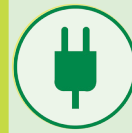


Milo-Grogan Sustainability Plan



A Product of City and Regional Planning Program

The Ohio State University
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Introduction

Background

The term sustainability has its roots in the writings of economists such as Reverend Thomas Malthus, who foresaw disastrous outcomes between the skewed relationship between resources and overpopulation.¹ His and others' writings coincided with the Industrial Revolution, a time of unprecedented global economic growth and technological progress. Picturesque landscapes gave way to urban growth and deplorable living conditions, which were, at that time, the antitheses of environmental consciousness.² Eventually, there were those who noticed humanity's progress was made at the expense of the rest of the earth and its resources, giving birth to mindfulness for the preservation of the environment. This awareness came to fruition in the words and paintings of Romantic Period authors and artists, whose art renewed an interest in and celebrated the beauty of nature.³ After the Romantic Period ended, environmentalism lay dormant for over a century during the industriousness of the Victorian Period. However, environmentalism received a shot in the arm in the 1960s, in reaction to global growth, increasing concerns over pollution, rising distrust of government and literature such as Rachel Carson's *Silent Spring*.⁴

Although resource depletion and its devastating effects on economics and human populations were around since Malthus' time, and even though environmentalism and environmental movements had been around before, sustainability, as a recognized and legitimate subject matter, did not enter the public consciousness until the 1987 United Nation's World Commission on Environment and Development – also called the Brundtland Commission – exulting sustainable development as the panacea that would enable human progress and development to succeed without compromising the Humanity's future.⁵ It is also because of the Brundtland Commission that sustainability became an amalgamation of economics, environmentalism and social equity – called the “Three E's of Sustainability”⁶ – rather than remaining focused on

economics or environmentalism. Social equity became an equal partner in sustainability out of necessity. The 20th century was a tumultuous time in terms of war, self-determination and national sovereignty⁷, and the Civil Rights Movement⁸; associating equity with sustainability was a natural extension of learning from the destruction and hardships experienced by various peoples as a result of the conflict and upheaval that occurred during the last 100 years. Because of its modern interdisciplinary nature, sustainability has been co-opted by environmental groups and corporations alike, as well as by organizations focused on equality, and has become a tool for ensuring longevity and success in countless efforts and in various disciplines.⁹

It is this holistic idea of sustainability that makes it attractive for neighborhoods and communities. The British government recognized this over 10 years ago, leading to the development of its 2003 plan *Sustainable Communities: Building for the future*. The primary focus of this plan is housing. In studying how to approach its housing challenges, the UK government realized that not only does inadequate housing negatively impact other areas of concern, such as health, transportation, education and social services, but housing itself is affected by such topics as healthy environments, strong economies and social well-being¹⁰ – the very same tenets central to sustainability. The UK understood that sustainability is an effective way to revitalize, strengthen and ensure the success of urban neighborhoods like Milo-Grogan.

Purpose

Originally framed by a network of industrial railroads coming northeast out of Columbus, Milo-Grogan was initially two neighborhoods in the late nineteenth century: Milo, named after a brickyard owner named Milo Streets, making up the western side of the neighborhood, and Grogan, named for Joseph Grogan, a local shopkeeper and Post Office administrator, comprising the eastern portion. The two neigh-



borhoods were isolated in their infancy by the railroads that surrounded them and by the fact that the neighborhoods were not part of Columbus nor connected to its infrastructure. The City of Columbus needed tax revenue from the bustling industry growing along the railroad tracks in Milo and Grogan and the pair of neighborhoods needed modernization. Columbus annexed the two neighborhoods in 1908. For the next half-century, Milo-Grogan and its industrial businesses prospered. Sadly, suburbanization and highway construction, maladies that afflicted many industrial neighborhoods in the mid-20th century, precipitated Milo-Grogan's decline; economic, industrial and social conditions began deteriorating after World War II and have continued to do so since.¹¹

The Milo-Grogan Area Commission is an organization that represents the neighborhood and works with Columbus, local businesses, neighborhood residents and potential developers. Founded by the Columbus City Council in the 1970s,¹² the commission is a quasi-governmental body, comprised of 11 volunteers who serve in a decision-making and advisory capacity, facilitating communication between the aforementioned stakeholders.¹³ It is this organization that represented Milo-Grogan and served as the point of contact with Dr. Maria Manta Conroy and her graduate students in City & Regional Planning at The Ohio State University during this effort.

During the fall 2014 term, Dr. Jack Nasar of the City & Regional Planning program oversaw an urban design studio in Milo-Grogan; it was he who recommended to Dr. Conroy that she continue their work in her sustainability studio class during the spring 2015 term. The plan Jack Nasar's studio produced is the most recent work among several plans and efforts in the last decade developed to help revitalize Milo-Grogan. In 2007, the City of Columbus Department of Development's Planning Division produced the Milo-Grogan Neighborhood Plan,

which contained proposals for community-building, urban design, land use, and public and private investment¹⁴; as of 2012, most of the plans recommendations had not been implemented¹⁵. In 2009, Dr. Jesus Lara, a landscape architecture professor in The Ohio State University's Knowlton School of Architecture, conducted an urban design studio, which made recommendations for the physical design of a portion of the neighborhood in order to improve residents' quality of life¹⁶. In all, three significant planning efforts have focused on Milo-Grogan in the last eight years, and there is little evidence that any of them made a lasting beneficial impact.

This plan is a culmination of the efforts of Dr. Conroy and 13 students, who studied and evaluated the Milo-Grogan neighborhood during the spring 2015 semester. The purpose of this plan is to introduce sustainable principles into the community and to encourage and foster practices and behaviors that produce sustainable outcomes. These outcomes will serve to reinvigorate Milo-Grogan, effectively planting the seeds for a prosperous community.

Methods and Means

Development of the sustainability plan began with researching Milo-Grogan background information, including previous plans and historical literature, most of which were posted on an online project management website called Basecamp. Basecamp served as the repository for all work done on the project as well as the primary means by which the project teams communicated and shared information with the Milo-Grogan community. After sufficient time to digest past efforts and historical data located on Basecamp, the class discussed how sustainability could be applied to the Milo-Grogan neighborhood. From this discussion, the class developed a sustainability vision with input from the community that was appropriate for the needs of the Milo-Grogan neighborhood:



In a vibrant Milo-Grogan, citizens and their government share responsibility to assess, implement, monitor and enforce sustainable policies that meet the present and future needs of the community. Milo-Grogan will do this through the enhancement of economic vitality, mobility, and social equity with special care toward the dignity of individuals, their safety, fair treatment, and meaningful involvement in community decisions to ensure the quality of life for present and future generations of residents.

The students were divided into four groups in order to focus on four broad topics of interest determined by the Milo-Grogan Area Commission and Dr. Conroy: Energy and Waste Reduction, Economic Development and Social Equity, Land Use and Urban Ecology, and Transportation and Mobility. Based on the Milo-Grogan sustainability vision, the four teams drafted a team-based vision statement in order to inform and guide their individual sustainability processes and goals. These statements were presented to the community for feedback and revision.

Robert Barksdale, chairman of the Milo-Grogan Area Commission, hosted a tour of the neighborhood on January 23, 2015 with Dr. Conroy and the students. Mr. Barksdale elaborated on the reasons for the teams' four focus areas, providing background information and practical advice concerning Milo-Grogan's strengths, weaknesses and concerns.

The student teams generated indicators based on their vision statements that would track the progress of their goals and recommendations. These indicators are measures which are designed to be easily tracked over time with existing information or with data generated by the students. They are intended to effectively track the implementation and efficacy of the teams' recommendations. The teams also collaborated on a questionnaire intended to elicit responses from area residents con-

cerning their needs and behaviors with respect to the four focus areas and sustainability in general. The questionnaire was distributed both as a hardcopy at the February Milo-Grogan Area Commission meeting and was available as an online survey.

For the next step of the process, each team performed an opportunity assessment to research and evaluate Milo-Grogan, analyzing the neighborhood's relevant strengths and weaknesses. This research was used to determine possible opportunities for implementing each teams' sustainable vision and goals and to foresee any difficulties in the execution thereof. As Milo-Grogan is a neighborhood and not a municipality, multiple and varied sources of information were utilized for the opportunity assessment; these included area residents, the Milo-Grogan Area Commission, the City of Columbus, state and federal regulations and initiatives, local and state agencies, technical reports, and previous planning efforts in Milo-Grogan.

After completing the opportunity assessment, each team conducted a sustainability analysis. This involved creating recommendations for each team's focus area, which were based on the teams' vision, goals and indicators as well as identified best practices from other communities in the United States.

During the sustainability planning process, Dr. Conroy and the student teams attended Milo-Grogan Area Commission (MGAC) meetings providing updates and information regarding their recent efforts and soliciting feedback. Updates were given at the following meetings:

1) February 10th, 2015 – Student teams presented their proposed vision statements as well as ideas for indicators to accomplish their visions. The MGAC and neighborhood residents in attendance asked questions and provided feedback to the teams.



- 2) March 10th, 2015 – Each studio team presented to the MGAC the final choices of indicators for its efforts and entertained questions regarding those indicators and related work.
- 3) April 14th, 2015 – Teams previewed the results of their sustainability analyses.

Indicators-Overview

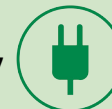
Sustainability is, at its heart, the process of finding a balance between economic, environmental, and equity concerns that will satisfy the needs of people today and in the future.¹⁷ In order to achieve this balance, we must have some method of measuring these aspects of sustainability. Indicators provide evidence of existing conditions in an area, either through a qualitative or quantitative description. While there are differences between the two, both can provide valuable insight into the health and sustainability of a community.

Indicators should be directly related to a community's goals and future. Indicators will be most successful when they are forward-looking, distributional, integrating, and developed by members of a community.¹⁸ Forward-looking indicators will not only give a picture of existing conditions, but will be closely related to community goals so that it can be reviewed as necessary to measure progress towards the goals. Indicators should also be distributional, meaning they can measure equity, both between demographic groups in the present and over time. Integrating indicators recognize the interdependence of economic, environmental, and equity concerns and have implications for several of these dimensions. Finally, indicators developed by members of a community for that community will relate more effectively to that community's goals and vision for its future.

This plan uses community-oriented sustainability indicators to evaluate the existing conditions in the neighborhood and track progress towards

our sustainability goals. Each team (Energy and Waste Reduction, Economic Development and Social Equity, Land Use and Urban Ecology, and Transportation and Mobility) developed core indicators that represented their areas of focus and were consistent with their goals and visions for a sustainable Milo-Grogan. Initial drafts of indicators were presented to the Area Commission at its February 10, 2015 meeting. Feedback from that meeting was used to further revise indicators to ensure that the final indicators would be representative of the community's needs, goals, and vision for its own future.

Indicators are described in three sections: Background, Measure, and Description. The Background section provides context for the indicator, including a discussion of its relevance to Milo-Grogan and a presentation of any existing background data. The Measure section discusses the information to be collected in greater detail, including a description of what the indicator is intended to measure. This may also include indicators that are being used as a proxy for topics that may be more difficult to measure. Finally, the Description section focuses on the details of each measure, including how data will be collected, how it is measured, and who will be responsible for collecting it. Existing data for previous years is provided where available, as is a description of the data collection methodology for future updates. The Description section also includes a recommendation for how frequently data should be collected for each indicator in the future.



Energy and Waste Reduction

Vision

A sustainable Milo-Grogan is an environmentally conscious and clean community where everyone who lives and works in the area benefits from enforcement of local policies addressing environmentally-harmful practices and conservation of energy in residential and industrial areas.

Goals

Milo-Grogan and its citizens will make this vision a reality by achieving success with the following goals:

1. Minimize the negative impacts of waste transfer stations on the community
2. Conserve energy in residential and industrial areas, resulting in lower usage and increased savings
3. Decrease household water consumption and waste by encouraging water and waste reduction practices

Indicators

Percentage of uncovered trucks delivering waste to the waste transfer stations per hour

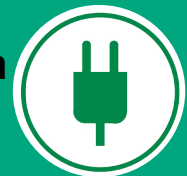
Background

Milo-Grogan has a land use history brimming with manufacturing-zoned uses, which has, over time, meant the inclusion of two waste transfer stations. Waste transfer stations can adversely affect the communities in which they reside with respect to odor, litter, and ultimately the value of nearby residential properties. The waste transfer stations in Milo-Grogan include the Republic Services Reynolds Road Transfer Station and the Rumpke Waste Removal & Recycling

facility, located at 805 Reynolds Avenue and 1191 Fields Avenue. Milo-Grogan's waste transfer stations accept trash from all over Columbus, attracting traffic from outside the community. Unfortunately, there are no public records available on the average number of trucks the stations accept hourly nor the amount of waste the facilities accept daily; therefore, multiple surveys of the waste transfer station entrances are necessary to observe waste deliveries and determine if and what percentage of trucks deliver waste uncovered. Once observations are made and data collected, it becomes easier to understand the negative impacts the waste transfer stations have on the community. This is mainly accomplished by observing the percentage of uncovered trucks delivering waste to the waste transfer stations; a larger percentage means that more litter is exposed to being blown out of the trucks, increasing the likelihood that the trucks are a significant source of litter throughout Milo-Grogan. Furthermore, knowing the potential sources of litter will facilitate the development of appropriate remedies that are more effective in mitigating the large amount of litter around the waste transfer stations and in the community, thereby mitigating the negative impacts of the waste transfer stations on Milo-Grogan.

Measure

This is a direct, visual measurement and will serve to quantify the amount of trash that potentially enters the community. The impact of this measurement is in providing an idea of how much waste being taken through the neighborhood is at risk of coming out of uncovered trucks. Determining this makes it possible to make certain recommendations about traffic routes or to what extent other mitigating factors need to be considered.



It is important to note that this indicator measures only the percentage of uncovered trucks delivering waste to the waste transfer stations. It provides an idea of how much waste is potentially at risk of flying out of uncovered trucks and is not a direct measure of the amount of waste that is being lost from the trucks. A direct measurement of waste leaving trucks is not possible. Furthermore, the team recorded observation data for only the Republic facility. Preliminary observations showed trucks delivering waste to the Rumpke waste transfer station were large commercial waste haulers, such as garbage trucks and semi-trucks; these types of trucks are designed to remain closed during travel and do not have the same risk of litter leaving the vehicles.

Discription

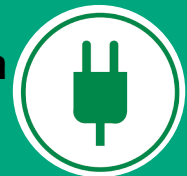
Three team members went to the Republic waste transfer station on different days and different times to observe the traffic levels of the station. The team made hour-long observations on the following days and at the following times: March 23rd at 1:45 p.m., March 24th at 2 p.m. and 3 p.m., and March 25th at 2 p.m. The observations resulted in 12 uncovered trucks out of 32 total trucks observed delivering wastes to the Republic facility; this is a 27.27% uncovered rate. This demonstrates the amount of refuse at risk of coming out of such trucks traveling through the neighborhood. The U.S. Environmental Protection Agency's (EPA) Waste Transfer Stations: A Manual for Decision-Making emphasizes the use of tarps to reduce litter and waste from trucks, and even suggests that transfer station operators decline trucks without coverings or charge an extra fee, incentivizing customers to cover their trucks.

Members of the Milo-Grogan Area Commission, or volunteers from the community, can easily observe traffic going into and out of the waste transfer stations in the neighborhood to collect data; the only cost of accumulating this data is time. This type of observation needs to take place at least once per year to determine if the implemented recommendations are making a difference in the percentage of uncovered trucks delivering waste to the stations. Data collection can occur more frequently to accumulate reliable data for making recommendations.

Percentage of local businesses that have permits to generate renewable and/or alternative energy

Background

The commercial uses present in Milo-Grogan are predominantly industrial and manufacturing. The heavy presence of manufacturing and industry means that large amounts of energy are being consumed; according to the United States Energy Information Administration, residential energy usage comprises 38.5% of electricity sales in the United States, whereas industrial and commercial energy usage comprises 61.3% of electricity sales.¹ If industrial entities and businesses have energy-efficient upgrades and processes in place, they are able to increase financial longevity and success. Also, businesses can produce some of their own energy via solar power, reducing costs. Additionally, the positive impacts these upgrades have on businesses ultimately help the community in which the businesses are located, and these practices can positively benefit the environment by reducing the negative impacts of traditional energy sources.



By looking at the percentage of local businesses that have permits to generate renewable/alternative energy, the community will be better able to determine where efforts need to be focused and what entities are leading the charge to help other businesses do the same in regards to utilizing renewable/alternative energy.

Measure

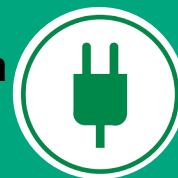
These percentages are a direct measure of the renewable/alternative energy generation permits granted to businesses in Milo-Grogan through the Public Utilities Commission of Ohio (PUCO). These permits are tracked by address and demonstrate which businesses are certified to sell energy to electric companies to satisfy the utilities' requirements for providing renewable/alternative energy. As of 2014, 0% of the industrial and manufacturing entities in the neighborhood have permits to sell renewable/alternative energy. By seeing this data annually over time, the community can get a better understanding of the neighborhood's status on commercial sustainability.

While companies do not need to have a permit to generate renewable/alternate energy, it is beneficial to have a permit so that any energy that is generated, but unused, can be sold to further reduce costs. It is also important to note that the Public Utilities Commission of Ohio does not distinguish between residential and industrial renewable/alternative energy generation facilities; this indicator is primarily designed to track renewable/alternative energy generation business permits, but solar facilities on residential properties would be included in the data.

Description

Either the area commission or the Milo-Grogan Business Association, if it becomes re-established as mentioned in the Economic Development and Social Equity section, can acquire this data from Mark Bellamy, a Utility Specialist at the Public Utilities Commission of Ohio. He can be contacted at 614-644-8295 or by sending email to Mark.Bellamy@puc.state.oh.us. The data for this indicator are kept in a database by the PUCO, which can be used to create an Excel file listing all certified renewable/alternative energy generators in Ohio; this file can be sorted by address and zip code to determine which, if any, certified generators are present in Milo-Grogan. Because of privacy concerns, the PUCO cannot divulge the addresses of the facilities; it can, however, inform interested parties of how many certified renewable/alternative energy generators are located within specific zip codes in order to calculate a percentage of certified renewable/alternative energy generators in the community. This indicator needs to be updated only once per year, as the rate at which renewable/alternative energy generation facilities are installed in the neighborhood is likely to be low.

Data from the Public Utilities Commission of Ohio reports the number of permits for renewable/alternative energy generation facilities in Milo-Grogan. These facilities are required to be certified through the PUCO in order to sell their renewable energy credits. The energy credits can be bought by energy utilities since states like Ohio have a renewable portfolio standard, which typically stipulates what percentage of the energy sold by utilities must be from renewable sources; if utility companies are unable to generate enough renewable energy themselves to meet the benchmark, they may purchase renewable energy credits from certified



generators to meet the renewable energy standard.² Only when a permit is acquired, can a business sell its energy to utility companies.

Percentage of homes in the neighborhood that have had an energy/weatherization audit and subsequent work

Background

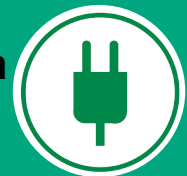
Maintaining a comfortable, healthy home can be energy-intensive; in the United States, heating and cooling comprises approximately 50% of residential energy consumption.³ Utility costs can be reduced by enhancing home energy efficiency. Although air leakage through walls, doors and windows is inevitable to some extent in every home,⁴ modern homes tend to be more energy efficient because of higher building and product standards.⁵ Also, increasing a home's energy efficiency is an investment, which means it requires an initial cost in manpower and materials to complete. For Milo-Grogan, a low-income neighborhood with an aging housing stock,⁶ area residents are likely living in homes that have not had energy efficiency upgrades and are therefore paying higher utility costs than necessary.

Measuring the percentage of homes in Milo-Grogan that have had an energy audit and have undergone energy efficiency upgrades will provide insight regarding the portion of the homes whose owners or renters are saving money on their utility bills. This percentage also demonstrates how many residential buildings are in need of energy efficiency audits and upgrades.

Measure

This indicator is a proxy measurement and represents potential residential energy efficiency in Milo-Grogan. Measuring the energy efficiency of all the residences in Milo-Grogan is a monumental task and would also only be a one-time measurement for each home. Weatherization audits and subsequent work are based on best practices and are known to increase residential energy efficiency, especially for homes in neighborhoods like Milo-Grogan. Therefore, this indicator is a reasonable alternative for representing potential energy efficiency in Milo-Grogan and provides a means by which to track potential energy efficiency progress in the neighborhood. As of 2014, 194 of the 838 housing units identified in Milo-Grogan by the Mid-Ohio Regional Planning Commission (MORPC) – 23.15% – have undergone energy audits and weatherization.

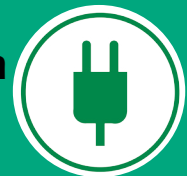
It is important to note that although MORPC's energy efficiency and weatherization program is funded through local utilities, it is not the only entity that is available to conduct weatherization audits and subsequent energy efficiency improvements. The utilities that help fund the program are also able to conduct residential energy audits, such as American Electric Power (AEP) Ohio and Columbia Gas of Ohio. Furthermore, to be eligible for MORPC weatherization and residential energy efficiency improvements, residents need to have an income equal or less than 150-200% of federal poverty guidelines or must be on the Ohio Percentage of Income Payment Plan.⁷



Description

The data for this indicator are generated and tracked by MORPC, the regional planning organization for the central Ohio region. MORPC's Residential Energy Efficiency department runs the non-profit program with funding from Columbia Gas of Ohio, the Ohio Development Services Agency and AEP Ohio. Upon request, they can furnish this information to Milo-Grogan Area Commission members responsible for following up with progress for this indicator.

This data needs to be collected annually to accommodate the seasonal and time-consuming nature of the energy efficiency upgrade work, especially since Milo-Grogan is not likely to be the only neighborhood undergoing work under MORPC's energy efficiency and weatherization program. Potential customers can reach the MORPC Energy Efficiency and Weatherization program by calling 614-621-1171 or by emailing wx@morpc.org. Milo-Grogan residents interested in data for this indicator can use the contact information above or call Scotte Elliott directly, who furnished the initial indicator data, at 614-233-4117. Scotte or another staff member should be able to provide a map with general locations of homes as well as a count of homes that have undergone energy audits and weatherization through MORPC.



Energy and Waste Reduction

Opportunity Assessment

The Energy and Waste Reduction Opportunity Assessment is a result of evaluating available waste, energy and water data for Milo-Grogan and its residents and businesses as well as determining community members' sustainable activities and behaviors. The assessment also employed a community survey, energy, waste and water best practices, applicable governmental policies, and current technologies. Overall, use of these tools and data provides a representation of Milo-Grogan and its community members' relationship with waste, industrial/commercial energy, and residential energy and water. Analysis of this assessment will be used to perform a Sustainability Analysis to identify areas of potential improvement and develop recommendations.

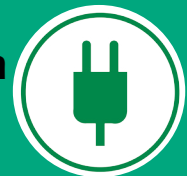
Waste Reduction

The waste transfer stations are a concern to the local community according to the Milo-Grogan Area Commission. These waste transfer stations take waste from the surrounding communities and temporarily store it before trucks take it to a larger facility or landfill. There are two waste transfer stations located within Milo-Grogan's boundaries, shown in Figure 1. The Republic Services Reynolds Road Transfer Station, located at 805 Reynolds Avenue, is in the southeastern quadrant of the neighborhood; the Rumpke Waste Removal & Recycling facility, located at 1191 Fields Avenue, is the larger of the two waste transfer stations and is located in Milo-Grogan's northwestern quadrant. Both facilities operate Monday through Saturday from 8 a.m. to 5 p.m. The stations are not bounded by the current zoning regulations that address several of the issues about which the community is concerned, because the facilities were established before the zoning ordinances were approved; the waste transfer stations and their current operations were grandfathered in.

Figure 1: Locations of both waste transfer stations in Milo-Grogan. Map generated with Google Maps by Andrew Crozier



The Republic Services Reynolds Road Transfer Station has been around since the 1980s, but has roots as a paper salvage facility going back to the 1960s, according to its variance and zoning history. The Rumpke Waste Removal & Recycling facility has established roots in the community as far back as 1932. According to local citizens and the Area Commission, and based on observations made during tours of the community, the waste transfer stations are a detriment to the neighborhood; their impacts include negative effects on traffic, levels of litter, odors and neighborhood aesthetics. Milo-Grogan is a low-income community, and the presence of multiple waste transfer stations continues to harm local property values; studies have demonstrated that property values are negatively-affected by proximity to waste transfer stations.



A 2007 study performed in Israel and later published in the Waste Management journal found that properties located within 0.6 miles of a waste transfer station were valued 6.4% to 8.4% less than comparable homes not located near waste transfer stations. Furthermore, properties 1.2 miles away had values 2.3% to 3.2% lower than comparable homes. The Israeli study has been used to justify restrictions on waste transfer station siting in other communities. A recent study in Carbondale, Colorado undertaken by BBC Consulting reaffirmed the Israeli study by finding that waste transfer stations have a negative effect on the value of residential properties within 1.8 mile radius.⁸

The waste transfer stations are considered a nuisance to the neighborhood residences, according to Mr. Robert Barksdale Jr., a property owner, former resident of the community, and current chair of the Milo-Grogan Area Commission. Although area residents have consistently complained about the waste transfer stations, the facilities' current operations are legal, and it is unlikely that the facilities will be relocated in the near future. The Republic waste transfer station has been operating at its current site since 1989, and it received a variance in 1993 to continue its operations at its current address.⁹ Based on these observations, the problems with the waste transfer stations are categorized into three areas: litter, odor, and aesthetics. Figures 2, 3 and 4 represent survey questions asked of Milo-Grogan residents, demonstrating that the facilities have an effect on residents' daily lives.

Figure 2: Survey Question

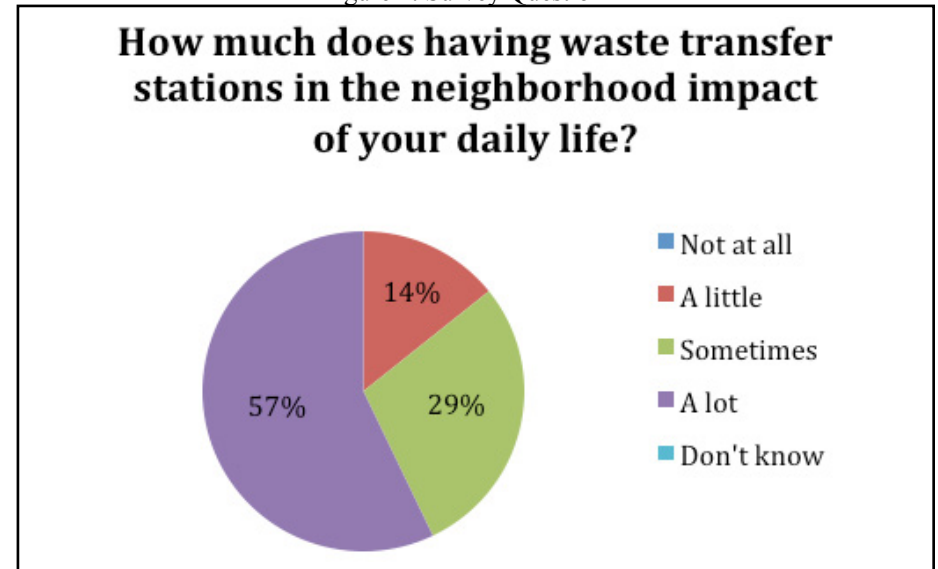


Figure 3: Survey Question

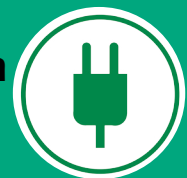
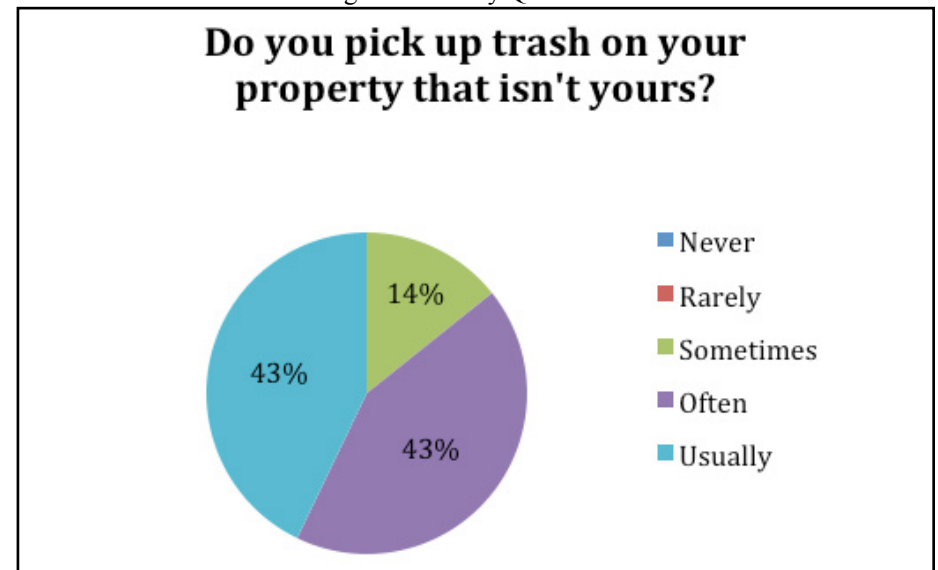
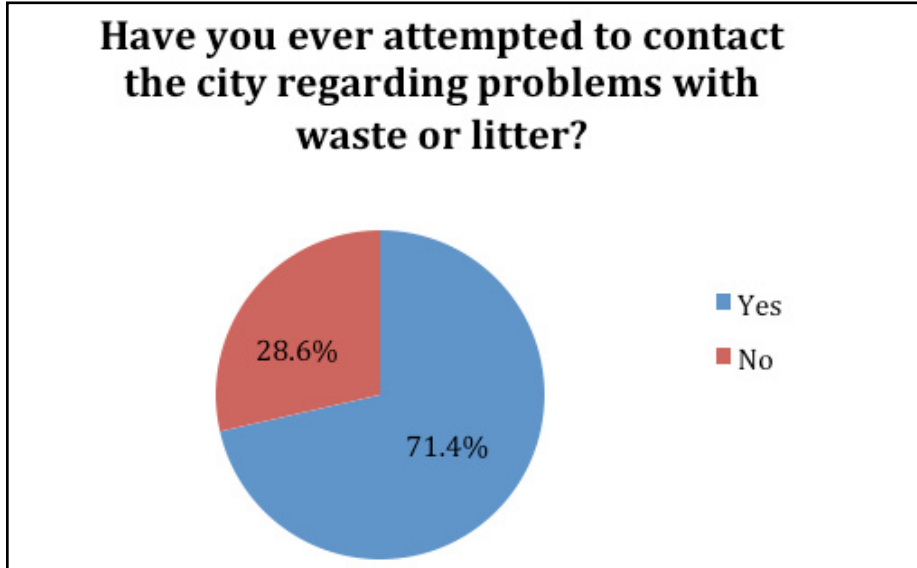


Figure 4: Survey Question



Uncovered loads delivered to the waste transfer stations are a potential cause of litter. Additionally, the waste transfer stations do not adequately screen their operations, which can lead to trash flying out of the premises. Accepting open loads does not violate any local zoning laws, so the change in practice will have to originate with the property owner. Mr. Barksdale has commented that the Republic waste transfer station intends to expand its operations. In a memorandum to Republic in December 2013, Mr. Barksdale emphasized that their intention to expand is detrimental to the community.¹⁰ The fact that the Republic waste transfer station is not adequately screened and accepts uncovered trucks, as well the fact that Republic wants to expand, is an opportunity for leverage. If Republic wants to expand and cannot without another variance, the citizens of Milo-Grogan can use this information to

incentivize Republic to mitigate its negative impacts on the neighborhood. The Columbus code does not require that all trucks be covered or that the station have a litter control plan before operating. However, other municipalities have these requirements.¹¹ Although the waste transfer stations' operations would most likely be grandfathered in regarding any changes to waste transfer station regulations, appropriate changes concerning covered trucks or requiring a litter control plan would prevent these problems in the future.

Odor is another issue stemming from the waste transfer stations, most notably the Republic facility. Mr. Barksdale and some members of the Milo-Grogan Area Commission have noted that foul odors originate from the waste transfer station in warmer months. Odors from the stations are also detectible in the winter months in close proximity to the facility. Student observations on three separate occasions have confirmed this fact.

An additional negative effect the waste transfer stations have on the community is the overall unsightly appearance and aesthetics of their operations and facilities. The current screening, as shown by Figures 5, 6 and 7, does not visually shield the operations of the site from the public right-of-ways. The lack of screening creates an unappealing built environment. Landscaping and mesh screens are not utilized, and the facilities favor the use of highly-transparent chain-link fencing. This lack of screening is also an issue because the waste transfer stations have, according to local maps, a combined frontage of approximately 900 feet – Republic, approximately 200 feet and Rumpke, approximately 700 feet – along public streets in Milo Grogan.¹²

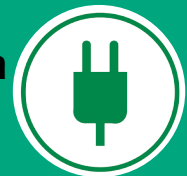


Figure 5: Screening at the Rumpke Waste Removal & Recycling facility.
Image courtesy of Luan Nguyen



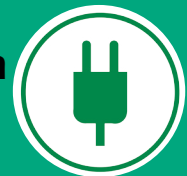
Figure 7: Further screening at the Rumpke Waste Removal & Recycling facility.
Image courtesy of Luan Nguyen



Figure 6: Further screening at the Rumpke Waste Removal & Recycling facility.
Image courtesy of Luan Nguyen



It is important to understand how many people the waste transfer facilities in Milo-Grogan are directly impacting, because close proximity to the facilities has a negative impact on property values and quality of life. Milo-Grogan has lower property values in comparison to neighboring communities like Italian Village; having these operations concentrated within the neighborhood adds another factor keeping property values low. Knowing how many area residents are within the codified impact boundary of a waste transfer stations enables the development of priorities for landscaping, trash barriers, and other strategies to mitigate the litter problem.



Section 3363.19(C) of the Columbus Zoning Code has a provision that requires a 600-foot minimum distance between waste transfer stations and residential structures. This provision is meant to provide a buffer to help prevent residential properties from being negatively affected by waste transfer operations. The Republic facility was granted a variance in 1993 allowing its operations to continue in its current location. The variance permits them to operate within 600 feet of residential properties, as shown in Figure 8; 72 residential parcels are located within 600 feet of the Republic facility. Because this fact does not take into account abandoned or demolished homes on these parcels, it therefore is an estimate of how many properties and therefore how many people the facility potentially affects.

Figure 8. Map of parcels affected by the Republic Services Reynolds Road Transfer Station. Data from the Franklin County Auditor



In terms of waste reduction, according to the survey distributed at the beginning of the research process, there are not many steps being taken to mitigate waste created by neighborhood residents; most of the focus on waste in Milo-Grogan pertains to the operations of the waste transfer stations. Also, based on student observations, composting does not seem to be a common activity in the neighborhood despite the presence of various personal gardens as well as interest in a local community garden. Furthermore, Columbus has a citywide recycling program that is available to community residents.

Industrial and Commercial Energy Efficiency

Figure 9 demonstrates the current zoning and land use map for Milo-Grogan. Over 64.6% of the land in Milo-Grogan is zoned manufacturing and 8.7% of that land is zoned commercial.¹³ Large amounts of energy is used in industrial areas as opposed to residential areas; the United States Energy Information Administration states that residential uses comprise 38.5% of electricity sales in the United States, whereas industrial and commercial uses comprise 61.3% of electricity sales, a 22.8% difference in usage.¹⁴ Even if industries and businesses have energy efficient upgrades and processes in place, there is always more that can be done to help them save money, benefit the community, and ultimately help the environment, because of the amounts of energy and electricity industrial and commercial entities utilize.

Additionally, approximately one-third of the housing stock in the community was built before 1939;¹⁵ most of the commercial buildings were built around the same time frame. According to the Energy Alliance Group, an energy solutions company that works with energy-saving products, technologies and services, the five

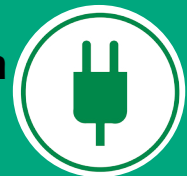


Figure 9: Milo-Grogan Zoning Map

Image courtesy of 2007 City of Columbus Milo-Grogan Community Plan



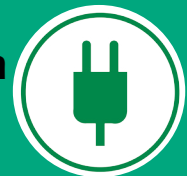
most common energy issues in older industrial buildings are: insulation, HVAC systems, lighting, windows and chimneys.¹⁶ There are funding opportunities in place through utilities and the through state and federal agencies that can help businesses and industries utilize more sustainable practices and remediate any of the aforementioned energy issues. While there are opportunities in place, there are few businesses or industries that are making use of alternative energy such as the Third Hand Bicycle Co-op. See Sidebar 1 for more information.

Sidebar 1: Third Hand Bicycle Co-op

The Third Hand Bicycle Co-op is a non-profit bicycle workshop in Milo-Grogan, shown in Figure 10. It serves as a place for the community to learn about, fix and obtain bikes. Community members can also meet fellow bicycle enthusiasts, volunteer their time and have fun. Their mission is to make cycling fun, affordable, and sustainable, and to promote cycling as a safe and environmentally-responsible means of transportation.¹⁷ Third Hand operates entirely by volunteers, and decisions are made by consensus. The organization decided to install solar panels because they are committed to environmental justice.

Matt Dickinson, a co-op coordinator at Third Hand, proposed the installation and spearheaded the fundraising.¹⁸ All of the volunteers agreed it was a worthy goal. Benefit events, individual donors and Third Hand bicycle sales secured funding. Ecohouse, a solar installation company, and others also offered generous discounts and donations. According to Kevin Egle of Ecohouse, Third Hand could pay off the system in 21 years, with an estimated average annual savings of \$548 after taxes and other operating expenses.¹⁹ Given the level of donations Third Hand has received in terms of materials, labor and cash, they are able to pay off their system in much sooner than the original estimate of 21 years.

If more energy is generated than used, Third Hand will feed the surplus into the grid for credit in a process called net metering; the business has an interconnection agreement and is planning on participating in net metering with AEP Ohio.

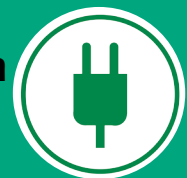


However, Jason Mulhausen, Third Hand Coordinator, stated that their system, displayed in Figure 11, currently matches existing consumption needs. Additionally, no batteries or on-site storage are required, maximizing space for daily business operations. Overall, Third Hand does not see any downsides to installing solar panels and utilizing renewable energy. Mulhausen added that, while upfront costs may be the biggest barrier, if a business plans on being around for the long haul, or is able to get donations to subsidize costs, solar panels are a great investment.²⁰

Figure 10: Third Hand Bikes
Image courtesy of Luan Nguyen



Figure 11: Third Hand's Solar Panels
Image courtesy of Luan Nguyen



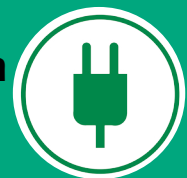
Throughout the United States, commercial entities have increased their use of solar installations by 487% in the past five years.²¹ However, according to the Public Utilities Commission of Ohio, there are no permits granted for businesses in Milo-Grogan to generate renewable/alternative energy.²² These permits are issued so that renewable/alternative energy generators are able to sell their energy. While generating renewable/alternative energy is not the only way to address energy efficiency, the large amount of unused, relatively flat roof space available on many businesses in communities like Milo-Grogan provides an excellent opportunity for generating solar energy. There are no zoning restrictions in the City of Columbus Zoning Code that would limit the installation of solar panels or the generation of renewable/alternative energy, as long as the installations meet height and setback requirements.

In addition to solar panels, there are numerous opportunities for businesses to develop or incorporate practices that decrease energy consumption and ultimately increase savings. These practices can include: more efficient and preventative maintenance of HVAC systems, lighting and energy retrofits, day-lighting, insulation of pipes, valves and walls, efficient building envelopes, and energy rebates and tax incentives.²³ AEP Ohio offers non-residential AEP customers incentives to upgrade equipment in exchange for more energy efficient models.²⁴ Small businesses are eligible for additional incentives with the AEP Express program, which reduces the cost of implementing energy efficient practices to business owners.

FirstFuel, a company that analyzes building energy consumption, released a report describing how half of energy efficiency opportunities in industrial or commercial buildings are possible through

changes in behavior or in equipment operation schedules, rather than through costly re-builds or building retrofits.²⁵ However, according to FirstFuel, energy efficiency changes are much more challenging in the industrial sector; time and experimentation are needed. Moreover, there are multi-faceted variables to consider in industrial environments.²⁶ Also, production and savings may be less consistent, making energy efficiency opportunities vary. The complexity of the operating environments and systems, combined with the facility limitations, can be challenging for business owners to make changes.

Existing and future community businesses have the potential to leverage their knowledge, resources and presence to serve as champions of change as this community continues to evolve for those who not only live in Milo-Grogan, but for those who work there as well. With these businesses and industries, there is potential for green building development, increased sustainable building practices, and use of renewable/alternative energy. The use of renewable/alternative energy is a way industrial and commercial entities can utilize their resources and size to be more sustainable. Solar panels can enable them to reduce energy costs for years to come, decrease their carbon footprints and ultimately reduce operating costs.²⁷



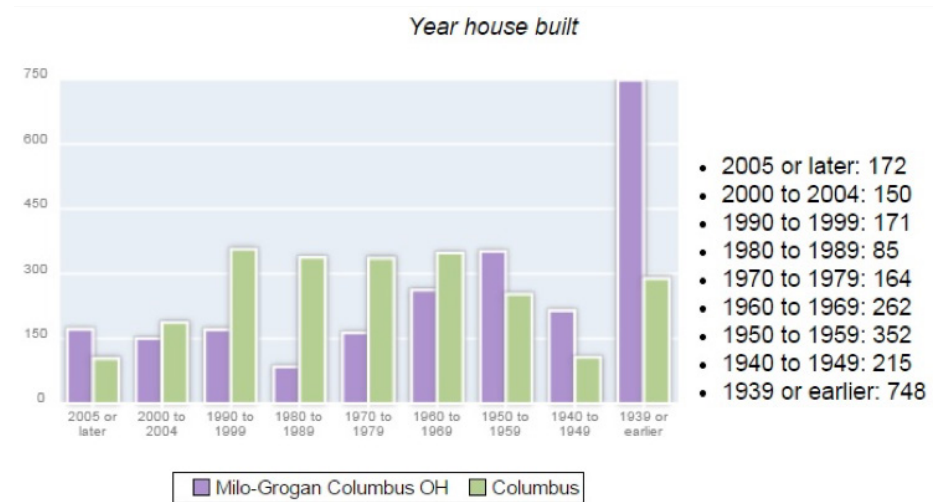
Residential Energy and Water Efficiency

According to the US Energy Information Administration, Americans used 18% of the total energy consumed globally in 2012,²⁸ while having approximately 5% of the world's population.²⁹ Furthermore, a study published by the Proceedings of the National Academy of Sciences of the United States of America demonstrated that Americans underestimate their water usage by half.³⁰ This information presents opportunities for improvement. If the typical Milo-Grogan neighborhood resident is like the typical American, they likely consume more energy and water than necessary and is therefore needlessly paying higher utility bills. Decreasing residential utility costs is especially important because of soaring energy and water prices. Average residential energy costs have risen in Ohio by as much as 30% since 2005.³¹ The price of water in Columbus and similar major cities rose 18% between 2010 and 2012.³² Furthermore, the Columbus City Council recently approved a 3% increase in water and sewer rates, which will increase water bills by \$28 for the average four-person household in Columbus; also, property owners will see a 1% rise in stormwater runoff fees, which is an increase of approximately \$0.50 per year. This measure was passed in November, 2014 and went into effect in January, 2015.³³

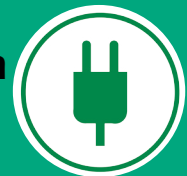
Milo-Grogan contains an aging housing stock, as exhibited in Figure 12: approximately a third of all homes in the neighborhood were built before World War II, and an additional third were built before the 1970s, the decade in which modern building and housing standards were first developed.³⁴ Typically, older homes such as those found in Milo-Grogan are less energy- and water-efficient than modern homes built within the last few decades, for a variety of reasons; newer homes adhere to the aforementioned building standards and contain better windows and appliances, as well as more insulation.³⁵

Moreover, the boundaries of the Milo-Grogan neighborhood fall within districts that were red-lined in the 1930s. Residential districts that were red-lined, usually because of racial or socio-economic demographics,³⁶ were deemed too risky for investment by banks, and residents in those districts were therefore ineligible for receiving loans backed by the government for purchasing or upgrading homes; because of this, homes in Milo-Grogan may not have seen much investment in terms of housing upgrades.³⁷

Figure 12: Age of Milo-Grogan housing stock. Figure courtesy of city-data.com.

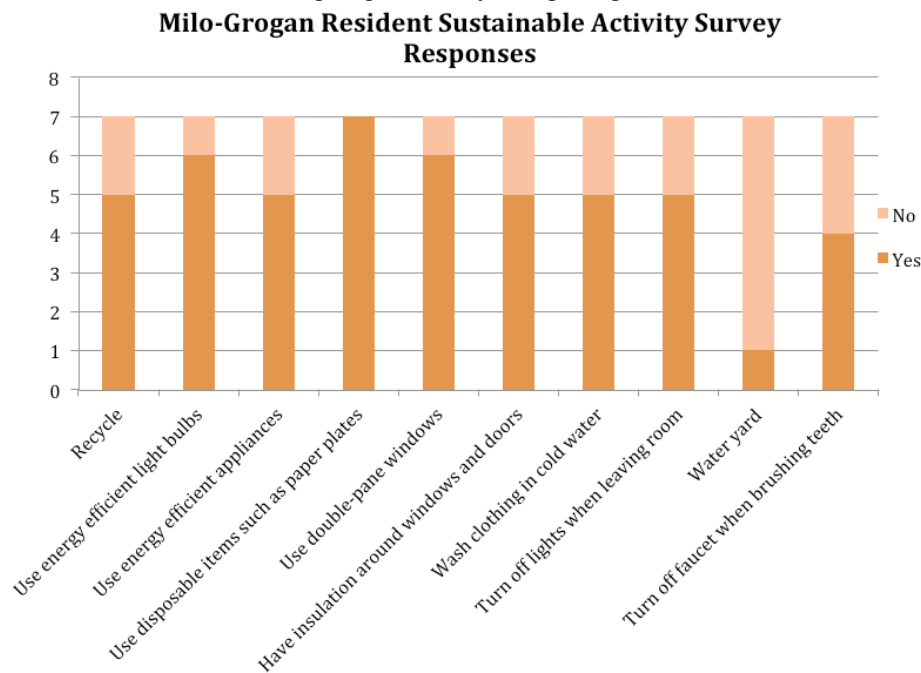


Because Milo-Grogan is a neighborhood in the City of Columbus, aggregate energy and water consumption data is not available. AEP Ohio and Columbus Gas of Ohio report city-wide aggregate energy usage data for the City of Columbus to use, but data for specific neighborhood consumption does not exist. Furthermore, with hundreds of homes in Milo-Grogan, and because of privacy concerns with respect to any household data, energy and water usage by residence was problematic to collect.



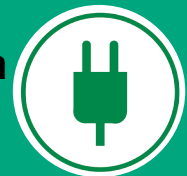
In lieu of household-level data, the team crafted questions for a survey the students distributed to neighborhood residents. Eight people completed and returned the survey, which constitutes less than 1% of Milo-Grogan’s population. Statistically, this does not provide an accurate picture of the behaviors of Milo-Grogan residents, especially since some of the survey responses were generated by Milo-Grogan Area Commission members, who are already aware of the neighborhood’s problems. It does, however, provide some insight as to Milo-Grogan residents’ awareness of sustainable practices. Figure 13 shows the survey responses relevant to residential energy and water efficiency.

Figure 13: Residential energy and water efficiency survey responses.
Figure generated by George Larger



EnergyStar is an international standard in energy-efficient products. However, the EnergyStar program encompasses much more than product standards. The EPA created the program in 1992 to help consumers and businesses increase their energy efficiency. The EnergyStar.gov website has information and tools to help homeowners increase their energy efficiency and save money; consumers can search energy efficient products, get do-it-yourself tips on improving energy efficiency, find a contractor who can perform home energy upgrades and search for all sorts of energy efficiency initiatives.³⁸ The EPA has a similar program for water efficiency, called Water Sense. Its program website offerings for consumers are similar, including information about becoming more water efficient, finding water-efficient products, and do-it-yourself home improvement tips for water efficiency.³⁹

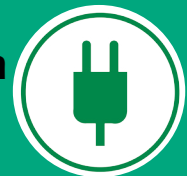
The U.S. Department of Energy also has plenty of recommendations for reducing energy consumption; many of these are related to using landscaping and natural resources to lower energy bills. Strategically-placed trees are an effective way to reduce residential utility bills; a well-shaded home can cut energy use by 20%, and placing as few as three trees can reduce energy costs by \$100 to \$250 per year.⁴⁰ Also, windbreaks are contiguous trees or shrubs designed to stop wind, and planting windbreaks north, east and west of a home can reduce fuel consumption by an average of 40%, according to a study in South Dakota.⁴¹



The Energy Independence and Security Act of 2007 (EISA) is a piece of federal legislation designed to move the United States “toward greater energy independence and security” through various means; one of these means is increased lighting efficiency. In order to save consumers money, the EISA mandated that light bulbs become 25% more energy efficient between 2012 and 2014,⁴² which ultimately caused the phasing out of most forms of incandescent light bulbs since manufacturers are unable to legally sell light bulbs that do not meet the standards. Light bulb manufacturers instead rely on the production and sale of light bulbs that meet or exceed the new requirements, such as compact fluorescent and halogen light bulbs.⁴³ Upgrading 15 standard incandescent light bulbs to a qualifying energy-efficient light bulb is projected to save the average household \$50 per year, and in the best possible conditions, a more energy efficient light bulb, such as compact fluorescent light bulbs, can last 10 times longer than the standard incandescent light bulb – 10,000 to 15,000 hours compared to 1,000 to 1,500 hours, respectively.⁴⁴

Renewable energy is a relatively new factor in residential energy efficiency and cost-saving efforts, especially due to its cost-prohibitive nature. However, the costs of solar energy systems have decreased significantly within the last decade; residential solar energy systems have fallen from over \$8/Watt in 2009 to under \$5/Watt in 2013. Further cost reductions are expected to continue through at least 2016.⁴⁵ Currently, the costs of solar energy are high for residential homes. However, a variety of factors could eventually make installing residential solar energy systems possible for area residents; these include the falling solar technology costs and demand for renewable energy credits through both state and federal regulations. Ohio SB 221 created a market for

renewable energy in Ohio,⁴⁶ requiring energy utilities to provide increasing amounts of renewable energy to their customers, and the U.S. EPA’s Clean Power Plan requires states to curb carbon pollution by 30% from 2005 levels.⁴⁷



Energy and Waste Reduction

Sustainability Analysis

The Energy and Waste Reduction Sustainability Analysis addresses the issues and opportunities presented in the Opportunity Assessment with detailed recommendations tailored to achieve Milo-Grogan's sustainability goals. The recommendations are further reduced into short-, medium- and long-term actions, which serve as a roadmap for success. Each recommendation includes supporting information to validate and explain the recommendation as clearly as possible, facilitating its implementation; this information also lists potential costs for each action as well as the suggested party or parties responsible for overseeing the actions' execution and completion.

Waste Reduction

Recommendation: Prevent the waste transfer stations from accepting loads from uncovered trucks that pollute the surrounding community with litter

As mentioned in the Opportunity Assessment, the waste transfer stations' policies of accepting uncovered loads of waste have been brought up by the Milo-Grogan Area Commission as a contributing factor to the ongoing litter issue near the sites. Team observations confirmed this fact. Although other municipalities have restrictions on waste transfer stations, the City of Columbus has no restrictions on waste transfer stations accepting open loads.⁴⁸ Anchorage, Alaska has a regulation in its zoning code requiring that waste transfer stations charge a fee for uncovered trucks, which serves to discourage the practice of using uncovered trucks to transport waste without punishing the business.⁴⁹ To see the details on how the Anchorage zoning code is enforced please see the Appendix.

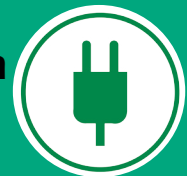
Short Term (1-3 years)

The following details the process for the passage of a rezoning amendment based on discussions with the City of Columbus Building & Zoning Department.

Appoint an Area Commission member or a community volunteer to contact community residents and stakeholders for the purpose of building support for altering the City of Columbus Zoning Code to prevent waste transfer stations from accepting uncovered trucks. The proposal needs to come from the Area Commission or someone endorsed by them to give the request legitimacy in the eyes of the city. The representative in charge of the zoning amendment would need to contact both the Columbus Planning Division and Columbus Building & Zoning Department to help draft the ordinance; they can be reached at 614-645-8664 and 614-645-8637, respectively.

Ordinances in the City of Columbus need to be voted on and passed by the Columbus City Council. The Area Commission can lobby each City Council member (currently Andrew Ginther, Shannon Hardin, Zachary Klein, Michelle Mills, Jaiza Page, Eileen Paley, and Priscilla Tyson)⁵⁰ and present the case for why this is a problem that should be solved citywide. It is necessary to present the information gathered in this report showing that almost 30% of the trucks that deliver waste to the site are uncovered, as well as examples of successful attempts to regulate this issue via zoning code, such as the Anchorage, Alaska code amendment. It would also be helpful to escort the council members out to the sites to show them, in-person, the litter control issue and to talk with some of the nearby residents to put a human face to those affected by the facilities.

Community support for this issue needs to be united between all



area residents and relevant stakeholders, including the Central Ohio Transit Authority's ("COTA") bus facility⁵¹ on Fields Avenue and Rogue Fitness;⁵² these entities need to be contacted and involved to demonstrate that this is an issue for both Milo-Grogan residents and for neighborhood businesses. They can be reached at 614-275-5800 and 614-358-6190, respectively.

Medium Term (3-5 years)

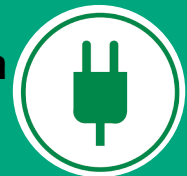
Continue the process begun in the short-term goal of passing an ordinance to ban waste transfer stations from accepting loads from uncovered trucks. The community member responsible for this effort can work with the Department of Building and Zoning Services and the Columbus Planning Division to draw up a new City ordinance. By working with these departments they can offer personal insight on what they believe will get passed by the Columbus City Council and ensure that they will present an ordinance that is supported by the City of Columbus. The ordinance should focus on amending the zoning code to require waste transfer stations to charge a fee to any truck that delivers an uncovered load and require the waste transfer station to develop and use a litter control strategy to prevent litter from escaping into the community. The code section can be based off of 26.80.050(B) of the Anchorage Alaska Zoning Code. This code section establishes an extra fee for truck drivers bearing loads that are uncovered. Instituting a fee as opposed to an outright ban may be an effort for which it is easier to build support.⁵³ The Alaskan Code section can be found on the Municipality of Anchorage's website⁵⁴ under Utilities Title 26; the relevant chapter is Solid Waste Disposal Chapter 26.80 as well as in the Appendix.

Long Term (5-10 years)

Encourage and lobby the Columbus City Council to pass the ordinance. If the ordinance is passed, the current litter levels need to be documented annually for analysis so as to evaluate the success of the zoning code amendment. The litter level needs to be compared against the percentage of uncovered trucks indicator. This way it can be observed if the rise or fall in litter levels is tied to the use of covered trucks or the total amount of trucks that use the facility. Success will also be judged by using the percentage of uncovered trucks indicator and comparing the results with previous levels; a decrease in this percentage, as well as a decrease in litter levels in the surrounding community, is the measure for success.

Recommendation: Amend zoning code to require waste transfer stations to universally screen their operations from the public right-of-way

As stated in the Energy and Waste Reduction Opportunity Assessment section of this report, waste transfer stations can adversely affect their host communities with respect to odor, litter, and the value of nearby residential properties.⁵⁵ Screening provides both a visual and a functional barrier, serving to catch debris before it enters the right-of-way. Currently, the zoning code requires that M-Manufacturing zones be screened only from adjacent residential parcels.⁵⁶ This allows waste transfer stations that border other M-Manufacturing parcels to forgo screening. Because of the lack of screening, litter is more able to filter into the surrounding community.



Short Term (1-3 years)

Amend the 2007 Milo-Grogan Neighborhood Plan to include screening requirements for M-Manufacturing zoning districts. The first step is to have one of the Milo-Grogan Area Commission members write up a memorandum outlining proposed screening requirements for the waste transfer stations; this memorandum needs to subsequently be put on the Area Commission agenda for discussion. Both members of the business community and local residents can be notified of the meeting wherein this issue will be discussed to get public comments. It is recommended that the Milo-Grogan Area Commission vote to have the screening requirements added to the 2007 Milo-Grogan Plan.

Appoint a representative to reach out to the community residents and relevant stakeholders to build support for altering the City of Columbus Zoning Code to require M-Manufacturing parcels to screen their operations from the public right-of-way. This needs to come from the Area Commission or someone acting on its behalf to give the request legitimacy in the eyes of the City of Columbus. The community representative in charge of the zoning amendment would need to contact both the Columbus Planning at 614-645-8664 and Columbus Zoning Department at 614-645-8637 to help them draft the ordinance.

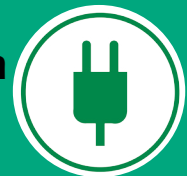
Ordinances in the City of Columbus need to be voted on and passed by the Columbus City Council. The Area Commission can lobby each city council member (currently Andrew Ginther, Shannon Hardin, Zachary Klein, Michelle Mills, Jaiza Page, Eileen Paley, and Priscilla Tyson)⁵⁷ and present their case for why this is a problem that should be solved citywide. Conditions around the waste transfer stations that were documented in this report can be used to establish how the lack of adequate screening negatively af-

fects the community. The studies cited in this report demonstrate how waste transfer stations negatively affect nearby properties and why mitigating the negative impacts is critical in a low-income neighborhood. Council members can also be taken on a site visit to see the issue first-hand.

As with the previous zoning recommendation, community support for this issue needs to be united between all area residents and relevant stakeholders, including COTA's bus facility⁵⁸ on Fields Avenue and Rogue Fitness,⁵⁹ these entities can be contacted and involved to demonstrate that this is an issue for both Milo-Grogan residents and for neighborhood businesses. They can be reached at 614-275-5800 and 614-358-6190, respectively.

Medium Term (3-5 years)

Continue efforts to pass a zoning ordinance requiring waste transfer stations to adequately screen their operations. The neighborhood representative in this matter can work with the Columbus Building & Zoning Department and the Columbus Planning Division to draw up a new city ordinance. These departments can offer personal insight on what they believe can get passed by City Council and ensure endorsement for an appropriate ordinance commensurate with their standards and the zoning code. The city departments can also help estimate a time frame for how long it will take to get this type of ordinance passed. The ordinance should focus on amending the zoning code to require M-Manufacturing parcels to not only screen their operations from nearby residential properties but also from the public right-of-way. An example of a zoning code section to use as a model is Section 153.133(A) from the City of Dublin Zoning Code. This code requires adequate screening from the public right-of-way.⁶⁰ Driving



through Dublin has shown that this code section is very effective. A copy of the code section can be found in the Appendix. The Area Commission and the City of Columbus can look at this code section and determine what types of requirements each party would be willing to support. It would be the financial responsibility of the property owner to comply with the new zoning regulations. An example of possible requirements in the code is the installation of a fence with a screening mesh and landscaping for all waste transfer stations. The following details potential financial costs of complying with the regulations, in terms of the installation of fencing and the planting of hedges and other shrubbery:

- Eight-foot chain link fence average \$15 per linear foot⁶¹
- Mesh fence screen (88% opacity) average \$0.66 per linear foot⁶²
- Josee Reblooming Lilac Hedge average \$6.66 per plant⁶³
- Arborvitae Techny evergreen average \$5.95⁶⁴

Long Term (5-10 years)

Encourage and lobby the Columbus City Council to pass the ordinance. If the ordinance is passed and the screening requirements are applied to the waste transfer stations, success will be judged by the perception of people living within 600 feet of the station, evaluating if the additional screening requirements have mitigated the negative effects on their properties. The difference in the amount of trash present in the surrounding streets and properties, as well as the sight and smell of the facilities, should be observable. The new zoning code will not be enforceable until the current waste transfer stations either upgrade their facilities or decide to expand. If the waste transfer stations decide to do either

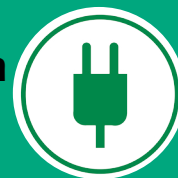
then the entire property will need to be brought up to the new code standard.

Recommendation: Create a composting education program for residential and community gardens/landscaping

Short Term (1-3 years)

Provide neighborhood residents with information and resources to facilitate residential composting. This includes basic instruction from a community volunteer designated by the Milo-Grogan Area Commission for building simple compost bins as well as how-to composting training. Additionally, the volunteer can connect area residents with local programs that subsidize composters or that are capable of holding composting seminars at the Milo Grogan Recreation Center. In Columbus, the GreenSpot Backyard program both subsidizes approved compost bins and provides in-person and online instructional composting classes.⁶⁵ As stated in the Opportunity Assessment, composting does not appear to be a common activity in Milo-Grogan. It does provide benefits, however, since residential composting can reduce the amount of waste produced by a household by as much as 30%; it also serves to extend the useful life of landfills, and therefore reduces the amount of taxpayer money spent on waste disposal.⁶⁶ Furthermore, composting also provides a free, nutrient-rich alternative to landscape fertilizers and mulch, and helps to retain moisture, saving water.⁶⁷

Composters can be built inexpensively with scrap materials; basic plastic composters cost less than \$100;⁶⁸ see Sidebar 2 for more information. As previously mentioned, the GreenSpot Backyards program reimburses Columbus residents up to \$50 after the purchase of approved compost bins. Composting classes taught



by a community volunteer or by representatives of the GreenSpot Backyard program should be available at little or no cost to the community. A designated representative of the Area Commission and the community is responsible for implementation.

Sidebar 2: DIY Compost Bin

Building a do-it-yourself compost bin is a fast, easy and inexpensive way for a handy citizen to begin composting.

Figure 14 shows the materials necessary:

- Chicken wire
- 4 stakes made of scrap wood
- Wood staples and staple gun

Steps:

- 1) Cut a rectangle of chicken wire. The height of the rectangle will be the height of the bin, and the length will be the circumference of the bin.
- 2) Cut four wood stakes. The stakes will be pushed into the ground, so the height of the stakes should be greater than the height of the bin by at least three to six inches.
- 3) Staple one end of the chicken wire to a stake. Wrap the chicken wire into the shape of a cylinder so that the other end of the chicken wire slightly overlaps the end stapled to the stake. See Figure 15.
- 4) Stand the cylindrical chicken wire up and push the stake attached to it into the ground so that the bottom of the chicken wire cylinder is flush with the ground.
- 5) Push the other three stakes into the ground around the chick-

en wire cylinder at 90-degree increments and staple them to the chicken wire. Figure 16 demonstrates how the compost bin will look when finished.

You are now the proud owner of a DIY compost bin! It should be noted that this is a basic compost bin designed primarily to handle yard waste; it is not adequate to handle food waste, which may attract animals. For composting more than yard waste, purchasing a compost bin or building a more complex bin is recommended. To learn more, visit <http://www.wikihow.com/Build-a-Compost-Bin>.



Figure 14: The basic necessities of building a simple DIY compost bin. Image courtesy of WikiHow.

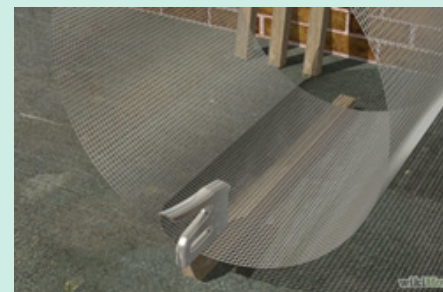
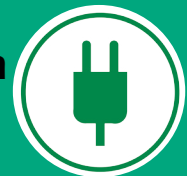


Figure 15: Stapling the chicken wire to the first stake. Image courtesy of WikiHow.



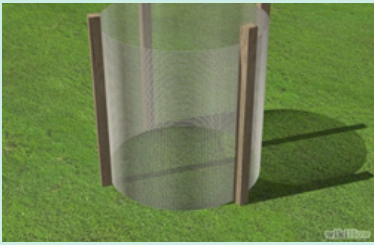


Figure 16: A completed DIY compost bin.
Image courtesy of WikiHow.

Medium Term (3-5 years)

Create and coordinate a compost collection system and/or locations for depositing compost that coordinate with community gardens. The Land Use and Urban Ecology team recommends the conversion of empty lots in Milo-Grogan into community gardens. Neighborhood residents could provide much-needed nutrient-rich compost from their short-term backyard composting efforts to Milo-Grogan community gardens projects. The Ohio EPA has extensive regulations regarding non-residential composting. However, composting sites related to community gardens that compost in an aggregate area no greater than 300 square feet, and that only compost yard wastes, animal wastes, food scraps, bulking agents and additives, are exempt from composting regulations, including registration and licensing requirements. As long as the neighborhood community garden uses an area of less than 300 square feet for composting, or utilizes residential composting, no oversight is necessary.⁶⁹

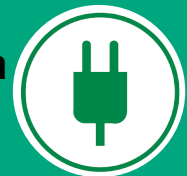
This program enables community residents to extend the benefits of backyard composting, mentioned in the short-term goal. It provides a low-cost means by which community garden projects acquire nutrient-rich soil, reducing the need to buy soil and mulch, which reduces the cost of community gardening. Community gar-

den composting efforts can be a local network of volunteers with trucks, who collect and deliver the compost from area residents to community garden locations within the neighborhood. If done on a street-to-street basis, members of the network could collect their neighbor's compost for delivery, requiring no additional fuel costs. Volunteers from the community will lead and operate the compost network. When community gardens are established, whoever is responsible for the garden can oversee composting efforts.

Long Term (5-10 years)

Utilize the compost collection system for community landscaping, such as landscaped Milo Grogan signage. There exists a lack of signage or landscaping letting citizens know that they are entering the Milo-Grogan neighborhood; this was identified as an opportunity and as a goal in Dr. Jack Nasar's Milo-Grogan Community Plan in the 2014 autumn term.⁷⁰ See Sidebar 3 for more information. Using compost to create community landscaping to beautify the neighborhood is an effective way to raise the quality of life of residents, strengthen the sense of community and raise property values. With a large buy-in of area residents participating in composting, this reduces their waste and the cost of bagging garbage in their homes, as well as reducing the cost of beautifying their neighborhood.

Members of the Milo Grogan Area Commission will need to contact local universities with landscaping or horticulture programs, such as Columbus State Community College or The Ohio State University, to solicit relatively low-cost landscaping work. For example, Columbus State, which is less than a mile south of Milo-Grogan, educates students in practical landscaping and horticulture through its Landscape Design and Management program;



as the work will be done by students for coursework, the costs should be minimal.⁷¹ Compost could be collected from the medium term goal for use in this effort, providing raw materials and reducing costs. Additional costs not covered by Columbus State can be sought through donations from local landscaping businesses, the City of Columbus or the community. The Landscape Design and Management program at Columbus State can be contacted at 614-287-5030. A member of the Milo-Grogan Area Commission interested in overseeing neighborhood beautification projects will be responsible for this effort.

Sidebar 3: 2014 Milo-Grogan Community Plan – Image and Branding

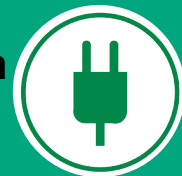
During the autumn 2014 term, Dr. Jack Nasar led an urban design studio, which produced the Milo-Grogan Community Plan. Among the recommendations listed in the plan was the use of landscaping and branding signage to identify Milo-Grogan's entrances and to improve the neighborhood's image. Currently few cues along the community's borders serving to separate it from the surrounding areas. Successful neighborhoods in Columbus, such as the Short North and the Brewery District, have used the concept of branding to promote their images and to distinguish themselves from their neighbors. Landscaping used in concert with signage concepts in Figure 17 at entrance locations identified in Figure 18, both demonstrated in the urban design studio's Milo-Grogan Community Plan, is a simple, low-cost way to create a visible identity for the neighborhood.



Figure 17: Signage concept from the Milo-Grogan Community Plan. Image courtesy of Kalindi Parikh.



Figure 18: Ingress points identified in the Milo-Grogan Community Plan. Image courtesy of Brian Malloy, Vasilias Yakumithis, Kalindi Parikh.



Industrial and Commercial Energy Efficiency

Recommendation: Maximize building processes such as heating, ventilation, air-conditioning, lighting and electrical systems to improve energy efficiency

Short Term (1-3 years)

Educate property and building owners about the importance of sustainable practices and its impact on the business through fliers or programs at the Milo-Grogan Recreation Center and mailings to individuals and businesses.

An initial step to spread awareness about energy efficiency and the impact energy has on business' fiscal health and the environmental would be to mail each business a factsheet containing important figures and statistics pertaining to energy efficiency. Some pertinent facts are:

- Factories and industrial plants account for 1/3 of United States energy usage, 25% of carbon dioxide emissions, and an energy bill of \$200 billion.⁷²
- If the energy efficiency of commercial and industrial buildings in the United States improved by just 10%, over 20 billion dollars would be saved.⁷³
- By investing in energy-efficient equipment, energy use in commercial buildings could be cut by 30%.⁷⁴
- When lights are on a dimmer, the bulbs last up to 20 times longer and electric consumption is reduced by 4-9%.⁷⁵ Lighting sensors can curb electrical use by up to 50%.⁷⁶

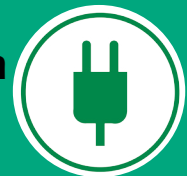
Either a community workshop hosted by the Milo-Grogan Business Association or through fliers posted at the Milo-Grogan recreation center, businesses can learn how they can start making

an impact in an impact in the local community. By understanding that small steps can lower energy costs, reduce the company's carbon footprint, and ultimately increase financial savings, industrial and commercial areas in Milo-Grogan can take an interest in and take action to make energy improvements.

The City of Columbus and Mayor Michael B. Coleman developed GreenSpot, a resource for answers to questions surrounding topics of 'green': What does it mean to be green? How can I get green? How does being green impact Columbus?⁷⁷ There is also a map of green business locations in Columbus, so that industrial and commercial entities can see who else is committed to being environmentally-conscious. In the Milo-Grogan community, Limbach Co, MyPlumber.me, Columbus Cleaning Solutions, Inc., Atlas Butler Heating and Cooling, The Eco Plumbers, and YouthBuild Columbus Community School are all registered with GreenSpot.⁷⁸ Any business can apply, and it is a way to get free advertising online. The application can be found online at <http://www.columbus-greenspot.org/pdfs/ApplicationIndustrialandCommercial.pdf> and the mandatory commitments⁷⁹ to join GreenSpot are:

- Submission of a summary of green initiatives begun and continued as a result of being part of GreenSpot by January 15th of each year
- Creation and display of an environmental policy or mission statement
- Measurement of compliance with local, federal, health, safety, and environmental regulations

While there are local resources available, there are also Federal resources and tools industrial and commercial entities can utilize. Within the United States Department of Energy, the Office of Energy Efficiency and Renewable Energy provides resources, train-



ing tools, and workshops, all at no cost.⁸⁰ Available presentations also have accompanying materials and activities. Topics range from introduction to energy management and energy performance to engaging utilities and external stakeholders. These tools can be utilized in both in formal and informal settings, creating opportunities for businesses to learn both at workshops and during their own time. It does not matter if the company is new to sustainability, or utilizes sustainability in their daily building processes; there is educational material available for both business owners and their employees.

Businesses need to engage employees, find support, build knowledge and plan appropriately.⁸¹ In order for businesses to utilize more efficient practices and increase energy sustainability, employees should buy in; they will know the operating processes thoroughly and have ideas about what could be done to save energy. Additionally, as more employees understand the larger purpose of energy efficiency, they may be more likely to take larger steps and make the necessary changes to see improvements in energy expenditures and emissions. According to the EPA, a sustainable business is one that: eliminates inefficiencies, minimizes its impact on the environment, streamlines its processes, thinks long-term, evolves and adapts to new information and seeks continual improvement.⁸² Once employees have an understanding of what a sustainable business is and what that entails for their environment and for their daily routine and duties, it is important for businesses to find support and create a network of like-minded community entities and service providers;⁸³ this network will become useful once the business is ready to apply for small or large-scale energy efficiency grants. Finally, in this initial stage, it is important for businesses to build their knowledge and plan appropriately.⁸⁴ By taking part in collaborative learning and strategic planning, businesses can learn from others' situations and potential cost-saving

efforts; this is a useful first step to becoming more energy efficient.

This is a relatively inexpensive initiative. Fliers cost \$10 to print and mailings cost \$68 to print and ship: \$10 for the paper, \$8 for the envelopes, and \$50 for the postage.^{85,86,87} There is also a time cost, as the fliers and mailings need to be designed and sent out to neighborhood businesses. Both the fliers and mailings are a way to spread the word about energy efficiency practices, while advertising an opportunity for a workshop at the Milo-Grogan Recreation Center to learn more about specific ways individual businesses can start making beneficial changes in their operating processes. Either the Milo-Grogan Area Commission through the Recreation Center and/or the Milo-Grogan Business Association will be responsible for educating area businesses. Educating employees on business efficiency improvements is the responsibility of each individual business.

Medium Term (3-5 years)

Participate in the Ohio Development Services Agency's Energy Efficiency Program for Manufacturers.

The Ohio Development Services Agency's Energy Efficiency Program for Manufacturers is a state-run program that helps Ohio manufacturers reduce costs through a multi-phase process focusing on diagnosing, planning and implementing cost-effective energy solutions at their facilities.⁸⁸

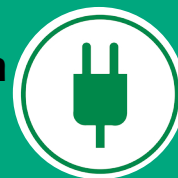




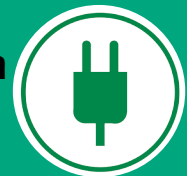
Figure 19: Images of streamlined business operations. Images courtesy of the Ohio Development Services Agency

The first phase of the program focuses on identifying where specific cost savings can be made; this is a facilitated process wherein manufacturers are able to think about energy in regards to their daily operating processes. Manufacturers and businesses can sign up through a contact form on the Ohio Development Services Agency's homepage: <http://development.ohio.gov/contactus/ContactInfo.aspx> or by calling the business response line within the Office of Energy at 614-466-6797. After initial contact is made, the company completes a customer background form, and a free two-hour diagnostic session is subsequently scheduled and conducted at the facility, shown in Figure 19. Key company representatives partake in the discussion and action steps are identified to achieve energy cost savings. The business manager's time is a cost to consider, as this and the other phases all require a time commitment for evaluating the building and planning for further steps.

Phase two focuses on development of a tangible energy plan, which is developed by the Ohio Development Services Agency's Energy Efficiency Program for Manufacturers in partnership with the businesses. This combines process methodologies along with an energy audit. This plan can address minor practices such as be-

havioral changes; examples of this are turning off lights and equipment when not in use and controlling the temperature of building. FirstFuel, a company that analyzes energy consumption in buildings, researched how operational improvements through behavioral changes can be the primary driver of positive, more energy-efficient outcomes. The company found that slightly more than half of energy efficiency opportunities could be realized with simple operational improvements. For example, the data showed that 60% of HVAC systems were running a full hour before buildings were occupied. It also showed that 60% of buildings were running equipment out of sequence and heating and cooling units were running when they did not need to be.⁸⁹ Modifying these behaviors or making small automation changes would save a total of roughly \$17 billion if applied across the entire U.S. commercial building stock.⁹⁰ After addressing the problem and solutions, phase three looks at more extensive energy efficient operational changes.

Ohio Development Services Agency's Energy Efficiency Program for Manufacturers oversees the third phase, which involves installation of the energy savings cost measures. In older industrial and manufacturing buildings, the five most common areas of wasted energy are insulation, HVAC systems, lighting, windows and chimneys. Insulation that is old, inefficient, torn or compressed is a source of wasted energy; by replacing or upgrading building insulation, energy savings could increase by 30%.⁹¹ Heating, ventilation, and air conditioning systems, also known as HVAC systems, account for 70%⁹² of commercial and industrial facilities' utility bill; by ensuring the systems are properly maintained or replaced with more efficient models, building-wide energy efficiencies are amplified. Older buildings typically have inefficient light bulbs or light switch devices. Replacing energy-inefficient light bulbs or altering the lighting fixtures could result in energy savings of 20-45%.⁹³ Windows and chimneys are often a source of heat and energy loss;⁹⁴



by adding film to the windows or altering how heat is released, significant reduction in wasted energy are possible. The fourth and final phase measures and verifies the energy cost savings.

The goal of the Ohio Development Services Agency's Energy Efficiency Program for Manufacturers is to enable Ohio's manufacturers to "realize cost savings and improve the efficiency of their operations; ultimately putting these companies in a better position with their worldwide competitors."⁹⁵ This program strives to provide the necessary tools and services to enable manufacturers to make an effective energy management plan, helping businesses retain and create new jobs through the costs savings achieved when energy efficiency is maximized.⁹⁶ To date, over \$24 million has been invested in Ohio to reduce industrial energy usage, resulting in a combined annual savings of 79,256 Megawatt-hours and a reduction of 110,256 metric tons of greenhouse gas emissions per year.⁹⁷ With or without utilizing Ohio Development Services Agency's Energy Efficiency Program for Manufacturers, industrial and manufacturing entities can look at the business process holistically from conception to implementation in order to minimize energy usage and maximize savings.

Because of the potential areas to address, partial funding and financial assistance is made possible through Ohio's Advanced Energy Fund and United States Department of Energy's State Energy Program.⁹⁸ The Milo-Grogan Business Association as well as individual businesses, with help from the Ohio Developmental Services Agency, are responsible for implementation.

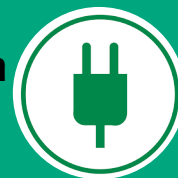
Long Term (5-10 years)

Research and create plan to install solar panels on Milo-Grogan neighborhood businesses, which can reduce energy usage and business energy costs.

Solar panels and other renewable/alternative energy sources are avenues to pursue for making the industrial and commercial areas of Milo-Grogan more sustainable. The United States Department of Energy released a new study showing that the cost of solar energy continues to fall across all sectors. In 2013, the installed price of commercial and residential solar declined by more than 12%.⁹⁹ The cost varies across states due to solar incentives, permitting requirements, regulations, and maturity of the market.¹⁰⁰ On average, it costs an average of \$15,916 for a home in Ohio to go solar in 2011, but it ultimately saved homeowners \$73 monthly and \$17,527 over 20 years, taking about 9 years to pay for itself.¹⁰¹

Central Ohio has, on average, four hours of sunlight a day, with an average of three to four kilowatt-hours of solar energy per square meter.¹⁰² While this may not sound like much, the payoff periods are in the five- to seven-year range and getting better.¹⁰³ Because of Ohio's renewable energy standard, the state must generate one-half percent of their electricity, roughly 300 to 400 kilowatt-hours of solar energy per square meter from solar power by 2025.¹⁰⁴ AEP Ohio emphasizes energy conservation, as they utilize an inverted block rate design for energy usage; people or businesses that consume more electricity will pay a higher rate than those whom consume less. This price bracket is in place to incentivize and encourage energy efficiency.¹⁰⁵

Once businesses in Milo-Grogan have been able to participate in Ohio Development Services Agency's Energy Efficiency Program for Manufacturers, they can start developing specific steps to make attaining and installing solar panels feasible. When researching and creating a plan for installation of solar panels, looking at the North American Board of Certified Energy Practitioners (NABCEP) is a place to start.



The NABCEP has a list of certified installers and sales professionals by location on the website: <http://www.nabcep.org/>.¹⁰⁶ Utilizing certified installers is important for the performance and utility of the solar panels. Businesses need to contact the professionals and give them the following information: basic information on the commercial property the proposed location for the solar panels, as well as contact information.¹⁰⁷ After initial contact is made, a Columbus solar installer will call to ask further questions and arrange a visit to the business. The on-site visit will consist of measurements and discussions surrounding specific questions and needs about the solar panel installation. Then, a detailed proposal will be developed. This will include all applicable rebates, from local, state and federal energy tax credits. After the contract is signed, the order is placed. Solar panel installation typically takes 2-4 days and 2-3 installers, depending on the size and complexity of installation.¹⁰⁸ Figure 20 demonstrates the solar installation at Third-Hand Bikes.

There are various business incentives for solar panels: federal tax credits and Modified Accelerated Cost-Recovery System (MACRS).¹⁰⁹ A business may claim credit of 30% of qualified expenditures, which include labor costs and assembly, for a solar electric system that is owned and used by the tax-paying business. Through the federal Modified Accelerated Cost-Recovery System (MACRS), businesses may recover investments in solar electric installations through depreciation deductions. Solar power is eligible for accelerated five-year property depreciation; with this depreciation rate, the business owner is entitled to deduct a significant portion of the adjusted basis of the property during the initial tax year the installation is in service.¹¹⁰

There are also a number of financial incentives for installing and using solar power systems in the state of Ohio. The state provides a state commercial grant of up to \$200,000 for installation of new

solar energy systems.¹¹¹ The Database of State Incentives for Renewables and Efficiency, <http://programs.dsireusa.org>, has a comprehensive list of current grants, incentives and financing options for commercial and industrial uses by zip code, and can be used as a resource for businesses interested in attaining and utilizing solar panels.¹¹² When more businesses are prepared for solar panel installation, there should be an increase in the percentage of local businesses that have permits to generate renewable/alternative energy. As the indicator suggests, as more businesses are able to utilize renewable energy, they are able to increase their financial longevity and success, positively impacting the environment by reducing the negative impacts of traditional energy sources. While each business will take different steps to make their energy processes sustainable, it is important that progress is annually measured and goals are updated, so that there is continued progress and profitability.¹¹³

While initial costs and savings will differ between residential and commercial solar facilities, the potential for benefits and savings remains the same. The many benefits of solar panels include: increasing the business' return on investment, reducing annual electric bills, increasing the resale value of the property, owning your own electric generator, and reducing dependence on fossil fuel and imported oil.¹¹⁴ The Milo-Grogan Business Association as well as individual businesses, with help from the Ohio Developmental Services Agency, are responsible for this effort. Installation companies are skilled in navigating the financial incentives of installing rooftop solar systems, and usually the cost of purchasing and installing the systems include financial incentives.

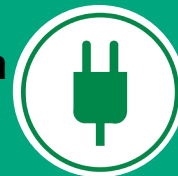




Figure 20: A view of Milo-Grogan from the roof of Third-Hand bikes, next to its solar energy installation.
Image courtesy of Luan Nguyen

Residential Energy and Water Efficiency

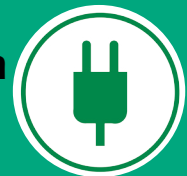
Recommendation: Create a program that educates, encourages and assists Milo Grogan citizens in reducing energy consumption and increasing energy efficiency in their homes

Energy-efficient products are highly beneficial for reducing energy consumption. As mentioned in the Opportunity Analysis, upgrading standard incandescent light bulbs to energy-efficient light bulbs such as compact fluorescents increases energy efficiency and reduces energy consumption. There are, however, other products that can be purchased or made, the benefits to energy efficiency and consumption of which may not be obvious. An example is the use of curtains. Poorly sealed homes or homes with older windows lose heat through and around windows. Purchased or handmade curtains designed to help insulate homes are a low-cost, aesthetically-pleasing way to reduce energy consumption and.

Although energy efficiency can be increased by purchasing more energy-efficient products, changing consumption behaviors inside the home is a low-cost way to be more energy-efficient and save money. As discussed in the Opportunity Assessment, compact fluorescent light bulbs are very helpful for increasing energy efficiency compared to traditional incandescent light bulbs. However, reducing energy consumption by turning off lighting in rooms that are not being used can be just as beneficial. Using less energy to illuminate an empty room still costs money; using no energy for lighting in the room is free.

Short Term (1-3 years)

Hold a monthly class in the Milo-Grogan Recreation Center that educates area residents about ways in which they can reduce energy consumption and increase energy efficiency in their



homes. This class will focus on helping attendees change their energy consumption behaviors to produce positive energy usage outcomes, thereby saving them money on their utility bills. Each class can focus on a different area of the home, and classes may be held more often based on demand. The class needs to be led by a designated member of the Area Commission or a community volunteer who has an interest in developing an expertise in residential energy consumption and efficiency, and who is willing to assist other members of the community in reducing their energy consumption and increasing their energy efficiency. The volunteer in charge of this effort may also solicit speakers from Columbus agencies or organizations responsible for energy conservation topics and initiatives, such as GreenSpot Columbus, to speak at these classes. This includes contacting and inviting representatives from entities like the Columbus Department of Public Utilities or the Mayor’s Office of Environmental Stewardship to speak to members of the community about current and future sustainable initiatives concerning energy use. The Columbus Department of Public Utilities can be contacted at 614-645-8276, and the Mayor’s Office of Environmental Stewardship can be reached at 614-645-7671. For more information on GreenSpot Columbus, see Sidebar 4.

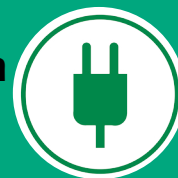
As this is a volunteer position, and because speakers from the City of Columbus are likely to speak to the community at no charge due to being part of their jobs, this recommendation should have no monetary cost. This is likely to cost mostly time, no more than 10 hours per month, spent researching content for the class; this research can be performed using the Columbus Public Library system and/or internet searches. Advertising for the classes can be done with a poster in the Milo-Grogan Recreation Center, at very little cost. A volunteer from the community or a member of the Area Commission will be responsible for implementation.

Sidebar 4: GreenSpot Columbus



Figure 21: GreenSpot Columbus Logo
courtesy of columbusgreenspot.org.

Mentioned in the industrial/commercial energy section of the Sustainability Analysis, GreenSpot Columbus, a service of Get Green Columbus, is an initiative begun by Mayor Coleman to inspire Columbus’ citizens to get excited about being environmentally-conscious. The program tracks and recognizes households, businesses, and organizations that opt in to the program and commit to going green. The website for GreenSpot Columbus dispenses advice on how to go green, focusing on energy conservation, water conservation and the Three R’s – reduce, reuse and recycle. The program also provides advice using pamphlets. Entities wishing to go green are encouraged to sign up with the program, verify their efforts to go green and become part of the green movement in Columbus. As of early 2015, there are over 11,000 members in the GreenSpot Columbus program. Milo-Grogan volunteers, tasked with disseminating information on how to reduce consumption and increase energy and water efficiency, can encourage citizens to become



members of GreenSpot and learn from the program in order to become more sustainable. Figure 21 shows GreenSpot Columbus' logo. To learn more, visit <http://www.columbusgreenspot.org/index.asp>

Medium Term (3-5 years)

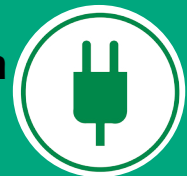
Advertise and encourage residential energy audits and weatherization programs from non-profit organizations such as the Mid-Ohio Regional Planning Commission; advertisements can be posted in the Milo-Grogan Recreation Center. For non-qualifying neighborhood residents, the Area Commission can develop contacts with entities that perform energy audits and weatherization in order to procure discounts as well as find funds and grants for residents, and assist with the legwork/paperwork, enabling them to make changes in their homes that increase energy efficiency and reduce consumption. The potential work performed during the audits includes: increasing insulation and replacing old appliances and HVAC systems with EnergyStar-certified models. With each area resident who signs up for and has work done through MORPC's weatherization program, the percentage of households that have had MORPC energy audits and weatherization in Milo-Grogan will increase; this progress in energy efficiency will be reflected by the MORPC energy audit and weatherization indicator.

MORPC audits and energy efficiency work is free for qualifying low-income residents. The committee work is on a volunteer basis, and as such does not carry a monetary cost. Development of contacts and expertise with helping area residents with these programs requires an initial cost in manpower, approximately 10 hours per month; this may increase or decrease over time, depending on the popularity of the program. Simple, low-cost advertisements placed in the Milo-Grogan Recreation Center may

be sufficient in spreading the word about MORPC's weatherization program. MORPC may have advertisements ready to be distributed to area residents or may be able to cover the cost of advertisement development. The MORPC Energy Efficiency and Weatherization program can be reached at 614-621-1171. The Milo-Grogan Area Commission, with possible help from community members, will be responsible for this effort.

Long Term (5-10 years)

Leverage and strengthen the partnerships recommended in the Economic Development and Social Equity section with housing organizations in order to ensure new homes built in the neighborhood are EnergyStar-certified. The issue with older, energy-inefficient homes in the community is a problem that can be addressed by ensuring new homes built by housing organizations such as Habitat for Humanity conform to modern building and energy efficiency standards. According to the EnergyStar.gov website, Habitat for Humanity of Greater Columbus is an EnergyStar builder, and the organization has built 12 EnergyStar-certified homes in Columbus in 2014 and a total of 92 EnergyStar-certified homes in Columbus. According to the Economic Development and Social Equity team, Milo-Grogan currently has a housing relationship with Homeport. Although Homeport has previously built homes in Milo-Grogan, and despite its efforts to embrace energy-efficient building standards,¹¹⁵ it is not an EnergyStar-certified homebuilder according to the EPA.¹¹⁶ If the Milo-Grogan Area Commission wishes to continue its association with Homeport, it is recommended that they encourage Homeport to become an EnergyStar-certified homebuilder. EnergyStar certification demonstrates competency in and dedication to energy-efficient home construction. Furthermore, establishing partnerships with



EnergyStar-certified housing organizations is a means by which the Milo-Grogan Area Commission can ensure that any new homes built in the neighborhood are energy-efficient.

This is a cost-free effort, requiring varying amounts of man-hours to complete, in terms of establishing and maintaining contacts with Habitat for Humanity of Greater Columbus and Homeport. As the Milo-Grogan Area Commission is focused on housing in the neighborhood, its members need to be personally involved in establishing contacts with Habitat for Humanity of Greater Columbus.

Recommendation: Encourage the utilization of natural and renewable resources to produce positive energy efficiency outcomes

One of the disadvantages of sustainability campaigns is that they may encourage the purchase of sustainable products, further contributing to consumption. This is problematic, as one of the underlying concepts of sustainability is the reduction of resource consumption; new products typically translate into using and consuming raw materials and resources. However, using natural, renewable resources, even if it means using technology to do it, is a valuable and essential aspect of sustainability and of saving resources and money.

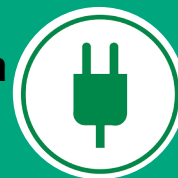
Since approximately 50% of household energy consumption is used for heating and cooling, and because climate is the biggest factor in a home's comfort, using natural resources such as trees and shrubs is an effective way to reduce the energy needed for residential heating and cooling; as mentioned in the Opportunity Assessment, planting a small amount of trees and shrubs can have significant positive impacts on energy savings and use. Once the amount of energy required for household heating and cooling is reduced, replacing traditional forms of energy with renewable/alternative energy is an excellent way to

reduce energy costs. As mentioned in the commercial/industrial energy sub-section, homeowners who generated their own energy with solar panels are expected to reduce monthly energy bills, which will produce significant savings over the life of the solar facility; this is due to the combination of local, state and federal incentives, as well as a competitive marketplace in Ohio.

Short Term (1-3 years)

Establish a program for the consultation and provision of basic landscape services for neighborhood residents. These services include consultation of the placement of trees as well as tree planting. Tree planting and tree maintenance are very common services in large cities with suburbs in a sprawling metropolitan area; it should not be difficult to find low-cost tree planting services in Columbus, adequate to plant sufficient trees around residences to cut energy use and reduce utility costs. Establishing the program includes acquiring discounts for large volumes of clients from Milo-Grogan interested in tree planting for energy consumption reduction.

Creation of this program involves only man-hours for establishing contacts with local landscaping services. Most landscaping services require a consultation before providing customers with a quote for any sort of landscaping. However, businesses such as Oakland Nursery will deliver a tree for \$50 and plant it for half the cost of the tree or a minimum of \$75. So, without group rates for multiple trees, delivery and planting of trees costs \$125 plus the cost of the tree.¹¹⁷ Oakland Nursery can be contacted at 614-268-3511. A Milo-Grogan Area Commission member or someone with contacts at landscaping companies will be responsible for this effort.



Medium Term (3-5 years)

Advertise to neighborhood residents the benefits of a comprehensive residential landscape plan. A custom flier created for this purpose is acceptable, or the infographic created by the U.S. Department of Energy that explains the basics of energy-efficient landscaping can be used; the infographic, which includes explanations on the use of windbreaks and shading, is a simple way to demonstrate to Milo-Grogan residents how planned landscaping can reduce energy consumption and save residents money on utility bills.¹¹⁸ For more information on this infographic, see Sidebar 5.

Advertisements and word-of-mouth are the best way to accomplish this, through the Milo-Grogan Recreation Center. Low-cost advertising could be as simple as a homemade poster. To create a flier, a community volunteer can contact Professor Charles Cartwright at 614-292-7273 in the City and Regional Planning Department at The Ohio State University; he leads the graphics courses for planners and can solicit student volunteers to create fliers demonstrating the benefits of planned landscaping. Students will be eager to participate if Professor Cartwright permits them to get class project credit for creating the flier. Also, as mentioned earlier, printing these fliers or the infographic in Figure 22 could cost as little as \$10.¹¹⁹ A community volunteer with landscaping contacts will be responsible for implementation.

Sidebar 5: Sustainable Landscaping Infographic

Figure 22 exhibits the US Department of Energy's infographic regarding sustainable landscaping practices. For more information, visit <http://energy.gov/articles/energy-saver-101-infographic-landscaping>.

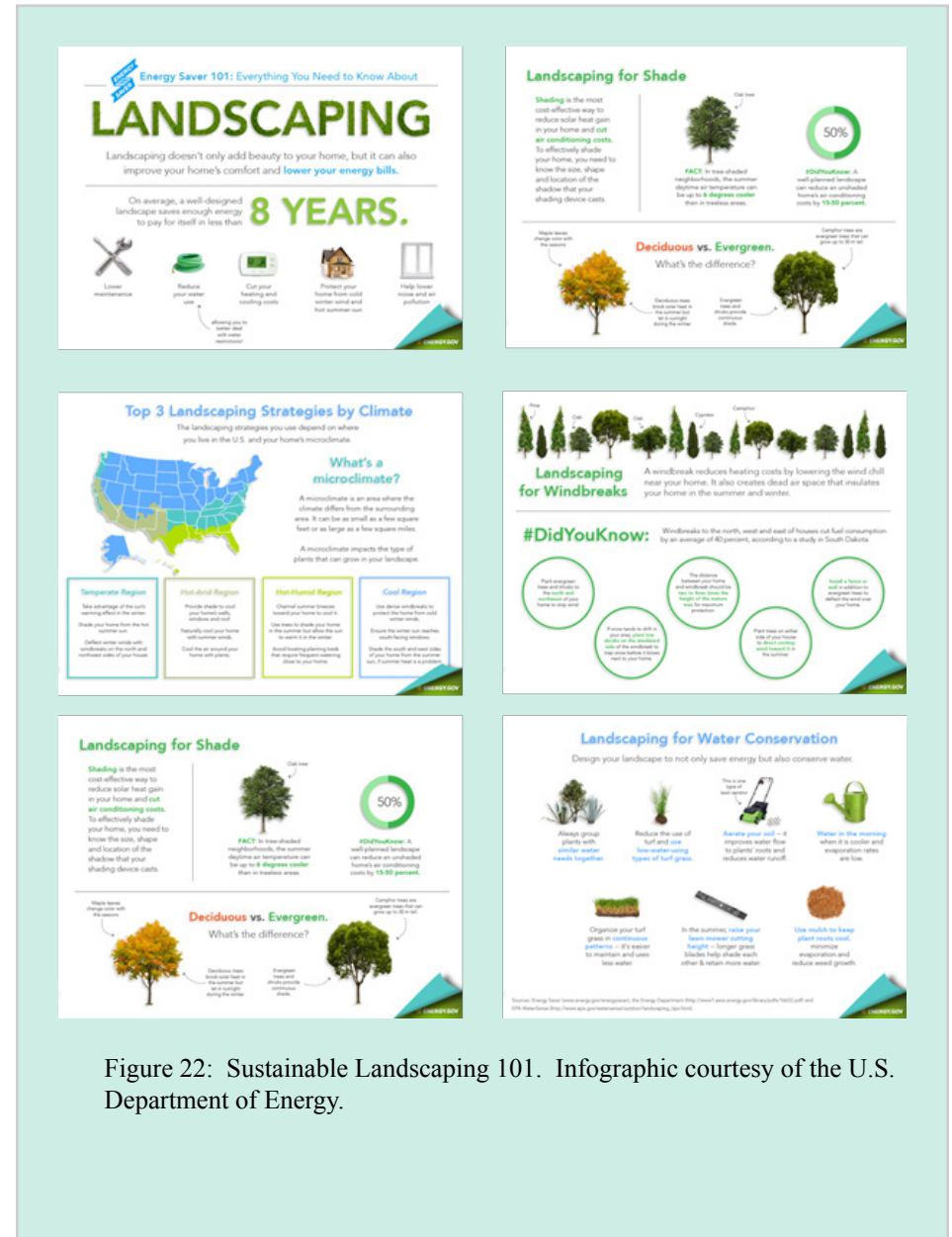
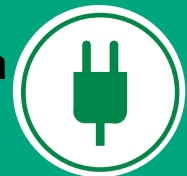


Figure 22: Sustainable Landscaping 101. Infographic courtesy of the U.S. Department of Energy.



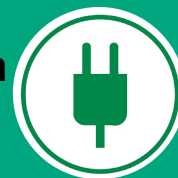
Build relationships and create a list of contacts with Columbus-area landscaping companies or local universities that can produce comprehensive landscape plans designed to reduce household energy consumption. Businesses such as Buckeye Landscape¹²⁰ provide landscaping master planning services for a variety of forms and functions, and local universities such as the Columbus State Community College have landscaping programs. Comprehensive landscape plans encompass more than just the planting of a few trees to reduce energy consumption, as mentioned in the short-term goal; significant placement of trees, shrubs and other shading/shielding plants can contribute substantially to the reduction of residential energy costs, as stated in the Opportunity Assessment.

The development of master landscape plans requires consultation with landscaping companies or with landscaping departments at local universities. Members of the Milo-Grogan Area Commission can leverage contacts made with tree planting businesses for the short-term goal and with those made with local universities for the signage landscaping recommendation detailed in the waste reduction Sustainability Analysis section. In terms of cost, soliciting local universities, such as Columbus State Community College, is likely to be more beneficial since the work will be performed by students for coursework, as discussed previously. Any additional costs or resource needs can be met by soliciting donations from local landscaping businesses, the City of Columbus or the community. The Landscape Design and Management program at Columbus State can be contacted at 614-287-5030. Buckeye Landscaping can be reached at 614-866-0088. The same community volunteers designated for the short-term goal will carry out this recommendation.

Long Term (5-10 years)

Create a fund to help the area residents have solar panels installed on their homes. Solar prices have been coming down dramatically during the last decade, which is detailed in the Opportunity Assessment. In 10 years, they may be viable for long-term Milo-Grogan homeowners. Overseers of the fund need to compile and compare pricing of solar technology and installation costs with Ohio-based solar companies, updating them annually. Because of falling solar technology costs, as the fund grows annually the costs for individual installations decrease, allowing the funding to go further. Furthermore, it is recommended that funding overseers determine the standards and requirements for choosing eligible residents within the community to which funding for solar energy investment should go. Recommended eligibility requirements can include long-term residence in Milo-Grogan, as well as a home that is up to code and has gone through an energy audit and weatherization program.

The cost of installing a typical solar energy generating facility on a residential rooftop is approximately \$16,000, taking into account all applicable incentives, and state and federal policies, as of early 2011;¹²¹ this is likely to drop in the next 10 years, as costs for solar energy technology and installation are expected to drop through at least 2016.¹²² The costs associated with the fund could be as simple as opening a low-cost savings account and approximately 10-20 man-hours per month soliciting donations and managing the account. Creation and maintenance of a solar energy fund needs to be overseen by a member of the Milo-Grogan Area Commission with experience in budgeting and finance.



Recommendation: Educate and encourage Milo-Grogan residents to reduce water consumption inside and outside their homes

Water is a resource that is often overlooked because, in many areas of the country, the price of water is still relatively low. However, as stated in the Opportunity Assessment, the price of water has increased substantially for Columbus residents since 2010; also mentioned in the Opportunity Assessment is the relatively old age of the housing stock in Milo-Grogan, which likely precludes the existence of water efficiency upgrades. Consequently, as the price of water rises, so does the necessity of consuming less water and making water usage more efficient. Approximately 70% of residential water usage takes place indoors, and toilets alone can comprise 27% of all household water usage. A typical bathroom faucet discharges water at a rate of 2 gallons per minute; turning it off while brushing one's teeth or shaving can save more than 200 gallons per month per person. Furthermore, not rinsing dishes before running the dishwasher can save 10 gallons per load. Additionally, poor maintenance is a problem for water efficiency, as leaks are attributed to over 13% of residential water use – a running toilet can waste approximately 200 gallons of water per day.¹²³

Short Term (1-3 years)

Start a class to be led by an Area Commission member or a volunteer from the community who is interested in developing an expertise regarding water efficiency and who is interested in teaching fellow community residents the means by which they can reduce water consumption and increase water efficiency in their homes. It is preferable that the volunteer is handy or has practical plumbing experience as they will be responsible for dispensing advice and basic instruction on how to fix rudimentary residential water issues, such as fixing pipe leaks and running toilets.

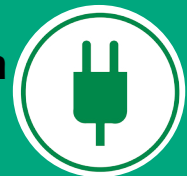
This involves only man-hours on the part of the volunteer(s) and minimal resources, including research of water conservation and water efficiency tips and advice; research can be done through the Columbus Public Library system or through internet searches. The U.S. EPA's WaterSense website, mentioned in the Opportunity Assessment, is a good place to start researching residential water consumption and efficiency information. Classes, if small enough, could be held at the home of a community resident, to demonstrate in a practical manner how to tackle basic plumbing tasks. Classroom instruction can be held at the Milo-Grogan Recreation Center.

Area commission members or community volunteers will be responsible for this effort.

Medium Term (3-5 years)

Start a fund for home remodeling and retrofits with WaterSense-certified water-efficient products. As mentioned in the Opportunity Assessment, the age and condition of the homes in Milo-Grogan makes it likely that sinks, toilets and other items in residences have not been upgraded, nor have the homes seen many water-efficient upgrades. Funding activities include searching for and keeping track of relevant rebates and local, state and federal policies and tax breaks that provide savings for consumers who buy WaterSense products. A WaterSense toilet, for example, can reduce the water usage for flushing to below 1.28 gallons and can reduce the overall contribution of toilets to water consumption by 20% to 60%.¹²⁴ Assisting Milo-Grogan residents in the purchase of WaterSense products helps reduce their water costs and overall utility bills.

Establishing the fund requires very little capital, and could be as



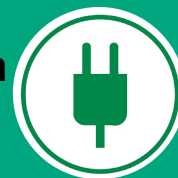
simple as opening a savings account; operating the fund would require an estimated 10-20 man-hours per month in soliciting donations and account management as well as rebate and policy searches. Requirements for funding disbursement would require man-hours to determine by the Milo-Grogan Area Commission, to ensure the safest investments possible. Creation and maintenance of a WaterSense product fund needs to be overseen by a member of the Milo-Grogan Area Commission with experience in budgeting and finance.

Long Term (5-10 years)

Continue to leverage the contacts with businesses and local universities that provide comprehensive master landscape plans for energy efficiency, and advertise the benefits for Milo-Grogan residents of comprehensive master landscape plans in terms of water efficiency. While useful for energy efficiency, landscaping is also useful for increasing water efficiency and reducing household water consumption. There are various aspects to master landscape plans that improve water efficiency; these include mulch, plant types and water sources. Utilizing mulch, with organic material from composting, reduces evaporation and therefore landscaping water requirements.¹²⁵ Planting drought-resistant plants also reduces the amount of water needed for landscaping, as these plant types thrive in low-water climates. The source of water used for landscaping is also paramount. Rain barrel systems are useful in providing no-cost water for landscaping; the previously-mentioned GreenSpot Backyard program reimburses Franklin County citizens \$50 after purchasing an approved rain barrel.¹²⁶ All of these features of a comprehensive landscaping plan are likely to reduce area residents' water consumption and water costs.

Master plans and subsequent work are likely to be costly if done

through private businesses. Leveraging contacts previously made with local universities, such as Columbus State, requires no costs other than additional man-hours. As mentioned earlier, work performed on a master landscape plan by students is likely to be for coursework, significantly reducing costs. Volunteers can contact these universities and inquire about xeriscaping, which is landscaping designed to reduce water consumption. Additional costs or resource needs can be met by soliciting donations from local landscaping businesses, the City of Columbus or the community. The Landscape Design and Management program at Columbus State can be contacted at 614-287-5030. The Area Commission member(s) or community member(s) with landscaping contacts leveraged earlier for master landscaping planning projects and networking will be responsible for implementation.



Economic Development and Social Equity

Vision

Milo-Grogan is an exemplar of sustainable economic development and social equity through encouraging meaningful social engagement, providing adequate social services, and promoting small business and local employment growth.

Goals

Milo Grogan will realize the vision for sustainable economic development and social equity by accomplishing the following goals:

1. Encourage increased residential participation and collaboration with neighborhood decision makers.
2. Cultivate a sustainable and diverse economic presence that coincides (contribute) with an established residential neighborhood.
3. Promote a significant growth in employment for the residents.
4. Enhance the accessibility of services and resources in a socially equitable manner.

Indicators

Percentage of voter registration and percentage of voter turnout

Background

These indicators will help determine social- and self-efficacy. That is, voter registration and turnout are indicative of residents' beliefs that their decisions and ideas are important.¹ Registering for and showing up to vote show that a resident believes he or she plays an important role in the political decision-making processes and has trust in the validity of the democratic process. Further, the Organization for Economic and Cooperation and Development, a multi-national policy analysis institute, uses voter turnout as a major indica-

tor for civic engagement in their comprehensive Better Life Index. They claim that voter turnout is a "measure of public trust in government and of citizens' participation in the political process."²

Because civic organization activity in Milo-Grogan is relatively low, using voting as an indicator will help in determining the democratic capacity of the neighborhood's residents. In essence, it will allow us to measure residents' change in civic participation over time.

This indicator is not only important when we're measuring social equity; it affects all other aspects of neighborhood plans as well. Social efficacy relies on a symbiotic relationship between residents and their governmental institutions. In order for residents to believe that their participation is effective, their governments must be responsive. This means that those governments must follow through on their recommendations outlined in neighborhood plans. Giving residents positive experiences with civic engagement will then result in an increase in social efficacy.

Measure

These percentages measure:

1. Number of registered voters compared to number of residents eligible to vote.
2. Number of registered voters compared to number of voters who vote in general elections.



Description

This data is available from the Franklin County Board of Elections, which reports a comprehensive inventory of voters down to the ward level for every election. Milo-Grogan is in ward 13 and covers precincts D and A. We can then compare this data to population data from the 2000 and 2010 United States Censuses. This indicator can be updated after each election cycle when the Board of Elections makes the data available. The Area Commission can access the data through the following methods:

1. Voting data: Ben Piscitelli, Board of Elections Public Information Officer, bjpis-cit@vote.franklincountyohio.gov
2. Population data: American Fact Finder, factfinder.census.gov

It is not uncommon to see trends such as greater turnout to presidential elections than to midterm elections. However, seeing the data over time can give us a clear representation of voting habits and can allow us to compare it to county, state, and federal levels. Figure 1 shows this data since 2000.

Figure 1
Percentage of Voter Turnout in Milo-Grogan

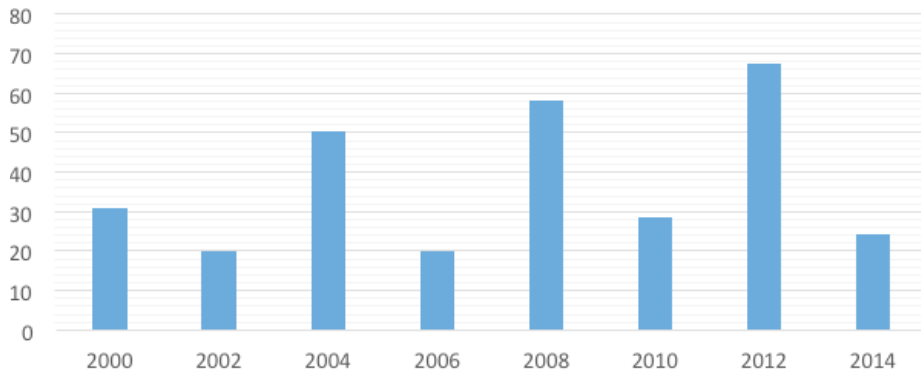
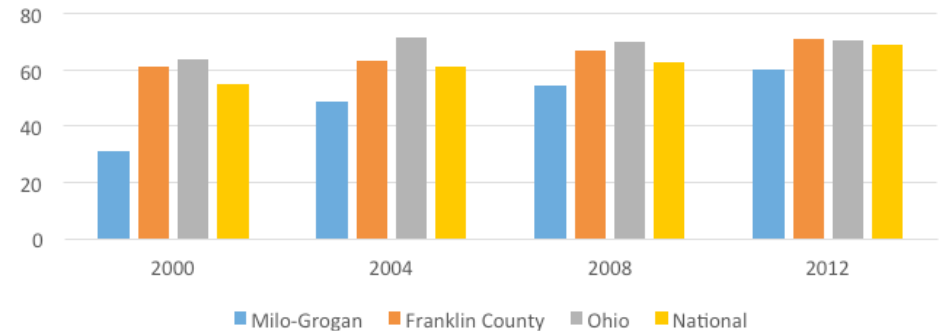


Figure 2 shows a comparison between voter turnout for Presidential elections in Milo-Grogan and turnout on the county, state, and national levels.^{3 4 5}

Figure 2
Percentage of Voter Turnout
Comparing Milo-Grogan, county, state, and national voter turnout



Annual change in the total number of businesses operating in Milo-Grogan

Background

Milo-Grogan has a long history of being a residential neighborhood with strong industrial and manufacturing roots. Along with its manufacturing history, Cleveland Avenue was historically a vibrant commercial corridor leading from downtown Columbus north towards the Linden neighborhood through the heart of Milo-Grogan.

Today, Milo-Grogan is still home to industrial and manufacturing companies along with many other types of businesses. These businesses range greatly in size (see figure 3). Businesses in Milo-Grogan vary from local start-ups to national chains.



According to data from the Columbus Chamber of Commerce, the top five industries in Milo-Grogan, as defined by NAICS codes, are: services, wholesale trade and waste management.⁶ (See figure 4).

By tracking the annual change in businesses operations in Milo-Grogan, we will have an understanding of whether the business community is shrinking, stagnant, or growing in terms of operating businesses. Measuring businesses operations in Milo-Grogan in this way will show what economic opportunities present in the neighborhood. For example, if in a calendar year three businesses open in Milo-Grogan and five businesses close, there is a net loss to the business community. If the focus was on new businesses alone, the three new businesses would be seen as a success, when in fact, we would be missing a piece of the story. While the three new businesses would be good news, the five other businesses that moved or closed down is not good news. In this case, using the annual change in total number of businesses operating in Milo-Grogan measure would result in a net loss in the total number of businesses operating in the neighborhood for that calendar year.

Measure

This measure includes all businesses that have a ‘brick and mortar’ presence in the Milo-Grogan neighborhood. All businesses with at least one employee within the boundaries of Milo-Grogan are included in this indicator.

Figure 3: Columbus Chamber of Commerce 2015

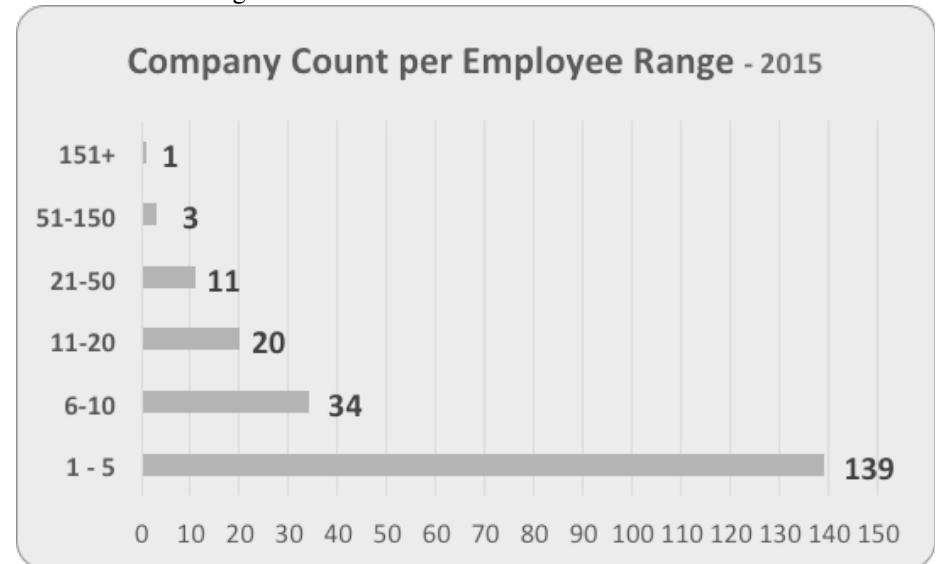
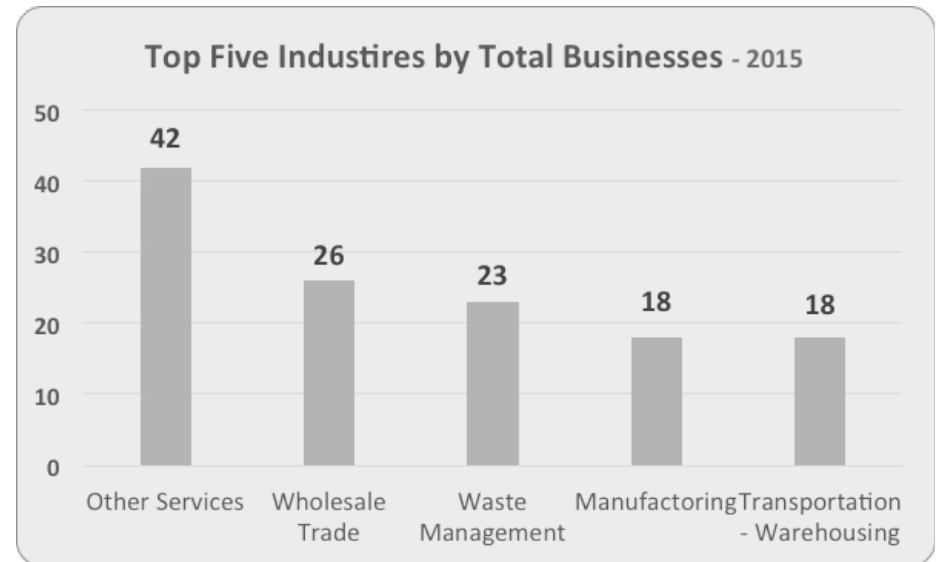


Figure 4: Columbus Chamber of Commerce 2015



Description

Business data can be requested from the Columbus Chamber of Commerce website by utilizing the “Ask a chamber expert” tool on the website at <http://www.columbus.org/>.⁷ The Columbus Chamber of Commerce uses data from ESRI Business Analyst that the firm Dun & Bradstreet provides to them. This data is a comprehensive list of all businesses; it is not limited to businesses that are members of the Columbus Chamber of Commerce. Businesses are classified into NAICS categories according to the Census 2012 definition file. The North American Industry Classification System (NAICS) are standard codes used by Federal agencies for classifying business establishments. The codes are how we determine what types of industries are operating in Milo-Grogan. These codes are used for all of the census data collected by the Federal government.

We retrieved business from the Columbus Chamber of Commerce and a Research Analyst, Laura Hess, who responded to the “Ask a chamber expert” function on the chamber’s website. After communicating what specific data was necessary and what the geographical boundaries were, Ms. Hess sent an excel spreadsheet with the business data. All businesses were mapped using ArcGIS software to ensure they were located within Milo-Grogan Boundaries. The data was further analyzed to make sure that businesses in the dataset had figures for employee total and information pertaining to NAICS code for each company.

Unemployment Rate

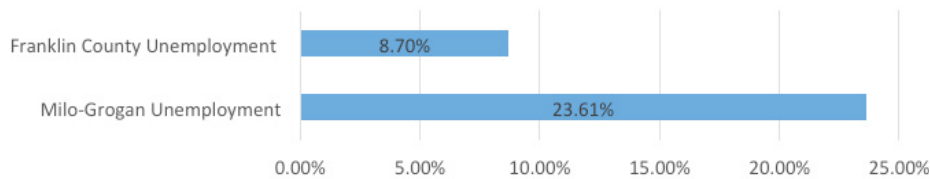
Background

There are ways that unemployment can negatively affect a neighborhood and its residents, with short and long-term consequences. Unemployment rates can be used as an indicator for different levels and can have different effects depending on the scale and area being assessed; however, it is generally accepted that the effects of unemployment are negative because unemployment affects individuals, families, and entire communities. On an individual level, research has shown that unemployed men made more visits to physicians, took more medication, and were spending more days in bed sick than employed individuals of similar diagnosis.¹⁰ This directly affects the family social condition and causes conflict and long-term stress.¹¹ Job loss and long-term unemployed affects the health, educational, social, and emotional outcome of children within the family through the increased family-stress and reduced incomes. This can also devastate local communities as high rates of long-term unemployment can cause various behavioral changes and eventually alter social networks within them.¹²

The 2007 Milo-Grogan Plan does not mention unemployment figures making it difficult to analyze whether unemployment rates have increased or decreased in Milo-Grogan since that plan was implemented. It is important that this indicator be monitored and measured because of the economic and social consequences that shadow unemployment rates. As with the current situation, we are hoping for lower unemployment rates over time, as it means more people are employed either inside or outside of the neighborhood. The estimated 2013 unemployment rates for Milo-Grogan, 23.61%, and Franklin County, 8.7%, are displayed in figure 5.



Figure 5
Unemployment Rates in Franklin County, and Milo-Grogan
American Community Survey 2013



Measure

According to the United States Census Bureau unemployment is defined as “all civilians 16 years old and over if they (1) were neither “at work” nor “with a job but not at work” during the reference week, and (2) were actively looking for work during the last 4 weeks, and (3) were available to start a job. Also included as unemployed are civilians who did not work at all during the reference week, were waiting to be called back to a job from which they had been laid off, and were available for work except for temporary illness.”¹³ Examples of job searching activities include: writing letters of application, looking at starting a starting professional practice or business, meeting with potential employers, and registering at a public or private employment office.

Using the American Community Survey of 2013, the five block groups that make up Milo-Grogan have unemployment rate ranging from 7% to 28.9%. Further calculations constrict this range and we estimate the unemployment rate of Milo-Grogan to be 23.61% (see methodology and equation). The overall unemployment rate for Franklin County is at 8.7%. This means that the unemployment rate in Milo-Grogan is roughly three times as high

as the Franklin County unemployment rate.

To calculate the “Adjusted Unemployed” of the block group, we take the number of unemployed given in the American Community Survey 2013 5-year estimates for that block group and multiply it by the respective proportion above. We then get the “Adjusted Total” by taking the total number of that block group and again multiplying by that proportion. To come up with the an estimated unemployment percentage of Milo-Grogan as a whole, we take the sum of the “Adjusted Unemployed” of all five block groups and divided them out by the sum of “Adjusted Total”. See figure 6

Figure 6

Block Group	Percentage of Parcels in Milo-Grogan	Estimated Total people ages 16+	Adjusted Total	Estimated Unemployment Total	Adjusted Unemployment
Block Group 2, Census Tract 14	.4101 → 41.01%	402	402*.4101= 165	101	101*.4101= 41
Block Group 1, Census Tract 15	.4527 → 45.27%	365	365*.4527= 165	23	23*.4527= 10
Block Group 3, Census Tract 15	1.0 → 100%	296	296*1.000= 296	85	85*1.000= 85
Block Group 1, Census Tract 23	1.0 → 100%	254	254*1.000= 254	58	58*1.000= 58
Block Group 2, Census Tract 23	.5031 → 50.31%	683	683*.5031= 344	189	189*.5031= 95
		Sum:	1224		289
Adjusted Estimate of Unemployed (ages 16-60) in M-G=			289/1224=	0.23611=	23.61%

Description

Data for unemployment can be obtained through the Census, particularly in the American Community Survey. In order to find the most recent unemployment figures for Milo-Grogan, the 2013 American Community Survey was utilized. American Community Surveys are conducted every five years and the next will be completed in 2018. Since the previous observation was made during the 2000 Census, observations of this measure will begin with the 2013 American Community Survey and will then continue onward with each new survey or census. Unemployment data for surrounding neighborhoods, Franklin County, and the state of Ohio can also be obtained through the American Community Survey.



Percent of owner-occupied homes

Background

The percent of owner occupied homes in Milo-Grogan is important for understanding the community's position on development and equity issues. Census data reveals that from 2000 to 2010 the percentage of owner occupied homes in Milo-Grogan has been reduced by nearly 50 percent. , , In addition, 1990 Census data indicates that percent of owner occupied homes was approximately identical to the 2000 census data. Residential disservice for longer than a decade enables the Milo-Grogan community to benefit from development, reinvestment and revitalization in their housing stock. Figure 7 portrays the number of owner's versus renters in regards to unit type by percentages. It supports a notion that attached and multiple unit structures in Milo-Grogan are popular to those who are not invested in homeownership. It also indicates that the neighborhood can use more social equitable effort with community investment to counter residential density and support people owning and residing in more valuable detached structures.

Generally, developers, housing practitioners, and other stakeholder agree that increasing the proportion of homeowners ultimately stabilizes and/or upgrades an area. This issue must be addressed since, owner-occupied homes in Milo-Grogan remains at around 40 percent of the total areas housing stock. The processes financial institutions (mortgage creditors, investors and etc.), choose to use are important, considering the fact that redlining –defined as a discrimination method practiced in minority low income neighborhoods, by housing institutions, who would refuse and/or limit loans, mortgages and etc; has been typical and historically prevalent in low- income minority communities like Milo-Gro-

gan. With respect to housing policy and physical structures, upgrades play a critical role: “expanding homeownership is vitally important to our country, because homeownership is critical to both individual economic opportunity and also for building strong communities.” Figure 8 depicts the relationship of homeownership and neighborhood stability, as it is best indicated with a conceptual model presented in Housing Policy Debate for the Fannie Mae Foundation in 1996. The model illustrates two factors regarding interest in homeownership: economic interest and use. These two factors demonstrate a correlation with residents or potential residents to organization participation, social interaction and a sense of community. This group will have an interest in maintaining properties and demanding local services. Public policy, resident actions, neighborhood conditions and residential satisfaction result from property maintenance and city services. The conceptual model shows that neighborhood stability in terms of length of tenure, property values, physical and social conditions are homeownership related.

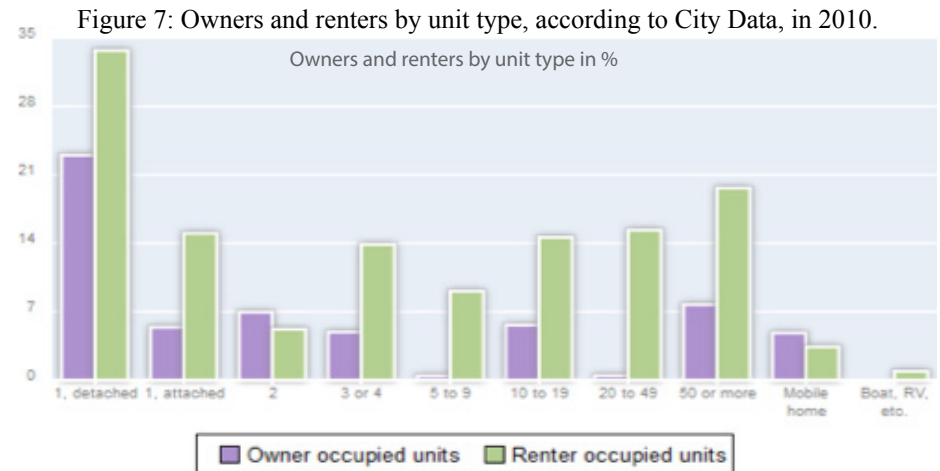
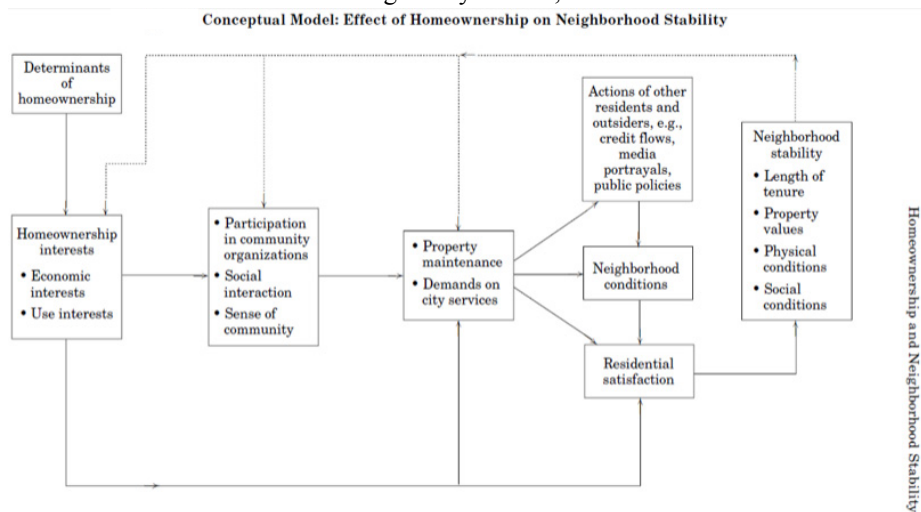


Figure 8: Conceptual Model relating homeownership to neighborhood stability.
Housing Policy Debate, 1996.



Measure

As an indicator, the percentage of owner occupied homes in Milo-Grogan can measure problems with homeowner interest and how they may relate to procedures that housing institutions practice. regarding potential issues of unfair mortgaging practices, distressed housing institutions and lack of community interest, this indicator measures as census data supports, owner occupied housing deficiencies in MG for at least a decade. The physical condition of houses and income levels of homeowners in Milo-Grogan should be looked at as a factor of neighborhood stability, which reverts to the economic aspect regarding homeowner interest. It is important to note that this indicator cannot actually measure any resident's willingness to pay, even with considering the location of Milo-Grogan is central to many of the City's boasted features, like downtown, the Short North, the Arena District, and the Ohio

State University's Campus. Data can be compiled to assess actual engagement in real numbers from the Department of Development within the City of Columbus's Housing Division. Efforts from Homeport, Habitat for Humanity, banks, and housing developers should be factored into why this owner occupied housing issue exists.

Description

This measure is performed by analyzing the number of homes that have been sold within the timeframes of collected data and the number for housing sales in 2015 by private owners, housing institutions, organizations and Non-Government Organizations (NGO). It is apparent that the context of income and viable employment relates to the tenure of residents. Evaluating the criteria in which housing agencies and City programs provide assistance to low-income people for programs will also be useful. In order for Milo-Grogan to build a sustainable, residential future and enhance its community base, the growth of Milo-Grogan's owner occupied housing numbers must be monitored. Data supporting these efforts should be gathered from: managers in the Columbus Housing Division, Social explorer census data, Britany Ylisaari of the Habitat for Humanity, Steve Nichol the Communications Specialist at Homeport, and active local real-estate agents serving the Milo-Grogan area. Figure 9, provided by Realtor.com reveals an example of the affordability of units within the neighborhood, which after purchased can be monitored with respect to duration of owner occupied tenure.



Figure 9: Examples of housing units for sale in the Milo-Grogan community courtesy of Realtor.com

The screenshot displays three real estate listings from Realtor.com. The top listing is for 1121 Sidney St, Columbus, OH 43201, priced at \$32,500. It is a 4-bedroom, 1-bathroom single-family home with 1,256 sq ft and a 3,049 sq ft lot, brokered by Equity Central, LLC. The middle listing is for 833 Leona Ave, Columbus, OH 43201, priced at \$12,900. It is a 3-bedroom, 1-bathroom single-family home with 1,160 sq ft and a 5,227 sq ft lot, brokered by Century 21 Excellence Realty. The bottom listing is for 773 775 Gibbard Ave, Columbus, OH 43201, priced at \$59,000. It is a 4-bedroom, 2-unit multi-family home with 2,020 sq ft and a 4,356 sq ft lot, brokered by ReMax Resource. A banner for Veterans United Home Loans is visible between the first and second listings.

Address	Price	Bedrooms	Bathrooms	Home Type	Sq Ft	Lot Sq Ft	Broker
1121 Sidney St, Columbus, OH 43201	\$32,500	4	1	Single Family Home	1,256	3,049	Equity Central, LLC
833 Leona Ave, Columbus, OH 43201	\$12,900	3	1	Single Family Home	1,160	5,227	Century 21 Excellence Realty
773 775 Gibbard Ave, Columbus, OH 43201	\$59,000	4	2	Multi-Family Home	2,020	4,356	ReMax Resource



Economic Development and Social Equity

Opportunity Assessment

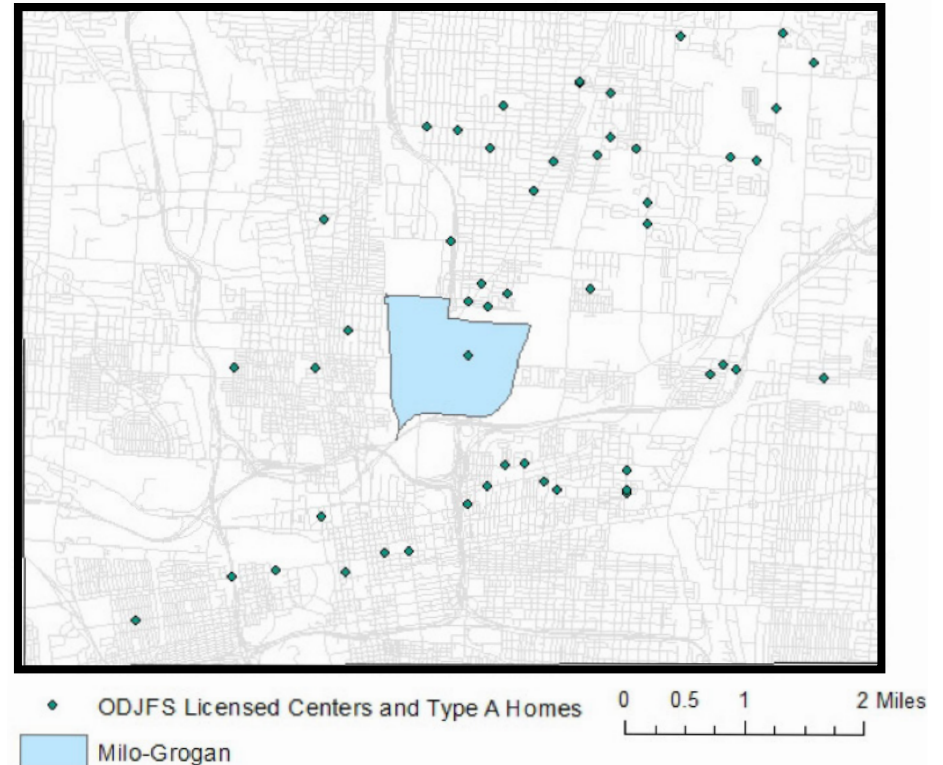
Economic development and social equity are both integral facets of a sustainable community. Economic development refers to the capacity of a neighborhood to retain and attract investment through employment, businesses, and other related assets. Social equity encompasses the capacity for a community to embrace and prioritize the voices and experiences of all of its residents. Economic development has the potential to occur at the expense of social equity. However, if done with sensitivity and intention, both can work together as complimentary characteristics of a sustainable Milo-Grogan.

This section includes descriptions of the following: child care, social services, economic development (encompassing both the business climate and employment), and housing. Each of these areas contains opportunities for Milo-Grogan to improve, and each affects both the economic and social atmosphere of the neighborhood.

Child Care

Child care is an important issue for both economic development as well as social equity for a number of reasons. First, access to affordable child care allows parents to work outside of the home. According to the Brookings Institute, lack of access to child care is one of the biggest reasons why low-income parents are unable to work outside of the home. Second, the availability of child care is more closely linked to the capacity of autonomy of women than it is to men. Finally, the acknowledgment of child care as an important social feature recognizes that children and families are social assets.²² Figure 10 shows the locations of licensed childcare centers in and around the neighborhood.

Figure 10: Ohio Department of Jobs and Family Services



In addition to a lack of child care centers within the neighborhood, access to child care in Milo-Grogan is also inhibited by a lack of affordability. The U.S. Department of Health and Human Services classifies affordable child care as requiring no more than 10% of household income. However, given that the median annual household income in Milo-Grogan is approximately \$21,500²³ and that the average annual cost for child care for a preschooler in Ohio is \$6,487,²⁴ parents of pre-schoolers in Milo-Grogan would be spending, on average, 30% of their income on child care.



Parents of infants would expect to spend \$7,771,²⁵ or 36% of their annual income, on child care. This cost would increase dramatically in households with more than one child.

All childcare licensing and training in Ohio is processed through the Ohio Department of Jobs and Family Services, or ODJFS. ODJFS differentiates between various types of child care based on how many children are watched and the kinds of facilities used. Each type of facility has their own licensing, training, and inspection requirements.

Sidebar 1: ODJFS Definitions ²⁶

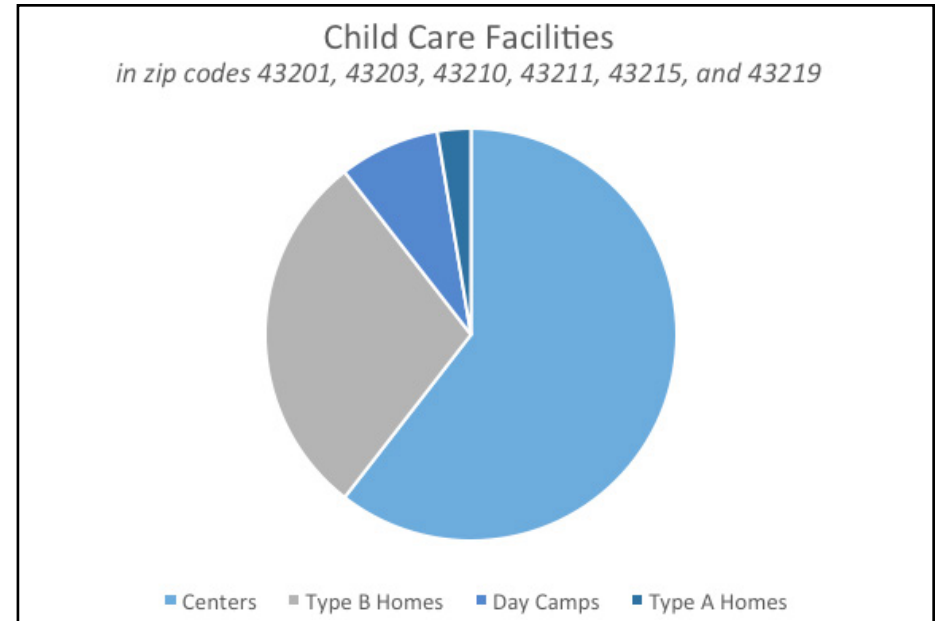
Child care Center: a dedicated childcare facility in which 13 or more children are watched at one time. Addresses of these facilities are on the ODJFS website.

Type A Home: 7 – 12 children watched at one time in the provider’s home. Addresses of these facilities are on the ODJFS website.

Type B Home: 1 – 6 children watched at one time in the provider’s home. Type B homes do not necessarily need to be licensed through ODJFS, nor are their addresses listed on the ODJFS website. In order to learn about the availability of Type B homes, prospective clients must visit their county DJFS office. There are a total of 34 Type B homes in the zip codes surrounding Milo-Grogan (43201, 43203, 43210, 43211, 43215, and 43219).

Day Camp: Child care for less than 7 hours a day, at least half of which must be spent outside, when school is not in session.

Figure 11: Ohio Department of Jobs and Family Services



ODJFS also offers financial assistance for families in need through the Publicly Funded Child Care, or PFCC. Access to PFCC assistance is dependent on household income, household size, and how many children in the household are also in child care. PFCC subsidies operate on a sliding scale and require that families pay at least a portion of child care costs. Families can apply for these benefits through their County Department of Jobs and Family Services.



Child care providers also have opportunity to receive government subsidies through state early childhood education funding. The most recent fiscal year budget increased funding for early childhood education significantly.²⁷ Providers must meet certain requirements to be eligible for funding and can apply through their County Department of Jobs and Family Services office.²⁸

In addition to licensing and assistance programs, ODJFS operates a child care quality control program called Step Up to Quality. Research shows a consistent link between child development and child care quality.²⁹ Step Up to Quality is a five-star rating system that ranks childcare facilities based on learning and development, administrative practices, professional development, and family and community partnerships.³⁰ Centers, Type A homes, and Type B homes all qualify for participation in this program. Rankings for specific child care facilities can be found on the ODJFS website: jfs.ohio.gov/cdc/stepUpQuality.stm. Figure 12 shows the range of ranked and non-ranked child care facilities.

Figure 12: Ohio Department of Jobs and Family Services



Social Services

Adequate and accessible social services are components to support communities. Such services are major components because seniors, people with disabilities and/or special needs are focal points for planners, policy makers and certain business owners. Milo-Grogan residents benefit when services like the Martin Janis Senior Center, the Milo-Grogan Boys and Girls Club, The Milo-Grogan Recreational Center and the J.H Ross Family Life and Community Center, and the Northside Library are functioning effectively. Religious entities also play a role in providing social oriented services. During a canvassing tour, the team found that Milo-Grogan has 7 churches in their 1.25 square mile area. In addition to social service organizations, the programs and agendas that are offered must be relevant, timely and diverse to support the needs of residents. For example, the Milo-Grogan Boys and Girls Club and the J.H. Ross Family Life and Community Center offer seasonal hot meal programs for the neighborhood youth.

Martin Janis Senior Center

600 East 11th Avenue

While not within the neighborhood itself, the Martin Janis Senior Center for individuals 50 and over is four blocks north of the northernmost boundary and provides numerous services available to the over 450 population of 50 and over residents in Milo-Grogan.³¹ It opened in 2010, is managed by Doreen Gosha, and operates on yearly revenue of approximately \$90,000. The Center operates on seasonal schedules that offers a variety of services. For example, on Mondays, fitness, woodshop, digital photography and other programs are scheduled. On Fridays at the center, seniors can have paint studio, learn to speak Italian, and play cards, among other activities. The diversity of the programming can



range anywhere from working with ceramics to practicing Tai Chi. Amenities such as a fitness room, theater, dining facility, dance room, auditorium, game room, billiards room, lounge, meeting rooms, classrooms and more make the Martin Janis Senior center a very attractive facility for Milo-Grogan's residents' social needs. Figures 13, 14, and 15, from the center's website, captures the center itself, the auditorium and dance room, in that respective sequence.

With all the services that the Martin Janis Center offers and the expected developments such as the new Bus Rapid Transit system, opportunity for sales volume and revenue can increase. In addition, elevated outreach encouraging service registrations would enhance new and existing resident access to the center. With collaboration regarding transportation, carpooling, COTA special services, and other transportation services, the center can serve more people within Milo-Grogan.

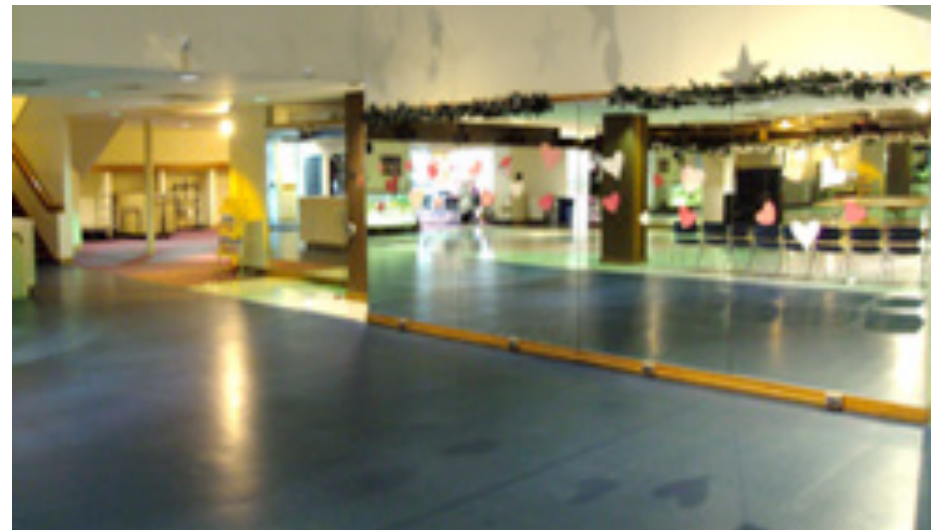
Figure 13: MJ Center



Figure 14: Auditorium



Figure 15: Dance Room



The Milo-Grogan Boys and Girls Club is often referred to as the Cleveland Avenue Boys and Girls Club and is a branch of the Boys and Girls Clubs of Columbus. The Boys and Girls Club of Columbus provides educational and recreational programs for approximate 600 children, young adults, and teenagers in the community.³² It is comprised of approximately six staffed branches, one being the Milo-Grogan Boys and Girls Club. The following quote is on the Boys and Girls Clubs of Columbus website: “We provide access to comprehensive after-school and summer programs. We work with over 3500 youth annually, and are constantly expanding our efforts to enable all young people, especially those who need us most, to reach their full potential as productive, caring, responsible citizens.”³³ The Milo-Grogan Boys and Girls Club offer many of the same services as the other neighborhood locations. However, each facility has unique needs according to their communities demand. For example, the Facility Director of the Milo-Grogan’s site, states that their facility offers sign language. The Milo-Grogan site provides a power hour for the youth that focuses on tutoring, youth development, hot meals, mentoring and recreational activities. The staff at the Milo-Grogan site ensures they are presenting programs that support healthy lifestyles, creativity, leadership development and fitness. Figure 16 portrays the site of the Milo-Grogan Boys and Girls Club and Figure 17 reveals the motto of the Boys and Girls Clubs of Columbus.

Figure 16: Milo-Grogan Boys and Girls Club



Figure 17: Boys and Girls Club of Columbus’s motto at Milo-Grogan site.



According to the facilities director, the Milo-Grogan’s Boys and Girls Club of Columbus has various needs that are not being met. During an interview with the facilities director, she stated that they are short staffed, have a high demand for males as role models for boys, and lack newer technology. In addition, job training and job readiness programs are not currently offered to adequately prepare for the upcoming community economic developments and potential surrounding area opportunities. She also revealed, as a visit to the site supported, their on-site playground is not sufficient in terms of space and physical condition. They also lack adequate green space for the children’s activities. With the deficiencies, opportunities are present for accessible, sustainable and invested development that promote equity. Outreach to partners, volunteers, community residents, and other interested parties will be significant in obtaining support to assist the Milo-Grogan Boys and Girls Club Facility Director, the Executive Director, Rebecca Asmo, and Director of Operations of the Boys and Girls Club of Columbus. Figure 18 presents some of the partners joined with the Clubs.

Figure 18: Partners of the Boys and Girls Clubs of Columbus.



The J.H. Ross Family Life & Community Center

907 Lexington Avenue

The J.H. Ross Family Life & Community Center is a center that has been established by Triedstone Baptist Church. The Center provides members and community members with a facility to fulfill some of their social needs. The J.H. Ross Family Life & Community Center supports healthy, safe, and enriching activities and functions. Some of the programs held at the site include seminars, conferences, training programs, community meetings, weddings/receptions, dances, and parties. The building is equipped with a fitness center, theatre, basketball courts, new computers large screen televisions, multi-purpose rooms, and a modern commercial size kitchen. The Center provides a summer seasonal hot meal lunch program to Milo-Grogan youth residents. These are examples of how an organization structure mobilizes neighborhood residents to gather with a sense of community pride and build stronger communities. Figures 19 and 20 captures the J.H. Ross Family Life & Community Center.

Figure 19: J.H. Ross Family Life & Community Center



Figure 20: J.H. Ross Family Life & Community Center



The Northside Branch Library

1423 N High St

The Northside Branch Library serves the Short North neighborhood and the Ohio State University campus area. It also provides service to surrounding areas, in particular, Milo-Grogan. This facility is one of over 20 that are part of the Columbus Metropolitan Library Systems. The Northside branch provides various services such as: kindergarten preparedness, third grade reading, homework help centers and job help. Events offered in the month of March 2015 support the diversity and creativity in the Northside Branch Library. For example, reading lessons, homework help, learning lab and family story time is offered on their schedule of events. At the Northside Library, study rooms are available for reservation. Candy Princehorn is the manager at the site and she welcomes people for questions and to discuss the services being offered there. The services and programs presented at the Northside Branch Library are examples of how civic engagement, learning, and the arts can strengthen a community. Figure 21 portrays the library.

Figure 21: Northside Branch Library



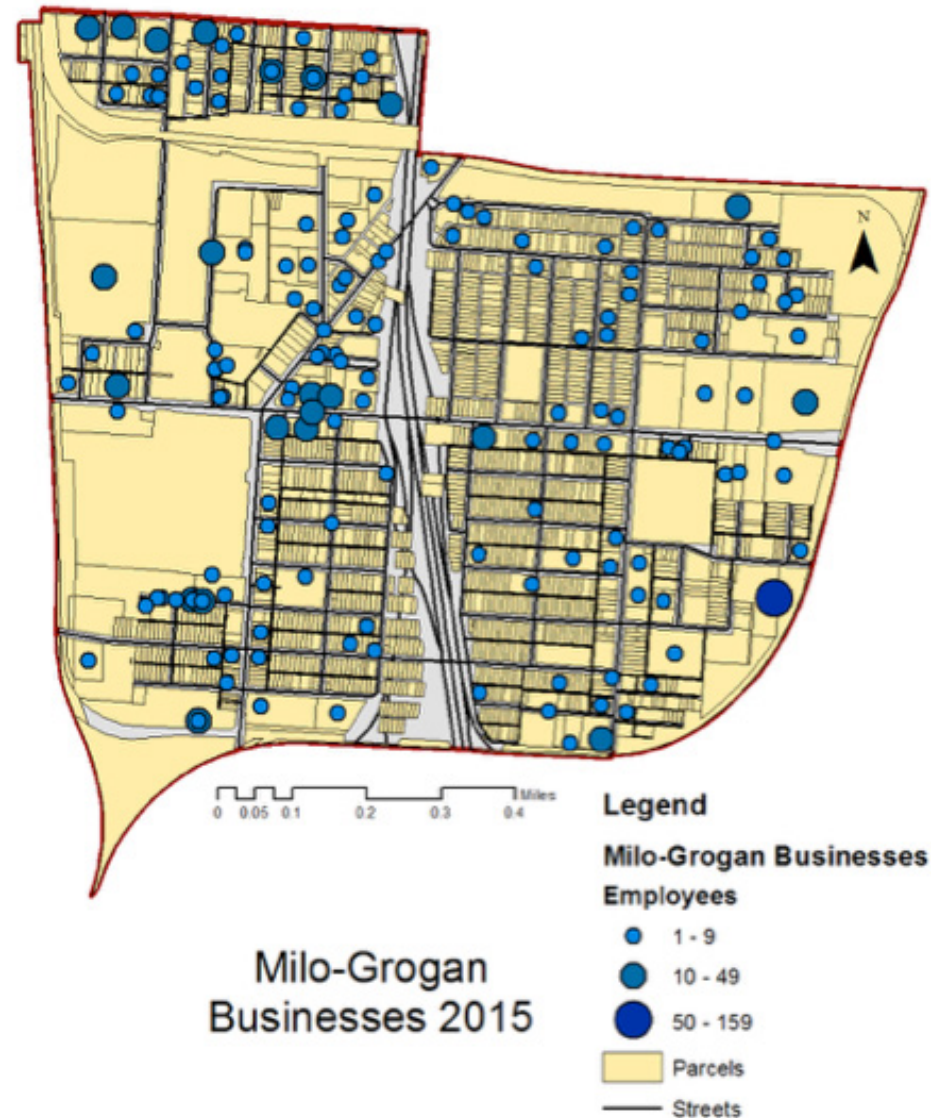
Access to Services

The library is a service which the residents of the community can benefit from. The Northside Branch Library is a few miles from Milo-Grogan in the Short North Community and having access to its service is a social justice for the neighborhood. That being said, the library operation hours are set to change due to renovations. The renovations are expected to better serve their patrons.

Economic Development

The Milo-Grogan Neighborhood Plan, done by the City of Columbus Planning Division in 2007, included an economic development section. The goal of the economic development section was to build on the existing businesses in the neighborhood to develop healthy employment opportunities for the residents in Milo-Grogan. It is not necessarily clear if the 2007 plan has had a meaningful impact on the neighborhood, but there are present opportunities for growth and investment in the neighborhood. In order to build on the city's plan, we need to examine two key factors: the economic makeup of Milo-Grogan's businesses and Milo-Grogan's unemployment rates.

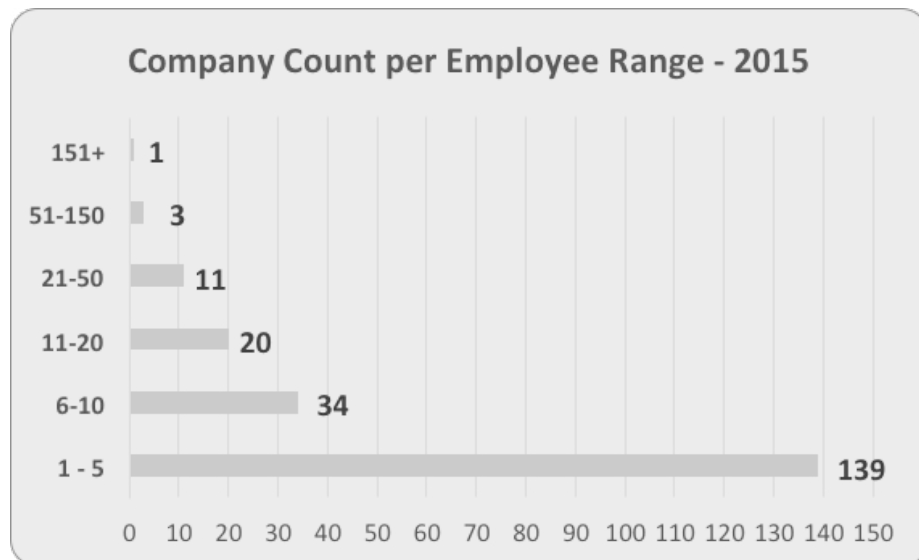
Figure 22: Columbus Chamber of Commerce 2015



Business Climate

As of 2015, there are 208 operating businesses within the boundaries of Milo-Grogan. This number was calculated from data provided by the Columbus Chamber of Commerce. The chamber sources their data from ESRI Business Analyst via the firm Dun & Bradstreet. The 208 businesses range in employment size from 1 to 159 people. There are 139 businesses that employ 1-5 people, 34 businesses that employ 6-10 people, 20 businesses that employ 11-20 people, 11 businesses that employ 21-50 people, 3 businesses that employ 51-150 people, and 1 business that employ more than 150 people (see figure 23). BriskHeat, a privately held company, employs 159 people at their Milo-Grogan facility. According to their website, BriskHeat “manufactures flexible surface heating elements and controls/accessories for unlimited applications” and services customers worldwide.

Figure 23: Columbus Chamber of Commerce 2015



The economic diversity of the Milo-Grogan businesses can be an opportunity for current and future residents. Currently, the top five industries operating in Milo-Grogan, defined by their NAICS codes, are: 81 Other Services, 42 Wholesale Trade, 56 Waste Management, 31-33 Manufacturing, and 48 Transportation-Warehousing. There are eleven other codes including; 44-45 Retail Trade, 23 Construction and 72 Accommodation & Food Service, in Milo-Grogan (see figures 24 & 25).

Using Milo-Grogan data from the American Community Survey from 2013, we compare the industries people reported they work within, to the industries of those businesses located in Milo-Grogan. For example, there are a total of 370 jobs in the professional services/waste management industries in Milo-Grogan. Comparing that to the estimated 28 people in Milo-Grogan who work in that field, we may consider that there is a lack of hiring of local residents by those types of firms in Milo-Grogan.

Figure 24: Columbus Chamber of Commerce 2015

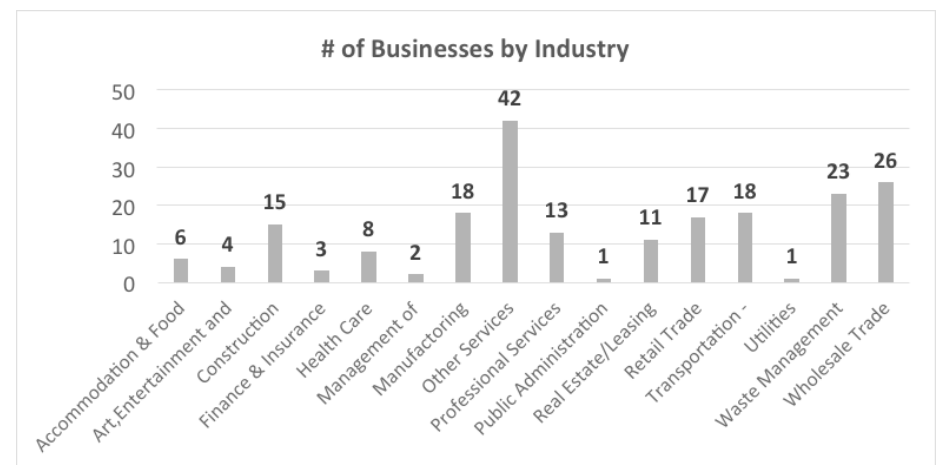


Figure 25: Columbus Chamber of Commerce 2015

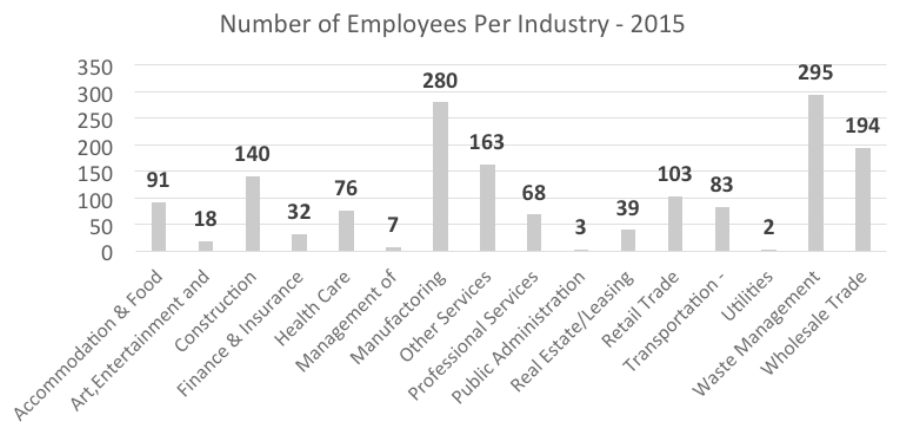
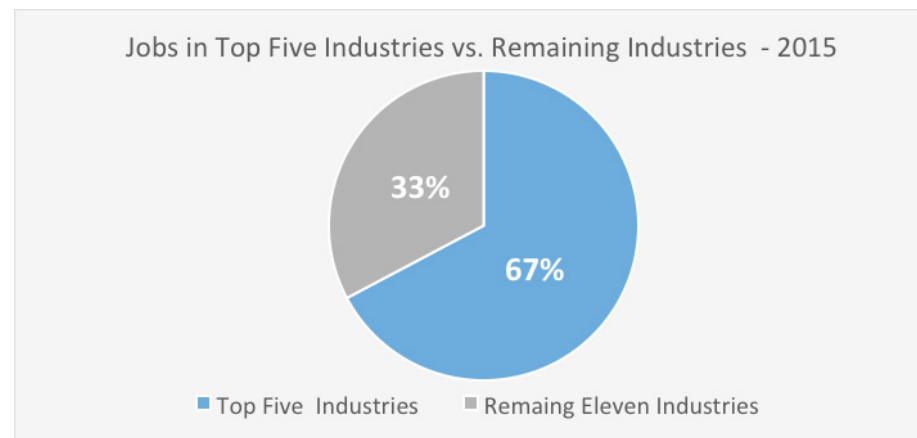


Figure 26: Columbus Chamber of Commerce 2015



The 208 businesses in Milo-Grogan employ approximately 1,594 people. There is no data on how many of those 1,594 people reside in the Milo-Grogan neighborhood. There are 280 people employed in the manufacturing industry within Milo-Grogan, which is second only to the waste management industry with 295 total employees. Other industries in the top five include wholesale trade with 194 employees, other services with 163 employees, and construction which with 140 employees. These top five industries are responsible for 67% of jobs in the Milo-Grogan, the remaining eleven industries make-up the other 33%. (see figure 26). Having almost 1,600 jobs in 16 different industries within a small neighborhood is an opportunity for diverse people of many different backgrounds to reside in Milo-Grogan.

Recently, Milo-Grogan has been the chosen for the new headquarters of Rogue Fitness at the former Timken Co. site on the southwest corner of Cleveland and 5th Avenue. Rogue Fitness is consolidating 355 jobs from around the City of Columbus, onto one site with

the expectations of adding another 90-100 jobs. The site will employ people for several different functions including manufacturing. Rogue Fitness will be taking 23 of the 30 acres on the property, with a 500,000 square foot manufacturing facility. With approval, Rogue will be in Milo-Grogan and functional by the end of 2015. Along with the main facility, Wagenbrenner Developers are hoping to have several outparcels located along 5th Avenue for development by the following year. The redevelopment of the former Timken Co. site coupled with the planned CMAX Bus-Rapid Transit line along Cleveland Avenue may spark new economic development in Milo-Grogan.

Unemployment

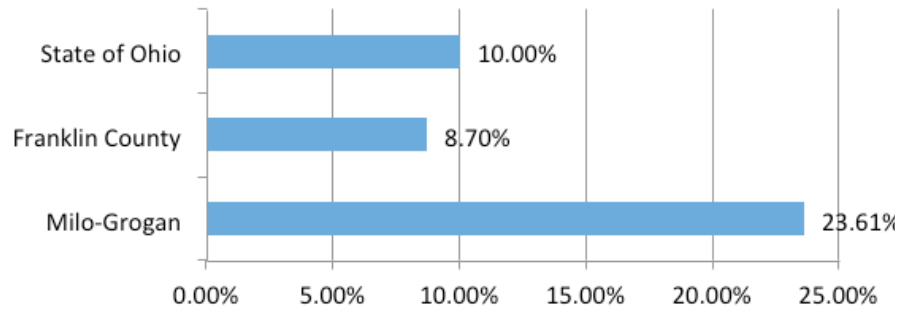
Using the 2013 American Community Survey five-year estimate, we calculated the unemployment rate for Milo-Grogan using the methodology, as shown in Figure X. The unemployment rate in Milo-Grogan is 23.61%. When comparing Milo-Grogan's unemployment to Franklin County's unemployment rate of 8.7% and Ohio's overall unemployment rate of 10%, the unemployment rate



of 10%, the unemployment rate in Milo-Grogan is roughly 2.7 times the rate of Franklin County (see figure 27).³⁹

Figure 27

Unemployment Rates in Milo-Grogan, Franklin County, and the State of Ohio American Community Survey 2013



Milo-Grogan consists of 5 block groups within 3 census tracts. 3 of the block groups have areas not limited to the neighborhood while the remaining 2 block groups are completely within Milo-Grogan. Using data from the American Community Survey 2013, we calculated that the block group with the highest percentage of unemployment is Block group 3, Census Tract 15 at 28.71%. This is followed by Block group 2, Census Tract 23 at 27.67%. Block group 2, Census Tract 14 has an unemployment rate of 25.12% and Block group 1, Census Tract 23 has an unemployment rate of 22.83%. The block group with the smallest percentage is Block Group 1, Census Tract 15 at 6.3%. These numbers are determined from the number of unemployed people ages 16 and over, divided by total number of people over the ages of 16 within their respective block groups. See Figure 28 and Table 1.

Sidebar 2: Geographic Terms and Concepts

Census Tract: Permanent statistical subdivisions of a county or equivalent entity are updated by local participants prior to each decennial census as part of the Census Bureau’s Participant Statistical Areas Program.

Block Group: Statistical divisions of census tracts are generally defined to contain between 600 and 3,000 people. These divisions are used to present data and control block numbering.

Figure 28: Unemployment Percentage by Block Group
Data from the American Community Survey - 2013

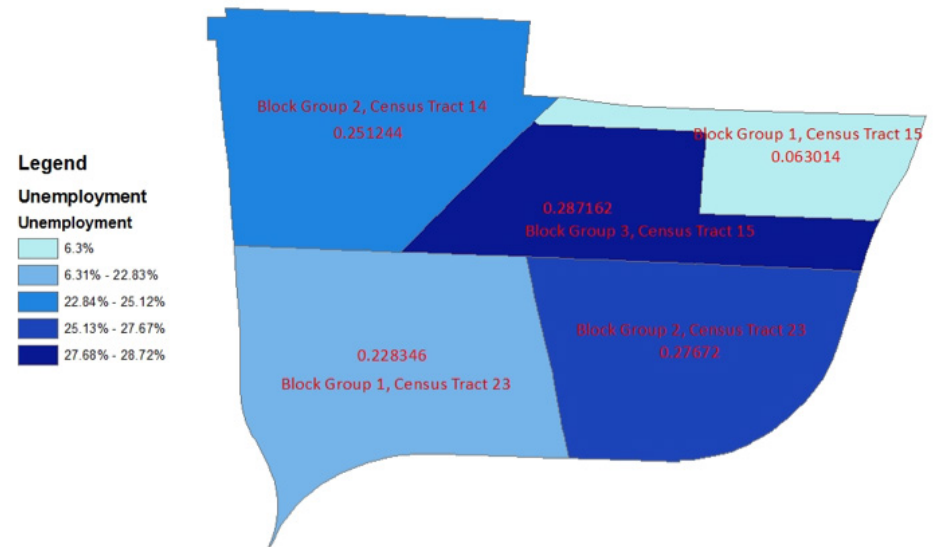


Table 1

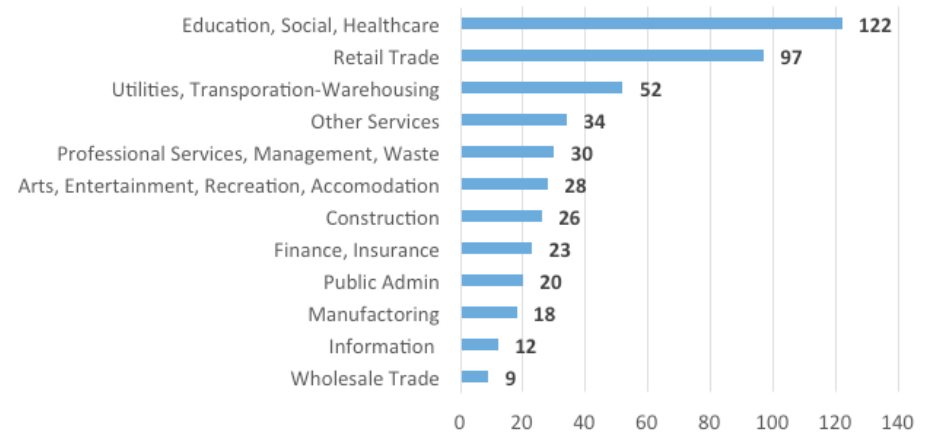
Block Group	Percentage of Unemployed in Milo-Grogan
Block Group 2, Census Tract 14	25.12%
Block Group 1, Census Tract 15	6.30%
Block Group 3, Census Tract 15	28.72%
Block Group 1, Census Tract 23	22.83%
Block Group 2, Census Tract 23	27.67%

Residents in Milo-Grogan reported to the American Community Survey in 2013 which employment industry their job falls into. This data, like unemployment, is only available at the block group level. In order to get this data for just Milo-Grogan residents, the same methodology can be utilized that was used to calculate unemployment. It is estimated that in 2013 the top five industrial categories Milo-Grogan residents worked in are: Educational, Social, and Healthcare, Retail Trade, Utilities, and Transportation-Warehousing, Other Service, and finally Professional Services, Management, and Waste Management. This data does not indicate location of resident’s employers; it only shows what industries their employment is under. This means we cannot determine how many of these residents may work in Milo-Grogan or nearby neighborhoods. Figure 29 shows the estimated residents per industrial categories that reside in Milo-Grogan. There is also no way to determine from this data if people who are unemployed work in the same industries and in the same ratios as those who are currently employed.

The need for jobs specifically for neighborhood residents opens up opportunities in both the business climate as well as in social programs. A focus on improving the business climate may attract

Figure 29

What Industries Milo-Grogan Residents Work In: American Community Survey 2013



future employers into the area that may potentially employ neighborhood residents. Otherwise, a focus on social programs can potentially improve the outlook and preparation for residents for skill-specific jobs within and outside of Milo-Grogan.

Housing

According to the 2007 Milo-Grogan Neighborhood Plan from the City of Columbus Department of Development, the value of houses in the neighborhood varies, ranging from \$40,000 to \$70,000.⁴² The median value was \$47,500, according to the 2000 census. However with estimates from the 2013 American Community Survey, the median value for is closer to \$57,000 (Refer to Figures 30, 31). According to these estimates, the median value of houses in the area presents an opportunity for future homebuyers in the area.



The cost of a home is about 2.65 times the 2013 American Community Survey median household income of Milo-Grogan and 1.1 times the 2013 American Community Survey median household income of Franklin County. Provided that current rental rates are also lower than that of Columbus, immediate tenants may also benefit from residing within the area.

According to the 2010 Census, the neighborhood has a housing vacancy rate that varies from 13.9% to 32.5% depending on block group. Census Tract 23, block group 2 has the highest percentage (32.5%) of vacant units. The next two block groups of highest vacancies (Census tract 15, Block group 3 with 26.7%, and Census tract 23, Block group 1 with 31.11%) are completely within Milo-Grogan.⁴³ Housing vacancy rates within Milo-Grogan are generally much higher than that of Franklin County (see figure 32). Vacancy conditions also vary, with 12% for rent or sale, 56% rented or owned but not occupied and another 32% classified as “Other Vacant” according to the 2009 Renewing Milo-Grogan Plan by a Planning Studio at the Ohio State University which was supervised by Dr. Jesus Lara.⁴⁴

Figure 30

Comparison of Median Housing Value in Milo-Grogan with Franklin County, Year 2000 and 2013

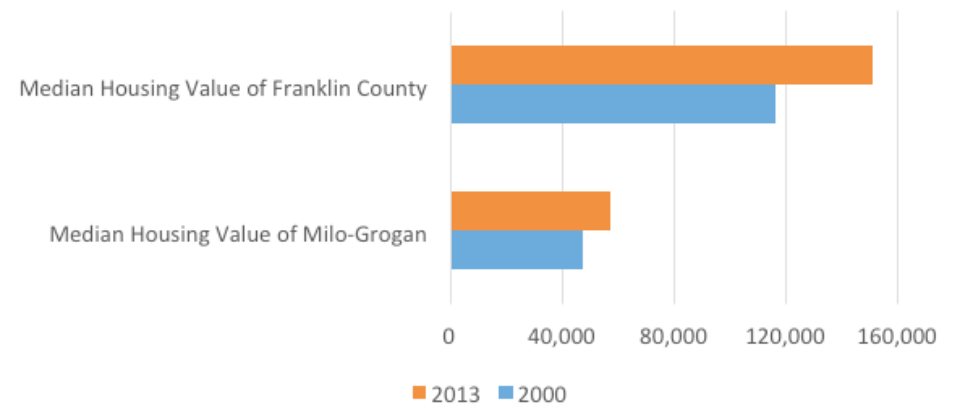
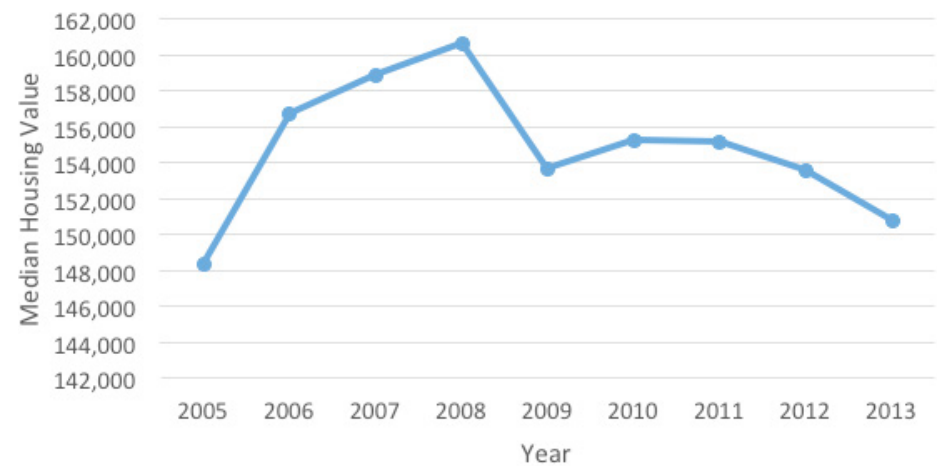


Figure 31

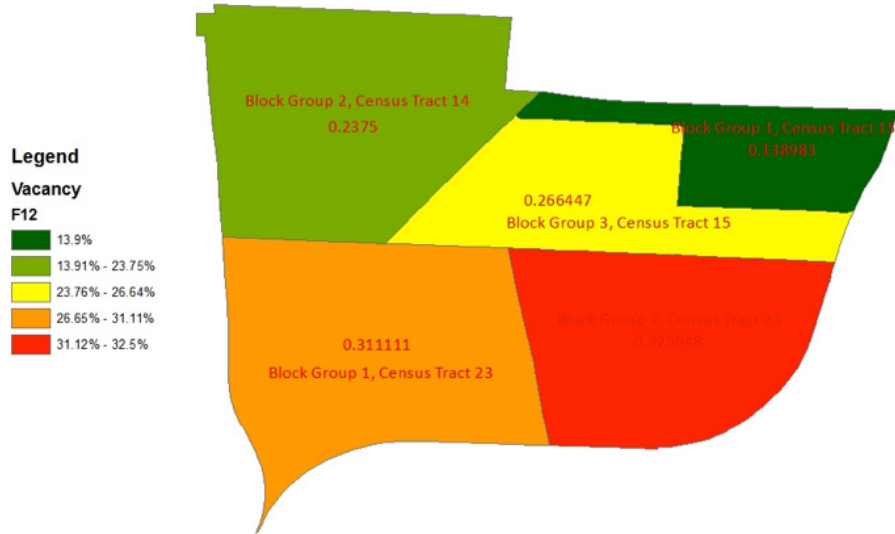
Median Housing Value of Franklin County



SIDEBAR 3: Block groups that make up Milo-Grogan

Exclusively Within Milo-Grogan: Block Group 1 Census Tract 23, Block Group 3 Census Tract 15
Has area outside of Milo-Grogan: Block Group 2 Census Tract 23, Block Group 2 Census Tract 14, Block Group 1 Census Tract 15

Figure 32
 Vacancy Percentage by Block Group
 2010 Decennial Census



The housing stock in the neighborhood is generally older, as about 35% of the housing units in the area were built before 1940. The next 45% were then built from years 1940 to 1960.⁴⁵ The location of the neighborhood presents opportunity for current and potential residents looking for a closer commute to other hubs around Columbus (see table 2). Further alterations and improvements to

the housing units are expected and the Columbus Housing Division lists potential resources for assistance.⁴⁶ Additionally, partnerships with other organizations such as Homeport and Habitat for Humanity will open up opportunities for future home refurbishing. The condition of vacancy can have various potential opportunity scenarios; units condemned for demolition may find future uses once processed through the market. The repurposing for these units and the land they reside on may be an opportunity for future homeowners and investors.

Table 2

Location	Distance From Milo-Grogan Recreational Center
The Ohio State House	2.5 miles
The Ohio State University Main Campus	2.2 miles
Columbus State Community College	1.3 miles
Columbus College of Art and Design	1.6 miles
The Ohio Expo Center	2.0 miles

All distances are calculated according to Google Maps

Vacant housing in the neighborhood presents problems other than the vacancy itself. Such problems arise in terms of blight and nuisance that may come from the vacant properties. To address these problems, the process of condemnation and demolition must take further effort in Milo-Grogan to improve the housing stock quality. Future demolished sites also present a possibility for infill and rededicated use. While it is important to keep the residential fabric in the neighborhood, demolition and infill present a chance for a new and better usage of the lands. Enhanced cooperation with housing organizations can also reinforce this effort. Organizations such as Homeport and Habitat for Humanity Greater Columbus have already made a presence in the community in the refurbishing and construction of homes in Milo-Grogan.^{47 48}



In the past, there were funding initiatives set forth such as the “Home Again” program which dedicated 25 million dollars towards neighborhood revitalization.⁴⁹ The Home Again Program aimed to revitalize or tear down approximately 2,000 vacant properties. Presently, there is the Vacant and Abandoned Property initiative (VAP) which consists of representatives from the City Attorney’s Office, code enforcement, and the Building and Zoning services. The VAP focuses on the enforcement and management of the 6,200 vacant and abandoned houses in Columbus and is funded by capital improvement funds invested by the city.⁵⁰

Once a year, the City of Columbus does a visual count of potentially vacant homes in the area. However, the foremost task of the city in vacancy management is not to acquire property, but to hold property owners accountable for the units they are responsible for. The acquisition process does not begin until there is a string of tax delinquency from owner or the land is forfeited or donated to the Columbus Land Bank. Then the property, if still a standing structure, must be appraised to determine whether it can be sold off for refurbishment or best being demolished.

There is no limit to how many units in a given area may be scrutinized, but because for each property is different it is unclear how long the process will take for each unit.⁵¹ However, it should be within the responsibilities of the neighborhood to report vacant properties and suspicious activity. It is within the responsibility of the City of Columbus, their partnering housing developers, and the VAP to push vacant property owners toward accountability, or push forth the condemnation and demolition process. Demolition of a vacant property opens up new possible uses for that property. One such use may be a temporary community garden. If a vacant parcel is

going to be used as a community garden, that parcel can be obtained from the Columbus Land Bank by applying to and receiving approval from the city for a \$10 parcel license that is good up to March 31st of the following year.^{52,53}

SIDEBAR 4: The Demolition Process within Milo-Grogan

Who is responsible for the demolition: Within the five Block Groups making up Milo-Grogan, there are currently 18 properties on the demolition list. The City of Columbus is responsible for removing properties that are ordered by court or by the City’s Building Department on the basis of building condition and absence of a responsible owner. Private owners can also do their own demolitions, however all demolition permits are to be kept in record by the Columbus Building and Zoning Department.⁵⁴

How many can be demolished and how long does it take: There are no limit as to how many properties can be set for demolition at a time, however the time in doing so can vary greatly from property to property. Buildings under emergency order from the Building Department can be demolished in a matter of a few days. Otherwise, buildings not deemed an imminent danger can take months. Mandatory time restraints include: Pulling a demolition permit- up to 30 days, reviewing of demolition structure by Area Commission- up to 60 days, Ohio EPA notification of demolition up to 10 days.⁵⁵

In Milo-Grogan, there is a large stock of older homes that may be in need of repair. With about 80% of the housing stock in the neighborhood being built before 1960, and 35% before 1940⁵⁶, there is a need in resources for current and potential homeowners to repair and acquire homes. There are technical and financial resources that current and future homeowners can use to finance



home repairs. These resources should be made known to residents looking to bring their homes up to code as well as to those looking to improve the aesthetic appeal of their house and lot. To assist the homes owners whom need it most in vital home repairs is an important step in avoiding vacancy and abandonment. The City of Columbus offers several programs to assist home owners with maintenance and repairs (see Table 4 in Appendix). Resources for financing future home ownership are also offered by the City of Columbus, these programs can be seen in Table 5. The Columbus Housing Division has detailed listings of all programs offered through the city at <http://columbus.gov/housingdivision/>. Present technical and financial resources are also available through the

Vacant and Abandoned Properties Initiative (VAP) to assist current single-family homeowners to repair substandard, unsanitary, and deteriorating condition(s) under the Vacant Property Prevention Program.⁵⁷ The eligibility for these programs are based on criteria, and most have a limit relevant to median income. VAP programs can be accessed through <http://www.columbus.gov/housingdivision/vpp/>.

Table 4: 2015 Columbus Housing Division Programs (Appendix)

City of Columbus 2015 Columbus Housing Division Programs Department of Development
Visit our website at: <http://columbus.gov/housingdivision/>

HOMEOWNER SERVICES CENTER						
Program Name	Purpose	Type of Assistance	Eligible Applicants	Use of Funds/Eligible Activity	Contact	Important Information
CHORES PROGRAM: 1) Rebuilding Together Central Ohio 2) Lifecare Alliance 3) Economic & Community Development Institute (ECDI)	Minor home repairs for seniors and/or disabled individuals	Up to \$1,000 worth of materials and labor are provided at no cost.	Senior and/or disabled owner-occupant.	Materials and labor for minor home repairs are provided at no cost.	1) 258-6392 2) 278-3130 3) 556-0115	Senior/disabled resident must live in the City of Columbus. Income limit is 80% of area median income and below.
HOME MODIFICATION PROGRAM	Special Housing Needs	Up to \$20,000 grant for owner-occupants and renters.	Persons with disabilities residing in the property. Written documentation of disability required.	Physical home alterations that enable accessibility.	Intake Line 645-8520	Owner-occupant or renter income limit is 50% of area median income and below. House or apartment must be the principal residence of the owner-occupant or renter. Permission of investor owner is required.
DEAF MODIFICATION PROGRAM	Special Housing Needs For Deaf and Hard of Hearing individuals	Specialized equipment is provided free of charge.	Owner-occupants or renters with disabilities residing in the property.	Equipment to increase safety and accessibility in the home.	Deaf Services Center (614) 841-6991 TTY/Voice	Owner-occupant or renter income limit is 50% of area median income and below. House or apartment must be the principal residence of the owner-occupant or renter. Permission of investor owner is required.
EMERGENCY REPAIR PROGRAM	Emergency Repair	Up to \$7,500 grant.	Owner-occupants of a single family (1 unit) residential structure; doubles are not eligible.	Heating, plumbing, and electrical repairs requiring immediate attention.	Intake Line 645-8520	Owner-occupant must have lived in home for minimum of one year; Income limit is 50% of area median income and below.
HOME SAFE AND SOUND INITIATIVES	Prioritized Home Repairs	Up to \$20,000 grant.	Owner-occupants of a single family (1 unit) residential structure; doubles are not eligible.	Prioritized repairs to assist in correcting substantial, unsanitary conditions.	Intake Line 645-8520	Owner-occupant must have lived in home for minimum of one year and reside in a 2013 Neighborhood Pride area. Income limit is 50% of area median income and below.
TOOL LIBRARY Rebuilding Together Central Ohio	Self-help Home Repair	Tools for home repair projects can be borrowed.	Owner-occupants, renters and non-profit organizations.	Self-help home maintenance and repair.	Rebuilding Together Central Ohio 258-6392	Borrower must live in Franklin County. All incomes are eligible. Nonprofits must provide services in Franklin County.
CITYWIDE ROOF REPLACEMENT PROGRAM	Roofing	Up to \$20,000 grant	Owner-occupants of a single family (1 unit) residential structure; doubles are not eligible.	Replacement for deteriorated roof and roof elements.	Intake Line 645-8520	Owner-occupant must have lived in home for minimum of one year; Income limit is 80% of area median income and below.
VACANT PROPERTY PREVENTION	Prioritized Home Repairs	Up to \$40,000 low interest or deferred loan	Owner-occupants of a single family (1 unit) residential structure; doubles are not eligible.	Prioritized repairs to assist in correcting substantial, unsanitary conditions.	Intake Line 645-8520	Owner-occupant must have lived in home for minimum of one year; Income limit is 80% of area median income and below.
ACQUISITION AND RELOCATION COMPLIANCE SERVICES						
ACQUISITION AND RELOCATION COMPLIANCE SERVICES	Assure program compliance; Special housing needs	Temporary Housing research; funds for moving and other eligible expenses determined on a case-by-case basis	Owner-occupants, for profit and non-profit owners of rental housing	Acquisition and relocation due to a federally-funded housing/highway project or code vacate order.	Gerard Fulow 645-6519 Erica Hudson 645-6739	Income limit is 80% of area median income and below.
LEAD SAFE COLUMBUS	Lead Based Paint Hazard Control and Outreach	Up to \$8,500 grant for lead-based paint hazard control.	Owner-occupants, investors and non-profit developers.	Lead based paint hazard control work (interior and exterior).	Tom Brutovski 645-7452	Eligible property: built before 1978; with a child under the age of six occupying or visiting the property more than six hours per week. Household occupants' income limit is 80% of area median income and below.

Table 5: 2015 Columbus Housing Division Programs (Appendix)

City of Columbus 2015 Columbus Housing Division Programs Department of Development
Visit our website at: <http://columbus.gov/housingdivision/>

HOUSING FINANCE						
Program Name	Purpose	Type of Assistance	Eligible Applicants	Use of Funds/Eligible Activity	Contact	Important Information
AMERICAN DREAM DOWNPAYMENT INITIATIVE (ADDI)	Homeownership	6% of purchase price-up to \$5,000 loan for down payment.	First Time Homebuyer	Purchase of an existing home, condominium, or newly built home. 5 year note, mortgage, and restrictive covenant; single family units only.	Tracey Davis 645-8530	Homebuyer must live in the house as principal residence for 5 years. Property must be located in Columbus Public School District. Income limit is 80% of area median income and below. Homebuyer education is mandatory.
HOMEOWNERSHIP DEVELOPMENT PROGRAM (HDP)	Homeownership	Up to \$40,000 gap financing depending on the project, higher amounts will be considered based on project demonstrated need.	Non-profit, For-profit, and Community Housing Development Organization (CHDO) single family housing developers	Rehabilitation or new construction of affordable single family homes for sale.	Randi Amett 645-7277	Program is available to non-profit and for-profit organizations. CHDO projects are eligible within their designated areas. Priority given to CHDO projects in their service area. Income limit of homebuyers is 80% of area median income and below.
RENTAL HOUSING PRODUCTION/PRESERVATION (RHPP)	Affordable Rental Housing	Up to \$250,000 loan per project for Tax Credit Properties Up to \$300,000 loan per project with a CHDO owner for the purpose of gap financing.	Non-profit or for profit developers	Rehabilitation or new construction of affordable multi-family rental housing.	Tracey Swanson 645-1819	Income limit of renters is 50% of area median income and below.
NEIGHBORHOOD INVESTMENT DISTRICTS (NID)/RESIDENTIAL TAX INCENTIVES	Homeownership and Housing Improvement	Property tax abatement on increased valuation due to property improvements in designated areas.	Developers for homebuyers; Rental property owners; Owner-occupants	N/A	Tracey Davis 645-8530	Requirements: 1. New construction, Renovation, or Conversion. 2. Investment in existing rental property (minimum 50% of current valuation). 3. Investment by owner-occupant of 20% of current valuation. 4. Conversion** (investment of 50% of current valuation) to rental or owner-occupied housing.
VACANT PROPERTY REDEVELOPMENT (VPR)	Homeownership	Up to \$40,000 gap financing depending on the project, higher amounts will be considered based on project demonstrated need.	Non-profit, For-profit, and Community Housing Development Organization (CHDO) single family housing developers	Redevelopment of vacant properties or new construction on vacant lots	Randi Amett 645-7277	Requirements: 1. Homebuyer must live in the house as principal residence for a minimum of 5 years. 2. Homebuyer education is mandatory. 3. Funds are awarded to Development Organizations.
RENTAL REHABILITATION	Prevention of Vacancy and Restoration of Vacant Properties	Up to \$40,000 per unit	Rental Property Owners	Renovation of no more than 2 units of rental property	Jillan Bolino 645-8621	Income limit of renters is 80% of area median income and below.

HUD Income Limits are based on family size and the annual household income.	2015 HUD Income Guidelines for Columbus MSA as of March 6, 2015				2014 HUD Income Guidelines for Columbus MSA as of May 1, 2014			
	2015 Median Family Income (Area Median Income - AMI) \$71,000				2014 Median Family Income (Area Median Income - AMI) \$70,000			
	FAMILY SIZE	50%	CDBG	80%	50%	80%	HOME, 2015 Limits have not been released	80%
ONE	YEARLY \$24,850		\$39,800	YEARLY \$24,500		\$31,850		\$39,200
TWO	YEARLY \$29,400		\$45,450	YEARLY \$28,000		\$36,800		\$44,800
THREE	YEARLY \$33,950		\$51,100	YEARLY \$31,500		\$40,400		\$50,400
FOUR	YEARLY \$38,500		\$56,800	YEARLY \$35,000		\$44,000		\$56,000
FIVE	YEARLY \$43,050		\$62,500	YEARLY \$38,500		\$47,600		\$61,600
SIX	YEARLY \$47,600		\$68,200	YEARLY \$42,000		\$51,200		\$67,200
SEVEN	YEARLY \$52,150		\$73,900	YEARLY \$45,500		\$54,800		\$72,800
EIGHT	YEARLY \$56,700		\$79,600	YEARLY \$49,000		\$58,400		\$78,400

Revised 03/17/15 RLA

Primary Funding is provided by the U.S. Department of Housing and Urban Development (HUD)
"We produce and preserve housing that helps build strong, distinct, and vibrant neighborhoods in Columbus"



Sidebar 5: Mitigating the effects of gentrification

“Perhaps the most important task for neighborhood residents, local and regional government officials and other stakeholders is to identify gentrification pressures early, and to understand how gentrification dynamics are to unfold.”⁵⁸

Gentrification refers to the displacement of residents due to increased property taxes, unsustainable rent increases, or any other pressure to leave a neighborhood due to redevelopment. The possibility of gentrification exists in Milo-Grogan, particularly due to the increasing presence of Wagenbrenner Development and encroaching “M” zoning. Further, neighborhoods at risk of gentrification include a high proportion of renters as well as low housing values. Gentrification also has a unique racial component, and there are numerous case studies of gentrification displacing people of color from historically black communities. However, there are ways to promote economic development and revitalization while also safeguarding residents from such displacement.

The Kirwan Institute outlines ways to avoid displacement during redevelopment.⁵⁹ These methods include:

Mixed-income development and inclusionary zoning.

This ensures that low-income residents are able to continue to afford housing in the neighborhood.

Address land speculation. Land speculation occurs when private entities buy property at low costs for the purpose of private investment. This can be avoided through strict code enforcement, using land bank programs to buy properties for community use, and being slow to organizations which have a history of land speculation to buy land in the neighborhood.

Encourage strategies to promote homeownership among existing residents. This includes finding and utilizing subsidies such as down payment assistance and low-interest financing.

Implement a method of monitoring. The best way to avoid resident displacement is to monitor and assess early indicators of gentrification. These indicators can include the following:

- o How quickly property is appreciating
- o How rent prices are changing
- o Are neighborhood services relocating
- o How quickly are residents moving out of the neighborhood



Economic Development and Social Equity

Sustainability Analysis

Child Care

As noted in the Opportunity Assessment, child care is both an economic and social issue due to its effects on parental employment as well as its implications on the importance of children and parents—particularly mothers—in social life. The demand for child care in Milo-Grogan exceeds the supply due to the geographic and financial limitations on access. The supply has the potential to meet the demand if the following recommendations are implemented:

Recommendation: Make childcare more accessible

Short Term (1-3 years)

Make information about Publicly Funded Child Care assistance more widely available. It is possible that some qualifying residents do not use financial assistance simply because they do not know what is available. Due to the disparity between average resident income and the average cost of childcare as explained in the Opportunity Analysis, many Milo-Grogan residents would qualify for financial assistance. Technical assistance for applying for benefits can be provided by organizing workshops to be held at the Recreation Center, for Franklin County Department of Jobs and Family Services representatives to work directly with interested residents. The Franklin County Department of Jobs and Family Services can be contacted at 614-233-2000. Forms and informational literature could also be left at the Rec Center and Northside/Main Libraries for residents to take at their own convenience. This informational literature, which includes instructions for applications as well as qualification requirements, can be found on the ODJFS child care website: jfs.ohio.gov/DCD/childcare.stm.

Medium Term (3-5 years)

Develop a partnership between the Milo-Grogan Area Commission and Franklin County Department of Jobs and Family Services to collaboratively address specific child care needs. This partnership can be developed through meetings of Franklin County Department of Jobs and Family Services staff, members of the Area Commission, and existing child care providers in the neighborhood. This will allow the County Department of Jobs and Family Services to have a better understanding of neighborhood-specific child care needs, specifically how many families are utilizing PFCC and how many Type B homes are on the path to licensure and Step Up to Quality rankings. Meetings can be held either at the Milo-Grogan Rec Center or the County Department of Jobs and Family Services office. Care would need to be taken in scheduling these meetings to ensure that child care providers would be available for them; meetings during the day may not be appropriate.

Long Term (5-10 years)

Conduct a survey to assess the impacts of previous steps. In order to analyze the success of providing information of financial assistance and partnering with Franklin County Department of Jobs and Family Services, a post-survey of residents will need to be conducted jointly through Department of Jobs and Family Services and the Area Commission. Residents should be surveyed on the following items: their continued need for childcare, how a lack of childcare affects their ability to work or attend school, if they are aware of financial assistance through Department of Jobs and Family Services, if they qualify for financial assistance, if they don't qualify for financial assistance but still have barriers.



ers to affording childcare, and any other concerns they may have about access to childcare. This survey could be funded by the County Department of Jobs and Family Services. It would require individuals to survey residents, either door-to-door or at specific locations, as well as to analyze the results. The Area Commission is well positioned to conduct the survey while the County Department of Jobs and Family Services has the resources to analyze the data. This survey can also be used to understand any additional needs that had not been adequately addressed.

Sidebar 6: Child Care Resources

Franklin County Department of Jobs and Family Services: 614-233-2000

Ohio Child Care Information: jfs.ohio.gov/CDC/childcare.stm

Franklin County Child Care Information: jfs.franklincountyo-hio.gov/childcare

Recommendation: Increase the number of Type B child care providers

Short Term (1-3 years)

Invite a representative from the Franklin County Department of Jobs and Family Services to present on the process of becoming a Type B provider. The Department of Jobs and Family Services offers presentations for groups of individuals who are interested in becoming childcare providers. This presentation can be held at the Milo-Grogan Recreation Center and would be advertised jointly by the Area Commission and Department of Jobs and Family Services. Costs for this presentation would be absorbed by Department of Jobs and Family Services.

Create a network of existing Type B providers in Milo-Grogan. A formalized structure of Type B providers would create a foundation for common resources and identity among providers. This would be a civic association of sorts, organized specifically to meet the needs of Type B providers. This organization would also be able to provide service information to residents in need of childcare. A list of current Type B providers can be acquired upon request from Franklin County Department of Jobs and Family Services. The Area Commission would invite these providers to initial meetings at the Milo-Grogan Recreation Center in order to create a leadership and organizational structure. The network would then organize their own meetings at locations and times they deem appropriate for their needs.

Compile resources for potential Type B providers. To make the process for becoming an in-home childcare provider easier, comprehensive resources should be made more readily available. These resources could include Department of Jobs and Family Services requirements and forms, instructions and advice on readying a home, advice for marketing childcare services, opportunities for training, and ideas for child-appropriate activities. Having these resources readily available would allow potential Type B providers to make appropriate decisions and steps to become childcare professionals. These resources would be compiled by the Type B Providers Network.

Medium Term (3-5 years)

Hold regular licensing training sessions in the Rec Center for Type B providers. Currently, Type B providers do not have to be licensed. However, licensure would benefit both providers and families; licensed Type B homes are authorized to accept PFCC subsidies and licensure requires specific training ses-



sions. Being licensed also allows Type B providers to qualify for a Step Up to Quality ranking. These trainings would include topics required by Department of Jobs and Family Services (such as first aid and child CPR) and would occur dependent on the demand for them. The Type B Providers Network would be responsible for notifying potential Type B providers of these training dates. The training sessions would be facilitated by Franklin County Department of Jobs and Family Services and paid for by the providers.

Long Term (5-10 years)

Conduct assessment of Type B providers. A comprehensive assessment of Type B providers will supply information about improvements in the supply of neighborhood childcare as well as areas that would still need to be addressed. This assessment would include the following issues: do childcare professionals have access to the resources they need? Are childcare demands in the neighborhood being adequately met? Are licensing and training requirements being met? This assessment would be conducted by the neighborhood Type B Providers Network along with the Franklin County Department of Jobs and Family Services.

Economic Development and Employment Opportunities

As discussed in the Opportunity Assessment, Milo-Grogan currently has many businesses operating within its boundaries. These businesses vary in types of industry and size of employment. While the current business data shows that 208 businesses are operating in Milo-Grogan, we do not know how many businesses have moved into or moved out of the neighborhood on a yearly basis. There is also no way at this time to track whether or not these existing businesses employ local residents. We have been able to identify that the unemployment rates in Milo-Grogan are much higher than the rest of Franklin County. This section suggests recommendations that enable and further encourage businesses to invest in Milo-Grogan, thus increasing local employment opportunities.

Recommendation: Form a Milo-Grogan Business Association

Milo-Grogan does not currently have a functioning business association. There is an opportunity to encourage Milo-Grogan's businesses to come together under a single association. Business associations pool together the collective ideas and aspirations for the community's economic sector. Through communication, marketing, community events, and a united front, business associations help stabilize and enhance communities. Right now, there is no organization in Milo-Grogan despite the heavy presence of industry and business in the neighborhood that includes: national chains, local non-profits, government entities, and utility companies. The association can become a voice for the community's businesses and assist in the sustainable economic development of Milo-Grogan (see Sidebar 6).



Short Term (1-3 years)

Identify core group of community leaders to be the organizing committee for the association. It is important to proceed patiently when identifying these individuals because they will likely become the association's first board members and officers. These leaders must also represent all of the different constituents being represented by the association. These individuals need to be committed to the neighborhood and have the time and energy to invest in the building of the association. The core group leaders must identify the purpose of the association, potential clients, mission statement, and organizational structure of the association, tax status, future financing, membership and programming.⁶⁰ The Center for Association Leadership has a detailed "how to" on starting an association on their website: <http://www.asaecenter.org/Resources>.

Associations need memberships to function. The association will need to acquire data showing all business operating in Milo-Grogan. A firm like Dun & Bradstreet⁶¹ can provide specialized business related data that would be helpful in identifying potential members of the Milo-Grogan community. Such data includes: employee figures, type of industry, addresses, sales volume and year started. This data will help the association shape their target market, mission statement, values, and goals.

The association develops its own website and fully integrates into social media outlets including Facebook, Twitter, and Instagram. An important aspect of this recommendation is that the association develops a cohesive branding between the website and all social media platforms. The association can reach out to Columbus School of Art and Design and The Ohio State University for art, design, and graphics students to work on their branding materials pro bono. Using student resources saves money, time and gives the students exposure and real world experience.

Medium Term (3-5 year)

The Milo-Grogan Business Association would be the leading source for business and economic data in the Milo-Grogan neighborhood. This includes existing businesses, employee statistics, industry types, new businesses opening, and existing businesses that may have closed. The association would have the necessary data for whether or not Milo-Grogan's economy is improving, and the association can also track local employment opportunity figures.

Milo-Grogan Business Association should become leading voice for encouraging both existing businesses in Milo-Grogan to stay and new businesses to relocate into Milo-Grogan by leveraging the economic strengths of the neighborhood. An example of an economic strength is the proximity to crucial infrastructure like Interstate 71 and existing industrial rail lines. Another strength is nearby destinations such as downtown Columbus, Italian Village, the Short North, and The Ohio State University. The association can also leverage the developments within the neighborhood including the CMAX Cleveland Avenue rapid transit line, Rogue Fitness' new corporate headquarter at the former Timken Co. site, and the relocation of Middle West Spirits to East Starr Avenue. The association, using these strengths and their brand, creates marketing material to sell Milo-Grogan to new businesses.

The Milo-Grogan Business Association offers a full breadth of programming, activities and benefits for its members (see Over-the-Rhine Chamber example sidebar 5.⁶² Examples include: access to association's newsletter, access to association's neighborhood business and marketing data, networking opportunities, promotion of your business on association's website, neighborhood 5k run, and local business awards.



Long Term (5-10 years)

Milo-Grogan Business Association can establish a 501c3. 501c3's are able to receive tax-deductible contribution in accordance with Code section 170.⁶³ Establishing a 501c3 will allow the Milo-Grogan Business Association to apply for and use grants and other funding money to employ local Milo-Grogan residents. Responsibilities include maintaining a clean and safe Milo-Grogan by performing garbage and recycling pickup of street and park receptacles, trimming greenery along sidewalks and maintaining and landscaping neighborhood welcome signage.

The Milo-Grogan Business Association forms a volunteer organization that would act as security ambassadors. Security ambassadors are used in many business and neighborhood groups. The Downtown Cleveland Alliance defines their security ambassadors as follows: "Our Safety Ambassadors - some walking and some on bikes -- patrol downtown as a positive influence for safety, acting as the eyes and ears for police. On duty 18 hours a day, they walk or bike about 1000 miles a week! Each Ambassador patrols specific districts, following a preset schedule and making regular stops by businesses on their route to gather and share security-related information and concerns."⁶⁴ This program signals the commitment the association has to the growth and safety of Milo-Grogan for businesses, visitors and residents alike.

Sidebar 7 – Over-the-Rhine Chamber

Mission Statement:

The Over-the-Rhine Chamber lists their mission on their website. It is "To represent our members by promoting economic vitality and fostering a socially and culturally diverse Over-the-Rhine Community. The Over-the-Rhine Chamber stays responsive to the needs of members and the community, and we accomplish our mission through the following ways: Marketing and communications, business attraction and retention and being safe and clean." In 2000 the Over-the-Rhine Chamber formed the Over-the-Rhine Revitalization Corporation as a 501c3 organization to tap into the grants and fiscal gifts available to generate street animation and activity for the businesses and residents of Over-the-Rhine. Together these two organizations work hand in hand to bring special events, attentions, awareness, resources and commerce to the 360-acre neighborhood.

Member Benefits:

Over-the-Rhine Chamber recognized that membership is an investment in the community. Their website lists out several benefits for members that include promotion of members through e-newsletters, social media, and chamber website, networking and engagement opportunities and potential savings through their Worker's Compensation Program.

Other Programs:

The Chamber sponsors signature events that include an annual OTR 5k run / walk, a neighborhood Halloween celebration, annual Chamber Awards Luncheon, various safety initiatives, and business retention support.⁶⁵



Recommendation: Use revitalization of historic structures to anchor new economic development

Revitalization and adaptive reuse of historic structures can be a catalyst for economic development in a community with such structures. Adaptive reuse can be defined as the process of building conversion to accommodate new functional requirements.⁶⁶ The southwest quadrant of Milo-Grogan has two potentially historic structures. The first structure is the Milo Arts buildings at 617 E 3rd Avenue and the second structure is the Columbus Railway Power and Light Company building at 842 Cleveland Avenue. Milo Arts is currently the home of several artists who work and live in studio spaces within a converted school building. The Columbus Railway Power and Light Company Building is vacant with no productive use occurring on site.

The Ohio Historic Preservation Tax Credit Program uses data from a 2011 Cleveland State University study to show how much impact adaptive reuse projects have in the state of Ohio. According to the program, one million dollars in tax credits translates to eight million in construction spending, thirty-two million in total operating income and forty million in total economic activity. The study looked at the over 100 projects that were awarded historic tax credits at the state level and their estimated economic activity between 2007 and 2024. In terms of job create, the one million dollars in tax credits created 381 total jobs, using the same data.⁶⁷ This data proves that in Ohio, historic preservation projects generate economic activity besides whatever final use the building will have. The National Trust for Historic Preservation lists twelve economic benefits of historic preservation that include increases in property value, attracts visitors, and conserves resources.⁶⁸

Short Term (1-3 years)

The Milo-Grogan Area Commission advocates for the Columbus Railway Power and Light Company building to be listed on the National Register of Historic Places. The nomination process does not have to be started by the property owner. The National Register of Historic Places Program through the National Parks Service (NPS) allows buildings to be placed on its National Register. Through a partnership with State Historic Preservation Office (SHPO), a property can be nominated for the register if it is over 50 years old, exists in relatively the same way it did historically, and has a national, state or local significance. This significance can be associated with its architecture, history, a person or event. Together the NPS and SHPO, in Ohio's case Ohio History Connection, determine whether a property fits all of these qualifications.⁶⁹ Detailed listing processes and application information can be found at <http://www.nps.gov/nr/>. Once the property has been listed on the National Register, the property can apply for federal and/or state tax credits for rehabilitation project. The property owners pursue these tax credits. Owners will work with National Park Service, Ohio History Connection and Ohio Development Services Agency's Ohio Historic Preservation Tax Credit Program⁷⁰ to determine eligibility of projects. The Ohio Historic Preservation Tax Credit Program details program and application information at http://development.ohio.gov/cs/cs_ohptc.htm.

Medium Term (3-5 years)

Renovation and adaptive reuse of the Columbus Railway Power and Light Company (CRPLC) building into a bar and restaurant are completed using federal and state tax credits. The project is monitored from start to finish by the Ohio Historic Preservation



Tax Credit Program to make sure that adaptive reuse is in compliance with the Secretary of Interior's standard for historical renovations.⁷¹ See Sidebar 6 for examples of similarly size historic buildings, compared to the CRPLC building, that have used adaptive reuse to become bar and restaurants.

Milo-Grogan Area Commission advocates for the current Milo Arts building to be listed on the National Register of Historic Places. The nomination process would follow the exact same process that the Columbus Railway Power and Light Company building completed. Once the property has been listed on the National Register, the property can apply for federal and/or state tax credits for rehabilitation project. The property owners pursue these tax credits. Owners will work with National Park Service, Ohio History Connection and Ohio Development Services Agency's Ohio Historic Preservation Tax Credit Program⁷² to determine eligibility of projects.

Milo-Grogan Area Commission designates the southwest quadrant Milo-Grogan to be a priority development area. The Milo-Grogan Area Commission will work with the Columbus Department of Building and Zoning Services to identify priority properties section of the community that will attract investment. The presence of the new CMAX bus-rapid transit line, new business headquarters and production west of Cleveland Avenue, and the reuse of historic buildings make this neighborhood a target for redevelopment. This area of Milo-Grogan will be further influenced by the increased presence of craft breweries in Italian Village along with the relocation of Middle West Sprits on E. Starr Avenue in Milo-Grogan. See Sidebar 7 for a case study of how new breweries transform neighborhoods and become economic engines for development and employment.

Long Term (5-10 years)

Renovation and adaptive reuse of Milo-Arts is completed. The project will be monitored from start finish by the Ohio Historic Preservation Tax Credit Program to make sure that rehabilitation meets the Secretary of Interior's standard for historical renovations.

Milo-Grogan Area Commission forms committee that, with the help of Ohio History Connection, properly monitors maintenance and uses of Milo Arts and the Columbus Railway Power and Light Company building to ensure historical integrity is not compromised.

Sidebar 8: Adaptive Reuse of Train Stations

National Trust for Historic Preservation article features old railway depots that have been turned into restaurants. The first example is a train station in Fullerton, CA (Figure 33) that was originally constructed in 1923. In 1980, the Fullerton Redevelopment Agency prevented the depot's demolition by relocating and repurposing the building as The Old Spaghetti Factory. Another example is Porter's in Medford, OR (Figure 34). Originally built by the president of the Southern Pacific Railroad, this train station was empty for 44 years before becoming Porter's Restaurant and Bar. The last example in this article is the Bedford depot built in 1891 (Figure 35). During WWII the Bedford depot was used to transport ammunition, supplies and troops. Since 1971 it has housed several different family owned restaurants, the most current being Liberty Station.⁷³





Figure 33: The Fullerton Union Pacific Station
Photo Courtesy of Bruce Fingerhood



Figure 34: Former Medford Depot
Photo Courtesy of Porters



Figure 35: Liberty Station
Photo Courtesy of Liberty Station

Sidebar 9: Urban Revival Through Breweries

A USA Today article titled “Build a craft brewery, urban revival will come”, presents the case of how Ohio City, an intercity neighborhood of Cleveland, has experienced economic prosperity and an employment boom because of the opening of Great Lakes Brewing in 1988. Great Lake Brewing reused structures that were previously a feed store, a saloon and livery stable to house their new brewpub. The article states, “Trendy small businesses like breweries and younger residents have been returning to downtown neighborhoods in many cities across the U.S.” Another benefit of breweries is that the employment positions tend to be higher earning positions than those in other services businesses.⁷⁴



Social Services

Social services can be viewed from a standpoint of both social justice and economic development. Ensuring a neighborhood balance of services in terms of adequacy, interest, access and connectivity, is important. It is also important to extend support and service to those with greatest need. As stated by The Martin Janis Senior Center's Director Doreen Gosha, some senior members face transportation challenges with the location of the center. The nature of the Center's location is what is called both a walk-by and drive-to facility, meaning that it is placed in a neighborhood where folks can just walk-in. However, the site is not adjacent or across from any residents. In fact, the Center is located on the fairgrounds, classifying the center as a drive-to facility. The Director actively refers seniors to transportation services offered by COTA, CMHA, and the COAAA; some of those services do not meet the access to the center needs as several of the half dozen seniors expressed to the Director.⁷⁵ Another example has to deal with the renovations of the Northside and Main Branch libraries. The Northside Branch library will soon close to begin renovations and a temporary site has yet to be disclosed.⁷⁶ They will be renovating thru 2016. Unlike Northside, the upgrades at the Main Branch will allow patrons to continue and benefit from their resources. Nevertheless, access to libraries important services mentioned in the Opportunity Assessment can be problematic for Milo-Grogan residents. In addition, even though many good services are offered by the Milo-Grogan Boys and Girls Club and the J.H. Ross Family Life & Community Center, needs that can more adequately serve residents of Milo-Grogan have been expressed by both organization's Directors.

Recommendation: Ensure access, support and quality to senior, youth and community interest social services organizations

Short Term (1-3 years)

We have determined through data (demographic and membership registrations) and neighborhood interviews that particular facilities represent some of Milo-Grogan's residents' most relevant social needs. Meeting social needs for all within a population group can be a difficult task to accommodate. Access to services that are in place or should exist, that will better peoples' lives, is significant. Therefore, we plan to administer surveys to seniors at the Martin Janis Senior Community Center site, allowing us to gauge where this group feels their social needs are fulfilled most holistically. The Martin Janis Community Center, according to the amenities offered, is envisioned as a hub for social service needs by the seniors.

After gaining a more complete understanding of what this group may additionally want, we can then assist with developing a unique service resource ensemble in printed form as a pamphlet, newsletter, or monthly journal. A centralized informational resource compiled with various senior related interests and concerns, would be an addition to the electronic Milo-Grogan's Area Commission Neighborhood Link and other service features. Presenting this information to seniors will be a beneficial resource as it reveals options for comfort, housing, wellness, healthcare, employment/volunteer opportunities, and other interests. It would encompass: factsheets, housing choice directories, important agency contacts, select coupons, and more. It would be a tool that information providers can efficiently use to highlight available services. The guide will be conveniently located at the Martin Janis Community Center, the Milo-Grogan recreation center, the



North branch Library, the J.H. Ross Family Life & Community Center, and community churches. The information will meet service accessibility issues by offering alternatives to electronic searching. In addition, the release can directly service the community without other neighborhoods being favored. Volunteers will be asked to contribute their time and expertise in organizing and distributing the release. We will work with the Milo-Grogan Area Commission, the Director and Board members of the Martin Janis Community Center, Columbus Public Health, and other neighborhood partners to establish logistics and cost; options for charitable donations and program contingency funding will be explored to implement the action. This short term recommendation will include outreach and service promotion, which will help to enhance Milo-Grogan's existing and future senior service structure.

Medium Term (3-5 years)

We aim to improve aspects of transportation to social services for residents. There are consistent complaints among COTA's Project Mainstream users; the complaints are regarding contracted drivers not meeting schedules, not having proper handicapped equipment and providing inappropriate drop-off and pick up techniques.⁷⁷ The Facility Director of the Milo-Grogan Boys and Girls Club stated that there is room for improvements with their current transportation options. We can help to organize more carpooling efforts and create an option that is not currently offered by COTA - youth bus tickets or bus pass vouchers. This recommendation addresses access needs for seniors and the youth. An additional resident connectivity resource will also be addressed, which is the expansion of the C -Bus Circulator. The C-bus, Columbus's newly implemented downtown (north and south bound) circulator, currently has no stops in Milo-Grogan. Yet it services nu-

merous other communities. As a part of this transportation goal, we have begun working with the Area Commission and COTA to express Milo-Grogan's transportation needs. The social equity and environmental team of this sustainability plan has joined with the transportation team to address lighting elements to existing and future COTA bus shelters.⁷⁸ With potential additions to the C-bus route, outreach efforts to improve current senior residential transportation scheduling, and a plan of the new bus rapid transit system; better access to places like jobs, grocery stores, Libraries, and centers will result.

Recommendation: Facilitate developments to neighborhood social centers

Long Term (5-10 years)

A long term recommendation is to make job readiness and mentoring programs available at two neighborhoods centers, the J.H. Ross Family Life & Community Center and the Milo-Grogan Boys and Girls Club. The Milo-Grogan Boys and Girls Club is positioned across the street from new business developments. The Milo-Grogan Boys and Girls Club is a part of the whole that makes up the Boys and Girls Club of Columbus. The need for a job readiness program that will allow their members to be prepared for future development in Milo-Grogan and surrounding area opportunities. We will work with the Club's Directors (facility, executive and operations), the Area Commission, and partners such as the City of Columbus and community residents to implement a program to serve this purpose. They are also short staffed and in need of males to assist young men with some mentoring efforts. We will work on resolving these matters with community



outreach and partnerships. The same concerns were expressed by the Director at the J.H. Ross Family Life & Community Center. In addition, both of the facilities said that they have a need for newer technology. Computers in the club and center are slow, easily corrupted by viruses and outdated. We will facilitate efforts with various partners of the Boys and Girls Club of Columbus and the Area Commission to organize for funding sources that would at least provide minimum upgrades and/or some newer systems.

An additional concern for the Milo-Grogan Boys and Girls Club is their lack of adequate green space within walking distance from the center. Green spaces would: service various aged youth for activities enhance the site, and support environmental sustainability. Further communication efforts must progress with stakeholders about two vacant lots that are adjacent to their site and a recently demolished property on a parcel, around the facility, which are potential land spaces to convert green. These goals can enhance the youth's future and the community of Milo-Grogan.



Land Use and Urban Ecology

Vision

Milo-Grogan is a community that incorporates open space, safe and accessible streets, and environmentally sound principles for the entire community that helps create a sense of place for all residents, regardless of age, income, or culture.

Goals

1. Implement strategies that will properly repurpose underutilized spaces within the neighborhood
2. To increase the biodiversity in the area
3. To impact the quality of life in the community through the implementation of land use strategies that will benefit all stakeholders within the neighborhood

Indicators

Home Vacancy Rate

Background

High accessibility to railroads supported Milo-Grogan's growth as industrial neighborhood in the 1920s. After the emigration to suburb and economic strikes happened in 1950s large amount of vacant parcels and buildings left behind. The decline of industry and the urban expansion had resulted in disinvestment for the neighborhood. A high vacancy rate at the neighborhood scale is considered unfavorable and often leads to decreases in neighborhood activity, safety, and quality of life.¹ A high vacancy rate not only decreases the property values, but may also indicate less willingness to move into or live in a community. Lowering the vacancy rate can help the community to achieve a better physical environment and to be capable for potential revitalization. Fur-

thermore, identifying the available vacant properties and restoring those properties back to productive uses enhances the neighborhoods sustainable development.

Measure

Vacancy rate is the proportion of housing inventory that is vacant. American Community Survey (ACS) provides rental and homeowner vacancy rates by conducting mail, computer-assisted telephone, and personal-visit interviews.² Most of the vacant properties are identified on the first personal visit when the responses have not been obtained after two months. The calculation divides the number of vacancies by the total number of residential units and then multiplies by 100 to get a percentage. Milo-Grogan is made up by five block groups; three of which extend beyond the boundary of the neighborhood. To adjust misalignment of boundaries, the overall community vacancy rate is the weighted average of vacancy rate from the five individual block group. Vacancy data are found at the block group level from the ACS. The weightings are the percentages of block groups that fall in Milo-Grogan. This measure will set the baseline for judgment in the future. Over time, we expect to see the number decreasing through initiatives proposed by the community and the city.

Description

According to 2010 census data, the estimated vacancy rates of block groups in Milo Grogan range from 13.9% to 32.5%.³ The overall community vacancy rate is 18.02%. Estimated vacancy status is produced by ACS every five years. The survey presents the housing characteristics, including number of vacant units and total housing units.



Data for housing properties in Milo-Grogan are available from the Franklin County Auditor's GIS data (website: <https://www.franklincountyauditor.com/real-estate/gis>). The data offers individual property information about the size, land-use type and the associated responsible agency of each property. This data is updated quarterly by the Franklin County Auditor. The vacancy rate indicator should be measured every five years as per the ACS data update. The Franklin County Auditor's Office should conduct the analysis and provide the information to the Milo-Grogan Area Commission ensuring that progress is being made and overseen within the community.

Percentage of Park Space

Background

Park spaces provide important areas for residents to gather, recreate, and enjoy nature. These spaces help to improve mental and physical health, and mitigate air and water pollution impacts for all in the community.⁴ Milo-Grogan is served by two parks: New Beginnings Park and the Milo-Grogan Recreational Center and Park. These parks are within a half mile of 97.37% of the residential parcels in the neighborhood.⁵ However, there is a discrepancy between access to parks and the amount of parks in the community. According to the American Planning Association, it is recommended that there is one acre of park space per 100 people. Through our analysis, we feel that amount of park space provided to the neighborhood is an essential part of making Milo-Grogan a sustainable community.

Measure

By measuring the percentage of land dedicated to parks in Milo-Grogan, we will be able to determine existing baseline conditions. By improving on these conditions, Milo-Grogan will reap more benefits of having a healthy park system in the neighborhood. To determine the percentage of land used for parks, GIS was used. The system of parks was mapped out and their acreage was computed. This was then compared to the total population of Milo-Grogan.

Description

To calculate Milo-Grogan's park ratio per person, the total acreage and total population is needed. The parks total 2.59 acres.⁶ Using population counts for the neighborhood, it was determined that Milo-Grogan only has 0.152 acres per 100 people. This is well below the recommended park ratio as described above. This calculation should be done every two years to allow time for land acquisition and park build out.

Tree Cover (Percent Coverage)

Background

Trees are an important piece in the creation of a sustainable Milo-Grogan because of the many benefits they provide. According to Urban Relief, trees help to improve air quality, reduce the urban heat island effect, improve water quality, support more biodiversity, improve social and community stewardship, and help improve the physical and mental health of the residents in the neighborhood.⁷



The aesthetic value that they provide also helps to increase the amount of money spent in commercial corridors and helps to increase property values. Finally, trees provide a buffer from the street for pedestrians. This helps increase the safety of those travelling and helps to reduce the noise levels in the neighborhood.

Measure

By measuring the tree cover percentage in Milo-Grogan, we will be able to determine existing baseline conditions. By improving on these conditions, Milo-Grogan will reap more benefits of having a healthy tree canopy in the neighborhood. To determine the amount of tree canopy in the neighborhood, www.itreetools.org/canopy was used. This tool was developed by the United States Forestry Service for simple and quick measurements. The website picks out random coordinates within a designated boundary, and the user determines what is located at each point. A compilation of 500 points in the neighborhood provided a statistically significant sample.

Description

As stated above, the iTree tool was used to determine the percentage of tree cover for Milo Grogan. The points were assigned to two categories: tree and non-tree. After 500 points were used, the percentage of tree cover for Milo-Grogan was determined to be 19.8%, with a plus/minus of 1.78%. The results are estimates of area tree coverage. This measure can be used to help implement new programs and policies directed at tree planting and tree coverage.

Permeability (Percentage of Pervious/Impervious Surfaces)

Background

Assessing the permeability (surfaces that allows water to infiltrate into the soil) of a community provides insight into the overall health of a community. Addressing the amount of stormwater runoff within Milo-Grogan will have social, environmental, and economic impacts. Not only will these impacts be felt by this neighborhood, but also by other communities downstream, and the city as a whole. The University of Delaware states “streams can show signs of degradation and can be considered stressed in watersheds where the impervious coverage exceeds 10—15 percent” and that “the size of one-hundred-year floods (or floods that have a one percent chance of occurring in any given year) can potentially double in watersheds with impervious cover levels greater than 20—30 percent.” So, the environment receives great benefits from proper stormwater management, as urban developments are far higher percentages than these. Water that is infiltrated into the soil instead of travelling into the drainage system is cleaner by going through a purification process that plants provide. Stormwater that is not filtered into the ground where it falls may carry and eventually deposit pollutants into local bodies of water. This contaminated water can infect all animals within an ecosystem, from the fish in the water to the animals (including humans) that consume the fish or the water itself. Proper stormwater management can also prevent river and stream bank erosion, prevent urban flooding, and provide adequate recharge of underground aquifers. For society, the amount of permeable surfaces can directly correlate to the amount of park/open spaces for the residents to enjoy. Economically, the more water that is able to recharge the water table directly allows for less infrastructure required to channel the



excess flows. This means lower costs for implementation and maintenance. The percentage of impervious coverage of Milo-Grogan was determined using ArcGIS mapping software.

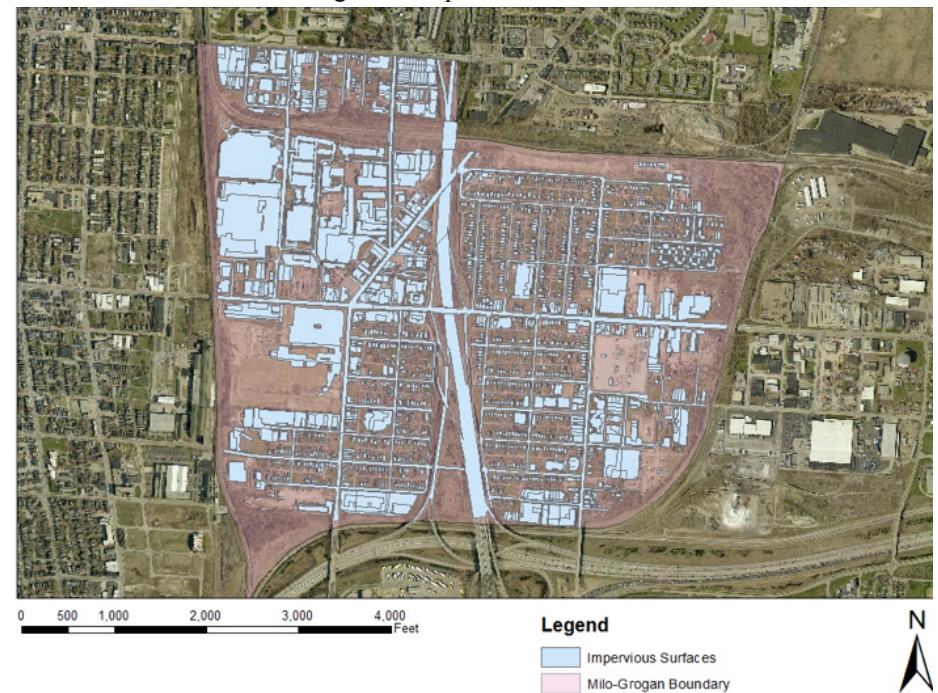
Measure

By knowing the amount of impervious surfaces, it is possible to determine the levels of Best Management Practices (BMPs) that should be implemented. The benefits of improving (reducing) the amount of imperviousness within the area may not be seen immediately, or not at all. Benefits to the environment may take years to develop and may not be noticed by the community implementing BMPs since the negative effects of stormwater runoff on the environment are usually experienced by downstream communities. A study of the surface areas of Milo-Grogan was conducted through the use of ArcGIS. The study showed the percentage of total land cover that is comprised of impervious surfaces. This gave us a baseline that the community will be judged on in later dates. Over time, we expect to see the percentage decrease through initiatives proposed by the community and the city.

Description

This study showed that approximately 40.4% of Milo-Grogan is covered by impervious surfaces. See LUUE Figure 1 for a map detail impervious surfaces. Through direct observation, this number is higher than the percentages of nearby neighborhoods, the Ohio State Fairgrounds to the north, being an exception. This is due to the amount of industrial and manufacturing activity in Milo-Grogan that requires a greater amount of paved surfaces for parking and the travel of heavy machinery and trucks. This measure needs to be measured every 12 months by the Columbus Department of Public Utilities to ensure that the amount of impervious surfaces is being reduced.

Figure 1: Impervious Surfaces



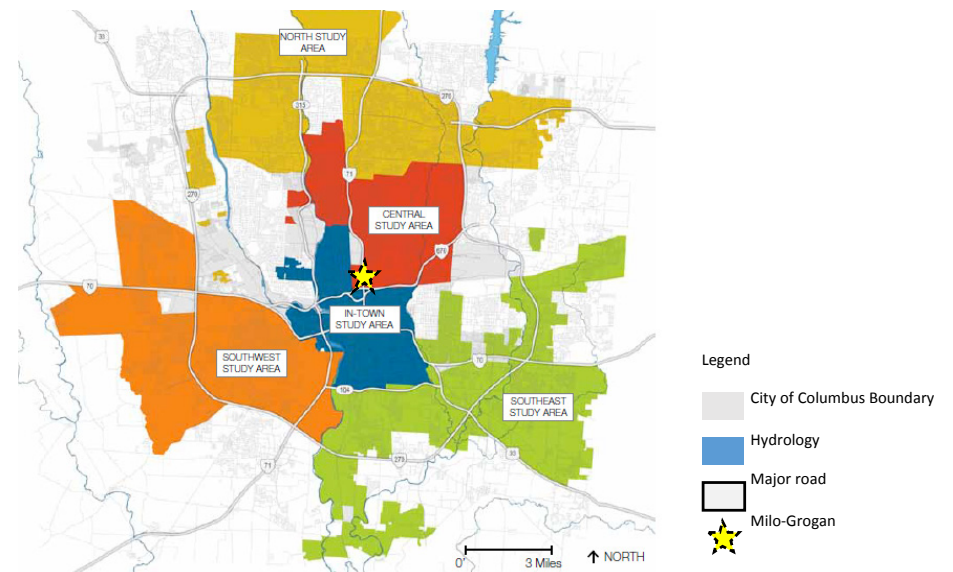
The opportunity assessment is the combination of online research and field observation to understand the current condition and to identify the needed improvements of Milo-Grogan, in terms of physical and natural environments. Online research includes the background plans and studies conducted by other agencies or academics. Field observation was made on January 23rd, 2015, with the guidance of Robert R. Barksdale (Area Commission Chair), and reached out to some of the committee members and residents.

Milo-Grogan is an urbanized neighborhood, adjacent to downtown and the Italian Village neighborhood. The majority of land uses consist of residential, industrial, and urban commercial overlay. The industrial uses, which were once served by the railroad infrastructure, surround the entire neighborhood. With the decline of manufacturing industry and railroad service, Milo-Grogan is confronted with a high percentage of blighted gray and brown fields.⁹ The term gray field refers to formerly vibrant retail or commercial sites suffering from disinvestment. Brown field is the general term used for former industrial sites with perceived contamination. The vacant manufacturing properties include the former Timken site (approximately 30 acres) on Cleveland Avenue and 5th Avenue and two parcels on the north and end of Camden Avenue (approximately 15 acres).

To revitalize the community, the Milo-Grogan Neighborhood Plan adopted by City Council on April 9th, 2007 suggests that redevelopment efforts should focus on the identified opportunity sites, and preserve and improve the existing housing within the residential district. Furthermore, in order to enhance the implementation of land use strategy, the plan prioritizes commercial development along 5th Avenue and St. Clair Avenue, while considering Cleveland Avenue and the former Timken site as secondary locations.

As a predominantly industrial settlement, Milo-Grogan has little access to parks and natural resources. According to the 2014 Columbus Recreation and Parks Master Plan, the Central Study Area (Figure 2), encompassing Milo-Grogan neighborhood, has 3.97 acres of park space per 100 residents. A general standard provided by the American Planning Association recommends a range from one acre of park space per every 100 residents.¹⁰ Yet, there is an uneven distribution of park spaces within the Central Study Area. Specifically, areas both east and west of I-71, traditionally dense neighborhoods, had the most unmet level of service across the entire study area. Additionally, the park space analysis reveals that Milo-Grogan only has 0.152 acres of park space per 100 residents. The plan concludes that there is a shortage of 15 acres of neighborhood parks in the Central Study Area to provide sufficient and well-distributed park space for the residents.

Figure 2: 2014 Columbus Recreation and Parks Master Plan Study Area
Source: 2014 Columbus Recreation and Parks Master Plan



Nearly 65% of the land in Milo-Grogan is zoned manufacturing; the community is 40.4% comprised of impervious surfaces (primarily rooftops, parking lots, and roadways), which reduce infiltration of rainwater and increase the surface runoff.¹¹ More importantly, the stormwater runoff increases the potential delivery of pollutants from waste transfer stations and other artificial causes, undermining the quality of streams.

Tree Cover

Trees are an important asset for a neighborhood pursuing a more sustainable and livable environment. Tree canopy is the layer of leaves, branches, and stems of trees that cover the ground when viewed from aerial perspectives. As mentioned in the indicator analysis, the tree canopy provides important ecological functions, including storm water management, reducing urban heat island impacts, providing wildlife habitat, and enhancing community aesthetics in urban environments. There are two important elements that affect the urban tree canopy: one is the natural forest vegetation, and the other is land use type. The latter element is especially important in Milo-Grogan.

Different land use types have distinct densities and development patterns which support urban tree canopy. As far as indicator analysis, Milo-Grogan is approximately 19.8% covered by a tree canopy. The core of Milo-Grogan consists of residential land uses and supports most of the canopy coverage in the neighborhood. The average residential density is six units per acre and consists of fairly similar single-family housing patterns.¹² With most residential properties having been built before the 1950's, the trees have had a chance to mature and provide better coverage than other parts of the community. On the other hand, the surrounding light industrial and manufacturing uses have a relatively dense develop-

ment pattern. Milo-Grogan is 64.7% zoned manufacturing, which indicates that over a half of the total community area has low tree cover. Figures 3 and 4 show the distinct conditions of tree canopy on residential and industrial parcels. The tree cover assessment and tree benefits report reveals that there is 19.8% tree cover in Milo-Grogan, with most of the coverage located within the residential core of the community.

Tree cover provides benefits in terms of lowering urban heat island effect, reducing artificial pollutants, supporting local biodiversity, and enhancing social equity. High tree cover percentage in a community supports the environmental, social, and economic aspects of sustainability. Literature found that the highest percent tree cover in an urban community occurs in Connecticut at 67.4%. The lowest occurs in Nevada at 9.6%. As demonstrated in the indicator analysis, Milo-Grogan has 19.8% of tree canopy and 40.4% of impervious surface. Comparing to the national tree cover study in urban and community areas, there is still room for improvement in Milo-Grogan. See Sidebar 1 for further explanation.



Figure 3: Existing tree canopy on residential parcels - Photo Courtesy of Luan Nguyen



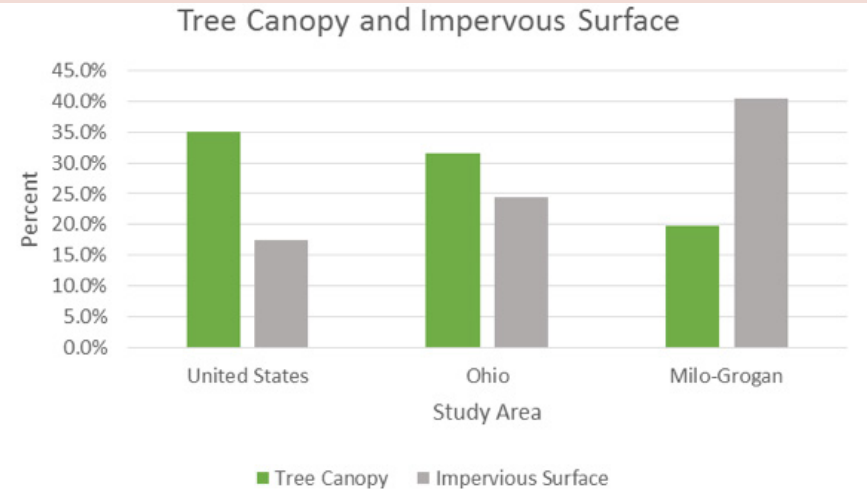
Figure 4: Existing tree canopy on industrial parcels - Photo Courtesy of Luan Nguyen



Sidebar 1: Tree and Impervious Cover in the United States

The research was published by the United States Forestry Service in 2012 by using the Google Earth aerial photography to interpret the tree canopy percentage and identify impervious surfaces in the urban/community area of the United States (LUUE Figure 5). The result shows that the national tree canopy and impervious surfaces within urban community areas are 35.1% and 17.5% respectively. At the state level, specifically for Ohio, tree canopy and impervious surfaces within urban community areas are 31.5% and 24.5% respectively.

Figure 5: Comparison of Tree Canopy and Impervious Surface



Sources: Nowak, D., & Greenfield, E. (2012). Tree and impervious cover in the United States. *Landscape and Urban Planning*, 107, p. 24 and 26.



Milo-Grogan Parks and Recreation Centers

Parks are great resources to a community. Such open spaces provide room for recreational activities to occur. The aesthetic value of the community is also improved with the vegetation in parks. Additionally the vegetation provides a habitat for animals, increasing the biodiversity of the community. Finally, parks provide a focal point to a community, which can provide a source of pride and gathering for the residents. Milo-Grogan is officially served by one park, New Beginnings Park, which is recognized by the Recreation and Parks Department. However, the Milo-Grogan Recreation Center should be included on this list as it has been recently renovated and provides upgraded open space for the residents.

New Beginnings Park

Located on the corner of St. Clair Avenue and Shoemaker Avenue, New Beginnings Park is a quiet neighborhood park. It is small at only 0.74 acres. The park was developed using Urban Infrastructure Development Funds in 2010. There are three access points to the facility; two on St. Clair Avenue and one leading to an alley between Olmstead Avenue and Shoemaker Avenue. The landscaped portion of the park is made up entirely of turf; however, there are new trees that have been planted, though they are far from reaching mature height and canopy size. Amenities include a half basketball court, a children's playground area, and a shelter house.

Figure 6: New Beginnings Park - Photo Courtesy of Luan Nguyen



Milo-Grogan Recreation Center

Originally dedicated in 1976, the Milo-Grogan Recreation Center just recently reopened after being renovated. The center is located on the corner of St. Clair Avenue and Second Avenue on a lot that covers 1.85 acres. There are multiple access points to the center, with two coming from St. Clair Avenue, two from Second Avenue, and one from Lexington Avenue. The recreation center has multiple amenities inside including: an art room, ceramics room, crafts room, gymnasium, kitchen, and weight room. Outside on the corner of Second and Lexington Avenues sits a new park that was recently constructed. It has a children's play area, basketball court, horseshoe pit, and a walking track.



Figure 7: Milo Grogan Park and Recreation Center - Photo Courtesy of Luan Nguyen



The two parks that the community has provide a great foundation for the community. However, more work needs to be done to give the residents more access to park areas. As demonstrated in the indicator section, 97.37% of the residential parcels lie within half mile of the two parks. But the neighborhood does not meet adequate standards of green space per person with there being only 0.152 acres of park space per 100 people. Therefore, more park space needs to be added to the community.

Stormwater Runoff/Water Quality

“Stormwater is rainwater and melted snow that runs off streets, lawns, and other sites.”¹⁴ It is important for this water to be able to infiltrate into the ground where it falls. The stormwater is filtered of pollutants, replenishes aquifers, and/or flows into local streams and rivers. Stormwater runoff is the water, and any contaminants that are picked up by it, that is not infiltrated into, or deposited

into the ground where it falls. As runoff flows over impervious surfaces (i.e. paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment or other pollutants that could adversely affect the quality of local and downstream water bodies if the runoff is discharged untreated. See Figures 8 and 9 for example of pollutants. The proper management of this runoff is an important element of environmental health. However, it is only recently becoming a topic of concern. This is because the effects of stormwater runoff are usually not experienced by the community or environment that has caused the increased load of runoff through added impervious surfaces. Many of the pollutants that are picked up by the water, such as automotive fluids, litter, or pesticides, are carried away and deposited downstream. The improper management of stormwater can lead to downstream flooding, stream bank erosion, increased muddiness of water created by stirred up sediment, and habitat destruction.

Figure 8: Oil in Stormwater Runoff - Photo Courtesy of Luan Nguyen



Figure 9: Trash in Storm Grate - Photo Courtesy of Luan Nguyen



Milo-Grogan has an increased amount of industrial and waste management activity within its borders compared to other neighborhoods within Columbus. Because of this, the negative effects of stormwater runoff can be intensified in areas downstream of Milo-Grogan, especially when compared to an area of comparable size that has less industrial land uses. According to the Columbus Division of Sewerage and Drainage Stormwater Drainage Manual, commercial areas are “outdoor areas within non-residential properties where pollutants are or may become more concentrated than typical urban runoff as characterized by the USEPA National Urban Runoff Program (NURP)...Proper stormwater management within the area will help to ensure its neighbors are healthy and safe.”¹⁵ The first area defined in the manual is material and waste

handling and storage areas. Milo-Grogan has two waste transfer stations where the effects of runoff may be intensified.

Many of the businesses located within the borders of Milo-Grogan operate in industries like manufacturing, distribution, automotive repair and maintenance, solid waste movement, and household hazardous waste disposal and storage. All of these activities require heavy automotive usage, either for transporting items to and from the area, or the repairing of vehicles. Any of these uses may release toxic materials into the stormwater runoff if not adequately contained. Solid waste movement in the area is potentially the biggest polluter, as many garbage trucks do not completely cover the trash they are hauling. Storm drains present a potential risk for increasing the amount of pollution entering waterways from uncovered trucks transporting trash. There are storm drains directly in front the Republic transfer station on Reynolds Avenue, as well as multiple drains along St. Clair Avenue, which is the primary route for entering the station. Near the Rumpke transfer station; there are also multiple storm drains located at the corner of Yeoman Street and Fields Avenue, Fields Avenue and Mobility Drive, as well as multiple drains along Fields Avenue across from the station. However, the fluids from automotive repair and recycling can be the most toxic to the waterways. Drains are located near all automotive shops within the neighborhood. There is one directly in front of Affordable Quality Auto Repair on Camden Avenue, two near Keen’s Body Shop at the intersections of 5th and Peters Avenues, and 5th and St. Claire Avenues, and one in front of New World Recycling on 5th Avenue. It is essential that local businesses do the best they possibly can to contain and clean up any spills of chemicals, fluids, or debris so they do not enter the local waterways.



Proper management of stormwater will help the local environment through local water table replenishment, less stream bank erosion, and less pollutant discharge into bodies of water. Economic gains can be attained if a resident were to collect rainwater for cleaning or the watering of plants, lawns, and gardens. The gains come through savings in both their water bill and sewer taxes. The primary method to control stormwater discharges is the use of best management practices (BMPs). In addition, most stormwater discharges are considered point sources and require coverage under a National Pollutant Discharge Elimination System (NPDES) permit.

Zoning

Zoning is a land-use planning tool that was created almost a century ago to separate incompatible uses from locating next to one another. One such example would be a strip mine being located next to a hospital. The modern intent of zoning is to regulate multiple factors including use, form, design, and compatibility of developments. Land use laws may be implemented for many reasons like preserving property values within a neighborhood, helping to preserve the urban character of an area through solid urban design, or for environmental control/preservation.¹⁶

Milo Grogan is zoned as a residential neighborhood surrounded by manufacturing zones. The Milo-Grogan Neighborhood Plan of 2007 gave suggestions on how to utilize the land within the neighborhood. These zoning suggestions are guidelines to be followed by the community. According to the plan, approximately 65% of the area is zoned for manufacturing and 25% for single-family residential. The plan recommends the downzoning of any spot zoning in the area. Downzoning means changing “the zoning of an area or neighborhood to reduce the density of housing or permit-

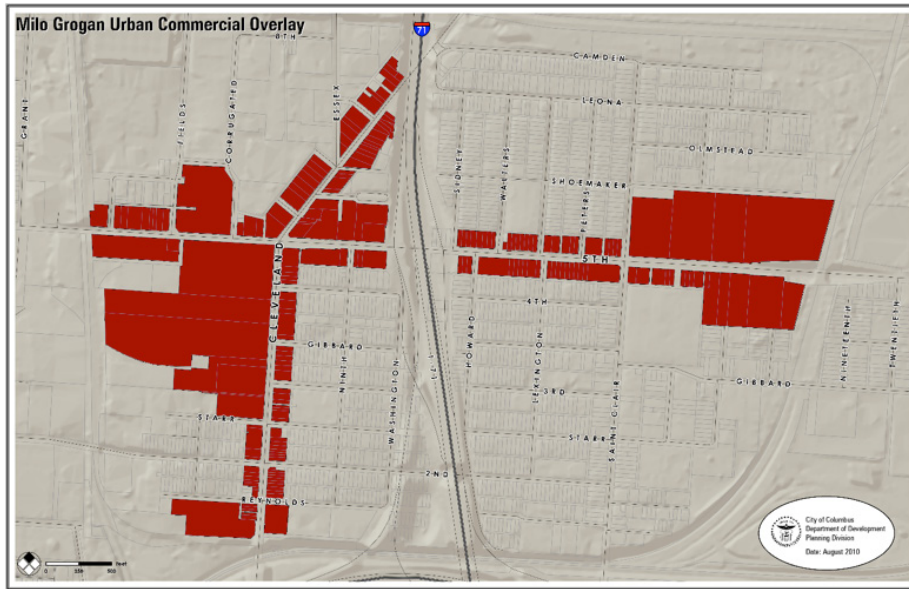
ted construction.”¹⁷ Spot zoning means “the granting to a particular parcel of land a classification concerning its use that differs from the classification of other land in the immediate area.” In Milo-Grogan these are parcels that may be zoned for commercial, but which are not used for commercial purposes or the commercial activity is detrimental to the residential areas around it. The southeast corner of Leona Avenue and Roselle Avenue along with the northeast corner of Leona Avenue and Wooley Avenue are two locations that are zoned for manufacturing, but have residential structures erected on them.

The areas along Cleveland Avenue and 5th Avenue are zoned for commercial uses; additionally there is an Urban Commercial Overlay (UCO) on 5th Avenue and Cleveland Avenue. See LUUE Figure 10 for a map of the UCO district and Sidebar 2 for a more detailed explanation of a UCO. This overlay only applies to retail, restaurant, office and medical office uses only. The design criteria contained in the UCO’s must be met for all new construction, any additions to existing structures, and any new signage erected.



Figure 10: Milo Grogan Urban Commercial Overlay

Source: Milo Grogan Urban Commercial Overlay. (n.d.). Retrieved from http://columbus.gov/uploaded-Files/Columbus/Departments/Development/Planning_Division/Commercial_Overlays/Commercial_Overlay_Directory/Milo%20Grogan%20UCO.pdf



Sidebar 2: Urban Overlay District

An Urban Commercial Overlay (UCO) is a zoning overlay that further restricts the regulations set forth in the existing underlying zoning code. The first UCO in Columbus was put in place in 1999 for a section of North High Street. Since then, UCOs have been established along 25 corridors, all within 6 miles of downtown Columbus, encompassing over 27 miles of urban streetscape.

Examples of the standards set forth in the UCO include but are not limited to:

- Buildings are placed no further back from the right-of-way than ten feet; up to 50% of the building frontage can be set back an additional 5 feet to provide a public-private space, such as an outdoor dining area.
- Buildings are to have a minimum width of 60% of the lot width.
- Front doors are placed on the building primary elevation.
- At least 60% of the front elevation between two and ten feet in height must be clear tinted window glass.
- Off-street parking is not permitted between the building and the street.
- Drive-thru windows are placed to the side or rear of the building.



An Milo-Grogan is located in a potentially strategic area. It is just north of downtown and just to the east of the Short North area. The 2007 Milo-Grogan Neighborhood Plan stated that “The proximity of Milo-Grogan to downtown Columbus, The Ohio State University, Italian Village, and the Discovery District is a major asset and as these areas are redeveloped pressure will increase for redevelopment in Milo- Grogan. Another key factor is the transportation network and the access provided by the arterials Cleveland Avenue and 5th Avenue and convenient access to I-711.”²⁰ As such, there is tremendous potential for a large amount of traffic to move through the area on a daily basis along Cleveland Avenue and 5th Avenue. Adherence to the UCO is of the utmost importance in bringing the vitality back to the area. More stores in the area would mean that the residents would need to travel less to obtain their desired products.



Land Use and Urban Ecology

Sustainability Assessment

Tree Cover

Recommendation: Improve the knowledge and participation of the residents and business owners in benefits of an urban tree canopy

Short Term (1-3 years)

To maintain the existing tree canopy in Milo-Grogan, the residents need to attain the ability to preserve the existing tree assets in the residential area. Residents can reach out to the Office of Urban Forestry to request for the street trees. As of April 2015, the Urban Forestry website has an online application at https://311.columbus.gov/Question_comment.aspx?sr_id=311+website. For questions about planting or removing street tree contact the Urban Forestry Office at 614-645-6640. Furthermore, the residents should utilize the gardening education to enhance the capacity of maintaining yards. The Ohio State University Extension of Ohio Nursery and Landscape Association provide the Master Gardener Volunteer Program to educate Ohio residents in the knowledge of gardening and to be able to share that knowledge with their community. For more information about the Franklin County Street Tree Planting Program, contact Mike Hogan at 614-866-6900, or fcmastergardeners@gmail.com.

Twenty-five percent of Milo-Grogan consists of single family residential uses, which supports the tree canopy in the urbanized neighborhood. For the short term recommendation in residential area, there are no funding requirements, since these two approaches are free upon request. However, it will need active participation of residents in the neighborhood.

For the non-residential area, Milo-Grogan has the opportunity to increase the tree canopy within the development of Urban Commercial Overlays along 5th Avenue, St. Clair Avenue, and Cleveland Avenue. All new commercial development should provide space for at least a ten foot wide pedestrian corridor; including tree lawn and sidewalk. The tree space along the corridor provides a pedestrian friendly environment and benefits the economic activities in the neighborhood. In the industrial areas of the neighborhood, property owners should provide landscaping buffers to reduce the conflicts between different uses. The fifty feet of buffering nearest the district boundary line should be used only as planting strip.

On the other hand, the area commission can cooperate with the city's land bank to utilize the city-owned vacant spaces for open spaces. For detailed leasing process, please see Green Space recommendation "Encourage City of Columbus to convert vacant lots to community gardens". The Gro1000 program,²¹ sponsored by Scotts Miracle-Gro, provides up to \$1,500 of annual Grassroots Grants for awarded projects through 2018. The Grassroots Grants offer fiscal support for local communities implementing edible gardens, flower gardens, and public green spaces. Grassroots Grants also have positive impacts on community outreach. The Scotts Miracle-Gro Company has a detailed application process on its website at <http://scottsmiraclegro.com/corporate-responsibility/gro1000>.

Medium Term (3-5 years)

The Milo-Grogan Area Commission will recommend understory trees on the industrial or commercial parcels when reviewing the development proposal to reduce stormwater runoff directly into waterways. The Area Commission will also contact the Co-



lumbus Department of Building and Zoning Services to establish the zoning amendment, requiring the understory trees in the industrial or commercial area. Understory trees are the group of small trees, shrubs and vines that have a low mature height. The height of mature understory tree is approximately 15-30 feet. It lowers the need of trimness or maintenance to prevent the obstacle of higher building or utility line. Also, the type of tree has moderate to high drought and sunlight tolerance.

Operation and maintenance of parks and public open space is a concern. A well-maintained open space enhances the perception of safety and the overall environmental for the users of all ages. In order to obtain the sufficient funding, the neighborhood needs to consider different financial resources. The community initiative projects within Urban Commercial Overlays can seek to be allocated from funding from the Urban Infrastructure Recovery Fund. Other than the Urban Forestry Office tree planting program mentioned in short term recommendation, Neighborhood Partnership Grants from the Columbus Foundation help support neighborhood organizations in low to moderate-income communities in Franklin County.²² The 501c3 organizations are eligible to apply for the maximum \$10,000 of each grant, and the proposed project activities should not exceed one year. The detail application information, see the Columbus Foundation website at <http://columbusfoundation.org/grants/columbus-foundation/neighborhood>.

Long Term (5-10 years)

Sustainable Milo-Grogan will provide a mature and continuous tree cover network throughout the neighborhood. To approach a sustainable community, the neighborhood needs zoning regulation or design guidelines to achieve the urban tree requirement.

The community has opportunities with the redevelopment of vacant residential parcels. The future neighborhood plan, led by the Department of Development, should include the design standard to establish the model of new housing completion. Future neighborhood plan can also address the potential of a tree-lined street network, with consideration of tree lawns, sidewalks, and bicycle facilities to provide a walkable friendly environment for the neighborhood. As mentioned in the opportunity assessment, trees benefit the community in multiple ways. As part of the new plan, a tree network study will include a visual inventory of current trees in the neighborhood. Additionally, new plantings will be prioritized according to areas that are lacking in tree canopy. This would bring about a completion of a neighborhood urban tree network plan.

Green Space

Recommendation: Encourage City of Columbus to convert vacant lots to community gardens

As demonstrated with the vacancy indicator, 18.02% of the properties in Milo-Grogan are vacant. These parcels can be utilized to benefit the community in multiple ways.²³ Turning these parcels into community gardens has a threefold purpose. First, the amount of green space in the community will grow as these parcels are converted. Second, fresh food access in the community will increase as residents will be able to grow their own healthy food. Third, the composting of some trash elements as proposed by the Energy and Waste Reduction group will help to cultivate the garden in a sustainable environmental and economic manner.

The City of Columbus has several programs that help to establish community gardens. Columbus' Community Garden Resource Manual



lays out steps for the implementation of these gardens.²⁴ Land owned by the city can be leased for one dollar through the city's land bank. The community can find available land for leasing on city's land bank website (<http://www.td.ci.columbus.oh.us/Bizdevelopment/BuyCityProperty/index.asp>). Additionally, the city's website provides links to water storage systems, tool rentals, and grant programs to help in the establishment of a community garden.²⁵ Local Matters is a non-profit that helps Central Ohio communities "inspire action because food impacts the quality of our health, our land and our communities."²⁶ Their program, Growing Matters, specifically deals with creating community gardens.

Short Term (1-3 years)

The Milo-Grogan Area Commission will reach out to Local Matters and the City of Columbus to increase awareness of the benefits for community gardens. Growing Matters provides workshops and educational opportunities for community members on the holistic approach to gardening and urban farming. This includes benefits such as leadership training, healthy eating habits and the implementation and furthering of community gardens.²⁷

Medium Term (3-5 years)

The Milo-Grogan Area Commission and Local Matters will look at available properties on the city's land bank website and begin converting them into community gardens. Properties can be leased for one dollar. The leased time would be for one growing season, usually April to November.²⁸ The community should follow the implementation and pricing options that have been outlined by the University of California.²⁹ On prospective lots, the community will have to have a soil test done to determine if

the soil is conducive to plant life. CAL MAR Soil Testing Lab in Westerville, Ohio provides soil test kits for \$14.95. They can be contacted at (877) 764-5522. After a soil test is completed, the land can be leased and the new garden can be planned out. Depending on the soil test, raised planting beds can be constructed or in-ground plots will be developed. Fencing, tool shed, water storage, and composting area should be included. Depending on the type of garden being constructed, the cost for the garden varies between \$2,500 and \$5,000. This excludes the water bill if onsite water storage is not provided.

Long Term (5-10 years)

The Milo-Grogan Area Commission and Local Matters will continue the outreach to new community members and begin converting more vacant parcels into community gardens. These new parcels would increase green space ratios for the community as well as providing fresh food for residents. The food could also be sold at local farmers markets located throughout the city.

Sidebar 3: Underutilized Spaces

Parcels owned by the State of Ohio, currently surround Interstates 71 and 670 and are overgrown and vacant.¹ These underutilized spaces can be developed into something much more aesthetically pleasing and functional.

A good example to look at the process and outcomes of these projects is the Florida Department of Transportation. Their website is <http://www.dot.state.fl.us/projectmanagementoffice/beauty/beauty.shtm>.

Contacting the Ohio Department of Transportation District 6



will give more information on the process. Their toll free telephone number is (800) 372-7714.



LUUE Figure 11: Underutilized space on 2nd Avenue between Interstates 71 and 670

Source: Luan Nguyen

Franklin County Auditor. (2015). Geographic Information Systems. Retrieved from <https://www.franklincountyauditor.com/real-estate/gis>

Recommendation: Install green roofs on commercial/industrial buildings

Green roofs provide additional green space on underutilized areas of buildings while also helping to mitigate stormwater runoff and decreasing heating and cooling costs for the owner. Additionally, the aesthetic value of a green roof provides a respite for the workers at these institutions. For a more detailed analysis on recommendations see the Stormwater Section below.

Stormwater Runoff/Water Quality

Recommendation: Retention of stormwater by residents for use as grey water

There are many ways that residents of Milo-Grogan can help the local environment through reducing the amount of stormwater runoff, as well as environments that are “downstream” from them; all the while promoting their own personal economic development. One such way is through the collection of rainwater. The roof of any structure provides an excellent opportunity for the owner to help both their own pocketbook, and the environment at the same time. Collecting roof runoff is simple since water is already funneled into the building’s downspouts. Instead of allowing this runoff to accumulate into the surface runoff, a property owner can intercept this discharge by installing a rain barrel at the end of downspouts that collect the water to be used as grey water. This grey water can be utilized for non-potable uses, such as for watering flowers or the lawn, washing the car or structures on the property, toilet water, or many other possibilities.

Rain barrels tie directly into the environmentally sound principles set forth in the vision. The environment will benefit from rainwater being collected by reducing the amount of pollutants being carried away by surface runoff. A property utilizing this strategy can see immediate savings on both their water bill and sewer fees (which is based off of overall water usage). Society as a whole will benefit as a decrease in the amount of stormwater runoff will result in less maintenance costs related to the existing stormwater collection system. See Sidebar 4 for more information.^{30,31}



Sidebar 4: Stormwater retention



Rain barrels can be made out of items lying around the house, Storage Talk. (2015). DIY to Save Money: Make a Rain Barrel for Garden Irrigation. Retrieved from <http://blog.storage.com/thrift-savings/diy-to-save-money-make-a-rain-barrel-for-garden-irrigation/>



Rain barrels can be ornamental and designed into the surrounding landscape. Rainbarrels.org. (2008). Products – pictures, features and pricing. Retrieved from <http://www.rainbarrels.org/id2.html>

Short Term (1-3 years)

The Milo-Grogan Area Commission will reach out to residents and businesses to increase awareness on the effects of stormwater. Emphasis will be on ways to decrease the amount of excess runoff created by the impervious surfaces on residential and business properties. This will require minimum costs and can be accomplished through flyers passed out to single-family homes and/or property owners, by actively promoting the idea during Area Commission meetings, or through electronic means. Emphasis will be placed on the collection of rainwater and explain the benefits to the individual's water and sewer bills.

Medium Term (3-5 years)

The Milo-Grogan Area Commission will continually monitor the implementation and utilization of rain barrels within the community as well as continue to reach out to residents and businesses to promote the use of rain barrels. Again this will require minimal costs and time associated with the implementation of this goal.

Long term (5-10 years)

The Milo-Grogan Area Commission will reach out to the City of Columbus to provide further incentives for reducing the stormwater runoff associated to individual properties. The Commission will attempt to start a dialog with the City of Columbus Public Utilities Department to address the possibility of reducing the water fees for individuals who reduce their water usage by a certain percentage each year.



Recommendation: City implementation of stormwater planters along principle corridors

A major contributor to stormwater runoff in urban areas, along with associated pollutant, is the impervious surface of roadways. Any runoff associated with areas where motor vehicles operate or park will contain a variety of contaminants such as oil or grease that can be carried away by stormwater runoff that will eventually enter local waterways. Vegetation is a natural combatant of pollutants in the environment. One way to capture the potential for pollutant removal by vegetation would be for the city to implement stormwater planters along the major corridors of the Milo-Grogan, specifically along Cleveland Avenue and 5th Avenue. Stormwater planters are vegetated planter boxes that allow stormwater runoff to enter from the street. They usually lie between the automobile and pedestrian traffics. The runoff is absorbed by the plants as it infiltrates the ground in the planter. Stormwater that exceeds the amount that can be infiltrated in a particular planter can be released and enter the next planter in the system or slowly released into the stormwater collection system. See Sidebar 5 for examples of these planters. These planters are located in the right-of-way, meaning it would fall entirely on the city to bring this recommendation to fruition, specifically the Department of Development.

The City of Philadelphia has implemented numerous programs to promote the reduction of stormwater runoff within the city through the implementation of Green Stormwater Infrastructure. One such program is the Green Streets Program. This program follows guidelines set out in the Green Streets Design Manual, which “provides design standards and procedural guidance for developing green streets that manage stormwater runoff.”³² In this manual, the City of Philadelphia sets out “how Philadelphia will design and construct our streets for decades to come.”³³ The first design standard set forth is the installation

of stormwater planters along major roadways with enough sidewalk width to support the implementation of an approximately two-foot wide box. The entire manual can be downloaded online at the following website: http://www.phillywatersheds.org/img/GSDM/GSDM_FINAL_20140211.pdf.

Sidebar 5: Stormwater Planter



Stormwater planters designed for Columbus Square in Philadelphia.



Diagram of stormwater planter structure
Philadelphia Water Department. (2015). Stormwater Planter. Retrieved from http://phillywatersheds.org/what_were_doing/green_infrastructure/tools/stormwater-planter



Short Term (1-3 years)

The Milo-Grogan Area Commission will contact the Public Utilities and Public Service Departments to discuss the desire for stormwater planters along Cleveland Avenue and 5th Avenue.

Medium Term (3-5 years)

The City of Columbus Department of Public Utilities will implement stormwater planters along Cleveland and 5th Avenues. Estimated cost of one planter is located in Table 1.

Table 1: Cost of Materials – Low Impact Development Best Management Practices Fact Sheet

Item	Unit	Estimated Unit Cost (2005 Dollars)
Planter box construction (concrete)	Cubic Yard	\$75 - \$125
Vegetation planting	Each	\$5 - \$20
Soil media	Cubic Yard	\$15 - \$25
4" dia. perforated under drain pipe	Linear Foot	\$8 - \$12

Long Term (5-10 years)

The City of Columbus Department of Public Utilities will need to perform annual maintenance of these planters. The maintenance will entail routine landscape maintenance such as trimming, watering during droughts, weeding, and litter removal, as well as routine cleaning of inlets and pipes. Estimated annual costs of Maintenance of planters can be viewed in table 2.

Table 2: Maintenance Costs - Low Impact Development Best Management Practices Fact Sheet

Item	Required Cost per Year (2005 Dollars)													
	0	1	2	3	4	5	6	7	8	9	10	...	25	
Installation	4,000													
Mulching, Weeding, and Debris Removal		300	300	300	300	300	300	300	300	300	300			
Replace Vegetation		100	100	100	100	100	100	100	100	100	100			
Concrete Repair						500						500		
Remove & Replace														4,000
Total Cost	4,000	400	400	400	400	900	400	400	400	400	400	900		4,000



Recommendation: Encouragement of green roofs

Green roofs are an excellent means of mitigating the negative effects of stormwater runoff. Green roofs are portions of roofs that have been designed to support the growth of vegetation. A green roof can have many purposes and produce positive environmental and economic benefits. A green roof on top of residential buildings can be used as a community garden, allowing economic savings for the residents. If implemented on top of a commercial structure, green roofs may be used as a break area for workers who wish to eat their lunch in a green space (see Sidebar 6).³⁴ Any collected rainwater (discussed in previous recommendations) can be used for routine watering of gardens or in times of drought. Green roofs are normally seen on commercial or multi-unit structures as most single-family housing units have slanted roofs on them. The slopes generally do not allow for water collection on the roof for vegetation, which means a watering system would likely be required to ensure a healthy supply of water. However, a forward-thinking person with the proper funds could find innovative ways to implement a vegetated roof. The city could potentially provide incentives to encourage citizens and developers to apply this stormwater management tool in their developments and improvements. Implementing green roofs will have the same economic, social, and environmental benefits discussed in the prior rain barrel section.

Short term (1-3 years)

The Milo-Grogan Area Commission will contact the City of Columbus' Office of Environmental Stewardship to request to work together to enhance the knowledge of residents and business owners on the benefits of having a green roof. This will be accomplished through the same means discussed earlier in the rain barrels section. The commission's main priority is to raise awareness, and again, would require minimal expenses.

Sidebar 6: Green Roofs

Howlett Hall on Ohio State's campus installed a 12,000 square foot green roof in September of 2013. The roof has a soil depth of 6 inches and over 7,000 plants on the roof. Additional seating options are provided to provide areas for people to relax and congregate. Over \$400,000 was raised and additional funding was provided by a grant from the Ohio EPA and the US EPA in accordance with the Clean Water Act. Estimates show that 191,196 gallons of stormwater are collected annually, with an additional annual savings of \$10,374 in energy costs and roof maintenance.



Greenroofs.com. (2015). The Ohio State University (OSU) Green Roof at Howlett Hall. Retrieved from <http://www.greenroofs.com/projects/pview.php?id=1597>



Medium term (3-5 years)

The Milo-Grogan Area Commission and the Office of Environmental Stewardship will continually monitor the implementation and utilization of green roofs within the community. They will continue to reach out to residents and businesses to promote the use of green roofs. Again, this will require minimum costs and time associated with the implementation of this recommendation.

Long term (5-10 years)

The Milo-Grogan Area Commission will encourage the City of Columbus to provide incentives for individuals that implement BMPs that reduce the runoff associated with their properties. The City of Columbus does not have a stormwater fee, only a sewer fee that is based off of water usage. As such, there is no financial incentive from the city to implement BMPs that do not contribute directly to water usage reduction. The commission will reach out to the city's Income Tax Division to develop a dialog for addressing the need for establishing a tax credit, either income or property taxes, that directly relates to the amount of stormwater runoff mitigated on-site through BMPs.



Transportation and Mobility

Vision

The Milo-Grogan community has an accessible, safe, and useable transportation system that provides reliable connections to both internal and external destinations. Improved pedestrian, cyclist, and transit facilities empower residents by linking them to opportunities within Milo-Grogan, surrounding neighborhoods, and the greater Columbus area.

Goals

1. 100% of all residential and commuter streets to have street lights
2. All underpasses to be adequately lit for drivers, cyclists, and pedestrians
3. 100% of sidewalks to be rated “Good” on Columbus Public Health’s sidewalk scale
4. Equip 100% of in-street storm drains with cyclist-friendly drain covers intact
5. 100% of bus stops to have a posted bus schedule
6. 100% of eligible bus stops (i.e. that meet ridership requirements) to have a COTA shelter
7. Percentage of residents with commute times greater than 60 minutes to be no higher than neighboring communities/Columbus as a whole

Indicators

Percent of Residents with a commute of longer than 60 minutes

Background

Access to reliable transportation is important for connecting residents to opportunities.¹ This indicator is intended to serve as

a proxy for the quality of transportation available to residents. Commute times can also have implications for the quality and availability of housing and jobs in a neighborhood, as well as traffic congestion and pollution.² Commute times for residents will depend upon a variety of factors, including distance of commute, time of day, and method of transportation used; commute times that are consistently longer than those of other Columbus residents suggest that either the transportation system as a whole places Milo-Grogan residents at a disadvantage, or that there is a lack of opportunity within Milo-Grogan, forcing residents to search for jobs in other communities. Additionally, approximately 20% of Milo-Grogan residents commute using public transit, a rate nearly ten times that of Columbus as a whole.³ Because of this dependency upon public transit, commute time data will, in many cases, have direct implications for COTA’s service to and through the community.

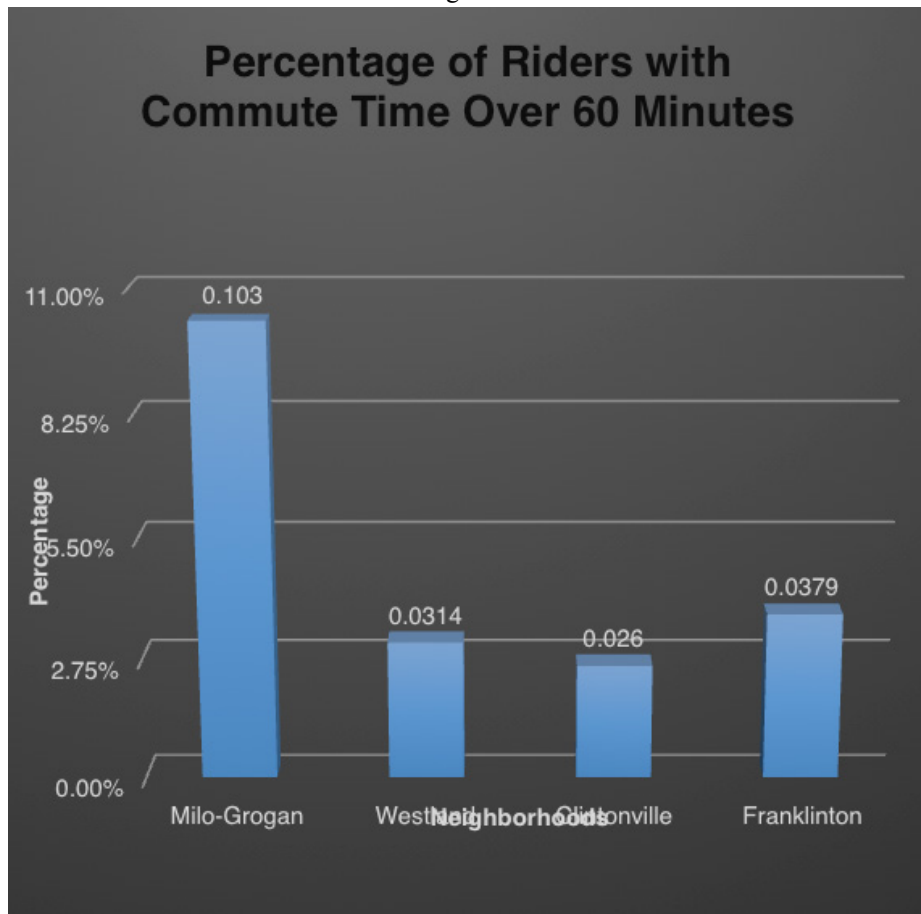
Measure

The American Community Survey tracks the reported commute times for respondents. Aggregating this data by neighborhood can provide an overall picture of commute lengths for residents of that neighborhood. This aggregated data does not provide an average commute time for the neighborhood, though it could be manipulated to approximate such an average. Instead, it shows the full distribution of residents’ commute time. The analysis focuses on the percentage of residents with commute times longer than 60 minutes as an indicator of how well the residents of Milo-Grogan are served by opportunities and transportation within their neighborhood.



Currently 10.3% of Milo-Grogan residents experience commutes of longer than 60 minutes, a much larger rate than the 2.7% among Columbus residents and 2.8% of residents in Franklin County.⁴ This rate is also higher than several comparable neighborhoods throughout Columbus, such as Clintonville and Westland (see the Opportunity Assessment for more details).

Figure 1



Description

This data can be found, separated by community, at www.findthehome.com. FindTheHome is a real estate data website operated by FindTheBest, a technology company focused on providing and interpreting a variety of market data to consumers. This could be a way for the Area Commission to continue to update and analyze the latest data, provided the website continues to be updated on a regular basis to accurately reflect the latest-available American Community Survey data. The data available on FindTheHome is currently limited to present-year data and does not allow for historical comparisons.

Number of bus stops in Milo-Grogan with a shelter

Background

Whereas commute times can be used as a proxy for the quality and reliability of a transit system, the provision of amenities at bus stops can shed light on its ease of use for the average rider. Possible amenities to be tracked include posted bus schedules, benches, and bus shelters. COTA currently differentiates between a basic bus stop, which normally consists of a sign to mark the bus stop, and a sheltered bus stop that includes a sign, shelter, and bench. According to COTA, they do not install benches independent of a bus shelter unless it is in collaboration with a neighborhood. Therefore, the number of official COTA shelters present at bus stops within Milo-Grogan can be tracked. Such facilities are important to improve the safety, convenience, and usability of the bus system.

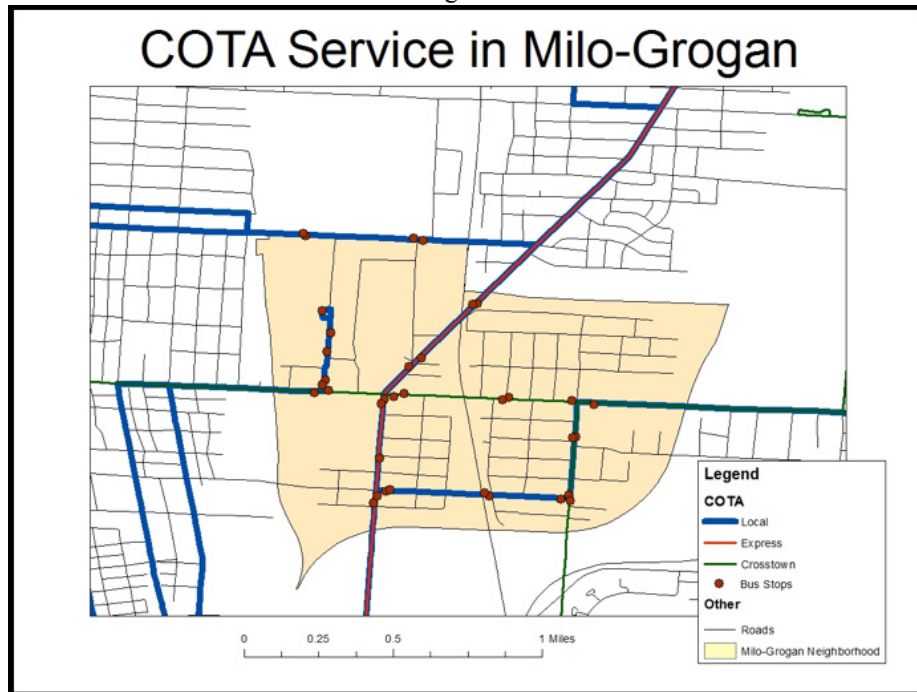
Measure

This indicator measures the number of bus stops within Milo-Grogan to be equipped with a bench and shelter, expressed as a percentage of the total bus stops in the neighborhood.



This data is currently tracked by COTA and is available to the public via a public records request to COTA's central office.

Figure 2



According to COTA, a bus stop must experience average daily traffic of 35 riders to be eligible for a shelter. The requested data shows that, of the 35 total bus stops in Milo-Grogan, three stops (8.6%) are currently equipped with shelters, while a total of ten stops (28.6% of the total) meet the required average daily traffic to qualify. Of the ten stops that meet the required traffic averages, the three with shelters represent a total of 30%.

Description

COTA will continue to be responsible for collecting and maintaining this data. As a public entity, COTA's files are considered to be public records and may be requested by the general public at any time. The Area Commission should request this information periodically (if not annually, then perhaps every 2-3 years) by filing a public records request for the bus stop amenities inventory for all stops within Milo-Grogan with COTA's customer service department at <http://www.cota.com/Contact-Us/Contact-Us.aspx>. We submitted our records requests through COTA Community Relations Manager Belinda Taylor at taylorb@cota.com.

Quality rating of sidewalks

Background

Safe, accessible, and properly-maintained sidewalks are a component of mobility in any neighborhood. Community outreach and observation early in the planning process revealed that many sidewalks in Milo-Grogan were cracking, uneven, or overgrown. Adequate pedestrian facilities are important connections to neighborhood amenities and support walking as an alternative mode of transportation that will improve the health and mobility of residents. As a community with above-average transit use for central Ohio, Milo-Grogan residents should maintain the sidewalks that provide access to and from bus stops. Communities such as Chapel Hill, North Carolina have used total sidewalk mileage as an indicator of pedestrian accessibility and mobility.⁵ In this case, we preferred to monitor the quality of sidewalks rather than the total length due to the deterioration of many existing facilities and the resulting safety, equity, and accessibility concerns.



Data was gathered from a walk study conducted by the City of Columbus Department of Public Health on July 11, 2014 as part of their Healthy Places Program to inform our evaluation of this indicator. According to Where Should I Walk? Walk Study Checklist, which contains rubrics for evaluating various road infrastructure, “the goals of the walkability study are to increase neighborhood residents walking in their neighborhood and to identify destination places that are within walking distance.”⁶ This walkability study covered just over a mile of Milo-Grogan streets and sidewalks in the southeast quadrant of the neighborhood and provided ratings for playability/recreation, sidewalks, streets and furniture, community gathering places, safety, housing, and environmental/public health concerns.

Measure

Data was collected using the City of Columbus Department of Public Health’s scale for sidewalk ratings as found in the Where Should I Walk? Walk Study Checklist. According to this scale, sidewalks may be classified as Good (sidewalks are wide with room to pass other walkers or walk with a friend; sidewalks are continuous throughout the walk; there is available shade along sidewalks), Fair (sidewalks are uneven, cracked, or broken; sidewalks are missing or stop in places), or Poor (there are no sidewalks or designated walking areas). Using this scale, we rated a total of 289 sections of sidewalk in Milo-Grogan on a block-by-block basis, with a separate rating given to each side of the street. Sidewalks were identified by the direction of traffic on their side of the street. For example, 4th Avenue between Howard Street and Lexington Avenue received one rating for the sidewalk along the eastbound traffic lane, and a second rating for the westbound side. If these sections, we found 13% to be in Good condition, 48% to be Fair, and 39% to be Poor. For purposes of this evaluation, sidewalks were also considered to be fair if they were too

narrow to pass other walkers (usually as a result of encroaching vegetation or sidewalk decay) or if there were no ADA-compatible ramps at intersections.

Figure 3: Poor Sidewalk



Figure 4: Fair Sidewalk



Description

Every street in Milo-Grogan was evaluated on a block-by-block basis, with a separate rating given to each side of the street. Sidewalks were identified by the direction of traffic on their side of the street. For example, 4th Avenue between Howard Street and Lexington Avenue received one rating for the sidewalk along the eastbound traffic lane, and a second rating for the westbound side. Due to time and labor constraints, observations were made while driving through the neighborhood. This data should be collected as needed to track sidewalk deterioration. The Area Commission will be responsible for updating this data or recruiting help from neighborhood residents or city staff to collect the data. While Columbus Public Health staff is available to conduct walk studies with neighborhood residents, these studies will be at a scale similar to the 2014 study, providing a more detailed look into smaller areas. The Area Commission or other neighborhood organizations can get additional information or organize such a walk study in collaboration with Public Health officials by calling 614-645-1260, emailing Health@columbus.gov, or by visiting the Healthy Places website at <http://www.columbus.gov/publichealth/programs/healthy-places/>.



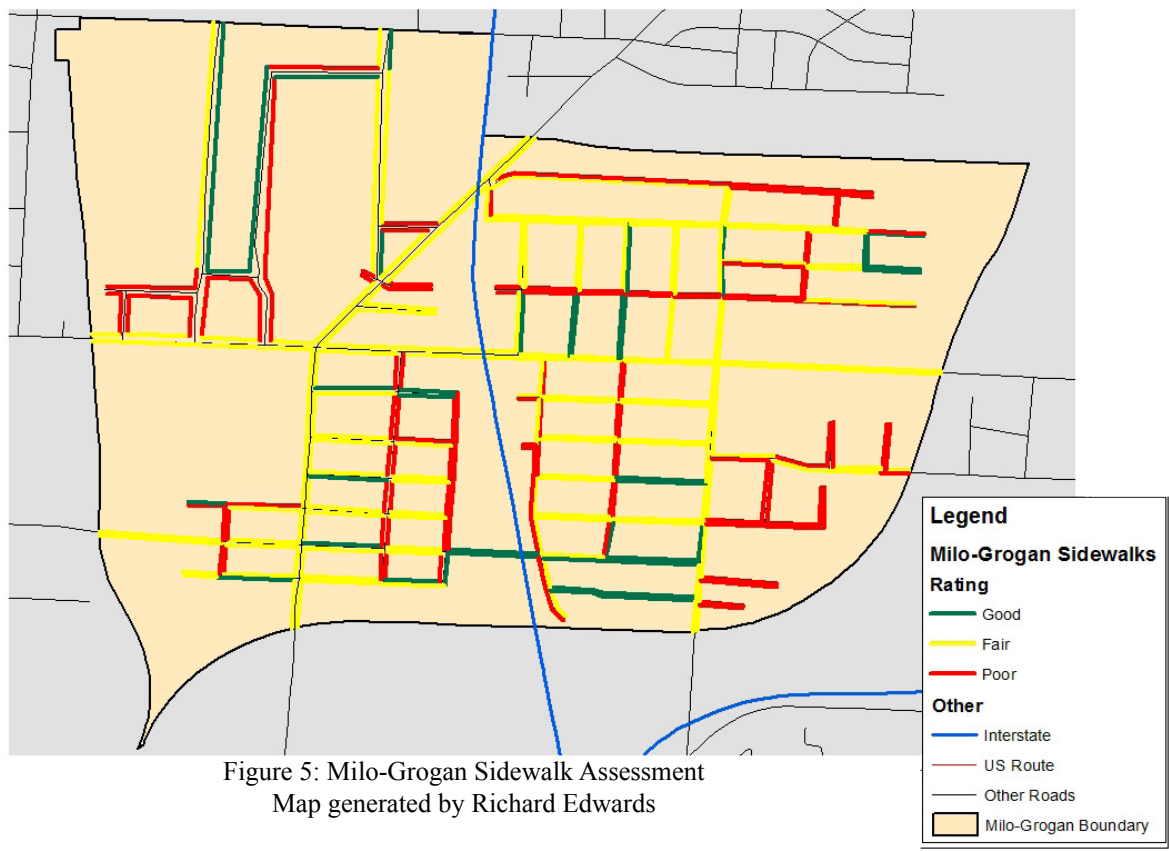


Figure 5: Milo-Grogan Sidewalk Assessment
Map generated by Richard Edwards



Opportunity Assessment

The following themes of opportunity were selected with input from the Milo-Grogan Area Commission and other community members. The assessments relating to sidewalk conditions, bus stop facilities, and bus service in the neighborhood are based upon the data provided by their associated indicators. Additional themes, including street lighting, drain covers, and the condition of highway noise barriers were also selected with input from the community. These themes are not directly linked to indicators. Nevertheless, they are topics to address, as they relate to the community's vision and goals for its future.

Sidewalks

According to the City of Columbus zoning code 2101.37, sidewalks are a “portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for the use of pedestrians”.⁷ Sidewalks are important for the health and vitality of a neighborhood.⁸ They can lessen the impact of obesity and chronic illnesses, reduce the need of an automobile, and increase property values. Although there are sidewalks along the major thoroughfares in Milo-Grogan, such as 5th and Cleveland Avenues and secondary streets such as 2nd and St. Clair Avenues, some streets such as 9th Street and Shoemaker Avenue in Milo-Grogan do not have sidewalks. There are reasons behind the lack of sidewalk infrastructure in Milo-Grogan. Milo-Grogan does not have a neighborhood school since the late 1970s, so the community does not participate in the Safe Walks to School program.⁹ Areas of the neighborhood, especially on the West side, have been zoned for manufacturing. These areas are devoid of pedestrian infrastructure. Many of the sidewalks that have been installed in the neighborhood before 1990 do not follow the Americans with Disabilities Act (ADA). Even with sidewalks installed

in the neighborhood, the residents who live there are unable to maintain the existing sidewalks due to median incomes being below the city average.¹⁰ This problem can be especially acute when the condition of the sidewalks warrant costly repair.

The data and information assessing sidewalks in Milo-Grogan is currently limited as of April 2015. The City of Columbus is working with a vendor to create an inventory of all sidewalks within its city limits. The estimated time of completion of the sidewalk inventory in Columbus is planned for May 2015. Another source of information is from Columbus Public Health. Their Healthy Places Program did a walkability study in Milo-Grogan in July 2014 of the southeast portion of the neighborhood along Howard, Lexington, Reynolds, and 4th. The Healthy Places Program uses a Walkability Assessment Checklist to assess the design of Columbus neighborhoods for walking and being active.¹¹ Walk Audit Reports are posted online and shared with staff from the City of Columbus Departments of Development, Recreation & Parks, Public Safety, and Public Service. The 2014 report revealed that many sidewalks appeared unsafe, lacked buffers and adjoined to the curb, and were not up to ADA standards.¹² This Opportunity Assessment encompasses the entire neighborhood and current state of sidewalk infrastructure.

There are multiple sidewalk assessment approaches used by the City. The Public Service Department has assessment criteria that were developed to prioritize the construction of sidewalks in the City of Columbus. These include potential pedestrian demand, safety, undeserved area, and transit service connection. Table 1 shows the sidewalk prioritization criteria.



Table 1
Source: City of Columbus¹³

Criteria	Brief description	Explanation
Potential Demand	The potential for walking activity to occur if sidewalks, paths or other appropriate walking facilities are provided.	Areas with higher levels of potential walking activity should have higher priorities for installing sidewalks than other areas. (This is also called "latent demand.")
Safety	Safety of pedestrians based on the number of pedestrian crashes	Sidewalks should be prioritized for locations with larger numbers of pedestrian crashes.
Underserved Area	The area within the 1958 Columbus boundary	Older areas of the city have infrastructure inequities that require priority attention.
Transit Service	Overall frequency of transit service	Areas with more transit service are likely to have busier bus stops and more pedestrian activity.
Partnering Project	An existing city project involving construction in the right of way.	If a project is planned to dig up a roadway, it can reduce the city's expense and public's inconvenience by including a sidewalk if possible.
Schools	School walking routes	Preferred walking routes to schools have been identified by the city and school districts to increase student safety.
Senior Population	Density of senior population	Concentrations of senior residents require more attention to sidewalks.
Population with Disabilities	Density of population with disabilities	Concentrations of people with disabilities require more attention to sidewalks.
Auto ownership	Density of zero-car households	Concentrations of residents without cars require more attention to sidewalks.
Children's activity centers	Locations to which children commonly walk	Activity centers consist of: libraries, playgrounds, recreation centers and public pools.
Sidewalk Gaps and Condition	A location with no sidewalk, or the physical condition of an existing sidewalk or similar facility	Condition includes: surface conditions (cracks, heaving, crumbling), dimensions (narrowness) and obstacles (poles, hydrants).
Identified Need	Project has been identified as a priority in an existing study.	A study, such as a Community Mobility Plan, has identified a particular sidewalk need.
T&P Commission	Project has been identified as a priority by the Columbus Transportation and Pedestrian Commission.	The city's advisory body, the Transportation and Pedestrian Commission, has formally identified a particular sidewalk need.

Columbus Public Health has their own rating systems for their sidewalks. Sidewalks are assessed and rated from Good, Fair, or Poor. Scott Ulrich from Columbus Public Health mentioned that their rating system for Columbus Public Health was a product of extensive research into the elements of walkability.¹⁴ Table 2 shows the sidewalk rating scale from Columbus Public Health.

Table 2
Source: Columbus Public Health⁶

GOOD	Sidewalks are wide with room to pass other walkers or walk with a friend. Sidewalks are continuous throughout the walk. There is available shade along sidewalks.
FAIR	Sidewalks are uneven, cracked or broken. Sidewalks are missing or stop in places.
POOR	There are no sidewalks or designated walking areas.

Utilizing the Columbus Public Health rating system for sidewalk assessment, we were able to assess 289 sidewalk segments in the Milo-Grogan neighborhood during a two and a half hour period on Sunday March 22, 2015. Each sidewalk segment was determined by the length of the block and its intersection with another street. From the 289 sidewalk segments, 13% were rated Good, 48% were rated Fair, and 39% were rated Poor. Figure 6 shows the sidewalk assessment pie chart. Figure 7 shows the sidewalk assessment bar chart. Figure 8 shows the map of the sidewalks assessed in the Milo-Grogan neighborhood.

Figure 6

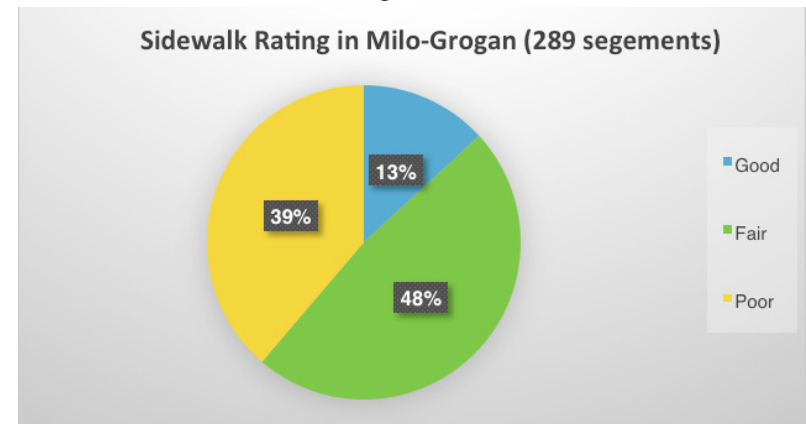


Figure 7

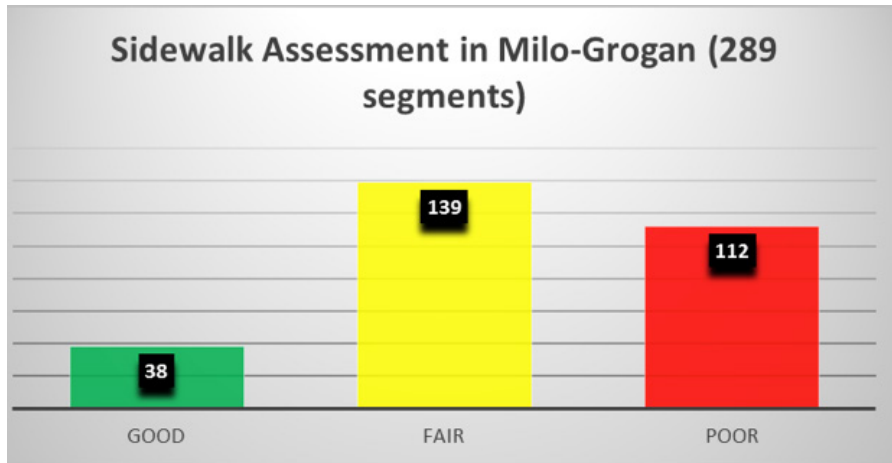


Figure 8

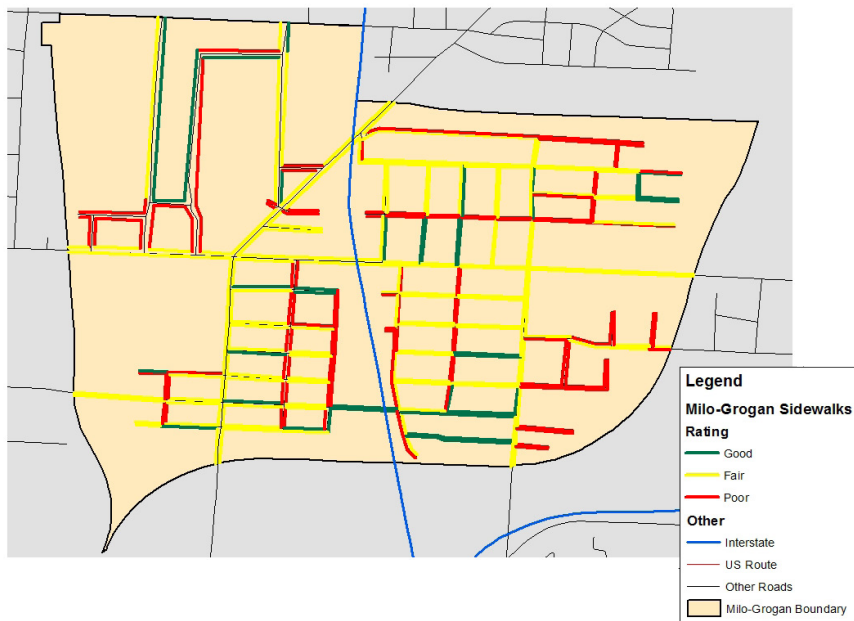


Figure 9



Drain Covers

Drain covers are often damaged or stolen by thieves and sold as scrap metal. Having improper or missing sewer drainage can be a safety hazard for residents, especially children. An example of this occurred in the town of Martins Ferry (125 miles east of Columbus) in November 2014. A child was injured after falling into a storm drain and was rescued by first responders.¹⁷ Another consideration looks at sewer grates being not up to code and dangerous for



for bicyclists. This may become a serious issue if bicycle sharrows are to be added on 2nd Avenue as planned in the UIRF.

Sewer grates direct rainwater either into nearby rivers or sewer treatment facilities in Columbus. Garbage getting into the sewer is a problem in Milo-Grogan with the location of two waste transfer stations in the neighborhood. Garbage can block the sewer grates and travel to rivers directly. Even with the Neighborhood Pride program effort that cleaned up trash in September 2014, Area Commission Chair Mr. Robert Barksdale commented that the garbage continues to be blown from the waste transfer stations and from trucks travelling to them. The Division of Sewage and Drainage is responsible for drain covers. Dax J. Blake is the administrator for the Division of Sewerage and Drainage in Columbus. The Sewage and Drainage Operating Fund collects money from customers' water and sewage bills, which are then used to make improvements and repairs to the city's sewer system.¹⁸ The City of Columbus has a 311 number for residents to call if a sewer grate is missing.¹⁹

Table 3 shows the catch basin grate and curb inlet dimensions from the 2006 Stormwater Drainage Manual for the City of Columbus. All curb inlets in the City of Columbus are to have an opening in the side of a curb. Catch basins are slotted inlets usually flushed with the surrounding ground, and combination inlets have a curb opening and a catch basin with a slotted grate.²⁰

Table 3

City Catch Basin Grate and Curb Inlet Dimensions

Standard Drawing	Shape	Clear Opening Area, A (ft ²)	Grate Length, L (ft)	Grate Width, W (ft)	Inlet Length (ft)	Inlet Height (ft) ²
AA-S115	Round Catch Basin	2.9	3.0	3.0	-	-
AA-S116	Round Catch Basin	2.7	3.0	3.0	-	-
AA-S123	42° Curb Inlet	-	-	-	3.5	>4
AA-S123	60° Curb Inlet	-	-	-	5.0	>4
AA-S126	Standard Curb Inlet	-	-	-	2.33	6.25
AA-S128 ¹	Combination Curb and Gutter - Standard	2.7	2.8	1.4	-	-
AA-S133	Square Catch Basin	2.5	3.9	2.1	-	-
AA-S138	Round Catch Basin	0.9	1.9	1.9	-	-
AA-S139	Square Catch Basin	1.9	1.6	2.0	-	-
AA-S140	Rectangular Catch Basin	1.1	1.8	1.2	-	-
AA-S141	Square Catch Basin	1.9	1.9	2.0	-	-

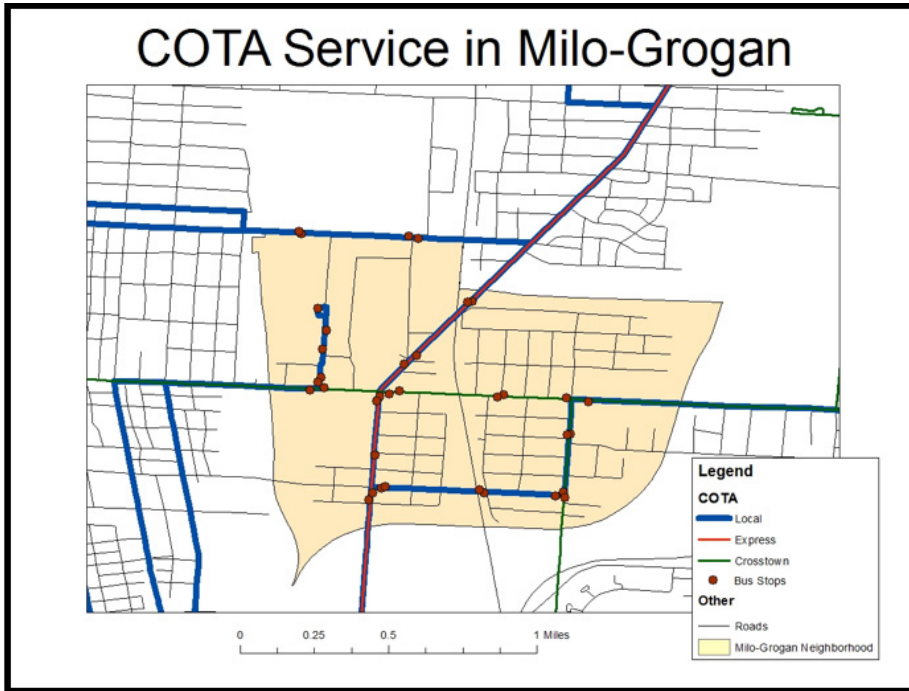
1. The capacity of combination curb and gutters shall be calculated as a grate inlet. The additional capacity from the curb inlet is to serve as overflow when grate becomes blocked with debris.
2. Depth of inlet opening can vary depending on height of curb and capacity needs. A depression should be provided to achieve an inlet height of at least 4 inches.

COTA Service and Facilities

The COTA bus system is the only public transportation choice for people living in Milo-Grogan. According to the 2013 data from ACS (American Community Survey), the people who taking public transportation in Milo-Grogan is 20.49%, which is much higher than the percentage in either Franklin County (2.36%) or Columbus (2.98%) as a whole. According to the COTA website, as of January 2015, there are 8 bus lines that transect the Milo-Grogan neighborhood (10 bus lines in total but line 35 and line 52 do not have stop in Milo-Grogan) with 35 bus stops within the community.



Figure 10: COTA service in Milo-Grogan
 Source: COTA website, GIS map created by Richard Edwards



The stops connect potential destinations within the neighborhood and between the neighborhood and elsewhere in Columbus, including churches, shopping, and employment. This makes the condition of bus stops an important element of the safety and usability of public transportation. COTA defines 3 types of bus stop in Columbus: basic stop, accessible stop and transit hub. (See TM Table 4) As of 2015, 31 out of 35 bus stops in the neighborhood are “basic” stops,²¹ which means they have boarding areas that are demarcated by the placement of a COTA route sign, with no additional improvements such as a shelter or bench,²² see TM Figure 11. According to the ACS data, Milo-Grogan residents experience commutes of longer than 60 minutes more frequently than residents of other neighborhoods. 10.3% of commuters in Milo-Grogan have commutes over 60 minutes as compared with Westland at 3.14% and Clintonville at a mere 2.6% as shown in Figure 12 below.²³ This is at odds with the overall locational connectivity of the neighborhood discussed previously.

Table 4: COTA bus stop types
 Source: Bus Stop Design Guide-COTA

Amenity	Basic Stop	Accessible Stop	Transit Hub
COTA Sign	Yes	Yes	Yes
Regulatory Sign	Yes	Yes	Yes
ADA Landing Pad	No	Yes	Yes
Information Case	No	No	Yes
Shelter	No	Site Specific	Yes
Lighting	No	No	Yes
Trash Receptacle	Site Specific	Site Specific	Yes
Bicycle Rack	No	No	Yes



Figure 11: Basic Bus Stop Example
 Source: Bus Stop Standards Manual



Figure 12: Source: Neighborhood/National Comparison. (2013, December 1). Retrieved March 5, 2015

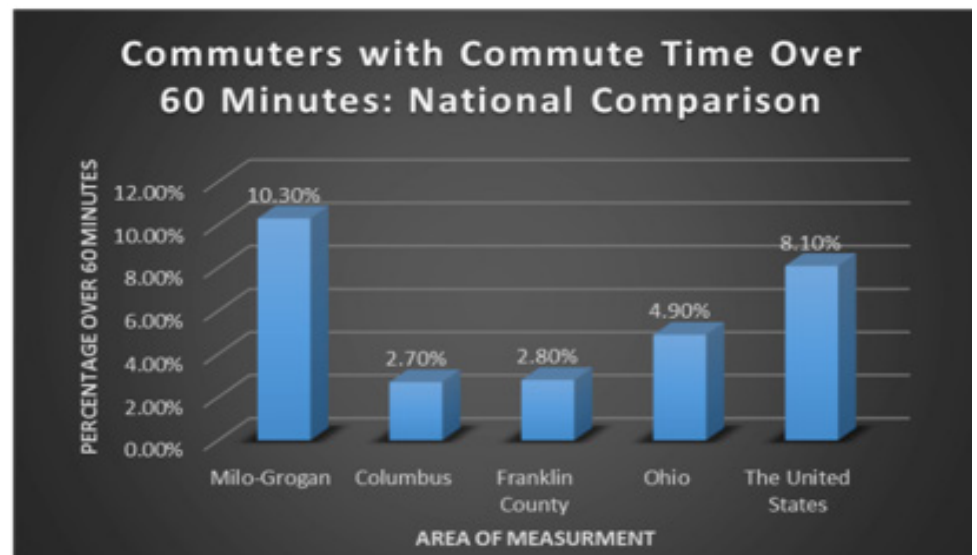
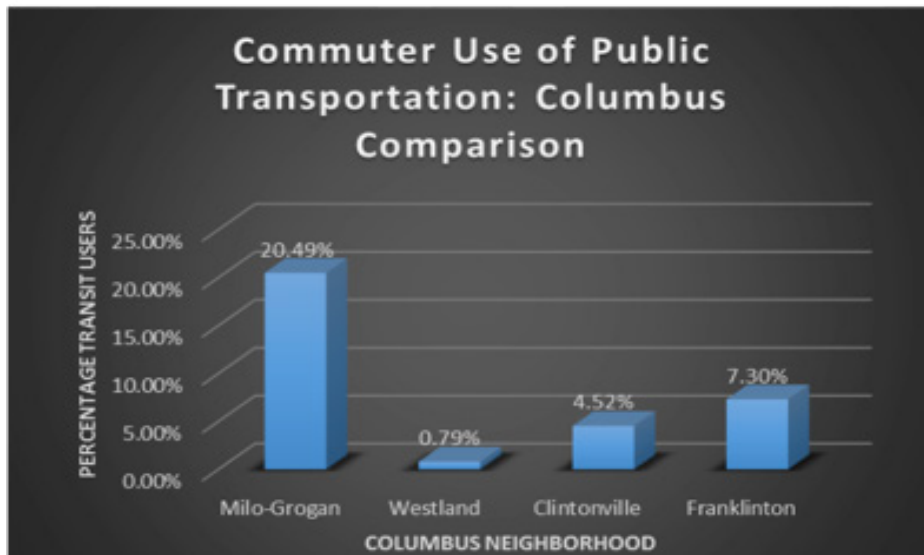
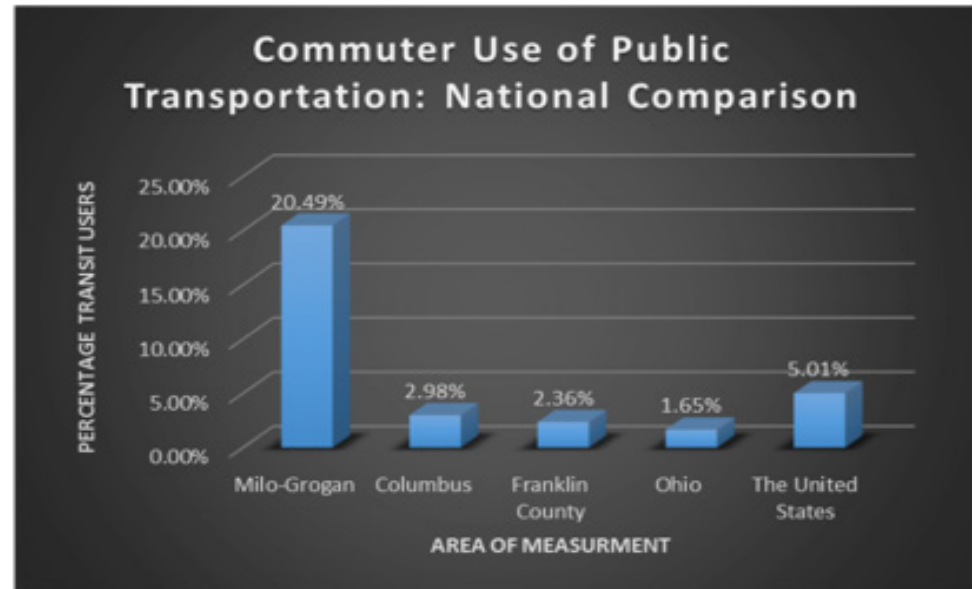
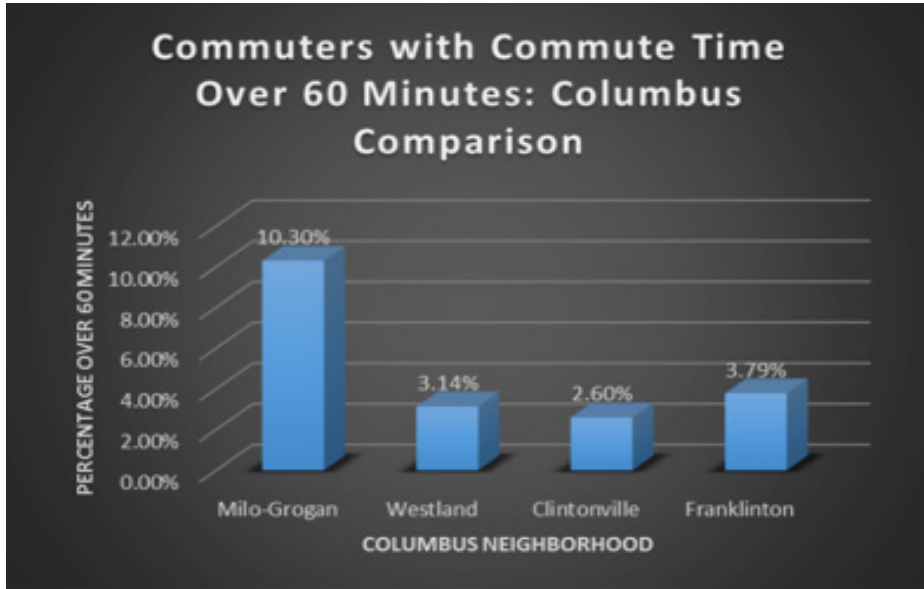
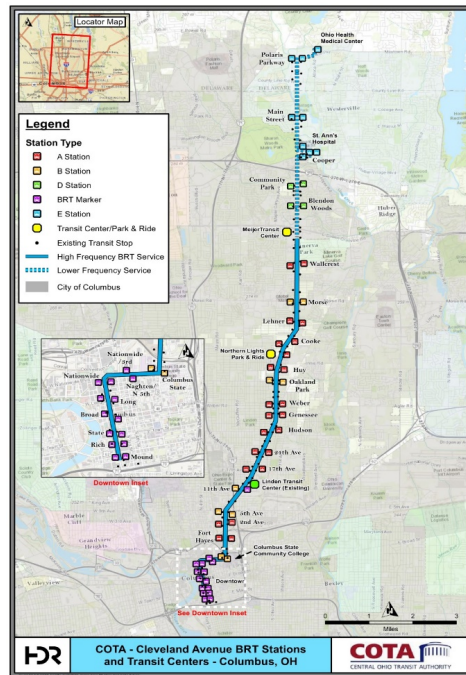


Figure 13: CMAX Proposed Map



A new Bus Rapid Transit (BRT) line known as CMAX will be completed by 2017 which will enhance public transportation connections efficiency Milo-Grogan.²⁴ According to COTA, CMAX will transport riders between Downtown Columbus and Polaris Parkway/Africa Road, stopping at 62 designated stations in both directions along the way. This is an improvement over existing service levels, which requires riders to take the 96 first before transferring to the 92. CMAX will also compliment service from Local Line 1 along Cleveland which is currently going through Milo-Grogan. CMAX will reduce travel time by approximately 21 percent with estimated 35-39 minutes trip time between Downtown and SR-161, and 48-56 minutes between Downtown

and Polaris Parkway/Africa Road According to the COTA website, there will be 4 CMAX stations in Milo-Grogan, with two Type A stops at 2nd Avenue, and two type B stops at 5th Avenue (See Table 5 on CMAX bus stop classifications). The new CMAX stops will replace 4 existing bus stops: Cleveland & 5th will be type B stop and Cleveland & 2nd will be type A stop. All of the stops will have a bench, shelter, lighting and trash can. Type B station will have bike parking, public art and landscaping. All of the stations will have a CMAX marker and signage, real time arrival information, and a COTA system map or schedule.

Table 5 CMAX station types & amenities

Source: Cleveland Avenue BRT Project Update. (2014, January 1). Retrieved March 8, 2015, from http://www.cota.com/COTA/media/PDF/BRT/Fact-Sheet-8-26-14_nopink.pdf

CMAX STATION AMENITIES

Amenity	Type A	Type B	Transit Center / Park & Ride	Type D	Type E
Number of Stations	25	9	2	4	9
Locations	Abbott, 2nd, 17th, 24 th , Hudson, Genesee, Weber, Huy, Northern Lights, Cooke, Lehner, Wallcrest & Northland Plaza	Columbus St., 5th, 11th, Oakland Park & Morse	Northern Lights & Meijer	Blendon Woods & Community Park	Cooper, St. Ann's, Main, Polaris & Africa
Boarding Area & Connections					
Concrete loading & waiting	•	•	•	•	•
Raised boarding area with tactile strip			•		
Sidewalk connection	•	•	•	•	•
ADA ramps	•	•	•	•	•
Distinctive pavement & crosswalks		•	•		
Shelter & Waiting Area					
Indoor waiting area			◊		
Shelter with bench & lighting	•	•	•		
Bench only				•	
Trash can	•	•	•	•	
Surrounding Amenities					
Bicycle parking		•	•		
Public art		•	•		
Landscaping		•	•		
Park & Ride spaces			◊		
Customer Information					
CMAX marker & signage	•	•	•	•	•
Real time arrival information	•	•	•	•	•
COTA system map/paper	•	•	•	•	•
Ticket vending machines			•		



In addition to the CMAX line, COTA also has a Long Range Transit Plan that covers the time frame from 2012-2035.²⁶ In this plan, COTA has proposed future changes with its different services that impact the Milo-Grogan neighborhood. For example, in the local line improvement plan, COTA proposed to increase the frequency of multiple fixed lines including 81 line.

Street Lighting

Lighting is highly relevant for safety within the Milo-Grogan community. Lighting facilities provide people with enhanced visibility during the nighttime and also add aesthetic value to the community. The street lighting system in Milo-Grogan meet the ODOT 2012 standard. Under these standards, local roads of 25'-35' width should have light pole spacing at a maximum 120'. The I-670 Bridge over 2nd Ave. does not have lighting facilities. The I-71 overpass at 2nd Ave near Howard only has lighting on one side of the street. Also the underpass at Washington Ave & 2nd Ave does not have lighting either. According to the Ohio Traffic Engineering Manual, underpass luminaires may be required beneath any structure whose transverse width (between outer edges of parapets) is 75 feet or more.²⁷ According to Kraig Shrewsberry, the District 6 Traffic Operations Engineer, the lighting I-71 bridge pass over 2nd is appropriate to light the 2 lane roadway. But if Milo-Grogan residents feel the luminance needs to be improved, they can noticed ODOT on this and ODOT will work with the City of Columbus on this issue. Also, for other street lighting, under the Columbus Right of Way (Row) Plan Routing Manual, any required relocation, support, protection, or any other activity concerned with the City's electrical facilities in the construction area is to be performed by the contractor under the direction of DOP personnel and at the expense of the project.²⁸

Figure 14: Underpass at 2nd Ave & Washington Ave



Figure 15: I-71&2nd AVE



The new CMAX line also brings new infrastructure into the community. There will be new lights installed in the platforms, which will also benefit the surrounding neighborhood. Besides the new CMAX line, the addition of lights under both the I-670 & I-71 overpasses is also in the top 9 priorities of the 2015 UIRF funding list.

I-71 Noise Barriers

Noise barriers on busy roads allow a community to capitalize upon the economic opportunities that such roads provide while mitigating noise pollution from the high traffic volumes. According to the Ohio Department of Transportation (ODOT), noise barriers on all interstate highways and state routes are constructed by ODOT, or by a private contractor on ODOT's behalf, and the maintenance of such barriers is also ODOT's responsibility except in cases where a maintenance agreement assigns that responsibility to another entity.

According to Noel Alcala, Noise and Air Quality Coordinator with ODOT's Office of Environmental Services, there are a total of three barrier segments along I-71 within Milo-Grogan. Two noise walls were constructed out of fiberglass composite next to the southbound side of I-71 in 1989. An additional 0.4-mile wooden barrier was constructed along the northbound side in 1992

Figure 16: I-71 Noise Barriers in Milo-Grogan



Table 6

Source: Highway Traffic Noise Analysis Manual, Ohio Department of Transportation

Noise Barrier Rating Descriptions

Noise Barrier Rating	Required Maintenance Action	Description
5	None	New Barrier < 15 yrs. old in great condition
4	None	Barrier >15 yrs. old still in good condition
3	Coating within 5 years	Some efflorescence, dirt, poor aesthetics, little to no structural damage
2	Immediate coating or full replacement within 5 years	Heavy efflorescence, dirt, poor aesthetics, some structural damage
1	Immediate full replacement	Structural damage/deterioration throughout length of barrier

Noise walls are evaluated according to the Noise Barrier Condition Ratings outlined in the ODOT Highway Traffic Noise Analysis Manual and reproduced in Table 6 below. According to Mr. Alcala, the noise walls within Milo-Grogan are evaluated on nearly a monthly basis due to their location in a high-traffic part of I-71 and the frequency with which evaluation teams pass them during the course of their regular duties. All three barrier segments currently have a rating of “2”, and the two wall segments along the southbound portion of I-71 are currently scheduled to be replaced in 2018. The northbound wall is not currently scheduled for replacement.



Transportation and Mobility

Sustainability Assessment

COTA Service

Recommendation: Improve bus stops' facilities

Short Term (1-3 years)

Have bus schedules at bus stops with daily ridership of at least 10 individuals within Milo-Grogan. As of March 2015, all of the bus stops in Milo-Grogan are classified as “basic stops.” A basic stop is defined by COTA as: “boarding/alighting areas that are demarcated by the placement of a COTA route sign, with no additional improvements. (See Opportunity Assessment for details). These types of bus stops are placed in areas with no existing sidewalks and in areas where there may be existing sidewalks but no other construction was being performed at the time of installation.”²⁹ According to Andrew Volenik, the Facilities Manager of Central Ohio Transit Authority, COTA currently has 2 variations of schedule information underneath a bus stop sign. One is called COM180's (communicating information only to one side or 180 degrees of the sign post) and the other is called CBUS informational signs (seen at all CBUS stops). Mr. Volenik also pointed out that the COM180 boxes have schedule information indicating what line and when that line should be at the bus stop. The COM180 boxes cost approximately \$280 per box. CBUS informational signs show a map of the route, bus stop locations and points of interest and/or landmarks and cost \$25. According to Mr. Volenik, even though the CBUS information signs are cheaper and functional, to make these for every bus stop in the system would be impossible to maintain and keep updated. In order to implement this measure, Milo-Grogan can contact Mr. Volenik and talk about adding CBUS information signs to neighborhood bus stops.

We propose for short-term improvement, a schedule is added at bus stops with a minimum of 10 daily riders; this will enhance COTA service within Milo-Grogan. A bus schedule can effectively reduce peoples' waiting time at the bus stop. Even if people missed previous bus, they can easily find out when the next bus will come. The funding source will be the COTA operation fund, which comes from its revenue. It is funded through 0.25% permanent sales tax and a 0.25% temporary sales tax, and it is renewed every ten years. This measure can contribute to enhancing COTA services within Milo-Grogan.

Medium Term (3-5 years)

Have benches at bus stops with more than 35 daily riders in Milo-Grogan (See Figure 14). In previous research, the primary factor for COTA to add a new freestanding bench at a stop is the average daily boardings of the stop. Daily ridership must be at least 35.³⁰ According to Belinda Taylor, the Community Relations Manager of Central Ohio Transit Authority, COTA is not responsible for bench installation at bus stops; however, they will partner with the community or neighborhood on planning to have benches. We believe benches can enhance COTA services within Milo-Grogan. The Milo-Grogan community can contact Andrew Volenik, who is the Facilities Manager of Street and Remote of Central Ohio Transit Authority, to have a conversation on installation of the benches, and the Milo-Grogan community will complete the installation as well as the maintenance. One of the funding sources can be donations from Milo Arts. Milo Arts currently hosts 29 artists³¹ and after the community develops an agreement with COTA, they can participate in this process and develop facilities with Milo-Grogan branding.



Sidebar 1: Squatter bench in Milo-Grogan

Currently, the bus stop benches in Milo-Grogan are “squatter benches”. They are made of either wood or concrete. Mostly they are installed by advertisers who have agreements or contracts with the community. The picture shows the “squatter benches” in Milo-Grogan.



Image courtesy of Luan Nguyen.

Sidebar 2: Benches

Creative bus stop benches can be found everywhere in the world. Figure 18 shows the Anti-Advertising Agency and Packard Jennings' Oakland based Bus Stop Bench in CA. This project has 2 parts. For the first part, the Agency created a survey to poll residents in the neighborhoods surrounding 10 Oakland bus stops regarding what advertising tactics they found most bothersome in their neighborhoods. Then Jennings developed targeted illustrations for each neighborhood and the team installed the work.³²



Figure 18
Source: Lambert, S. (2006, May 18). A virtual tour of the benches Retrieved March 30, 2015, from Bus Stop Bench Project



Figure 19
Sources: Lambert, S. (2006, May 18). Installation view at Catharine Clark Gallery. Retrieved March 30, 2015, from Bus Stop Bench Project





Figure 20
 Source: Belinda Taylor, the Community Relations Manager of COTA
 GIS map created by James Burdin

Long Term (5-10 years)

Have shelters, trashcans, paper boxes and lighting facilities at stops with more than 35 daily riders (See Figure 20). COTA is doing a ridership assessment regularly. According to Belinda Taylor, the Community Relations Manager of Central Ohio Transit Authority, COTA will install shelters at bus stops that have at least 35 daily riders. Ridership is the primary factor for shelter decisions, however other factors include: if the stop has ADA accessibility and number of bus routes the stop serves. According to Andrew Volenik, the Facilities Manager of Central Ohio Transit Authority, a standard shelter costs \$5,100 for construction and installation. Shelters measures 4’x10’ or 4’x12’. There are 2 versions of shelters because the right-of-way can be limited at times and require a smaller shelter. COTA will be responsible for the shelter installation. Funding will come from the COTA operation fund. As more development occurs in Milo-Grogan, the community will attract more residents in the future. Thus, COTA can determine certain stations that are eligible for upgrades based on ridership and other factors.

Recommendation: Reduce the average travel time of Milo-Grogan residents

Short Term (1-3 years)

COTA should conduct a comprehensive assessment on bus routes and ridership information monthly to ensure the best possible service. As of March 2015, COTA conducts regular ridership assessments that assess the average daily ridership of bus stops and rank them according to this ridership³³ COTA could use this information to do the bus stop analysis, see which bus stops have consistently high ridership, and understand which bus stops have



increasing or decreasing ridership. According to Mr. Barksdale, the chair of the Milo-Grogan Area Commission, the major employers of Milo-Grogan residents are Easton Town Center and Polaris. According to the COTA website the average commute time to Polaris is between 40 minutes to 1 hour 24 minutes. The average commute to Easton Town Center is between 46 minutes to 1 hour 6 minutes. Each commute would require a one-time transfer. Based on the ridership analysis, COTA can remove stops with nearly zero ridership to reduce the travel time. Also, in COTA 's Short Range Transit Plan,³⁴ they propose to improve line 9's service frequency from 50 minutes to 30-35 minutes on Saturday from 2014-2017. This will be a valuable service improvement for the neighborhood and should be implemented as soon as possible.

Medium Term (3-5 years)

Make the best use of CMAX line (see Opportunity Assessment) and incorporate with the use of fixed routes. The construction of the CMAX line will be completed by 2017, and it will reduce the travel time significantly and add more destinations for Milo-Grogan residents. There will be 4 CMAX stations in the community by 2017. COTA can enhance the residents' knowledge about the CMAX line.³⁵ In addition, since some of Milo-Grogan residents have common destinations such as Easton Town Center and Polaris, those who have the same destination and work schedule can participate in the vanpooling program of MORPC's. Passengers pay a monthly fee that covers use of the van, insurance, maintenance, 24-hour roadside assistance, fuel and parking. The specific cost is based on the number of riders on the vanpool, fuel cost, and the mileage the van is traveling. The van is driven by a volunteer driver and the number of people using the van is limited.³⁶ Incorporating this program with the CMAX will make a great

contribution to reducing the percent of residents with a commute of longer than 60 minutes, which is our first indicator.

Long Term (5-10 years)

Have an effective bus routes system that can reduce travel time by at least 30%. COTA can continue to work towards this goal through periodic system reviews that seek to connect residents to important destinations and through thorough implementation and improvement of its Long and Short Range Transit Plans. By focusing long-range planning on the current and projected conditions in a community, COTA can continue to ensure a high quality of service for residents. As part of this long range plan, COTA is investigating new amenities, including a proposed One-Stop Trip Itinerary Planner.³⁷ This program will feature a One-Stop Trip Information system (trip planner). It will take requests for transportation needs from the customer or agencies. Once the appropriate transportation has been identified, the trip planner will link the customer with the agencies or transportation providers to request trips.³⁸ Since this program is still in a proposal stage, there is no information on specific costs and implementation timeline. According to the Long Range Transit Plan, several agencies expressed an interest in participating in the program.³⁹ Therefore, after the One-Stop Center is being established, Milo-Grogan residents who is working at Easton Town Center and Polaris can encourage employers to participate in this program, significantly reducing the travel time.



Street Lighting

Recommendation: Enhance lighting at the underpass of I-670 and I-71 over 2nd Avenue and enhance the quality of lighting facilities within the community

Short Term (1-3 years)

Negotiating with City of Columbus on enhancing lighting system under the bridge of I-670 and I-71 pass over 2nd Avenue. According to Mr. Barksdale, the chair of the Milo-Grogan Area Commission, there are no lights under the I-670 Bridge (section) and 50% (one side of the street) under the I-71 Bridge. According to the Highway Lighting Guide by ODOT, lighting is required if transverse width of structure is 75 feet and shadow is “significant” (based on 30’-40’ MH and 15’- 17’ vertical clearance).⁴⁰ ODOT is responsible for installing and maintaining lights under both of the aforementioned underpasses, and operates a new facility fund for supporting this and similar facilities projects.

Medium Term (3-5 years)

Have lighting at every bus stops with in the community. According to COTA’s Bus Stop Standard Guide, adequate lighting at bus stop facilities allows bus drivers and approaching traffic to see waiting passengers at night. Lighting also provides added security for those waiting at the stop, in addition to illuminating the route and schedule information for patrons. Lighting can be provided by a nearby streetlight, ambient light from the adjacent businesses, lighting installed within the shelter, or a stand-alone light pole. Transit stops without sheltered lighting should be located within 50 feet of an overhead light source.⁴¹ Bus stop light fixtures or shelter illumination should be between 1.5 to 2.0 foot-candles.⁴²

According to the Pedestrian and Bicycle Center, a pedestrian-level streetlight has an average cost of approximately \$4,900.⁴³ In terms of street lights construction and maintenance, Kraig Shrewsberry, the District Traffic Operations Engineer of ODOT District 6, stated that by the time of April 2015, ODOT is re-writing an agreement with the City of Columbus on highway lighting and street lighting. Generally, if Milo-Grogan residents want to enhance lighting at certain bus stop, they can contact ODOT and they will notify the City of Columbus on the issue. Therefore, by the end of the 2020, 100% of bus stops should have lighting facilities.

Long Term (5-10 years)

Have a completed and quality lighting system within Milo-Grogan. All the lighting facilities should fulfill the standards and regulations of ODOT and City of Columbus. According to Kraig Shrewsberry, the District Traffic Operations Engineer of ODOT District 6, the City maintains all of the ODOT lighting inside of 270, except the 670/High Street tunnel/cap and the 71NB to 670 tunnel/daytime lighting. The City of Columbus also has its design specifications on street lighting. ODOT and the City of Columbus can authorize contractors for street light installation, and according to ODOT’s new project application Policies and Procedures, all proposed streetlight requests will be reviewed by ODOT for proper locations. A permit is required for attachment of streetlights to existing poles as well as for new poles.⁴⁴ Thus, Milo-Grogan can either notify ODOT for improvement of streetlights or entrust third party contractors to do the improvement.



Drain Cover

Recommendation: Decrease the occurrence of missing drain covers

Short Term (1-3 years)

The Area Commission or other concerned residents should report any instances of missing drain covers to 311. Once reported to 311, the City of Columbus Department of Sewerage and Drainage (DOSD) will go out and replace the missing grate.⁴⁵ The Area Commission should work with 311 to conduct additional outreach within Milo-Grogan to increase awareness of this resource (see recommendations below).

Medium Term (3-5 years)

Create a drain adoption program to allow residents to participate in the upkeep of drain covers. Volunteers who live in the neighborhood will make sure that: litter does not accumulate around sewer drains, sewer drains are kept clear of leaves and other debris, and ensure the drainage of water following heavy rains. Damaged or missing drain covers should still be reported to 311 for repair, but having volunteers periodically monitor the condition of drain covers will increase the likelihood of those problems being reported. This approach will be modeled after the City of Seattle's "Adopt-a-Drain" program. The program was created by Mayor Ed Murray in 2007 as a way to combat the effects of climate change and the hazards of flash flooding neighborhoods.⁴⁶ Citizens are to sign-up for the program by selecting a neighborhood sewer drain.⁴⁷ Those who participate are contacted by Seattle Public Utilities (SPU) about upcoming weather events.⁴⁸ The Area Commission could elect to organize a pilot program in the neighborhood by recruiting and organizing volunteers, or they

could contact their City Council members for assistance in submitting a proposal for such a program city-wide. In the long term, the program could be run by the City of Columbus Department of Sewerage and Drainage, but should be organized in conjunction with the Area Commission in order to solicit the local volunteers necessary to make the program successful. If successful, the program could even be expanded to include other public infrastructure that must be regularly maintained or submitted to 311 for repair or replacement.

Long Term (5-10 years)

The third solution is for the City of Columbus to replace any sewer grates that are considered to be substandard and a general hazard for bicyclists who bike in Milo-Grogan. The Mid-Ohio Regional Planning Commission (MORPC) has reported best practices for Bike and Pedestrian Facilities in Central Ohio. The report mentioned that bicycle lanes should be provided with adequate drainage to prevent potentially hazardous conditions.⁴⁹ Perpendicular drainage slots should be avoided from usage. To remediate those perpendicular sewer grates already installed, MORPC recommends a temporary correction; welding thin metal straps across the grates perpendicular to the drainage slots at 4 inches with center-to-center spacing should be considered.⁵⁰ This is only to be used when resources are unavailable at the moment to replace the entire sewer grate. Retrofitting sewer grates should be prioritized by the placement of bicycle infrastructure especially on streets where bicycle sharrows are added.



Recommendation: Increase resident awareness of 311

Short Term (1-3 years)

The City of Columbus' 311 service is designed to give Columbus residents a single point of contact for non-emergency service requests. According to 311 Service Manager Lois Bruce, 311 is always looking for ways to inform residents of the available services and would be willing to conduct additional outreach. 311 already stocks informational brochures that list their contact information and the types of services provided, as well as refrigerator magnets with contact information. The Area Commission should contact 311 to acquire these materials and make them available in the Recreation Center and other community gathering places.

Medium Term (3-5 years) to Long Term (5-10 years)

The Area Commission or other interested neighborhood groups should organize opportunities for 311 representatives to present their services to members of the community. Any interested community group can contact 311 Service Manager Lois Bruce at LFBruce@columbus.gov or (614)645-1550 to arrange an engagement opportunity. The Milo-Grogan Area Commission already has a link to the 311 website on its own page, but may consider ways to make the resource more visible or better-explained for residents with service requests.

Sidewalks

Recommendation: Enhance sidewalk conditions in Milo-Grogan

Short Term (1-3 years)

The Area Commission and the City of Columbus should implement an adopt-a-sidewalk program to shovel when snow or ice events occur. The City of Chicago created a similar initiative in 2012 under Mayor Rahm Emanuel to ensure that all sidewalks are shoveled during the winter months.⁵¹ Citizens are asked to register online and select sections of sidewalk along a street that they will shovel following major winter storm events.⁵² Such a program would help to ensure that sidewalks are properly maintained, while at the same time reducing the burden on elderly or disabled residents. The Area Commission could elect to organize a pilot program in the neighborhood by recruiting and organizing volunteers, or they could contact their City Council members for assistance in submitting a proposal for such a program city-wide. In the long term, the program should be run by the City of Columbus, but should be organized in conjunction with the Area Commission in order to solicit the local volunteers necessary to make the program successful. Once this program is established, either as a neighborhood pilot or on a city-wide level, it may even qualify for community service hours required by many local schools and universities, adding to the pool of available volunteers.

Medium Term (3-5 years)

Inform residents in the neighborhood about their responsibilities as property owners to adequately maintain the quality of their sidewalks. Although the City of Columbus' Public Service Department has information on their website concerning the respon-



sibilities of property owners of their sidewalks, this is only one line of communication.⁵³ Creating an informative pamphlet to property owners is a way to address concerns by mail to follow up on any 311 reports made and increase awareness of the adopt-a-sidewalk plan. The City of Seattle has an informative pamphlet informing residents of their responsibilities as property owners to maintain their sidewalks.⁵⁴ Additionally, educating residents on the Columbus Public Health rating scale used here for evaluation can help to clarify expected levels of maintenance.

Long Term (5-10 years)

In order to repair and replace existing sidewalks, the City of Columbus needs to create a funding mechanism to maintain a state of good repair of its sidewalks in impoverished neighborhoods. With little income from property owners and UIRF funds prohibited from being used to repair older sidewalks, money to maintain sidewalks in impoverished neighborhoods is limited.

One solution is to call in code violations against property owners that do not keep up their sidewalks. However, in the case of low-income families or elderly or disabled residents, the homeowner or resident may not be able, either physically or financially, to make the necessary repairs. The Housing Division of the Columbus Department of Development offers a variety of homeowner assistance programs, including the Chores Program, the Better Municipal Care for Veterans Program, and the Linden Home Repair Program.⁵⁵ Some of these programs may be willing to fund sidewalk repairs if the repairs are shown to be necessary for the health and safety of the homeowner. Others might be expanded to include sidewalk funding or used as models for new infrastructure programs within the City. For more information about homeowner assistance programs, contact the Karen Francis of the Housing

Division at KDFrancis@Columbus.gov or 614-645-7896. Other municipalities have funded sidewalk repairs in a variety of ways, including issuing public bonds, assessing annual sidewalk fees, and appropriating general funds or particular revenue lines for the purpose.⁵⁶ Any of these actions would require an ordinance from the City Council to create, change, or fund such a program. Anyone wishing to propose such a program should contact their city councilor.

The neighborhood could also begin to raise its own funds for the purpose of assisting homeowners with sidewalk repair. Sidewalk costs in Columbus generally cost between \$4.42-5.82 per square foot, meaning a 50-foot length of sidewalk will likely cost between \$1,100-1,500.⁵⁷ This would require a significant commitment on the part of the Area Commission or any other neighborhood organization, both for fundraising and for managing the funds raised.

Recommendation: Increase walkability in Milo-Grogan

Short Term (1-3 years)

The Area Commission should utilize the data provided from the sidewalk assessment indicator to prioritize streets for new sidewalk construction using UIRF funds. According to that data, areas designated as “Poor” have no sidewalks and should be eligible for new sidewalk construction. When prioritizing sidewalk construction, the Area Commission should consider the factors listed in the City of Columbus’ sidewalk priority scale as discussed in the Opportunity Assessment.



Medium Term (3-5 years) to Long Term (5-10 years)

Identify and secure federal funding for the construction of new sidewalks. Streets that do not have sidewalks or have been identified by the Milo-Grogan in the short and medium-terms should get sidewalks first. The Milo-Grogan Area Commission should draft written documents for grant proposals to the Federal Highway Administration (FHWA). Two programs include the Transportation Alternatives Program (TAP) and Transportation, Community, and System Preservation Program (TCSP). The TAP will help in funding sidewalks in areas with close proximity to mass transit and community improvement activities.⁵⁸ The TCSP will help in funding sidewalks that will encourage private sector development in the community and increase efficiency in access to jobs and services.⁵⁹

A more local solution is for the City of Columbus to consider raising the gas tax to help fund sidewalk and bicycle improvements throughout the city. City Council can draft a proposal which can be voted by registered voters in an election to raise the gas tax within the City of Columbus. The amount proposed would have to be determined by the City Council and the Mayor of Columbus. Several states such as Arizona, Oregon, North Carolina, and Washington allow for the distribution of funds for pedestrian improvements from the gas tax.⁶⁰

Noise Wall Improvement

Recommendation: Repair or replace the existing noise walls

Short Term (1-3 years)

According to Noel Alcala, the ODOT central staff member in charge of noise wall construction and oversight, the two wall segments along the southbound portion of I-71 are currently scheduled to be replaced in 2018, but the northbound wall, which also has a rating of “2” (see the Opportunity Assessment for more details), is not currently scheduled for replacement. By the end of 2015, the Area Commission should draft a formal letter to Ferzan M. Ahmed, Deputy Director of ODOT District 6, with a courtesy copy to Noel Alcala of the ODOT central office, formally requesting that the project be expanded to include the northbound wall, that additional funds be added to the project to support the replacement of the northbound wall, and, if possible, that the project be accelerated and given the highest possible priority. This letter should outline previous requests by members of the area commission to have the wall repaired as well as photo documentation of the structural and aesthetic deficiencies of the existing wall. If ODOT is unwilling to accommodate any of those requests, the Area Commission should request that a separate project be approved and appropriation set aside to replace the northbound sound wall no later than calendar year 2020 per the ODOT Highway Traffic Noise Analysis Manual, which requires that a wall given a rating of “2” undergo immediate maintenance or full replacement within 5 years. The Area Commission should continue to document communications with both the ODOT District 6 office and the ODOT central office regarding this matter, and should continue to document any deterioration of the wall. If such deterioration should continue to occur, the Area Commission



should request that the maintenance classification be changed to “1”, requiring immediate replacement of the structure.

Medium Term (3-5 years)

ODOT will be responsible for planning and constructing the noise wall replacements or contracting to have these done. According to Noel Alcalá, under the current timeline plans for construction should begin in either 2016 or 2017 with construction taking place in 2018. The Area Commission should continue to communicate with both Mr. Alcalá and the District 6 office to make sure that any maintenance and construction fully addresses the needs of the community. If ODOT is unwilling or unable to include the northbound wall in the 2018 project, the Area Commission should continue to communicate with Mr. Alcalá and the District 6 office regarding the status of that project.

Long Term (5-10 years)

Once both noise walls have been replaced, they are expected to have a functional lifespan of approximately 25-30 years. During this time, the Area Commission should continue to communicate with the District 6 office should any unforeseen problems with the wall arise or should additional maintenance be required.

Recommendation: Ensure proper maintenance of vegetation along noise wall

Short Term (1-3 years)

According to the Franklin County Auditor’s website, all land abutting the I-71 noise wall in Milo-Grogan is the property of ODOT. Maintenance of such property is ODOT’s responsibility unless it can be documented that such responsibilities have been transferred to another entity. If the vegetation is not properly or regularly maintained, the Area Commission or concerned residents of the neighborhood should contact the ODOT District 6 offices to request maintenance.

Medium Term (3-5 years) to Long Term (5-10 years)

Eventually the neighborhood may wish to modify the noise wall and surrounding parcel as part of a neighborhood place-making or beautification project. If the neighborhood or Area Commission wishes to consider such a project in relation to the noise wall and surrounding land, a formal proposal and request for permission should be submitted to the ODOT District 6 office and a courtesy copy sent to Mr. Alcalá or any other staff responsible for noise walls in the future.



Conclusion

Milo-Grogan is a historic neighborhood whose industrial past predates its annexation to the City of Columbus. It was a thriving manufacturing center throughout the first half of the 20th century. Like many industrial neighborhoods nationwide, its prosperity began to decline in the latter part of the 20th century as suburbanization, highway construction, and an overall decline in American manufacturing took their toll. This plan recognizes the challenges posed in such a neighborhood by proposing a new vision for sustainable development in Milo-Grogan that balances economic development, environmental preservation, and social equity. This plan represents the first step towards that vision for the future of Milo-Grogan:

In a vibrant Milo-Grogan, citizens and their government share responsibility to assess, implement, monitor and enforce sustainable policies that meet the present and future needs of the community. Milo-Grogan will do this through the enhancement of economic vitality, mobility, and social equity with special care toward the dignity of individuals, their safety, fair treatment, and meaningful involvement in community decisions to ensure the quality of life for present and future generations of residents.

Milo-Grogan will attain this vision by implementing sustainability policies in four key thematic areas. The community will conserve energy and reduce waste in the community by altering their approach to waste management, engaging the waste transfer stations to reduce their impact on the community, and educating businesses and residents about the financial and environmental benefits of improved energy and water efficiency. Sustainable development practices will improve social equity and economic conditions in

the neighborhood by improving access to childcare for residents, forming a Milo-Grogan business association, encouraging preservation and adaptive reuse of existing structures, improving access to social services, and improving access to resources for renovating, maintaining, and owning homes. From an ecological land use perspective, Milo-Grogan will embrace environmentally-friendly policies by encouraging additional green space and street trees and implementing storm water management policies. Finally, Milo-Grogan will continue to develop a safe and user-friendly approach to transportation through infrastructure and service improvements to transit service, lighting, sidewalks, noise barriers, and other street infrastructure.

This plan attempts to address the needs of the community and to provide recommendations that will help it to achieve its goals and visions for the future. This plan was developed as part of a 16-week project and will be inherently limited in its scope by these time restrictions. The recommendations in this plan should not be viewed as a comprehensive list; rather, it is our hope that this plan and its recommendations will serve as an inspiration for the community to pursue sustainable development policies and to continually assess and analyze sustainability indicators in the community.

Once adopted by the Area Commission, the policies and recommendations in this plan should continue to inform future planning projects including, but not limited to, future zoning map amendments, collaboration on economic development initiatives, and the eventual revision of the 2007 Milo-Grogan Neighborhood Plan.



Appendix

Municipality of Anchorage, Alaska – Code of Ordinances

26.80.050(B)

Fee schedule for unsecured loads.

1. Unsecured loads transported by cars, pickups or trailers eight feet or less in length shall be charged \$10.00 more than the secured load charge described in subsection A. of this section. As a convenience, the customer may purchase a \$7.00 tarp sold by the solid waste disposal utility for future use.
2. All other unsecured loads shall be charged \$30.00 more than the secured load charge described in subsection A of this section.

26.80.050(C)

Municipal disposal permit accounts.

1. Individuals or firms which regularly use the municipal disposal facilities may obtain a permit card badge which authorizes the extension of credit for disposal service transactions. Applications for a permit card badge may be obtained at the office of the director, solid waste services department. All applications shall be signed by an authorized agent of the individual or firm applying for the permit card badge. All applications are subject to approval by the director, solid waste services department, or his designee.
2. Approved applicants will be supplied one permit card badge at no charge. Additional or replacement badges will be issued for a charge of \$5.00 per badge.
3. Customers will not be allowed to charge transactions unless they present a valid permit card badge to the weigh station attendant.
4. Charges for which credit is extended under a permit account will be billed monthly on the solid waste utility billing statement.
5. Failure to maintain a permit account in a current condition may

subject the permit to cancellation at any time without notice to the permit holder.

City of Dublin Zoning Code - 153.133(A)

This section describes the minimum requirements that shall be met in regard to perimeter buffer landscaping for different land use areas, perimeter landscaping for vehicular use areas, interior landscaping and shading of parking lots, landscaping for service areas, and additional site landscaping for businesses, buildings, structures or other new developments.

(A) Perimeter buffer landscaping requirements.

- (1) Purpose. It is the purpose of this section to improve the appearance of vehicular use areas, to separate vehicular and pedestrian traffic areas, to reduce the effects of glare from automobile headlights, to screen the appearance of parking areas from public rights-of-ways and adjacent properties (vehicular use area perimeter requirements), and to require buffering between different land uses and along certain public rights-of-way (property perimeter requirements).
- (2) Opacity requirements. Landscape materials, fences, and walls used to fulfill perimeter landscaping requirements shall be installed to provide 100 percent year round opacity. Landscape materials must be an evergreen species. The height of plant material used to fulfill the requirements of this section must be installed per § 153.135 and meet height and opacity requirements within four years after installation.
- (3) Perimeter buffer landscape zone. The perimeter buffer landscape zone shall be provided by the property owner adjoining the street, unless the authority building the street has fully met all requirements on the street right-of-way. When adjacent to other common boundaries, the perimeter buffer landscaping:



- (a) May be placed on either adjoining parcel, or astride the boundary, if both owned and being processed by the same owner; or
 - (b) Generally shall be placed on the activity listed under Appendix A, column B and Appendix B, column B, when adjoining parcels have different owners; or
 - (c) May be placed astride the boundary of adjoining parcels having different owners if a written agreement, signed by both owners, is filed with the Planning Director, as a public record; or
 - (d) Shall be placed on the activity or parcel being processed when adjoining property is already developed with the exception of Appendix A, lines 6 and 7; or
 - (e) Shall not be required along the common boundary if the requirements of this chapter have been fully complied with on the adjoining property, in fulfillment of the requirements of this chapter.
- (4) Property perimeter requirements. Property perimeter requirements provide buffering between different land uses and along certain rights-of-way. See Appendix A.
- (5) Vehicular use area perimeter requirements. Vehicular use area perimeter requirements provide buffering of areas used by vehicles such as parking lots and driveways from adjacent property or public rights-of-way. See Appendix B.
- (6) Requirements conflicts. Whenever a parcel or activity falls under two or more of the categories listed in the table of division (A)(4) or (5) hereof, only one category, that with the most stringent requirements, shall be enforced.
- (7) Perimeter buffer landscape zone conflicts. The required perimeter buffer landscape zone may be combined with a utility or other easement as long as all of the landscape requirements can be provided in addition to, and separate from, any other easement. Cars

or other objects shall not overhang or otherwise intrude upon the required perimeter buffer landscape zone more than two and one-half feet, and wheel stops or curbs shall be required.

(8) Existing landscape material. Existing landscape material shall be shown on the required plan, and any material in satisfactory condition may be used to satisfy these requirements in whole or in part when, in the opinion of the public approval authority, such material meets the requirements and achieves the objectives of this chapter.

(9) Landscaping at driveway and street intersections. To insure that landscape materials do not constitute a driving hazard, a sight triangle shall be observed at all street intersections or intersections of driveways and streets. Within this sight triangle, no landscape material nor parked vehicles, except for required grass or ground cover, shall be permitted. Within the sight triangle, trees shall be permitted as long as, except during early growth stages, only the tree trunk is visible between the ground and eight feet above the ground, or otherwise does not present a traffic visibility hazard. The sight triangle is defined in the following sections and is illustrated in Appendix C.

(a) Driveway intersection sight triangle. At intersections of driveways with streets, the sight triangle shall be established by locating the intersection of the street curb with the driveway edge, and by measuring from this point a distance of ten feet along the driveway to a point and a distance of 20 feet along the street curb to a point and connecting these points.

(b) Street intersection sight triangle. At street intersections, the sight triangle shall be formed by measuring at least 35 feet along curb lines and connecting these points.



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