

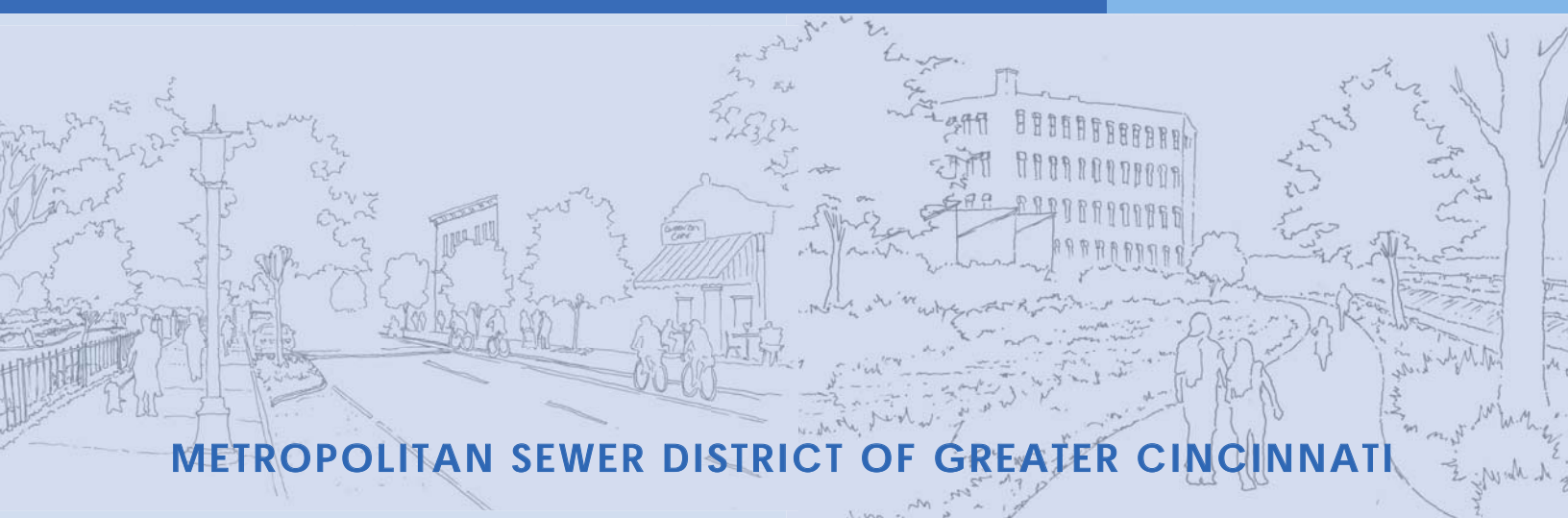
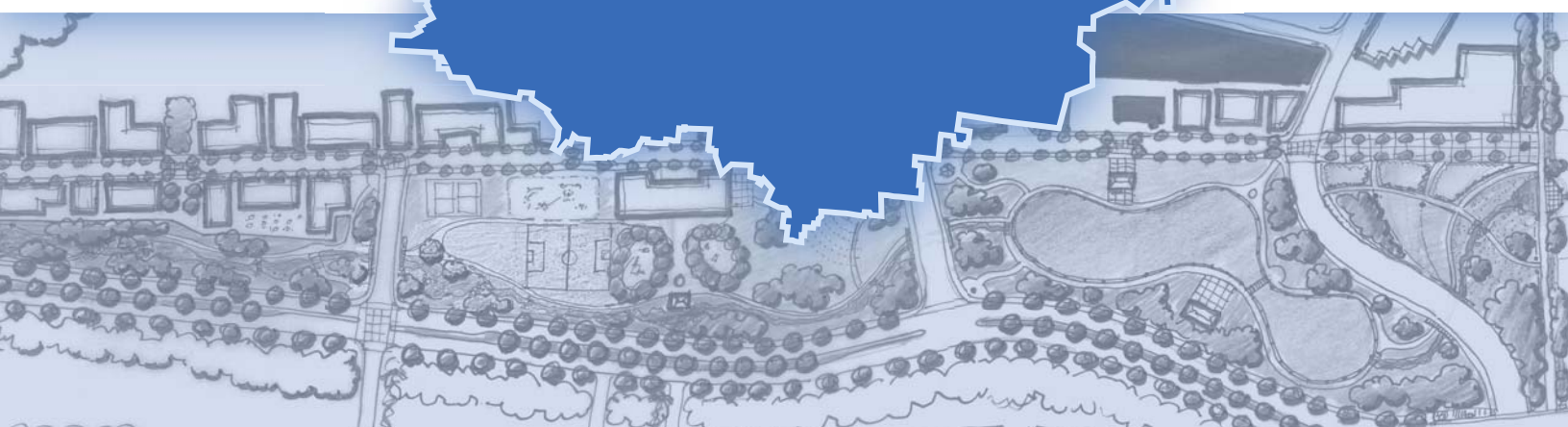
WELCOME TO

SOUTH FAIRMOUNT
GATEWAY TO THE WEST Est. 1849



**WET WEATHER
STRATEGY**

**LICK RUN
WATERSHED**



METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

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WATERSHED CHARACTERIZATION



CONTEXT

WET WEATHER STRATEGIES AND THE LICK RUN WATERSHED

The Metropolitan Sewer District of Greater Cincinnati (MSD) is making necessary improvements to its sewage systems, particularly those with combined sewers that carry both sewage and storm water in the same pipes. Our current sewer system is old, parts of it are deteriorating, and portions are not big enough to handle the mixture of sewage and storm water that enters it during heavy rains. During wet weather, billions of gallons of raw sewage mixed with storm water overflow into local rivers and streams and back up into basements.



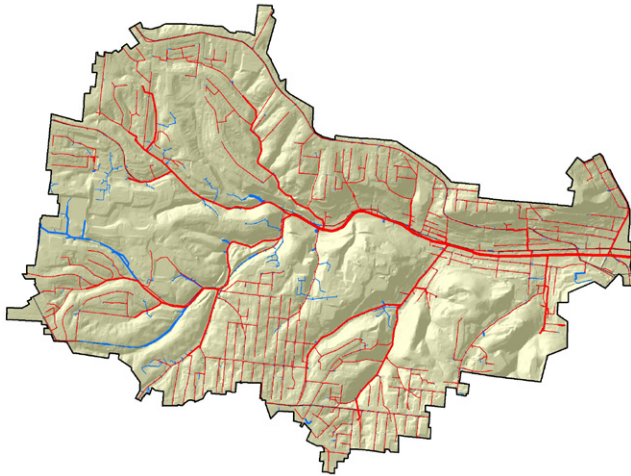
PROJECT GROUNDWORK
your pipeline to clean water

As one of the top five combined sewer overflow or CSO dischargers in the country, MSD is under a federal Consent Order to resolve this problem. The U.S. EPA has mandated that MSD capture and treat or remove 85% of the 14 billion gallons of combined sewer overflows. The solution to this problem is **Project Groundwork**, one of the largest public works projects in the history of our community. This two-phased, multi-year initiative is comprised of hundreds of sewer improvement projects across our area, with the local community investing over a billion dollars over the next 10 years.

MSD is faced with finding solutions that are affordable to ratepayers and also meet the environmental, social and economic needs of affected communities. One of MSD's largest combined sewer overflows is in South Fairmount; located on the west side of Cincinnati in the Mill Creek valley. Each year, about 1.5 billion gallons of combined sewage and storm water overflow through this CSO. Of that total, less than 25% is sewage - the rest comes from storm water drains and what used to be natural stream flow.

South Fairmount was first settled in the early 1800s. Although it was initially settled for farming, the area eventually became industrialized and over the past 80 years, a premier gateway from the downtown area to Cincinnati's westside. South Fairmount originally developed as self-sustaining community, with homes, vibrant industry and businesses, health care, and educational institutions. It was an early "bedroom community" of the City, hugging the Mill Creek Valley. As the City grew, the landscape of the neighborhood changed. Streams and trees were replaced with roadways, buildings and sewer pipes. Increased runoff from hard surfaces like rooftops, roads and sidewalks mixed with additional domestic flows led to increased frequency and intensity of flooding events and sewer overflows. Over time, the Mill Creek and its tributaries became the dumping ground for human and industrial waste.





Today underground sewer systems have replaced the pre-development hydrologic network, which naturally conveyed storm water runoff to Lick Run and, eventually, to the Mill Creek.

To resolve this public health threat, several more tributaries of the Lick Run - were enclosed within a large sewer pipe to move the waste away from the South Fairmount neighborhood. That 19.5-foot-diameter pipe still remains today, running under 3,700 feet of buildings and streets. It is connected to CSO #5, a relief outfall at the east end of Queen City Avenue that overflows into Mill Creek during heavy rains.

Project Groundwork currently includes a \$250 million capital solution for CSO #5 which includes a tunnel, deep underground, about 30 feet in diameter and 1.2 miles long that will store the combined sewage and storm water flows and likely discharge to an on-site treatment facility with significant annual operation and maintenance costs.

The tunnel solution requires MSD to treat more than a billion gallons of combined sewage and storm water during heavy rain events. Much of this is clean water being fed into the system from the former Lick Run and other Mill Creek tributaries. The tunnel solution is expensive and brings no new customers or revenue to help pay for the cost of construction or operation and maintenance - these costs will be borne by MSD's existing customer base.

MSD is prepared to execute the tunnel plan; however, there may be a better and more sustainable solution. The contents of this report provides an alternative to the tunnel plan and provides a wet weather solution that would be less expensive to construct, operate and maintain and one that would incorporate a brighter vision for the west side of Cincinnati.

The Wet Weather Strategy for the Lick Run Watershed is an MSD vision to create **a community of the future** that integrates the U.S. EPA mandate to reduce combined sewer overflows with urban renewal, economic development, and sustainable environmental solutions. The Wet Weather Strategy for the Lick Run Watershed builds upon the initiatives and implements the ideas that several local, state and national organizations have been working towards through smarter growth, collaboration and sustainability.

“A wet weather solution that would be less expensive to construct, operate and maintain and one that would incorporate a brighter vision for the west side of Cincinnati.”

HISTORICAL ANCHOR BUILDINGS



1 Central Fairmount Public School



2 Old St. Francis Hospital



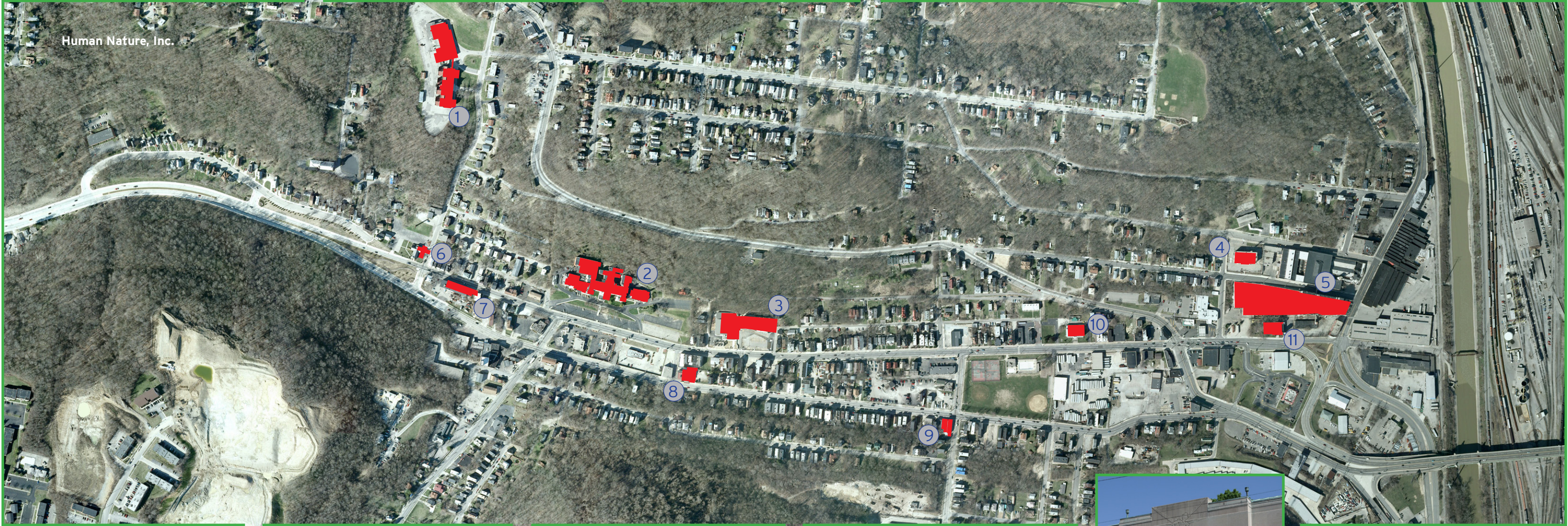
3 Orion Academy



4 Theodore Roosevelt School



5 Lunkenheimer Building



6 San Antonio Church



7 Stone Building



8 Funeral Home



9 Former Storefront



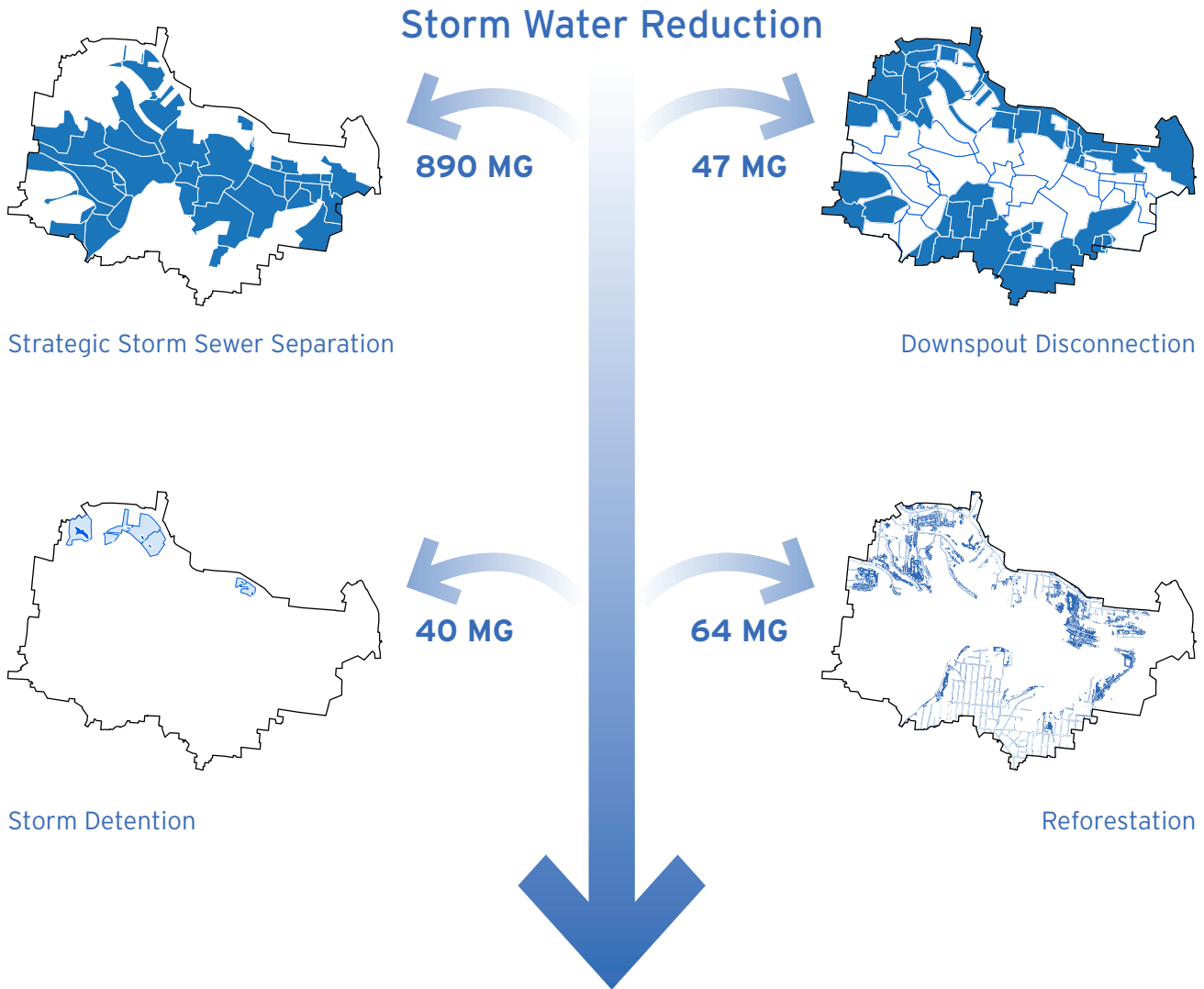
10 Cincinnati Water Works



11 Immanuel United Church of Christ

WET WEATHER STRATEGIES

MULTI-PRONGED APPROACH PROVIDES COST-EFFECTIVE SOLUTIONS



results in

Strategic Storm Sewer Separation • Civic Spaces • Downspout Disconnection • Clean Water Sustainable Infrastructure • Reduced Combined Sewer Overflows • Greenway Connections Sense of Place • Recreational Amenities • Urban Core • Reinvestment in the Urban Core Community Redevelopment • Water as a Resource • Neighborhood Redevelopment Stream Daylighting • Job Creation • Adaptive Reuse • Leveraged Infrastructure Investment

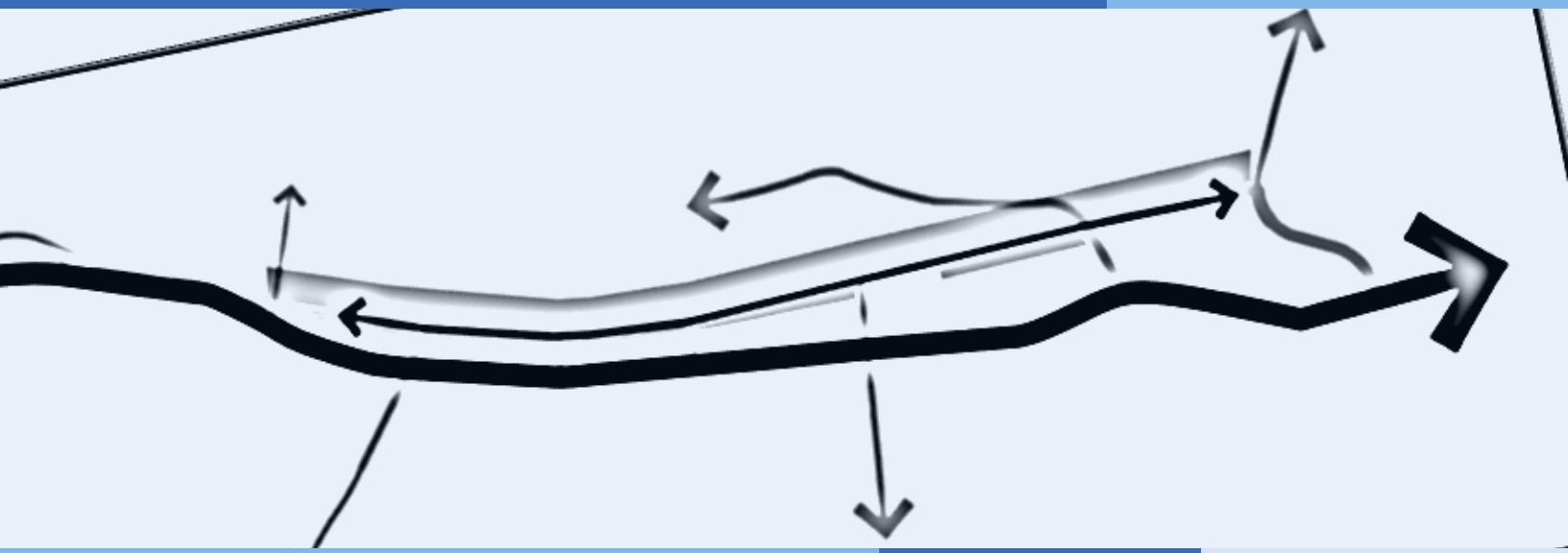
800
million gallons
annually removed from
combined sewer overflow

LICK RUN WATERSHED

WET WEATHER STRATEGIES AND THE TRIPLE BOTTOM LINE

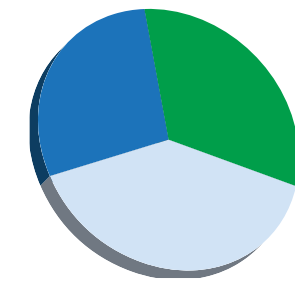
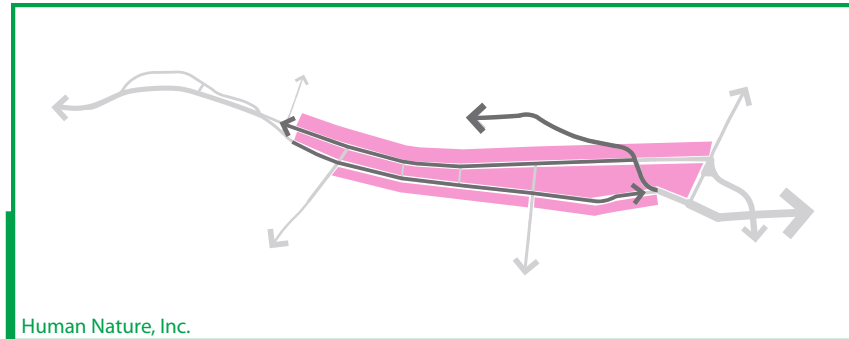


ALTERNATIVES DEVELOPMENT



URBAN RAVINE/CANAL

- Slightly reconfigure the existing Queen City/Westwood alignments. Queen City is better integrated with Harrison Avenue.
- Preserve architecturally-significant buildings (shown as black blocks in plan).
- Encourage mixed-use redevelopment (including commercial, office, and residential uses) where purple blocks are shown. Stream-side building frontage would include terraces, outdoor seating, and/or patios overlooking the stream or canal.
- Promote larger-scale mixed-use redevelopment (industrial, institutional, and/or commercial) at the eastern end of the corridor.
- Promote smaller-scale redevelopment south of Westwood Avenue due to steep slopes.
- Create a central greenspace with a daylighted stream, trail/path opportunities, active recreation, and other amenities.
- Celebrate the connection of the stream to the Mill Creek. This area would be the primary interactive, civic, and celebratory space for the neighborhood and contain pathways and promenades.

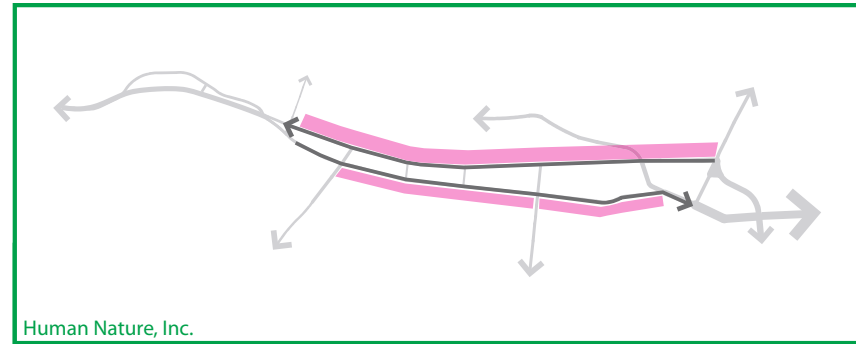


- Mixed-Use Redevelopment (Industrial, Institutional, Commercial) **24 acres**
- Pedestrian-Oriented Redevelopment (Commercial, Office, Residential) **33.2 acres**
- Green Space **26.3 acres**

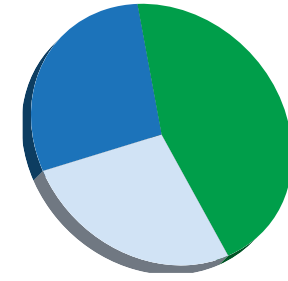


GREEN SPINE/CENTRAL PARK

- Maintain current traffic configuration (i.e., the existing Queen City/ Westwood alignments).
- Preserve architecturally-significant buildings (shown as black blocks in plan).
- Encourage mixed-use redevelopment (including commercial, office, and residential uses) where purple blocks are shown.
- Promote larger-scale mixed-use redevelopment (industrial, institutional, and/or commercial) at the eastern end of the corridor.
- Promote smaller-scale redevelopment south of Westwood Avenue due to steep slopes.
- Create a greenspace that becomes the “Central Park” for South Fairmount. This area would contain opportunities for active and passive recreation.
- Celebrate the connection to the Mill Creek with large-scale ponds/detention areas. In addition to providing additional water quality benefits, these areas would integrate opportunities for recreational uses (e.g., fishing, paddle boats), and contain civic spaces and/or plazas.



Human Nature, Inc.

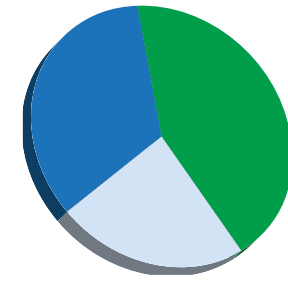
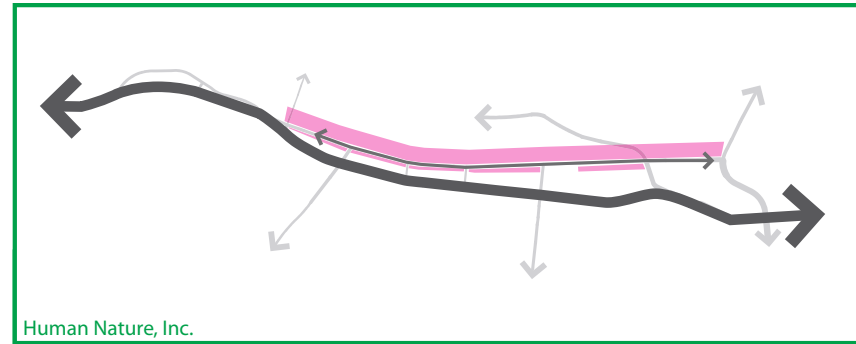


- Mixed-Use Redevelopment (Industrial, Institutional, Commercial) **24 acres**
- Pedestrian-Oriented Redevelopment (Commercial, Office, Residential) **22.3 acres**
- Green Space **37.2 acres**

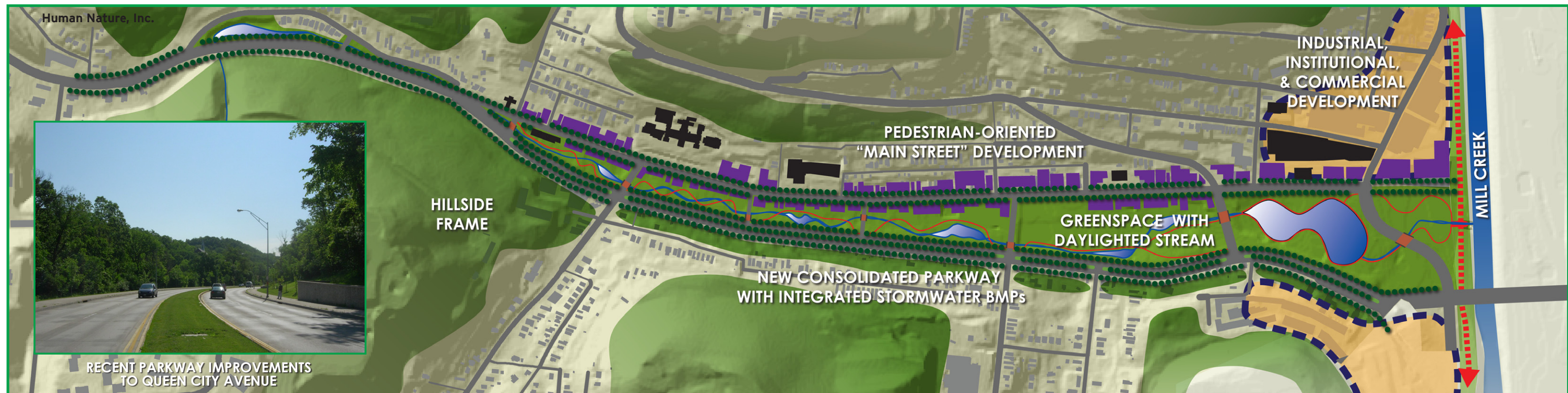


GREEN STREET/MAIN STREET

- Combine Queen City and Westwood avenues into one, multi-lane parkway with street trees and improved traffic flow. This alternative integrates well with recent improvements to Queen City Avenue.
- Transform the former Queen City Avenue into a “Main Street”, with an improved pedestrian realm (e.g., traffic-calming elements, street trees, street planters, etc.).
- Preserve architecturally-significant buildings (shown as black blocks in plan).
- Encourage mixed-use redevelopment (including commercial, office, and residential uses) where purple blocks are shown. Buildings face the “Main Street”, and the stream-side buildings include terraces, outdoor seating, and/or patios.
- Promote larger-scale mixed-use redevelopment (industrial, institutional, and/or commercial) at the eastern end of the corridor.
- Create a central greenspace with a daylighted stream, trail/path opportunities, active recreation, and other amenities.
- Celebrate the connection of the stream to the Mill Creek with a large-scale pond/detention area. This area would be the primary interactive, civic, and celebratory space for the neighborhood.

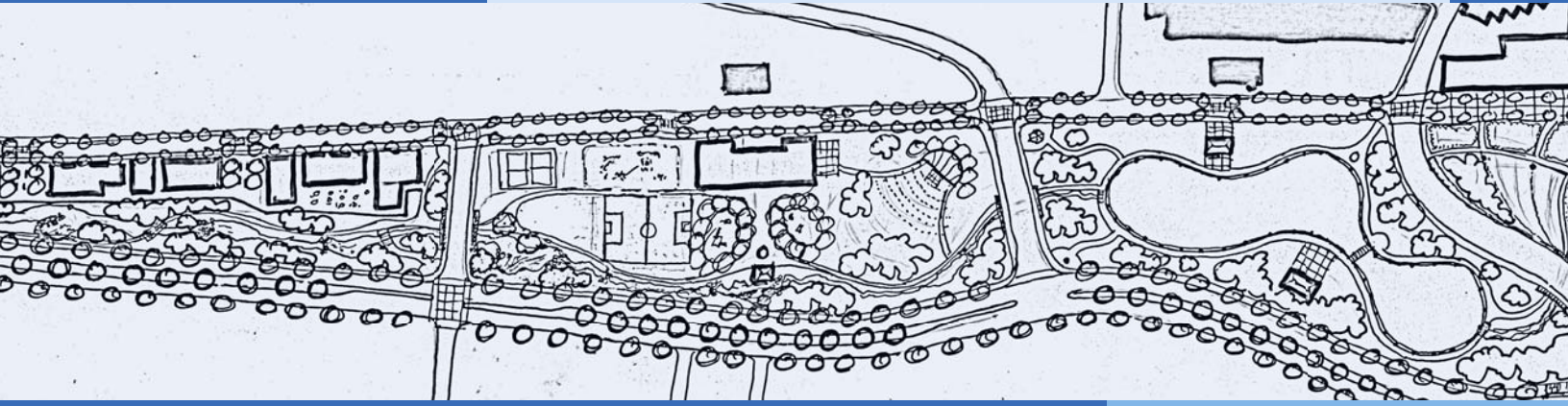


- Mixed-Use Redevelopment (Industrial, Institutional, Commercial) **24 acres**
- Pedestrian-Oriented Redevelopment (Commercial, Office, Residential) **16.3 acres**
- Green Space **30 acres**



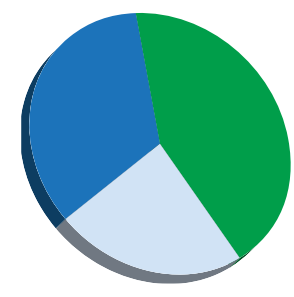
RECENT PARKWAY IMPROVEMENTS TO QUEEN CITY AVENUE

PRELIMINARY SYNTHESIS PLAN



PRELIMINARY SYNTHESIS PLAN

- Combine Queen City and Westwood avenues into one, multi-lane parkway with street trees and improved traffic flow. This alternative integrates well with recent improvements to Queen City Avenue.
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- Mixed-Use Redevelopment (Industrial, Institutional, Commercial) **24 acres**
- Pedestrian-Oriented Redevelopment (Commercial, Office, Residential) **16.3 acres**
- Green Space (Active and Passive Recreation, Civic Spaces) **30 acres**



BIRD'S EYE VIEW



Human Nature, Inc.

PROPOSED



AERIAL PERSPECTIVE

QUEEN CITY AVENUE



Human Nature, Inc.

PROPOSED



EXISTING CONDITIONS

MILL CREEK TRAIL



EXISTING CONDITIONS



PROPOSED

STREAM RESTORATION



EXISTING CONDITIONS



PROPOSED

Human Nature, Inc.

STREAM RESTORATION

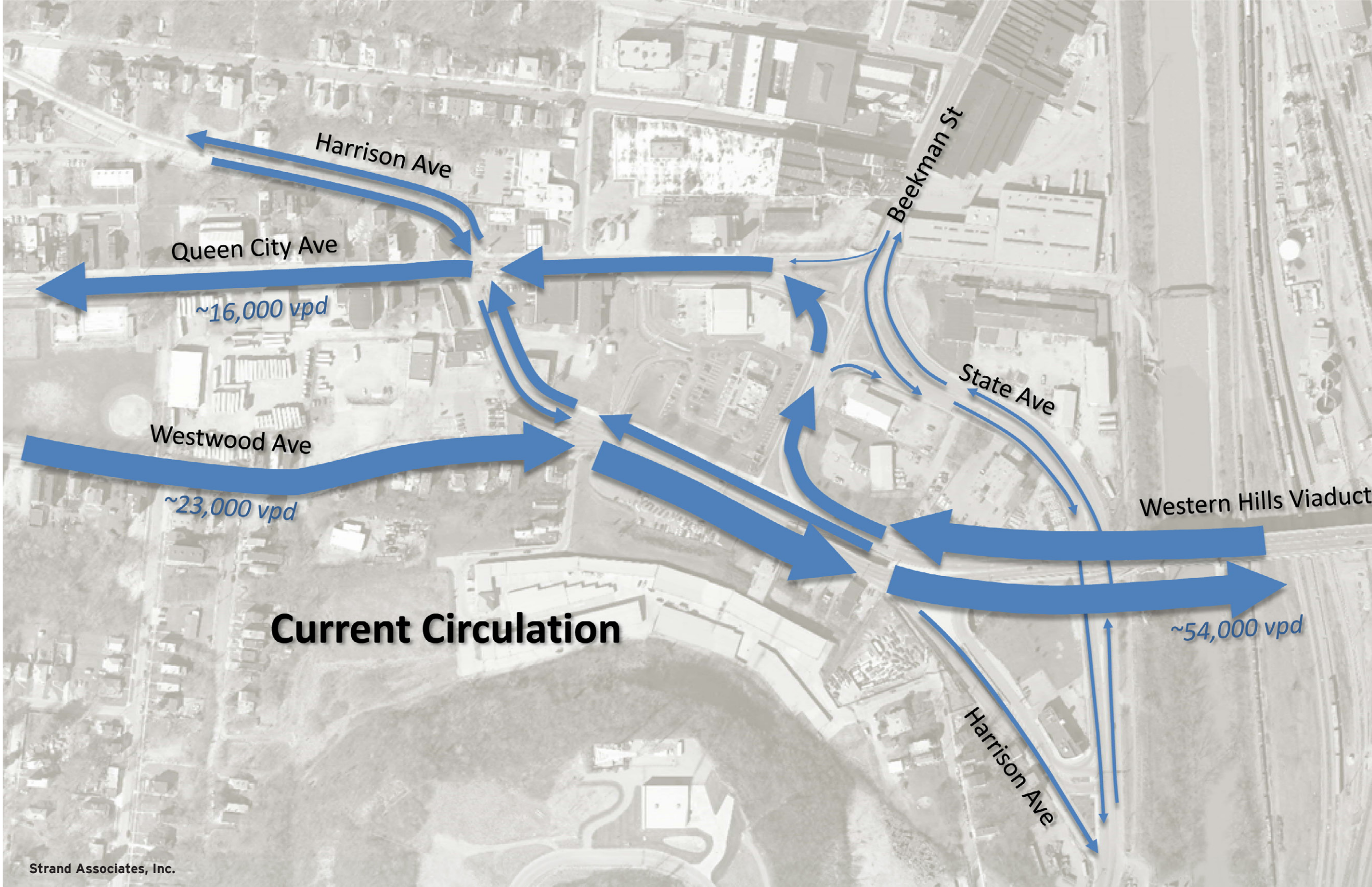


PROPOSED



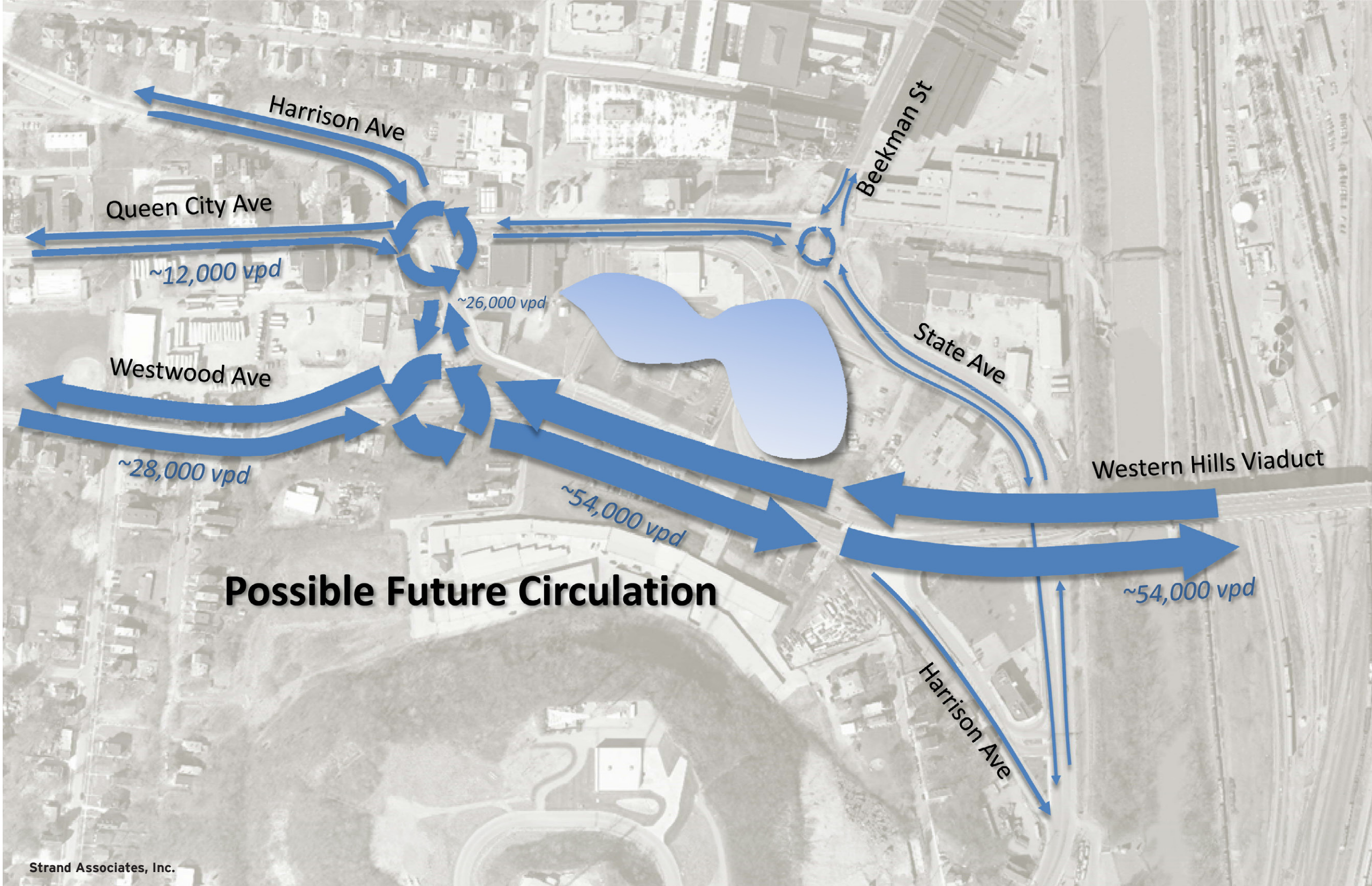
EXISTING CONDITIONS

EXISTING TRAFFIC FLOW PATTERNS



Strand Associates, Inc.

POSSIBLE FUTURE TRAFFIC CIRCULATION



Strand Associates, Inc.

POSSIBLE FUTURE TRAFFIC CONTROL: ROUNDABOUTS



Strand Associates, Inc.

ROUNDABOUTS IMPROVE SAFETY

- More than 90% reduction in fatalities
- 76% reduction in injuries
- 35% reduction in all crashes
- Slower speeds are generally safer for pedestrians

ROUNDABOUTS REDUCE TRAFFIC CONGESTION

- Efficient during both peak hours and other times
- Typically less delay than conventional traffic controls

ROUNDABOUTS REDUCE POLLUTION AND FUEL USE

- Reduce fuel consumption and CO₂ emissions by 25-30%
- Require fewer stops and hard accelerations, and therefore result in less time idling

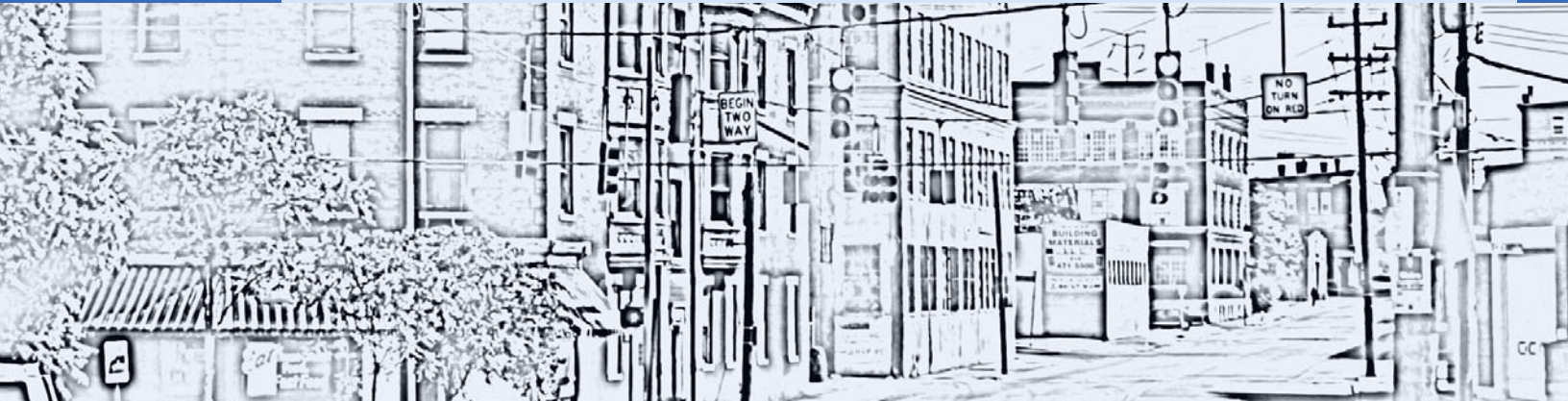
ROUNDABOUTS SAVE MONEY

- Often no signal equipment to install, power, and maintain
- Smaller roundabouts may require less right-of-way than traditional intersections
- Often less pavement needed

ROUNDABOUTS ARE COMMUNITY ASSETS

- Quieter operation than conventional traffic controls
- Functional and aesthetically pleasing
- Community gateway into a community
- Ease of use by pedestrians and bicycles

DEMOGRAPHIC AND POLICY FRAMEWORK



CORE FINDINGS

The following core findings are noted:

The demographic perspective for South Fairmount highlights key challenges that highlight the need for revitalization. Considerations relate to significant housing stock vacancy and implicit obsolescence, as well as long-term disinvestment in the community.

Historically, South Fairmount benefited from a strategic location in the region, adjacent to the primary traffic corridor into downtown Cincinnati, and serving as a gateway into western suburban areas. Back in the 1800s, this proximity to downtown drove demand for back office, service, and industrial activities; key employers included the Fairmount Woolen Mills (Adler & Co.), the Clark and Thompson lumber yard, the Fairmount Flour Mill, and the Herancourt Brewery. While proximity to downtown became a key challenge as downtown Cincinnati struggled during the 1970s and 1980s, the downtown area's recent resurgence should bode well for revitalization efforts in South Fairmount.

The policy analysis section highlights broader considerations for why revitalization is a relevant policy goal. Noted long-term factors that have clear implications for housing market demand include changes in household structure as well as growth in costs for home heating and gasoline. These factors are slowly beginning to impact housing demand by influencing housing locations (closer to transit and employment centers) and home sizes (smaller rather than larger, and more dense).

The proposed daylighting effort is not without precedent. Other cities have combined stormwater improvements with open space, trail and greenway improvements with the intent of encouraging revitalization. Examples include San Antonio, Kansas City, Dallas, and Kalamazoo. In many of these examples, cities have also partnered with sanitary districts and the Army Corps of Engineers to achieve broader revitalization goals.

Research shows that there are practical real estate value premiums that can be derived from proximity to parks, greenways, and linear parks. Experience in other cities has shown that real estate in proximity to these amenities can command premiums of 10% to 20% in value over similar properties not in proximity.

AECOM experience would suggest that the success of revitalization strategies for projects such as Lick Run links with the extent to which limited public sector investment is able to leverage additional private sector investment. In AECOM experience, projects that can leverage a minimum of four dollars in private investment for every dollar in public investment tend to be successful over the long-term. For Lick Run, preliminary overall project cost estimates range between \$100 million and \$150 million, with preliminary trail / linear park element investment estimated at about \$40 million of the total. Looking at the trail and linear park system element as the real estate value and

revitalization driver, a core project goal could be to leverage \$160 million in new private investment in the South Fairmount Area from the noted \$40 million in park improvements. This goal should be kept in perspective with current property valuations in the study area, which add to about \$11 million according to the Hamilton County Auditor. Practical considerations associated with these estimates include:

The opportunity to leverage up to \$160 million in private investment is dependant on the availability of sufficient sites and buildings located in walking distance proximity. Further studies should be considered to validate the occupancy and ownership status and size of existing parcels, including status / occupancy of existing structures, historic status, parking, etc. At a policy level, the core goal should be to ensure that planning maximizes opportunities to leverage private development within walking distance of the Lick Run project.

The ability to leverage noted private investment targets will also link with planning and zoning factors that will impact redevelopment, including building density / height requirements, parking requirements, setbacks, access to public transit, etc.

The inventory of existing space is also important to clarify opportunities to maximize renovated space versus construction of new space. To the extent that space can be renovated at a lower cost compared to new construction, resulting rent levels will be more competitive, and allow a broader mix of tenants.

DEMOGRAPHIC PERSPECTIVE

A current demographic perspective for the South Fairmount neighborhood, covering population, income, household structure housing vacancy, educational attainment, and employment concentrations, with information for 2000, as well as forecasts for 2008 and 2013.

This section describes the local area demographics of the South Fairmount neighborhood, the city of Cincinnati, and the state of Ohio. The data source is the U.S. Census from 2000 and estimates for 2008 and forecasts for 2013, generated by Environmental Systems Research Institute (ESRI). The reader should note that the demographics for noted years were extracted from a geographic information system based using boundary files from the Hamilton County GIS system. For this reason, noted estimates may vary from past reports based on slight variations in boundaries. In the tables below, the term CAGR 00/08 indicates the estimated compound annual growth rate between 2000 and 2008. The CAGR measures growth upon growth over a period of years. (For example, a metric growing at 1%, compounded annually, over 5 years grows at an average of 1% the first year; then the new, higher figure grows at 1% the second year, and so on.)

Population

South Fairmount represents approximately 1% of the city's population and is estimated to have declined from a population of 3,251 to 2,842 between 2000 and 2008, based on past trends. The City of Cincinnati, meanwhile, is estimated to have decreased slightly by about 1% per year; however, more recent estimates by the Census Bureau released July 1, 2009 indicate that the population may have actually increased by about 2,000 residents. While neither study area is experiencing sharp population changes, it does appear that South Fairmount has been struggling to retain residents more than the city as a whole.

Table 1. Total Population

	2000	2008	2013	CAGR 00/08
South Fairmount	3,251	2,842	2,669	-1.7%
Cincinnati	331,692	305,988	294,545	-1.0%
Ohio	11,366,392	11,645,739	11,817,922	0.3%

Households

The average household size in South Fairmount is higher than in the city as a whole. It is common for urban areas to have much lower household sizes than their corresponding states or regions. City housing units—houses and apartments—tend to be smaller than the average housing unit in other areas.

Table 2. Number of Households

	2000	2008	2013	CAGR 00/08
South Fairmount	1,274	1,131	1,069	-1.5%
Cincinnati	147,574	138,679	134,467	-0.8%
Ohio	4,450,932	4,635,384	4,731,015	0.5%

Table 3. Average Household Size

	2000	2008	2013
South Fairmount	2.49	2.44	2.42
Cincinnati	2.16	2.11	2.09
Ohio	2.49	2.45	2.43

However, within Cincinnati, South Fairmount has a higher average household size of about 2.44, compared with a city average of just 2.11. In the specific case of South Fairmount the number of four-or-more person households is 24% in South Fairmount, compared with 16% for Cincinnati; in addition, the percentage of single family dwellings is higher in South Fairmount (42%) than for the city as a whole (38%).

Table 4. Percent of Households That Are Families

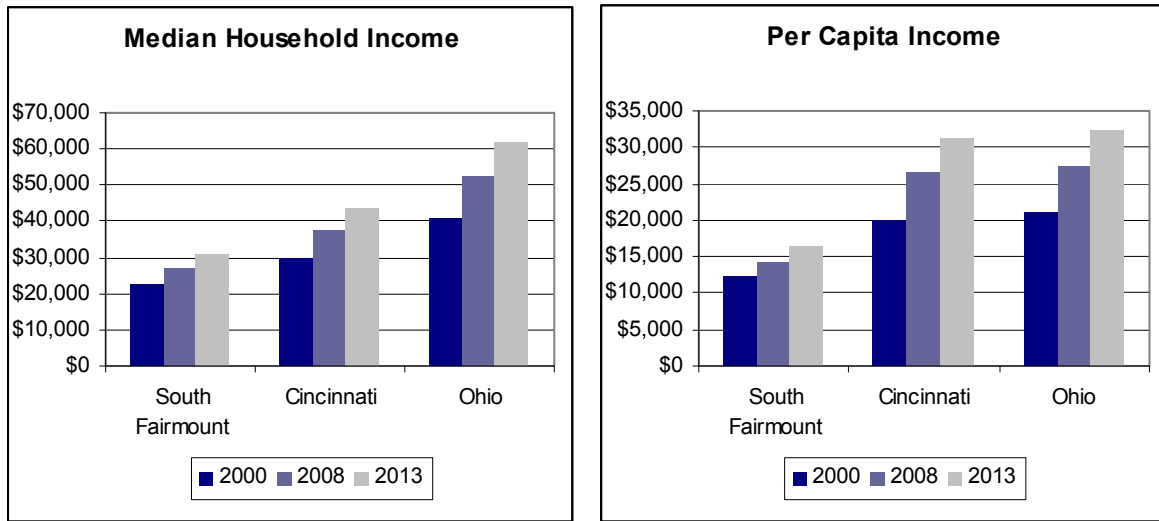
	2000	2008	2013
South Fairmount	54.2%	51.5%	50.0%
Cincinnati	49.4%	47.0%	45.5%
Ohio	67.3%	66.0%	65.1%

The percentage of households that are families is higher in South Fairmount than in the city as a whole, potentially reflecting fewer one- and two-person non-family households than in the city. It is also noteworthy that while South Fairmount and the state have almost identical average household sizes, 66% of the state's households are families, while just 52% of South Fairmount's households are families.

Income

By two common measures, median household income and per-capita income, South Fairmount is struggling. The median household is estimated to have earned just \$27,197 in South Fairmount in 2008, compared with \$37,209 in the city and \$52,367 in the state.

Figure 1. Median Household Income and Per Capita Income



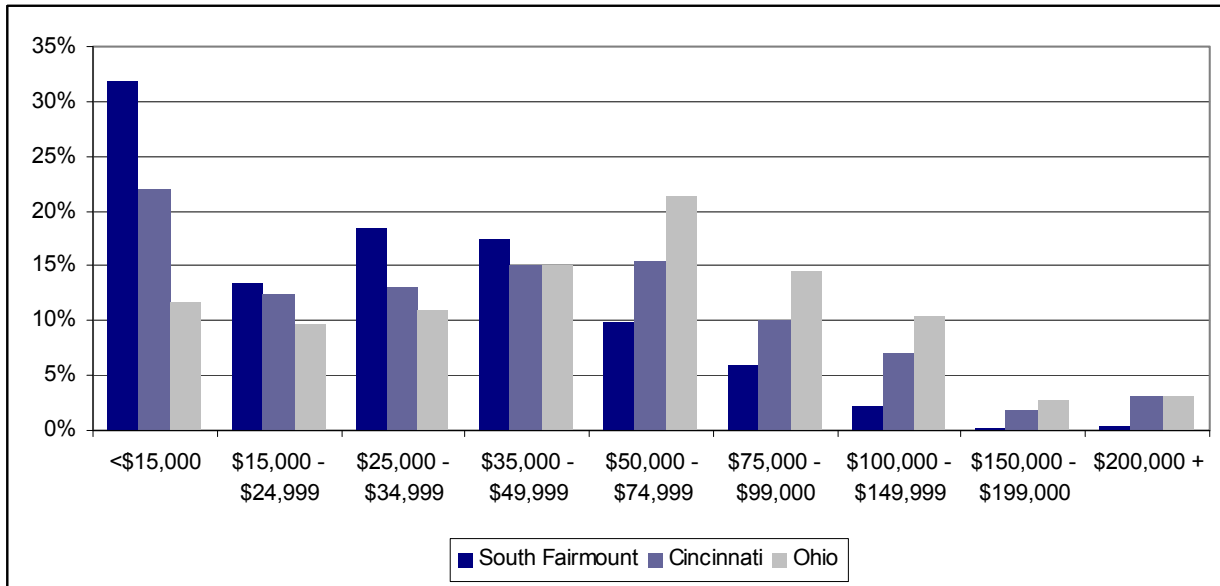
The disparity is even greater when considering per-capita income: the per-capita income in South Fairmount is just over half what it is in Cincinnati as a whole. Moreover, among the three study areas in this analysis, South Fairmount’s household and per-capita incomes are growing the slowest.

Table 5. Median Household Income

	2000	2008	2013	CAGR 00/08
South Fairmount	\$22,393	\$27,197	\$30,949	2.5%
Cincinnati	\$29,684	\$37,209	\$43,753	2.9%
Ohio	\$40,971	\$52,367	\$61,982	3.1%

In addition to the averages, it is possible to bracket households by income level. The chart below shows that almost 32 percent of South Fairmount households take home less than \$15,000 per year, as of 2008. Just 2.8 percent earn \$100,000 or above, compared with 12.1 percent and 16.3 percent in the city and state, respectively:

Figure 2. Population by Household Income



Age

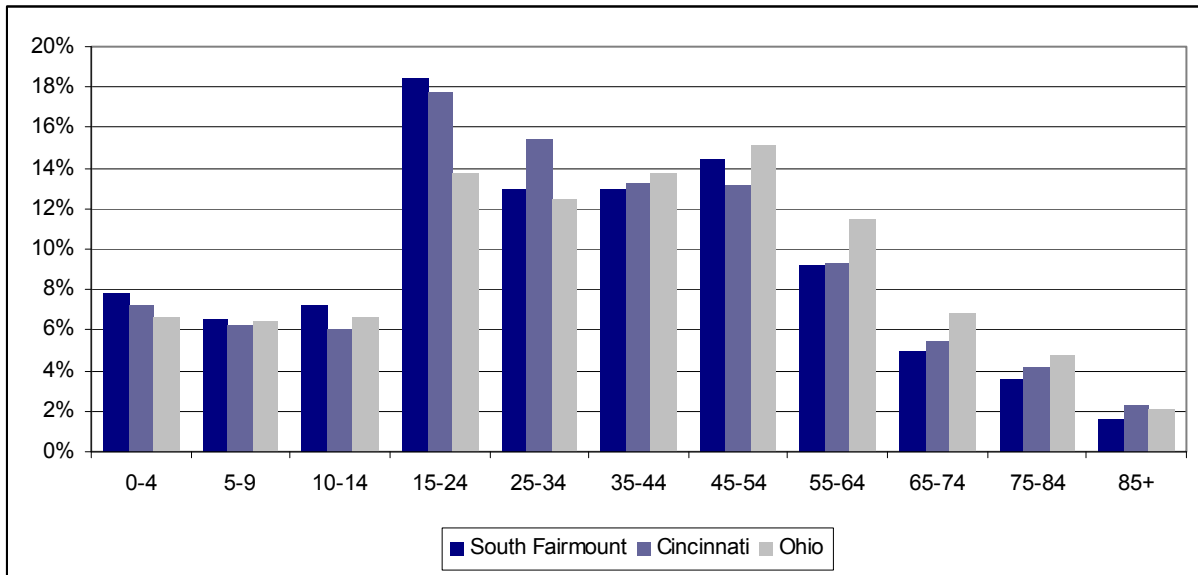
At 32.2, the average age in South Fairmount is slightly lower than for the city and well below the average age for the state:

Table 6. Average Age

	2000	2008	2013
South Fairmount	31.1	32.2	32.6
Cincinnati	32.3	33.3	33.5
Ohio	36.2	38.1	39.1

As compared with the city and state, South Fairmount has a greater percentage of residents in each age bracket under age 24 and the lowest percentage in each age bracket over age 55:

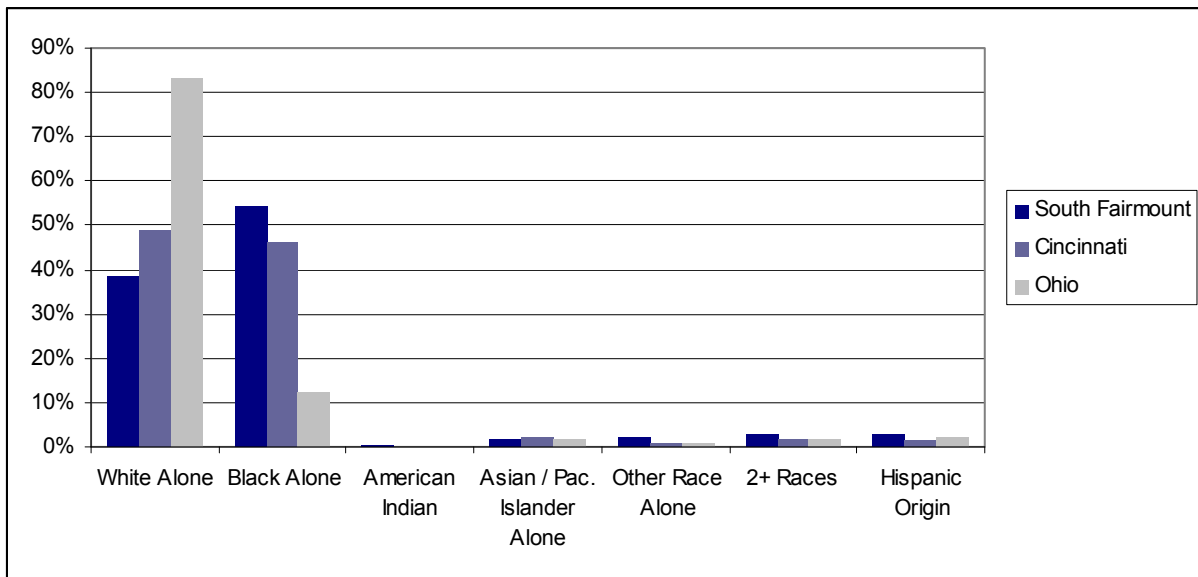
Figure 3. Population by Age



Race and Ethnicity

The figure below shows the race and ethnicity breakdowns for the three study areas:

Figure 4. Population by Race and Ethnicity



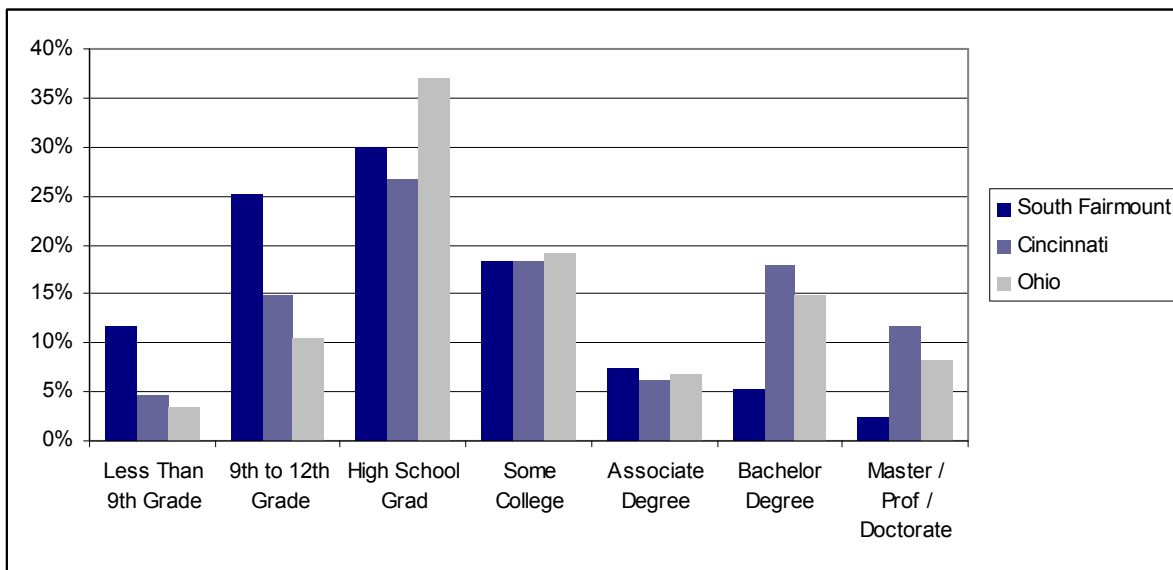
The proportions of black and white are approximately reversed from the city average, though neither the city nor the neighborhood is dominated by one race. Although the proportion of residents of Hispanic Origin is almost twice as high in South Fairmount as for the city, that proportion is still very low (2.6%), considering the U.S. average is estimated to be around 12%. Cincinnati is fairly evenly split

between those responding White Alone and Black Alone: they are 49 and 46%, respectively, compared with 38 and 54% in South Fairmount.

Educational Attainment

There are significant educational achievement gaps between South Fairmount and the city and state. Thirty-seven percent of South Fairmount adults over the age of 25 have not completed high school, compared with 19% for the city and 14% for the state. Just 5 percent of South Fairmount has a bachelor's degree; almost 18% of Cincinnatians do:

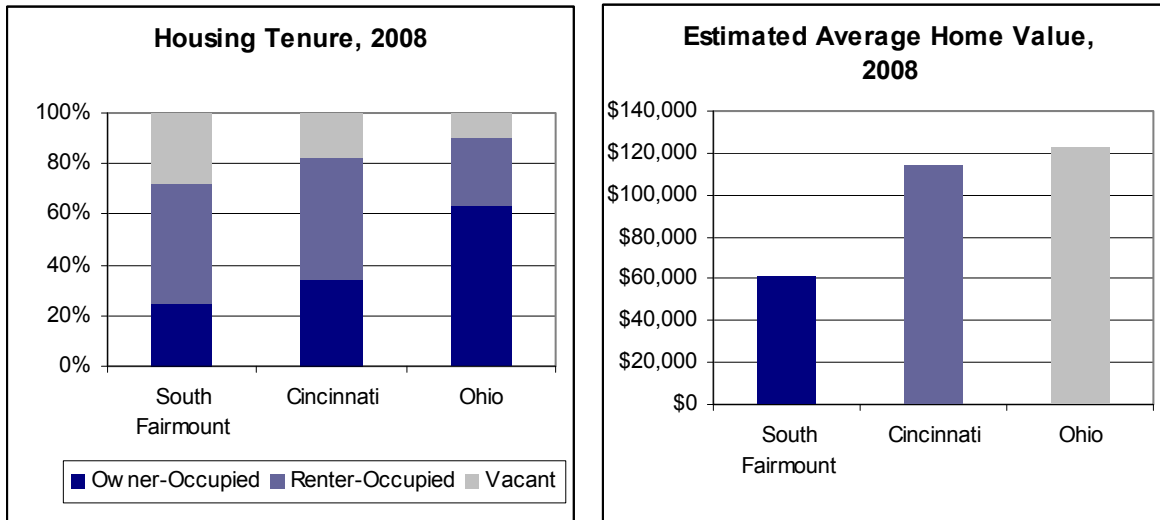
Figure 5. Population Age 25 + by Highest Educational Attainment



Housing

According to information extracted from ESRI, housing in South Fairmount has more vacancies; more renters; and lower home values for owner-occupied units than for the city as a whole:

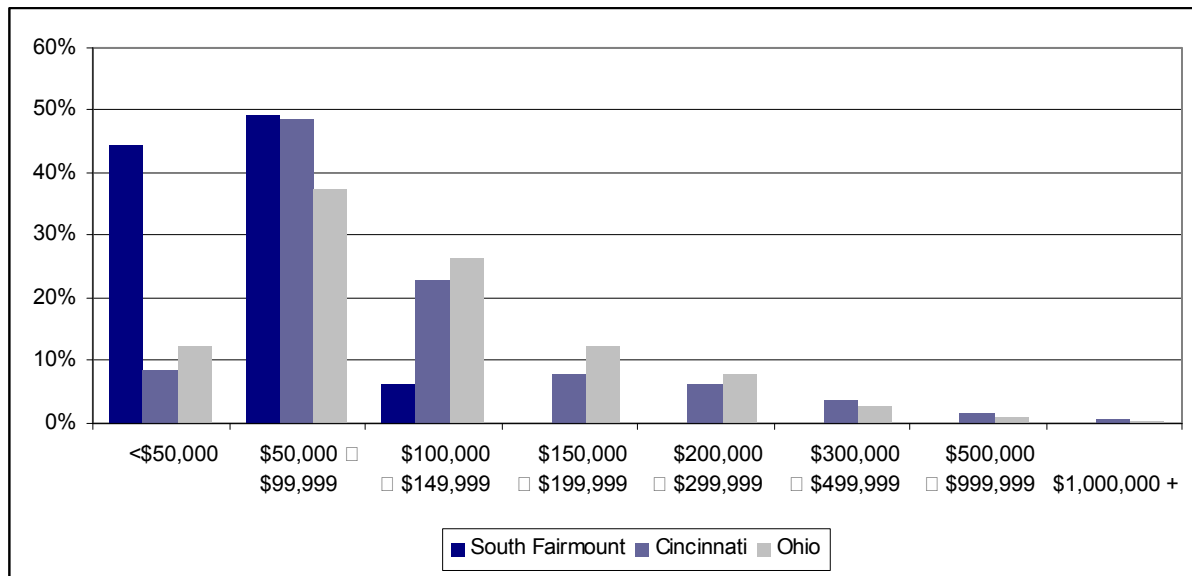
Figure 6. Housing Tenure & Estimated Home Value, 2008



Census estimates show that approximately 27 percent of housing units are likely to have been vacant in 2008. However, several extenuating circumstances could make that number higher in reality. Nationally, many low-income neighborhoods with previously low home values evolved into areas of concentration for high loan-to-value (sometimes 100 percent) subprime mortgages, which have high rates of default and foreclosure in other markets. The events of 2007 and 2008 would not be included in the estimates above, so aggressive mortgages sold in low-income neighborhoods may have exacerbated a significant trend toward vacant housing.

The biggest discrepancy is the value of owner-occupied housing units. In South Fairmount, a majority of owner occupied homes are estimated to be worth less than \$150,000; 94% are estimated at below \$100,000. At the bottom of the spectrum, 44% are estimated be worth less than \$50,000. This compares with 8.5 percent and 12.3 percent in Cincinnati and Ohio respectively:

Figure 7. Estimated Value of Owner-Occupied Housing Units, 2008

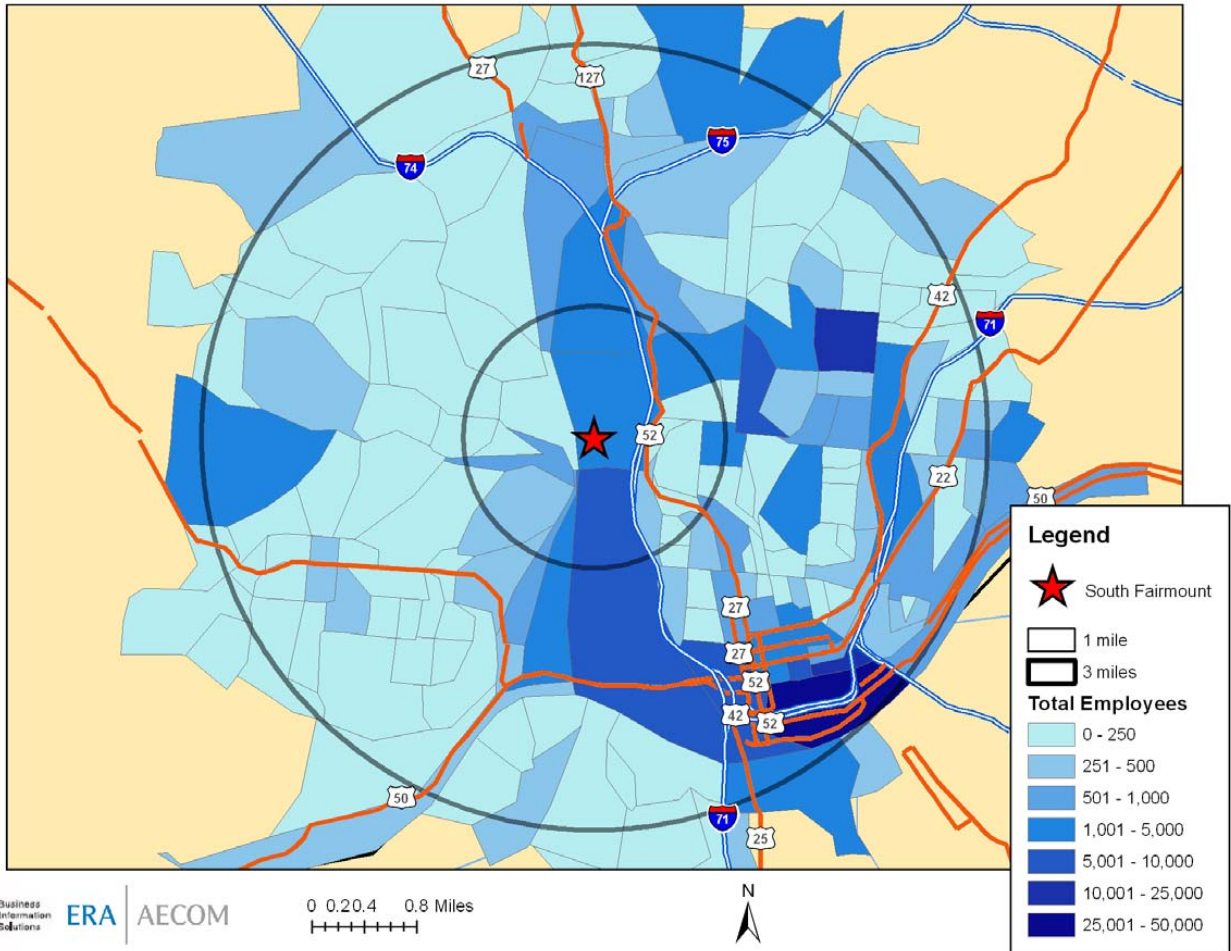


It should be noted here that the data source for the above chart is from U.S. Census survey data taken in 2000 and adjusted using national and regional trends. Because it is survey based, it captures the owner-occupant’s expectation of what his or her house is worth. ERA also evaluated home value breakdowns within the smaller target area, supplied by the Hamilton County Auditor. This analysis confirmed the overall breakdown of values, with a majority of property currently valued below \$10,000 (land and improvements), and a total market value of about \$11 million.

Employment Concentrations

The map on the following page highlights relative concentrations of employment in proximity to the South Fairmount Study area. The map highlights an important consideration, which is the relative proximity of South Fairmount to key local employment concentrations and transportation routes within three miles. Over the mid-term, this becomes a key market consideration for revitalization.

Total Employment by Block Group near South Fairmount



POLICY FRAMEWORK : ECONOMIC TRENDS AND URBAN DEVELOPMENT

Discussion of broader policy considerations for why the proposed revitalization strategy is logical to consider, with broader insight as to regional and national trends which, over the mid-term, will increase demand for urban infill sites. The discussion will also highlight practical real estate benefits of generated by proximity to parks, greenways and trail systems.

This section highlights several trends that are of interest to urban re-development and infill development in American cities. Several trends converge to argue in favor of higher density infill development:

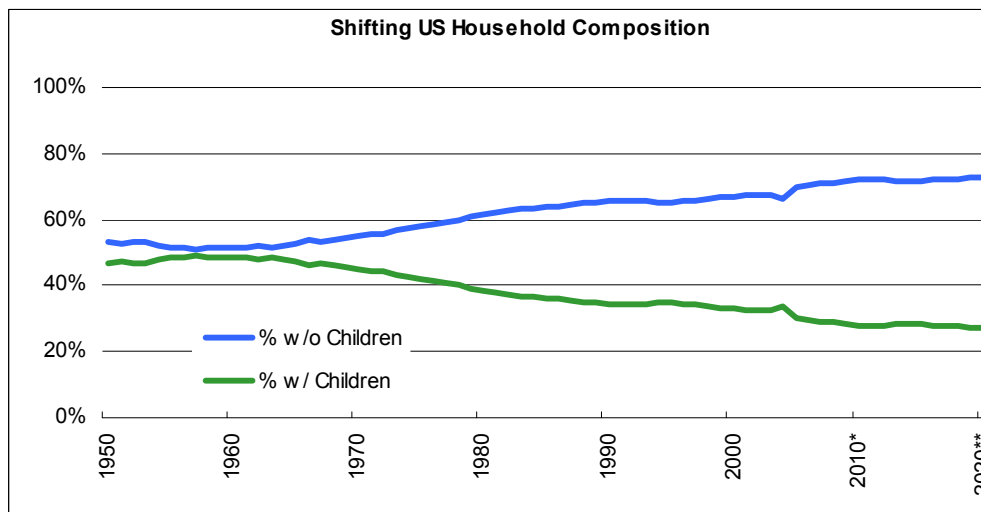
- Family and household composition
- Average size of a new home
- Fuel price growth
- Home ownership rates

While greenfield development in outlying areas will always be attractive to developers, cities have a role in promoting the advantages of urban life in relationship to wider demographic and economic trends, the better to allow urban areas to serve the demands of the marketplace.

Family and Household Composition

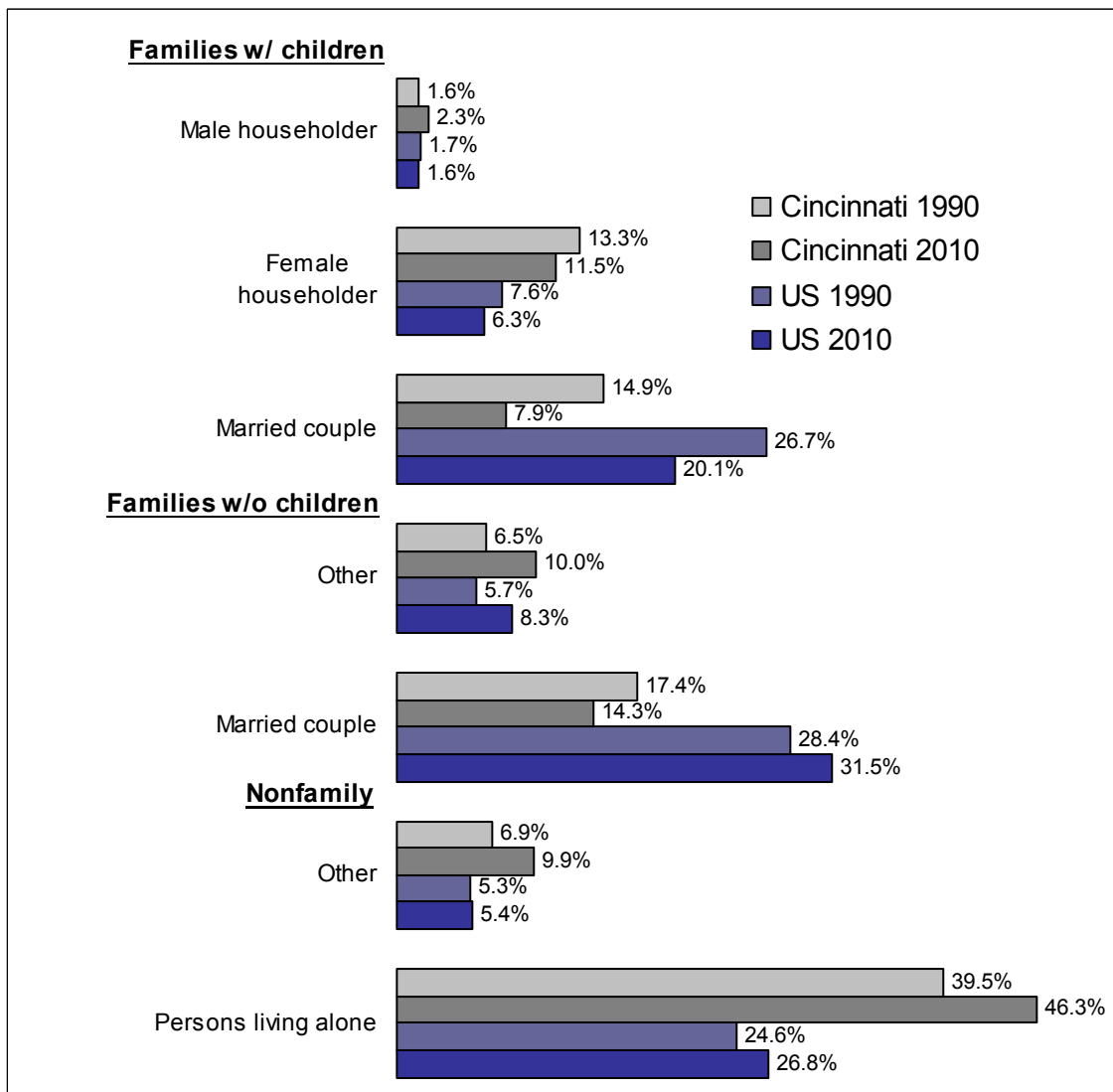
Households without children are becoming a larger portion of the population than those with children, which is due in part to more fragmented living arrangements, whereby large families now split into more individual households than in the past. It is possible, as well, to look deeper into the shifting household composition within the two metrics above.

Figure 8. Household Composition in the U.S.



Demographic data for both Cincinnati and the U.S. as a whole show that family and household composition is changing. By 2010, the U.S. will see several changes from 1990 - more people living alone; fewer married couples with children; and more married couples without children. Cincinnati, in particular, is expected to have a large share of persons living alone, which is common for urban areas. This trend has specific implications for housing demand in that smaller household sizes will gradually shift demand away from traditional single family houses and toward urban types of housing with higher density.

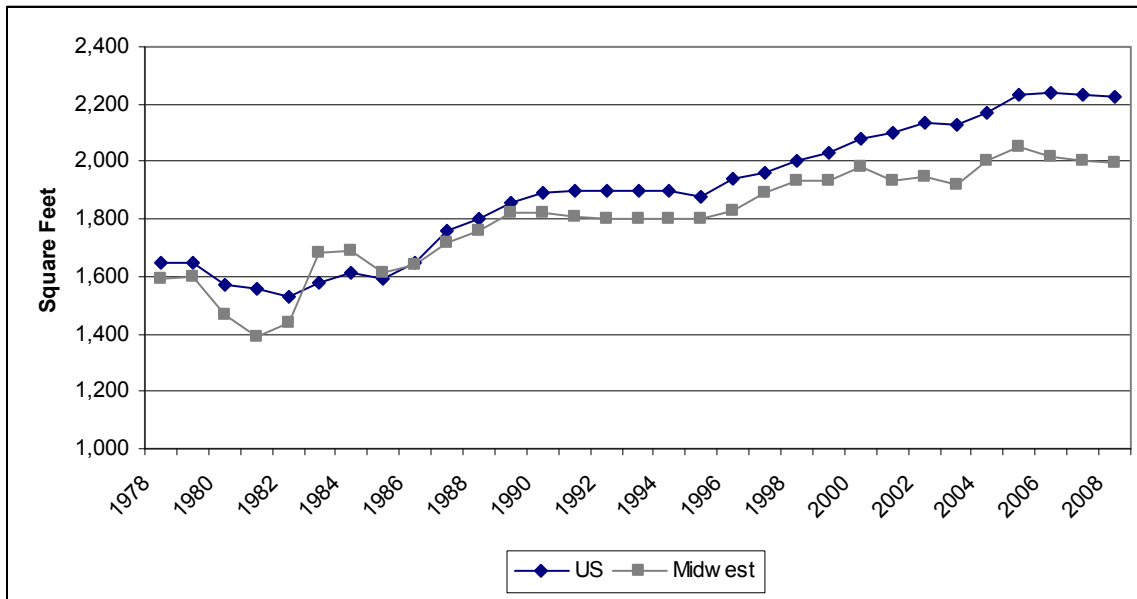
Figure 9. Estimated Household Composition Shifts, 1990 and 2010



Size of New Homes

Both the above figures support the conclusion from Table 3, which shows declining average household sizes. With fewer people per home, it makes sense that the average home size would be declining.

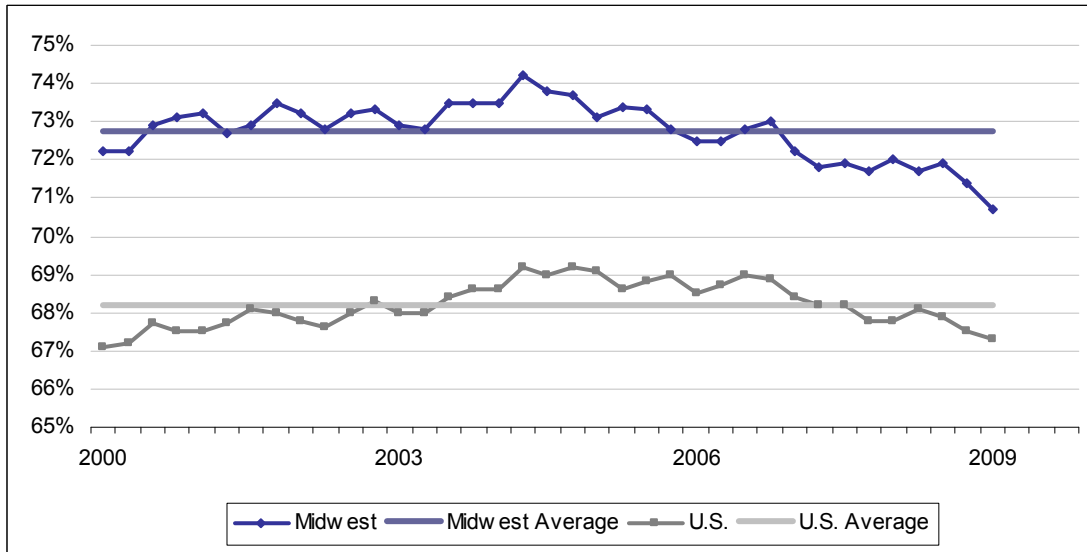
Figure 10. Median Size of New One-Family Homes



The upward climb over the last 30 years has been stalled since about 2005, where it peaked in the Midwest at 2,049 square feet. By 2008, it had dropped below 2,000 square feet for the first time since 2003. A recent survey of home builders indicated that almost 90 percent were planning on building smaller homes in the coming year. Surveys of architects also show that twice as many expect to design smaller homes rather than larger homes in the near future. A key reason for this relates to the building pressure of significant growth in utility costs, which will be covered later.

Many home builders, most prominently KB Home, have shaved their new products to boost affordability and re-align their products with consumer expectations. Certainly the recent turmoil in housing and credit markets has lent a new cachet to smaller, more affordable homes—and to renting apartments—than in the early years of this decade. This is partially reflected in home ownership rates in the chart below:

Figure 11. Homeownership Rates, 2000 to 2009



The average rate of home ownership over the last decade was 68% in the U.S. and 73% in the Midwest. In each case, the peaks for the decade were achieved in 2004 and both rates have fallen below their decade average in the last 12 to 24 months.

Fuel Prices

The following three figures show historic energy prices in Ohio, excluding taxes, for residential heating oil, natural gas, and retail gasoline. All three have implications for housing demand. Heating oil and natural gas relate to the ownership costs related to homes: larger homes cost more to heat and cool, especially in climates like Ohio's with four seasons. Between 1989 and 2008, heating oil and natural gas prices increased at annual rates of 8% and 6% respectively. Transportation costs, meanwhile, affect a household's decision on where to live in relation to regional employment centers. Fuel price increases in the past 24 months in particular generated one of the first significant mode shifts away from cars and toward public transportation. Between 1989 and 2009, gas prices grew at an annual rate of 7%. That all three factors have grown at rates well above income growth over the same period is a key reason why these factors are slowly exerting more pressure on housing and transportation options.

Figure 12. Residential Heating Oil Prices in Ohio

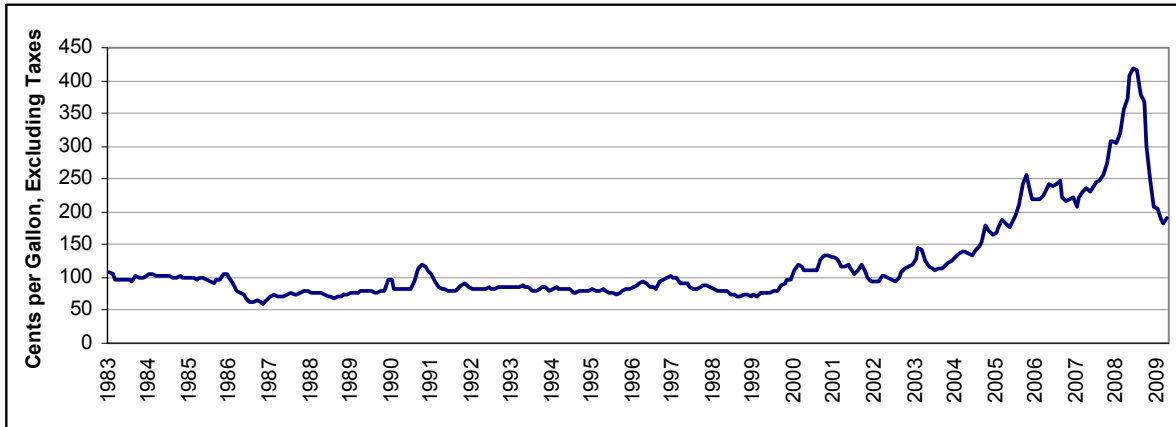


Figure 13. Natural Gas Prices in Ohio

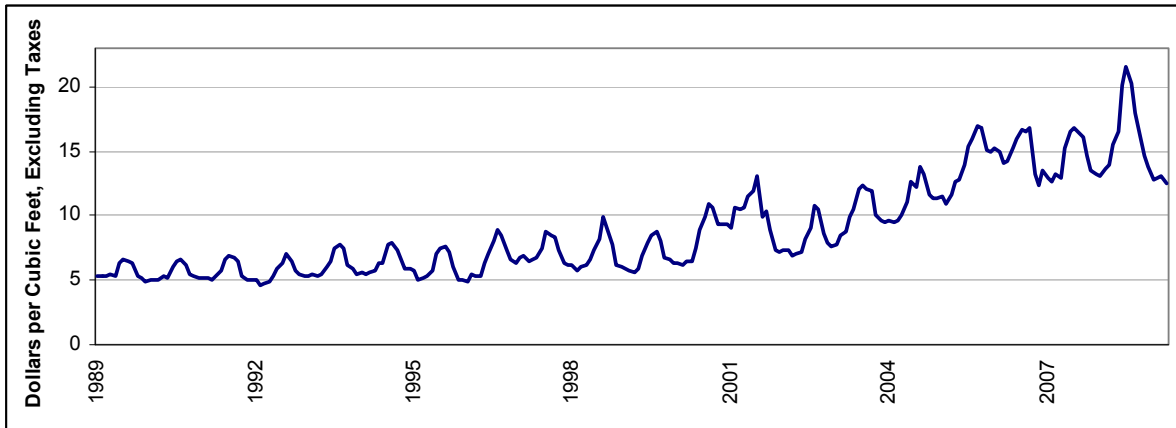
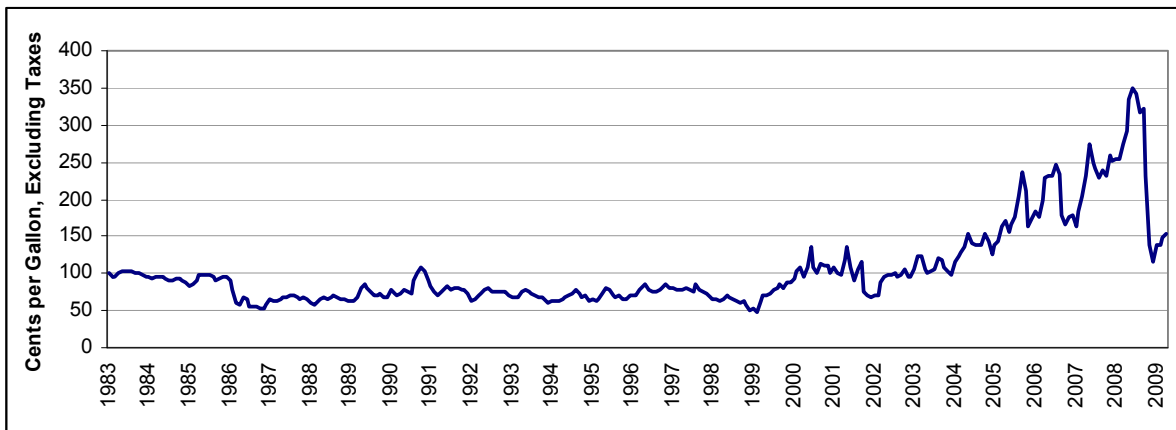


Figure 14. Retail Gasoline Prices in Ohio



Energy prices can affect the buying decisions of American consumers, by making smaller, more energy efficient homes in urban areas more attractive relative to larger homes farther from employment centers. Consumers confronted record gasoline costs in 2008, when retail gas prices approached \$4 per gallon in many areas. Higher gas prices in 2008 had two specific consequences:

- It generated the first significant mode shift toward public transportation, and forced many to realize that walkable residential options in proximity to employment centers are limited, particularly in the Midwest.
- Since commuting distance is driven by housing choice, higher gas prices have an immediate impact on discretionary income and the local economy, particularly for low and middle income residents.

Urban areas can position themselves to appeal to consumers who are concerned about these trends by offering smaller, more efficient homes in urban, walkable neighborhoods close to main employment centers. Even in smaller Midwestern markets where public transportation remains more modest, efforts to create walkable mixed use nodes will build long-term support for transit.

Key Policy Indications

This section has identified several economic and demographic trends that can be useful to cities and urban areas looking at revitalization strategies for areas such as South Fairmount.

- There is, and will continue to be, a market for urban infill development. Smaller household sizes and rising fuel prices combine to create a market for a range of housing products in urban areas. These products can have smaller footprints and are more efficient. They can be close to workplaces, saving time and expense on transportation.
- Household composition is becoming more fragmented, which is beginning to reshape the market for a broader continuum of housing choices, ranging from small condominium apartments to townhomes to single family homes, all with a range of sizes and styles. Where once a dichotomy of choices—an apartment in the city or a house in the suburbs—could satisfy the market, now a range of many choices is more appropriate.
- Rates of home ownership have fallen from their peaks in 2005. While there is much to recommend home ownership, many consumers are re-discovering that there is much to recommend renting, including increased mobility. Credit standards are likely to remain tight in the future. Urban infill development plans can recognize this trend and allow for rental, as well as for-sale, housing to be included. The modest good news on regional housing front is that home values across Cincinnati did not grow as fast as national factors, suggesting that the downturn in values will not be as pronounced.

Revitalization Considerations

For the South Fairmount neighborhood, the above demographic and policy framework helps to frame opportunities for revitalization associated with the proposed Lick Run Daylighting and Revitalization plan. The channel daylighting plan has the clear potential to create recreational amenities that will

improve real estate values for the neighborhood, and encourage revitalization of numerous properties that are currently vacant. Recent national research has consistently highlighted the value enhancement for residential and commercial property that comes from close proximity to community and neighborhood parks, greenways, and trail systems. Based on studies reviewed by ERA, completed by groups such as the Trust for Public Lands, the following benchmarks were noted:

- Neighborhood parks can provide up to a 20% increase in housing values for those homes facing the park. Benefits from a neighborhood park can extend to approximately 600 feet, with houses nearer to the park receiving the majority of the benefit.
- Community parks may provide benefits up to 33% of the residential real estate value. Positive externalities of a community park may extend up to 2,000 feet away.
- One specific study completed in Indianapolis evaluated value enhancement for homes built in proximity to the region's 14 greenway corridors. The analysis showed that homes built in close proximity to the system in Marion County benefited from a 10% premium in property value

Nationally, there are many examples of other cities that have revisited stormwater management systems to expand recreational amenities and enhance adjacent real estate values, with cities such as San Antonio (the riverwalk) being obvious examples. One specific example identified by AECOM is in Kansas City, Missouri. Brush Creek runs through southern Kansas City.

Following a significant flooding event in 1977 which generated \$60 million in property damage, the US Army Corps of Engineers partnered with the City of Kansas City to begin a major flood control effort for this creek.



The active participation of the city was significant, in building support for a \$51 million dollar bond issue in 1987 to help pay for the incremental beautification elements of the flood control plan, including an adjacent linear park that runs alongside the creek, as well as new bridges, slope stabilization, lighting improvements, trails, and landscaping. The project work, completed in the early 1990's was partially responsible for encouraging additional development and added real estate value along the corridor, which is now one of the primary upscale shopping areas in the Kansas City Metropolitan area. Image courtesy of the US Army Corps of Engineers.

GENERAL AND LIMITING CONDITIONS

General & Limiting Conditions

Every reasonable effort has been made to ensure that the data contained in this report are accurate as of the date of this study; however, factors exist that are outside the control of Economics Research Associates, an AECOM company (ERA) and that may affect the estimates and/or projections noted herein. This study is based on estimates, assumptions and other information developed by Economics Research Associates from its independent research effort, general knowledge of the industry, and information provided by and consultations with the client and the client's representatives. No responsibility is assumed for inaccuracies in reporting by the client, the client's agent and representatives, or any other data source used in preparing or presenting this study.

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