1	55	32.4	69	40.6	0	0	0	0	0	0	0	0	0	0
Cleveland-Elyria, OH Metro Area	42599	7.6	112110	20	120956	21.6	100229	17.9	103011	18.4	59910	10.7	16679	3	3663	0.7

Source: www.data.census.gov Table DP04: 2019-ACS 5 Year Estimates

Financing

While the thought of this intergenerational housing model has well intentions and ambitious goals, the understanding of finance and reality warrant the solicitation of all available funding opportunities. The below list will outline the most advantageous funding sources for the intergenerational housing model the strategic vision for South AsiaTown seeks to implement.

Primary Funding Sources:

1. **LIHTC** – Low-Income Housing Tax Credit (Federal)
    a. **HUD** - *U.S. Department of Housing and Urban Development administers Federal aid to local housing agencies (HAs) that manage the housing for low-income residents at rents they can afford. HUD furnishes technical and professional assistance in planning, developing, and managing these developments (U.S. Department of Housing and Urban Development, 2021).*
2. **NMTC** - New Market Tax Credit (State)
    a. *Provides an incentive for investors to fund businesses in low-income communities. These "new markets" are traditionally underserved by private sector capital (Ohio Development Services Agency, 2021).*
3. **OHFA** – Ohio Housing Finance Agency (State)
    a. *A tax incentive program designed to increase the supply of quality, affordable rental housing by helping developers offset the costs of rental housing developments for individuals with low- to moderate-income (The Ohio Housing Finance Agency, 2021).*

Secondary Funding Sources:

1. **CDBG** – Community Development Block Grant - City of Cleveland (Local)
    a. The consolidation of ten federal housing and urban development programs into one flexible grant which provides funding for local improvement projects (Department of Community Development, 2021).
2. **CDA** - Cleveland Development Advisors - An affiliate of Greater Cleveland Partnership (Local)
    a. Provides subordinate, gap or bridge financing to catalytic real estate and business development projects in the City of Cleveland. We welcome the opportunity to learn more about your project (Cleveland Development Advisors, 2021).
3. **The Cleveland Foundation** (Local)
    a. Offers numerous creative and rewarding ways to donate to the community, some with significant tax advantages (The Cleveland Foundation, 2021).
4. **ARIEL Ventures, LLC** (Local)
    a. Structures multi-layered project financing in public-private partnerships, that combine comprehensive economic development financing incentives to attract businesses and stimulate economic development in Ohio and in other states nationally and works closely with government agencies, port authorities, US and international chambers of commerce, economic / community development corporations, investors, and developers (Ariel Ventures, 2021).

Additional Funding Sources:

In-Kind:

1. Midtown Cleveland Inc
2. Qualified Opportunity Zone Fund
    a. Investment vehicle that is set up as either a partnership or corporation for investing in eligible property that is in a Qualified Opportunity Zone
3. Cleveland State University

As one can see, the intergenerational housing model the strategic vision for South AsiaTown seeks to implement will require creative and strategic financing to bring the idea to fruition. The primary financing options are imperative to aid and advance the AsiaTown community regarding its assets, culture, and viability. The second, third and in-kind financing are also important and necessary to propel this intergenerational housing model to completion and beyond.

Corridors

Circulation

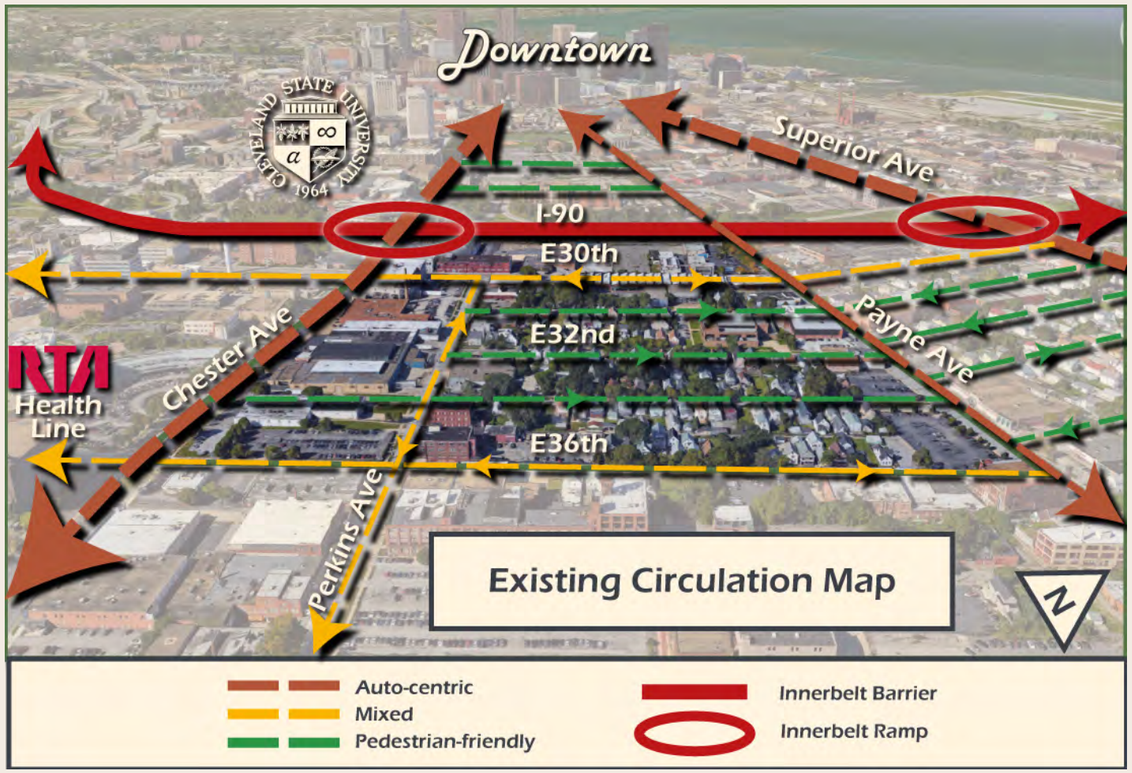


Exhibit 81 .

To enhance mobility for pedestrians and cyclists within the neighborhood, our plan proposes zoning and streetscaping changes along the Payne and Perkins corridors. To improve access to adjacent neighborhoods, we have focused on designing improvements to the Payne Ave bridge over I-90 and the intersection of Chester and E36th. While improving access to CSU along/across Chester Ave would be ideal, this was determined to be less feasible due to the innerbelt on/off ramps and high volume of traffic using Chester legitimizing its number of lanes and roadway width.

Currently, the study area is disconnected from adjacent neighborhoods and amenities due to the innerbelt barrier to the west and the high volume and speed of cars moving along Chester Ave to the south. Payne Avenue to the north, despite low traffic volumes, is also very auto-centric and feels unsafe for pedestrians and cyclists. Between the roadway conditions and lack of park space in the study area, it is no surprise that residents report going on walks up and down their streets rather than around their neighborhood.

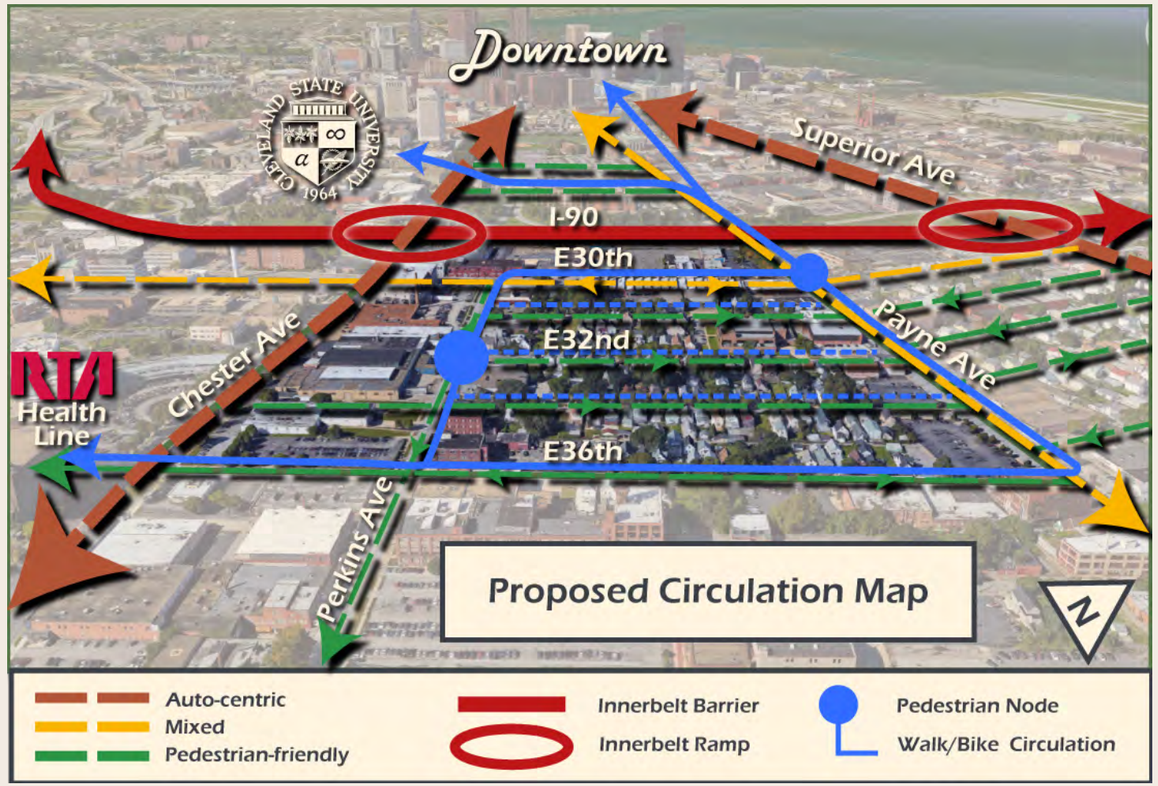


Exhibit 82 .

Payne Avenue Overview

Exhibit 83 .

Our vision sees Payne Avenue further developing into a strong commercial corridor for the area that effectively connects over I-90 to the northeastern edge of Cleveland State's campus. We are recommending infill development of vacant lots, surface lots, and non-adaptable industrial parcels with multifamily and commercial uses that align with our market analysis. Industrial uses should be phased out in favor of mixed-use, multifamily, and commercial spaces. For multifamily, this includes market-rate and low-income housing options. Commercial development should fill the market area's missing uses, including women's clothing and specialty stores, jewelry stores, optical goods stores, family clothing stores, laundry/dry cleaning/tailor, and accounting/tax preparation services.

Beyond infill development, we encourage adaptive reuse when feasible of architecturally significant buildings. There is an art deco-style garage at the southeastern corner of Payne Avenue and E. 30th that could be transformed into a cafe or other food service space. The former Dave's Market site has great potential to become a business incubator or food hall space. The warehouse located on the south side of E. 27th street and Payne has a unique historic feel and should be preserved; while it's proximity to the highway precludes this building becoming multifamily lofts, it would have great potential as a museum or other arts-focused space. Likewise, the building on the southeastern corner of Payne Avenue and E. 36th Street should continue to serve as rentable offices and artist workspaces. As discussed in the existing conditions section, plans are already in development for construction of a multifamily building in the former Dave's Market parking lot, and for potentially turning the Dave's Market site into a community cultural center.

We envision the corridors experiencing this infill development over the next 20 years as a phase 2 of our plan, in contrast to our catalyst projects which we see occurring in the next 5 to 10 years as phase 1. To help guide evolution of the Payne corridor into a stronger commercial, main-street style artery for AsiaTown, we are proposing several zoning changes as well as major streetscape improvements that will be highlighted in the following pages.

Payne Avenue Zoning Recommendations

Urban Form Overlay

The Urban Form Overlay is a district classification used to promote a high a level of walkability and design quality for streets. This is done by requiring pedestrians-oriented building facades, as well as preserving and enhancing the architectural character of existing and new buildings. Our proposal recommends implementing the overlay district along the Payne corridor. Due to Payne Ave being a busy street, it is imperative to make it more pedestrian friendly and safe, which this overlay does.

By focusing on walkability and designs focusing on that as well as limiting conflicts between cars and pedestrians, this overlay promotes a pedestrian friendly and safe corridor. This achieves Goal 3. Enhance neighborhood usability to improve quality of life. The overlay reduces the amount of parking that is required for developments.

By utilizing an overlay district, the code helps to provide guidelines for development. This district is designed to operate in conjunction with the existing zoning classification of the land, except in the case of contradictions, where the overlay will win out. The only uses that are prohibited are open sales lot, gas station pump islands within the urban street scape, any business served by a drive-thru shall have all points of customer interaction located outside of the urban street space, and a lot parking lot as a main use is prohibited. Cleveland Ordinance §348.04(c).

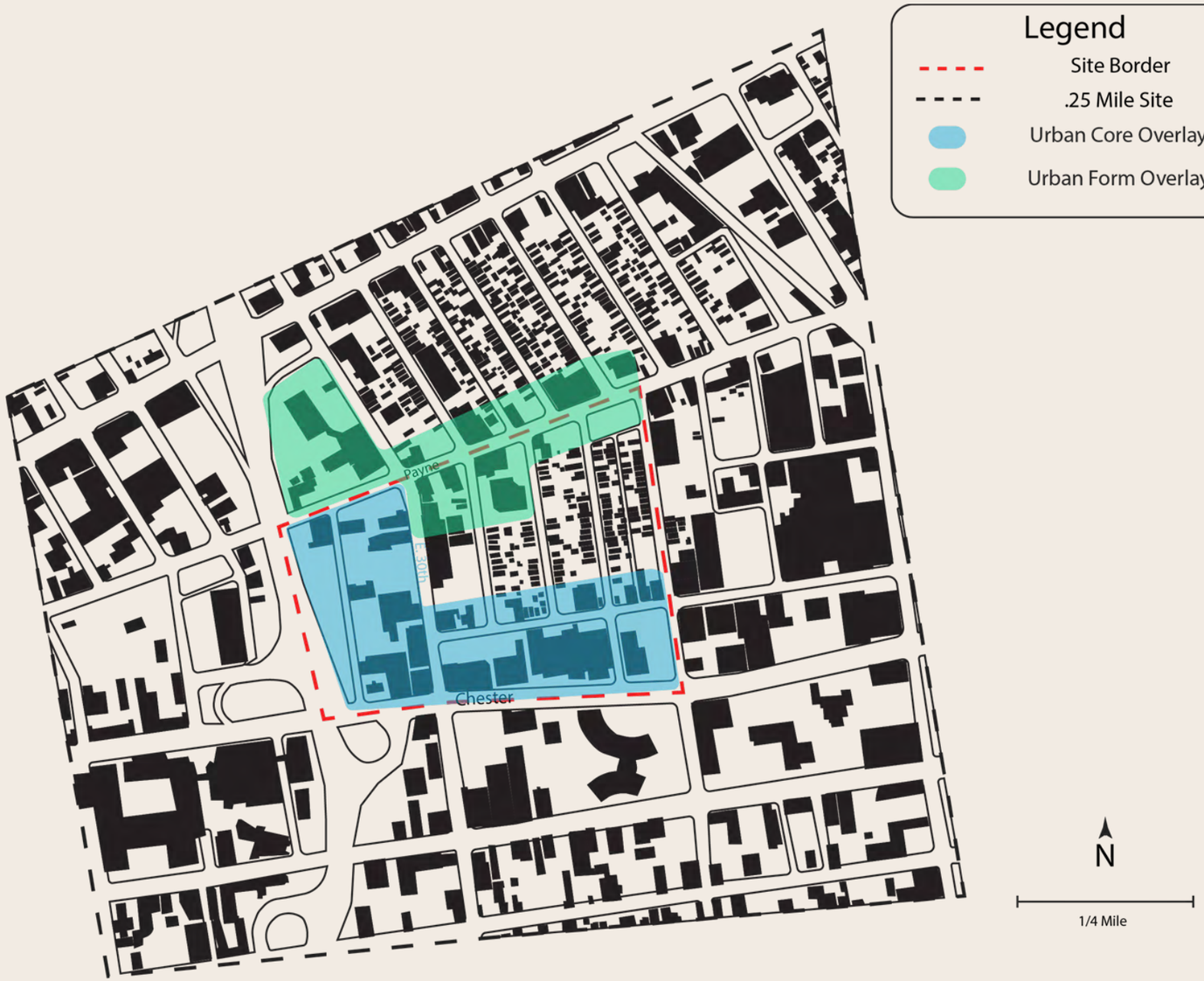


Exhibit 84 .

Payne Avenue Streetscaping

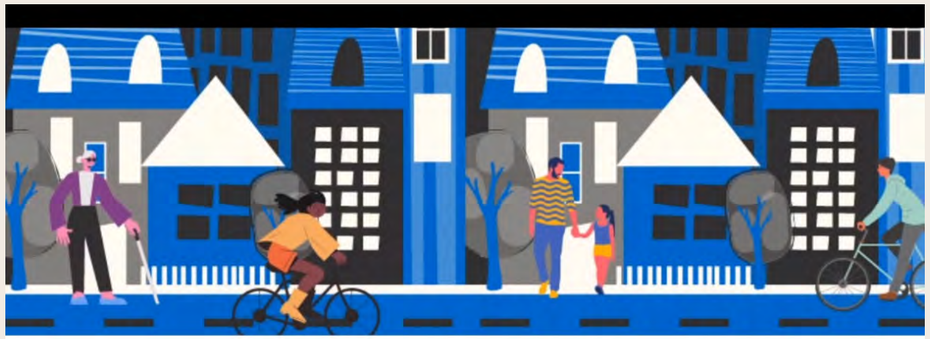
Background

A primary objective of the Access AsiaTown plan is to ensure that the neighborhood adheres to the principles of Universal Design and is therefore accessible to people all ages and abilities, as well as all modes of transportation. This design philosophy is a great lens through which to address the surveyed needs for the Payne Avenue corridor. The surveyed needs include improved lighting, transportation safety, and cleanliness; repaired sidewalks; reduced crime/increased perception of safety; and more seating, park space and shade trees.

Addressing these needs currently is a grass-roots organization called The People's Streets. Their vision is to "...design an anti-racist street that connects Cleveland's Downtown and east side neighborhoods through short-term, pop-up interventions and through long-term visioning." They intend to enhance the streetscape experience as soon as possible to test out ideas for permanent installation during the upcoming Payne Avenue Resurfacing project scheduled by the city for construction in 2023 or 2024.

Our plan is to Assist The People's Streets with interim streetscape design plans and implementation strategies as well as to propose a reconstructed streetscape plan for the city's consideration.

Exhibit 85 .



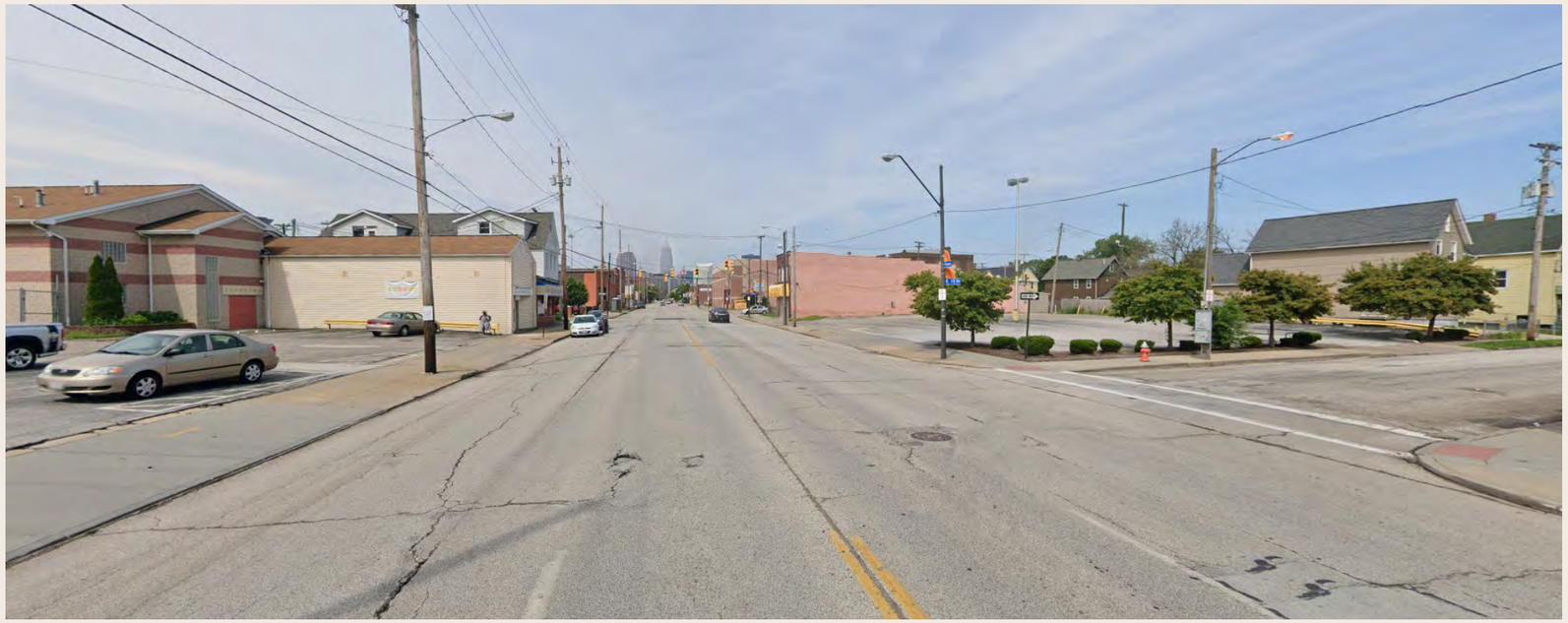


Exhibit 86 .

Existing Conditions

Payne Avenue has a right of way width of approximately 80 feet throughout the study area. The roadway surface is 58 feet across with 8 foot parking lanes on each side, along with a 10 foot and 11 foot travel lane in each direction (4 total travel lanes). The speed limit is 25mph, however, between the number of lanes, their width, and an Average Annual Daily Traffic (AADT) of only 6,261 vehicles, the functional design speed is closer to 40mph (NACTO, 2013). Sidewalks are typically 11 feet wide and do not include a public tree lawn area. While the sidewalks are relatively wide, significant cracking, frequent curb cuts, and utility poles limit the usable width of the sidewalks to approximately 8 feet. The challenges presented by these and other existing conditions are detailed on the following page.

Existing Challenges

Exhibit 87 .

Existing Quantities Payne Total			
Type	**Feature**	**Quantity**	**Unit**
Landscape	Public Tree Lawn	2,250	sf
	Street trees (Public and Public adjacent)	34	count
Roadway	Travel Lanes	4	count
	Street Parking Spots	70	count

1 The number of lanes greatly exceeds demand. There are currently a little over 6000 vehicles that use Payne Ave each day with capacity for approximately 25,000 vehicles per day (NACTO, 2013).

2 The lane configuration of 2 lanes in each direction with no turn lane creates a dangerous traffic pattern, encouraging cars to weave around turning vehicles (NACTO, 2013)

3 Site visits have indicated that available parking exceeds demand in most areas.

4 There is no seating along the corridor outside of two bus shelters. Other bus stops simply consist of a small, nondescript sign and are unwelcoming.

5 There are large sections with no landscaping at all, and 6 where there is greenspace is underutilized.

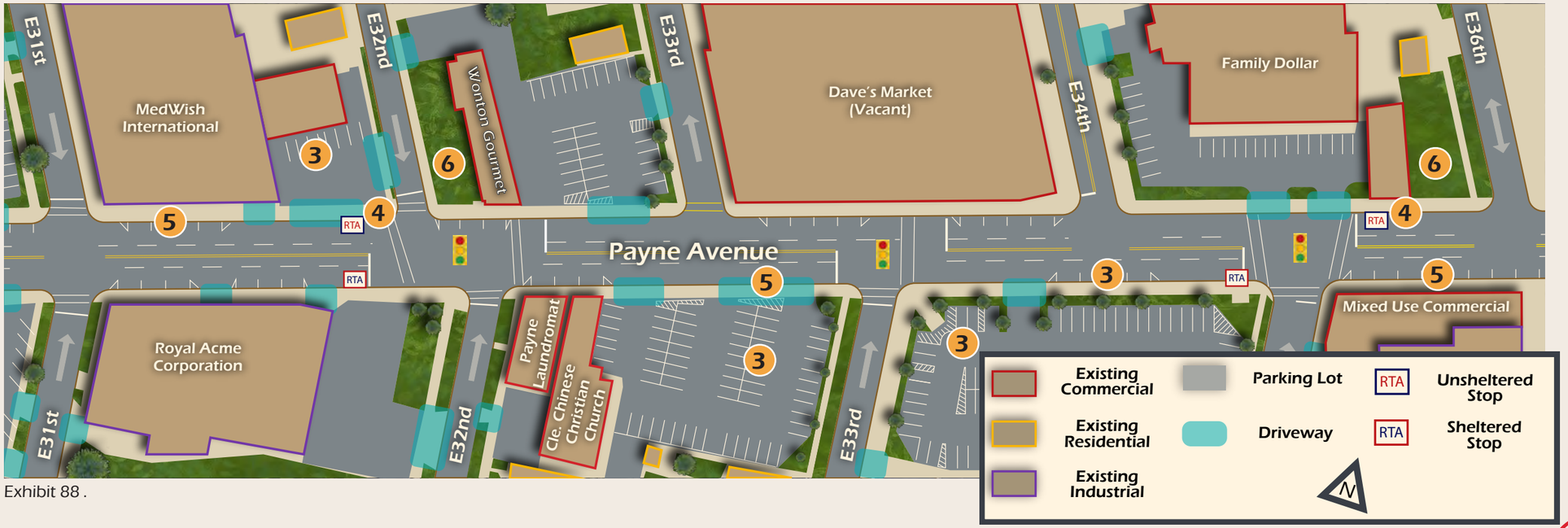


Exhibit 88 .

Interim Proposals

Exhibit 89 .

Exhibit 90 .

Our interim redesign work went into action during the semester as we collaborated with the People's Streets by providing graphics for a proposed intergenerational pocket park and bus stop improvements along Payne as part of an AARP Community Challenge Grant application.

The exhibits to the left show a proposed intergeneration pocket park. Features of the design include:

1. A mural
2. Pallet benches with small planters on their backs along Payne Ave for pedestrians, park-goers, and customers of Wonton Gourmet
3. Picnic tables behind those benches - could be used by park-goers or as outdoor seating for the restaurant
4. Decorative planters at each corner of the park
5. Vegetable garden planters next to the existing garden space along the wall
6. A sandbox for younger children to play
7. Tree stumps for older children to climb and run around
8. A small slide
9. Additional pallet benches with planter backs inside the fence

The exhibits to the right show proposed bus stop improvements at Payne and E22nd and on Payne in front of Asian Evergreen Apartments. These figures illustrate how relatively inexpensive materials such as pallets, plants, and sidewalk paint can greatly improve the condition of the street scape over the interim term.

Exhibit 91 .

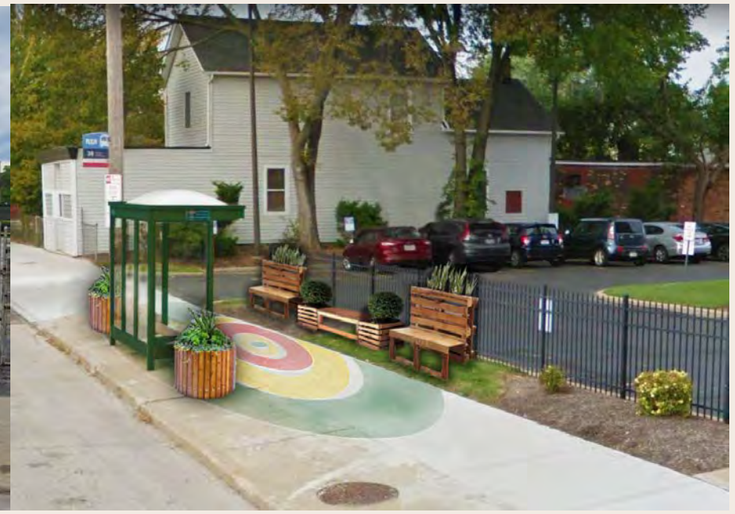


Exhibit 92 .

In addition to our work with the People's Streets, the figures below illustrate additional interim streetscape improvements we have identified that could be implemented prior to the Payne Avenue Resurfacing project.

Interim Quantities Payne Total

Type	Feature	Quantity	Unit
Landscape	Public Tree Lawn	2,250	sf
	Street trees (Public and Public adjacent)	34	count
	Planters	96	count
	Benches/Parklets	23	count
Roadway	Travel Lanes	2+1	count
	Street Parking Spots	55	count
	Painted Pedestrian Bump-outs	39	count
Public Art	Wayfinding Signs	9	count
	Murals	9	count
	Sculptures	12	count

Exhibit 93 .

1 Revised lane configuration with bike lanes to improve accessibility for all modes of transportation.

2 Painted crosswalks and bump outs to shorten the distance of crossing the street, improving pedestrian safety

3 Mural and sculpture locations to liven up the corridor and create a more distinct sense of place

4 Planters, parklets, and benches shown to increase greenspace and seating opportunities and providing the opportunity for more eyes to be on the street helping to increase the perception of safety.

Exhibit 94 .

Additional Notes & Decision Making Processes on Interim Design

1. ***Road Diet and Restriping***
    a. Reduce one car lane (10') and one bicycle lane (5') in each direction with central turn lane where necessary (See proposed street sections on page 67)
        i. If required by RTA/ODOT/Cleveland, travel lanes can be 11' by not providing a buffer between bike lane
    b. Painted median in central turn lane where there is nowhere to turn
    c. Change crosswalk striping from standard (2-thin stripes) to continental/zebra/ladder (multiple large rectangular stripes to improve visibility) style
2. ***Landscaping***
    a. Painted bump outs with temporary landscaping at locations where street parking is not currently permitted
        i. Parallel parking spaces were measured in 20' increments to determine total number of cars that could fit in designated area, left over area/half spaces were identified as being suitable for painted bump outs with landscaping
3. ***Lighting***
    a. String decorative lighting (i.e. lanterns) between utility poles, buildings, etc. where lighting and/or streetscape aesthetics are Lacking

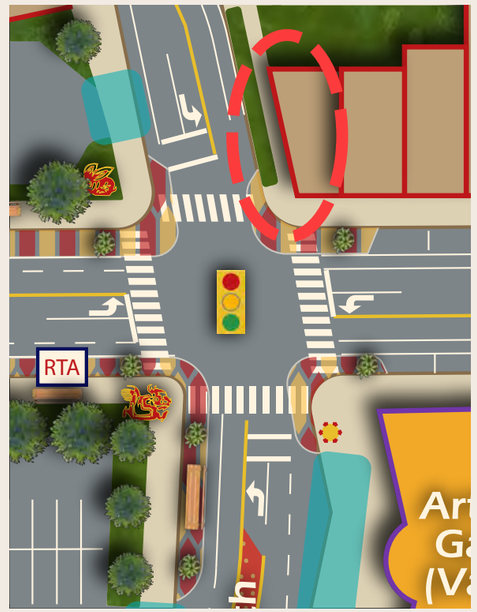


Exhibit 95 . Enlarged Payne Ave and E30th St intersection

Implementation Strategies & Interim Cost Estimate

Interim Improvement Cost Estimate (Tactical Urbanisim Approach)						
Type	**Enhancement**	**Quantity**	**Unit**	**Bugeted Cost**	**Anticipated Construction Cost**	**Subtotal**
Landscape	Planters	96	count	$ 100	$ 9,600	$ 11,900
	Benches/Parklets	23	count	$ 100	$ 2,300	
Roadway and Sidewalk	Bump-outs painted (Temporary Paint)	35,450	sf	$ 0.60	$ 21,270	$ 29,900
	Crosswalks painted (Temporary Paint)	6,880	sf	$ 0.60	$ 4,128	
	Medians painted (Temporary Paint)	7490	sf	$ 0.60	$ 4,494	
Public Art	Sculptures	6	count	$ 2,000	$ 12,000	$ 28,000
	Wayfinding	4	count	$ 2,000	$ 8,000	
	Murals	4	count	$ 2,000	$ 8,000	
					Total	**$ 70,000**

Exhibit 96 . Costs were conservatively estimated based on values from the Tactical Urbanist's Guide materials database. (Source: http://tacticalurbanismguide.com/materials/

This proposal is intended to be presented as vision to the People's Street organization, where feedback can be provided by community and group members. Completing an interim project of this nature also requires that designs be coordinated with and approved by NOACA and the City of Cleveland. After completing revisions based on People's Streets feedback, the draft interim design can be used as a starting point in this official process.

If the plans get approved, the cost of implementation can be significantly reduced by using NOACA's Street Supplies library, depending on inventory availability. Materials can also be acquired by coordinating with local business who may be able to supply useful materials such as pallets. Any remaining costs can be covered through grant funding from a source such as AARP Community Grant Challenge or, alternatively, crowd funding is another common revenue source for this type of project. Overall, these proposals are intended to be flexible, and therefore, implementation can include as much or as little as can be funded.

Reconstruction Proposal

Exhibit 97 .

The reconstructed design proposal largely consists of making successful interim improvements permanent, potentially including

1 Permanent striping of the road diet configuration,

2 Installation of concrete curb ramp bump outs, and

3 Installing city benches that can be fastened to the ground.

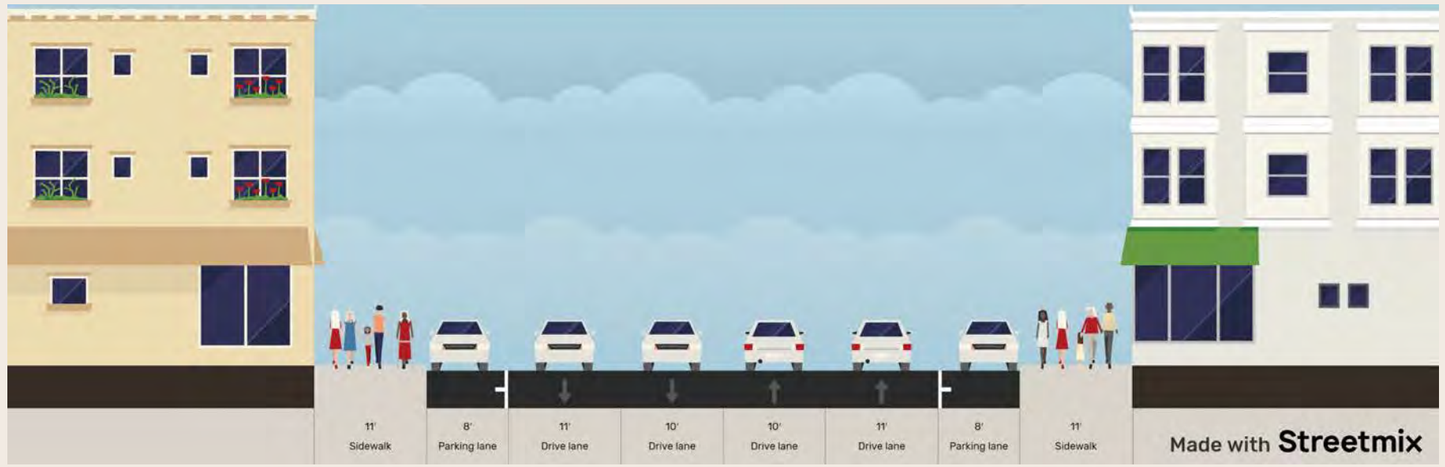
Exhibit 98 .

Additionally, we have identified landscaping improvement areas which include the addition of

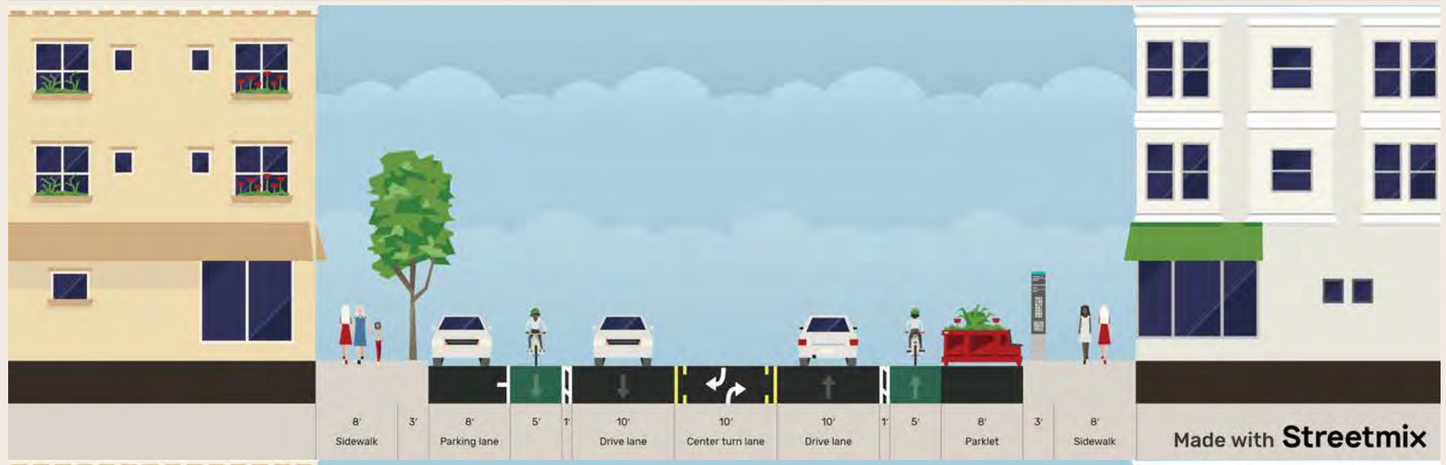
4 Bioswales (see exhibit to the next page), tree lawns, and street trees to increase the pervious surface area on the corridor and reduce the roadway width without requiring the reconstruction of the current stormwater drainage system.

5 We have also identified additional potential street art and wayfinding signage locations. The following page identified specifically how street sections can feasibly change.

Existing Street Section



Proposed Mid-Block Street Section



Proposed Intersection Street Section

Reconstruction Implementation & Cost Estimate

The first purpose of the reconstruction plan at this time is to serve as a vision of what the street can ultimately become. It is fully expected that many details and significant features could change based on their effectiveness during the interim redesign period and due to engineering standards/design considerations. However, this plan approximates what is feasible and, therefore, helps to determine whether the proposed changes could come at a feasible cost relative to comperable capital improvement projects being completed by the city.

The cost estimate was developed based on that of the AsiaTown Transportation & Streetscape Plan for Superior Avenue and E36th from 2010 with costs adjusted for inflation. The total cost of these improvement as we have estimated comes to approximately $2 million, putting its costs in line with comparable capital investment roadway projects the city of Cleveland is currently undertaking such as along W65th St ($4.5 Million) and along Franklin Boulevard ($3.2 Million). This project could seek additional funding for improvements not coved within Cleveland's capital improvement budget through NOACA's transportation for livable communities initiative.

Reconstruction Improvement Cost Estimate

Type	Enhancement	Investment Quantity	Unit	December 2010 Budgeted Cost	Bugeted Cost (Inf. Adj.)	Anticipated Construction Cost	Subtotal
Landscape	Public Tree Lawn/Bioswale	12,570	sf	$ 9	$ 16	$ 204,263	$ 335,400
	Street trees added	22	count	$ 750	$ 910	$ 20,020	
	Planters added	68	count	$ 750	$ 910	$ 61,880	
	Benches	29	count	$ 1,400	$ 1,695	$ 49,155	
Roadway and Sidewalk	Bump-outs constructed	35,450	sf	$ 19	$ 23	$ 815,350	$ 994,000
	Crosswalks painted	6880	sf	$ 6	$ 8	$ 55,040	
	Medians painted	7490	sf	$ 12	$ 15	$ 112,350	
	Sidewalk Slab Reconstruction	750	sf	$ 12	$ 15	$ 11,250	
Public Art	Sculptures	6	count	$ 2,000	$ 2,420	$ 14,520	$ 38,800
	Wayfinding	5	count	$ 2,000	$ 2,420	$ 12,100	
	Murals	5	count	$ 2,000	$ 2,420	$ 12,100	
Miscellaneous Expenses	Land Surveying	1	count	$ 15,000	$ 18,130	$ 18,130	$ 253,600
	Mobilization	1	count	$ 25,000	$ 30,215	$ 30,215	
	Contingency	1	count	15%	15%	$ 205,210	
						Total	**$ 1,622,000**
						Say	**$ 2,000,000**

Exhibit 99 .

Perkins Avenue Corridor

Exhibit 100 .

Our vision sees Perkins growing into a residential-commercial corridor that will serve as a more pedestrian-friendly and focused connection through the area. Looking generally at Perkins Avenue, between East 30th and East 36th, this corridor is currently home to a competing mix of industry, office buildings, and a few residences. In order to increase public health conditions and safety for residents, our vision phases out the industrial uses in favor of mixed-use multifamily, and commercial spaces. The types of multifamily and commercial spaces added to the corridor should align with our market analysis.

Similar to Payne Avenue, infill development of vacant lots, surface lots, and non-adaptable industrial uses, such as the one-story windowless warehouse structures, should be prioritized. Further, we recommend adaptive reuse for a handful of older, more architecturally significant properties scattered through the corridor. Namely, the buildings on the northern side of Perkins between E. 36th and E. 33rd street, currently home to offices and the Cuyahoga Soil and Water Conservation District, add a unique historic feel to the area. Twin Lanes, a bowling alley located on the western side of E. 30th Street right where Perkins ends, should be maintained as an important community recreation asset. While it does not front Perkins due to placement of it's surface parking lot, there is an old 3-story building on the northeastern corner of E. 30th street and Chester Avenue that could be adapted into multifamily lofts.

We envision the corridors experiencing this infill development over the next 20 years as a phase 2 of our plan, in contrast to our catalyst projects which we see occurring in the next 5 to 10 years as phase 1. To help guide evolution of the Perkins Avenue corridor into a pedestrian-focused residential and small-scale commercial street, we are proposing several zoning changes as well as major streetscape improvements that will be highlighted in the following pages.

Perkins Avenue Zoning Recommendations

Urban Core Overlay

The Urban Core Overlay is a district classification used to promote the development of dense mixed-use neighborhoods with a focus on pedestrian accessibility. Because of this purpose of the district, our proposals recommend implementing the overlay district along our development sites between Perkins and Chester, over to innerbelt, as well as encompassing the E. 30th block to the innerbelt, up until Payne. This zoning overlay will highlight our proposed developments and promote similar development opportunities in the area.

By focusing on frontages and active use first floors, this overlay promotes the type of pedestrian friendly development we have identified in our goals and objectives. The environment becomes accessible to more people through the altering of building frontages. Additionally, the overlay doesn't require any parking, allowing more flexibility in uses, and the utilization of centralized parking facilities to bring focus to people scale, rather than car scale.

By utilizing an overlay district, the code helps to provide guidelines for development. This district is designed to operate in conjunction with the existing zoning classification of the land, except in the case of contradictions, where the overlay will win out. The only uses that are prohibited in this district are open sales lots, and drive-through lanes, which may not be along primary or secondary street frontages. Cleveland Ordinance §348.05(c).

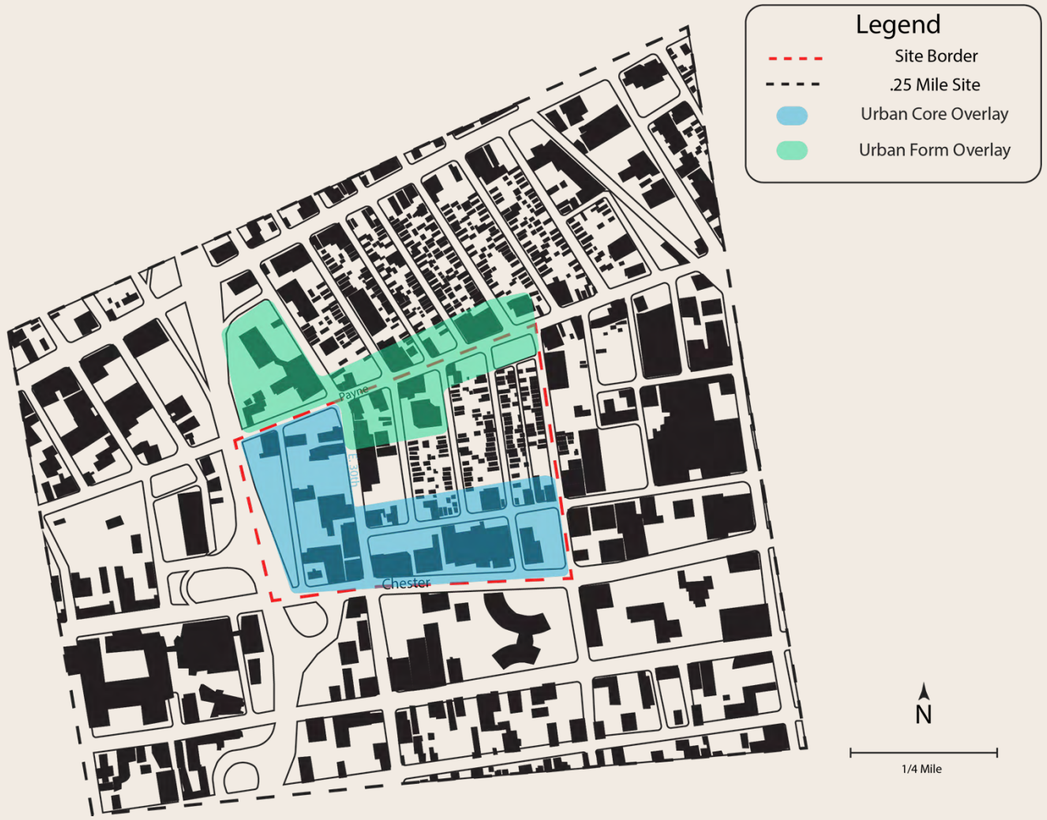


Exhibit 101 .

Form-Based Codes

In the future it recommended to reach out to the City of Cleveland to implement form-based codes for the AsiaTown neighborhood. Currently the City of Cleveland is piloting three form-based codes, Detroit Shoreway, Hough, and Opportunity Corridor (TheLandCode https://thelandcode.com/). Form-based codes are zoning regulations that place an emphasize on physical form of buildings, rather that land uses, that regulates development types and heights to ensure that there are predictable form-outcomes on new developments (Garde and Cecilia 2017). Form-based codes are focused on the relation between building facades and the public realm, the form and mass of buildings, and the form and mass of buildings (TheLandCode). Form-based codes are created by residents of the neighborhood and include community engagement events and interactive charrettes. Form-based codes places an emphasis on having the different parts of the neighborhood to be interconnected with one another rather than separated out. It is recommended to implement the best practices of what worked well in the three pilot projects.

Perkins Avenue Streetscaping

Perkins Avenue has a ROW width of 60 feet and has a roadway surface of 30 feet. The road currently has one travel lane in each direction with no on-street parking permitted. The road in its current state largely caters to industrial vehicles and cargo trucks heading to and from the industrial & commercial buildings along Chester Avenue. It is our plan that as industrial zoning is phased out along Perkins, the roadway can become a node of pedestrian activity with features designed to improve multimodal transportation between Payne to the north and the catalyst sites along Perkins to the south.

The proposed improvements to Perkins include striping of one 10 foot travel lane and one five foot bike lane in each direction (see exhibits on right), curb ramp bump outs across the one way residential streets (Exhibit 104), new pocket park space at the southwest corner of Perkins and E33rd (Exhibit 104), and a continuous sidewalk at the E32nd intersection in front of the proposed mixed use grocery store site (Exhibits 104 &106).

The most significant streetscape proposal along Perkins is the "Continuous Sidewalk" in front of the proposed mixed use grocery store. Unlike a regular crosswalk where pedestrians must enter the roadway space that is clearly designed for vehicle traffic, a continuous sidewalk provides the opposite experience where cars must enter a clearly defined and elevated pedestrian space to pass through the intersection.

This is a long-term vision for the corridor, developed in hopes of creating a pedestrian node for residents of the neighborhood to safely walk to the grocery store and park. This feature could also appeal to eventual residents of the intergenerational living facility looking to cross Perkins to walk to commercial destiations along Payne. Additionally, this feature will work to deter cut through vehicle traffic along Perkins and encourage vehicle traffic to the grocery store to come along Chester. This will help to further establish Perkins as and pedestrian friendly street, allowing residents to go on walks around their neighborhood rather than simply up and down their block.

Existing Perkins Street Section

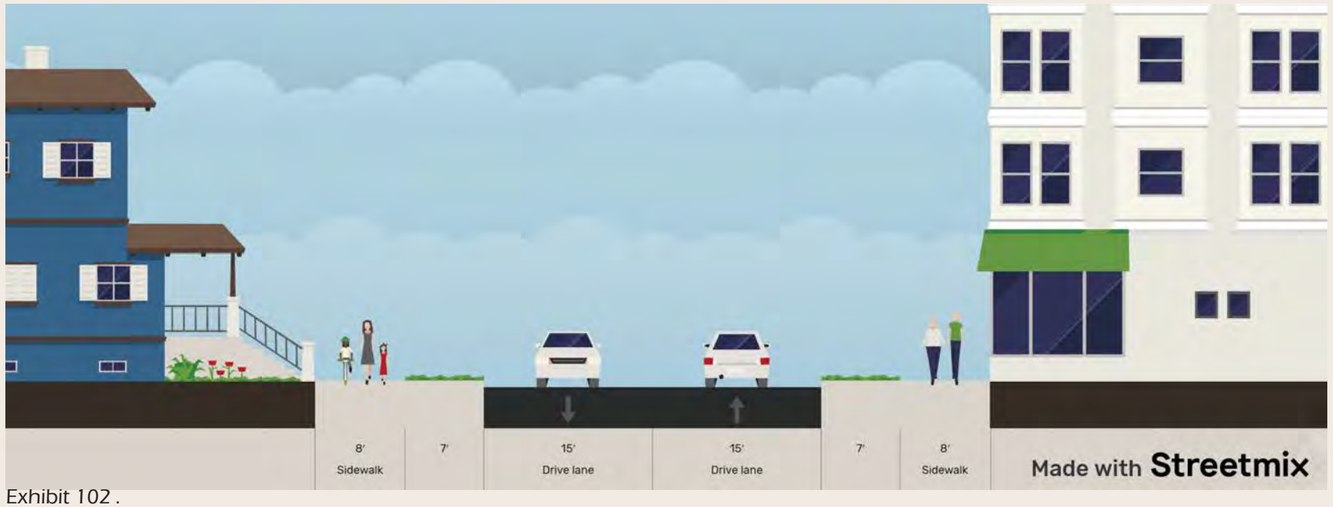


Exhibit 102 .

Proposed Perkins Street Section

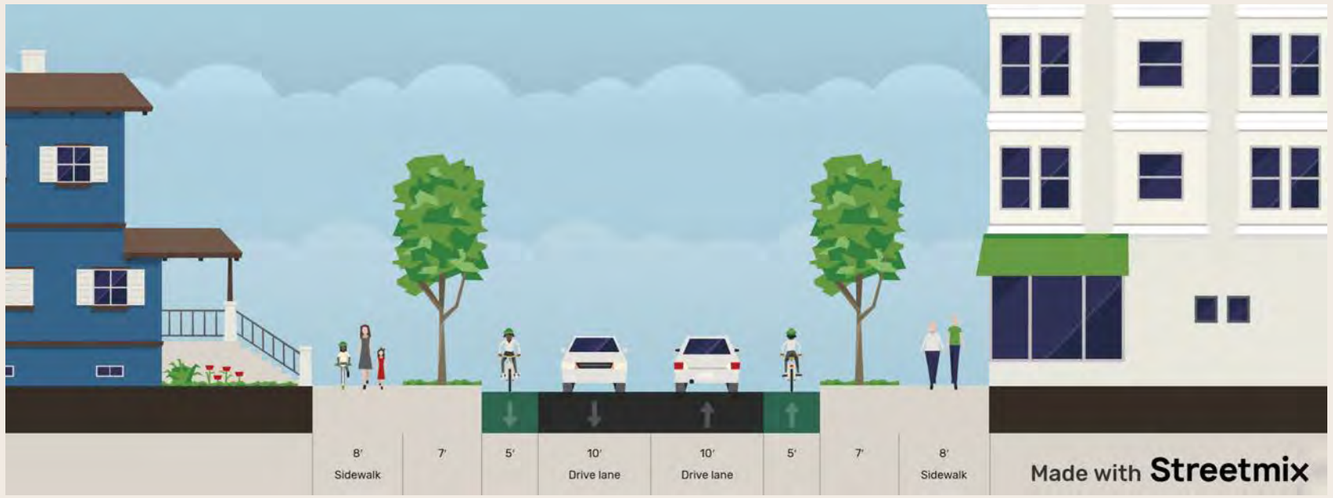


Exhibit 103 .

Exhibit 104 .

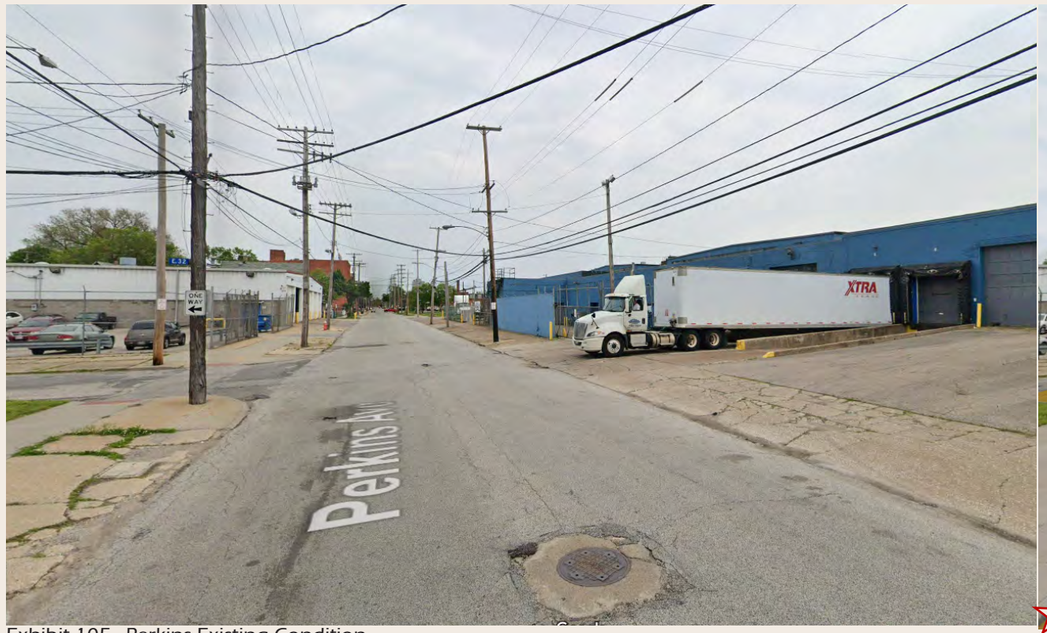


Exhibit 105 . Perkins Existing Condition

Exhibit 106 . Perking Proposed Long-Term Plan

Residential District

As discussed in the existing conditions section, the core of our site area is a residential district of single and two-family homes, located primarily on the North-South streets East 36th, East 33rd, East 32nd, and East 31st. This area is densely developed, with more than one home located on many parcels. There are a few vacant lots which should be infilled with homes of a similar size and design style. The following recommendations are designed to preserve this residential core, provide options for seniors to age in place next to their families, and improve the area's walkability and sense of safety.

Accessory Dwelling Units (ADUs)

Better known as a granny flat or an ADU, an accessory dwelling unit is a secondary housing unit on a single-family lot that is independent of the primary dwelling unit. Historically, ADUs can be linked back to the early twentieth century when they were commonly featured in single-family housing. Although zoning regulations in some communities restrict the development of accessory dwelling units, there has been an increase in awareness and acceptance of ADUs as an inexpensive way to expand the affordable housing supply along with addressing the existing illegal units (U.S. Department of Housing and Development, 2008). Accessory dwelling units (ADUs) have their own kitchen and bathroom and can come either as attached (usually on the side of the primary dwelling unit), detached (typically at the rear of the primary dwelling unit), or can be internally such as in the attic and basement areas. ADUs can provide a variety of benefits to communities. Since they cost less to construct than a single-family unit on a separate lot, it can offer an affordable housing option for low-and moderate-income residents. It can also become beneficial for senior or disabled residents who desire to remain in their communities or close to their family members and caregivers. Young adults entering the workforce and the student population find these units convenient and inexpensive. Additionally, it can be used as office space for home-based businesses or provide homeowners the option for supplemental rental income. Furthermore, accessory dwelling units do not require expenses correlated with purchasing land, nor require additional infrastructure. ADUs are not only a great way to add additional living space but they could also provide significant benefits and future investment.

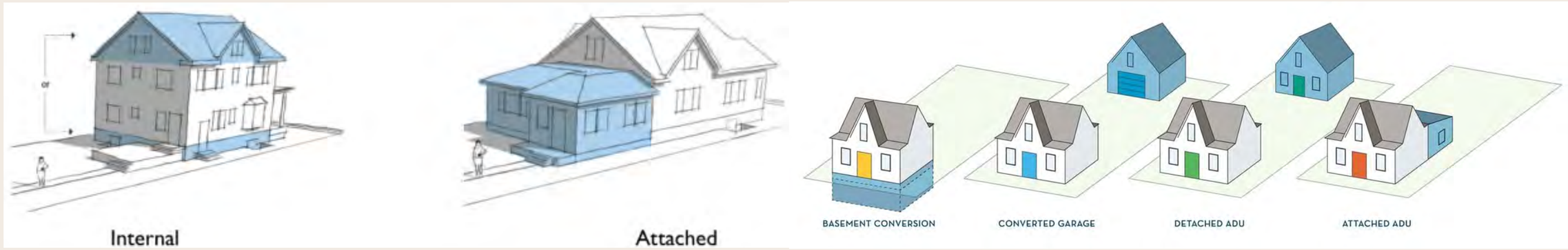


Exhibit 107 Image source: City of Boise https://www.cityofboise.org/departments/planning-and-development-services/accessory-dwelling-units/

Zoning for Accessory Dwelling Units in Residential Districts

As the senior population is rapidly growing, this presents communities with challenges as current zoning codes separate healthcare facilities and assisted living from residential areas. Older residents with limited mobility may experience difficulties in accessing mental and physical health services or must relocate away from their social networks to receive the proper care. Ensuring the senior population can rightfully age in place can be supported through revisions to the zoning code. Allowing for accessory dwelling units (ADUs) can allow older residents to live independently while in proximity to family and other support systems. Adopting accessory dwelling units into the zoning code could allow requirements of these structures to either be built or permit modifications to the existing ADUs based on use-specific standards such as universal design (Ohio Department of Health, 2018). For example, the existing accessory dwelling units in AsiaTown (as pictured) can be converted according to universal design standards (no-step building and wider entryways).

While accessory dwelling units (ADUs) may be a great option in addressing mismatches in the current housing supply, conducting a housing needs assessment may be needed to determine future projections in demand. A housing analysis can aid in identifying potential challenges correlated with integrating ADUs into single-family neighborhoods (American Planning Association, n.d.). Municipalities often include policy recommendations to proposed zoning ordinances or provide the public with information regarding existing regulations and suitable land-use categories.

According to the City of Cleveland's Code of Ordinances, an ADU:

1. Must be in the rear half of the lot (a minimum of 18 inches from all property lines and 10 feet from the main residence)
2. Cannot exceed 800 square feet and the maximum height is 15 feet
3. Adding an ADU to an existing property may require a variance or conditional use permit pending approval from the Building and Housing Department, Board of Zoning Appeals, and the City Planning Commission

Exhibit 108 .

Future Accessory Dwelling Unit Recommendations

Still within the infancy stages, 3D printed houses are quickly growing as the next wave in affordable housing infill strategies and could boom in the construction industry within the next 5-10 years. The process of three-dimensional (3D) printing involves using a computer-controlled mechanism to produce layers of material such as polymers and concrete. 3D printed houses allow for more flexibility in architectural design than conventional construction practices (Allouzi et al., 2020). The innovative techniques of 3D printing can produce complete homes with electrical, plumbing, drywall, and insulation components at faster rates than traditionally built units. Furthermore, it can be seen as a sustainable practice by its use of renewable resources such as bioplastics, additionally, it dramatically reduces material waste, emissions, and labor costs. In the picture below, ICON, a company in Austin, Texas collaborated with a non-profit last year to construct seven homes as a start in creating a community for the homeless. Also, pictured below are floor plans to show the typical layout of a 446 sq. ft. and 793 sq. ft accessory dwelling units. 3D printed houses can provide an alternative cost-effective tool in creating homes for low-and moderate-income households, immigrant, student, and senior populations. 3D printed homes could easily become the next trend in the creation of affordable housing in the AsiaTown community and surrounding neighborhoods in the future. It is hopeful the City of Cleveland plans to consider amendments to regulations regarding the construction of accessory dwelling units (ADUs) to increase its marketability.

Exhibit 109 Image source: Icon https://www.iconbuild.com/updates/icon-delivers-series-of-3d-printed-homes-for-homeless

446 sq. ft. ADU floor plan

Exhibit 110 .

793 sq. ft. ADU floor plan

Exhibit 111 .

Image source: City of Del Mar, CA https://www.delmar.ca.us/642/Accessory-Dwelling-Units-ADUs

Community Garden

SPECS	Site acreage: 0.48 | Total Cost: $208K
GOALS MET	**Environmental** (absorbs rainwater, reduces soil erosion, promotes composting; plants add oxygen and reduces air pollution) **Social** (promotes community involvement, formulating stronger social ties, can be used as a strategy in crime prevention "eyes are on the street") **Educational** (provides an opportunity to teach residents useful skills in gardening and food production) **Economical** (increases property values and could create opportunities to sell produce at a farmer's market)

CURRENT	FUTURE
Uses: Parking lot for Cromwell Mechanical LLC located off of Perkins Avenue Zoning: Residence-Industry	**Uses:** Urban community garden **Zoning:** Urban core overlay

USE DETAILS	IMPLEMENTATION
Community gardens have increased in popularity in urban agriculture across the U.S. and worldwide. Blighted and vacant land can be transitioned into a sustainable use that allows for the cultivation of fruits, vegetables, herbs, and flowers as a part of the sharing economy among residents. Community gardens can not only produce an aesthetic appeal and community improvement, but they can also provide the accessibility of fresh food and herbs in closer proximity to lower-income households. Research links urban gardens to physical and mental health as well. Gardening involves physical exertion to keep people active and could become a remedy for stress and depression (Mackenzie, 2016) Furthermore, it provides a safe and welcoming space for social interaction among groups of different ages, abilities, cultures, races, and ethnicities.	The location of a community garden is a key factor in how often it is used and who visits it. Residents are more inclined to visit/utilize a garden if it is either within walking distance or a short drive. It is understood due to its location in an industrial zone, brownfield remediation implementation strategies are needed. This process involves an environmental site assessment to determine how much contaminates are present on the site. The results from the assessment would be helpful in deciding if the project is financially feasible to undertake. The redevelopment of a brownfield can be often complicated and costly. Efforts to this strategy will involve a collaborative approach utilizing public and private funding sources. Funding sources that could be used for implementation include the Summer Sprout program, funded by the City of Cleveland Department of Community Development, Neighbor Up through the Cleveland Foundation, and Cuyahoga County Board of Health Creating Healthy Communities Grant to name a few. It is undeniable the addition of an urban garden is an asset to a community. They offer a resourceful space in growing organic food and develop community cohesiveness. *See Appendix 7* for site acquisition and developmental costs*

ACCESS

AsiaTown

Catalyst Projects


People's Steets Pocket Park
Payne Avenue
Parking Garage & Circulator Shuttle Hub
Park Vistas on Payne
Art Deco Garage
Community Center
I-90 Innerbelt
E27th Street
E30th Street
E31st Street
E32nd Street
E33rd Street
E36th Street
Courtyard Public/Private Parkspace
Surface Parking
"Accordian" Building
Parkspace w/Playground
Community Garden
Twin Lanes Bowling
Perkins Avenue
Grocery Store & Mixed Use Development
Pocket Parkspace
Senior & Inter-generational Housing
Extra Space Storage
Surface Parking
Surface Parking
Chester Avenue
ACCESS AsiaTown
Illustrative Site Plan
Catalyst Sites
Buildings to Preserve
Proposed Park
Existing Commercial
Existing Residential
Existing Industrial
Parking Lot
Streetscaping Focus Areas
N

Intergenerational Housing

SPECS

Building Sq ft: 160,000 Sq ft | Building height: 4 stories | Site acreage: 2.319 | Total Cost: $29.8M

GOALS MET

- Celebrate the area's diverse population to maintain current residents and attract new ones.
  - o Facilitate aging in place
- Enhance neighborhood usability to improve quality of life
  - o Provide much-needed green & recreation spaces.
  - o Facilitate better pedestrian connections through the area
  - o Increase amenities
- Expand residential market to provide diverse range of housing options
  - o Provide opportunities for Intergenerational living

CURRENT

Uses: One parcel is currently vacant; the other is industrial, currently occupied by Copy King.
Zoning: Semi-Industry and General Retail Business

FUTURE

Uses: Intergenerational housing with pocket park located directly to the south.
Zoning: Urban core overlay

USE DETAILS

Intergenerational housing consists of seniors and students living in the same building. This is done because students and seniors suffer from isolation and limited incomes, as discussed in the literature review section of this report. Currently in Cleveland there are no intergenerational living developments where students and seniors live together. This project could serve as an example for the rest of the city that these developments are beneficial to students and seniors, spurring further similar projects in the area. There will be a pocket park located to the south of this development, acting as a buffer in between the intergenerational living site and the mixed-used grocery store. We are also proposing siting of a community garden, accessible just north up East 36th Street, adapting a currently large, underutilized surface parking lot behind the Sail Lofts building. Three of the stories of the intergenerational housing will be designated for seniors, floors 1-3. The top floor will be reserved for student living space.

IMPLEMENTATION

Funding sources that could be used for implementation include Low-Income Tax Credits, Ohio Housing Finance Agency HOME Loans, ODWA Green Infrastructure Loan, Cleveland Foundation Grant, and Tax Abatements. Michael Stefan's company North Coast Commercial, who is one of our clients, owns the parcels where this will be developed. Therefore, we do not need to worry about how to get parcels for this site. Once Copy King's lease is up, that building should be demolished to make way for this development. This project will be the first intergenerational living development in Cleveland, making it a great marketing tool for this site, the immediate neighborhood, AsiaTown and Cleveland State University (CSU). CSU should partner with North Coast and other developers to provide the student housing opportunities. This development will also bring attention to AsiaTown, and hopefully attract more visitors to this area to learn more about Cleveland's first intergenerational housing development. Midtown Cleveland can help promote this site as the first of its kind in the area, and refer senior residents to this development.

Intergenerational Housing

Exhibit 112 .

AsiaTown Grocery

SPECS

Building Sq ft: 120,000 sq ft | Building height: 4 floors | Site acreage: 1.237 | Cost: $24.4M

GOALS MET

- Celebrate the area's diverse population to maintain current residents and attract new ones
  - o Facilitate aging in place
- Enhance neighborhood usability to improve quality of life
  - o Implement universal design standards for public spaces
  - o Increase health and safety by phasing out industrial uses
  - o Increase amenities
- Expand residential market to provide diverse range of housing options
  - o Increase number and variety of housing choices
  - o Implement and encourage universal design standards for housing
- Encourage economic development to attract visitors and provide financial opportunities for residents
  - o Support new and existing local business
  - o Utilize zoning tools to promote design and attract developers

CURRENT

Uses: Warehousing and Venue Event Center
Zoning: Semi Industry and General Retail

FUTURE

Uses: First Floor Grocery and retail; 2nd-4th floor residential
Zoning: Urban form overlay

USE DETAILS

The AsiaTown Grocery will provide access to food for AsiaTown residents of all ages and abilities. Creating an urban scale grocery store promotes access to food on a scale that has been unavailable in the neighborhood following the relocation of Dave's Market. The focus on mainstream grocery items helps to create a market that does not threaten local Asian grocers, but opens the market to previously unavailable items. Additionally, the top floor residential units will provide greater choice in housing stock for the neighborhood. The market rate apartment and loft style units will better provide for the middle market residential units that are lacking in the neighborhood and the city.

IMPLEMENTATION

To build this ground-up project, the developer will have to purchase the several parcels that this building will occupy. Most of these buildings are industrial uses, like warehouses, or are vacant. There is one event center located currently on this site. The relocation of these businesses and phasing out of the industrial uses will allow for demolition of extant buildings and construction of this four floor building, parking lot, loading bay, and greenspace.

Exhibit 113 .

Grocery Greenspace

CURRENT

Industrial buildings
Parking lots
Warehouses

FUTURE

Open greenspace
Walking path
Benches
Landscaping

SPECS

Acreage: 60,000 Sq Ft | Total Cost: $159K, part of building budget

USE DETAILS

This greenspace will help to serve residences in proximity of the park, as well as customers of the grocery store. The space will also facilitate pedestrian access and create necessary outdoor space for the area's senior residents. Finally, the design and layout of the paths and benches will promote accessibility for all users.

IMPLEMENTATION

While creating the grocery and residential buildings, open greenspace will be set aside in the design to allow for public use. This will be accessible to residents in intergenerational housing and grocery buildings, as well as users of the grocery store. By setting aside this semi-public space in the design of the building, the greenspace will be created in conjunction with the construction of these other projects.

AsiaTown Community Center

SPECS

Building Sq ft: 69,000 sq ft | Building height: 2 floors | Site acreage: 1.5 acres | Costs: $9.4M

GOALS MET

- Celebrate the area's diverse population to maintain current residents and attract new ones
  - o Facilitate aging in place
  - o Enhance and support extant multicultural character
- Enhance neighborhood usability to improve quality of life
  - o Provide much-needed green & recreation spaces
  - o Implement universal design standards for public spaces
  - o Increase amenities

CURRENT

Uses: CMSD School (Design Lab Early College), which is currently being phased out.
Zoning: Multifamily

FUTURE

Uses: AsiaTown Community Center (first floor); Class B Office Space (second floor); Parking garage (basement)
Zoning: Urban form overlay

USE DETAILS

The AsiaTown Community Center will provide physical and social recreation for AsiaTown residents of all ages and abilities. The different sized spaces on the first floor will provide spaces for a variety of events or meetings. The gym can host group exercises, pickup basketball games, and other athletic events, as well as space for large-group gatherings. Classrooms will be used as meeting space for small clubs and classes. The hallways will act as galleries for cultural art and art made by residents. While these spaces and activities will benefit all residents, seniors in particular will benefit from these programs, in accordance with the whole-person approach to planning. Offices on the second floor will primarily be for non-profit organizations that provide services to residents, including seniors.

IMPLEMENTATION

Because the building is currently set up as a school, only a slight renovation will be required to transform it into the AsiaTown Community Center. The first-floor will be given only cosmetic updates. It will maintain the school's open gym space and classrooms. The second-floor classrooms will be converted into rentable office space.
The AsiaTown Community Center will be run by a non-profit organization. This could be MidTown Cleveland or a new entity developed for the sole purpose of running the community center. The non-profit will coordinate the programs and events that take place at the center, as well as renting the second-floor office spaces. The rent from the second-floor offices, as well as income from residents or organizations paying to temporarily use the space for private events, will help fund programming for the community.

Exhibit 114 .

Payne Park

CURRENT SPECS

Acreage: 1.2 acres
Total Cost: $13K

Industrial buildings
Parking lots
Vacant lot

FUTURE

Open greenspace
Walking path
Playground
Small pavilion
Benches & Picnic Tables

USE DETAILS

Payne Park will provide a much-needed multi-purpose greenspace for the neighborhood. Ample seating and well-paved walking paths will make the park friendly for users of all physical abilities. A playground will provide recreation for children in the neighborhood. Finally, open space will provide an area for group exercises that currently take place in empty parking lots. Lighting and proximity to the other busy catalyst sites will make the park a safe place to spend time. Design should be culturally relevant, to ensure it serves as a placemaking tool and aesthetically inviting site for visitors and residents AsiaTown.

IMPLEMENTATION

There are several buildings on the site currently that will need to be acquired and demolished before the park can be constructed. The entire site is currently for sale as one unit, along with the one-story office building on East 30th St.

Once the land has been made suitable for greenspace, the walking path and lighting should be the first priorities to ensure that the site is immediately usable and safe. Other amenities should follow soon after to maximize use of the space.

Park Vistas on Payne

SPECS

Building Sq ft: 200,570 sq ft | Building height: Western Building: 5 Floors, North Eastern Building, 4 Floors, South Eastern Building, 3 Floors | Site acreage: 3.85 Acres | Cost: $40.7M

GOALS MET

- Celebrate the area's diverse population to maintain current residents and attract new ones
  - o Enhance and support extant multicultural character
- Enhance neighborhood usability to improve quality of life
  - o Provide much-needed green & recreation spaces
  - o Increase amenities
- Encourage economic development to attract visitors and provide financial opportunities for residents
- Expand residential market to provide a diverse range of housing options
  - o Increase number and variety of housing choices
- Increase place-making, branding, and wayfinding for AsiaTown
  - o Street set-back to allow for small public space.

CURRENT

Uses: Parking, Commercial
Zoning: Semi-Industrial

FUTURE

Uses: Retail (47,974 sq. ft.); Residential (152,596 sq. ft); Public Green Space
Zoning: Urban Core Overlay

USE DETAILS

The Park Vista on Payne will provide the area with additional commercial retail space both for existing residents of the area and nearby neighborhoods, as well as visitors. It will also increase diversity of the area's housing stock. The courtyard at the center of the project will provide much needed green recreational space. The frontage for the site will be an interesting wayfinding and branding opportunity for the area, as it will be the first thing that you see coming into the neighborhood on Payne. The courtyard space will also connect to the proposed park space across East 30th Street via crosswalk, giving a clear path for residents living here to the proposed community center on the other side of the park. The location on Payne Avenue, across from Asia Plaza, will help to grow Payne as a commercial corridor.

IMPLEMENTATION

The existing buildings within this site area should be purchased, demolished, and their parcels combined. The parking lot at the northern end will also be taken out. The southern parking lot should remain as-is and be expanded to provide parking for residents. The site should be sold to a developer with the conditions of it being used in a way similar to this proposal. The building should be mixed-use with ground level retail, residential above and a public green courtyard to the rear of the structure. The site's frontage can be used to promote AsiaTown as it is one of the first things you see when you enter the neighborhood from downtown. Some form of mural or public art made in conjunction with the Progressive Arts Alliance and Asia Services in Action along the frontage would effectively utilize this prime branding and wayfinding space. The project can be promoted through this public art, as well as by Midtown Cleveland, the Urban League, and the Greater Cleveland Neighborhood Centers Association.

Park Vistas on Payne

Exhibit 115 .

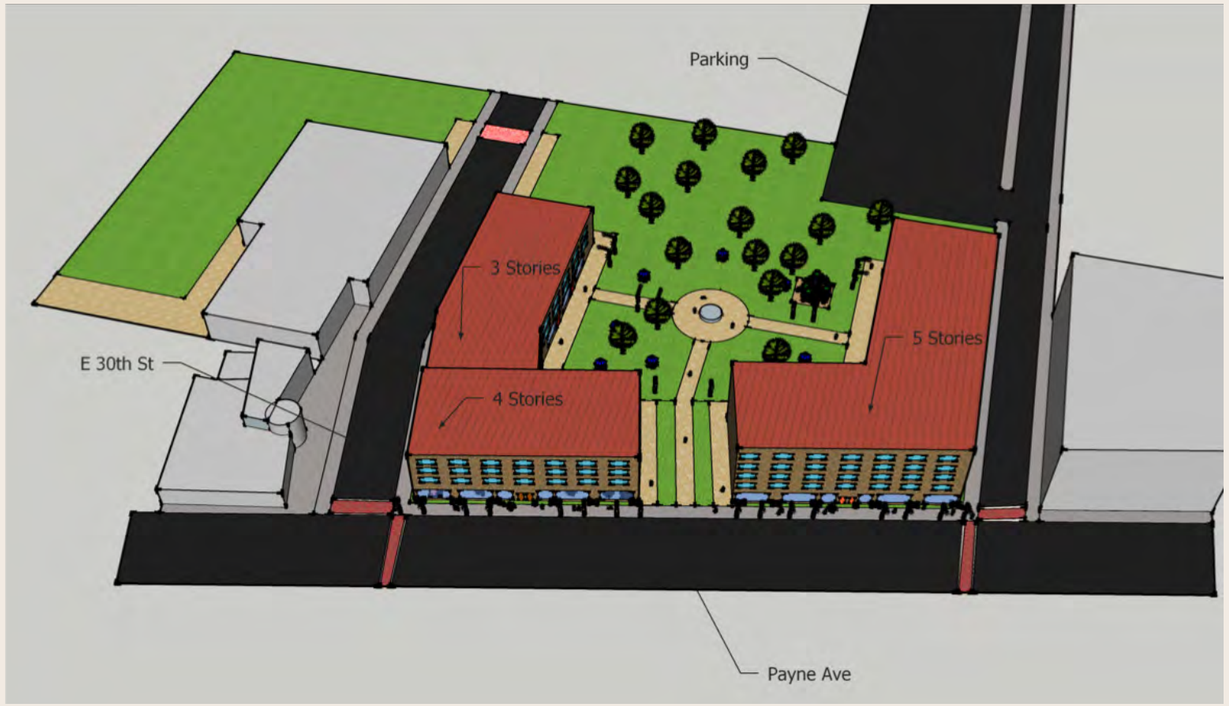


Exhibit 116 .

Exhibit 117 .

Parking Garage

As further development increases in this area, the needs for parking for visitors and residents will also grow. The overlay zoning districts we recommend eliminate parking requirements for area businesses, but we are cognizant of the fact that parking should still be offered as a mechanism to attract visitors to the area. Therefore, we have identified a site located at E. 27th Street and Payne Avenue that would be ideal for a 3-5 floor parking structure given its location right next to I-90. Currently, this is the site of an abandoned auto garage adjacent to a surface parking lot currently used by Asia Plaza for overflow parking. There are two single family homes located between the vacant site and the parking lot which would need to be demolished or relocated. These homes are very isolated from the main residential districts of AsiaTown, and their elimination would help to reduce the contrasting and competing variety of uses scattered throughout the site area. Further, these homes pose a health risk to their residents given their close proximity to the highway.

In the interim, before construction of the parking garage, we envision the abandoned auto garage site becoming a published transit stop for the Greater Cleveland Regional Transit Authority (GCRTA) #38 bus line that runs up and down Payne Avenue. While the bus does stop in AsiaTown when requested to by passengers (or to pick up waiting transit users), currently the bus does not have a published stop in AsiaTown at which it always stops according to a specific time table. Further, this area could be the starting and end point for the AsiaTown Circulator Shuttle we are proposing that will be detailed in the next few pages. The extant auto garage structure could serve as the facility where the shuttles are kept.

Cost estimates show the total construction costs being $6.3million for this parking garage and transit "pull-in" area. This includes costs associated with acquiring the parcels, demolishing the extant structures, and constructing a new 3-story garage that would provide 300 parking spaces.

Circulator Shuttle

In order to increase access to and within AsiaTown and our specific site area, we are proposing the creation of an AsiaTown circulator shuttle service. This idea is based off of several extant examples in Cleveland, including University Circle's CircleLink service and GCRTA's downtown trolley service. Both of these serve as free transit service that circulates in their respective areas and are funded via sponsorship partnerships with local nonprofits and businesses. CircleLink is primarily a partnership between University Circle, Inc. (UCI), Case Western Reserve University (CWRU), and University Hospitals, though smaller-scale sponsorship funding is provided by other local businesses and museums whose customers, visitors, and employees use the service. Shuttle operations are provided via contract with Standard Parking. Downtown's trolley service is funded by GCRTA and the city of Cleveland, as well as a list of 25+ downtown businesses who provide sponsorship dollars. The service costs around $800,000 to operate annually but is a much larger scale service than what we are proposing, as it has 4 different lines, large trolley buses, and runs every 10-30 minutes depending on the line and time of day.

Following Cleveland's examples, we feel it is important to keep the shuttle service free in order to maximize use. Further, in conversation with UCI about CircleLink, they emphasized that keeping the shuttle free reduced security and logistical concerns associated with having bus drivers need to collect fares via cash or credit. Therefore, we are proposing a funding mechanism that also relies on partnership with and sponsorship by area governmental organizations, anchor institutions, and businesses. We see Cleveland State University (CSU) as the most important partner, as this shuttle would be an asset to help engage students with their immediately surrounding community. Further, Cleveland State University likely already owns shuttles or has a relationship with an operator, akin to CircleLink's relationship with Standard Parking that was fostered through an extant connection with CWRU. Beyond CSU, we see GCRTA and the City of Cleveland as important potential government partners. The local CDCs, Midtown Cleveland and St. Clair Superior, would also be vital to execution of this idea, serving a coordination role. Other area sponsors could include the Cleveland Foundation, whose employees could use the shuttle once they complete their new headquarters on Euclid Avenue and E. 65th street, as well as local businesses.

PROPOSED PARTNERS

& Other local businesses, such as Asia Plaza, Park to Shop, Asian Town Center, and the like

In terms of actual operating costs, there would likely be upfront costs, such as for the shuttles themselves, as well as annual operating costs to cover gas, shuttle storage, driver salaries, and marketing. Upfront costs could be reduced based on CSU's extant access to shuttle transportation, or through an operation agreement as discussed above. Calculations for annual costs of similar projects vary from $100,000 a year to the $800,000 mentioned for GCRTA's trolley program.

Our proposal sees the circulator shuttle serving the entire AsiaTown area and connecting Cleveland State University to the relocated Dave's Market further in Midtown via Chester Avenue before circulating back to AsiaTown via E. 55th Street and Superior Avenue. This proposed route connects with several GCRTA bus lines in the area, improving transit access for the residents of AsiaTown by providing them a safe, reliable way to get to the bus that does not involve 10 or more minutes worth of walking. This access is especially important for AsiaTown's aging residents. Beyond serving residents, this circulator shuttle would better connect CSU students and employees over I-90 into the AsiaTown neighborhood as well as Midtown in general. Employees and customers of area businesses would also benefit. Our proposal would center on service being available every 15-30 minutes, coordinated with local bus route timetables. Further, the shuttle should have weekday as well as weekend hours given that it will be used by shoppers, restaurant-goers, and other area visitors as well as students and employees for commuting.

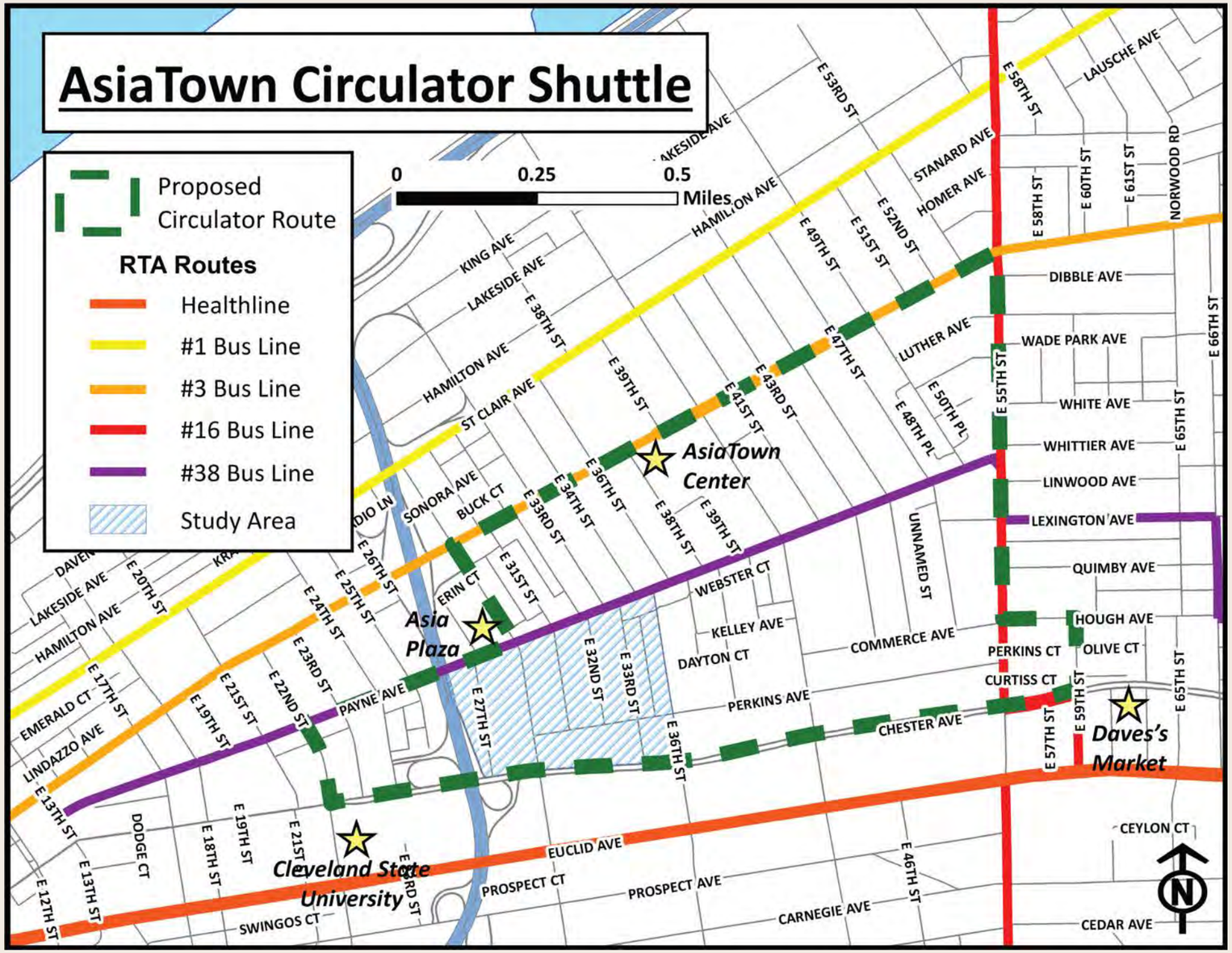


Exhibit 118 .

Acknowledgments

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Clint Luikart
Chris Toddy
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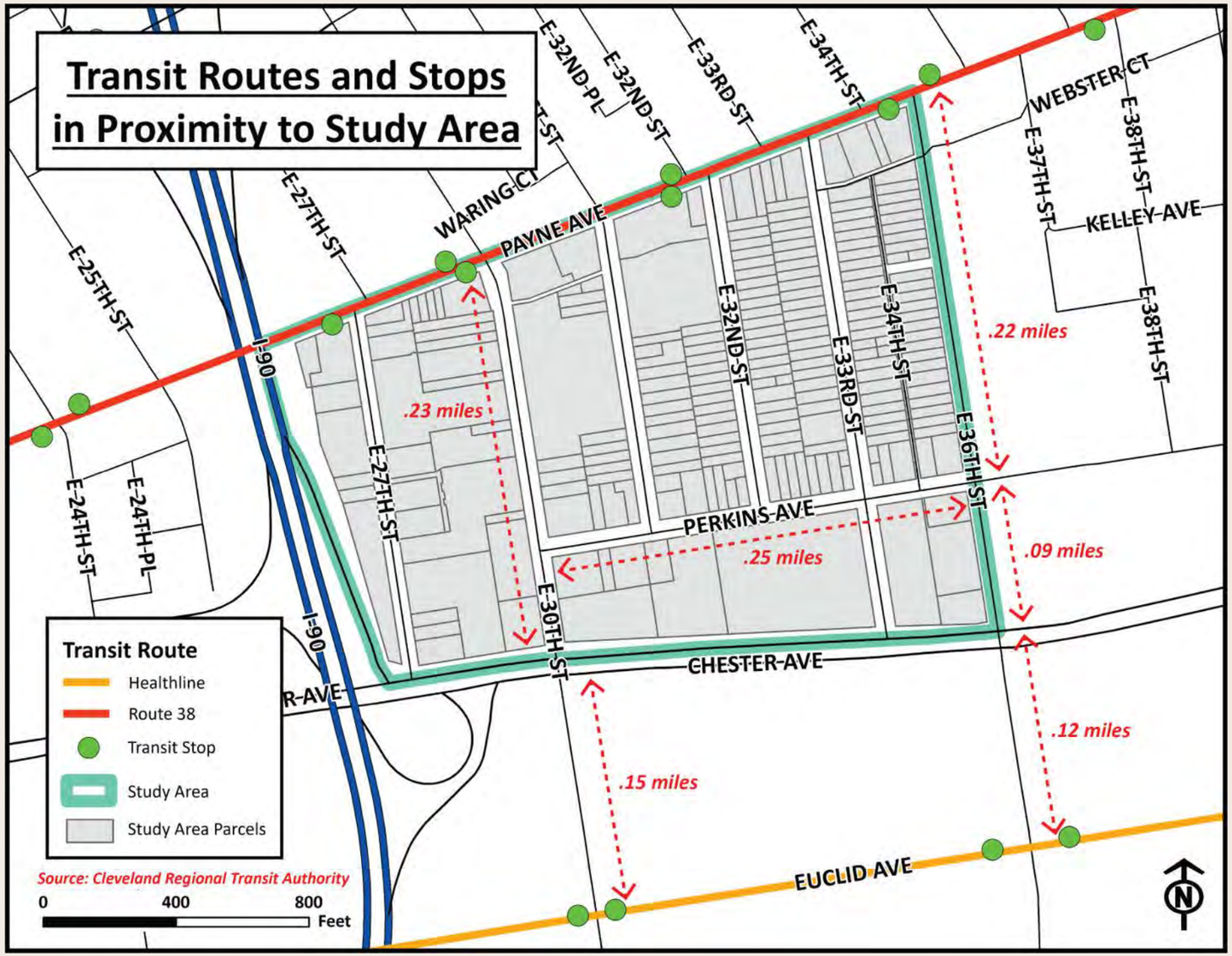
Appendix

Appendix 1: Existing Transportation Conditions

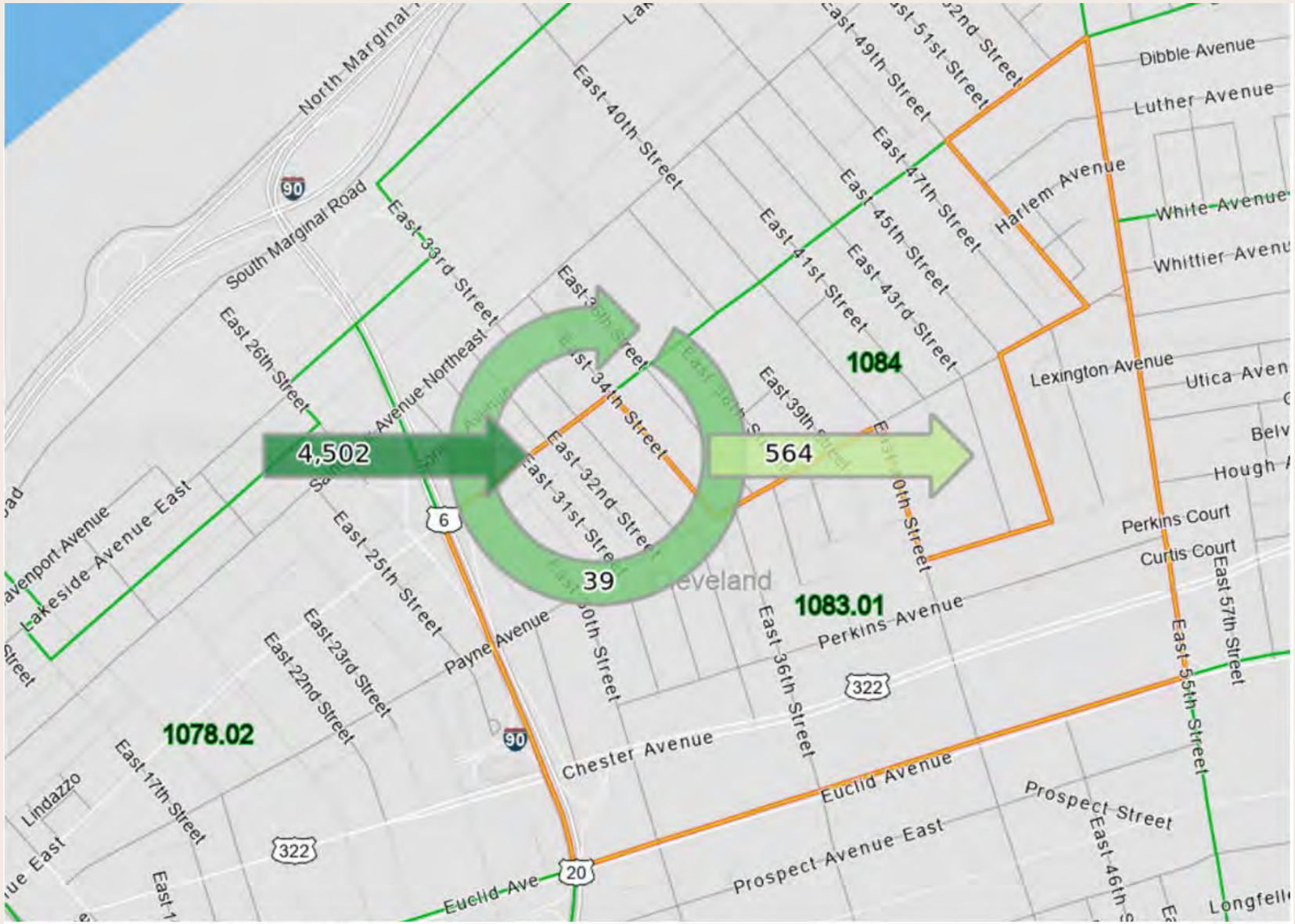


Study Area Traffic Counts

Street	Cross-Street	Year	Direction	Car Count	Truck Count	Total Vehicles
Chester Ave	East 30th St	2017	Eastbound	17,787	763	**18,550**
			Westbound	14,571	1,203	**15,774**
Payne Ave	I-90 Bridge	2017	Eastbound	2,601	66	**2,667**
			Westbound	4,123	143	**4,266**
Payne Ave	East 38th St	2016	Eastbound	2,887	122	**3,009**
			Westbound	3,319	143	**3,462**
Perkins Ave	East 36th St	2016	Eastbound	1,125	81	**1,206**
			Westbound	1,734	80	**1,814**
East 36th St	Perkins Ave	2016	Northbound	1,098	36	**1,134**
			Southbound	1,202	34	**1,236**
East 30th St	Payne Ave	2014	Northbound	3,325	187	**3,512**
			Southbound	3,464	147	**3,611**

Source: NOACA 24-hour traffic counts (http://gis.noaca.org/Portal/)

Appendix 2: Employment Flow Existing Conditions



Source: United States Census Bureau, OnTheMap

Appendix 3: Urban Form Overlay Zoning Code

Urban Form Overlay (UF) District Zoning Code

1. **Purpose.** The Urban Form Overlay (UF) District is established to foster a high level of walkability and design quality for Cleveland's urban streets. The UF will do this by requiring pedestrian-oriented building features, preserving and enhancing the architectural character of new and existing buildings and protecting public safety by minimizing conflicts between vehicles and pedestrians.
2. **Mapping.** Areas designated as UF Districts are planned to be densely developed areas characterized by a preponderance of buildings set relatively close to the street with parking located behind the main building. In every UF District, any street frontage to be considered an "Urban Frontage Line", as defined in this section, shall be marked on the Zoning Map, with either one or both sides of a street designated as such.
3. **Use Regulations.** All uses permitted in the underlying zoning district shall be permitted in the UF District, except that the following uses shall be regulated as follows:
    a. Open sales lots are prohibited;
    b. Gas station pump islands are prohibited within the urban street space;
    c. Any business served by a drive-thru shall have all points of customer interaction located outside of the urban street space; and
    d. A parking lot as a main use is prohibited.
4. **New Construction and Additions (See table on next page)**
5. For purposes of this section, "principal street frontage" means the side or sides of a public street frontage that is specifically designated on the Zoning Map or where there is only one street frontage, it is the street line.
6. **Variances.**
    a. An applicant seeking a variance shall submit a site plan, color elevations, and other drawings as requested or necessary to compare and contrast a code compliant building with the proposed non-compliant building. Such exhibits shall demonstrate, based upon a preponderance of competent, probative evidence as evaluated under the guidelines set forth in division (f)(2) below, that the standard for granting a variance has been met.
    b. To ensure the development of a safe and cohesive district, the Board of Zoning Appeals shall have limited authority to grant variances from the following specific provisions of the UF District requirements.
        i. The Board of Zoning Appeals shall have no authority to grant a variance to eliminate the requirement for the first story of a liner building. Where the Board of Zoning Appeals grants a variance to eliminate the requirement for a liner building above the first story, all building facades above the first story shall have architectural treatments that screen the view of parking from the ROW by the use of walls, glazing, decorative screens, durable plantings, or similar materials. Exposed structural spandrels are prohibited.
        ii. Parking Requirements. The Board may grant a variance above the maximum amount of parking spaces permitted by this section, where the applicant has either shown a good faith effort to first utilize district parking, on-street parking and /or secure shared-use agreements with adjacent property owners or has agreed to make its parking lot available for shared parking with neighboring businesses.

Source: City of Cleveland

(1) *Setbacks.*			
A. Front yard depth; principal street frontage	Single-family, two-family, townhouse: 0 ft. min., 10 ft. max.		All other building types: 0 ft. min., 8 ft. max.
B. Front yard depth; secondary street frontage	Single-family, two-family, townhouse: 0 ft. min., 6 ft. max.		All other building types: 0 ft. min., 6 ft. max.
C. Interior side yard depth	0 ft. min.		
D. Rear yard depth	3 ft. min.		
(2) *Building Configuration.*			
A. Frontage build-out; principal street frontage	80% min. of principal street frontage; 20% of this requirement may be met with a streetscreen Streetscreens shall be masonry and min. 3.5' in height		
B. Frontage build-out, secondary street frontage	100% min. of the urban street space		
C. Active use; first story principal and secondary street frontage	Required on 60% of frontage buildout		
D. Floor area ratio	No max		
E. Entrances	Single-family, two-family, townhouse: Each first-story unit fronting a principal or secondary street shall provide a main pedestrian entrance to that principal or secondary street frontage.	Multi-family residential: Required: At least one main pedestrian entrance from a principal or secondary street frontage.	All other building types: Required: Each use fronting a principal or secondary street frontage shall provide a main pedestrian entrance to that frontage. Such entrance shall be recessed to prevent doors swinging over the ROW, including patio space in the ROW, under Section 3109.03.
F. Height of finished first floor above grade	First-story residential: 18 in. min., 5.5 ft. max, building lobby may be at 0 ft.		First-story non-residential: 0 ft. min.
(3) *Building Design Features.*			
A. First-story glazing, non-residential; principal and secondary street	75% min. of the frontage buildout between 3' and 8' above grade (excluding streetscreens) shall be transparent windows and doors		
B. First-story glazing, residential: principal and secondary street	45% min. of the frontage buildout between 3' and 8' above grade shall be transparent windows and doors		
C. Architectural articulation required: Balconies, bays, awnings, sunshades, planter boxes, or similar	Single-family, two-family, townhouse: Required on 50% min. of all units facing both the principal and secondary street frontage; balconies, if used, shall be 1 ft. min. depth; balcony railing transparency: 30% min.		All other building types: Not required.
D. Materials; principal and secondary street frontage	First-story: Glass in any dimension is permitted. All other materials shall be human-scaled, except materials used on building bases (up to 3 ft. above grade) may be larger in size. Above first-story: Materials in any dimension are permitted. Prohibited: plain and split-face concrete masonry units, synthetic stucco, vinyl siding		

(4) *Parking, Garages and Valet.*			
A. Required parking	Existing Buildings and Additions: Min: 25% of total required by Section 349.04, Max: 120% of total required by Section 349.04		New Construction: Min: 65% of total required by Section 349.04, Max: 120% of total required by Section 349.04
	Garage or structured parking shall have no maximum number of spaces. Sub-market rate housing in an existing building or new construction shall have a Min. 25% of total required by Section 349.04, Max: 120% of total required by Section 349.04		
B. Parking access, drives and garage access Where a secondary street frontage or alley abuts the property, no access is permitted on a principal street frontage	Single-family, Two-family: 10 ft. max. width/lot	Townhouse: Two-way traffic: 18 ft. width max. One-way traffic: 10 ft. width max.; 20 ft. max. aggregate width per frontage	All other building types: 20 ft. max. aggregate width per frontage; 10 ft. max. opening height for parking entrances; 14 ft. max. opening height for service access
	Prohibited: Garage doors facing a principal or secondary street frontage unless located behind the rear wall of the main building Garage doors perpendicular to secondary street frontage: Permitted; 3.5 ft. tall masonry streetscreen required		
	Alley: Unlimited		
C. Surface parking; location	Primary street frontage: Behind the rear wall of the main building [1]		
D. Parking lot aisle width	22 ft. max.		
E. Parking and drive aisles between a front building wall and the public ROW	Prohibited		
F. Valet zones	Shall not reduce existing sidewalk width, or shall maintain 8' min. through pedestrian sidewalk zone		
[1] Where no alley or side street abuts the property, off-street parking between the main building actual front setback and the rear wall of the main building shall be permitted, however limited to one, single loaded row of parking spaces adjacent to the main building. A masonry streetscreen min 3.5 ft. min. in height shall be required between the permitted parking and the public ROW.			
(5) *Transition Strips and Screening.*			
A. Secondary street frontage	3 ft. min. deep landscape strip and streetscreen required Streetscreens shall be masonry and a min. 3.5' in height		
B. Interior Side	Not required		
C. Rear abutting a less intensive use	6 ft. high screen element, 100% opacity		
D. Screening of structured parking and enclosed parking	Liner building along principal and secondary street frontages required. Height of Liner Building shall be equal to or greater than the height of the parking structure. Frontage build-out of liner building shall be equal to or greater than the width of the structured or enclosed parking it screens, less permitted access openings. Liner building shall meet all the requirements of any Overlay District in which it is located.		

Source: City of Cleveland

Appendix 4: Urban Core Overlay Zoning Code

Urban Core Overlay (UC) District

1. **Purpose**. The Urban Core Overlay (UC) District is established to foster the development of dense, vibrant, mixed-use neighborhoods that encourage a quality pedestrian experience. The UC achieves this goal for urban cores by setting forth requirements for consistent street walls, pedestrian-oriented building features, minimizing conflicts between vehicles and pedestrians, and screening of off-street parking and service areas.
2. **Mapping**. The UC District may be overlayed on any zoning district where authorized by ordinance of Council. Areas designated as UC Districts are planned to be developed in accordance with the purpose set forth herein.
3. **Use Regulations**. All uses permitted in the underlying zoning district shall be permitted in the UC District, except that the following uses as regulated below:
    a. Open sales lots are prohibited;
    b. Any establishment served by a drive-through lane providing access to windows or other facilities at which food or merchandise can be ordered or picked up, or business can be transacted by a person in a motor vehicle is prohibited when accessed from a principal or secondary street frontage.
4. **New Construction and Additions (See table on next page)**
5. For purposes of this section, "principal street frontage" means the street line where the principal building entrance and address are located.
6. The Commission may approve an application under this section with design and dimensional elements that are in accordance with the following standards when the site plans, color elevations, or other drawings demonstrate the proposed building configuration, design, or garage better meet the purpose of the Urban Core Overlay:
    a. Frontage build-out should not be less than sixty percent (60%) on each of the principal and secondary street frontages;
    b. Active use on the first-story should not be less than fifty percent (50%) on each of the principal and secondary street frontages;
    c. First-story non-residential glazing should not be less than fifty percent (50%) on each of the principal and secondary street frontages;
    d. Garage doors facing a principal or secondary street frontage for single-family, two-family and townhouse units should be no wider than ten (10) feet.

Source: City of Cleveland

(1) *Block Length.*			
A. Block length	500 ft. max.; No development shall cause a net increase in existing block length.		
B. Block perimeter	1,400 ft. max.		
C. Mid-block pedestrian connection or public alley	Block lengths over 400 ft.		
(2) *Setbacks.*			
A. Front yard depth; principal street frontage	Single-family, two-family, townhouse: 0 ft. min., 10 ft. max.	All other building types above the ground floor: 80% of frontage build-out: 0 ft. to 3 ft. max., or equivalent ground plane area 20% of frontage build-out: 12 ft. max., or equivalent ground plane area	
B. Front yard depth; secondary street frontage	Single-family, two-family, townhouse: 0 ft. min., 6 ft. max.	All other building types above the ground floor: 80% of frontage build-out: 0 ft. to 3 ft. max., or equivalent ground plane area 20% of frontage build-out: 12 ft. max., or equivalent ground plane area	
C. Interior side yard depth	0 ft. min.		
D. Rear yard depth	0 ft. min.		
(3) *Building Configuration.*			
A. Frontage build-out, principal and secondary street frontage	90% min.; the frontage build-out requirement may be met with a streetscreen, plaza, or square for up to 10% of the street frontage. Streetscreens shall be 3.5' in height min. Streetscreens screening non-active uses shall be 6' in height min. and shall have 50% opacity min.		
B. Active use; first-story	Required on 70% of each of the principal and secondary street frontages		
C. Building height	Minimum building height at actual setback shall be 1/2 the width of the street ROW on which the building fronts. (ex. where a building fronts a 60' right of way ROW, minimum building height shall be 30') Maximum height shall be as regulated by the underlying Height District.		
D. Floor area ratio	No max.		
E. Entrances	Single-family, two-family, townhouse: Each first-story unit fronting a principal or secondary street shall provide a main pedestrian entrance to that principal or secondary street frontage.	Multi-family residential: Required: At least one main pedestrian entrance from a principal or secondary street frontage.	All other building types: Required: Each use fronting a principal or secondary street frontage shall provide a main pedestrian entrance to that frontage. Such entrance shall be recessed to prevent doors swinging over the ROW, including patio space in the ROW, under Section 3109.03.
F. Height of finished first floor above grade	First-story residential: 18 in. min., 5.5 ft. max, subject to increase of up to 3 ft. to accommodate slope across site. building lobby may be at 0 ft.	First-story non-residential: 0 ft. min.	
G. First-story height; non-residential, principal and secondary street frontages	11 ft. min. finished floor to finished ceiling		

(4) *Building Design Features.*			
A. First-story glazing, non-residential	60% min. of each of the principal and secondary street frontages between 3' and 8' above grade shall be transparent windows and doors		
B. First-story glazing, residential	30% min. of each of the principal and secondary street frontages between 3' and 8' above grade shall be transparent windows and doors		
C. First-story articulation; frontage build-out	One vertical break required at intervals not to exceed 60 ft. (ex. piers, columns, and/or 3" min. change in facade plane)		
D. Architectural articulation required: Balconies, bays, awnings, sunshades, planter boxes, or similar	Single-family, two-family, townhouse: Required on 50% min. of all units facing each of the principal and secondary street frontages; Balconies, if used, shall be 1 ft. min. depth, and railings shall have minimum 30% transparency.	All other building types: Not required.	
E. Materials; principal and secondary street frontage	Single-family, two-family, townhouse: Glass in any dimension is permitted. All other materials shall be human-scaled, except materials used on building bases (up to 4 ft. above grade) may be larger in size. Prohibited: plain and split-face concrete masonry units, synthetic stucco, vinyl siding	All other building types: Prohibited: plain and split-face concrete masonry units, synthetic stucco, vinyl siding	
(5) *Parking, Loading and Garages.*			
A. Required parking	None		
B. Screening of surface parking, structured parking, and enclosed parking	Liner building or facade along principal and secondary street frontages that does not appear as a parking structure required. Height of liner building or facade shall be equal to or greater than the height of the parking structure, and no less than required by division (f)(3)C. building height. Frontage build-out of liner building or facade shall be equal to or greater than the width of the surface parking, structured parking, or enclosed parking it screens, less permitted access openings. Liner building shall meet all the requirements of any Overlay District in which it is located.		
C. Parking access, drives, garages, and service access Where a secondary street frontage or alley abuts the property, no access is permitted on a principal street frontage	Single-family, two-family: 10 ft. max. width/lot	Townhouse: Two-way traffic: 18 ft. width max. One-way traffic: 10 ft. width max.; 20 ft. max. aggregate width per frontage	All other building types: Max. single opening width: 24 ft. Max. opening height for service access: 14ft. Max. opening height for parking entrance: 10 ft. Aggregate width of openings per development phase shall not exceed the number of street frontages of the development phase multiplied by 24 ft.
	Prohibited: Garage doors facing a principal street frontage		
	Alley: Unlimited		
D. Valet Zones	Shall not reduce existing sidewalk width, or shall maintain 8' min. through pedestrian sidewalk zone.		

Source: City of Cleveland

Appendix 5: Retail and Housing Niche Analyses

Housing Niche Analysis

Housing Niche Analysis

Adjusted Groups	Household Income Range					House Price Affordability Range			Rental Price Affordability Range					
Household Income	Low	High	Households	10% Secondary Demand	Total Demand	Low	High	Owner Occupied Units	Low	High	Renter Occupied Units	Vacant Properties	Total Supply	Net Demand
Less than $5,000	$0	$4,999	6,834	683	7,517	$0	$14,997	1,472	$0	$124	4,994	2,219	8,685	(1,168)
$5,00-$9,999	$5,000	$9,999	6,834	683	7,517	$15,000	$29,997	1,472	$125	$249	4,008	1,890	7,369	148
$10,000-$14,999	$10,000	$14,999	6,834	683	7,517	$30,000	$44,997	1,472	$250	$374	3,809	1,823	7,104	413
$15,000-$19,999	$15,000	$19,999	4,170	417	4,587	$45,000	$59,997	1,331	$375	$499	5,177	2,227	8,735	(4,148)
$20,000-$24,999	$20,000	$24,999	4,170	417	4,587	$60,000	$74,997	1,260	$500	$624	7,117	2,849	11,226	(6,639)
$25,000-$29,999	$25,000	$29,999	3,127	313	3,440	$75,000	$89,997	1,260	$625	$749	5,355	2,260	8,874	(5,434)
$30,000-$34,999	$30,000	$34,999	3,127	313	3,440	$90,000	$104,997	971	$750	$874	3,073	1,390	5,433	(1,993)
$35,000-$39,999	$35,000	$39,999	2,124	212	2,336	$105,000	$119,997	393	$875	$999	2,065	837	3,294	(958)
$40,000-$44,999	$40,000	$44,999	2,124	212	2,336	$120,000	$134,997	393	$1,000	$1,124	1,409	618	2,419	(83)
$45,000-$49,999	$45,000	$49,999	2,124	212	2,336	$135,000	$149,997	393	$1,125	$1,249	981	475	1,848	487
$50,000-$54,999	$50,000	$54,999	1,367	137	1,503	$150,000	$164,997	323	$1,250	$1,374	911	425	1,660	(156)
$55,000-$59,999	$55,000	$59,999	1,367	137	1,503	$165,000	$179,997	323	$1,375	$1,499	765	376	1,464	39
$60,000-$64,999	$60,000	$64,999	1,367	137	1,503	$180,000	$194,997	323	$1,500	$1,624	637	334	1,295	209
$65,000-$69,999	$65,000	$69,999	1,367	137	1,503	$195,000	$209,997	280	$1,625	$1,749	282	199	761	742
$70,000-$74,999	$70,000	$74,999	1,367	137	1,503	$210,000	$224,997	258	$1,750	$1,874	282	191	731	772
$75,000-$79,999	$75,000	$79,999	718	72	790	$225,000	$239,997	258	$1,875	$1,999	282	191	731	59
$80,000-$84,999	$80,000	$84,999	718	72	790	$240,000	$254,997	233	$2,000	$2,124	278	180	691	99
$85,000-$89,999	$85,000	$89,999	718	72	790	$255,000	$269,997	182	$2,125	$2,249	119	108	410	380
$90,000-$94,999	$90,000	$94,999	718	72	790	$270,000	$284,997	182	$2,250	$2,374	119	108	410	380
$95,000-$99,999	$95,000	$99,999	718	72	790	$285,000	$299,997	182	$2,375	$2,499	119	108	410	380
$100,000-$104,999	$100,000	$104,999	319	32	350	$300,000	$314,997	115	$2,500	$2,624	119	83	318	33
$105,000-$109,999	$105,000	$109,999	319	32	350	$315,000	$329,997	115	$2,625	$2,749	56	62	232	118
$110,000-$114,999	$110,000	$114,999	319	32	350	$330,000	$344,997	115	$2,750	$2,874	37	56	208	142
$115,000-$119,999	$115,000	$119,999	319	32	350	$345,000	$359,997	115	$2,875	$2,999	37	56	208	142
$120,000-$124,999	$120,000	$124,999	319	32	350	$360,000	$374,997	115	$3,000	$3,124	37	56	208	142
$125,000-$129,999	$125,000	$129,999	319	32	350	$375,000	$389,997	115	$3,125	$3,249	24	51	190	160
$130,000-$134,999	$130,000	$134,999	319	32	350	$390,000	$404,997	94	$3,250	$3,374	12	39	145	205
$135,000-$139,999	$135,000	$139,999	319	32	350	$405,000	$419,997	51	$3,375	$3,499	12	23	87	264
$140,000-$144,999	$140,000	$144,999	319	32	350	$420,000	$434,997	51	$3,500	$3,624	12	23	87	264
$145,000-$149,999	$145,000	$149,999	319	32	350	$435,000	$449,997	51	$3,625	$3,749	9	22	82	268
$150,000-$154,999	$150,000	$154,999	110	11	121	$450,000	$464,997	51	$3,750	$3,874	4	20	76	45
$155,000-$159,999	$155,000	$159,999	110	11	121	$465,000	$479,997	51	$3,875	$3,999	4	20	76	45
$160,000-$164,999	$160,000	$164,999	110	11	121	$480,000	$494,997	51	$4,000	$4,124	4	20	76	45
$165,000-$169,999	$165,000	$169,999	110	11	121	$495,000	$509,997	30	$4,125	$4,249	4	12	46	75
$170,000-$174,999	$170,000	$174,999	110	11	121	$510,000	$524,997	19	$4,250	$4,374	4	8	31	90
$175,000-$179,999	$175,000	$179,999	110	11	121	$525,000	$539,997	19	$4,375	$4,499	4	8	31	90
$180,000-$184,999	$180,000	$184,999	110	11	121	$540,000	$554,997	19	$4,500	$4,624	4	8	31	90
$185,000-$189,999	$185,000	$189,999	110	11	121	$555,000	$569,997	19	$4,625	$4,749	4	8	31	90
$190,000-$194,999	$190,000	$194,999	110	11	121	$570,000	$584,997	19	$4,750	$4,874	4	8	31	90
$195,000-$199,999	$195,000	$199,999	110	11	121	$585,000	$599,997	19	$4,875	$4,999	4	8	31	90
$200,000 or Greater	$200,000		1,795	180	1,975	$600,000	or more	290	$5,000	or more	4	110	404	1,571

Retail Niche Analysis

Retail Niche Analysis

Category	Spending Power in PMA	% of HH Income Spent	Capture Rate	Potential Sales	2021 Avg Sales/SF	Supportable SF	Existing SF	Net Supportable SF	Typical SF/Store	Stores Needed
Dining										
Restaurant-Limited Service/ Fast Food	$ 428,728,106	2.41%	70%	$ 7,232,643	$ 359.33	20,128	56,063	(35,935)	3,700	(9.7)
Bar/ Tavern	$ 428,728,106	0.41%	70%	$ 1,230,450	$ 242.61	5,072	38,447	(33,375)	3,000	(11.1)
Restaurant-Full Service	$ 428,728,106	2.20%	70%	$ 6,602,413	$ 271.10	24,355	83,085	(58,730)	4,200	(14.0)
Retail Goods										
Women's Clothing & Specialty Stores	$ 428,728,106	1.51%	70%	$ 4,531,656	$ 189.02	23,974	4,841	19,133	6,000	3.2
Jewelry Stores	$ 428,728,106	0.39%	70%	$ 1,170,428	$ 385.60	3,035	500	2,535	1,250	2.0
Optical Goods Stores	$ 428,728,106	0.22%	70%	$ 660,241	$ 299.11	2,207	-	2,207	1,500	1.5
Family Clothing Stores	$ 428,728,106	0.56%	70%	$ 1,680,614	$ 348.75	4,819	-	4,819	4,400	1.1
Supermarket or Grocery Store	$ 428,728,106	8.17%	70%	$ 24,518,960	$ 553.00	44,338	-	44,338	42,000	1.1
Community & Recreation Services	$ 428,728,106	1.94%	70%	$ 5,822,128	$ 180.19	32,311	27,683	4,628	5,000	0.9
Candy, Nut, & Confectionery Stores	$ 428,728,106	0.07%	70%	$ 210,077	$ 379.32	554	-	554	800	0.7
Record Stores	$ 428,728,106	0.21%	70%	$ 630,230	$ 348.52	1,808	-	1,808	3,250	0.6
Beer, Wine, & Liquor Stores	$ 428,728,106	0.37%	70%	$ 1,110,406	$ 411.76	2,697	1,500	1,197	3,000	0.4
Home Improvement Stores	$ 428,728,106	0.37%	70%	$ 1,110,406	$ 178.21	6,231	5,800	431	7,500	0.1
Discount or General Store	$ 428,728,106	6.20%	70%	$ 18,606,800	$ 303.76	61,255	73,516	(12,261)	95,000	(0.1)
Men's and Boys' Clothing & Accessory Stores	$ 428,728,106	0.36%	70%	$ 1,080,395	$ 309.34	3,493	4,051	(558)	2,800	(0.2)
Household Appliance Stores	$ 428,728,106	0.11%	70%	$ 330,121	$ 348.29	948	1,900	(952)	4,000	(0.2)
Used Merchandise Stores	$ 428,728,106	0.10%	70%	$ 300,110	$ 66.50	4,513	7,585	(3,072)	5,000	(0.6)
Shoe Stores	$ 428,728,106	0.50%	70%	$ 1,500,548	$ 171.93	8,727	12,000	(3,273)	5,000	(0.7)
Drug Stores	$ 428,728,106	2.24%	70%	$ 6,722,457	$ 521.73	12,885	24,350	(11,465)	12,500	(0.9)
Art Dealers	$ 428,728,106	0.02%	70%	$ 60,022	$ 237.38	253	2,000	(1,747)	1,650	(1.1)
Florists	$ 428,728,106	0.13%	70%	$ 390,143	$ 274.82	1,420	3,150	(1,730)	1,500	(1.2)
Beauty Shops	$ 428,728,106	0.36%	70%	$ 1,080,395	$ 361.07	2,992	4,920	(1,928)	1,500	(1.3)
Book Stores	$ 428,728,106	0.19%	70%	$ 570,208	$ 270.98	2,104	6,000	(3,896)	2,250	(1.7)
Pet Shops & Services	$ 428,728,106	0.08%	70%	$ 240,088	$ 122.18	1,965	9,500	(7,535)	2,200	(3.4)
Bakeries	$ 428,728,106	0.18%	70%	$ 540,197	$ 379.21	1,425	9,200	(7,775)	2,000	(3.9)
Furniture Stores	$ 428,728,106	0.94%	70%	$ 2,821,031	$ 500.46	5,637	129,806	(124,169)	20,000	(6.2)
Sporting Goods Stores	$ 428,728,106	0.83%	70%	$ 2,490,910	$ 313.88	7,936	30,154	(22,218)	3,500	(6.3)
Convenience Food Stores	$ 428,728,106	0.89%	70%	$ 2,670,976	$ 592.06	4,511	30,830	(26,319)	4,000	(6.6)
Computer & Electronics Stores	$ 428,728,106	0.79%	70%	$ 2,370,866	$ 316.90	7,481	35,276	(27,795)	4,000	(6.9)
Musical Instrument Stores	$ 428,728,106	0.06%	70%	$ 180,066	$ 337.94	533	26,224	(25,691)	3,500	(7.3)
Toy, Craft, or Hobby	$ 428,728,106	0.17%	70%	$ 495,181	$ 696.26	711	11,900	(11,189)	1,200	(9.3)
Auto Parts, Tires, & Accessories Stores	$ 428,728,106	0.54%	70%	$ 1,620,592	$ 186.47	8,691	79,800	(71,109)	5,400	(13.2)
Barber Shops/ Salons	$ 428,728,106	0.05%	70%	$ 150,055	$ 212.62	706	14,032	(13,326)	1,000	(13.3)
Photo/Portrait Studios	$ 428,728,106	0.12%	70%	$ 360,132	$ 205.18	1,755	32,200	(30,445)	2,000	(15.2)
Homefurnishing Stores	$ 428,728,106	1.42%	70%	$ 4,261,557	$ 269.58	15,808	117,652	(101,844)	3,000	(33.9)
Specialty or Micellaneous Food Stores	$ 428,728,106	0.71%	70%	$ 2,130,779	$ 314.22	6,781	81,600	(74,819)	1,700	(44.0)
Consumer Services										
Laundry, Dry Cleaning, & Tailor	$ 428,728,106	0.72%	70%	$ 2,160,790	$ 219.48	9,845	6,700	3,145	1,500	2.1
Accounting & Tax Preparation	$ 428,728,106	0.35%	70%	$ 1,050,384	$ 489.99	2,144	1,000	1,144	1,000	1.1
Insurance	$ 428,728,106	0.60%	70%	$ 1,800,658	$ 653.33	2,756	3,900	(1,144)	2,500	(0.5)
Healthcare/Doctor/Dentist	$ 428,728,106	2.26%	70%	$ 6,782,479	$ 571.72	11,863	21,725	(9,862)	4,000	(2.5)
Childcare & Daycare Services	$ 428,728,106	0.28%	70%	$ 840,307	$ 285.86	2,940	10,500	(7,560)	2,000	(3.8)
Banks or Financial Institution	$ 428,728,106	1.30%	70%	$ 3,901,426	$ 488.25	7,991	19,678	(11,687)	2,400	(4.9)
Legal Services	$ 428,728,106	0.68%	70%	$ 2,040,746	$ 816.77	2,499	16,984	(14,485)	1,500	(9.7)
Arts, Entertainment, & Recreation	$ 428,728,106	1.48%	70%	$ 4,441,623	$ 285.86	15,538	200,085	(184,547)	8,000	(23.1)
Auto Repair and Services	$ 428,728,106	2.48%	70%	$ 7,442,720	$ 470.00	15,836	197,254	(181,418)	3,000	(60.5)

Appendix 6: Highest & Best Use Analysis for Catalyst Sites

Intergenerational Housing, AsiaTown Grocery & Greenspace Sites

3209 Chester Ave & Copy King Sites									
Site Attributes	Sng/Two-Family	Rental Multi-Family	Park/Public Space	Restaurant /Bar	Office	Mixed-Use (Com/Res)	Community Center	Senior Housing	Light Manufacturing
Visibility/Views	-2	0	0	2	0	2	0	0	0
Auto Traffic	-2	0	0	2	0	2	0	0	0
Adequate Parking	2	2	2	2	2	2	2	2	0
Pedestrian Access	1	1	1	1	1	1	1	1	0
Highway Access	0	0	0	1	1	1	1	0	2
Public Transit Access	2	2	2	2	2	2	2	2	2
Daytime Use	0	0	2	2	2	2	2	2	2
Evening Use	2	2	0	2	-1	2	0	2	-1
Compatibility w/ Neighborhood	1	2	2	1	1	1	2	2	2
Zoning	-1	-1	2	2	-1	0	-1	-1	2
Size of Parcel	2	2	2	2	2	2	2	2	1
Building Tax Base	1	2	0	1	2	2	0	2	1
Competition	1	1	2	-2	1	1	2	2	-1
Total	**7**	**13**	**15**	**18**	**12**	**20**	**13**	**16**	**10**

Community Center & Payne Park Sites

Former Design Lab Early College Site									
Site Attributes	Sng/Two-Family	Rental Multi-Family	Park/Public Space	Restaurant /Bar	Office	Mixed-Use (Com/Res)	Community Center	Senior Housing	Light Manufacturing
Visibility/Views	-1	0	0	-1	0	-1	0	0	0
Auto Traffic	1	0	1	-1	0	-1	1	1	0
Adequate Parking	2	2	2	2	2	1	2	2	-1
Pedestrian Access	1	1	1	1	1	1	1	1	0
Highway Access	0	0	0	1	1	1	1	0	2
Public Transit Access	1	1	1	1	1	1	1	1	1
Daytime Use	0	0	2	2	2	2	2	2	2
Evening Use	2	2	0	2	-1	2	0	2	-1
Compatibility w/ Neighborhood	2	2	2	1	1	1	2	2	0
Zoning	0	2	2	-1	-1	-1	2	2	-2
Size of Parcel	2	2	2	2	2	1	2	2	-1
Building Tax Base	1	2	0	1	2	2	0	2	1
Competition	1	1	2	-2	1	1	2	2	-1
Total	**12**	**15**	**15**	**8**	**11**	**10**	**16**	**19**	**0**

Park Vistas Site

E. 30th and Payne Site									
Site Attributes	Sng/Two-Family	Rental Multi-Family	Park/Public Space	Restaurant /Bar	Office	Mixed-Use (Com/Res)	Community Center	Senior Housing	Light Manufacturing
Visibility/Views	0	1	0	1	1	1	0	1	0
Auto Traffic	-1	0	0	0	1	0	1	1	-1
Adequate Parking	0	2	1	2	2	2	2	2	2
Pedestrian Access	1	1	1	1	1	1	1	1	0
Highway Access	1	2	0	1	2	2	2	-1	2
Public Transit Access	2	2	2	2	2	2	2	2	0
Daytime Use	1	1	1	1	1	1	0	1	-1
Evening Use	0	0	0	1	-1	1	0	0	0
Compatibility w/ Neighborhood	-2	-1	-2	-1	-2	-1	1	-2	2
Zoning	-2	-2	-2	-2	-2	-2	0	-2	2
Size of Parcel	-2	2	2	-1	2	2	1	1	2
Building Tax Base	-1	1	-2	1	1	2	-1	1	-1
Competition	0	0	2	-2	-1	1	-1	2	-2
Total	**-3**	**9**	**3**	**4**	**7**	**12**	**8**	**7**	**5**

Appendix 7: Pro Formas for Catalyst Sites

Intergenerational Housing Pro Forma Summary					
Construction		**Annual Revenue (Stable Year 3)**		**Total PV of Completed Project**	**$24,287,351**
Demolition	$162,170	Senior 1-bedroom	$1,174,389	Construction loan	$16,636,005
Site Prep	$707,361	Senior 2-bedroom	$282,912	LIHTC	$9,328,796
Hard Costs		Student Studio	$295,016	HOME Loan	$757,986
Senior	$17,082,000	Student 1-bedroom	$419,830	GI Loan	$180,000
Student	$5,490,400	Student 2-bedroom	$136,161	Developer Fee	$1,128,620
Soft Costs		subtotal	$2,308,307	Cleveland Foundation Grant	$500,000
Senior (30%)	$5,124,600	less vacancy	$157,966	Land Equity	$1,313,204
Student (20%)	$1,098,080	less expenses	$1,351,745	Debt Service Coverage Ratio (yr 3)	1.20
Parking Construction	$180,000			Debt Service Coverage Ratio (yr 6)	1.33
Total Capital Budget	**$29,844,611**	**Net Operating Income**	**$798,597**	**After Tax Net Present Value**	**$195,936**

Grocery/ Mixed-Use Pro Forma Summary					
Construction		**Annual Revenue**		**Value of Completed Project**	**$20,093,686**
Site Acquisition	$1,079,900	MF Studio	$421,200	Max 1st Mortgage	$15,070,265
Demolition	$715,513	MF 1-bedroom	$1,078,920	GI Loan	$462,443
Site Prep	$1,043,503	MF 2-bedrooms	$311,040	NMTC	$4,300,000
MF Construction	$14,824,080	Grocery	$582,123	Equity required	$4,592,731
Grocery Construction	$6,300,000	subtotal	$2,393,283	Annual Debt Service	$882,631
Parking Construction	$300,000	less MF vacancy	$181,116	Net Annual Before Tax Cash Flow	$463,646
Greenspace Construction	$162,443	Less MF expenses	$865,890	Cash-on-Cash Return	10.1%
Total Capital Budget	**$24,425,439**	**Net Operating Income**	**$1,346,277**	**Debt Service Coverage Ratio**	**1.53**

Community Center/ Office Space Pro Forma Summary					
Construction		**Annual Revenue**		**Value of Completed Project**	**$1,353,757**
Site Acquisition	$3,234,800	Office Space	$250,557	Tax-Exempt Bond	$2,000,000
Community Center Renovation	$2,837,787	Community Center	$200,000	NMTC	$2,000,000
Office Space Renovation	$3,397,254	subtotal	$450,557	Equity required	$5,483,378
Greenspace Construction	$13,537	less office vacancy	$12,528	Annual Debt Service	$122,314
		less expenses	$294,531	Net Annual Before Tax Cash Flow	$21,184
Total Capital Budget	**$9,483,378**	**Net Operating Income**	**$143,498**	**Debt Service Coverage Ratio**	**1.17**

Payne Ave & E 30th Street Mixed-Use Pro Forma Summary					
Construction		**Annual Revenue**		**Value of Completed Project**	**$30,637,026**
Site Acquisition	$1,618,661	MF Studio	$432,000	Max 1st Mortgage	$24,509,620
Demolition	$387,531	MF 1-bedroom	$1,404,000	GI Loan	$400,000
Site Prep	$1,406,182	MF 2-bedrooms	$837,900	NMTC	$8,147,398
Environmental Remediation	$436,000	MF 3-bedrooms	329670	Brownfield Grant	$436,000
MF Construction	$27,228,925	Retail	$774,763	Developer Fee	$1,395,078
Retail Construction	$9,043,099	subtotal	$2,393,283	Equity Required	$5,848,893
Parking Construction	$400,000	less vacancy	$339,095	Net Annual Before Tax Cash Flow	$631,869
Greenspace Construction	$216,591	Less MF expenses	$1,386,557	Cash-on-Cash Return	10.8%
Total Capital Budget	**$40,736,989**	**Net Operating Income**	**$2,052,681**	**Debt Service Coverage Ratio**	**1.44**

Appendix 8: Community Garden Costs

Permanent Parcel Number (PPN)	Acres	Market Value	***10238014***	
10238025	0.096	$ 7,700	21-24 are part of this parcel	
10238024	0.096	$ 7,700		
10238023	0.096	$ 7,700		
10238022	0.096	$ 7,700		
10238021	0.096	$ 7,700		165 X 125
Total	0.48	**$ 38,500**		

Site Development	$ 305,029	acre	***Cost to remove the parking surface and add in-ground garden, including site acquisition
	$ 146,414		
Construction	$ 1.00	SF	
	$ 20,909		
Fencing	$ 15.00	linear foot	
	$ 1,875		
Storage Shed	$ 1,000		
Total Cost	**$ 208,698**	***	

OR

	Price	Dimensions	***Cost leave the parking surface and install raised planters, including site acquisition
Raised Beds	$ 1,132	4X16X2	https://durablegreenbed.com/raised-garden-bed-kits/
	30	planters	
Premium Topsoil	$ 26.00	cubic yard	https://www.boyasrecycling.com/landscape-products/topsoil
	4.7	cubic yards/planter	
Fencing	$ 15.00	linear foot	
	$ 1,875		
Storage Shed	$ 1,000		
Total Cost	**$ 79,001**	***	

Appendix 9: Parking Garage Costs

PPN	Acres	Mkt Value	Building SF			
10227026	0.58	$ 123,500	0	Demolition	6.61	gsf
10227025	0.091	$ 49,100	2,472	Site Development	$ 305,028.65	acre
10227024	0.067	$ 16,300	1,016			
10227014	0.557	$ 253,600	10,844			
Total	1.295	$ 442,500	14,332			
	$ 395,012.10		$ 94,734.52			
Garage Footprint	40,000	SF				
Floors	3					
Total Parking Spaces	300					
20 ft X 10 ft	2012	2021				
Cost per space	$ 15,000	$ 17,926				
Total Garage Cost		$ 5,377,916.56				
Total Construction Cost	$ 6,310,163					
Source: ULI Professional Real Estate Development						

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