University at Buffalo
The State University of New York

B/a+p

Assessments and Recommendations

AGE
FRIENDLY
ERIE COUNTY

May 2017

Age-Friendly Erie County

A Graduate Urban and Planning Studio

University at Buffalo, School of Architecture and Palnning

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This report is presented to Age Friendly Erie County.

SUMMARY

This report is a summary of an urban planning studio conducted in the Spring of 2017 at the University of Buffalo School of Architecture and Urban & Regional Planning. Titled "Assessments & Recommendations for a More Age-Friendly Erie County", this studio, conducted by Professor Bumjoon Kang, brought together 9 diverse students from the Master in Urban Planning program and the dual Masters in Architecture and Urban Planning program. The University of Buffalo has established a culture of civic engagement and this studio is a representation of the school's long term commitment to that engagement in Erie County, New York.

The goal of the studio assesses and recommends how Erie County, New York can become more age-friendly. Having age-friendly communities has become a crucial topic to planners as the aging population increases. Through research and guidance with professionals and citizens, we were able to take on this issue in Erie County, NY. During the studio, we interacted with employees at the Erie County Senior Services, American Association of Retired Persons (AARP), UB's Center for Inclusive Design and Environmental Access, and aging people of Erie County that we met through meetings and community conversations. From these interactions, the studio was able to connect the age-friendly efforts of the county and the needs expressed by aging people in order to complete a comprehensive report of Erie County's age-friendliness.

The report's introduction delves into what age-friendly is, how it is incorporated into the planning process, partnerships of the studio, and meetings attended. The second chapter discusses the demographics of Erie County, why Erie County should focus on becoming more age-friendly, and cities that have incorporated successful age-friendly plans. Chapter three presents a vision of an age-friendly Erie County. Chapter four is an age-friendly assessment of Erie County's outdoor spaces, transportation, housing, and respect and social inclusion programs. Chapter four also assesses various municipalities' master plans and if there are age-friendly elements included in them. Chapter five analyzes surveys Erie County aging people have taken, and community conversations that the studio has attended. Finally, the sixth chapter covers key domains of an age friendly community.

Many age-friendly initiatives cover eight to ten domains that are important to making a community become age-friendly. After meetings and conversations, the studio chose to focus on four that were of highest concern and most commonly discussed. The four domains focused on were Outdoor Spaces, Transportation, Housing & Community Support, and Respect & Social Inclusion. Each domain includes an evaluation, current goals & metrics, and future recommendations for Erie County.

This report was a collaborative approach that could not have been accomplished without the support of multiple senior service groups, various academic departments, and most importantly the aging people of Erie County, NY. We hope that this report emphasizes the importance of incorporating an age-friendly plan into a community, and that the report can serve as a vision for the potential Erie County has for becoming more age-friendly.

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Introduction

1.1 Our Initiative

The University at Buffalo Spring 2017 Masters of Urban Planning Studio aims to create an Age-Friendly assessments and recommendations plan for Erie County's built environments and social environments. With this, Erie County can become further committed to creating an inclusive and sustainable community for all residents young and old.

There are assessments of:

1) Erie county's age-friendly livability: This was calculated as an index at the census tract level using measurements specific to the four domains of high concern to aging people in Erie County.

2) Existing comprehensive plans: This was evaluated by using content analysis method, to test age-friendliness in local governments' comprehensive plans. The criteria were classified by AFEC's ten domains.

3) Parks and open paces: Quantity and quality of parks were evaluated in multiple methods.

4) Transportation: Public transit and other transportation accessibility for aging people throughout Erie County.

5) Community conversations: This includes suggestions and opinions of underrepresented groups in Erie County concerning age-friendly attributes.

6) Housing: Housing availability and housing conditions within Erie County were assessed.

7) Age-friendly programs: Specifically, the availability of inclusive cross-generational programs, and recommendations for implementation of new programs in the future were examined.

Based on the seven assessments above, we developed recommendations focusing on domains of community support, housing, transportation, park and outdoor spaces, and social inclusion.

Figure 1-1 Working in Studio

1.2 Planning Background and Partnership

1.2.1 Planning Background

The plan initiated from the background of aging global and local trends and the upper guidance from the world, country, and state level. **The trends.** With growing research on the population of those who are aging, age friendly has become a more urgent and crucial topic within planning. From now until 2050, the United States as a whole will experience a great deal of growth and therefore the population of those who are considered 'elderly' is expected to reach 83.7 million. That figure almost doubles what the 'elderly' population currently is.[1] Due to the "baby boom" between 1946 and 1965, aging people are growing more rapidly nowadays. Erie County is rapidly changing in terms of demographics.[2] Erie County, along with 163 communities across United States and the world, believes it is necessary to start Age-Friendly plan. Age-friendly plan ensures a healthier and more collaborative county that gives each community member a sense of purpose and a feeling of respect. Age-friendly planning also examines and audits an area with an "age friendly lens". This means that every action, assessment, and suggestion is taking the older population's needs and wants into consideration.

Plan needed. Since the overall population is growing consistently older due to individuals living longer, policies and plans need to be created, updated, and maintained to properly serve the public.[3] An "aging-friendly" community has all major systems (housing, transportation/ mobility, health, social interaction, productivity, cultural and religious involvement, educational and leisure activity) being responsive to the changing needs.[4] Many cities are experiencing deterioration or isolating residential communities from central commercial, transportation and recreation hubs. Major highways, suburban developments and lack of transportation reaching citizens who decided to move out of the city center are all becoming factors on how isolated an individual or family will be from everyday necessities.
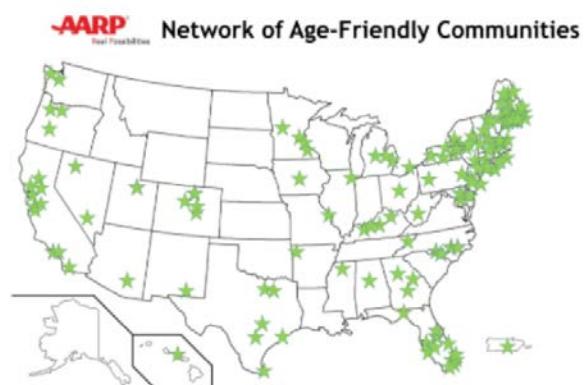
Upper guidance. The World Health Organization (WHO) was one of the first organizations to publicly support and start an age-friendly community initiative. The World Health Organization defines age-friendly as follows: "An age-friendly city encourages active aging by optimizing opportunities for health, participation and security in order to enhance quality of life as people age... In practical terms, an age-friendly city adapts its structures and services to be accessible to and inclusive of older people with varying needs and capacities."[5] The World Health Organization launched the 'World Health Organizations Age-Friendly Cities and Communities Program' in 2006 with a focus group research project. As a result of the research, a guide was created to provide preparation assistance to cities that will be experiencing rapid

growth of the aging population. The WHO's guide.[6] indicated definition and guidance of age-friendly plans. The WHO is now working toward an "Age-Friendly World" and supports a global network of cities, communities, and neighborhoods that want to also join the movement and become more age-friendly. The organization provides information, tools, and practices to implement actions at the local level for those who want to join the cause and make a real change in their community.

Figure 1-2 Age-Friendly in Practice

Source: WHO. From: http://www.who.int/ageing/age-friendly-world/en/

Updated January 3, 2017

Figure 1-3 AARP Network of Age Friendly Communities. 2017

Source: AARP. The Member List. From: http://www.aarp.org/livable-communities/network-age-friendly-communities/info-2014/member-list.html

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1   *World Population Ageing 2015. Report. Economic and Social Affairs, United Nations.*
2   *U.S. Census Bureau. 2015. Erie County, New York.*
3   *Age Friendly Erie County. Buffalo, NY: AFEC, 2017.*
4   *Scharlach, Andrew. "Creating Aging Friendly Communities in the United States." Ageing Int., 2012, 25-38.*
5   *"Towards an Age-friendly World." Ageing and life-course. Accessed May 2, 2017. http://www.who.int/ageing/age-friendly-world/en/.*

6   *World Health Organization. (2007). Global age-friendly cities: A guide. World Health Organization.*

1.2.2 Planning Partnerships

University at Buffalo Planning Studio produces the Age-Friendly Erie County Assessment and Recommendation Plan. The plan builds on the previous work conducted by Age-Friendly Erie County Network, the Erie County Department of Senior Services, People Inc., and the Center for Inclusive Design and Environmental Access in UB.

Erie County. Erie County and its many municipalities are making efforts to allow positive improvement towards age equality. It is important to aging people to remain in place they choose and maintain their independence. However, different areas have different situation in transportation, physical spaces, and social opportunities. Erie County Senior Service developed a survey that refined questions to get answers on what was lacking or thriving in the county. The resident survey came in the form of paper and online. Over 1,100 surveys were received back.

Age Friendly Erie County (AFEC). Age Friendly Erie County is an initiative developed by Erie County Senior Services. Age-Friendly Erie County was started "as an idea to bring together individuals and organizations working to improve quality of life and service for older adults in Erie County." As the initiative progressed more contributors and stakeholders joined the cause for a more equitable and inclusive Erie county. Age Friendly Erie County describes itself as creating "a vibrant, inclusive community for residents to grow up and grow old."[1] AFEC also wants to build "the hope that Western New York will be a model community in New York State and nationally where older adults and their families thrive."[2]

University at Buffalo. It is a hope that the partnership creating and implementing a plan. In making plan, more aging community members will be enabled to involve policy decisions and help them move forward. A plan can lead to the growth of programs that will assist aging people, as well as provide recommendations for improvements to Erie County's built environment and its social environment.[3] UB master of urban planning studio makes an Age-Friendly Erie County Assessment and Recommendation Plan.

The IDeA Center in UB also involved in the planning preparation and process. From 2015, the IDeA Center gathered representatives from across the county to participate in a Needs Assessment Workshop. Representatives included members of nonprofit agencies, university members, government agencies, and local businesses. At the workshop, the groups discussed issues that influence the health and quality within Erie County. It allowed participants to voice their opinions on areas that need improvement the most.

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1   "Age Friendly Erie County." About. http://www2.erie.gov/aging peopleervices/index.php?q=age-friendly-erie-county.

2   Perez, Brittany, and Molly Ranahan. A multi-sector, transdisciplinary approach to improving the lives of older adults in Erie County, NY. February 15, 2017.

3   Fitzgerald, Kelly G., and Francis G. Caro. "An Overview of Age Friendly Cities and Communities around the World." Journal of Aging and Social Policy 26, no. 1 (2014): 1-18.

Figure 1-4 Planning Partnership

Figure 1-5 Erie County Designated as an "Age-Friendly Community"

Source: Erie County Government. (2014). From: http://www2.erie.gov/exec/index.php?q=92214-erie-county-designated-quotage-friendly-communityquot

1.3 Planning Process

The planning process for the University at Buffalo MUP Spring 2017 studio included having meetings and participating in the age-friendly development timeline. This assisted the studio to comprehensively understand the great deal of work, communication, and community outreach that goes into becoming a true "Age Friendly Community" or in Erie County's case an "Age Friendly County".

Aside from Community Conversations across Erie County, and meetings with stakeholders shown above, the MUP studio met January - May, Tuesdays and Thursdays from 1:00 PM - 5:50 PM to discuss, collaborate, and share ideas that would create the plan.
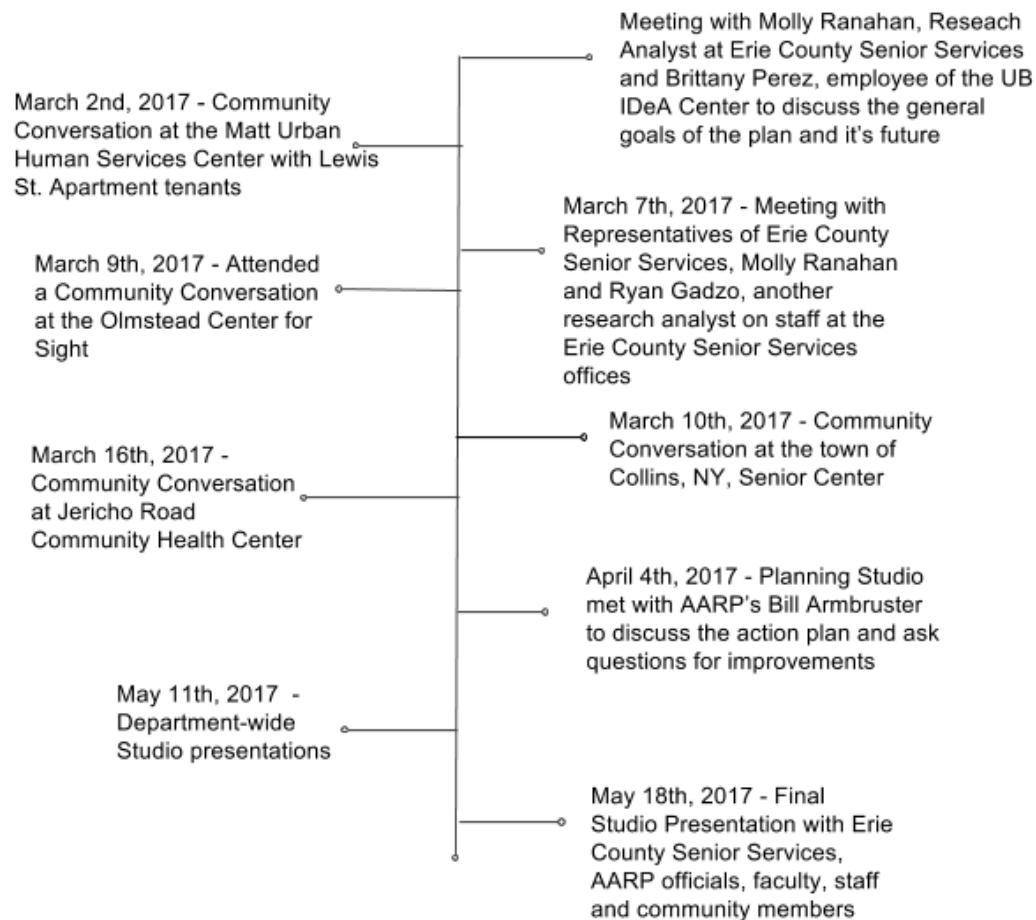
Opportunities of Planning. One major opportunity for Age Friendly Erie County is the existing collaborations with aging services throughout the county. AFEC has joined forces with Erie County Senior Services, Senior Centers around the county, the IDeA Center, and University at Buffalo professors in departments such as nursing, planning, social work, and rehab sciences.

Another opportunity is the abundance of resources that are available. Since Age Friendly Erie County is part of and recognized by AARP's Age-Friendly Communities, they have a vast amount of support, toolkits, and assistance from the organization. Erie County Senior Services also provides data and information to push the action plan onward with fact based assessments and recommendations.

Challenges of Planning. Challenges in achieving an ideal age-friendly community also exist. One of the biggest concerns is funding for projects that increase age-friendliness, as well as funding to sustain AFEC. There is also a great deal of input on what makes a, complete age friendly community. Taking all of the input and creating actual programs, projects, or events will not satisfy every single opinion of what needs to be improved.

Very few researchers and Universities are working collaboratively on Community Friendly Action Plans. Age Friendly Erie County and the University at Buffalo MUP Studio are one of the few known collaborations that exist. Together they are hoping to increase age-friendly efforts and awareness.

Meeting with Molly Ranahan, Reseach Analyst at Erie County Senior Services and Brittany Perez, employee of the UB IDeA Center to discuss the general goals of the plan and it's future

March 2nd, 2017 - Community Conversation at the Matt Urban Human Services Center with Lewis St. Apartment tenants

March 7th, 2017 - Meeting with Representatives of Erie County Senior Services, Molly Ranahan and Ryan Gadzo, another research analyst on staff at the Erie County Senior Services offices

March 9th, 2017 - Attended a Community Conversation at the Olmstead Center for Sight

March 10th, 2017 - Community Conversation at the town of Collins, NY, Senior Center

March 16th, 2017 - Community Conversation at Jericho Road Community Health Center

April 4th, 2017 - Planning Studio met with AARP's Bill Armbruster to discuss the action plan and ask questions for improvements

May 11th, 2017 - Department-wide Studio presentations

May 18th, 2017 - Final Studio Presentation with Erie County Senior Services, AARP officials, faculty, staff and community members

(Timeline of planning process pictured above)

Figure 1-6 Planning Process

2 Erie County is Aging

2.1 Outline of Erie County

2.1.1 History of Erie County

Erie County started as a European Settlement in the early 1800's after the Holland Land Company extinguished all Indian claims to the land. The Holland Land Company then acquired the rights to the eight most western counties in New York. Erie County was officially established in 1821 encompassing all of the land between Tonawanda Creek and Cattaraugus Creek. The County was initially part of Niagara County, which now resides to the north. Erie County's main form of development was due to the construction of the Erie Canal it the City of Buffalo's Inner Harbor. The Inner Harbor and the Erie Canal were a focal point for business and spurred industrialism throughout the county. This caused high density, high population, and job growth in the City of Buffalo and the surrounding areas.

The creation of the automobile and the desire of suburban living in the 1950's and 1960's led Buffalo, and the towns surrounding the City, into a period of decline. Industrial jobs started to decrease and people began looking for new opportunities in the surrounding neighborhoods outside of the city; this halted the area's economic growth and its rising population. Between the years of 1990 and 2000, Erie County experienced a 1.9% decrease in population; this amounted to 18,267 residents leaving the area. (Table 2-1) Between the years of 2000 and 2007, Erie County experienced an even steeper decrease of -3.9% of its population; amounting to 36,927 residents in total.[1] (Table 2-2)

Table 2-1 Population in Erie and Niagara County in 1990 and 2000.

Metropolitan Area	Population Estimate 1990	Population Estimate 2000	Change in population	% Change in population
Erie County	968,532	950,265	-18,267	-1.9%
Niagara County	220,756	219,846	-910	-0.4%

Source: U.S. Census Bureau, Census 1990 and 2000.

Table 2-2 Population in Erie and Niagara in 2000 and 2007.

Metropolitan Area	Population Estimate April, 2000	Population Estimate July, 2007	Change in population	% Change in population
Erie County	950,265	913,338	-36,927	-3.9
Niagara County	219,844	214,845	-4,999	-2.3

Source: U.S. Census Bureau, Community Survey 2000 and Census 2007.

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[1] *The Burned-Over District: Evolution of County Boundaries. Oliver Cowdery Home Page, accessed 7 ~~mber 2008.*

2.1.2 General Condition of Erie County

Erie County currently encompasses 15 villages, 25 towns, and 3 cities; totaling 26 municipalities overall. The County is currently experiencing a great deal of growth and innovation with the mindset of putting community members and their needs first. The County offers a robust amount of opportunity for its community with contributions from universities, locally-owned businesses, and its rich history woven throughout the city in locations such as City Hall and Canalside. With this growth the County has seen a surge in population which has attracted people of all ages as well as different backgrounds, cultures, and nationalities throughout county.[2] Erie County, along with the city of Buffalo, has a variety of neighborhoods and municipalities with different attributes that offer citizens a sense of home and a strong cultural aspect. This comes with a number of people who plan to stay in Erie County for the remainder of their lives. To truly allow all individuals to live their life to the fullest, where they want, near friends and family, with minimal limitations regardless of neighborhood, it is now becoming essential and a necessity to begin developing Age Friendly action plans for communities throughout Erie County.
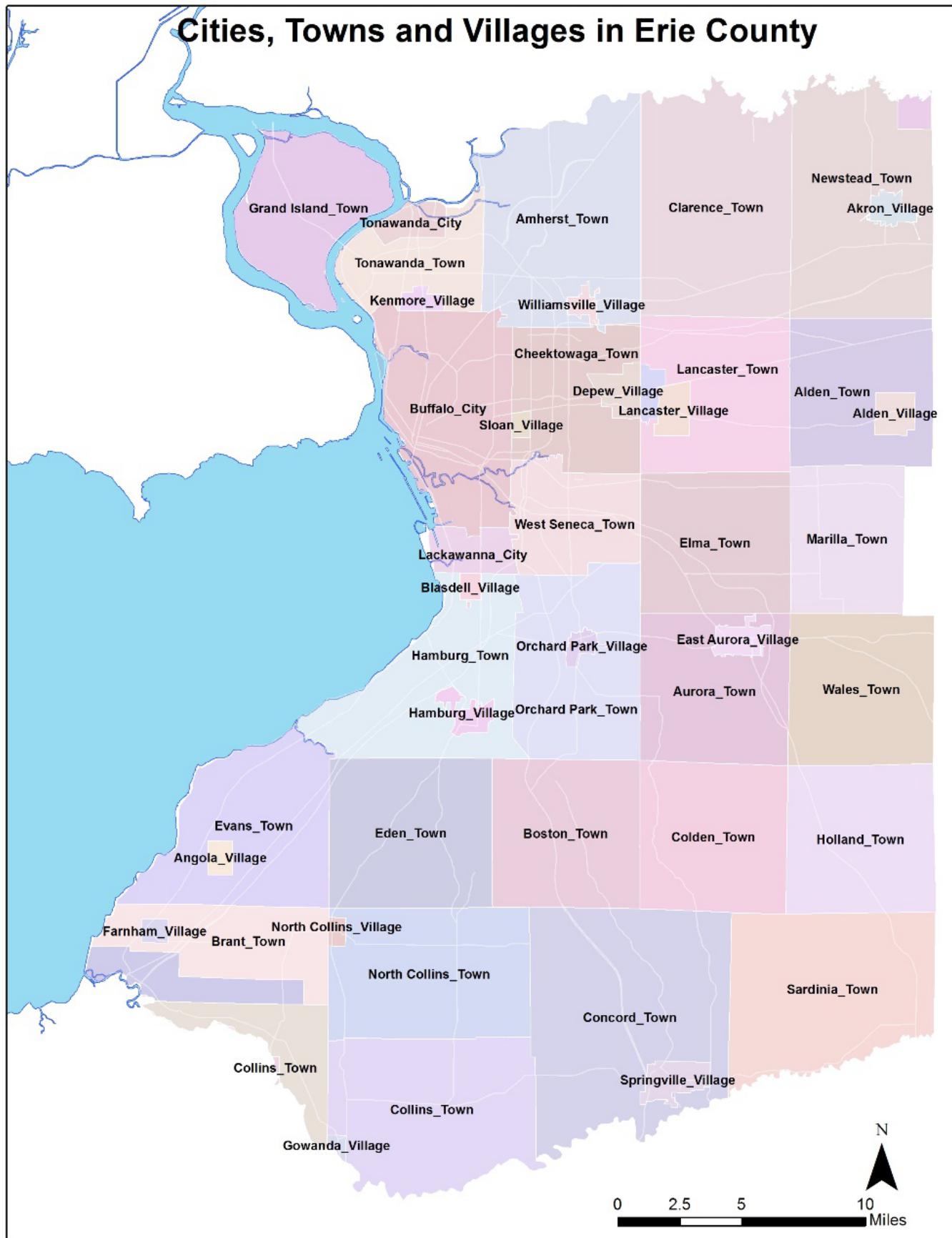
"Working together we are seeing heights we could not have imagined a decade ago. The renaissance that is the "New Buffalo," the "New Erie County" is real but there is still much more that needs to be done to ensure all of our residents can enjoy the fruits of this renaissance." - Erie County Executive, Mark Poloncarz.[3]

Erie County sits along the northeastern edge of Lake Erie in the Western New York region. Geographically, Erie County is 1,058 square miles in size and has three cities and 25 towns within its borders. [1] With a population of 921,584, per the 2015 ACS 5-year estimates from the U.S. Census Bureau, the county densifies in the City of Buffalo, New York State's second largest city.

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[2] Hansen, Robert "Research Brief: County Government Structure Update (vol. 3, no. 1)". National Association of Counties. July 2005. Accessed April 5, 2017.
[3] "Poloncarz Delivers State of Erie County." WGRZ. March 29, 2017. Accessed April 11, 2017.

Figure 2-2 Cities, Towns, and Villages in Erie County

Figure 2-2 Cities, Towns, and Villages in Erie County

2.2 Demographic Analysis of aging People in Erie County

For our purposes, senior citizens are defined as 65 years and older. Within Erie County, 16.2% of the total population are senior citizens. This 16.2% represents just under 150,000 residents within the county. However, there are reasons to suggest that these numbers are subject to change in the upcoming years. Currently, 52.7% of the population in Erie County are between the ages of 25 and 64. Broken down, 13.1% are between 25-34, 11.4% are between 35-44, 14.5% are between 45-54, and 13.7% are between 55-64. (Table 2-3)

Given that the estimated population of Erie County has consistently grown from 2010 to 2014, general conclusions may be made about demographic projections in future decades. As seen in Figure 2-3, the need for Senior Services will increase as the population of aging people will likely be more than double by the year 2030.
In comparing the population, demographics and trends of Erie County to that of the State of New York, and to that of the United States, Erie County's population is aging at a higher level than both. There is a higher percentage of people aged 45 and over in Erie County, thus supported that, not only is there a need for age-friendly infrastructure and programs, but the necessity is pending. (Figure 2-4)

As for geographic distribution, north and east areas have more senior people. Areas surrounding Buffalo and South areas have less aging people (Figure 2-5).
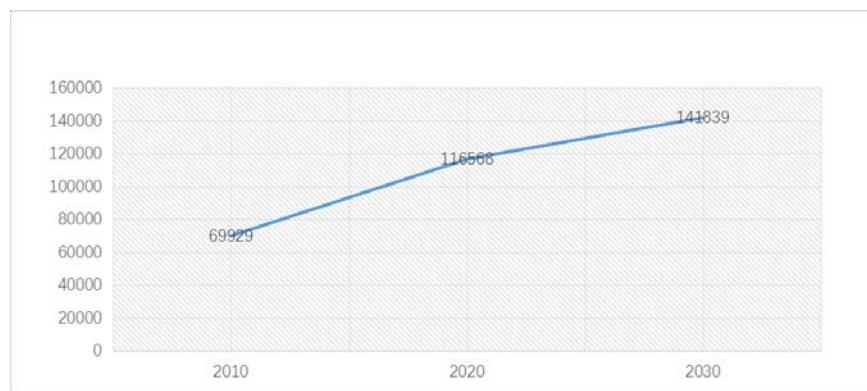
Aside from the growing population of elderly in Erie County, there is a significant number of Veterans in Erie County, and many of them are over 65 years old. The information and distribution of elderly veterans is comparable to the population trends of the overall elderly population, as supported by both U.S. Census data and visually represented in Figure 2-6.

Table 2-3 Erie County's Population by Age Distribution

AGE RANGE	POPULATION
25-34 Years old	13.1%
35-44 Years old	11.4%
45-54 Years old	14.5%
55-64 Years old	13.7%
65+	16.2%
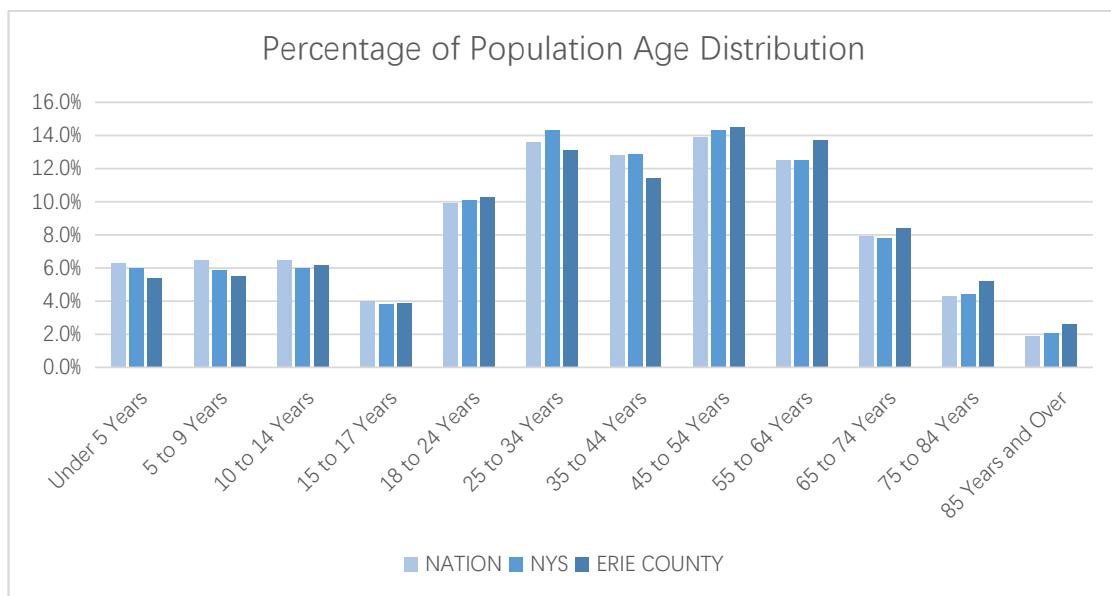
Source: U.S. Census Bureau, American Community Survey 2015.

Figure 2-3 Erie County's Population & Projections

Data Source: U.S. Census Bureau. ACS 2015 (5-Year Estimates). Gathered from Social Explorer.

Percentage of Population Age Distribution

NATION   NYS   ERIE COUNTY

Figure 2-5 Population over 65 in Erie County

Population of Senior Citizens in Erie County, NY

Legend
Senior Population
- 0 - 2500
- 2501- 3500
- 3501 - 5000
- 5001 - 6500
- 6501 <

Data source: U.S. Census Bureau. ACS 2015 Five-Year Estimates

0   2.5   5   10
Miles

Data Source: U.S. Census Bureau. ACS 2015 (5-Year Estimates). Gathered from Social Explorer.

Figure 2-6 Population of Veterans Aged 65+ in Erie County NY

Veterans Population over 65 in Erie County, NY

Legend

Veterans Population
- 0 - 270
- 271 - 475
- 476 - 760
- 761 - 1200
- 1201 - 2067

Data Source: U.S Census Bureau. ACS 2015 Five-Year Estimates

0   2.5   5   10
Miles

N

Data Source: U.S. Census Bureau. ACS 2015 (5-Year Estimates). Gathered from Social Explorer.

2.3 Current Issues Facing the Elderly of Erie County

The necessity for age-friendliness is a just concern for the future. Currently 8.4%, or 12,159 of aging citizens are living in poverty. Poverty is defined by the U.S. Census Bureau as, "a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty". There are 31 census tracts throughout Erie County that have more than 20% poverty rate among their aging citizens.[1] Figure 27 gives a geographic layout of the population distribution of poverty ridden aging citizens. Poverty in the elderly community has strong implications that there is a need for change that currently exist. Many of those stricken by poverty are residents of areas outside of the City of Buffalo, and not located within geographic areas known for their walkability. This widens concerns, as it leads to issues in topics such as housing and transportation, as will be further discussed at later times.


Source: https://www.flickr.com/search/?text=age friendly COMMUNITY

Source: https://www.flickr.com/search/?text=age friendly COMMUNITY

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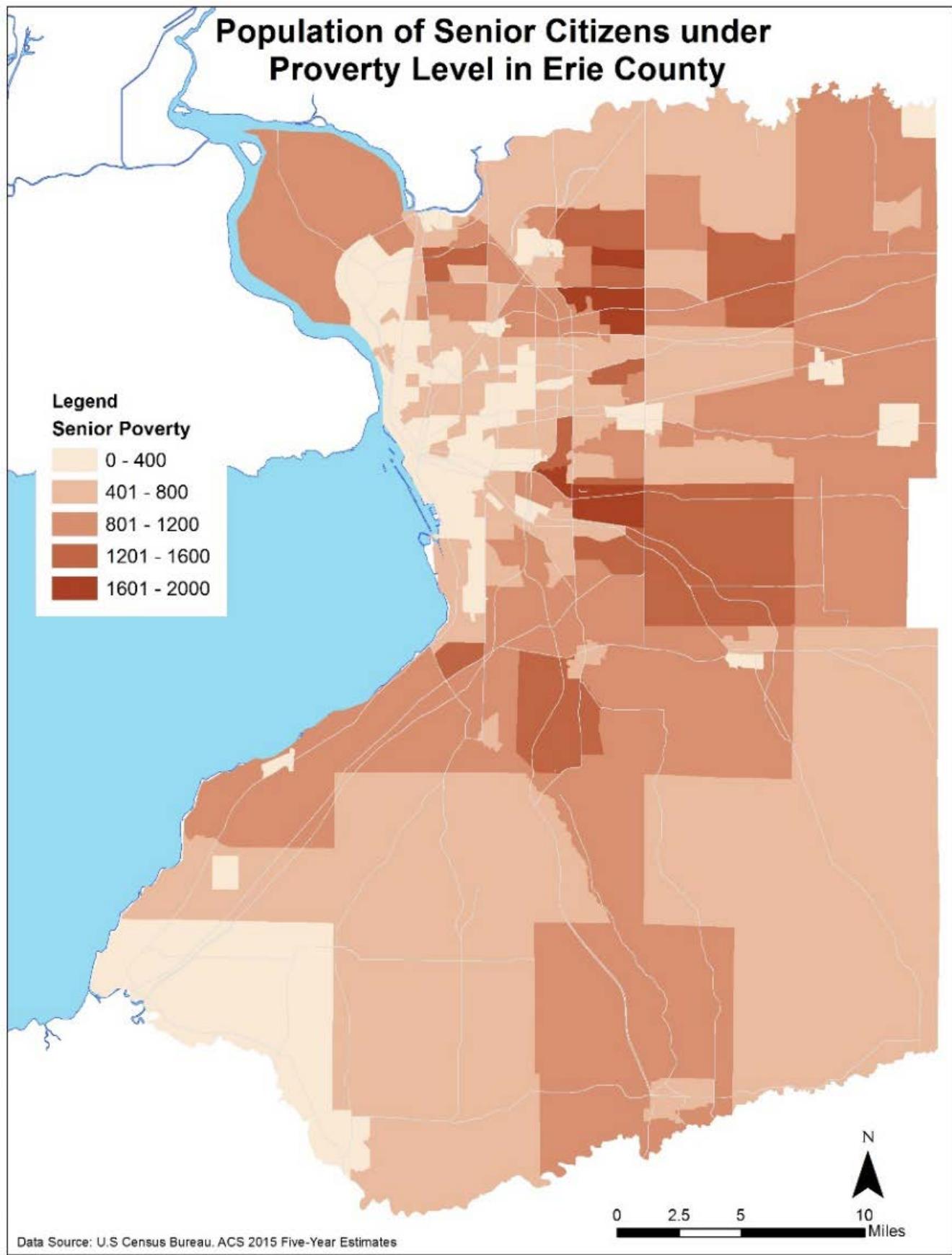
1   *U.S. Census Bureau, ACS 2015 (5-Year Estimates), Social Explorer (U.S. Census Bureau 2015)*

Figure 2-7 Poverty Status of Age 65+, Erie County, NY

2.4 Existing Precedent

2.4.1 Examples of NYC and Portland

After reviewing the survey data provided, as well as attending multiple community meetings, it is determined that both transportation and housing remain the top concerns of aging people. Currently there are existing programs in place to assist elderly with their housing concerns, as well as their transportation needs. The access to this information, however, has not proven to be as readily available as intended. In researching how to better serve our elderly community, we can take notes from existing Age-Friendly plans that have been considered widely successful by groups such as the World Health Organization. One such example, would be Age-Friendly NYC. While New York City, NY is quite different from Erie County NY in their general make-up, we can look to their plan for vision and inspiration.

In visiting the AGE-FRIENDLY NYC website, there are many contextual conditions which allow for the ongoing success of the program. The first was the "Commission for Age-Friendly NYC," which is "comprised of civic leaders from across sectors and disciplines working to develop the overall strategy for age-friendly inclusivity of both the public and private sectors". This suggests that the initiatives are ongoing within New York City. In fact, on their easily accessible website, there are sections that outline the "Current Priorities", as well as "Ongoing Initiatives", "Neighborhoods" and even their "Working with the City"; aside from solely referring to the Commission itself.[1] This website allows those with internet accessibility to easily remain up to date with the progress of the program. Aside from the updates, it gives general guidelines for age-friendliness. While this outlines the work that is being done, it also gives an overview of general accountability of implementation of a plan after it has been drafted.

Another good example of a successful implementation of an age-friendly plan comes out of Portland, Oregon. In reviewing Portland's plan on aging, we find that information is provided in a visually appealing and easy to follow manner. Extensive research allows for the plan to indicate the areas in most need of improvements. By building from the findings of this research, a path from the initial vision and recommendations, ultimately to the methods of implementation and looking towards the future.[2] Furthermore, from the initial plan created, an "Action Plan for an Age-Friendly Portland" was created in October of 2013, as adapted by the Age-Friendly Portland Advisory Council. This document outlines the importance of the implementation, and the ideal outcome and impacts.[3]

2.4.2 Implication for Erie County

Erie County has a strong case for the necessity of becoming age-friendly. With the anticipation of an increased population in coming generations, the time to act is now. By understanding the obstacles that older citizens of Erie County face, it allows for planners and groups, such as the AFEC, to plan better for people's needs. While the plan from Portland, Oregon gives us an example of the creation of a plan, the Age-Friendly NYC website allows a better understanding of the implementation and continuity of a successful plan. In learning from the many Age-Friendly Cities that are already being recognized by such groups as the World Health Organization, we can understand better the methodology, and what is theoretically best for Erie County, while understanding the limitations and what is practical for our planning process.

1   AGE-FRIENDLY NYC, 2010-2013
2   ORCA Planning, Toward an Age-Friendly Portland, 2013
3   Age-Friendly Portland Advisory Council, Action Plan for Age-Friendly Portland, 2013

3 Assessment of Age-Friendliness in Erie County

To better understand the current conditions of Erie County's Age Friendliness, two major assessments were done. Adapting concepts brought forward by the American Association of Retired Persons (AARP) and the World Health Organization (WHO), an Age-Friendly Index assessment, and a comprehensive plan assessment were developed to assessed the current situation and spatial policy for Erie County.

3.1 The Age-Friendly Index of Erie County

As a tool to assess Erie County's livability for aging people, this index was created measuring each census tract on a set of specified criteria. The purpose of this index is to focus on the four domains chosen for this report (transportation, housing, outdoor spaces, and social inclusion), and to have all measurements be at the census tract level based on each census tract's population density. This index was inspired by the AARP Livability Index.

3.1.1 Improving AARP's Livability Index

The AARP Livability Index considers seven domains and measures each of them at a neighborhood scale and a county scale. The seven domains are housing, neighborhood, transportation, environment, health, engagement, and opportunity. While these measurements give an idea of the livability of different locations and an assessment of multiple domains, there are some limitations in using it for Erie County's age-friendly assessment.

The AARP Livability Index measures forty variables divided among the seven domains. Twenty-one of the variables are at a neighborhood scale and nineteen are at a county scale. The nineteen measurements at the county scale can dilute the results because no matter what neighborhood one selects within Erie County, those nineteen measurements will always be the same. For example, under the domain Engagement, one of the measurements is civic organizations per 10,000 people. No matter what location one chooses in the county, the result will always be 6.9 organizations per 10,000 people, which is considered a low score. The index for this report eliminated county measurements to focus solely on census tract measurements. To improve the Engagement domain, this report measures the distance to closest senior center at the census tract level.

The AARP Livability Index is also useful for providing an assessment of multiple domains. But, since this report is only focusing on four domains, three of AARP's domains (environment, health, and opportunity) were removed. By removing them, the

Source: Google Image. https://www.flickr.com/search/?text=age friendly COMMUNITY

assessment can be more specific. While the AARP Livability Index is a great tool, these revisions and improvements provide a more viable age-friendly assessment for this report.

3.1.2 Process of Exploring and Utilizing Age-Friendly Index

(1) Criteria Selection

There were six measurements used for the four domains to calculate the index score for each census tract (Table 3-1)

Table 3-1 Domains and Measurements used for Erie County's Age-Friendly Index

Domains	Measurements
Transportation	-Number of bus stops per census tract
Housing	-Number of senior housing and nursing homes per census tract
Outdoor Spaces	-Number of parks per census tract -Distance to closest library -Percent of population within ½ mile of a grocery store.
Social Inclusion	-Distance to closest senior center

The density of the senior population (aged 65+) per census tract was considered to standardize the scores of each census tract. All the census tracts were averaged to determine an overall index for the county.

(2) Data Collection

Population density data was gathered from the U. S. Census attained through the American Fact Finder database and the Social Explorer database. A list of bus stops was attained from the NFTA-Metro. A list of senior-housing, nursing homes and senior centers were provided by Erie County's Department of Senior Services. A list Erie County parks were attained from the NYS Clearinghouse. A list of Erie County libraries was attained from Buffalo & Erie County Public Library. Grocery store proximity was gathered from the United States Department of Agriculture (Table 3-2).

Table 3-2 Sources used for data collection.

Criteria	Year	Source	URL
Population Density	2015	American Fact Finder	https://www.factfinder.census.gov/faces/nav/jsf/pages/programs.xhtml?program=acs
Bus Stops	2015	NFTA-Metro	https://www.arcgis.com/home/item.html?id=fa918c34bab9417e9657fcdba77c7a24
Senior Housing & Nursing Homes	2016	Erie County's Department of Senior Services	http://www2.erie.gov/aging peopleervices/index.php?q=housing
Parks	2015	NYS Clearinghouse	https://www.arcgis.com/home/item.html?id=36df872cd14d4f6282017357bafe6290
Libraries	2017	Buffalo & Erie County Public Library	https://www.buffalolib.org/content/library-locations
Grocery Stores	2015	United States Department of Agriculture	https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/
Senior Centers	2017	Erie County's Department of Senior Services	http://www2.erie.gov/aging peopleervices/index.php?q=community-resources-amp-info

(3) Tools of Data Processing

The following tools were used in order measure the criteria: the near function was used to determine the distance to the closest libraries and senior centers. The count function was used to determine the number of parks, bus stops, senior housing and nursing homes per census tract. The percent of population within ½ mile of a grocery store was provided by the U.S. Department of Agriculture.

3.1.3 Results and Discussions

The results of assessment by Age-Friendly Index were shown on Figure 3-1. Nine out of the ten census tracts with the highest index were in the City of Buffalo. (Table 3-4) Only one fell just outside of the city. This shows that areas with higher density within the county typically have higher scores. The bottom 10 census tracts all fell outside of the City of Buffalo. Six out of the ten census tracts were found along the border of Erie County (Figure 3-2). It was clear that housing and transportation had the greatest impact on the bottom ten's index scores. Every census tract had a 0% for transportation and housing. This means there were no senior housing, nursing homes, or bus stops within those census tracts. The overall average for the Erie County Livability index was 70%. This score was very close to AARP's overall average of Erie County, which came to 69%. When eliminating the three domains that this report eliminated, AARP's average is then reduced to 65%.

This index validates trends than have been occurring throughout the country which has shown that areas with higher density tend to be more age friendly.[1] This is due to the abundance of resources, especially in terms of transportation and senior housing. All data used in this index was publically collected creating some limitations of getting a complete assessment. If private data were included, a more accurate index could be calculated. Some factors such as county based measurements may want to be reconsidered by AARP's livability index. While some county measurements may be relevant to high density areas, those same measurements could skew low density areas. Nonetheless, Erie County's Livability Index produced results similar to national trends, and provides a relevant assessment of areas where age-friendliness could be improved.

3.2 Age-Friendly Assessment for Comprehensive Plans

3.2.1 Assessing Age-Friendliness of Overall Spatial Policy

Plan assessments show whether urban spatial policies are age-friendly. While the livability index looks on present situations, the plan assessment looks toward the future. By evaluating and comparing plans, how cities value age-friendly issues in their spatial policies can be assessed. Among spatial plans of cities, the comprehensive plans were selected as a subject for study, because it was the only plan that considered multiple programs and accounted for activities on all land located in the planning area. If these comprehensive plans lack age-friendly elements, the age-friendly plan would propose some suggestions for improvement. In this way, the age-friendly plan and a city's future spatial policy can be cohered. This research would evaluate comprehensive plans in Erie County from the perspective of age-friendliness.

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1   K. G. Fitzgerald and F. G. Caro, "An overview of age-friendly cities and communities around the world," Journal of Aging & Social Policy 26 (2014):13.

Figure 3-1 Assessment by Erie County's Age-Friendly Index

Livability Index in Erie County, NY

Legend

High Senior Livability

Low Senior Livability

Data Source: U.S Census Bureau. ACS 2015 Five-Year Estimates

Top Ten Highest & Lowest Index Scores

Legend

— Highways

■ Highest Index

■ Lowest Index

□ Census Tract

Lake Erie

N
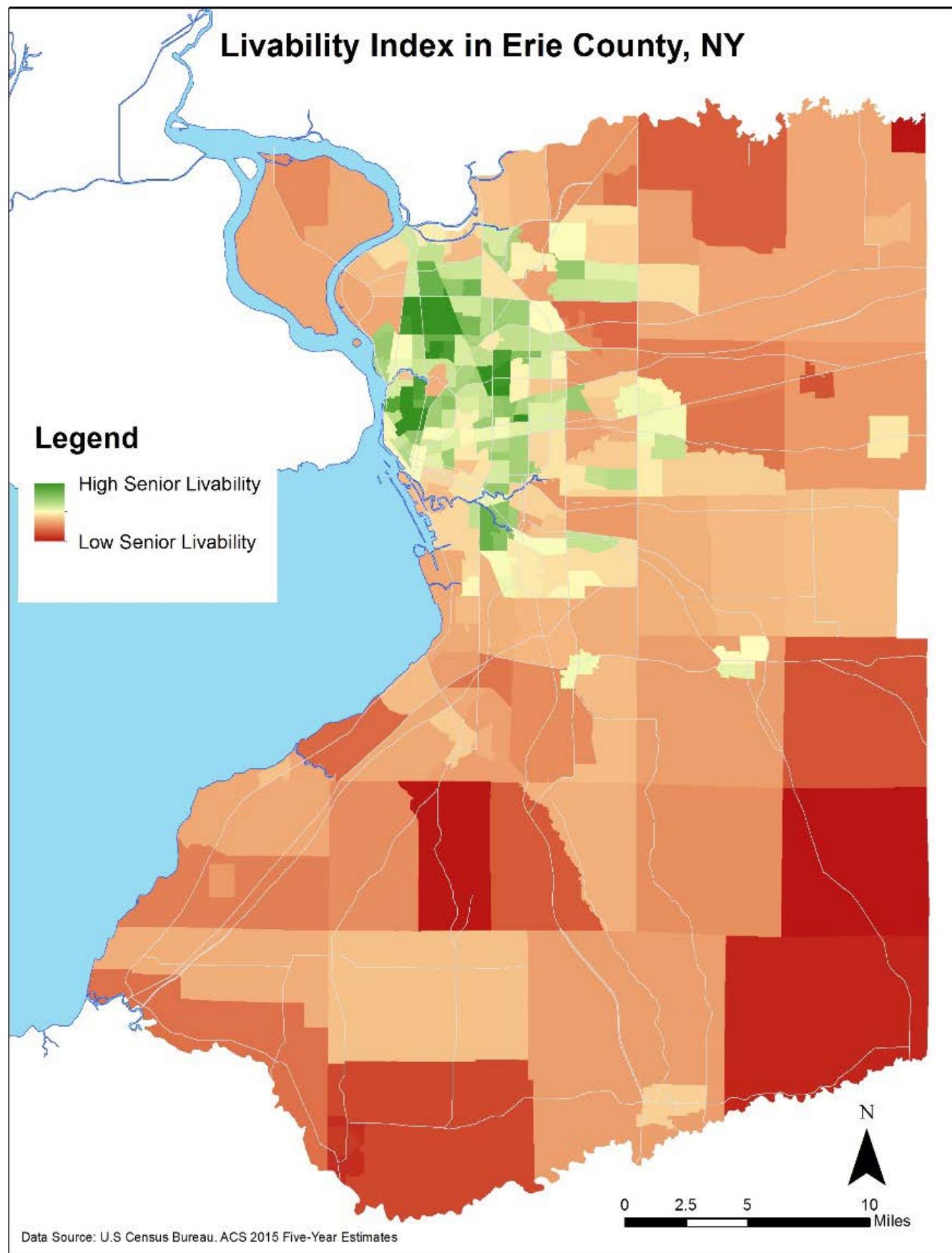
0   2.5   5   10 Miles
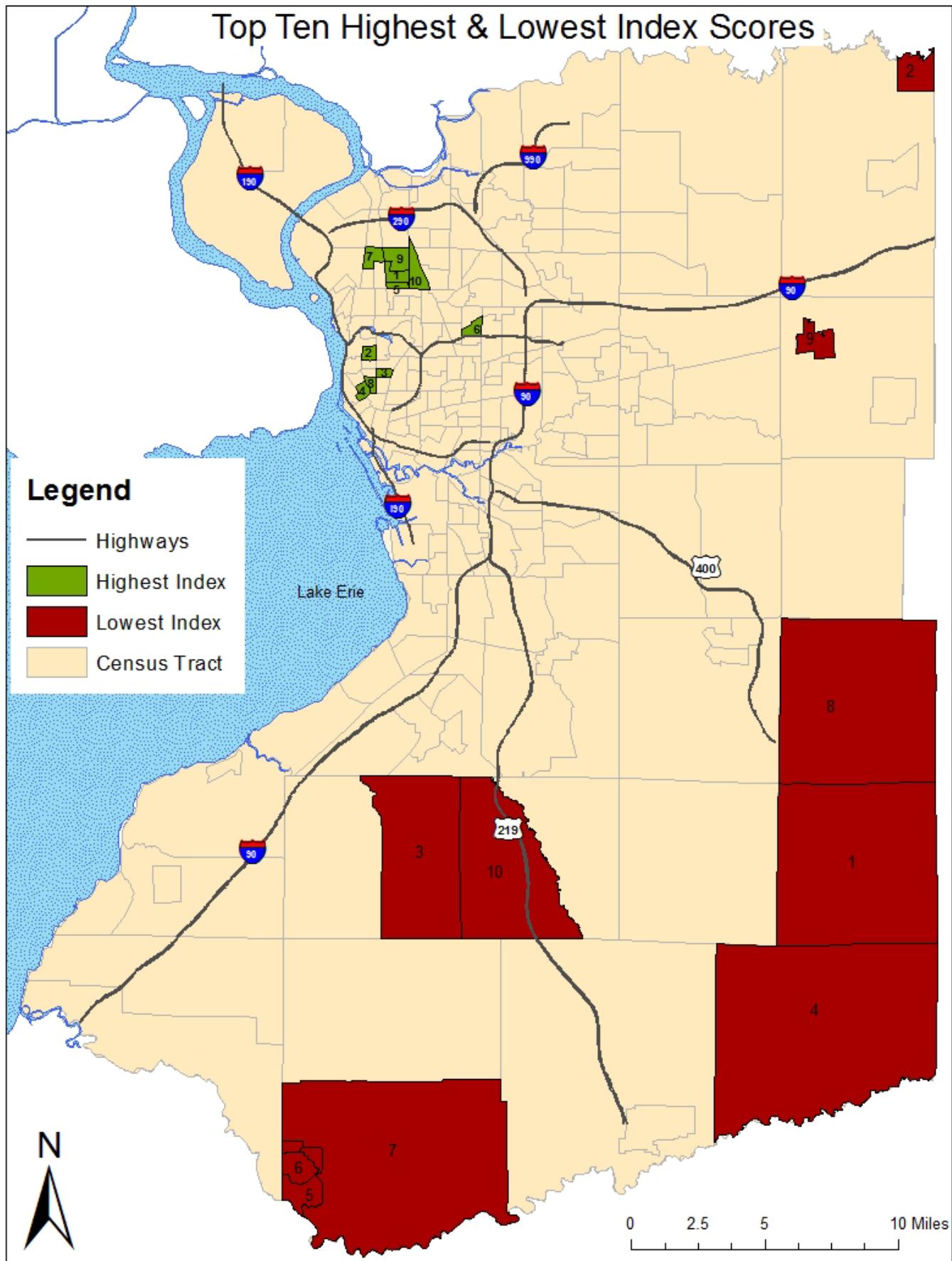
Table 3-3 Comparing Erie County's Age-Friendly index and AARP's Index

Tool	Transportation	Housing	Outdoor Spaces	Social Inclusion	Index
Erie County's Age-Friendly Index	79%	34%	81%	88%	70%
AARP's Index	76%	55%	57%	70%	65%

Table 3-4 Top 10 Census Tracts with the highest index's in Erie County

Census Tract	Rank	Density	Transportation	Housing	Outdoor Spaces	Social Inclusion	Index
Census Tract 86	1	1845.13	100%	99%	95%	100%	99%
Census Tract 63.01	2	1820.12	99%	97%	95%	100%	98%
Census Tract 66.02	3	4031.98	98%	93%	97%	100%	97%
Census Tract 69.02	4	2608.04	99%	98%	93%	99%	97%
Census Tract 85	5	2254.05	100%	97%	91%	100%	97%
Census Tract 44.01	6	1307.13	99%	92%	96%	100%	97%
Census Tract 82.02	7	1609.2	99%	94%	92%	100%	96%
Census Tract 67.01	8	2003.44	99%	90%	99%	96%	96%
Census Tract 81.02	9	1105.73	100%	99%	93%	91%	96%
Census Tract 80.02	10	1189.95	100%	93%	91%	100%	96%

Table 3-5 Bottom 10 Census Tracts with the lowest index's in Erie County

Census Tract	Rank	Density	Transportation	Housing	Outdoor Spaces	Social Inclusion	Index
Census Tract 150.03	1	14.36	0%	0%	51%	40%	23%
Census Tract 9401	2	0	0%	0%	85%	46%	33%
Census Tract 153.02	3	33.56	0%	0%	77%	63%	35%
Census Tract 151.02	4	9.09	0%	0%	62%	85%	37%
Census Tract 152.01	5	33.94	0%	0%	66%	85%	38%
Census Tract 147.01	6	24.61	0%	0%	66%	89%	39%
Census Tract 131.02	7	133.97	0%	0%	63%	93%	39%
Census Tract 96	8	465.31	0%	0%	64%	100%	41%
Census Tract 150.02	9	12.79	0%	0%	65%	99%	41%
Census Tract 149.04	10	225.7	0%	0%	74%	91%	41%

3.2.2 Process of Plan Assessment

(1) Overall method

To value comprehensive plans appropriately in consideration of their lengthiness, vocabulary-frequency analysis method in content analysis was utilized. Content analysis is a method that may be used with either qualitative or quantitative data and in an inductive or deductive way.[1] Krippendorff (2013, p. 24) defines content analysis generally as "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use." These inferences may address the message itself, the sender(s) of the message, the recipients of the message, or the impact of the message (Weber, 1984).[2] WordStat (Provalis Research, 2014, Montreal, Canada) was used to count the frequency of keywords. The overall processes were as follows: selecting plans, picking out keywords, counting frequencies, and standardizing data.

(2) Plan Selection

First, nine representative plans were selected among Erie County (Table 3-6). For City Buffalo, two comprehensive plans in different period were selected to show change of focus. Although each city had a comprehensive plan, samples of some cities were selected for analysis. Different locations and diversely sized cities, towns and villages were considered while selecting plans.

(3) Keywords and phrases Selection

One hundred keywords or phrases were selected as a dictionary to get frequencies. Comprehensive plans may not mention 'age-friendly' directly, but they may include some similar principles or characteristics as the age-friendly cities. WHO had summarized eight characteristics, or eight domains of age-friendly cities[3], and Age-Friendly Erie County (AFEC) added the other two domains to face local need[4]. Thus, these ten domains were important factors for age-friendly Erie County and were used as classification to pick keywords. The ten domains included: outdoor spaces and buildings, transportation, housing, social participation, civic participation and employment, communication and information, community support and health service, emergency preparedness and resilience, and research and education. Each domain would have ten keywords or phrases.

Keywords were selected using multiple ways and materials. The major material was WHO's Guidebook and Senior Service of Erie County, which described ten domains in detail. Some definition in other research related to age-friendly cities were also considered and decided some of the keywords[5],[6],[7]. Thus, keywords could represent core element of these domains. Keywords included some nouns indicating core concepts and some adjectives showing features or objectives.(Table 3-7)

Table 3-6 List of Selected Comprehensive Plans

Group	# of plan	Name of plan	Type
1	Plan 1	Queen City in the 21s Century (City of Buffalo), 2006	Comprehensive plan
	Plan 2	Buffalo City Plan (City of Buffalo), 1977	Comprehensive plan
2	Plan 3	Town of Boston: A Vision for the Year 2020	Comprehensive plan
	Plan 4	Town of Eden, 2015	Comprehensive plan
	Plan 5	Town of Orchard Park, 2007	Comprehensive plan
	Plan 6	Town of Tonawanda, 2014	Comprehensive plan
	Plan 7	Town of Amherst Bicentennial, 2015	Comprehensive plan
	Plan 8	City of Lackawanna, 2016	Comprehensive plan
	Plan 9	Town of Cheektowaga, 2010	Comprehensive plan

1   Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. Journal of advanced nursing, 62(1), 107-115.
2   Drisko, J., & Maschi, T. (2015). Content analysis. Oxford University Press, USA.

3   World Health Organization. (2007). Global age-friendly cities: A guide. World Health Organization.
4   http://www2.erie.gov/aging peopleervices/index.php?q=age-friendly-domains#Outdoor
5   Buffel, T., Phillipson, C., & Scharf, T. (2012). Ageing in urban environments: Developing 'age-friendly' cities. Critical Social Policy, 32(4), 597-617.
6   Plouffe, L., & Kalache, A. (2010). Towards global age-friendly cities: determining urban features that promote active aging. Journal of urban health, 87(5), 733-739.
7   Brittany Perez & Molly Ranahan. (2017). A multi-sector, transdisciplinary approach to improving the lives of older adults in Erie County, NY.

Table 3-7 Dictionary of keywords and phrases

Domains	Representative keywords	Domains	Representative keywords
1. Outdoor spaces and building	low density green space seating river smooth/ level surface safe street sidewalk outdoor lighting public toilet suitable stairs	6. Civic participation and employment	volunteer better/flexible employment civic participation job training entrepreneurship benefit of employing older job creation discrimination skills workplaces
2. Transportation	frequency metro bus clear timetable key destination pedestrian pathway rural transit handicapped parking free/subsidized transport transit stop public transit visual signal	7. communication and information	access to communication relevant/timely information social occasion individual access familiar/plain terms computer/internet training oral communication printed information information sign public information meeting
3. Housing	affordable utility universal design public housing family connection single family housing option aging in place housing improvements housing costs home maintenance service	8. Community support and Health Service	caregiver healthcare nursing disabilities health service home care illnesses social service volunteers support insurance
4. Social Participation	accessible affordable activities Integrating generation engagement neighborhood center awareness of activities/event encouraging participation recreational activity active aging friendly	9. Emergency preparedness and resilience	immediate weather risk storm prepare readiness recover priority action shelter assist
5. Respect and Social inclusion	respectful behavior intergenerational interactions financial aid ignorance social inclusion helpfulness consideration involve mutual relationship	10. Research and education	learning research facility study collaborative partnership school tuition fund university class

(4) Data Standardization

Next, the frequency data should be standardized. Considering comprehensive plan and age-friendly plan had different logic and focus, the frequency of each domain may differ greatly. In each domain, the frequencies of ten keywords were summed to be total frequency of the domain. Because ten frequencies of ten domains had different weight, the domain frequencies should be standardized to eliminate bias among ten domains. The score is standardized by T-score[1] (Figure 3-3). T-score had a mean of 50 and a standard deviation of 10.

Figure 3-3 T-Score

$$T = 50 + 10\frac{(x - m)}{s}$$

where x is the pupil's mark for the subject Q
m is the average mark (mean) scored by all the pupils
s is the spread of the marks around the average mark (standard deviation)

3.2.3 Plan assessment results

(1) Plans in north areas were more age-friendly than south areas.

According to the results, all selected northern parts of Erie County are above average score and the four evaluated south parts are all below the average score (Table 3-8). Tonawanda Comprehensive Plan gets the highest score (58.1), while Town of Orchard Park Comprehensive Plan has the lowest score (42.2). These results show that northern areas of Erie County, such as the Town of Tonawanda and the Town of Lackawanna, valued age-friendly characters in their comprehensive plans. Demographic data showed that population in southern municipalities were less than their northern counterparts, which may be one reason for why they did not value these characteristics in plans.

(2) Each plan had different strength and weakness in ten domains compared to others

However, these comprehensive plans had strength and weakness in different domains. For example, Tonawanda comprehensive plan was good at communication and outdoor spaces, while Lackawanna comprehensive plan valued community support and health service better than Tonawanda. Town of Boston emphasized social participation better than other plans. For those plans getting a lower score, Orchard Park's comprehensive plan did not emphasis emergency and housing issues. Eden's comprehensive plan did not value community support, health service and research and education.

Besides, in City Buffalo, the 2006 Comprehensive Plan emphasized civic participation and community support compared with the 1977 plan. The 1977 plan emphasized outdoor spaces and buildings more. Thus, it could be seen that focus of comprehensive plan had changed as time went on.

(3) Spatial distribution of plan assessment and Erie County's Age-Friendly index fitted each other

Those results shown similar spatial distribution of Erie County's Age-Friendly index (Figure 3-5). North areas, especially city and towns surrounding Buffalo got higher score in both assessments. It could be seen that these cities had tradition in valuing these factors in planning, thus the current situation would be better. Guidance of comprehensive plan was important for city's environment.

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1   Kiresuk, T. J., & Sherman, R. E. (1968). Goal attainment scaling: A general method for evaluating comprehensive community mental health programs. Community mental health journal, 4(6), 443-453.

Table 3-8 Result of Plan Assessment

Group	Plan	Total score
1	Queen City in the 21s Century (City of Buffalo), 2006	52.1
	Buffalo City Plan (City of Buffalo) (City of Buffalo), 1977	47.9
2	Town of Boston: A Vision for the Year 2020	46.5
	Town of Eden, 2015	44.5
	Town of Orchard Park, 2007	42.2
	Town of Tonawanda, 2014	58.1
	Town of Amherst Bicentennial, 2015	51.1
	City of Lackawanna, 2016	55.9
	Town of Cheektowaga, 2010	51.6

*Figure 3-4 Standardized Domain Scores of Seven Comprehensive Plans in Erie County*
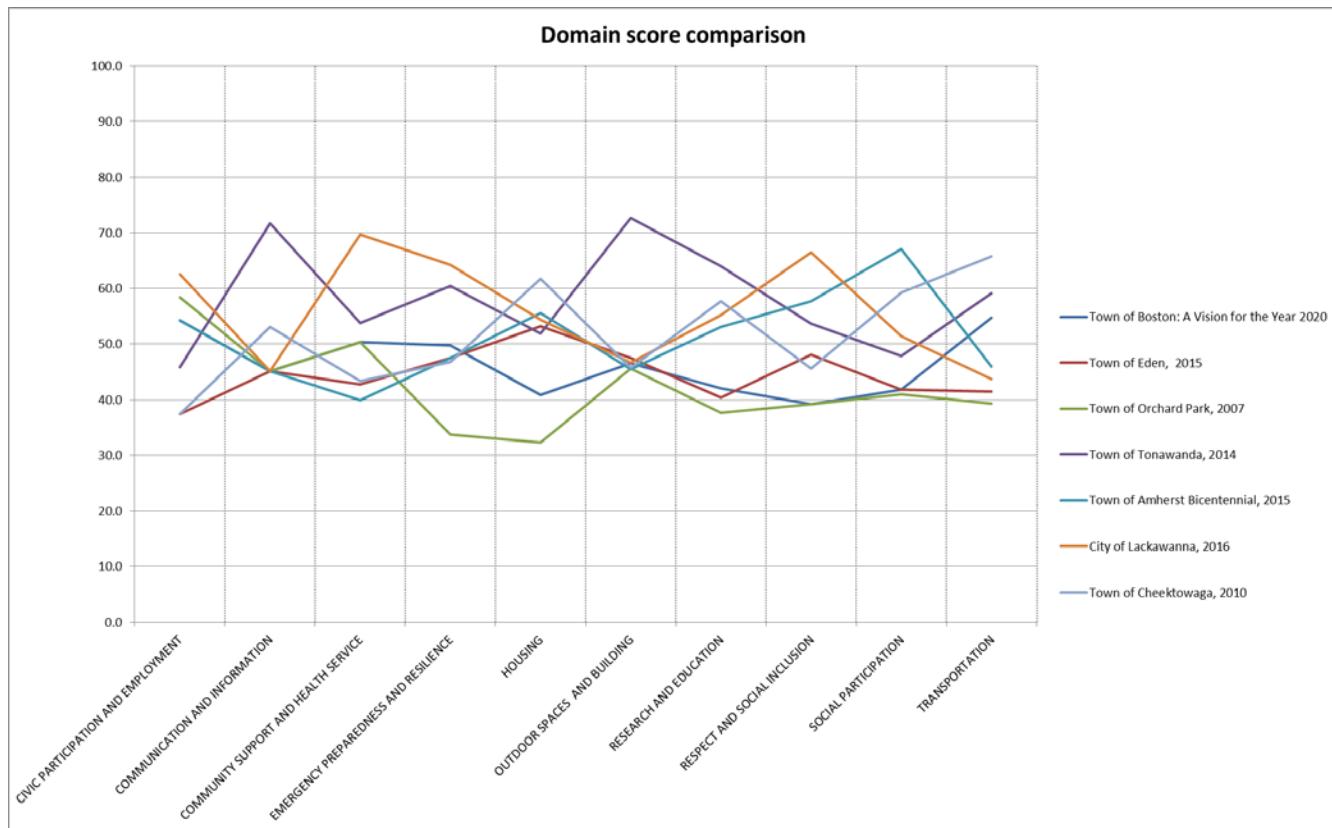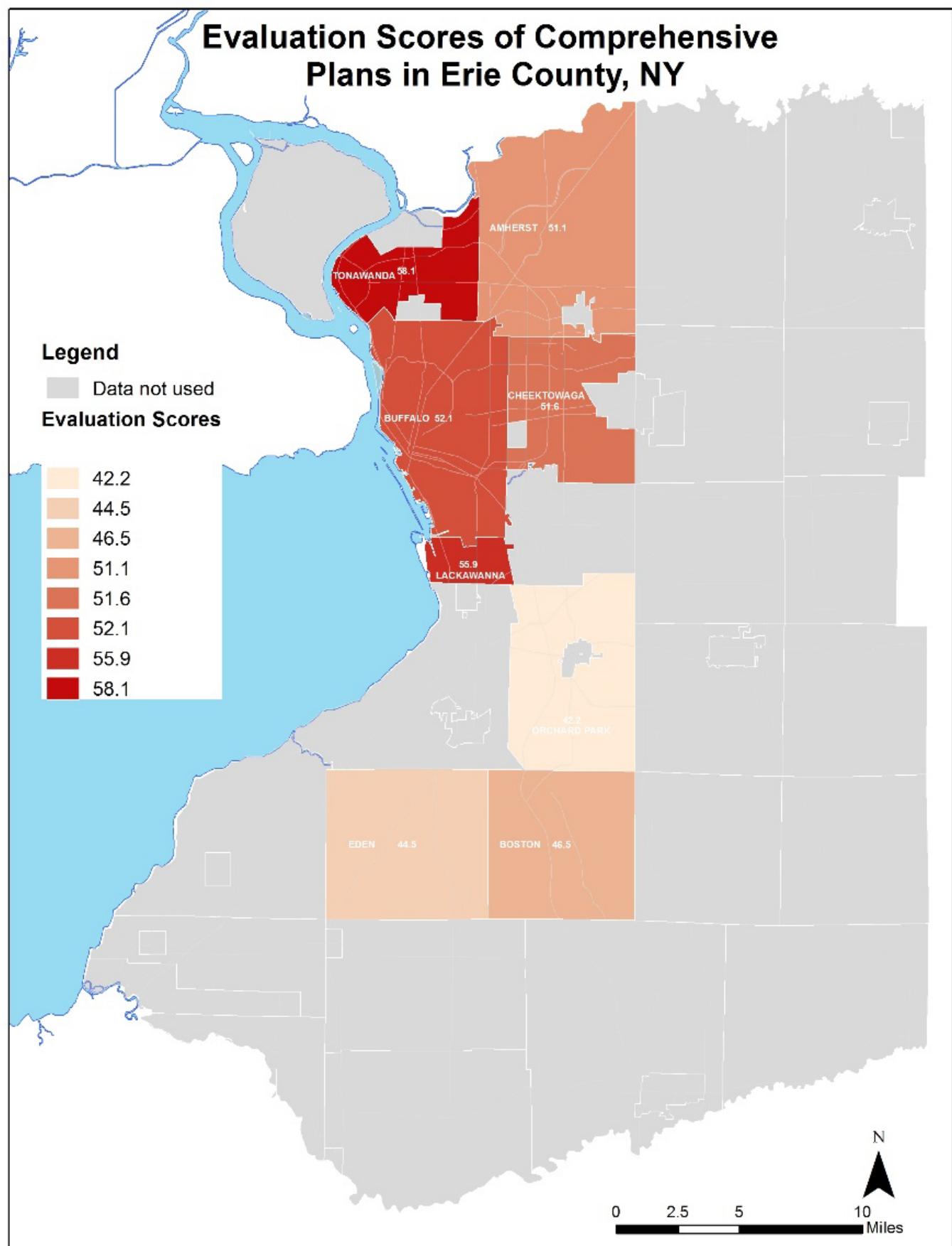
Figure 3-5 Assessment Scores of Seven Comprehensive Plans in Erie County

4. Needs assessment of Age-friendly Erie County

4.1 Community Conversations of Age-Friendly Erie County

4.1.1 About Community Conversations

Erie County Senior Services (ECSS) conducted a series of community conversations within Erie County, New York. At the community forums, Senior service members asked attendees to rate how they feel about their life based on the Age-Friendly Erie County (AFEC) domains, and how these concepts affect the quality of their life.

The process of these community conversations was as follows. First, six to eight aging people from each target community were invited to the AFEC initiative; then, dialogues began about aging experiences and concerns. The IDeA Center also carried out interactive activities for each event to introduce participants to age-friendly domains and concepts. Once participants were familiar with the domains and concepts, a conversation within the group could begin. Senior service members assisted organizational directors to facilitate group conversations with aging residents and document information generated through these discussions.

The purposes of Community Meetings were:

1) To facilitate new partnerships with organizations who serve diverse and underrepresented populations of older adults in Erie County.

2) To empower 35 - 45 older residents from diverse and underrepresented populations to participate in age-friendly community planning and assessment activities.

3) To develop, pilot, and refine inclusive planning strategies for engaging older residents in age-friendly initiatives.

4) To increase the understanding of universal design and age friendly initiatives amongst diverse and underrepresented populations.

4.1.2 Key Findings on Community Conversations

1) There are no (regular) transportation services for shopping and recreation.

2) There are lots of options/ but lack of information pertaining to these options.

3) Inconveniently located on-site laundry facilities.

4) Snow removal assistance.

5) Job training: 55 is the cutoff for job training at various employers.

6) Struggling during Power outages.

7) Lack of enforcement of speed limit on local roads.

8) Refugees have difficulty finding work since they struggle speaking and writing in English.

4.1.3 AFEC Domains Evaluation by Community Conversations

(1) Outdoor Spaces and Buildings

2017-03-02	2017-03-09	2017-03-10	2017-03-16
-Regularly available (hours). -Difficulties getting to park: no shade, unsafe/unsecure.	- Ice issues on the sidewalks. - Sidewalks are not found everywhere. - Need to get to major places but no transportation.	- Lack of accessibility in certain government buildings, libraries, community centers.	N/A

(2) Transportation

2017-03-02	2017-03-09	2017-03-10	2017-03-17
-There are a lack of services for shopping and recreation. -Lots of options but a lack of **information.** -Distance/time to walk to the bus stop is challenging.	- Limited information. - Majorly lacking transportation.	-Distance restrictions-won't go into the city. - Road conditions. - Lack of public transportation. - Difficulty driving when getting older.	- Mainly walk or rely on sons and daughters for rides. - Not familiar with taking the bus.

(3) Housing

2017-03-02	2017-03-09	2017-03-10	2017-03-17
-Feeling unsafe in their homes.	- Affordable housing. - Balcony Issues (safety). -Need for housing upkeep.	- Lack of housing options for middle-income aging people - Apartments on 2nd floor.	- Memory and physical problems emerged. -Becoming incapable of walking.

(4) Social Participation

2017-03-02	2017-03-09	2017-03-10	2017-03-17
-Lack of organized social programming. -Lack of detailed information about activities.	-Social Isolation for older adults with vision impairment (disability). - Connections with students from UB and high schools.	-Off the map – further away from Buffalo. - Unfamiliarity with neighbors—could depend on them for help. - Adult neighbors don't make an effort.	- Language barriers – can't communicate with neighbors. - Difficulty walking to store or community center.

(5) Respect and Social Inclusion

2017-03-02	2017-03-09	2017-03-10	2017-03-17
-Bullying and "community bosses" within communities of co-habitation in residencies.	- High costs to have a social life. - Many seem interested in the intergenerational programs. - Partner with local high school.	-Lack of attention to rural communities. -Disparate programs and services. -Politicians don't pay attention. -Pay taxes but not getting services.	- Can we have a community hall where everyone can meet. - There is only one agency (hope agency) helping us.

(6) Civic Participation and Employment

2017-03-02	2017-03-09	2017-03-10	2017-03-17
-The police do not come over, because complaints aren't made.	-Volunteer opportunities needed. - Not enough volunteer opportunities.	N/A	- Hard to find a work because of language barrier.

(7) Communication and Information

2017-03-02	2017-03-09	2017-03-10	2017-03-17
-Bulletin board or letters on doors: ineffective. -Would like a single person to give consistent and reliable information.	- Information is not centralized. - Many people do not have access to technology. - Major barrier is technology. - Eligibility of technology training.	- Challenges from not using a computer. - Lack of printed forms.	- Difficult to understand the multi-meaning of English words. - Lack of interpreter.

(8) Community Support and Health Services

2017-03-02	2017-03-09	2017-03-10	2017-03-17
-Many buildings have tenant councils: feel that these councils would be helpful. -Religious communities. -Parks lack senior accessibility and are kid-oriented.	- Cost of coverage. - Support: Commission for Blind; Blind Association. - Slow response time for aging people.	- Hospital/Emergency services are far away (Takes at minimum 20-25 minutes to get to neighboring facilities). - Urgent care available, but only open 8a-8p.	-Who makes final decisions for me when I am ill? - Children provide support…. but what happens for older adults without children? - Lack of advanced care planning.

(9) Emergency Preparedness and Resilience

2017-03-02	2017-03-09	2017-03-10	2017-03-17
-There are no generators for when the power goes out. -Bug epidemics: unprepared, improper handling.	-Generators / batteries/ charged cell phones. -Snow removal.	- Power outages. - Lack of emergency shelters. - If telephone is out—there is no way to communicate.	-Police seem to put our needs on a low priority.

(10) Research and Education

2017-03-02	2017-03-09	2017-03-10	2017-03-17
N/A	-Training: 55 was the cutoff for training. - CAT: Main goal are those in school & returning to work: no options for those who are not in work.	N/A	- What resources exist for learning?

Lewis Street Apartments / March 2, 2017

"Technology connection is huge. Eligibility comes with technology; we have no one to train us"

Lewis Street Apartments / March 2, 2017

"There are major transportation issues in Buffalo, public transportation is horrible"

Lewis Street Apartments / March 2, 2017

"I haven't associated with many people after going blind. I was able to continue working with my company. I was able to work in non-profit - create revenue sources"

Olmsted Center for Sight / March 9, 2017

"I still have two daughters and two grandsons, and they are depending on me and my wife. We still provide a shelter for them. My biggest concern is that I am no longer working"


Olmsted Center for Sight / March 9, 2017
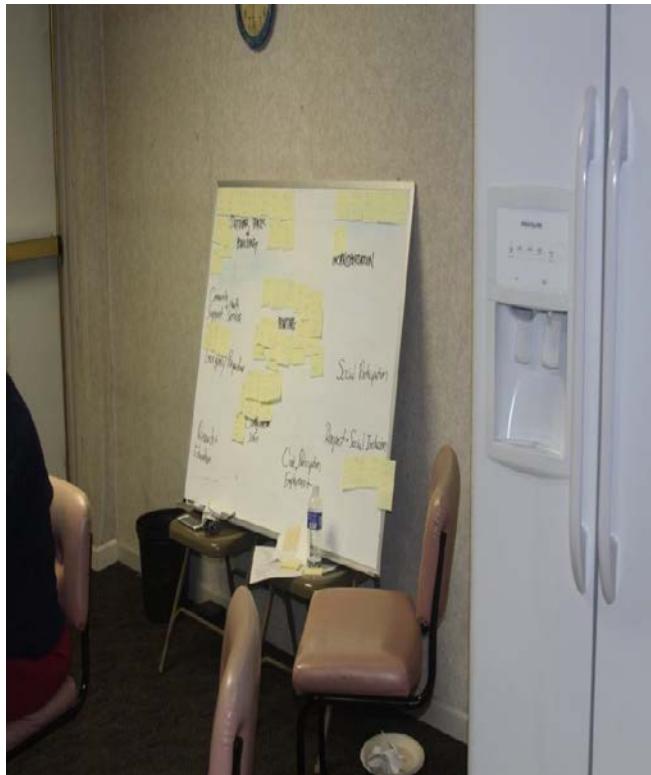
"I am overwhelmed living with an income that is below what I am used to. It bothers me. I don't have the power to go out and work anymore, or socialize"

Olmsted Center for Sight / March 9, 2017

"When there is a serious health condition, who makes the final decisions?"

4.1.5 Appendix: Meeting Notes

(1) Meeting one

Population/Community: Elders living in senior housing

Event Details: Lt. Col. Matt Urban Human Services Center of W.N.Y. – Lewis Street Apartments; March 2, 2017

1)No (regular) transportation services for shopping and **recreation.** There is only transportation provided for going to the doctors.

2)Physical Design Issues: There is a need for walk-in tubs/ higher toilets.

3)Management of residencies: lack of information sharing, poorly handled complaints; things the building is "going to do"- but never follow up.

4)Moving during renovations—temporarily moving into unfamiliar apartments that someone else has lived in.

5)Bullying and "community bosses" within communities of co-habitation in residencies.

6)Bulletin board or letters left on doors is an ineffective system: not everyone receives the same information, it's only located in one area that not everyone has access to. Many people do not leave their apartments.

7)The park (across the street) has not been made age-friendly: there is a steep hill a is primarily child-oriented.

(2) Meeting Two

Population/Community: Elders who are blind or visually impaired

Event Details: http://olmstedcenter.org/ Olmsted Center for Sight;

March 9, 2017

1)NFTA rail-stations are not accessible for handicapped.

2)Sidewalks are in poor condition.

3)No one is responsible of maintaining sidewalks in front of vacant homes, especially in winter.

4)The city is car centric.

5)Lack of UBER – a technological accessibility.

6)Finding housing, especially affordable.

7)**Laundry facilities**, located in inaccessible areas of the home.

8)Unsafe balconies within some buildings.

9)Social isolation for older adults with vision impairment.

10)Aging Experience: Not able to meet their role in family, struggle due to vision loss

11)Not enough volunteer opportunities.

12)They want more information about what they feel they are missing, such as a connection with local schools to organize programs.

13)Hard to stay on-line, many don't have access to computers or IPhone.

14)Long& timely process to get health services.

15)**Snow removal.**

16)**Job Training: 55 was the cutoff for training.**

17)**Power outages:** Trouble in the house, and nowhere in town to go.

(3) Meeting Three

Population/Community: Elders living in a rural community

Event Details: 50+ Aging people Program, Town of Collins ; March 10, 2017

1)Difficulty driving when getting older:

2)Safety is a big concern—speed and actions of other drivers, especially **Lack of enforcement of speed limit**

3)Know your neighbors—can depend on them for help

4)Lack of attention to rural communities in Erie County.

5)Differences in supports and services form County to County.

6)Urgent care available, but only open 8a-8p.

(4) Meeting Four

Population/Community: Nepali elders

Event Details: Jericho Road Community Health Center; March 16, 2017

1)Lack of awareness of transportation services, or how to apply.

2)Living issues: Memory and physical problems have emerged. As well as being incapable of walking.

3)Social isolation is prevalent among older adults:

    a)Language barriers – can't communicate with neighbors

    b)Children working during the day

    c)Difficulty walking to store or community center

    d)No place or program for elderly Nepali people to gather

4)Trouble finding work since they cannot write or speak English

4.2 Analysis of Data in AFEC Residents Survey

4.2.1 Survey Data Validation

Erie County Senior Service and AFEC created a resident survey in order to get information of aging people's health and quality of life. The survey had online and paper formats. The paper survey was the front and back of a page that took participants a brief amount of time to fill out. There were two versions of the online surveys. One was short and took participants around 30 minutes to complete and the other was a long form that took up to 60 minutes to complete. The assessment had aging people rate the 10 age-friendly domains through different questions relating to each domain. After the distribution of the surveys, the AFEC received back over 1,000 completed surveys. The valid sample size in AFEC Residents Survey was 1040. The data came from three types of surveys: a paper format, a 30-minute online survey, and a 60-minute online survey (Figure 4-1). Paper forms were distributed at senior centers throughout Erie County and assistance was provided to those in need. Online forms were taken at senior centers and at home, assistance was also provided to those aging people. In total, AFEC received 381 paper forms, 384 30-minute online forms, 275 60-minute online forms from Community members across Erie County.

Before assessing the survey data to provide recommendations regarding age-friendly procedures, a data validation was completed. The data validation compared the survey taker's demographics to Erie County's demographics for citizens 60 years and older (using the American Community Survey 2010-2015). The goal of this data validation is to ensure that the survey respondents were an accurate representation of the county as a whole. The demographic data reviewed was: gender, race, marital status, and educational attainment.
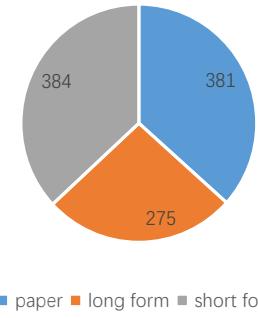
After completing the data validation, it was confirmed that the survey respondents were an accurate representation of three out of the four demographic categories. The majority of survey respondents who participated were also female totaling 70% (Figure 4-2). The majority of Erie County is female amounting to 57% (Figure 4-3). 97% of survey respondents identified as white (Figure 4-4) and 88% of Erie County residents identify as white (Figure 4-5). 52% of survey responded as being married (Figure 4-6) and more than half of Erie County's 60 and over population is still married totaling 53% (Figure 4-7). Almost a quarter (22%) of Erie County's over 60 population is currently widowed and 17% of

survey respondents are currently widowed. 13% of Erie County's aging population is divorced and 18% of survey respondents are divorced. Only 2% of Erie County's over 60 population are separated and just 1% of survey respondents are currently separated. And finally, 10% of Erie County's over 60 population have never been married and 12% of survey respondents have never been married as well.

There were discrepancies between the educational attainment of the County and the survey respondents (Figure 4-8, Figure 4-9). Erie County an even distribution across all education attainment categories (Less than High School Graduate - 13%, High School Graduate / GED Equivalent – 36%, Some College / Associates Degree obtained - 25% and Bachelor's Degree or Higher - 26%). The majority of survey respondents however had a Bachelor's degree or higher amounting to 53% and 30% had some college experience or an Associate's Degree.

The results of the data validation confirm that the survey takers were an accurate representation of Erie County. Therefore, Age Friendly Erie County and the University at Buffalo Master of Urban Planning Studio may make recommendations to Erie County that would be fit for all communities, and not just a few select areas.
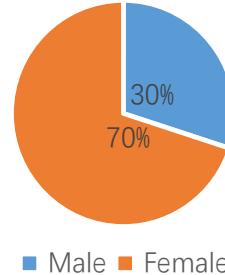
Figure 4-1 Respondents in Three Forms of Erie County Survey

■ paper ■ long form ■ short form

Data Source: Erie County Senior Services (2016). AFEC Resident Survey.
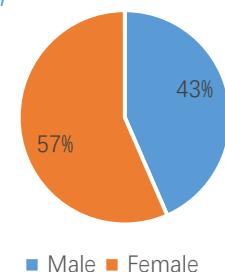
Figure 4-2 Percentage of Male and Female for Erie County Survey Respondents

■ Male ■ Female

Data Source: Erie County Senior Services (2016). AFEC Resident Survey.

Figure 4-3 Percentage of Male and Female Population of 60 years of Age or Older in Erie County, NY
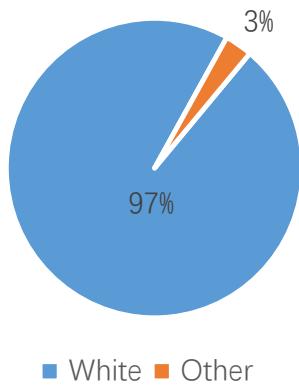
■ Male ■ Female

Data Source: U.S. Census Bureau. ACS 2015 (5-Year Estimates). Gathered from Social Explorer.

Table 4-1 Gender
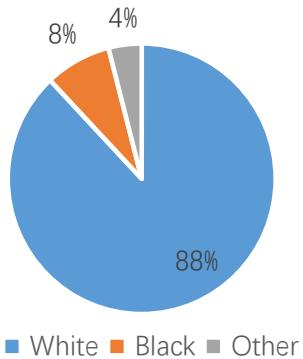
| Gender	Erie County, NY	Survey Respondents
Male	43%	30%
Female	56%	70%

Figure 4-4 Race Percentages for Erie County Survey Respondents

3%

97%

■ White ■ Other

Data Source: Erie County Senior Services (2016). AFEC Resident Survey.

Figure 4-5 Race Percentages for Population 60 years and over in Erie County, NY
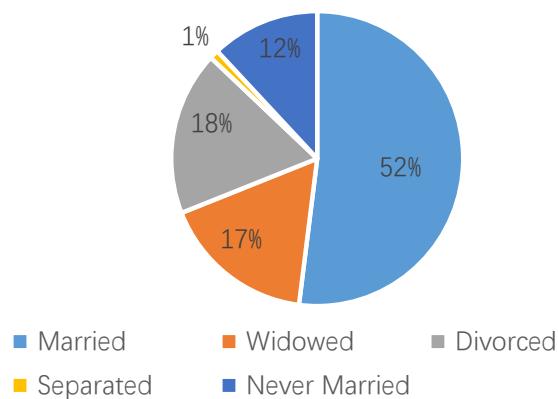
8% 4%

88%

■ White ■ Black ■ Other

Data Source: U.S. Census Bureau. ACS 2015 (5-Year Estimates). Gathered from Social Explorer.

Table 4-2
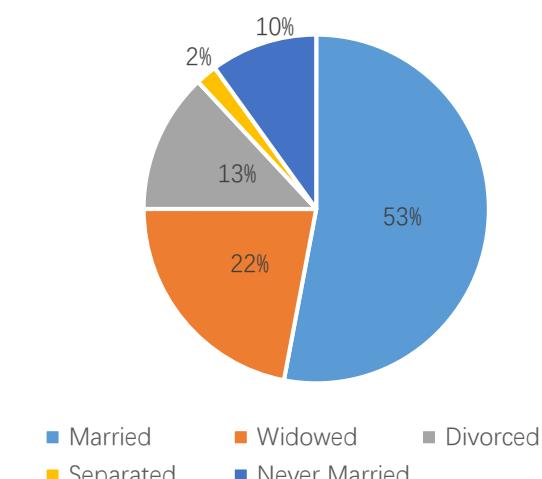
Race	Erie County, NY	Survey Respondents
White	88%	97%
Other	12%	3%

Figure 4-6 Marital Status Percentages for Erie County Survey Respondents

1% 12%

18%

52%

17%

■ Married   ■ Widowed   ■ Divorced
■ Separated   ■ Never Married

Data Source: Erie County Senior Services (2016). AFEC Resident Survey.

Figure 4-7 Marital Status Percentages for 60 and over Population in Erie County, NY
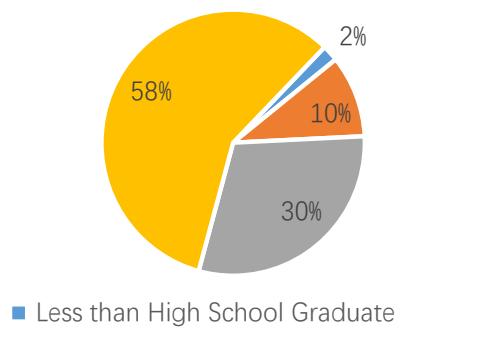
2% 10%

13%

53%

22%

■ Married   ■ Widowed   ■ Divorced
■ Separated   ■ Never Married

Data Source: U.S. Census Bureau. ACS 2015 (5-Year Estimates). Gathered from Social Explorer.

Table 4-3
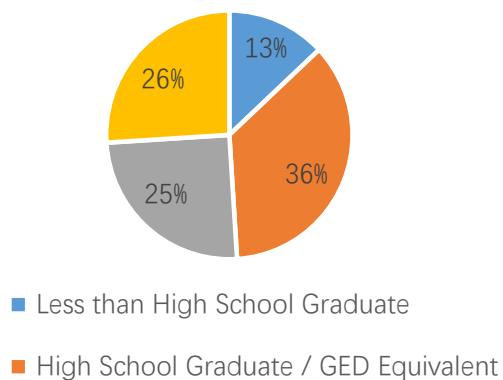
Marital Status	Erie County, NY	Survey Respondents
Married	53%	52%
Widowed	22%	17%
Divorced	13%	18%
Separated	2%	1%
Never Married	10%	12%

Figure 4-8 Educational Attainment Percentages for Erie County Survey Respondents

- Less than High School Graduate

- High School Graduate / GED Equivalent

Data Source: Erie County Senior Services (2016). AFEC Resident Survey.

Figure 4-9 Educational Attainment Percentages for 60 and over Population in Erie County, NY

- Less than High School Graduate

- High School Graduate / GED Equivalent

Data Source: U.S. Census Bureau. ACS 2015 (5-Year Estimates). Gathered from Social Explorer.

Table 4-4

Educational Attainment	Erie County, NY	Survey Respondents
Less than High School Graduate	13%	2%
High School Graduate / GED Equivalent	36%	10%
Some College / Associates Degree obtained	25%	30%
Bachelor's Degree or Higher	26%	58%

4.2.2 Survey Data Analysis

(1) Summary

The data for this analysis came from the AFEC Assessment Survey. There were over one thousand respondents and three types of surveys. Respondents were asked to rate Erie County and ten domains from an age-friendly perspective. On average, Erie County got a score of 3.226 out of 5, indicating that people were somewhat satisfied with the overall status of Erie County. Transportation, intergenerational activities, streets and sidewalks, and employment received low scores. As for spatial distribution, the north areas and the southeast areas had higher scores, or higher satisfactory. The high-score areas of transportation were in areas covered by public transportation, while the high-score areas of park and outdoor spaces were in areas with many parks, or large parks. However, the survey data still had some limitations.

(2) Overall Rating of Age-Friendly and Key Elements

Respondents were required to rate Erie County and 10 age-friendly domains. Scores ranged from 1 to 5, indicating poor to excellent levels. For Erie County overall score, people gave a somewhat high score of 3.226, which meant people were somewhat satisfied with Erie County as a place for senios. As for some key elements, park & open spaces, and community activism & volunteer opportunities received high scores. On the other hand, streets & sidewalks, intergenerational activities, transportation options, and employment received low scores. (Figure 4-10) Aging people were not satisfied with these four elements. In addition, most people thought that it was very important for them to live in their own home and remain in Erie County. It was observed that there were strong demands for "aging in place". (Figure 4-11)
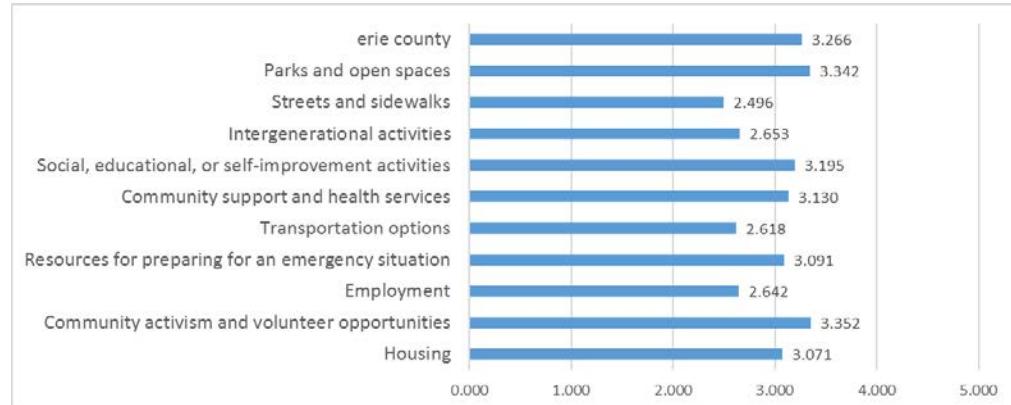
(3) The Spatial Distribution of People's Rating Scores

For each zip code, the average rating score was calculated and linked to GIS maps. Overall, the north part and the southeast part of Erie County had higher scores, which revealed aging people in these parts were more satisfied with their surrounding environment (Figure 4-12). Streets and sidewalks in most areas did not have high scores. The north area and south area were slightly higher (Figure 4-13). The north and east areas received high scores for their parks. The spatial distribution of high-scoring areas was almost always in areas with many parks, or big parks (Figure 4-14). Transportation ratings were different than the total score, and other domain scores. Although overall scores were low, areas in and surrounding the City Buffalo received higher scores than other areas (Figure 4-15). That outcome fitted in with the distribution of public transportation in the city. The spatial distribution of housing scores was similar with total scores. Northern areas and middle areas received high scores (Figure 4-16).

(4) Discussion of the Survey Data
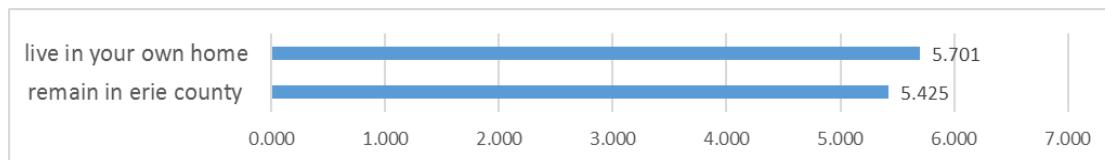
There were some limitations to the survey data, so the outcomes may only be used as reference. Most variables were highly correlated with each other, showing that while people gave a specific domain a high score, they tended to give other domains similar scores; (Error! Reference source not found.) that pattern may have occurred due to the questionnaire's format. Under each question there were columns and rows of domains and ratings. This made it easier to rate quickly, and may have led to a pattern while rating. Additionally, some areas of Erie County had a small sample size, especially in the peripheral area. Some zip-code areas had ten or fewer respondents, meaning rates in those areas may have some bias. (Figure 4-17)

Figure 4-10 Rating for Erie County and Ten elements
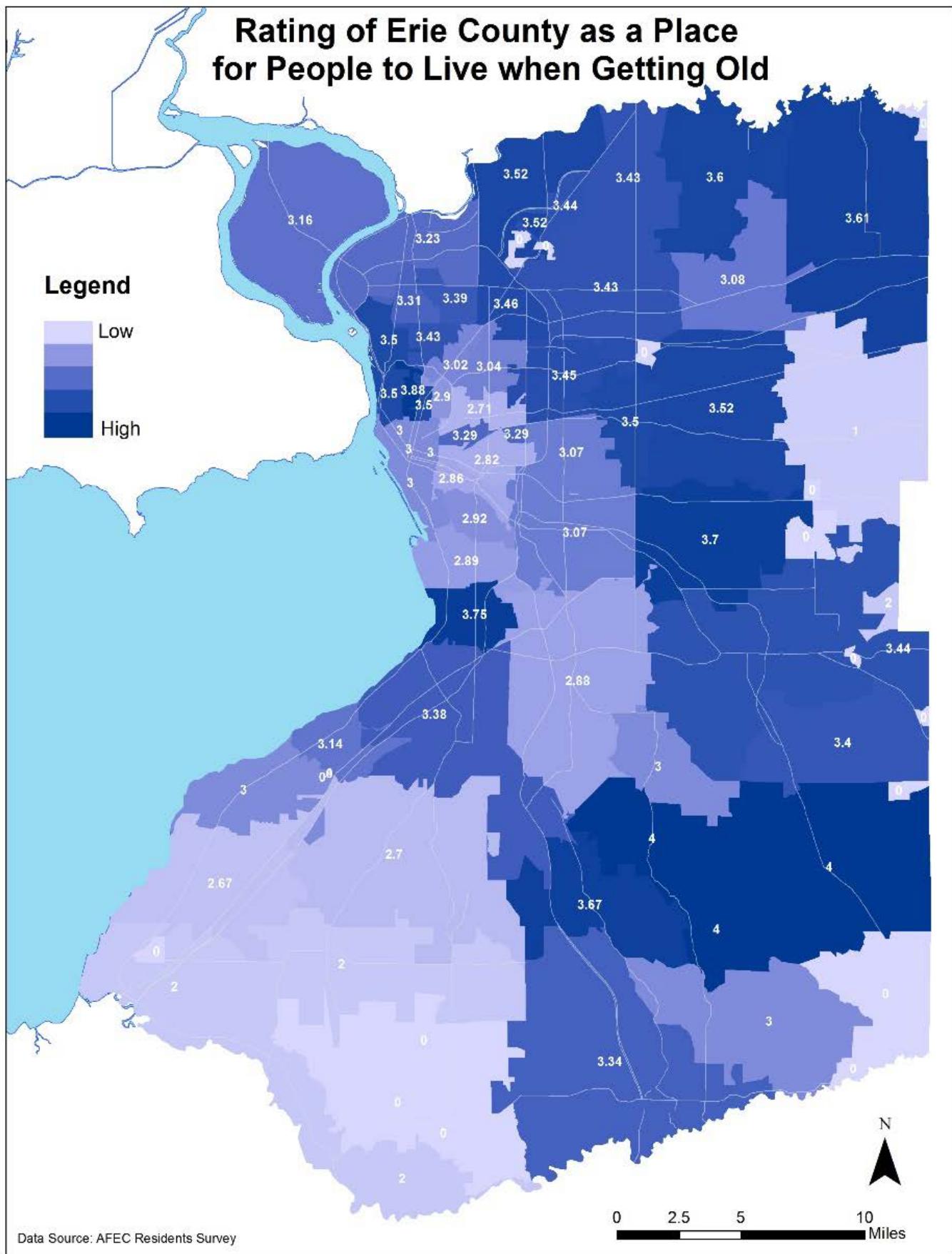
Data Source: Erie County Senior Services (2016). AFEC Resident Survey

Figure 4-11 Importance for people remain in Erie County and their own home

Data Source: Erie County Senior Services (2016). AFEC Resident Survey

Figure 4-12 Rating for Erie County

Rating of Erie County as a Place for People to Live when Getting Old

Data Source: AFEC Residents Survey

Figure 4-13 Rating for streets and side walks

Rating of Streets and Sidewalks in Erie County, NY

Data Source: AFEC Residents Survey

Data Source: Erie County Senior Services (2016). AFEC Resident Survey
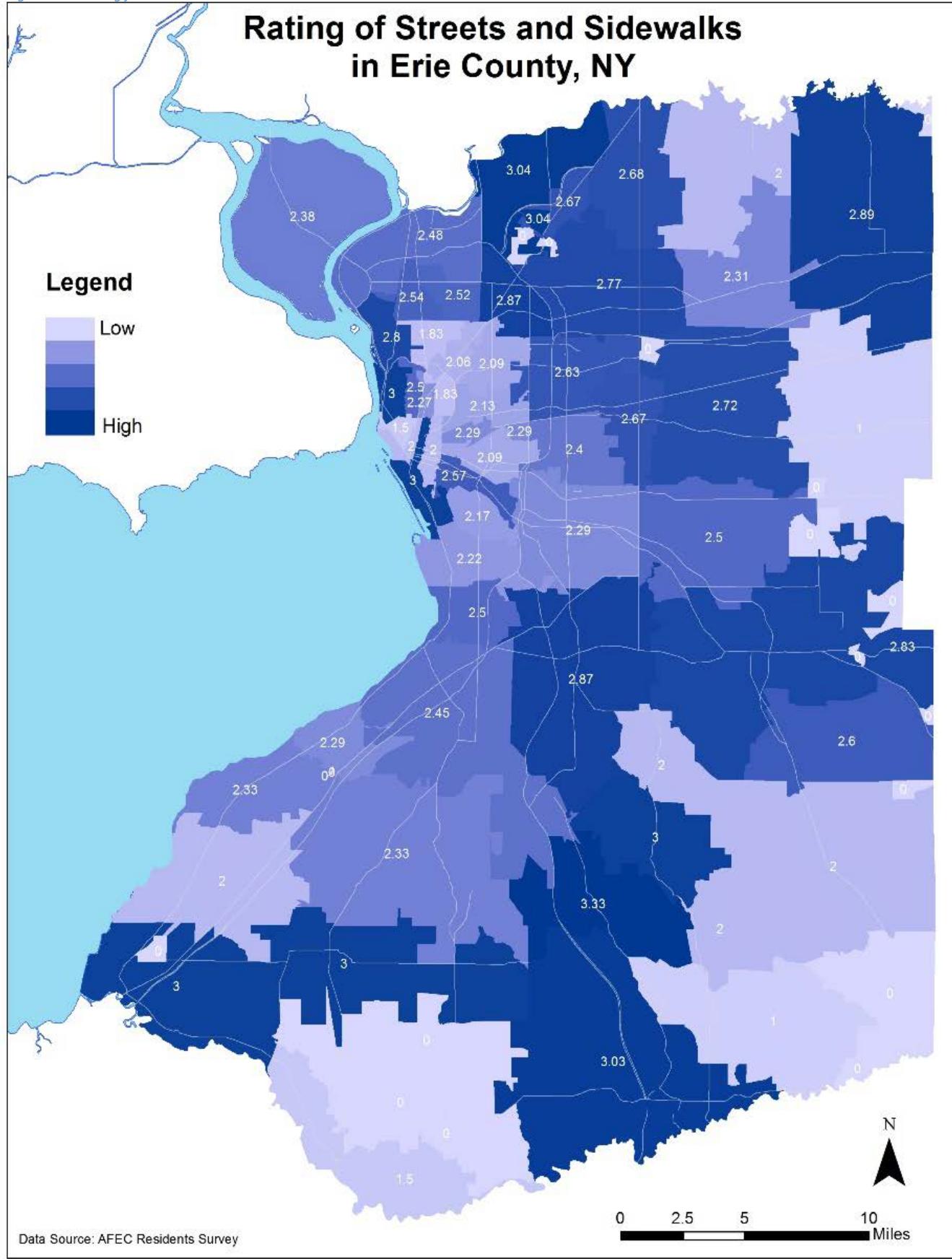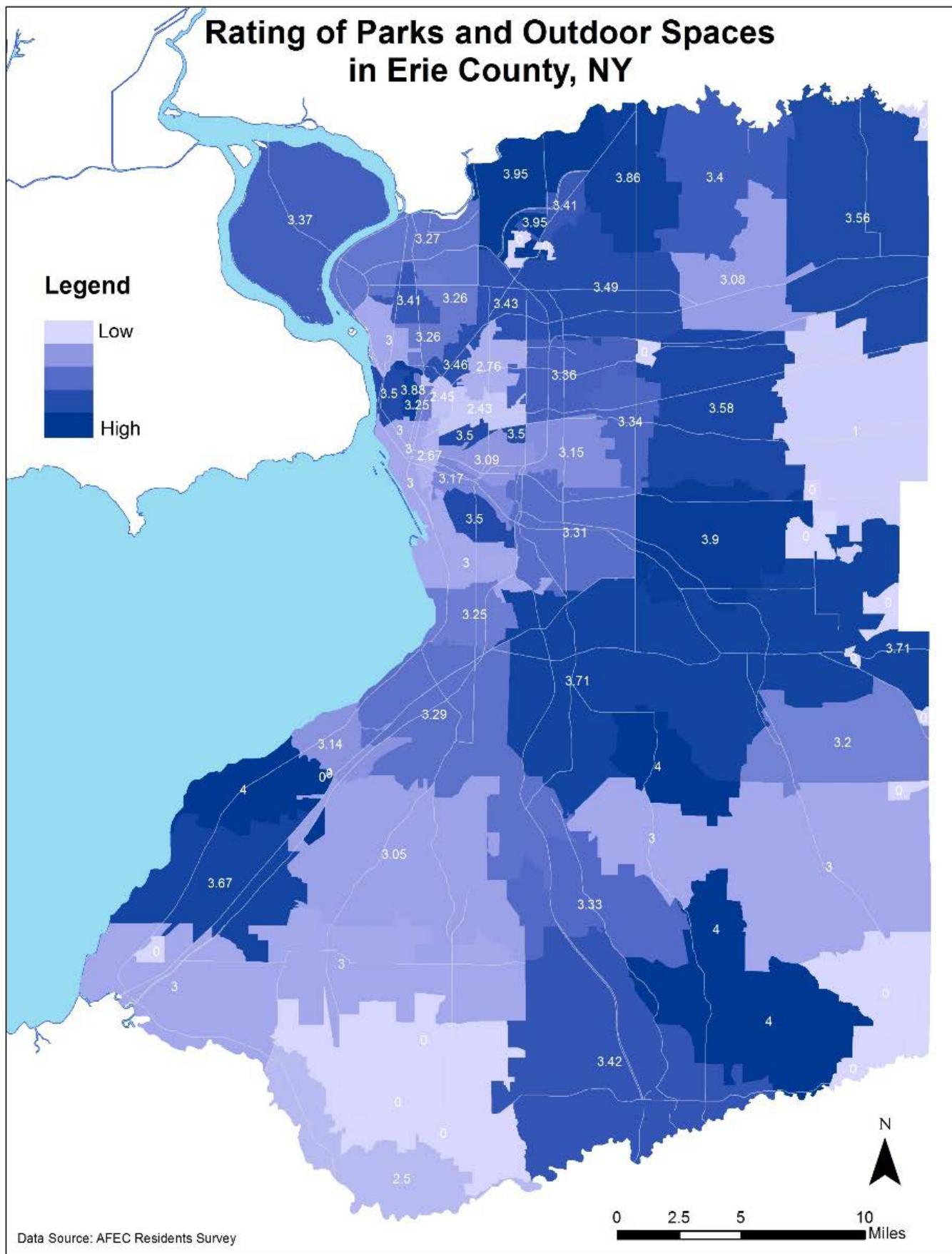
Figure 4-14 Rating for Parks

Rating of Parks and Outdoor Spaces in Erie County, NY

Legend

Low

High

Data Source: AFEC Residents Survey

38

Figure 4-15 Rating for transportation

Rating of Transportation in Erie County, NY

Legend

Low
High

Data Source: AFEC Residents Survey

Data Source: Erie County Senior Services (2016). AFEC Resident Survey
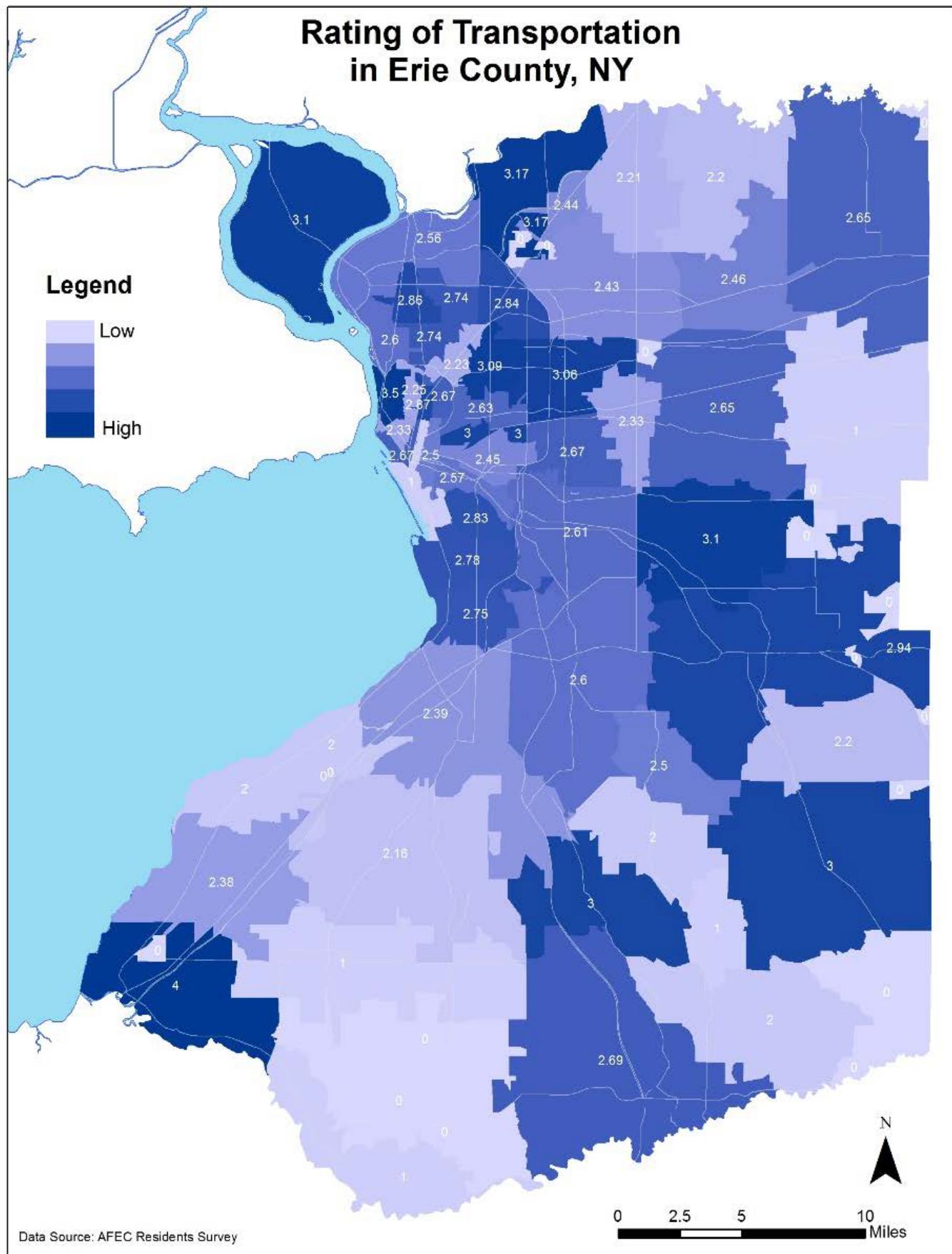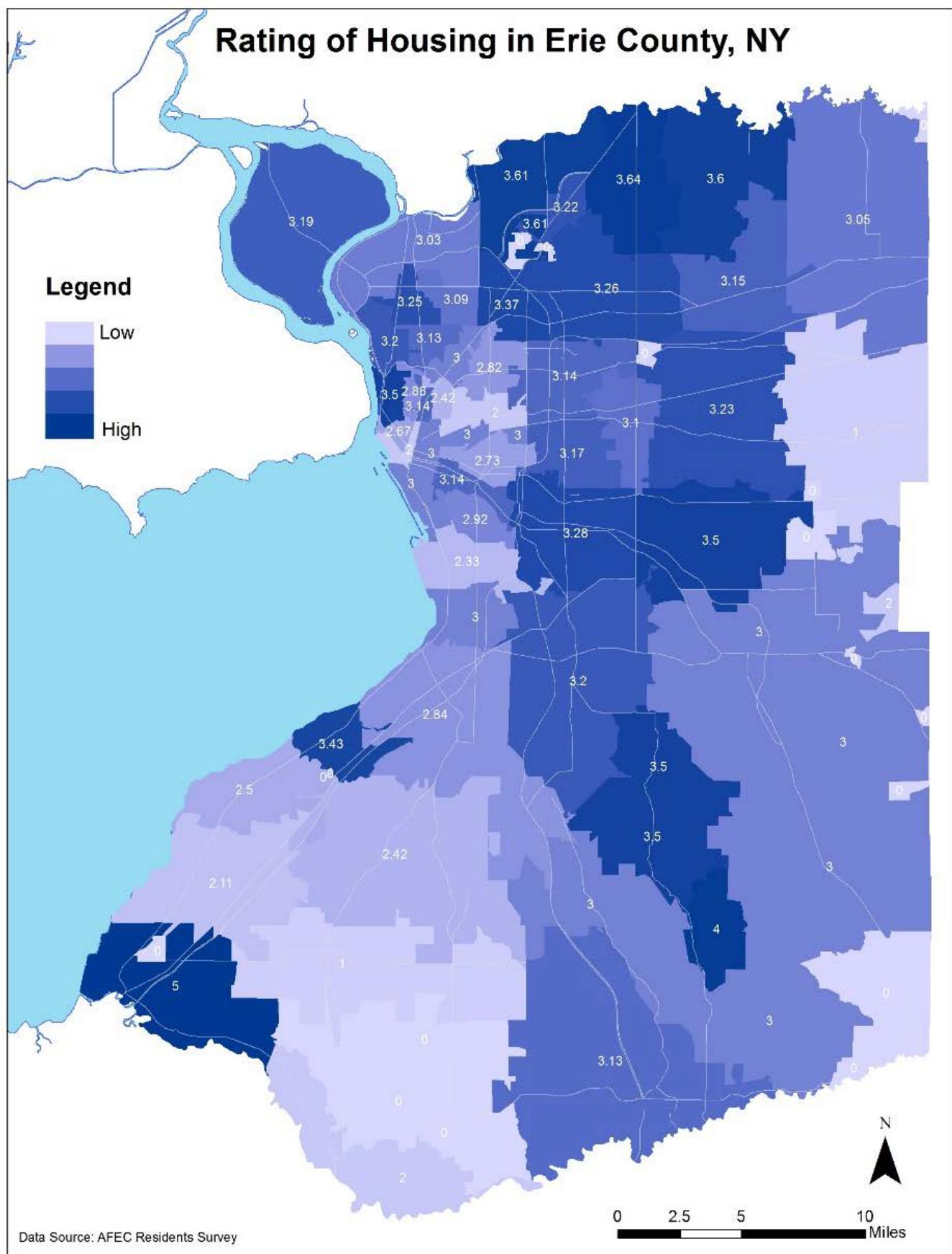
Figure 4-16 Rating for housing

Rating of Housing in Erie County, NY
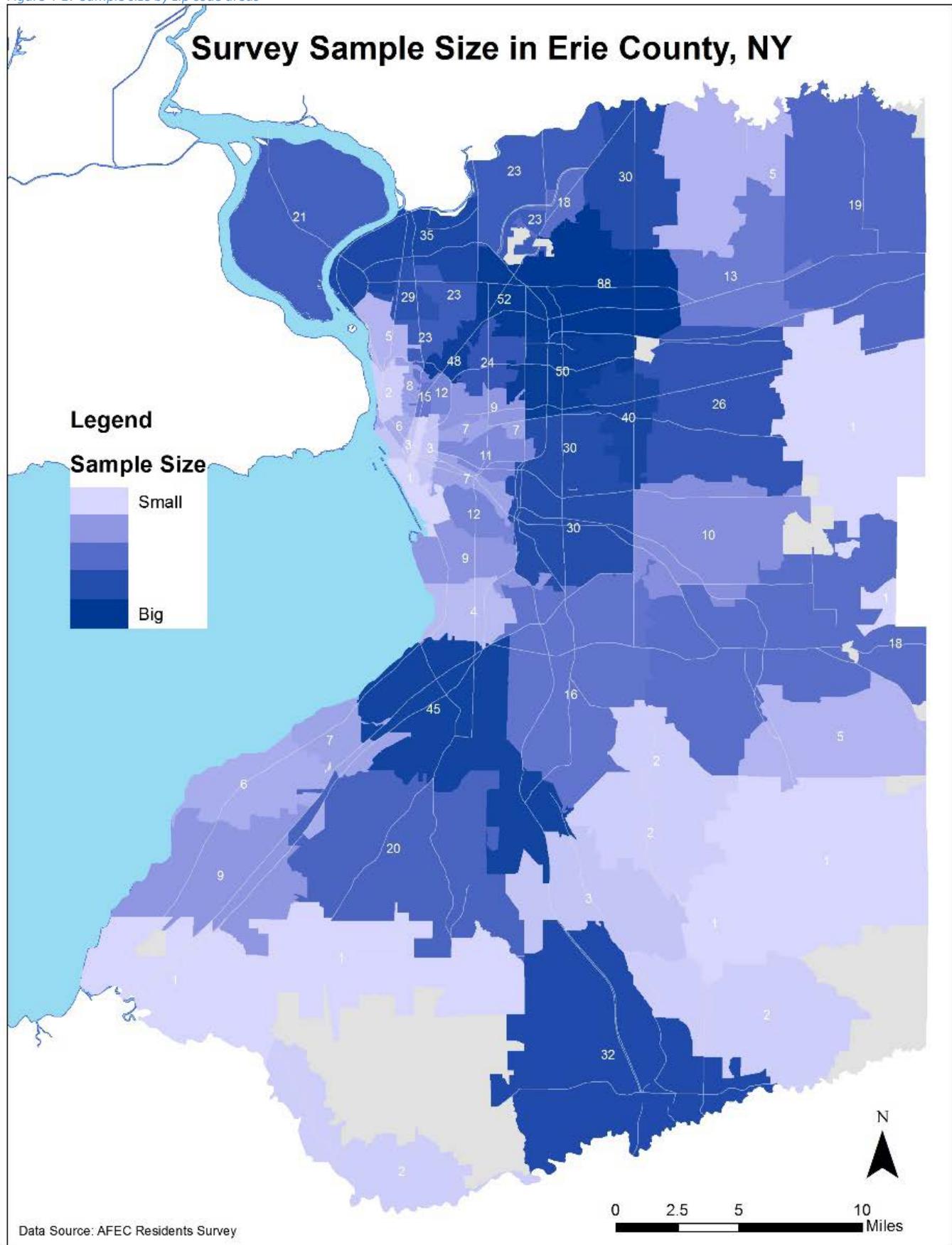
Data Source: Erie County Senior Services (2016).AFEC Resident Survey

Table 4-5 Correlation Matrix among 10 Elements of Survey

correlation

		Housing	Community activism and volunteer opportunities	Employment	Resources for preparing for an emergency situation	Transportation options	Community support and health services	Social, educational, or self-improvement activities	Intergenerational activities	Streets and sidewalks	Parks and open spaces	erie county
Housing	Pearson Correlation	1	.520	.441	.536	.455	.549	.515	.486	.410	.425	.538
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	830	830	830	830	830	830	830	830	830	830	830
Community activism and volunteer opportunities	Pearson Correlation	.520	1	.494	.540	.343	.589	.607	.499	.352	.539	.456
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	830	830	830	830	830	830	830	830	830	830	830
Employment	Pearson Correlation	.441	.494	1	.531	.347	.449	.449	.444	.344	.365	.422
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	830	830	830	830	830	830	830	830	830	830	830
Resources for preparing for an emergency situation	Pearson Correlation	.536	.540	.531	1	.487	.619	.538	.542	.425	.518	.508
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
	N	830	830	830	830	830	830	830	830	830	830	830
Transportation options	Pearson Correlation	.455	.343	.347	.487	1	.592	.441	.484	.408	.369	.441
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	830	830	830	830	830	830	830	830	830	830	830
Community support and health services	Pearson Correlation	.549	.589	.449	.619	.592	1	.706	.597	.420	.519	.529
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	830	830	830	830	830	830	830	830	830	830	830
Social, educational, or self-improvement	Pearson Correlation	.515	.607	.449	.538	.441	.706	1	.646	.391	.549	.511
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	830	830	830	830	830	830	830	830	830	830	830
Intergenerational activities	Pearson Correlation	.486	.499	.444	.542	.484	.597	.646	1	.493	.535	.505
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	830	830	830	830	830	830	830	830	830	830	830
Streets and sidewalks	Pearson Correlation	.410	.352	.344	.425	.408	.420	.391	.493	1	.498	.414
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000
	N	830	830	830	830	830	830	830	830	830	830	830
Parks and open spaces	Pearson Correlation	.425	.539	.365	.518	.369	.519	.549	.535	.498	1	.495
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000
	N	830	830	830	830	830	830	830	830	830	830	830
erie county	Pearson Correlation	.538	.456	.422	.508	.441	.529	.511	.505	.414	.495	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	830	830	830	830	830	830	830	830	830	830	830

Data Source: Erie County Senior Services (2016). AFEC Resident Survey

Figure 4-17 Sample size by zip code areas

Survey Sample Size in Erie County, NY

Legend

Sample Size

Small

Big

Data Source: AFEC Residents Survey

5 Envisioning Age-Friendly Erie County

This plan envisions an Erie County with boundless lifestyle choices and options for aging people. People's daily life can be improved with an expanded social network because of vibrant, healthy, and well-connected neighborhoods. An ideal county enables citizens to 'Age in Place' by developing a walkable and pedestrian friendly environment for older citizens. Accessibility to nearby parks, community centers, restaurants, and public plazas enable the citizens to remain active and healthy as they age. Aging people prosper in well-constructed, affordable, retrofitted houses with universal design strategies, as well as in a wide range of dwellings. A diverse range of accessible and affordable housing will help citizens to age in place with the utmost comfort.

6 Key Domains of Age-friendly Erie County

6.1 Community Support: Creating 20-Minute Neighborhoods
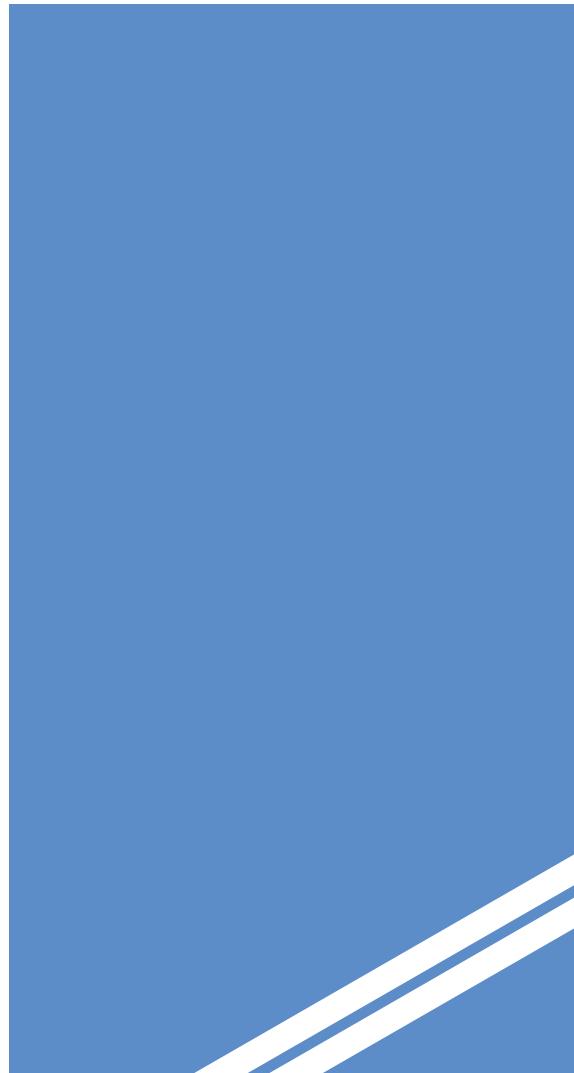
One of the main goals of creating an age-friendly Erie County would be to make the aging people feel safe and comfortable in their own communities. By creating 20-minute neighborhoods, which were inspired by new urbanism, communities can be more walkable and age-friendly.

6.1.1 Supporting Theory: New urbanism

New Urbanism is an urban design movement which promotes walkable neighborhoods containing a range of housing and job types. Walkability is a measure of how friendly, secure, and accessible a neighborhood is to any normal human being.[1]

Basic principles of New Urbanism include:

1) The basic building block of a community is the neighborhood.

2) The neighborhood is limited in physical size, with a well-defined edge and a center. The size of a neighborhood is usually based on the distance that a person can walk in five minutes from the center to the edge, roughly a quarter-mile. Neighborhoods have a fine-grained mix of land uses, providing opportunities for young and old to find places to live, work, shop, and be entertained.

3) Providing a range of transportation options is fundamental. For most of the second half of the 20th Century, transportation agencies focused almost exclusively on optimizing the convenience of automobile travel, and dealt with transit riders, pedestrians, and bicyclists as little more than afterthoughts. We must give equal consideration to all modes of transportation to relieve congestion and to provide people with useful, realistic choices.

4) The street pattern is conceived as a network to create the greatest number of alternative routes from one part of the neighborhood to another. This has the effect of providing choices and relieving vehicular congestion. The streets form a hierarchy, from broad boulevards to narrow lanes and alleys.[2]

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1 *"What Is New Urbanism? | CNU." 2017. Accessed April 3. https://www.cnu.org/resources/what-new-urbanism*
2 *Arch, Lakshmanan B. 1935. "Le Corbusier Forays into Urbanism," 1–21.*

6.1.2 Defining Ideal Communities: 20-Minute Neighborhoods

A 20-minute neighborhood is an emerging concept inspired from new urbanism. New urbanism's housing policy focuses on aging people living in their own neighborhoods. To continue living in the same neighborhood and encouraging the concept of 'AGEING IN PLACE', the communities ought to be more walkable and friendly. These reasons act as reinforcing agents to help elder citizens age in place comfortably, and happily.

A 20-minute neighborhood is a concept in which the community is pedestrian oriented, safe, and the services and amenities can be approached within a walking radius of 20 minutes. In other words, a 20- minute neighborhood is a pedestrian friendly environment.

20-minute neighborhoods have the 3 basic characteristics:

1) Walkable environment.

2) Amenities to support daily needs.

3) Housing density to support the previous characteristics.

20-minute neighborhoods have various health benefits, economic benefits, and environmental benefits. The concept promotes biking and walking which in return reduces the use of cars and public transportation, saving time and money. Economic benefits include a reduction in commuting costs, and a decrease in infrastructure investments in relation to transportation. The environmental benefits include reduced consumption of fuels, a reduced carbon footprint, and an overall improvement of health and wellbeing.

A livable community is safe and secure, has affordable and appropriate housing, has a variety of transportation options, and offers supportive community services. Once in place, those resources enhance personal independence, allow residents to age in place, and foster their engagement in the community's civic, economic, and social life. (Book and Policies 2017)[1]

6.1.3 Case Study: 2016 Great Neighborhoods from APA

(1) Downtown Santa Ana, Santa Ana, California:

Located in the heart of California's Orange County, Santa Ana is the fourth-densest large city in the U.S. It is a gathering place for artists, entrepreneurs, and central to Orange County's creative class. Downtown Santa Ana's booming local businesses, restaurants, and long-time residents are committed to the creation of a tight-knit, thriving community that celebrates diversity through festivals and public celebrations. (Figure 6-1)

Planning excellence included: Downtown Santa Ana has evolved organically over the past 147 years with the support of key municipal investments. Downtown Santa Ana has a tradition of hosting a variety of uses throughout the neighborhood's 147-year history. There are multi use buildings and dense urban developments, including government, industrial, commercial, and residential buildings. Adjacent residential areas are safe, family-friendly, and close to shops, restaurants, and offices. Downtown Santa Ana is a Walker's Paradise, according to WalkScore.com.[2]

Figure 6-1 Downtown Santa Ana

Source: American Planning Association. (2017). From: https://www.planning.org/greatplaces/

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1   Book, The Policy, and Aarp Public Policies. 2017. "The Policy Book: AARP Public Policies 20152016," 1–7

2   American Planning Association. (2017). "Downtown Santa Ana: Santa Ana, California." Accessed from: https://www.planning.org/greatplaces/neighborhoods/2016/downtownsantaana/.

(2) Midtown Atlanta: Atlanta, Georgia:

Midtown Atlanta is the preeminent urban neighborhood in Atlanta. It stands out as a dense, mixed-use walkable area in a region traditionally known for its decades of sprawling growth. Midtown Atlanta is bordered to the north by an Amtrak Station and to the south by Pine Street near its medical district. It extends east to the edge of Piedmont Park, near the Atlanta Beltline Eastside Trail, and to the west at Interstate 85/75. (Figure 6-2)

Planning excellence included: The neighborhood is known for its dense growth and street grid network. Midtown Atlanta has a diverse range of housing and building uses and developments. As of Summer, 2016, 20 major mixed-use development projects were actively under construction, including residential apartments, condos and townhomes ranging from 2-25 stories, offices, institutional, hotels, and street-level restaurant/retail uses. Top-ranked anchor institutions bridging technology, healthcare, and the arts foster innovation among corporations, start-ups, and entrepreneurs in Midtown Atlanta's Technology Square area. With construction funding from the Atlanta Regional Commission and the Midtown Improvement District, Midtown Alliance's $5.6 million renovation of 12 blocks of Juniper Street will include a buffered bicycle lane, on-street parking, and storm water catchment and mitigation areas in addition to sidewalk, lighting, and landscape improvements.

Midtown Atlanta, in cooperation with other partners, is undertaking a series of projects to transform the I-75/85 Connector through environmental and urban design improvements. Construction enhancements of the two Peachtree Street bridges over I-75/85 will finish by end of 2016.[1]

(3) Nob Hill, Albuquerque, New Mexico

Nob Hill in Albuquerque sprung up around the golden age of road trips and cruising inspired by Route 66, which now serves as its Central Avenue. The community has played a central role in much of the preservation and bustling culture the neighborhood knows today. (Figure 6-3)

Planning excellence included: Nob Hill remains diverse and affordable. Rental prices have been stable over the past 10 years, and the neighborhood has maintained its percentage of Hispanic/Latino residents at 26 percent. There are significant plans to continue improvements and efforts to revitalize the portion of Nob Hill east of Carlisle. Transit routes run on all sides of the neighborhood and up and down Central Avenue. Bike lanes are also a feature of the neighborhood. Nob Hill has strong pedestrian connections to local businesses via sidewalks and paths. Solid pedestrian infrastructure is due in part to Albuquerque's gridded street design. In conjunction with Anthea @ Nob Hill, the City of Albuquerque Planning Department's Metropolitan Redevelopment Agency is redeveloping a vacant Route 66 motel site in Nob Hill into a new mixed-use facility. The De Anza Motor Lodge will offer boutique hotel space, retail, and restaurants while preserving precious Zuni Shalako murals and historic building facades that face Central Avenue. The project is slated to begin in early 2017.[2]

Figure 6-2 Midtown Atlanta

Source: American Planning Association. (2017). From: https://www.planning.org/greatplaces/

Figure 6-3 Nob Hill, Albuquerque, New Mexico

Source: American Planning Association. (2017). From: https://www.planning.org/greatplaces/

1   American Planning Association. (2017). "Midtown Atlanta: Atlanta, Georgia." Accessed from: https://www.planning.org/greatplaces/neighborhoods/2016/midtownatlanta/.

2   American Planning Association. (2017). "Nob Hill: Albuquerque, New Mexico." Accessed from: https://www.planning.org/greatplaces/neighborhoods/2016/nobhill/.

6.1.4 Analysis of Four Typical Neighborhoods in Erie County

Four neighborhoods in four census tracts were selected from the north, south, east, and west of Erie County. Select neighborhoods were in Census Tract 91.12, Census Tract 130.02, Census Tract 140, and Census Tract 63.02. Their walkability situations were studied using guidelines from AARP's walk audit tool kit. Photographic documentation was done to relate the theory to the real site experience.
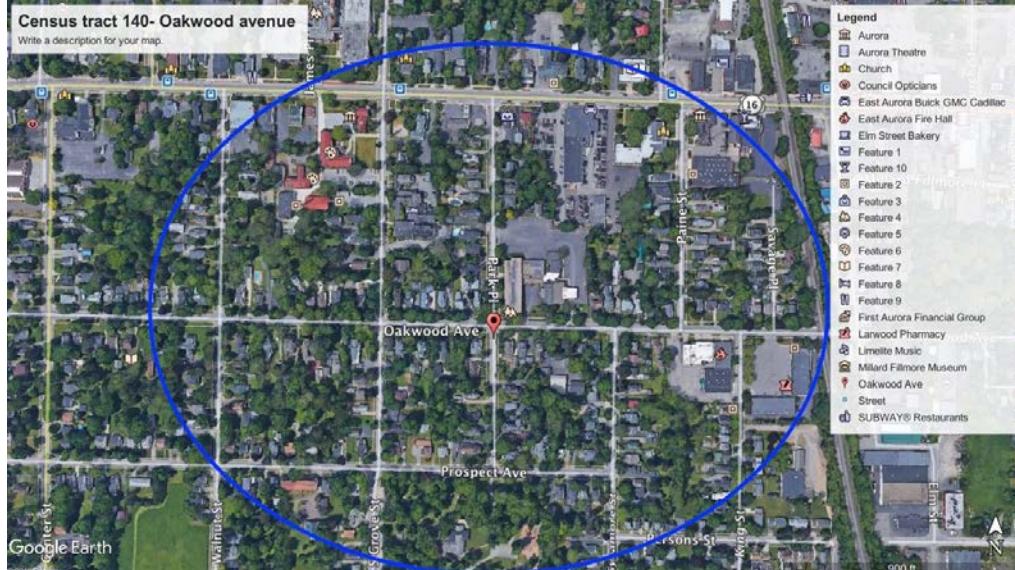
(1)Neighborhood in Census Tract 140

This neighborhood is an example of good walkable neighborhood wherein almost all the errands and tasks can be completed by walking. The neighborhood is not automobile dependent. (Figure 6-4)

The residential neighborhood is near the heart of the village of East Aurora, where there are shops, restaurants, grocery stores, a public park, and entertainment which is all within a 20-minute walk. The chosen site, at the corner of South Grove Street and Oakwood Avenue, suggests that the community is considerably safe. There were many people walking throughout the neighborhood.

As seen in the photographs provided (Figure 6-5), the sidewalks were relatively level, with some minor obstructions created by the roots of trees. There are some updates required to sidewalks, but they are not paramount. The residential streets lacked signage, or any specific physical indicators of where to cross, especially as the crosswalk lines had become quite faded.

Figure 6-4 neighborhood in Census Tract 140

Source: Google Earth

Figure 6-5 Sidewalks on Oakwood Ave

(2) Neighborhood in Census Tract 130.02

In this neighborhood, almost no errand or task can be completed in the 20-minute walking distance which is a radius of about 1-2 miles. Almost all the grocery stores and convenience shopping or restaurants are more than 3.5 miles away and thus require a car to travel. (Figure 6-6)
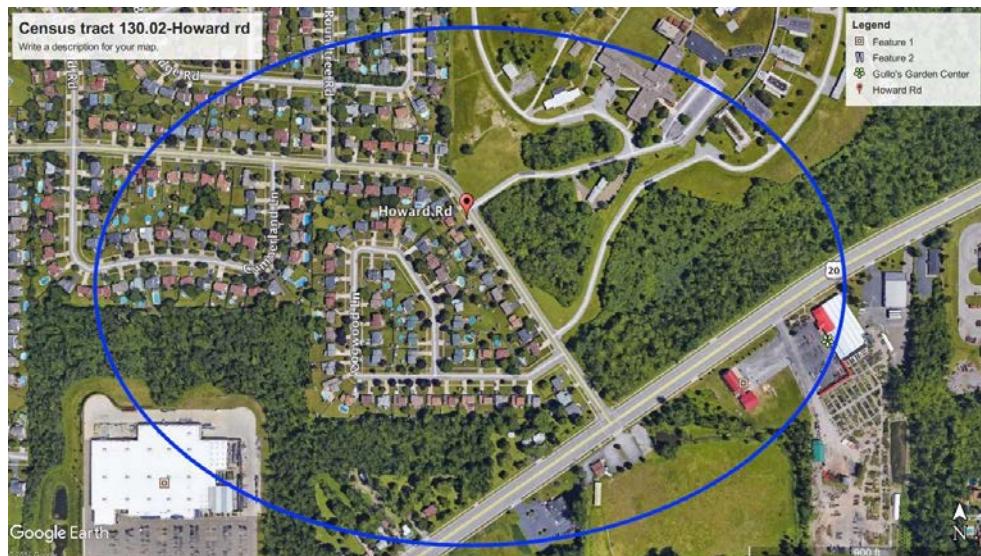
The residential neighborhood is on Howard Road at the intersection of Heatherwood Drive. Howard road connects two 4-lane, high speed roadways (Camp Road and Southwestern Blvd). Off Howard Road is an interconnected development that spans most the road.

Interestingly, the sidewalks along Howard Road end after the developments end. This means that there is no connectivity to Camp Road from the clusters of residential properties. The sidewalks that are available lack a step up/down into the roadway. Also, a lack of signage may add to a seemingly dangerous road. A speed tracker placed on the western side of Howard Road, heading towards Camp Road, also indicates that there may already be a speed issue on the street.

On top of the observable issues at the site, the geographic limitations also suggest an area of little walkability. The location of the nearest grocery store, bank, or open public park space is not easily accessible without an automobile, especially when considering safety as well as proximity. (Figure 6-7)

Figure 6-6 Neighborhood in Census Tract 130.02

Source: Google Earth

Figure 6-7 Howard Rd and Heatherwood Drive
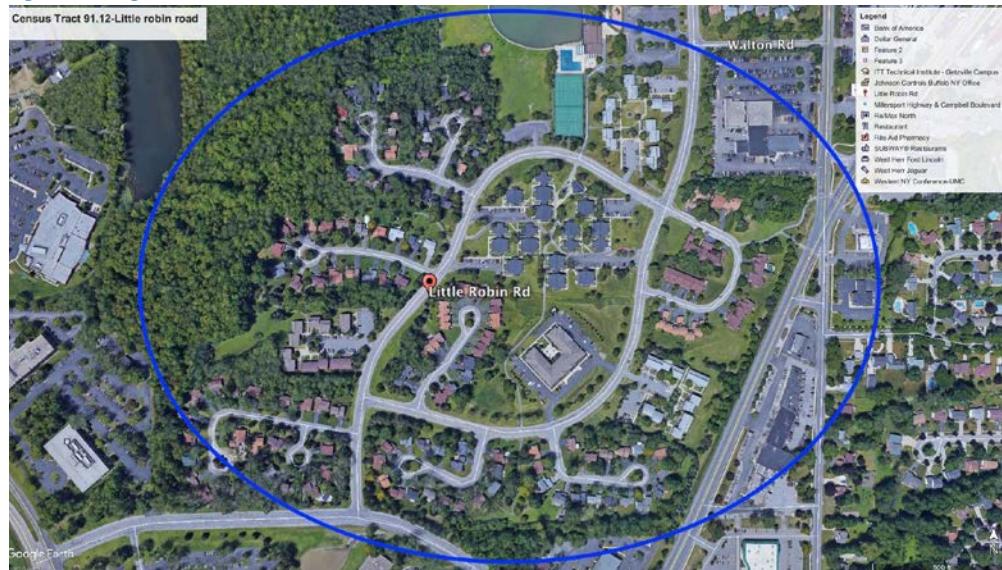
(3) Neighborhood in Census Tract 91.12

This neighborhood lays surrounding Little Robin Road. Most restaurants, grocery stores, library, senior center, and bank are in the radius of a 20-minute walk. To get downtown, it takes more than 20 minutes walking, thus it is also car dependent neighborhood. (Figure 6-8)

The surrounding neighborhood has a public park, but it is directly between four busy roadways: North Forest Road, the Audubon Parkway, Millersport Highway, and Dodge Road. The neighborhood lacks any sidewalks to connect the cul-de-sacs within the community, or connect residents to the major roadways.

There is little access to the amenities needed to consider this neighborhood walkable. (Figure 6-9)

Figure 6-8 Neighborhood in Census Tract 91.12

Source: Google Earth

Figure 6-9 Robin Rd

(4) Neighborhood in Census tract 63.02: Albright Neighborhood of Buffalo

It is another good example of a walkable neighborhood. Many of the tasks and errands can be completed within a walking distance. Interestingly, here downtown is comparatively closer to the neighborhood than rest of the census tracts, but it still takes time to commute owing to heavy traffic in the area. (Figure 6-10)

This City of Buffalo site was located at the edge of Delaware Park, near Lincoln Parkway. This area is often heavily populated with pedestrians, especially due to its proximity to Delaware Park. The sidewalks are set back from the somewhat busy intersection near Forest Avenue. There are sloped walkways connecting the level sidewalks to the street, with textured indicators for the visually impaired. The only indication of potential safety concerns is the angle at which the corners let out the pedestrians, as it is somewhat into the intersection instead of leading to the sidewalk appropriately.

The location at Lincoln Parkway is close to the Olmsted Park system at Delaware Park, entertainment and culturally enhancing exhibits at the Albright Knox Art Gallery and the Buffalo History Museum. It is close to shops, restaurants, gas stations, and other such essentials. This is a prime example of an urban walkable neighborhood. (Figure 6-11)

Figure 6-10 Neighborhood in Census tract 63.02

Source: Google Earth

Figure 6-11 Roads and Sidewalks in Neighborhood in Census tract 63.02

(5) Comparative analysis

Table 6-1 Comparison of Four Typical Neighborhoods in Erie County

Commute time to downtown	Census Tract 91.12 (North)	Census Tract 130.02 (South)	Census Tract 140 (East)	Census Tract 63.02 (West)
Total Area	1.31 square mile	2.01 square mile	1.75 square miles	0.42 square mile
Total population	2,922	5,386	3,739	2,589
By car	22 minutes	20 minutes	20 minutes	12 minutes
By bike	40 minute	38 minutes	38 minutes	19 minutes
By walking	60+ minutes	60+ minutes	60+ minutes	55 minutes
To the public transport (Routes)	44 Lockport- 0.2 miles (3-4 minute) 35 Sheridan - 1.2 mile (35-40 minutes)	106 South suburban - 0.5 miles, 76 lotus bay- 1.1 miles, 74 Hamburg- 0.5 miles and 36 Hamburg- 1.3 miles	70 East Aurora- 0.1 mile	21 min walk to metro rail line- 0.8 mile, many bus lines in vicinity with a distance of 0.2 mile from the center.
Tasks accomplished within 20 minutes walking	school, bars and restaurants, errands, shopping, culture and entertainment	almost no errand or task can be completed within 20 minutes walking	almost all the task and errands can be completed by walking within 20 minutes' radius.	Many of the tasks can be accomplished by walking.
Walk Score	34/100	20/100	76/100	66/100

6.2 Housing: Affordablility, Diversity, and Universal Design Guidelines

6.2.1 Outline of Housing Situation in Erie County

One of the most important factors in creating an age-friendly Erie County is creating a safe, accessible, and affordable physical environment. Physical environments that are age-friendly can make the difference between independence and dependence for all individuals, but are of particular importance for those growing old.[1]
Housing is one of the basic necessities of life. Since the older population is very diverse, in terms of abilities, they require a selection of housing options to cater their range of needs. The needs assessments administered by Erie County senior services have indicated that aging people want to stay in a neighborhood of their choice where they have friends, family, faith, community, medical care, employment and social exposure.

Currently, housing affordability is a major concern. Housing

typically takes the biggest portion of our paycheck or pension, and when prices soar, quality of life suffers. Higher monthly rent or mortgage payments leave less money for food, transportation, and health care; thus, restricting housing options for households with fixed or low-to-moderate incomes. According to the AARP livability index, Erie County ranks middle third in housing affordability with a cost of $947 per month, where the median is $999 per month. The Index accounts for housing costs (including taxes, rent, mortgage fees, and utilities) that existing residents pay to help users compare the costs of living in different neighborhoods. However, it does not reflect the market rate price to rent or buy in the current local housing market. Out of total income, 17.4% is usually spent on housing and other amenities relating to it.[2]

1   WHO. 2002. "Active Ageing: A Policy Framework." The Aging Male 5 (1): 1–37. doi:10.1080/713604647

2   AARP Livability Index - Location Results." 2017. Accessed April 11 https://livabilityindex.aarp.org/search#1421+Hertel+Ave+Buffalo+NY+142 16+USA.

6.2.2 Affordable and diverse housing

To help residents live comfortably in all stages of life, communities should provide opportunities like convenient transportation, walkable neighborhoods, affordable and accessible housing, multi-generational social opportunities, and inclusive business practices. Housing trust funds are established by elected government bodies at the city, county, and state level. A source of public revenue is dedicated, by ordinance or law, to a distinct fund with the express and limited purpose of providing affordable housing.

The availability of reasonably priced, approachable and suitable housing options is very important to the population as it ages. The shift in age and work pattern along with lifestyle modifications has an impact on future housing arrangements. Thus, it becomes important to provide flexible models of accommodation which are accessible and affordable, while at the same time, catering to the needs of individuals occupying the house.

1) Explore incentives to include senior housing in future developments or redevelopment projects.

2) Explore partnership to create aging people /student mixed-age housing.

3) Provide housing modifications at reasonable and affordable price with financial assistance to those needed.

4) Create more Age-Restricted Communities- Age restricted communities can accommodate aging people who have a common preference on where to live and who surrounds them. They usually extend a mix of housing types—condominiums, townhomes, single-family homes or apartments that are age friendly. Age Restricted Communities tend to focus on services for aging people, recreational services etc.

5) Elder cottages/ ECHO- Elder cottages are a subcategory of Accessory Apartments that are intended for temporary use. These units are also known as "Elder Cottage Housing Opportunities" (ECHO). The concept for ECHO cottages, as noted above, is that they are temporary, and can be removed from the site when no longer needed. A report by HUD3 noted that one of the main constraints associated with ECHO housing is zoning issues. Often, zoning bans temporary structures.[1] ECHO housing is widely accepted and is being practiced in states such as California and New Jersey. In certain New Jersey communities, the units are owned by a governmental agency and rented to community residents. This option is currently not available in Florida.[2]

6) Cohousing- Cohousing is an intentional community of private homes clustered around shared space. Households have independent incomes and private lives, but neighbors collaboratively plan and manage community activities and shared spaces. Age-friendly can refer to either multi-generational or aging people only communities. They both modify the cohousing model to create physical and social environments that allow people to flourish as they get older. Cohousing communities are vibrant places where there are many opportunities for multi-generational interactions and social connections.

7) Amend regulations to encourage alternative housing models. Also consider form based zoning policies and effect on housing options.

8) Organize workshops and seminars and competitions to encourage architects to come up with new solutions for senior housing and for developers, real estate agencies, and citizens to promote awareness about different housing schemes for aging people.

Table 6-2 Affordable and Diverse Housing Matrix

#	Policies in place	Recommendations
1	Inclusionary zoning incentives	Amend regulations to encourage alternative housing models. Also take into account zoning policies and effect on housing options
2	Accessory dwelling units	Elder cottages/ECHO housing
3	Assisted living	Intergenerational living/ Cohousing
4	Adult Home	Incentives to include senior housing in future developments or redevelopment projects.
5	Senior Apartments	Create more Age-Restricted Communities
6	Home energy assistance program (HEAP)	To improve the existing home care services
7	The Rental Assistance Corporation of Buffalo (RACB)	Rental regulation specially designed for older population
8	Home care	Organize workshops and seminars and competitions to encourage architects to come up with new solutions for senior housing.
9	enriched housing program	Making full use of the space in existing subsidized elderly homes to provide more places that offer continuous care.

1   County, Erie, and Community Development. 2012. "AFFORDABLE HOUSING AND ZONING," no. October.
2   "Department of Human Services | Housing Options for Senior Citizens." 2017. Accessed April 23. http://www.state.nj.us/humanservices/doas/home/housingglossary.html.

Figure 6-12 Echo cottage in Pennsylvania

Source: County and Development. (2012)

Figure 6-13 Birds eye view of a Cohousing community;

Source: Mandy Eve-Barnett's Official Blog. (2017) . From: https://mandyevebarnett.com/2016/02/03/alternative-living-cohousing/

Figure 6-14 Elders gathered for evening activities

Source: Sunward Cohousing. (2017). From: http://www.sunward.org/

6.2.3 Universally design for accessible and safe homes

Universal design is a set of architectural and design principles that evolved post WWII for returning veterans and the disabled and are now being re-purposed for older Americans. Architects and contractors are increasingly turning to universal design principles when they build or remodel a home so it may work for all, regardless of their age or level of mobility.

According to Ron Mace, an architect credited with coining the phrase, "Universal Design", it is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.[1]

The Disability Act of 2005 defines Universal Design, or UD, as the design and composition of an environment so that it may be accessed, understood, and used to the greatest possible extent; in the most independent and natural manner possible; in the widest possible range of situations and without the need for adaptation, modification, assistive devices or specialized solutions, by any persons of any age or size or having any particular physical, sensory, intellectual ability or disability.[2]

Different people with different abilities should be able to use and live in their houses and dwellings comfortably and without any special assistance as far as it is possible. With universally designed homes, we eliminate the idea of one-size-fits-all' since it encourages different kinds of people to live under same roof independently.

As the population gets older, it becomes difficult to stay in the homes; steep stairs or a slippery shower can pose dangers, and many standard houses are not wheelchair accessible. With 78 million baby boomers about to hit retirement age[3], it's time we move forward with the movement of redesigning the older homes with universal design principles. For example, this movement is already helping 82-year-old Jim Waggoner. Jim is wheelchair bound because of a cancer recurrence. Thus, it became important for Jim to have his home remodeled. The consequence of which was remarkable. Jim could access his mailbox from his wheelchair as it was now placed at a low height. There were no steps, ramps were installed and the doorways were made wide. The kitchen sink was now at a lower height which enabled Jim to contribute in the household chores making him more independent and comfortable. "The design allows a person to remain independent and keep their dignity," he says. For Jim Waggoner, moving out of a nursing home and into his own house simply meant freedom. It gave him "the ability to do what he wants, when he wants and how he wants, and he does not have to be dependent on anyone anymore.[4]

As important is the interior of the house is, equally important is that the site selected for housing should be well-connected locally with easy access to transportation links and places to socialize and

1   "Why Universal Design Is Important | Independent Home Living." 2017. Accessed April 19. http://independenthomeliving.com/hello-world-3/.
2   "What Is the Americans with Disabilities Act (ADA)? | ADA National Network." 2017. Accessed April 1. https://adata.org/learn-about-ada.
3   Colby, Sandra L, and Jennifer M Ortman. 2014. "The Baby Boom Cohort in the United Population Estimates and Projections." https://www.census.gov/prod/2014pubs/p25-1141.pdf.
4   "Building Homes to Age In : NPR." 2017. Accessed April 20. http://www.npr.org/templates/story/story.php?storyId=129260583.

shop. The development should enhance the existing local identity and be a desirable place for everyone to live.

Recommendations included:

1)Ensure that large schemes include, or are close to, public amenity space, with good access to transportation and local shops, restaurants and park space.

2)Establish new policies and schemes to provide accessible housing and create awareness regarding the same.

3)Promote universally designed products such as stair lifts, accessible baths, and automatic door openers.

4)Create a directory of accessibility features based on the principles of universal design that the city can regulate.

5)Provide incentives for retrofitting and remodeling old homes to meet the universal design guidelines.

6)Engage in public-private partnerships to subsidize the cost of incorporating accessibility features.

Table 6-3 Universal Design Checklist

Area	Design requirements	Examples
Site	Walkway should be smooth, hard level surface suitable for walking and wheeling. Walkway should be constructed with a non-slip material & different from rest of the area. Texture change in walk ways adjacent to seating will be desirable for blind persons. The manhole, tree or any other obstructions in the walkway should be avoided.	 Figure 615 Smooth pathway Source: http://www.homesurfaces.net/services.html Figure 616 Ramps for the entrances ; Source: http://www.improvenet.com/a/how-to-a-build-wheelchair-ramp

Area	Design requirements	Examples
Entrance	Ensure entrances are clearly visible and prominent. Make sure all entrances in new buildings are universally designed by having wide doorway and railings where required. Design alternative entrances to existing buildings to meet universal requirements. Provide adequate space inside and outside entrance doors. Provide canopy or door recess for weather protection.	 Figure 6-17 Wide entrance door enables free movement Source: http://www.architecturendesign.net/33-ultimate-front-door-designs/
Horizontal circulation	Plan overall layout to be as logical and with as much of a direct route as possible. Avoid changes of level within a story. Maintain access routes carefully and keep them clear of potential obstructions.	 Figure 6-18 maintain easy access routes and smooth transition Source: http://www.outletdelacarpinteria.com/ofertas-en-cataluna.php
Vertical circulation	Design and maintain stairs to provide safe access at all times even if rarely used. Make sure the gradient of a ramp slope is constant and consistent throughout and between consecutive ramp slopes. Stairs should be slip resistant when both wet and dry.	 Figure 6-19 Staircase with railing on both sides Source: http://sawdust2stitches.com/board-and-batten-in-the-stairwell/

Area	Design requirements	Examples
Lighting	Ensure all rooms and spaces benefit from some natural light, wherever possible. Consider the use of sun-shading devices and blinds to reduce glare from direct sunlight. Ensure all outlets, switches, and controls are clearly visible, and easy to reach and operate. Use consistency in arrangement, position, style and sequence.	 Figure 6-20 Wheelchair accessible switchboards Source: http://es.easterseals.com
Sanitary facilities	Bathrooms should be provided, with either bath or shower facilities, as required. Toilet and bathroom facilities should be designed and constructed in such a way as to facilitate easy adaptation to suit the needs of individual residents. Example- Use adjustable-height, detachable shower head Use suitable accessories including towel rail, clothes hooks, and mirror.	 Figure 6-21 Universally designed bathing area Source: https://www.thebalance.com/ada-construction-guidelines-for-accesible-bathrooms-844778
Kitchen	Install an efficient kitchen layout that comprises a continuous work surface. Provide clear knee space to lower work surfaces and appliances for people in a seated position.	 Figure 6-22 Accessible kitchen design Source: http://www.keukenervaringen.nl/chopchop-een-keuken-voor-mensen-met-een-beperking/

Area	Design requirements	Examples
Bedrooms	Provide two-way switching to the main lights. Ensure bedroom doors are easy to open and swing only one way throughout the house to avoid any confusion. Position clothes rails where they can be reached without strain. Wherever possible, locate the main living room, kitchen, and an accessible toilet at the entrance level.	 Figure 6-23 Closet placed at a accessible height Source: http://technologygreenenergy.com/siple-house-stylish-home-for-disabled/

6.2.4 Summary

Housing is one of the most vital components to age-friendly communities. Housing affordability is a widespread problem both for older householders and the remaining community members. The problem is not confined only to the major cities but to major counties and municipalities within them. The burden of housing costs is unsurprisingly more prevalent in places that have a lot of lower-income households. In fact, residents' incomes seem to be the biggest factor in determining the prevalence of housing cost burden. Thus, the affordability of housing as one ages is critical. Diverse housing options, which can cater to different needs of aging people, should be available with different programs and schemes already in place. Finding ways to produce a larger quantity of age-friendly housing options in places with age-friendly design characteristics is an important strategy for accommodating the needs Erie County's increasing aging population.

6.3 Transportation: Multiple Countywide Assessment and International Cases

Transportation is a core issue of many cities and it influences the daily lives of its residents. A variety of transportation options that can serve a large population enables citizens to travel further and at a lower price. In an aging society, the reliance on personal automobiles may leave vulnerable citizens such as the aging, the disabled, or residents incapable of affording an automobile behind.

As the aging population increases, the importance of transportation has become a concern to many aging people. As life expectancy becomes longer, the trend of an increased aging population has become apparent. Transportation affects the relationship between physical space and society, it shapes and embodies the relationship of citizens and influences the quality of a person's daily life. As Erie County expanded and suburbanized, the aging population's demand for a more widespread, efficient, safe, and affordable transportation system increased.

After reviewing guidance by the World Health Organization, an assessment of Erie County's transportation situation was accomplished. The assessment included analysis of public transportation system, AARP Livability Index, NFTA Annual Performance Report, Community Conversations, and AFEC Resident Survey. Finally, some cases were studied to provide reference for the development of an age-friendly transportation system in Erie County.

6.3.1 Age-Friendly Transportation Guidance from WHO

The World Health Organization had published a guide[1] established a checklist and specific criteria for reviewing each age-friendly domain in detail. The principles included:

Availability: The Availability indicates the essential equipment of the basic transportation system of the area. (1) The public transportation is easy to reach and accessible to older people in any physical condition. (2) The operation of public transportation is stable and regular.

Affordability: The Affordability indicates (1) public transportation is affordable to all older people. (2) There are consistent and well-displayed transportation rates.

Reliability and Frequency: The Reliability and Frequency is the indicated schedule arrangement and the on-time accuracy.

Travel Destinations: (1) how good of a connection is there for aging people to visit destinations such as hospitals, health centers, recreation facilities, retails, shopping centers, banks and senior centers. (2) The connections between areas are balanced and adequate, including urban, suburban, and rural areas. (3) The collaboration between different transportation systems.

Age-friendly vehicles: The vehicles are (1) well-maintained, clean, and safe. (2) The vehicles are accessible, equipped accommodations such as a lift, a low floor, and wide, high seats. (3) The vehicles are equipped with signs, and voice guides of routes and destinations

Specialized services for the elderly: That extra services are available for aging groups

Priority seating and passenger courtesy: In vehicles, that priority seating is provided and respected by passengers.

Transportation drivers: This index evaluates the behaviors of drivers, including courteous attitude, safe driving, waiting for aging people to be seated, on time driving, and parking by the curb.

Safety and comfort: The public transportation should provide a safe, free-from-crime, and comfortable environment with abilities to react in an emergency.

Transportation stops and stations: This index indicates that (1) the location of stops and stations are available for aging residents, and (2) the stops are well designed, clean, accessible with ramps, elevators, public toilets, and appropriate signs. (3) The employees at stations are courteous and helpful.

Taxis: The taxis should be (1) affordable, comfortable, and accessible with enough space for wheelchairs or canes. (3) Taxi drivers are courteous and helpful.

Community transport: That specific transportation services are provided to take aging people to specific events and places.

Information: (1) The information of transportation is provided to aging people in a clear, accessible way. (2) The routes and entrance/exits are clear to disabled people

Driving Conditions: The roads are well maintained, wide, have clear signs, lane lines, and traffic signals. (2) The roads are free of barriers, and clear for elder drivers. (4) The rules of the road are clear, and the laws are restrictively obeyed.

Courtesy towards older drivers: Driving courses are required and provided for aging people.

Parking: (1) Affordable and enough parking space. (2) Preserved parking space for elders and disabled.

The WHO index provides a standard procedure that evaluates how the transportation system of an area performs in achieving an age-friendly environment. This report referred to WHO's guidelines of an age friendly transportation system, but did not follow the step by step criteria. Nonetheless, to strive for a more age-friendly transportation domain, it is a powerful tool.

6.3.2 Transportation Situation in Erie County

(1) Public Transportation in Erie County

Public transportation is important for an Age-Friendly Erie County. the American Census Survey 5-Year Estimates shows that Erie County contains 149,000 people over 65 years old; this equates to over 16%. The trend has been constantly growing. Many aging people are no longer able to drive on their own. A sufficient public transportation system can provide independence and a safer transportation option for aging adults. Furthermore, the weather conditions of Erie County increase the needs for a more widespread and condensed public transportation system. The low temperature, snowfalls and rainfall in Erie County have increased the danger of driving and getting to a public transportation stop.

The Niagara Frontier Transportation Authority (NFTA) is a public authority that operates the public transportation system in Erie County, Niagara County, and Buffalo. The NFTA includes a Metro rail line, a bus system, two airports, a small boat harbor, and several paratransit lines. When the NFTA launched in 1967, it integrated and replaced the original private streetcar routes in Erie County, and has become the main force of public transportation since.

The Metro Rail and Buses share the same fare prices. In addition, due to an age friendly action reduced fares have been implemented. The qualification of Reduced Fare is Children from 5 to 11 years old, aging people above 65 years old, and people with disability and medical care requirement. The age-friendly action cut the fare prices in half, for example: the Standard Fare reduced from $2 to $1, the Day Pass reduced from $5 to $2.50, the 7-Day Pass reduced from $25 to $12.50; the PAL Pass remained in $35 in every 10 trips. The fare above applied to Metro Rail and Bus.[2]

NFTA Metro Rail

The metro rail in Erie County is a single-line-dual-direction route running 6.2 miles along Main Street into and through downtown Buffalo. It contains 13 stops (with one events only station), with a fare free zone in downtown from Canal Side to Fountain Plaza and a self-service fare zone from Allentown station to UB South Campus. The train arrives every 10 to 20 minutes from 5 am (later

1   "Global Age-friendly Cities: A Guide - WHO", 2007.

2   Special Services - Reduced Fare." NFTA-Metro. Accessed April 28, 2017. http://metro.nfta.com/Paratransit/FaresReduced.aspx.
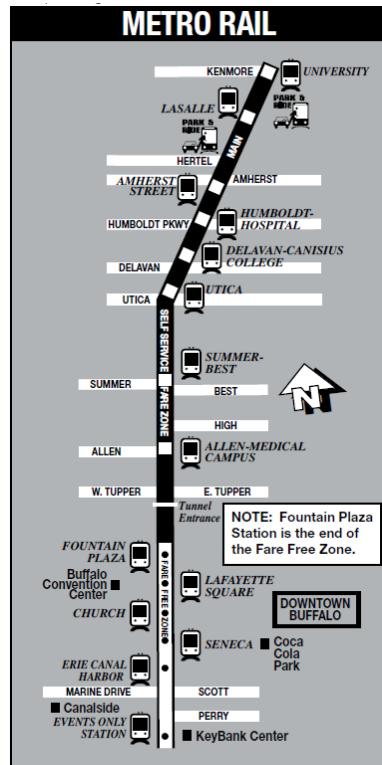
most stop is at the south campus of University at Buffalo, and the southernmost stop is at canal side downtown; with a total 14 stations altogether. 8 of the stations are underground served with barrier-free doors (except Allentown Station) and elevators; the other 6 stations are ground level stops equipped with ramps to the first carriage. In 2015-2016, the Metro Rail served 5.5 passengers per vehicle mile, slightly higher than 5.3 of former year.[1]

Public Bus System

The bus system in Erie County and Niagara County contains 64 routes. The operation times of bus routes ranged from 4 am to 11 pm, but only a few lines have late night rides. The bus system received 28.1 million riders in 2015-2016, with a 2.6 passengers per vehicle mile.

The current bus routes mainly cover Buffalo and surrounding areas. The Figure 626 shows coverage of ¼-mile service area of Bus Stops. The ¼ buffer zone is a general opinion for an affordable walking distance to public transportation service. The ¼-mile service area of bus stops among Erie County could serve an estimated 77,708 out of 149,741 senior people (51.8%). could also potentially serve 510,752 out of 921,584 of the general population (55.4%). The population calculation is completed by a ratio of average distribution of census block groups.[2] (Table 6-3)

Figure 6-24 NFTA Metro Rail Route

*Source: NFTA. From: http://www.nfta.com/*
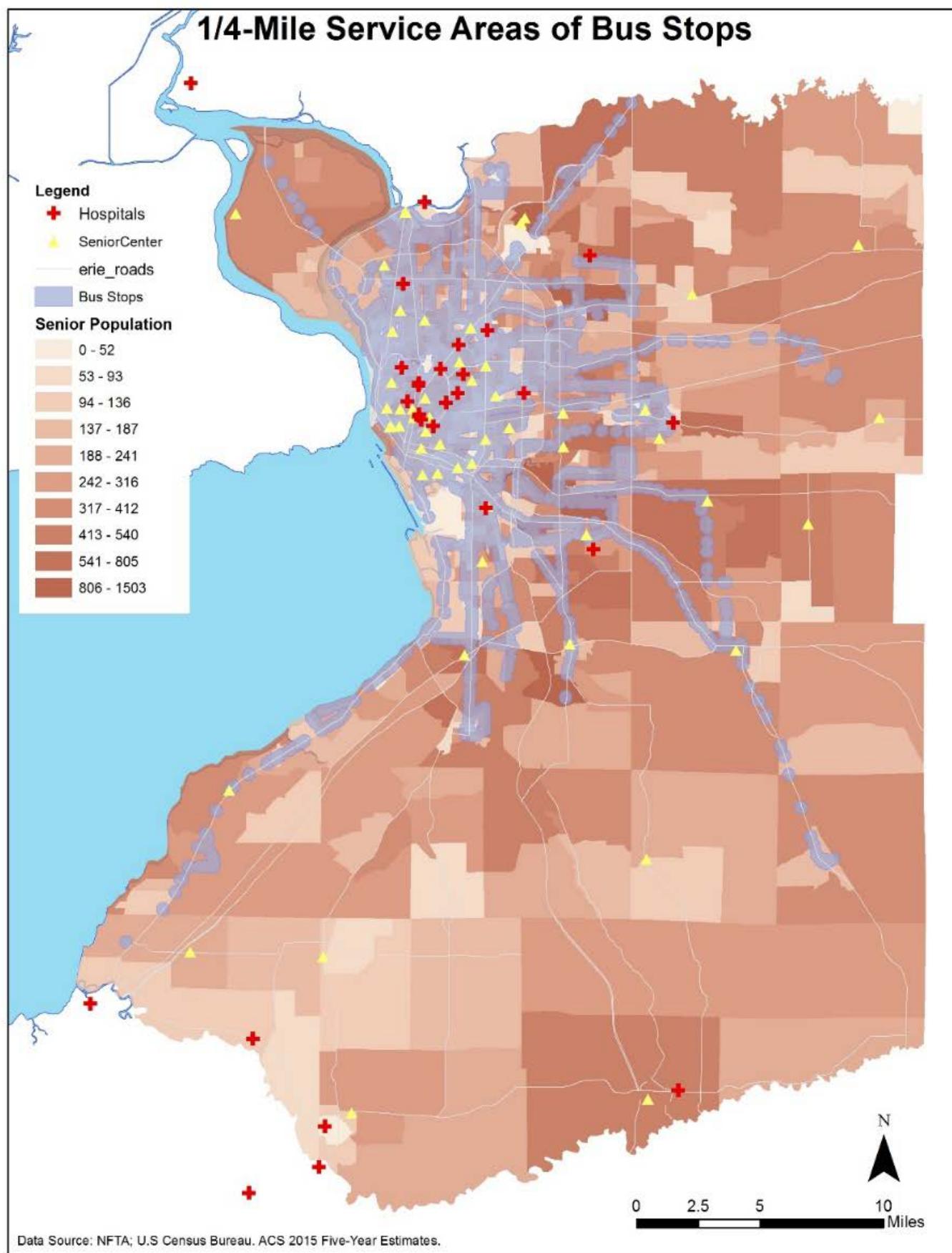
Figure 6-25 Elevator and Barrier-free Door in Metro Rail Station

1   "NFTA Annual Performance Report 2015/16." March 31, 2016.
2   Census Block Groups by Population Density (2015 ACS) Open Data, Accessed April 28, 2017.

Figure 6-26 1/4 Mile Service Area of Bus Stops

1/4-Mile Service Areas of Bus Stops

Legend

+ Hospitals
▲ SeniorCenter
― erie_roads
▨ Bus Stops

Senior Population

- 0 - 52
- 53 - 93
- 94 - 136
- 137 - 187
- 188 - 241
- 242 - 316
- 317 - 412
- 413 - 540
- 541 - 805
- 806 - 1503

0   2.5   5   10 Miles

Data Source: NFTA; U.S Census Bureau. ACS 2015 Five-Year Estimates.

Data Source: NFTA; US Census Bureau. ACS 2015 Five-Year Estimates.

Table 6-4 Estimate of Residents that Bus Stops Can Serve

	Covered in ¼-mile service area	Total Population	Cover Rate (%)
Population over 65 years Old	77,708	149,741	51.8%
Residents in Erie County	510,752	921,584	55.4%

NFTA Paratransit

The Paratransit Access Line (PAL) is a fleet provided for passengers who cannot use the regular Metro Rails and Buses. The PAL uses accessible vehicles, and extends ¾ of a mile to either sides of the Metro bus and fixed rail route. However, it does not do front door pick up or drop off service.

The Paratransit receive a total of 186,932 Ridership in 2016, increased 7,747 ride from 179,185 of 2015. The trend has gone upward in the last 5 years except 2014. The Registration of eligible riders in 2016 also increased to 5,048 people from 4,714 people of 2015, almost increased 20%.[1]
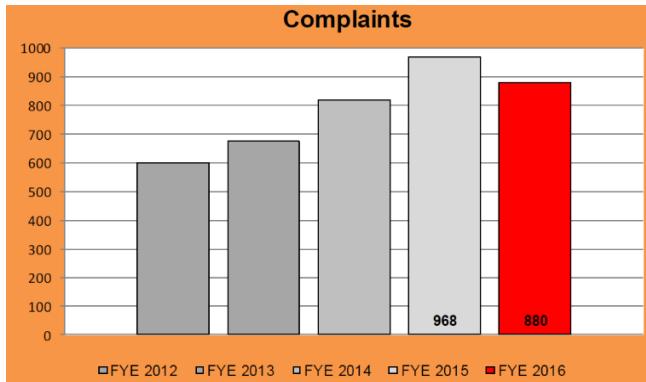
(2)Complaints from Riders in NFTA Annual Performance Report 2015-2016

According to the Annual Performance Report of 2015-16 (2016, NFTA), the NFTA received 880 complaints. That is lower than the former year but still higher than previous years. The content about the complaints are classified into three types of categories with 12 subtypes. Most of the subtype complaints were also lower than the former year but higher than previous years.

From the graphs, the complaints are in the subtypes of Rules & Regulation, Passing up Passengers, Reckless Driving, Discourtesy, and the Schedule Failure. The Schedule Failure had a significant increase in complaints in the two previous years. According to the figure, the on-time situation is similar to usual, and from figure the passenger amount did not increase; it presents a possible result that the passengers might pay more focus on the performance of public transportation and have a higher demand.[2]
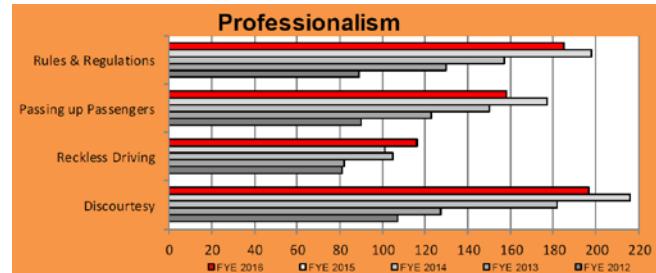
It is clear from the numbers that the professionalism has received a great amount of dissatisfaction. The dissatisfaction may serve as a motivation for the county to provide a more age-friendly transportation environment.

*Figure 6-27 Complaint received in recent five years*
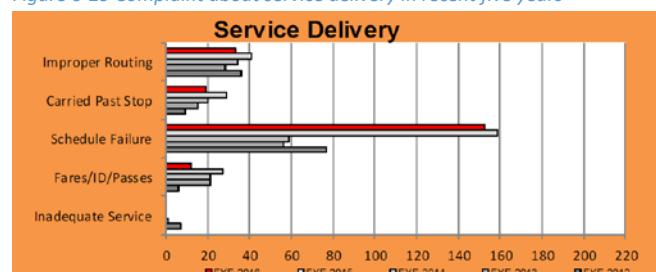
Source: NFTA. (2016). Annual Performance Report 2015-16

Figure 6-28 Complaint about professionalism in recent five years
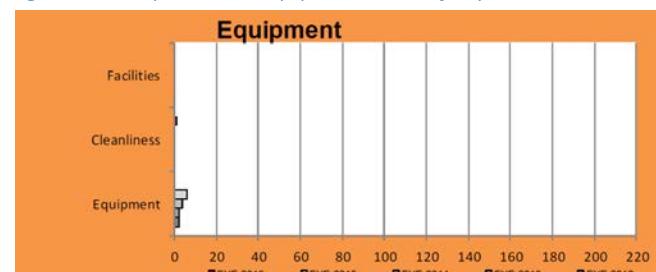
Source: NFTA. (2016). Annual Performance Report 2015-16

Figure 6-29 Complaint about service delivery in recent five years

Source: NFTA. (2016). Annual Performance Report 2015-16

Figure 6-30 Complaint about equipment in recent five years

Source: NFTA. (2016). Annual Performance Report 2015-16

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1   "NFTA Annual Performance Report 2015/16." March 31, 2016.
2   "NFTA Annual Performance Report 2015/16." March 31, 2016.

(3) Assessment by AARP Livability Index

The AARP Livability Index provides a means of measuring a community's livability in categories such as housing, neighborhood, transportation, environment, health, engagement and opportunity["AARP Livability Index - Web-Based Tool to Measure Community Livability." AARP. Accessed April 28, 2017. https://livabilityindex.aarp.org/featured-communities.]. All the categories, including transportation, are scored on a scale out of 100 and contain many metrics.

AARP's Public Policy Institute ranked Erie County's total livability index score at a 62 and the transportation livability index score is currently 76. The following form is a comparison of scores between Erie County and the median U.S. neighborhood score in seven metrics. The table displays that Erie County scores medium to good in the transportation category. (Table 6-4)

Table 6-5 The AARP Livability Score of Transportation in Erie County

Criteria	Erie County	Median U.S. neighborhood	Unit
Convenient transportation options: (Frequency of local transit service)	64	0	buses and trains per hour
Convenient transportation options: (Walk trips)	0.79	0.73	trips per household per day
Convenient transportation options: (congestion)	18.9	17.4	hours per person per year
Transportation costs: Household transportation costs	$9,638	$10,791	per year
Safe streets: Speed limits	29.9	28.0	miles per hour
Safe streets: Crash Rate	5.4	7.6	fatal crashes per year
Accessible System Design: ADA-Accessible stations and vehicles	100.0%	81.7%	of stations and vehicles are accessible

Date Source: AARP Livability Index. From: https://livabilityindex.aarp.org

Table 6-6 The AARP Livability Score of Transportation in Some Cities of Erie County

Criteria	Buffalo Overall	Buffalo-Amherst, 14226	Alden, 14004	Orchard Park, 14127	Eden, 14057	East Concord, 14055
Transportation Score	90	83	55	62	49	45
Convenient transportation options: (frequency of local transit service)	154	70	3	9	1	0
	buses and trains per hour					
Convenient transportation options: (walk trips)	0.97	0.86	0.53	0.58	0.54	0.49
	trips per household per day					
Convenient transportation options: (congestion)	20.6	20.6	9.9	20.4	8.1	0.0
	hours per person per year					
Transportation costs: (Household)	$8,051	$9,005	$11,955	$11,011	$12,464	$13,456
	USD per year					
Safe streets: (speed limits)	27.5	29.5	34.3	31.6	34.7	38.6
	miles per hour					
Safe streets: (crash rate)	4.2	3.3	8.9	5.6	16.2	15.2
	fatal crashes per year					
Accessible System Design: ADA-Accessible stations and vehicles	100.0%	100.0%	98.8%	100.0%	100.0%	100.0%
	of stations and vehicles are accessible					

Date Source: AARP Livability Index. From: https://livabilityindex.aarp.org

(4) Transportation Modes of Aging People in AFEC Survey Result

In the Age-Friendly Erie County (AFEC) Resident Survey, residents were asked to rate the transportation options and choose their major transportation modes. Out of 380 respondents, 18.4% rated the transportation options as poor, 35.2% rated fair, 31% rated good, and 15% rated excellent.

255 aging people responded when asked what was their main mode of transportation. 88.2% stated they drive themselves, 4.7% indicated getting a ride with friends and family; meaning 92.9% are dependent on an automobile. 2% specifically indicated they use a form of public transportation, while 1.2% walk and 3.9% use another form of transportation. (Figure 6-31) None of the respondents uses bikes, taxis, or senior centers' van services as the main transportation method. The usage of transportation methods other than automobiles is significantly low according to

the survey. From the distribution map (Figure 6-32), the main use of public transportations is located in the northwest side of the City of Buffalo; the Buffalo-Amherst corridor.

Respondents were asked how familiar they are with each of these modes of transportation. Overall, the resource of public transportation and services provided by different sectors are generally unfamiliar for most of the respondents. Combined with the main transportation method survey, the aging people in Erie County most rely heavily on automobile transportation. The respondents indicated that the Bus System and Metro Rail were the most familiar transportation systems available to them, but they were very unfamiliar with the paratransit system. The next transportation system they were more familiar with were the senior transportation programs. They were more familiar with medical transportation and transportation provided by their local senior center, and they were very unfamiliar with the volunteer transportation services. Finally, aging people were most unfamiliar with car sharing, ride sharing or carpooling programs, and bicycle sharing. (Figure 6-33)
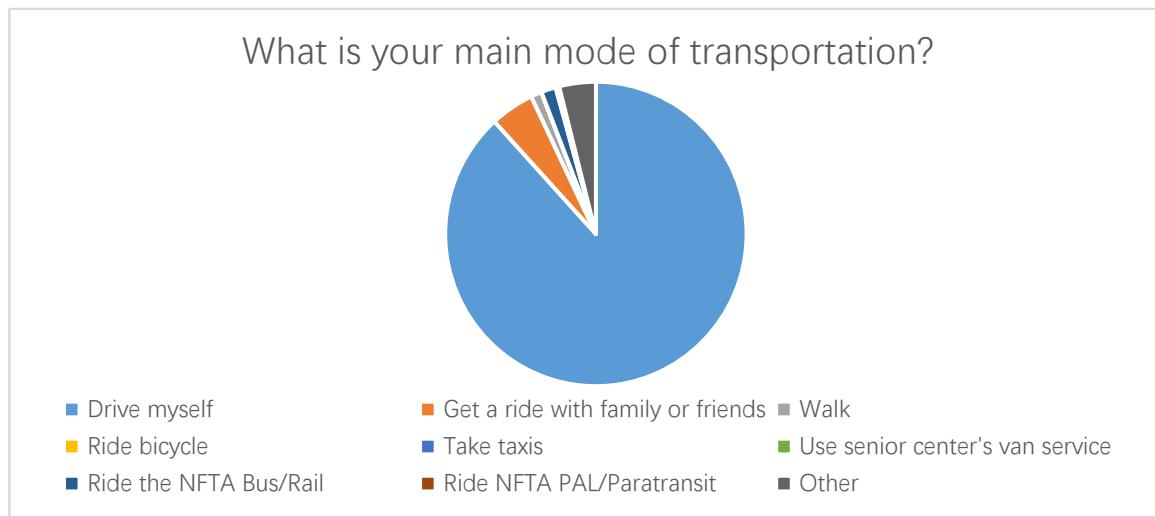
When respondents were asked how often they use these resources to find information about transportation options and needs, the most frequent answer is family and friends. Besides, newspapers, TV/Radio, Internet/Social Media, and NFTA itself are the main source for aging people to acquire information. NY Connects, healthcare providers, employers, and elected officials are barely used to gain transportation information. The local senior centers are also underutilized by aging people getting information on transportation. As the local senior centers should be an important resource for aging people, they should afford more responsibility to provide enough information to these residents.(Figure 6-34)

Table 6-7 Rating for Transportation Options by Senior People

| Poor	Fair	Good	Very Good	Excellent	Total
70	134	117	50	8	376
18.47%	35.36%	30.87%	13.19%	2.11%	100%

Data Source: Erie County Senior Services (2016). AFEC Resident Survey

Figure 6-31 Senior Residents' Main Mode of Transportation

Data Source: Erie County Senior Services (2016). AFEC Resident Survey.

What is your main mode of transportation?

Legend

1 Dot = 0.2

- With Fam/Fri
- Walk
- Bus/Rail
- PAL
- Other
- Drive

Data Source: AFEC Residents Survey

Figure 6-33 Senior People's Cognition of Transportation Modes
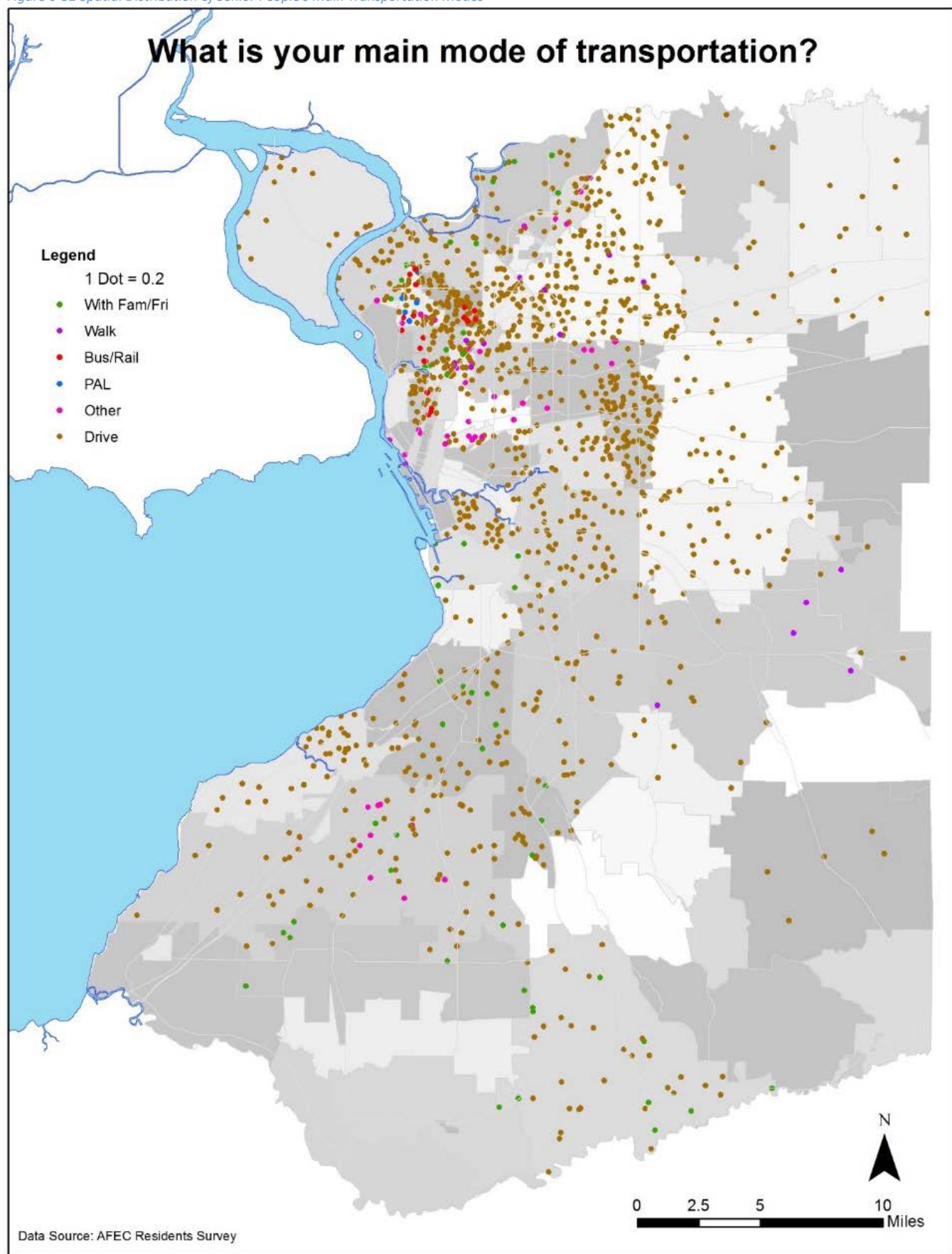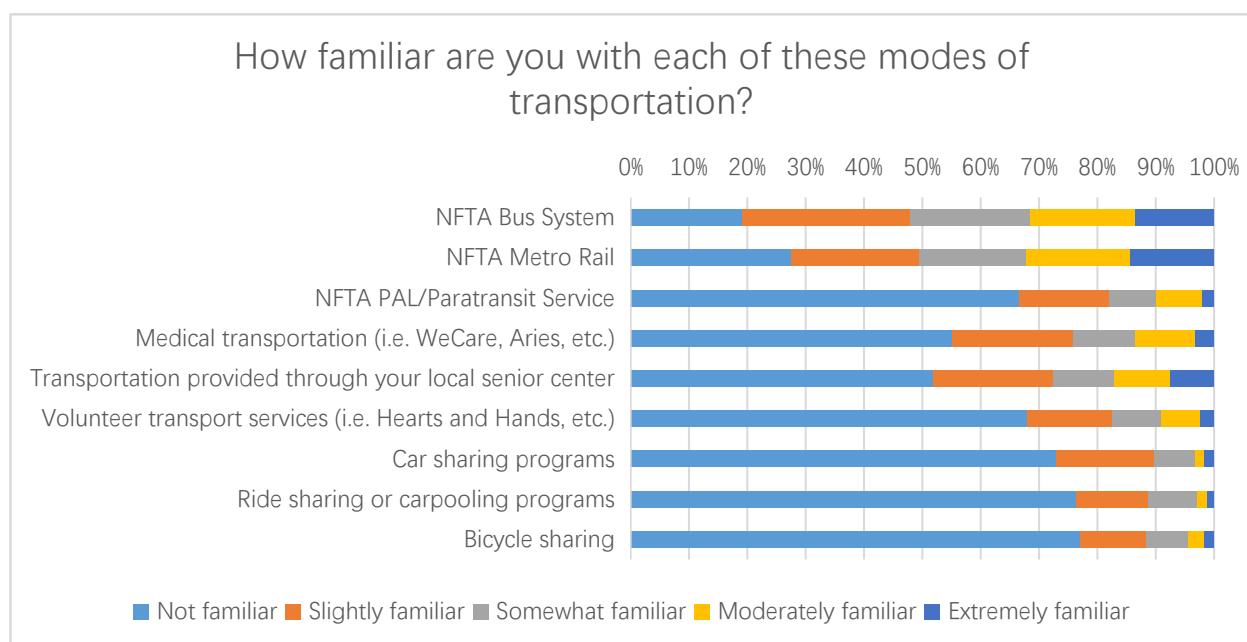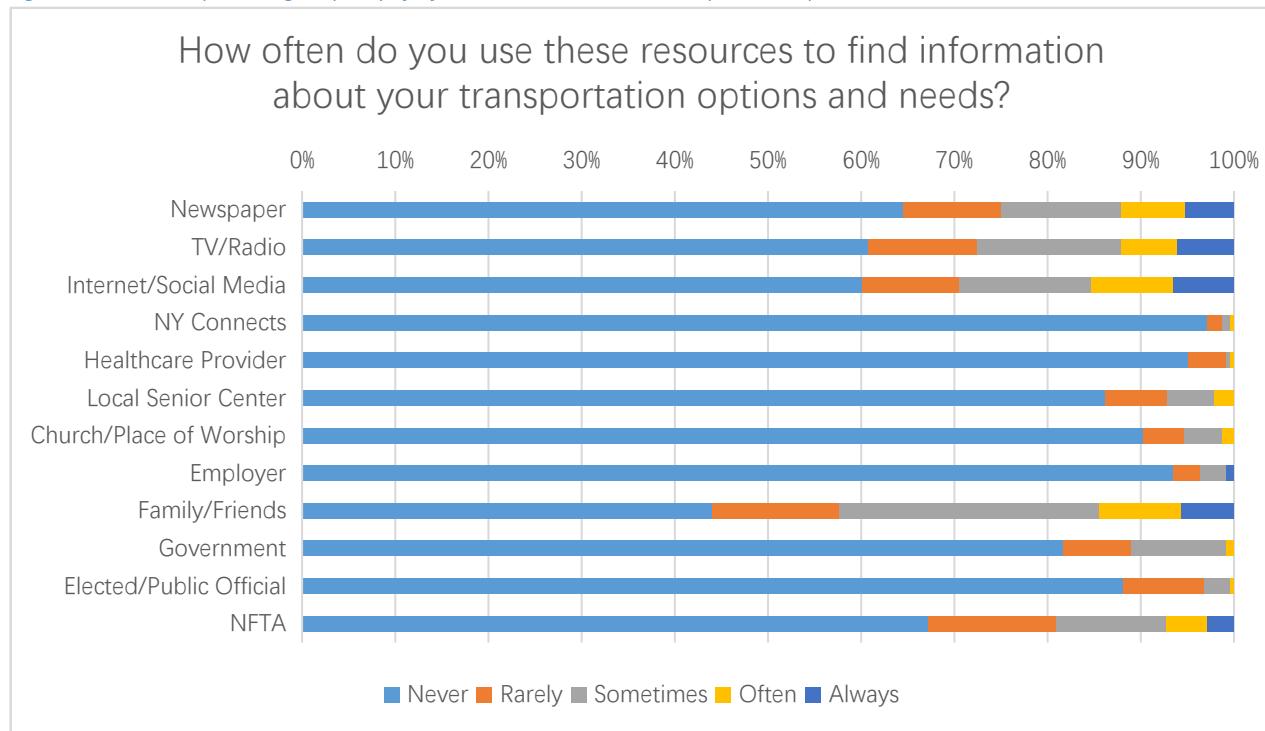
Figure 6-33 Senior People's Cognition of Transportation Modes

Data Source: Erie County Senior Services (2016). AFEC Resident Survey.

Figure 6-34 Senior People's Using Frequency of Information Resource about Transportation Options

Data Source: Erie County Senior Services (2016). AFEC Resident Survey.

(5) Opinions in Community Conversations

In community conversations, aging people gave many opinions of bus system and paratransit services. Major opinions included: There are inadequate routes and bus stops for aging people, especially in east Erie County area and various Erie County suburbs. Bus stops are in an inconvenient proximity to grocery stores or other facilities. Some information on buses is hard to understand, especially for foreigners. Some bus drivers are discourteous. Some aging people are unfamiliar with the service. appointment system is inconvenient. Vans/overscheduling appointments is insufficient sometimes. There is information gap between aging people and transportation services.

As indicated in the survey, the bus system is the most frequently used public transportation method, yet the residents had expressed their disappointment in the NFTA bus system. People in all conversations addressed that the inadequate bus service forced them to rely on other family members to pick them up or having to take a cab, which is costly. Difficulty getting to bus stops was also a common opinion. aging people at the Jericho Road Community Health Center meeting stated they live ten minutes walking distance to bus stops but have difficulty.

Even the aging people who successfully reach the bus stops have complaints about the bus system. The bus service does not provide available routes for aging people. Bus routes in Erie County are centralized in the City of Buffalo, meaning fewer routes are available in east and south Erie County. Thus, it is difficult to travel from one community to another community since there are less lateral ties. According to aging people from the Matt Urban Center and the Olmstead Vision Center, when being dropped off, bus stops are far from grocery stores, banks, and other public facilities making it difficult to get to those destinations.

In addition to issues with the bus stops and routes, aging people also pointed out that the experience of taking the bus is difficult and rough. The bus drivers are often unwilling to assist aging people getting on the bus, or drivers start the bus before they can sit down. aging people from Nepal sometimes have difficulties understanding the information on the bus due to the language barrier.

Some aging people have made use of the paratransit services provided in different areas of Erie County. The paratransit service is arranged by appointment. The availability of the services received positive opinions in general, but some complaints appeared during the conversation.

The main complaints focus on the appointment system. The appointment system requires aging people to plan an appointment a week or two weeks ahead. This requirement can be an inconvenience for aging people depending on their needs. If their needs are immediate, the paratransit services are not a useful service to them. Some appointments may be canceled if other patron's appointment takes priority. For example, medical appointments, grocery shopping, and various business appointments can take a priority over other appointments. If there is a congestion of appointments scheduled, and not enough vans, some appointments will be rescheduled. Residents at the Matt Urban Center stated that this has happened to them since there is only one van service in the area.

On the other hand, even though the paratransit service may be sufficient, the information between communities may be imbalanced. None of the aging people at the Jericho Road Community Health Center meeting knew of the paratransit services available. The gap of information is a barrier to improving the public transportation system.

(6)Key Findings of Transportation Situation

After reviewing the current public transportation system within Erie County, 51% of aging people are within ¼-mile service area of NFTA bus routes.

The general complaint of aging people to the NFTA is the lack of professionalism of bus drivers.

According to the AFEC survey, most aging people still rely on an automobile as their main transportation method. Aging people indicated that they are less familiar with senior service transportation programs and more familiar with the NFTA Metro Rail and Bus system.

According to the conversations, aging people are generally dissatisfied with the current public transportation system in Erie County due to the inconvenience, narrow service range, and the discourtesy of bus drivers. Many aging people are unaware of the transportation services provided by different organizations.

6.3.3 Case Study: Good Public Transportation System around The World

(1) EasyCard of Taipei:

Taipei City has provided a high dense and integrated transportation system. The system includes a metro rail system called Mass Rapid Transit (MRT), a joint bus system involving two city government bureaus and 15 private agencies, and it has a coordinated numbering, fare system, and a public bike sharing system (PBSS, named U-bike).

All the systems share the same contactless smartcard credential called EasyCard. The EasyCard application has issued over 60 million cards. The cards are available to be used across many systems including parking, taxi, recreation, hospital facilities, railroads, and other cities' bus system. EasyCard transactions now account for 91% of Taipei Metro system transactions, 92% of bus transactions, and 71% of parking lot transactions. Daily transactions reached 5.7 million in 2014. The EasyCard can easily be purchased and refilled in all convenience stores and metro rail stations without extra fare. The EasyCard provided a reduced fare of $0.25 for elder passengers and a concession fare of $4 between buses and MRTs within one hour.

(2) Coin Bus of Akita
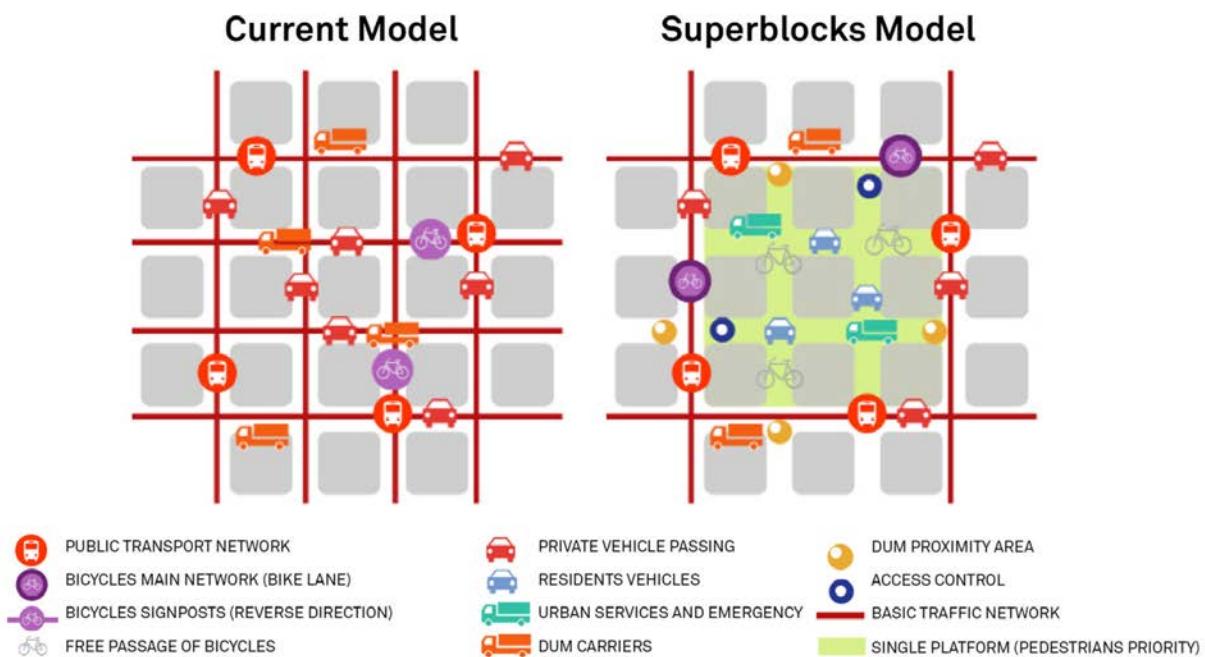
Akita, Japan, situated in the north eastern part of the Japan's main Island, faces cold weather and a low density of population similar with Erie County. Akita has tried to improve its age-friendly environment. Akita has provided a reduced fare in a coin of 100 yen (USD $0.9) to aging people over the age of 68. This initiative hopes to motivate aging people to participate in society by providing a more convenient fare.[1]

1   WHO. Bus Coin Project. From: https://extranet.who.int/

(3) Superblocks of Barcelona

The City of Barcelona, Spain had proposed an ambitious initiative to decrease the dominance of automobiles by using a new Urban Mobility Plan. By considering nine blocks of a community as a square superblock, 400 meters in length, and containing 50 to 60 hundreds of residents, the auto transportation, scooter, lorry and bus traffic would be limited in the inner block and assigned to use the basic roads except specific and residents' cars. Even though some cars would be allowed on the inner streets if they are residents or providing local businesses, inside the block the speed would be reduced to 10km/h (6.2 mph), typically the speed limit across the city is 50km/h, and 30km/h in specific areas. (Figure 6-35)

6.4 Park and Outdoor Spaces: Post Occupancy Evaluation by New Media

Open space, green space, and parks can attract and encourage all-aged citizens to participate in social activities and increase social participation. For a more age-friendly environment in Erie County, outdoor spaces such as parks, gardens, sidewalks, and landscapes may require better designs for aging people. Better age-friendly designs promote physical health by encouraging more people, of all ages, to go to public spaces.

The Erie County Parks system is known as one of the best park systems in the entire state. (Distribution of green spaces and parks show in Figure 6-36). This chapter will assess the parks in Erie County and identify which parks need improvements in order to become more age-friendly.

Figure 6-35 Superblocks Model in Barcelona
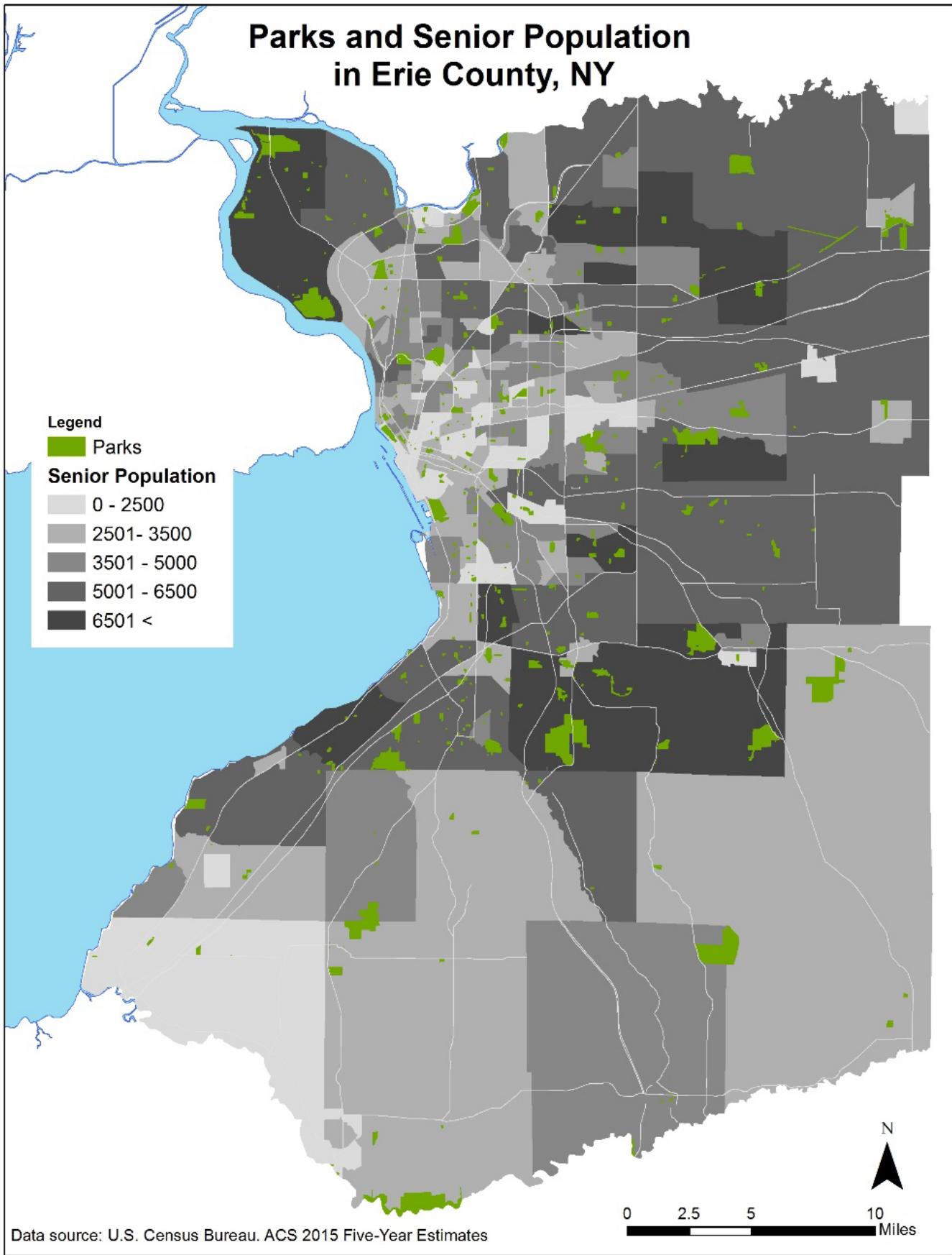
Source: BCNecologia. sustainable urban mobility plan of Barcelona (2013-2018)

Figure 6-36 Park location and main traffic line in Erie County.

Figure 6-36 Park location and main traffic line in Erie County.

6.4.1 Evaluation Index and its Weighted Score

The evaluation of Erie County's parks will assess reviews by park patrons, the park's landscape, activities the park has, its location and accessibility, and its facilities and management. The assessment will be weighted toward visitor ratings and their subjective reviews. Those reviews were obtained through social media platforms and averaged as a social rating. An overall average score is calculated by combining the social rating with the four other criteria.

The evaluation index consists of 5 standards which include landscape beauty, activities experience, location & accessible, facilities & management, and social rating. The score is out of 100.

The weighted scores are as follows: the maximum score of landscape beauty is 10, the maximum score of activities

experience is 10, the maximum score of location & accessibility is 10, the maximum score of facilities & management is 10, and the maximum score of social rating is 60. (Totaling 100)

For each assessment item, conditions could be divided into three different levels, they are excellent, fair, and poor. (Detail evaluation criteria is shown in Table 6-7) Excellent will be shown in more than 3 but no more than 5 stars and with a score between 6 and 10. Fair will be showed in more than 1 but no more than 3 stars and with a score between 3 and 6. Poor will be showed in 1 or less stars and with a score less than 2.

The social rating scores were obtained from social media platforms such as Foursquare, Tripadvisor, Yelp, Google, and Facebook. According to the social media ratings, an average score for each park will be calculated and converted to a stars rating (out of 5).

Table 6-8 Evaluation Criteria for Parks

	Lansscape Beauty 10 points	Activities experience 10 points	Location& Accessable 10 points	Facilities & Management 10 points	Social Rating 60 points
Excellent	Has an exllentent overall scence. Has a rich biological diversity. Has an high value of history and culture research. (10 Credit) ★★★★★	Activites experience in this area is pretty safe. Has a rich acativites diversity. Include plenty social and cultural activites. (10 Credit) ★★★★★	The location of this place is near to residential areas or high density activity areas. This area is easy for people to get in. The traffic to this land is convinent. (10 Credit) ★★★★★	This area has complete infrastructure systern can meet people requirements. This area has clear function divisions and. mature emergency response mechanism (10 Credit) ★★★★★	★★★★★
Fair	Has an fair overall scence. Has relatively a rich biological diversity. Has an some value of history and culture research. (6 Credit) ★★★	Activites experience in this area is relatively safe. Has a relatively rich acativites diversity. Include some social and cultural activites. (6 Credit) ★★★	The location of this place is relatively near to residential areas or high density activity areas. This area is not hard for people to get. The traffic to this land is relatively convinent. (6 Credit) ★★★	This area has relatively complete infrastructure systern can meet people requirements. This area has relatively clear function divisions and relatively mature emergency response mechanism. (6 Credit) ★★★	Combin with ratings by visitors on social platforms such as Yelp, Google, TripAdvisor, Twitter, Facebook, Foursquare,Flickr, and ParkScore to figure out a comprehensive tourists rating score. ★★★
Poor	Has an poor overall scence. Has less biological diversity. Has an low value of history and culture research. (2 Credit) ★	Activites experience in this area is unsafe to some extend. Has a less acativites diversity. Include few social and cultural activites. (2 Credit) ★	The location of this place is far from residential areas or high density activity areas. There is a difficult for people to get. The traffic to this land is unconvinent. (2 Credit) ★	This area has uncomplete infrastructure systern which cannot meet people requirements. This area has unclear function divisions and.unmature emergency response mechanism. (2 Credit) ★	★

6.4.2 Assessment of Parks and Green Spaces

(1) Assessment Scores for Major Parks in Erie County

Table 6-9 Assessment Scores for Major Parks in Erie County

Platform	Foursquare	Tripadvior	Yelp	Google	Facebook	Total
Ellicott Creek Park	7.6 (17 Ratings) ★★★★	Na	9.3 (3 Ratings) ★★★★★	9.2 (71 Ratings) ★★★★★	9.6 (107 Ratings) ★★★★★	9.3 ★★★★★
Delaware Park	9.2 (150 Ratings) ★★★★★	9 (113 Ratings) ★★★★★	9.2 (41 Ratings) ★★★★★	9.4 (138 Ratings) ★★★★★	9.4 (15 Ratings) ★★★★★	9.2 ★★★★★
Emery Park	Na	9 (6 Ratings) ★★★★★	9.3 (3 Ratings) ★★★★★	9.2 (30 Ratings) ★★★★★	9.2 (34 Ratings) ★★★★★	9.2 ★★★★★
Chestnut Ridge Park	8.8 (61 Ratings) ★★★★	9 (57 Ratings) ★★★★★	9.4 (25 Ratings) ★★★★★	9.4 (78 Ratings) ★★★★★	9.2 (380 Ratings) ★★★★★	9.2 ★★★★★
Sprague Brook County Park	7.5 (9 Ratings) ★★★★	Na	8.6 (3 Ratings) ★★★★★	9.4 (40 Ratings) ★★★★★	9.2 (181 Ratings) ★★★★★	9.2 ★★★★★
Akron Falls Park	8.4 (26 Ratings) ★★★★★	9.5 (25 Ratings) ★★★★★	8.8 (8 Ratings) ★★★★★	9.2 (77 Ratings) ★★★★★	9.2 (73 Ratings) ★★★★★	9.1 ★★★★★
Evangola State Park	7.5 (11 Ratings) ★★★★	9 (29 Ratings) ★★★★★	6.8 (5 Ratings) ★★★★	9 (61 Ratings) ★★★★★	8.8 (219 Ratings) ★★★★★	8.8 ★★★★★
Como Lake Park	7.5 (21 Ratings) ★★★★	10 (2 Ratings) ★★★★★	8.2 (7 Ratings) ★★★★★	9.4 (36 Ratings) ★★★★★	Na	8.7 ★★★★★
Cazenovia Park	6.6 (29 Ratings) ★★★★	8 (19 Ratings) ★★★★	8 (1 Ratings) ★★★★	9 (59 Ratings) ★★★★★	8.4 (405 Ratings) ★★★★★	8.4 ★★★★★
Three Valley Campground	Na	6.3 (14 Ratings) ★★★★	6 (2 Ratings) ★★★	6.8 (19 Ratings) ★★★★	8.6 (136 Ratings) ★★★★★	8.2 ★★★★
Bennett Beach	6.5 (8 Ratings) ★★★★	8 (5 Ratings) ★★★★	7.8 (8 Ratings) ★★★★	8.4 (10 Ratings) ★★★★	8.4 (37 Ratings) ★★★★★	8.1 ★★★★

(2) Assessment Sample: Bennett Beach

Bennett Beach located in Old Lake Shore Road, Angola. It is considered to be the most beautiful beach in Erie County. There is beautiful nature as well as well as wildlife throughout the park. Many people appear to relax at this park, and the sunset is visible. Green spaces provide people places for picnics and various outdoor activities. There is a nice landscape. The park received a landscape beauty score of 8. (Maximum score: 10)

Bennett Beach is located next to Lake Erie. Bennett Road and Lakeshore Road provide the main access points providing easy accessibility. As an accessibility score, the lake received 7. (Maximum score: 10)

If the park extended to the Buffalo River, that could increase the possibility of fishing. Also, there is a limited amount of walking and hiking trails. In terms of infrastructure and management, the park received a 6. (Maximum score: 10)

(3) Assessment Sample: Akron Falls Park (In Multiple Approach)

Akron Falls Park is a famous park located in Akron, east of Erie County. The park is known for its fantastic natural features and multiple species. Using the social rating score from patrons' social media reviews, Akron Fall Park has an average score of 9. (Uniform into ten-point system) (Table 6-10)

Table 6-10 Evaluation of Bennett Beach

Platform	Foursquare	Tripadvisor	Yelp	Google	Facebook	Total
Bennett Beach	6.5 (8 Ratings) ★★★☆	8 (5 Ratings) ★★★★	7.8 (8 Ratings) ★★★☆	8.4 (10 Ratings) ★★★★☆	8.4 (37 Ratings) ★★★★☆	8.1 ★★★★☆

Besides, another approach to evaluation parks were also utilized in Akron Falls Park to improve evaluation method. (Table 6-11)

In terms of landscape beauty, the park has a graceful view, plenty of plant life, mammals, birds, streams, waterfalls, and a lake. Visitors reviews include: "Nice local park, with a couple waterfalls and a lake created by a dam." review of Akron Falls Park by Robert. E, Foursquare Website Review, May 24, 2014. "My husband and I got married at the park August 2015. A great park with beautiful scenery and a nice secluded pavilion a bit off the main road made for a wonderful day!" review of Akron Falls Park by Toni.S, Tripadvior Website Review, August 25, 2016. The park's landscape beauty received a score of 9. (Maximum score: 10)

In terms of the park's activities experience, there are many outdoor activities which can be experienced in all seasons. One review stated: "They offer swimming, camping, boat ramps, picnic areas, fishing, hiking, and loads of fun. I have been enjoying Mississinewa since I was young and I still enjoy it in my 40's" Akron Falls Park by Tammy. B, Tripadvior Website Review, March 14 2017. The park's activity experience received a score of 9. (maximum score: 10)

There are residential developments north of the park, as well as the Akron airport. Streets such as Parkview Drive, East Avenue and Skyline Drive straddle the park These streets provide convenient parking, and convenient access to and from the park. On the part of location and accessibility, Akron Park received an 8. (Maximum score: 10)

The park has places areas for basketball, bicycling, fishing, hiking trails, ice skating, picnics, and tennis. In terms of infrastructures and management, the park received an 8. (Maximum score: 10)

A total assessment of the park leaves Akron Park with a score of 88. (Total 100)

Table 6-12 Evaluation of Akron Falls Park in another approach

	Lansscape Beauty 10 points	Activities experience 10 points	Location& Accessable 10 points	Facilities & Management 10 points	Social Rating 60 points	Total
Akron Falls Park	9 ★★★★☆	9 ★★★★☆	8 ★★★★	8 ★★★★	54 ★★★★☆	88 ★★★★☆

6.5 Respect and Social Inclusion: Intergenerational Programming

6.5.1 Current Situation of Intergeneration Issues in Erie County

Erie County currently has very few instances of true "Intergenerational Programming" (IGP). IGP is community based programming aimed at providing space and opportunity for different generations to not only interact, but to learn and share experiences together in the hopes of fostering positive relationships and lead to further interaction between all generations within the community. There is a great opportunity for collaboration within the county. In Erie County there are 53 senior centers and 138 schools in a 1.5-mile radius of those centers (Figure 6-37). There may also be opportunity to place new senior centers in areas densely populated with aging people and that lack a center (Figure 6-38).

Erie County Coordinator of Senior Volunteers, Patricia Downing stated, "There are at least 200 senior volunteers helping out students in the schools through RSVP, Experience Corps, and Foster Grandparent program." The Retired Seniors Volunteer Program (RSVP) is an IGP which offers a range of volunteer opportunities. But, RSVP does not give aging people the opportunity to learn from, or with students. At RSVP, the aging people act as extra staff for the Buffalo Public Schools (BPS). Currently, there are 30 RSVP volunteers for five Buffalo Public and Charter schools. A true intergenerational program would incorporate aging people and children and seek to build meaningful interpersonal relationships. The program would bridge the generations and offer the chance for them to learn together, and from one another.

In the course of researching this project, Erie County Senior Services suggested contacting community centers, such as the North Buffalo Community Center, which hosts both youth programming and senior programming. Unfortunately, the senior programming and youth programming do not happen together at North Buffalo Community Center. When researching more locations which have youth programs and senior programs, it became clear that most the locations did not have intergenerational programs.

In 2016, Erie County conducted a survey of over 1000 aging people. According to the results, Erie County's own "Findings from a County-wide Community Assessment" found that on a scale of 0 to 5, aging people only rated Intergenerational activities offered in Erie County at a 2.62. Working in compliance with AARP standards there are 10 domains that must be satisfied. AARP's 5th domain is respect and social inclusion. In this domain, IGP and related activities are highly prioritized, and Erie County is lacking in this area.
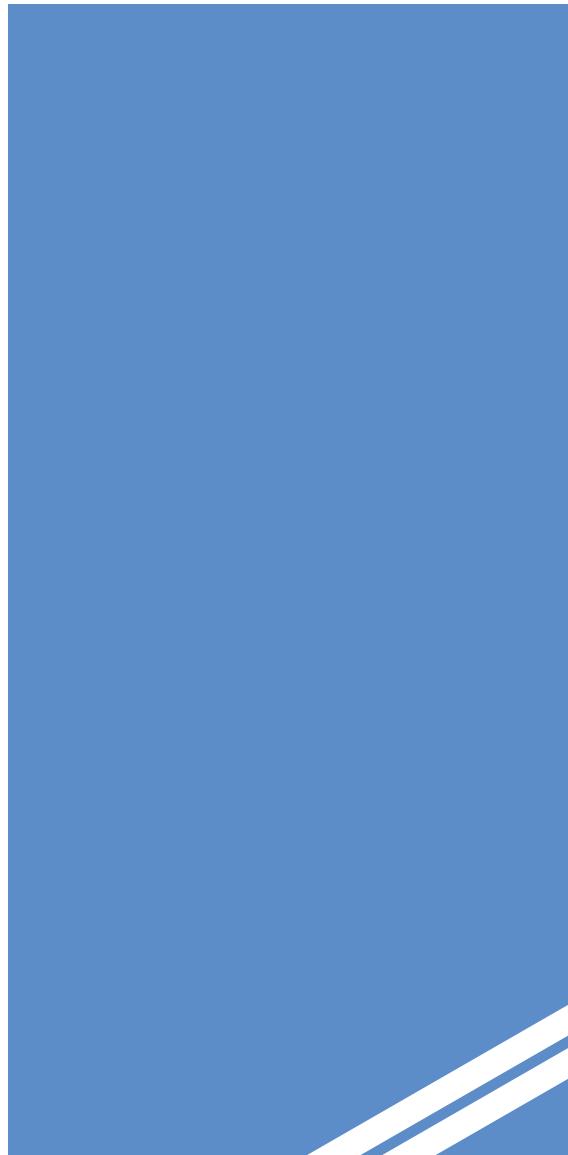
Schools Located Within 1.5 Miles of Senior Centers in Erie County, NY
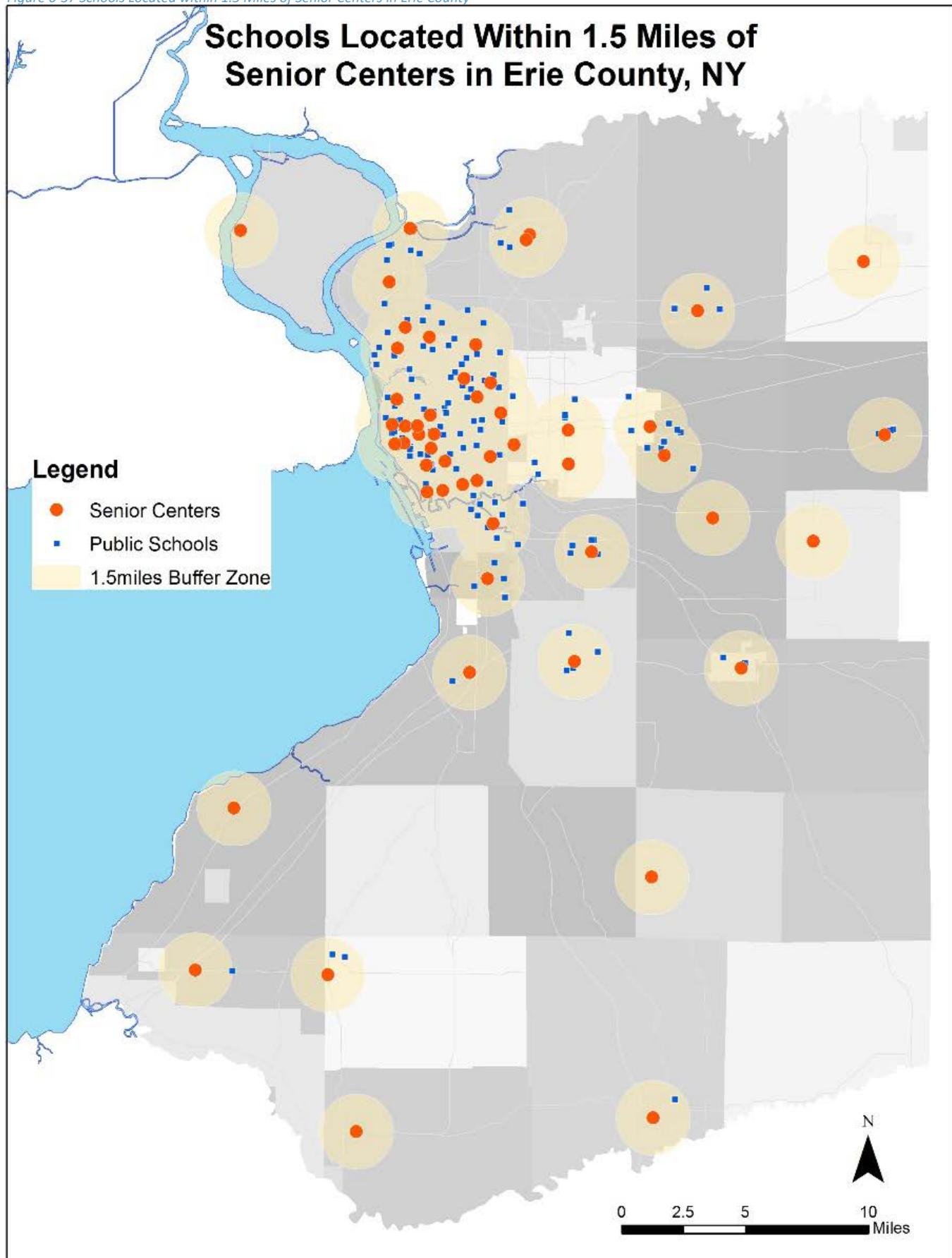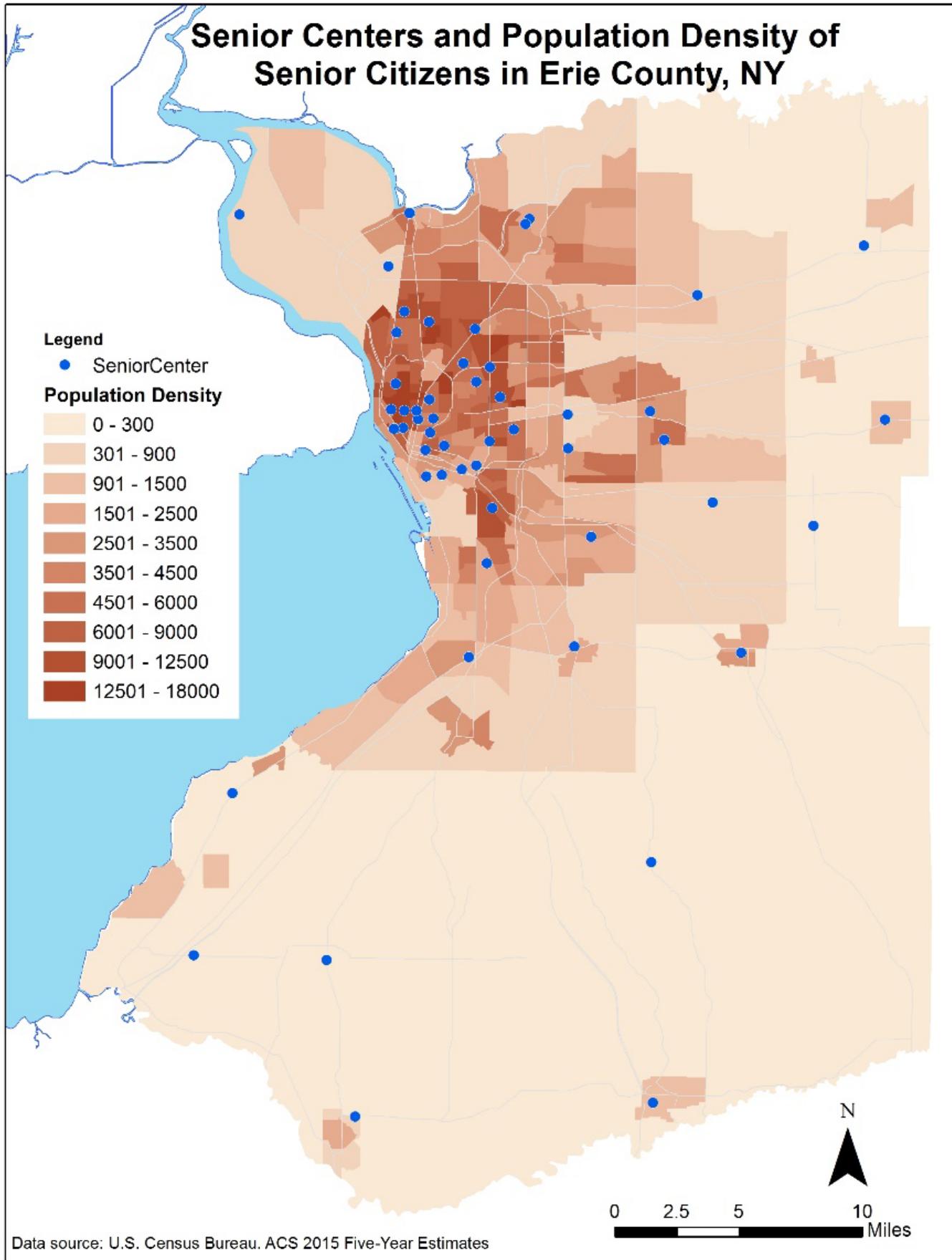
Legend
- Senior Centers
- Public Schools
- 1.5miles Buffer Zone

Senior Centers and Population Density of Senior Citizens in Erie County, NY

Legend

• SeniorCenter

Population Density

- 0 - 300
- 301 - 900
- 901 - 1500
- 1501 - 2500
- 2501 - 3500
- 3501 - 4500
- 4501 - 6000
- 6001 - 9000
- 9001 - 12500
- 12501 - 18000

0   2.5   5   10 Miles

Data source: U.S. Census Bureau. ACS 2015 Five-Year Estimates

6.5.2 Intergenerational Programs

(1) Overview

Benefits of IGP for children include improved academic performance, enhanced social skills, and a decrease of negative behavior.[1] Youth that are "involved in intergenerational mentoring programs are 46% less likely to begin using illegal drugs, 27% less likely to begin using alcohol, and 52% less likely to skip school.[2]" The positive externalities of these programs benefit a community as a whole.

In an interview with an intergenerational coordinator from San Diego County, these results were echoed. "Social benefits like to breakdown social barriers. They (IGP) enhance the quality of life. IGP do more than help the participants, they (IGP) can help tackle community problems, serious social problems. This is a win, win, for everybody."

aging people experience a number of benefits from participating in IGP. Health benefits such as burning up to 20% more calories than aging people who do not participate. Participants show improved results in memory tests. The increased social interaction offers emotional support and allows for more stimulated learning as well.[3]

IGP can focus on any subject, such as art, nature, history, or entrepreneurship. They can be customized to each community's unique interests. There are four types of IG programs under consideration in this study; arts based programs, environmental or nature based programs, internship based programs, and combined facilities based programs. These four types of programs were selected based on the individual program merits in the context of current budget constraints, as well as how the fit with already existing infrastructure. These examples suit the current interests and resources of Erie County's communities and their members. The appendix below contains more examples of IGP types, accompanied by recommendations for each senior center in Erie County.

Art Programs, music educational budgets, along with after school programming have recently faced major cuts to funding. Art and music based IGP has the potential for a variety of cost saving benefits. Instead of spending money on separate facilities and programs for each demographic group, distinct groups of people could be served in the same facilities. Art and music educational based programs also have an added cost saving benefit of not needing as many staff members to oversee students because the aging people can help with supervision responsibilities. The appeal of the arts transcends demographics, race, gender, class, and brings people of different backgrounds together.

Erie County is home to vast natural resources. There is no

shortage of rural communities that have beautiful lands that our aging people and children could explore. Environmental Programs provide an opportunity to instill in children that as technology advances, there is still an importance of enjoying nature. Aging people benefit from the exercise, clean air, and change of scenery. Aging people who have expansive information and knowledge about nature can enlighten children about the natural world around them.

A year round internship program in Erie County has the strong foundation of both the City of Buffalo Mayor Summer Youth Internship Program (MSY) along with Erie County starting the Erie County's Summer Youth Internship Program (SYIP). With these programs in place, the infrastructure and partnerships are ready to create year-round programs that are both available and accessible. Instead of using money as an incentive to participate, students could earn academic credit. If their host organizations saw enough benefits, they could be convinced to offer minimum wage to students as an added incentive. Aging people provide wisdom and experience on the realities of the workforce. What it takes to be an employee of value, how to become a business owner and what steps to avoid on their journey. A smart man learns from his mistakes. A wise man learns from the mistakes of wise men. The aging people of Erie County have a wealth of knowledge and experience to pass down to the next generation.

The aforementioned Lutheran Church Lord of Life Adult & Child Services program has the potential to be a model for combining adult and child public services. This combination would cut costs and would not increase the current budget. A study of combined facility programs is essential for Erie County IGP development due to the lack of availability and the need for more Senior/Child interactions.

(2) Arts Based Program

Elders Share the Arts (ESTA), established in 1979, is a nationally recognized community art organization based in New York City. This IG program developed an intergenerational theater arts approach called "Living History". This innovative format uses the traditional arts of theater, dance, storytelling, writing, and visual arts to bring students, ranging in age from pre-school to high school, and aging people together on a weekly basis. Together they share and find meaning in their life stories.[4] The ESTA publication, "Generating Community: Intergenerational Partnerships through the Expressive Arts", describes how this program came to be. Combining art and history took two years to implement and included partnerships from schools, senior centers, and art organizations.[5]

ESTA is a mid-size nonprofit with 7 administrative staff members, 26 teaching artists, 6 board members, and 4 advisory board members.[6] According to ESTA's 990 form, obtained using Guide Star's database on non-profits, ESTA's 990 shows that the organization gets half of their funding from program service the other half consists of funding from the government, donations,

1   Generations United. (2007, July). *The Benefits of Intergenerational Programs. (Generations United) Retrieved March 22, 2017, from Generations United: http://www.gu.org/LinkClick.aspx?fileticket=71wHEwUd0KA%3D&tabid=157&*

2   Generations United. (2007, July). *The Benefits of Intergenerational Programs. (Generations United) Retrieved March 22, 2017, from Generations United: http://www.gu.org/LinkClick.aspx?fileticket=71wHEwUd0KA%3D&tabid=157&*

3   Generations United. (2007, July). *The Benefits of Intergenerational Programs. (Generations United) Retrieved March 22, 2017, from Generations United: http://www.gu.org/LinkClick.aspx?fileticket=71wHEwUd0KA%3D&tabid=157&*

4   Kaplan, M. S. (2001). *http://www.youthmetro.org/. Retrieved March 22, 2017, from http://www.youthmetro.org/uploads/4/7/6/5/47654969/school_based_intergenerational_programs.pdf*

5   Kaplan, M. S. (2001). *http://www.youthmetro.org/. Retrieved March 22, 2017, from http://www.youthmetro.org/uploads/4/7/6/5/47654969/school_based_intergenerational_programs.pdf*

6   ELDERS SHARE THE ARTS. (2016). *ELDERS SHARE THE ARTS. Retrieved March 22, 2017, from ELDERS SHARE THE ARTS: http://www.estanyc.org/*

and special events.[1] This type of performance-based programming has the potential for development in areas such as City of Buffalo and the Theater District.

Buffalo is currently experiencing a boom in the downtown area in part to Canalside and the medical corridor, among other factors. A bubbling arts neighborhood already exists between the Theater District and Allentown. The Allentown Arts District, with many art studios lining Allen Street and the surrounding area, already has momentum promoting the arts with events like "First Fridays".[2] Likewise, the Theater District is rich in possibilities for cooperation with IG programs, with a number of well-known and acclaimed thespian groups. Within a mile radius are institutions like Hutchinson Central Technical High School, Oracle Charter School, and community centers that serve that area, such as the Jewish Community Center of Greater Buffalo and Richmond-Summer Recreation Center. The money available through government grants will likely decrease, but with creative collaboration between the different community and regional partners, there may be an effective way to create art based IG programs in Erie County.

(3) Environmental Education

For our communities that are rural, or very close to nature, environmental education based IGP may be a viable solution. An example of this type of program in Philadelphia is the Center in the Park Senior Environment Corps, referred to simply as "Center in the Park". It "offers a variety of environmental education activities for school children, including exploratory canoe trips on the Schuylkill River, sailing on Delaware Bay to monitor water quality, and periodic visits to Philadelphia to discuss how urbanization and industrialization are affecting water quality".[3] Center in the Park is a part of the Pennsylvania Senior Environment Corps established in 1997.[4]

Figure 6-39 aging people and High school students

Source: Elders Share the Arts. 2016

The Center in the Park website states, "[Center in the Park] volunteers participate in a variety of important projects such as monthly water quality monitoring, habitat assessments, tree plantings. school programs, youth and community education and outreach programs and trips".[5] There are numerous stated benefits for aging people, such as better quality of life physically, mentally as well as socially.[6]

The Town of Akron, a suburb in Erie County, provides "hiking trails and excellent examples of uncommon plant communities that are associated with the underlying limestone rock".[Conservation, N. Y. (n.d.). Onondaga Escarpment Unique Area. Retrieved 4 4, 2017, from Department of Environmental Conservation : http://www.dec.ny.gov/lands/108647.html] A community Senior Center that has potential to collaborate with Akron High School and the City of Akron Conservation Advisory committee to explore the Onondaga Escarpment Unique Botanical Area.

Figure 6-40 aging people and students

Source: Senior Corps website

Figure 6-41 aging people and High School Student in Intergenerational Work Study Program

Source: New York City Government. 2017

1   Guide Star. (n.d.). GuideStar Report Generated For: Elders Share the Arts Inc,. Retrieved March 22, 2017, from Guide Star: https://www.guidestar.org/ViewPdf.aspx?PdfSource=0&ein=13-3135292
2   First Friday. (n.d.). Retrieved 04 21, 2017, from Allentown Association: http://allentown.org/first-fridays/
3   Kaplan, M. S. (2001). http://www.youthmetro.org/. Retrieved March 22, 2017, from http://www.youthmetro.org/uploads/4/7/6/5/47654969/school_based_intergenerational_programs.pdf
4   Senior Environment Corps. Accessed March 22, 2017. https://www.centerinthepark.org/programs-environment.html.

5   Senior Environment Corps. Accessed March 22, 2017. https://www.centerinthepark.org/programs-environment.html.
6   Generations United. (2007, July). The Benefits of Intergenerational Programs. (Generations United) Retrieved March 22, 2017, from Generations United: http://www.gu.org/LinkClick.aspx?fileticket=71wHEwUd0KA%3D&tabid=157&

(4) Internship/Work study

The Internship Work/Study program, developed by the New York City Department for the Aging, connects high school students, who are at risk of dropping out of school, with local senior centers and nursing homes. The students work up to 15 hours per week and receive academic credits. Depending on program conditions, they can receive stipends for living as well. Some of their responsibilities cover a range of activities, including meal preparation, art, exercise classes, and group trips at senior facilities.[1] Part of the mission of The Internship Work/Study Program is to "engage academically-achieving, college-bound, and developmentally challenged students as well as academically at-risk youth. It has broadened its mission of ensuring that student participants graduate from high school to steering them into college enrollment, post-graduation employment with providers in the aging services network and careers in health and social services."[2] This program not only offers the traditional benefits for aging people and youths, it offers the added social benefit of tackling poverty by developing a workforce.

Erie County's Summer Youth Internship Program (SYIP) starts for the first time on July 10, 2017. SYIP has the opportunity to connect with the City of Buffalo's (Mayor Summer Youth) MSY Program to expand internships on a year round basis. For example, MSY students who range in ages 14-22 could work to assist aging people in a variety of ways, such as maintaining aging people' lawns, painting houses, and learning other household skills. Older students could help aging people by delivering food or picking up dry cleaning. The MSY and SYIP have a unique opportunity to create its own IGP that can build on the foundations that already exist in the county. Erie County would find a willing partner in the Superintendent for BPS, Dr. Kreiner Cash. At the ribbon cutting of the Computing Academy of Technological Sciences at Bennett, Dr. Cash stated "We are educating the workforce of the future, and gearing that education to the competitive demands of the city, the nation, and the world."[3] As a part of the Computing Academy of Technological Sciences at Bennett curriculum " industry partners will assist in developing curriculum and making technology real to our students through mentoring, guest speakers, internships, field trips, and other work-based learning experiences"[4] Dr. Cash has been eager to create positive change in schools and to search for effective programs to emulate. In the past year, thirteen new community schools and six innovative high schools have been created.[5] One of the innovative high schools, South Park, hosts the new Buffalo Education for Solar Occupations Leading to Area Rejuvenation Pathways Program (BESOLAR). The high school is partnered with Solar City, Erie Community College,

and Compliance & Administrative Services of NY (CASNY). The program, implemented in Dr. Cash's first year, shows his willingness to make partnerships in order to better prepare his students for life after highs school.[6]

Erie County's retired aging people have a variety of distinct skillsets. Distinct skillsets have potential to be harnessed to create innovative IGPs. In the Town of Tonawanda, an IGP could be made with a partnership of retired General Motors employees as an apprenticeship program. Within the City of Buffalo, there is potential for a program directed at aging people who are retired from fields such as the arts, music, or acting. An IGP could be created where these aging people take classes with the students from Buffalo Academy for Visual and Performing Arts (BAVPA). The students and aging people could even put on productions year round. In a traditional IGP, aging people and adults impart instructions and life skills in a top down manner, however, the BAVPA IGP could be a collaborative interaction where aging people and students learn from each other by working side by side.

(5) Erie County's Existing Example: Combined Facilities

Erie County currently has a functioning example of an IGP; Lord of Life Lutheran Church's Lord of Life Adult & Child Services. Karen A. Glanowski, the Director of Program Services Lord of Life Adult Day Care has been with the program for over 26 years.

"It's so important. The aging people are so full of wisdom and guidance. We need to care for our aging people and keep them active in our society."

At Lord of Life the aging people are considered "grandmas and grandpas". The children and aging people interact daily including a range from Arts and Craft to singing, playing games, and story time. Deborah R. Hanitz, an adult, volunteers every Tuesday. Deborah said, "This (IGP) is an excellent concept" Deborah enjoys her time volunteering and loves the interaction between the children and grandparents. Marcia Lunetta, a "grandma" describes how interacting with the children "helps (her) recall when she took care of her child". She believes the staff are doing a great job of teaching the kids. and she feels "very comfortable around a lot of children".

Figure 6-42 Linda Pryor and Oliver posing together after finish the last song of the weekly celebration.

Source: DaVon L. McCune. 2017

1   New York City Government . (2017). Th Intergenerational Work Study program. Retrieved March 22, 2017, from nyc.gov: http://www.nyc.gov/html/dfta/html/community/intergenerational.shtml

2   New York City Government . (2017). The Intergenerational Work Study program. Retrieved March 22, 2017, from nyc.gov: http://www.nyc.gov/html/dfta/html/community/intergenerational.shtml

3   "Ribbon-cutting: Computing Academy of Technological Sciences at Bennett." Buffalo Public Schools News. Accessed May 04, 2017. http://www.buffaloschools.org/news.cfm?story=5503.

4   "Ribbon-cutting: Computing Academy of Technological Sciences at Bennett." Buffalo Public Schools News. Accessed May 04, 2017. http://www.buffaloschools.org/news.cfm?story=5503.

5   Williams, D. (2017, Jan 28). Kriner Cash on 'state of the schools:' Progress, but much left to do. Retrieved April 4, 2017, from www.buffalonews.com: http://buffalonews.com/2017/01/28/kriner-cash-then-now-and-in-the-future/

6   Buffalo Public School. (n.d.). About Us. Retrieved March 22, 2017, from http://www.buffaloschools.org/: http://www.buffaloschools.org/district.cfm?subpage=68.

6.5.3 Recommendations

1) Hire Intergenerational Coordinator

2) Hire College Intern Coordinator

3) Initiate Pilot Program

4) Hire Intergenerational Coordinator

5) Full-time Coordinator Duties:

6) Ensure that the IGP best achieves its goal of satisfying the domains of respect and social inclusion.

7) Carry out the implementation of the pilot program and that it fully utilizes all available county assets

This would set a standard in which the coordinator would help facilitate collaboration between every municipality willing to partner, assuring current county assets are used to their maximum benefit. This coordination would translate to cost savings for each school district, senior center, and community center in the county. There is limited money available for special programs because of national budget cuts to programs like Meals on Wheels, school lunch programs, and after school programs.

National budgets are being cut by the current administration for programs like meals on wheels[McLaughlin, Eliott C. "Meals on Wheels could take funding hit in Trump budget." CNN. March 16, 2017. Accessed May 04, 2017. http://www.cnn.com/2017/03/16/politics/meals-on-wheels-trump-budget-blueprint/.] and after school programming[Ocbazghi, Emmanuel. "Watch Trump's budget director explain proposed cuts for after-school programs that feed children." Business Insider. March 16, 2017. Accessed May 04, 2017. http://www.businessinsider.com/budget-director-explains-trumps-proposed-cuts-meals-on-wheels-omb-white-house-press-briefing-2017-3.]. Being able to feed aging people and our children in the same buildings while providing quality IG programming would have cost saving benefits as well as the health, academic, and community benefits that are listed in the Why Intergenerational Programming Is Important section. An intergenerational coordinator said that,

"The position has two functions: to run our own programs in the county and, secondary, to also be tech support and help people start their own IGPs."

Hire College Intern Coordinator

College Intern Coordinator Duties include: 1) Creating and maintaining relationships with the surrounding universities and 2) Training and supervising interns year round, in lieu of hired staff

The Center for Urban Studies could be a substantial resource in this respect. The center directed by Dr. Henry Louis Taylor, Jr., currently implements various after-school and a summer programs. The Center for Urban Studies also offers credit-bearing internships to undergraduate and graduate students. This would allow the county to save money by not having 15 to 20 dedicated paid staff members; these anchor institutions are an untapped resource.

In a meeting with the Erie County Senior Services, the commissioner stated that the Ready Set Home program was achieving amazing results. Additionally, a representative from

the Aging and Disability Resource Center (ADRC) stated that the program has experienced "huge cost savings". The program is saving millions of dollars with just two staff members running the program. With two graduate student interns, possibly from the School of Architecture and Planning, or the School of Social Work, they could double the work force without increasing labor costs from hiring another full-time staff member.

An Erie County assistant research analyst mentioned that a large portion of the burden of data for the department rests on his shoulders alone. Two graduate level planning interns could assist with the workload. For example, by helping create qualitative questions, helping clean quantitative data, or making sure the sample size is meaningful. The opportunity to hire interns would be an invaluable resource, and this example only highlights one relationship with the University at Buffalo. Much more could be accomplished by tapping into the full power of the colleges and universities in the area.

Initiate Pilot Program

The county should prioritize making a pilot program to show the benefits of IGP. Using a facility that already supports both youths and aging people would be the ideal facility to house the program. BPS has community schools that are open to the entire community; these community schools would be a favorable site to establish a pilot program. Additionally, numerous community centers serve both youths and aging people. Bridging the gaps would be a process that would not require much effort since both parties already use the facility. The particular type of program should be researched and based on the interests, experience, and skills of the participants. Below is a chart showing possible partnerships and types of IGPs based on the resources of the community in which these centers are located. This chart includes a list of all senior centers in the county, program recommendations, and possible partnerships with schools and other organizations, all within about a 3-mile radius of the centers.

Table 6-13 Possible IGP Partnerships for Pilot Programs at Facilities that Serve both Children and Aging people

Senior Center	Zip	Recommended Programs	Schools	Distance (miles)	Potential Community Partners	Distance (miles)
CONCERNED ECUMENICAL MINISTRY (CEM)	14213	Arts education		.2	Western New York Artists Group	2.1
			Lafayette High School,			
			Newcomers Academy	.2		
DELAVAN-GRIDER COMMUNITY CENTER	14215	Internship/ Work study	PS 197 Math Science Technology Preparatory School,	.2		.9
					True Bethel Baptist Church	
					Buffalo City Hall Community Services and recreational Programming	5.3
					Hopson Dry Cleaner	0.0
EDWARD SAUNDERS CAO COMMUNITY CENTER	14215	Arts Based Program	Nativity Miguel Middle School	.5	Buffalo Arts studio	2.4
			Westminster Community Charter School	.7		
THE BELLE COMMUNITY CENTER	14201	Internship/Workstuday	Herman Badillo Community School	.09	Buffalo City Hall Community Services and recreational Programming	1
FRIENDS TO THE ELDERLY, INC.	14209	Internship/Workshop	Health Sciences Charter School	.3	Buffalo City Hall Community Services and recreational Programming	2.3
			City Honors School,	.7		
FLARE (Fillmore Leroy Area Residents, Inc.)	14214	Arts Based Program	Public School 61	.3	Buffalo Arts studio	.6
			Buffalo United Charter School,	.9		
GLORIA J. PARKS COMMUNITY CENTER	14214	Internship/Work study	Bennett High School	.3	Buffalo City Hall Community Services and recreational Programming	6.4
		Arts Based Program	Middle Ealry High School	.3	Buffalo Arts studio	1.2

Senior Center	Zip	Recommended Programs	Schools	Distance (miles)	Potential Community Partners	Distance (miles)
North Collins Senior Citizens	14111	Environmental education	North Collins High School	.9	Awald Farms	.9
			North Collins Elementary School	1.4	Bowman Farmsnorth	.3
Akron-Newstead Senior Citizens	14001	Environmental education	Akron Middle School	2.8	City of Akron	1.4
			Akron High School	2.8	Conservation Advisory Committee	1.4
			Akron Teen Center	2.1	Management of Onondaga Escarpment Unique Botanical Area	4.2
Alden Community Center	14004	Environmental education and Internship/Work study	Alden Inter School	.6	Alden Farmers Market	0
			Alden High School	1.1	Alden Recreation Department	.6
Clarence Senior Center	14031	Arts Based Program	Clarence High School	1	Creative Essence	3.4
			Ledgeview Elementary School	1.5	Town of Clarence Youth Bureau	1.8

7 Conclusion

Erie County is one of the few regions in the United States that is making an overt effort to become more age-friendly. Erie County Senior Services generously provided this studio with the necessary resources to pursue that goal. Interactions with Erie County senior citizens, as well as support from organizations such as AARP and the IDeA center provided this studio with the means to make assessments and recommendations. With assistance from these public and private organizations, as well as the invaluable information received from senior citizens, a comprehensive report of the county's housing, outdoor spaces, transportation system, and social inclusiveness was completed. This report is intended to be an additional resource for Erie County as it strives to become a model of the ideal, age-friendly county.