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Wilmington-Blanchester Sidewalk Prioritization Plan 2019

CCRPC

CLINTON COUNTY REGIONAL PLANNING COMMISSION

Acknowledgements

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Introduction

Sidewalks are an essential form of transportation used by pedestrians, runners, and cyclists to get from place to place. They promote physical activity and serve as a healthier way of getting around than automobiles, while also creating more walkable and pedestrian-friendly communities. Clinton County is home to such walkable communities, especially Wilmington. On the other hand, the county is also home to communities that lack adequate sidewalks, which includes most of Blanchester and parts of Wilmington. In a county where a large portion of the population without cars live in or near the downtown center of Wilmington, this addresses the need to preserve the city's already walkable areas and create new ones where they are needed. This plan will provide insight and data on this issue, as well as recommendations and potential solutions to ensure that Clinton County achieves its most walkable form. It will also primarily focus on the county's two largest communities: Wilmington and Blanchester.

Goals and Objectives

Goal:

Provide a safe, adequate, and well-connected network of sidewalks throughout Wilmington and Blanchester to ensure all pedestrians are able to walk from place to place without any difficulties.

Objectives:

1. Provide inventory of existing sidewalk conditions.

2. Establish a criteria system to use as a reference for prioritizing missing sidewalk segments.

3. Create maps that convey the data for each criteria section.

4. Using the previous sections' maps as references, create maps that display the final recommendations for the prioritized sidewalks.

Methodology

The tools used to collect this data mainly consisted of GIS and American FactFinder (United States Census Bureau). American FactFinder was used to provide data for many of the demographic maps, which were created in GIS. GIS was used to create the street/sidewalk maps, proximity maps, and pedestrian crash and attractor maps. The locations of the pedestrian crashes were obtained from GCAT data from the Ohio Department of Transportation. Street View on Google Maps was used as a reference for evaluating the sidewalk conditions for the "Mobility" section to help identify their hierarchy function and whether they had sidewalks on just one side of the street or both. When it came to the "Final Recommendations" maps, every map from each section was observed and the best judgment was used to determine the sidewalks' final prioritizations based on what those maps were showing. The "Final Recommendations" maps were completed in GIS and the images for the "Notable Examples" section were taken from Street View on Google Maps.

Existing Conditions

On the next page, there are maps of Wilmington and Blanchester that display the street segments with and without sidewalks within the observation areas. They also display existing trails as well. As both maps show, there tends to be more existing sidewalks in the downtown centers of the communities, which makes sense considering downtown areas tend to be more walkable. On the other hand, both maps also show that there tends to be more non-existent sidewalks in the outer, more rural roads of the community, and even parts of the residential local streets. Below are the percentages of street segments with and without sidewalks for both Wilmington and Blanchester within the observation areas.

Wilmington

With Sidewalks: 40.7 mi (70%)
(3.1 mi/8% - Walking and Biking Trails separate from street network)

Without Sidewalks: 17.8 mi (30%)

Total: 58.5 mi

Blanchester

With Sidewalks: 8.7 mi (41.2%)
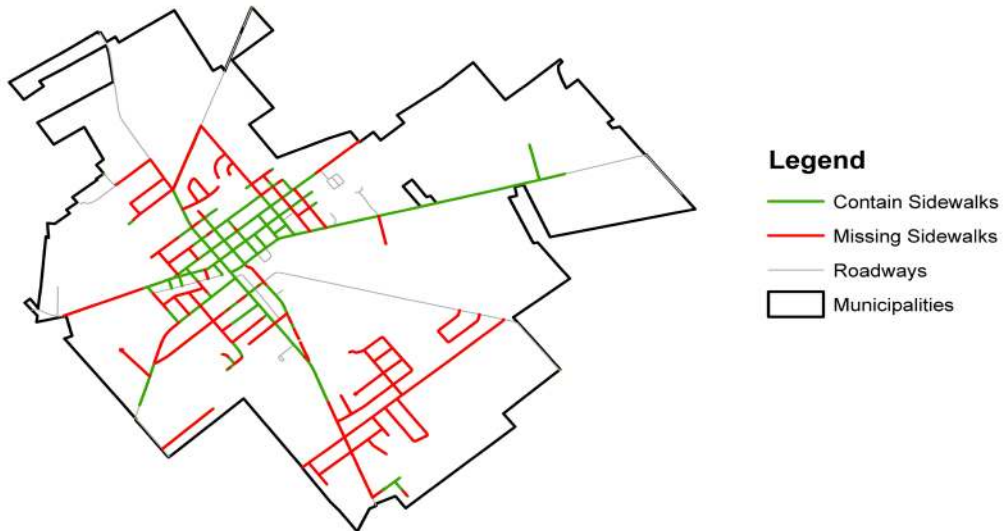
Without Sidewalks: 12.4 mi (58.8%)

Total: 21.1 mi

Wilmington, OH Existing Conditions 2019 Within Observation Area

Blanchester, OH Existing Conditions 2019 Within Observation Area

3

Observation Areas

When it came to determining which streets to observe for this plan, the best course of action was to focus on streets that already had sidewalks and streets without sidewalks that had the best potential for them. Streets that had little to no potential for future sidewalks and pedestrian activity were excluded, such as rural roads that reach the outer limits of both Wilmington and Blanchester. The maps below highlight the streets that were observed:

Wilmington, OH Observed Sidewalks 2019

Legend
— Observed Sidewalks
— Roadways
☐ Municipalities

0   0.325 0.65   1.3   1.95   2.6
                                              Miles

Blanchester, OH Observed Sidewalks 2019

Legend
— Observed Sidewalks
— Roadways
☐ Municipalities

0   0.2   0.4   0.8   1.2   1.6
                                             Miles
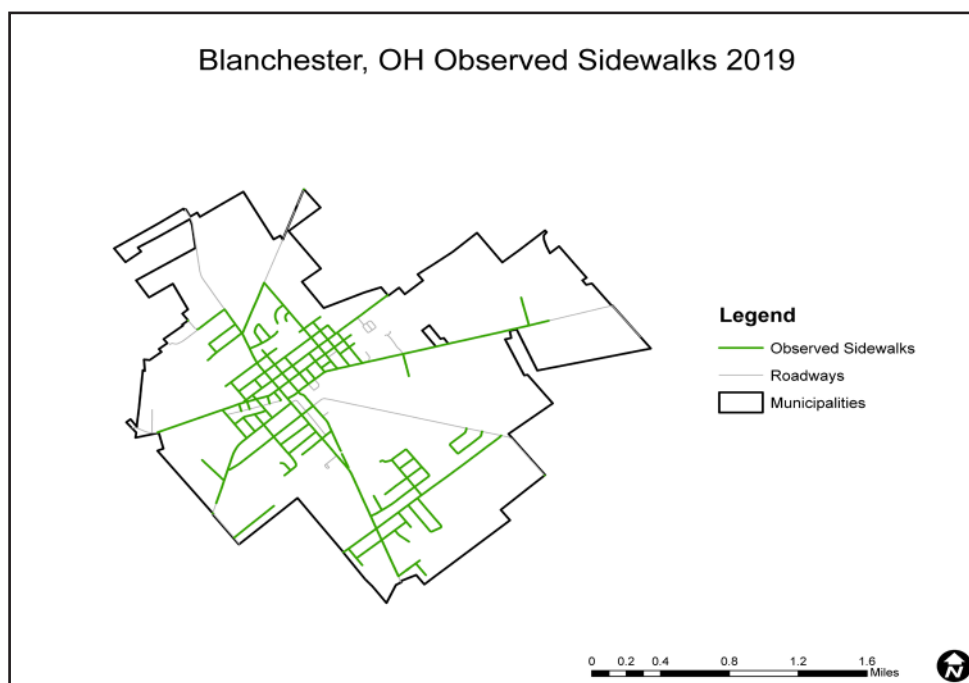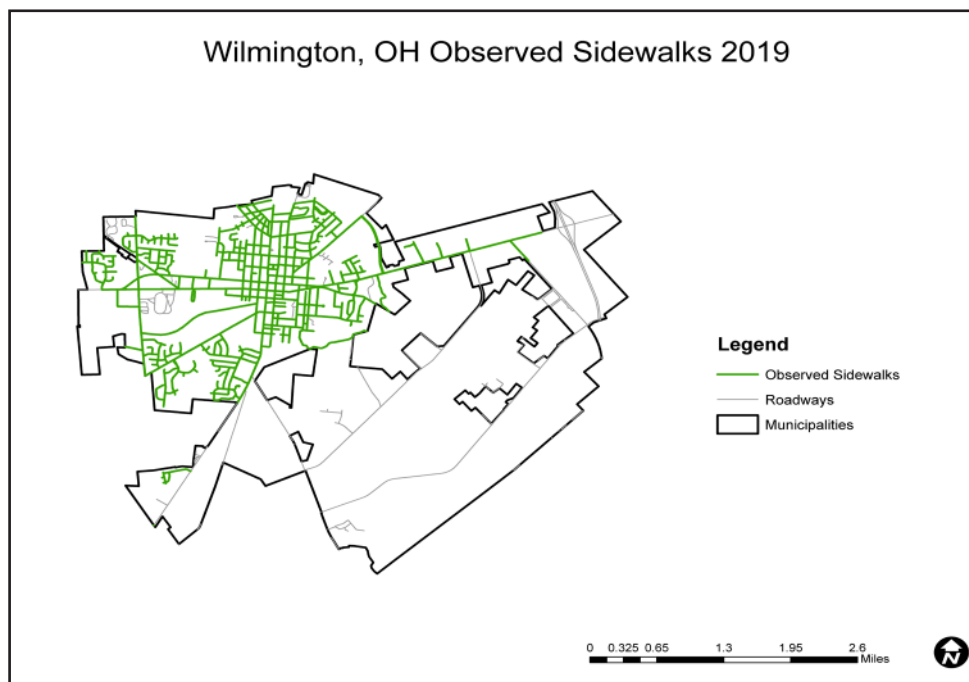
Prioritization

All missing sidewalk segments will be prioritized based on different criteria that deal with important demographic and physical aspects of Wilmington and Blanchester. Those criteria are listed below:

A. Pedestrian Attractors
    1. Schools
    2. Activity Centers
    3. Parks
B. Mobility
    1. Street Hierarchy
    2. Presence of Sidewalks
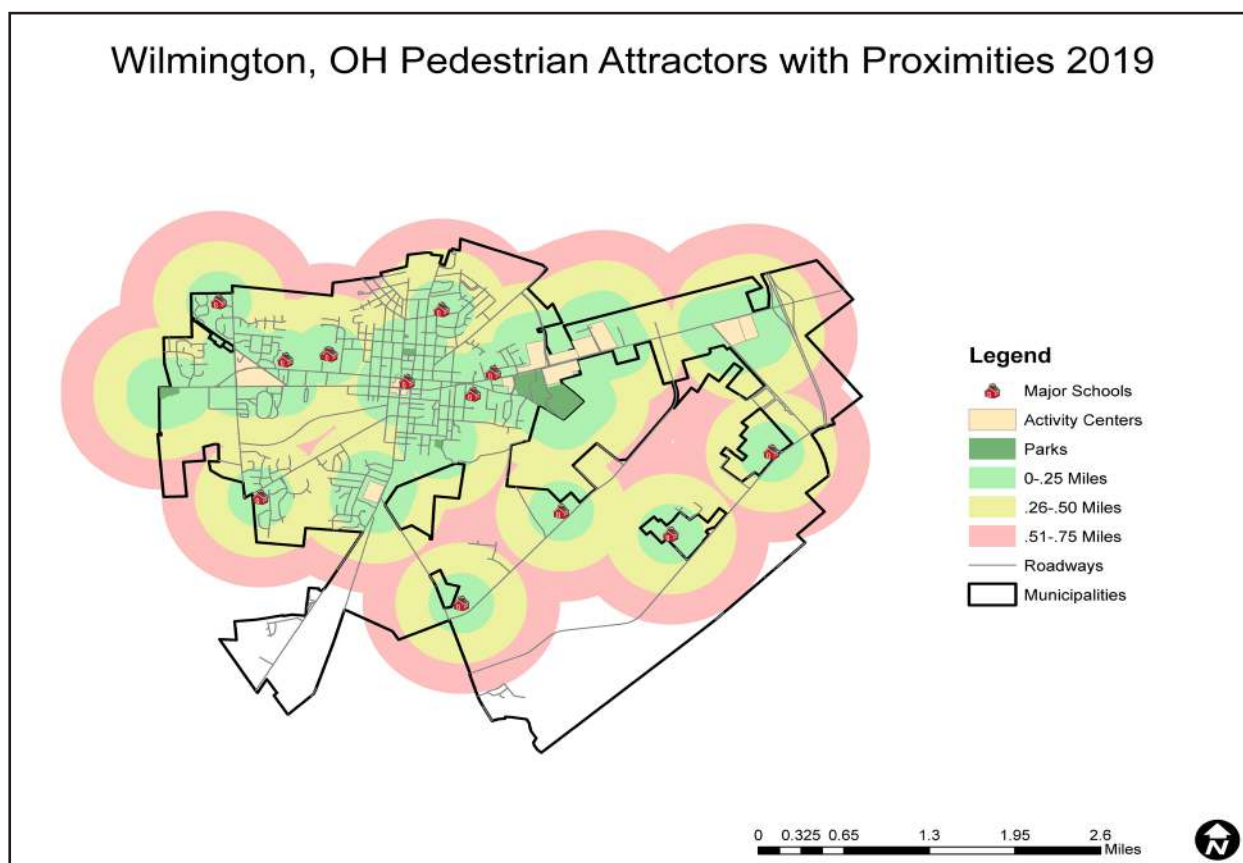   3. Pedestrian Crashes
C. Social Factors
    1. Residents Below Poverty Level
    2. Population Aged 65+
    3. Population Aged 14-

Pedestrian Attractors

People have destinations that they travel to throughout the day. These places include work, school, stores, parks, and other locations that fulfill their needs. This fulfillment is what brings people to these places and motivates them to make the trips. Oftentimes, when people live close to these places, they take advantage of the sidewalk system and walk there as opposed to driving. This can generate high pedestrian traffic, which is why these destinations were considered pedestrian attractors. The specific attractors that were the center of focus in this analysis were schools, activity centers, and parks. Schools were included because they are important institutions that educate and enrich our children. Activity centers are high-density areas of commerce, institutions, and recreation, consisting of areas such as downtown and shopping centers. They were included because they are common places for people to engage with the community, shop, and interact. Lastly, parks were included because they are common places for people to relax and enjoy their free time, especially children. For this section, missing sidewalk segments were analyzed and prioritized based on their proximity to these pedestrian attractors.

Proximity Maps

The following maps display the major schools, parks, and activity centers in both Wilmington and Blanchester, along with their proximities to different roadways. These three types of attractors were used in this analysis because they are common destinations for pedestrians and can generate pedestrian traffic. The reason for the use of different proximities from these attractors is to get an idea of which roadways are nearest and furthest from them. Streets that have adequate sidewalks and have nearby or direct access to these attractors can promote walkability throughout the community.

Wilmington, OH Pedestrian Attractors with Proximities 2019

Legend

- Major Schools
- Activity Centers
- Parks
- 0-.25 Miles
- .26-.50 Miles
- .51-.75 Miles
- Roadways
- Municipalities

0   0.325 0.65   1.3   1.95   2.6
                                                Miles

Blanchester, OH Pedestrian Attractors with Proximities 2019

Legend
- Major Schools
- Activity Centers
- Parks
- 0-.25 Miles
- .26-.50 Miles
- .51-.75 Miles
- Roadways
- Municipalities

Prioritization Maps

The next set of maps display the specific missing sidewalks that are being addressed and their prioritization based on their proximity to the pedestrian attractors. Missing sidewalk segments located within the 0-.25 mile buffer were prioritized first because they are closest to and have direct access to the attractors. Missing segments located within the .26-.50 mile buffer were prioritized second because they are the second closest segments and have the second best access to the attractors. Lastly, missing segments located within the .51-.75 mile buffer were prioritized third and last because they are furthest from the attractors and have the worst access to the them.

Wilmington, OH Priority Sidewalks by Pedestrian Attractors 2019

Legend
- Major Schools
- Activity Centers
- Parks
- First Priority
- Second Priority
- Third Priority
- Roadways
- Municipalities

0   0.325 0.65   1.3   1.95   2.6
Miles

Blanchester, OH Priority Sidewalks by Pedestrian Attractors 2019

Legend
- Major Schools
- Activity Centers
- Parks
- First Priority
- Second Priority
- Third Priority
- Roadways
- Municipalities

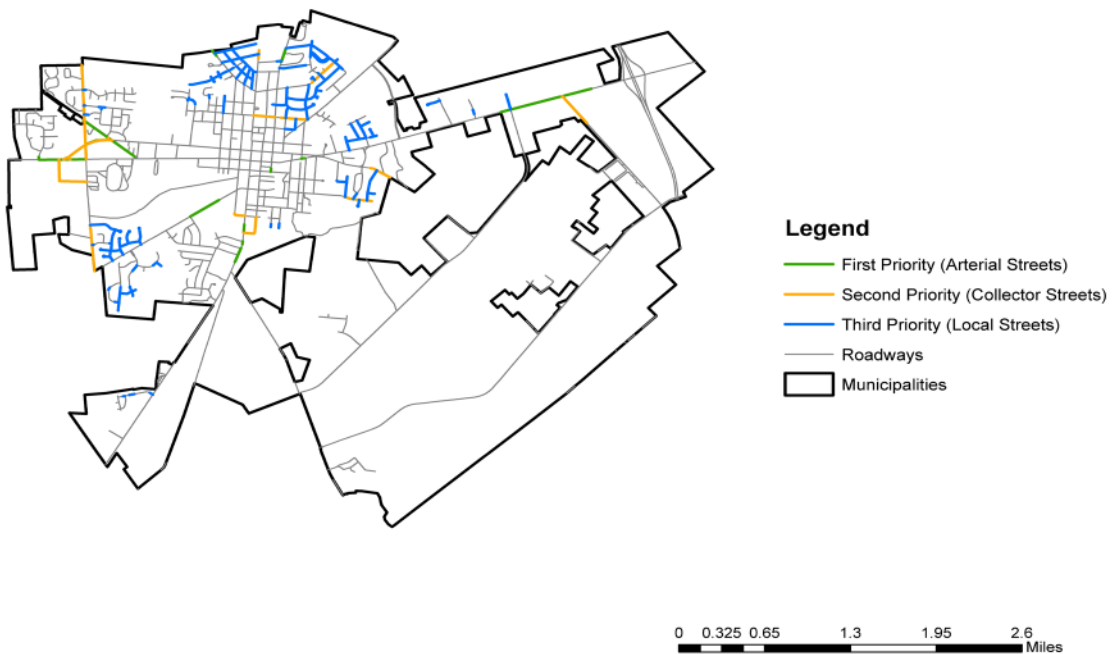0   0.2   0.4   0.8   1.2   1.6
Miles

8

Mobility

When prioritizing missing sidewalk segments, it is important to consider the condition of the streets they are located on and the experience of the pedestrian when walking them. That is why for this section, street hierarchy, sidewalk presence, and proximity to pedestrian-involved crashes were the main focuses. With street hierarchy, missing sidewalk segments were prioritized based on the classification of the type of street they were located on. With sidewalk presence, missing sidewalk segments were prioritized based on whether the streets they were located on were missing sidewalks on both sides or just one side. Lastly, with pedestrian-involved crashes, missing sidewalk segments were prioritized based on their proximity to those crashes. All of these issues address the importance of pedestrian safety and providing space for pedestrians to walk.

Street Hierarchy

Roads can be categorized into a street hierarchy in which they are ordered by their connectivity and flow of traffic. Roads that have the highest flow of traffic and run through cities/towns, connecting them to freeways and other cities/towns, are called "arterials." Roads that connect arterials with local streets and have a medium flow of traffic are called "collectors." Lastly, roads that connect with collectors and have the lowest flow of traffic, often within residential areas, are called "local" roads. All of these types of roads, however, are similar in that pedestrians use them constantly. For this sub-section, missing sidewalks were prioritized based on the function of the street they are on. Missing sidewalks located on arterials were prioritized first because they generate more traffic, which can be hazardous for pedestrians. Missing sidewalks located on collectors were prioritized second because although they do not have the most traffic, they can still cause some safety issues for pedestrians. Lastly, missing sidewalks located on local streets were prioritized third because they generate very little traffic, thus having less impact on pedestrians' safety.

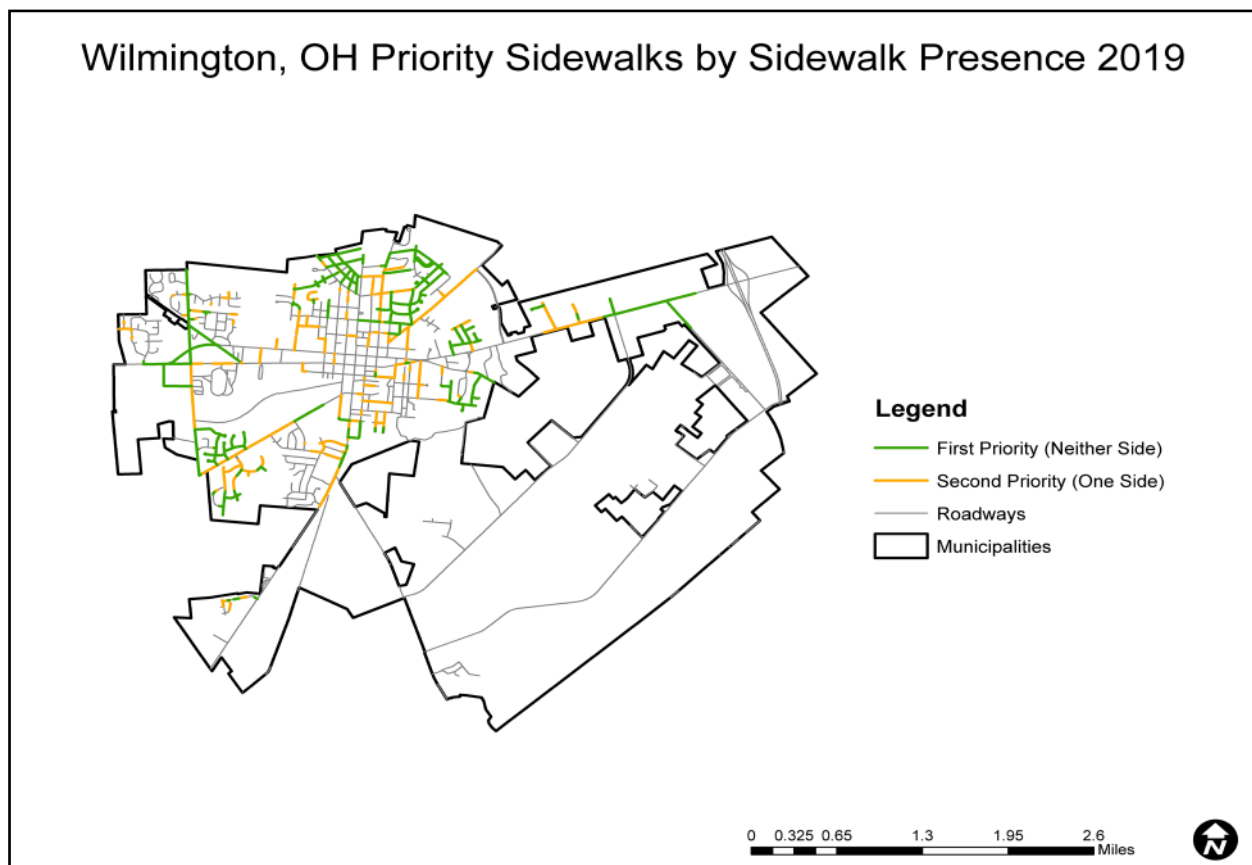Wilmington, OH Priority Sidewalks by Street Hierarchy 2019

Legend
First Priority (Arterial Streets)
Second Priority (Collector Streets)
Third Priority (Local Streets)
Roadways
Municipalities

0   0.325 0.65   1.3   1.95   2.6
                                                Miles

Blanchester, OH Priority Sidewalks by Street Hierarchy 2019

Legend
First Priority (Arterial Streets)
Second Priority (Collector Streets)
Third Priority (Local Streets)
Roadways
Municipalities

0   0.2   0.4   0.8   1.2   1.6
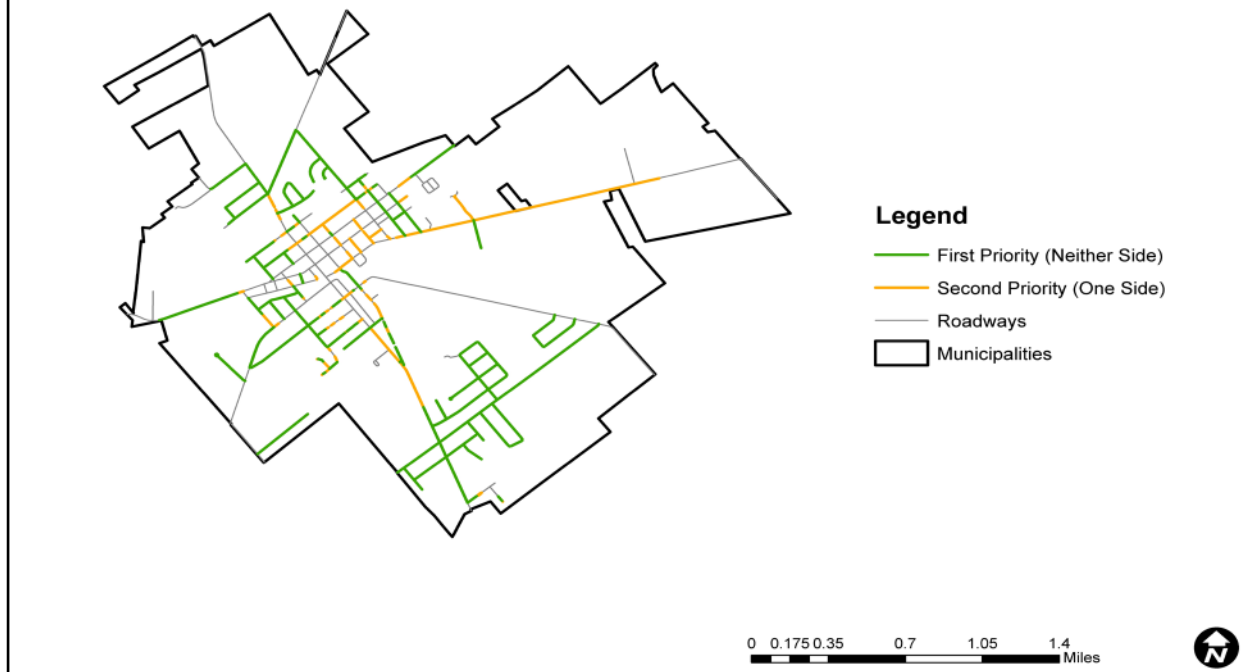   Miles

Sidewalk Presence

Sidewalks play an important role in promoting walkability and pedestrian safety. Not only that, but they also promote physical activity and a healthier alternative than driving a car to where one needs to go. For a community to be walkable, it needs adequate sidewalks that are accessible throughout the area, which is why their presence in Wilmington and Blanchester was analyzed. For this analysis, it was important to observe which street segments within the observation areas had sidewalks on both sides, only one side, and lacked sidewalks completely. Streets that completely lacked sidewalks, or had no sidewalks on either side, were prioritized first as they lack pedestrian safety and make it more difficult for pedestrians to get from place to place. Streets that had a sidewalk on only one side were prioritized second because they only offer minimal pedestrian safety and walkability.

Wilmington, OH Priority Sidewalks by Sidewalk Presence 2019

Blanchester, OH Priority Sidewalks by Sidewalk Presence 2019

Legend
— First Priority (Neither Side)
— Second Priority (One Side)
— Roadways
▭ Municipalities

0 0.175 0.35   0.7   1.05   1.4
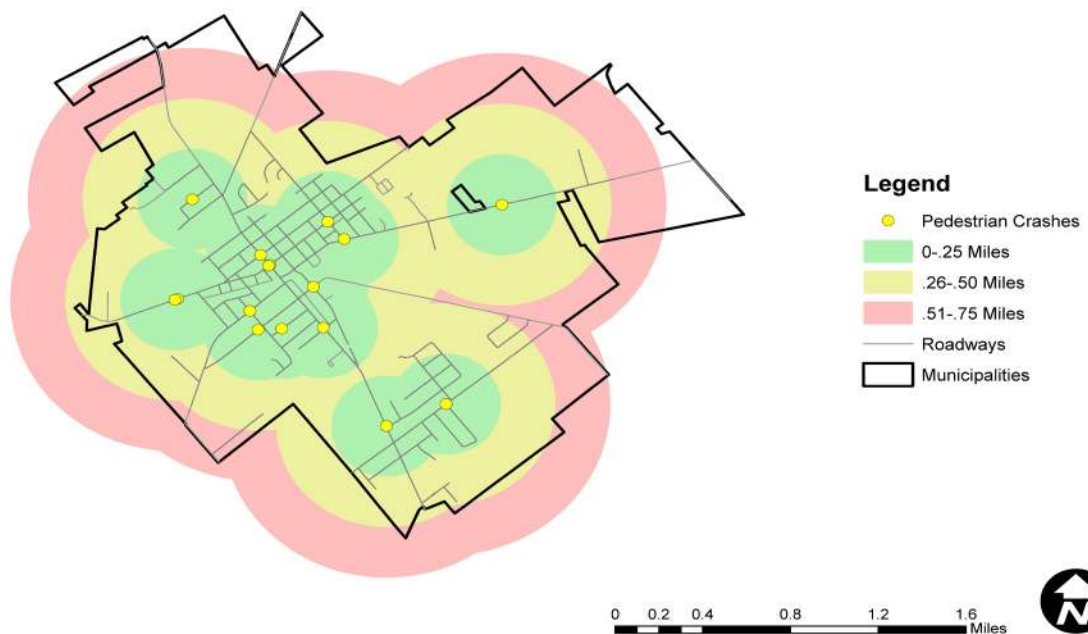   Miles

Pedestrian Crashes

Pedestrian-involved crashes and accidents happen frequently throughout the country. They can be caused by distraction, alcohol and drug intoxication, improper lighting and signage, and countless other reasons. This is a major issue for pedestrians that puts their safety at risk, which is why it is being addressed in this plan. For this subsection, GCAT data from 2008-2018 was used to locate where pedestrian crashes have occurred in Wilmington and Blanchester. The missing sidewalk segments were prioritized based on their proximity to the crash locations because the streets closest to the crashes may have improper signage, lighting, or may overall be unsafe for pedestrians. Missing sidewalks located within the green (0-.25 Mile) buffer were prioritized first, those within the orange (.26-.50 Mile) buffer were prioritized second, and those within the blue (.51-.75 Mile) buffer were prioritized third. Missing sidewalks located outside of the .51-.75 mile buffer were prioritized fourth and last.
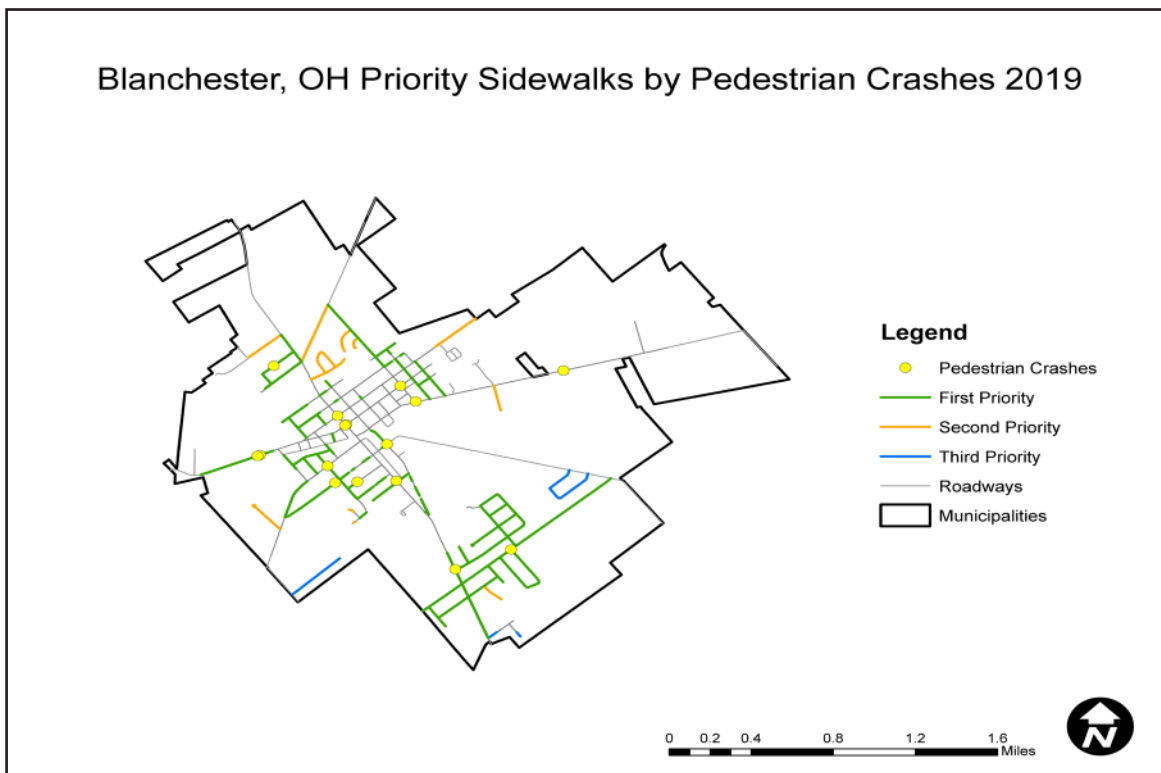
Wilmington, OH Pedestrian Crashes with Proximities 2019

Legend

- ● Pedestrian Crashes
- ▮ 0-.25 Miles
- ▮ .26-.50 Miles
- ▮ .51-.75 Miles
- — Roadways
- ▢ Municipalities

0 0.325 0.65 1.3 1.95 2.6 Miles

Blanchester, OH Pedestrian Crashes with Proximities 2019

Legend

- ● Pedestrian Crashes
- ▮ 0-.25 Miles
- ▮ .26-.50 Miles
- ▮ .51-.75 Miles
- — Roadways
- ▢ Municipalities

0 0.2 0.4 0.8 1.2 1.6 Miles

The next set of maps display the specific missing sidewalks that are being addressed and their prioritization based on their proximity to the pedestrian crashes.

Wilmington, OH Priority Sidewalks by Pedestrian Crashes 2019

Legend
- Pedestrian Crashes
- First Priority
- Second Priority
- Third Priority
- Roadways
- Municipalities

0   0.325 0.65   1.3   1.95   2.6
Miles

Blanchester, OH Priority Sidewalks by Pedestrian Crashes 2019

Legend
- Pedestrian Crashes
- First Priority
- Second Priority
- Third Priority
- Roadways
- Municipalities

0   0.2   0.4   0.8   1.2   1.6
Miles
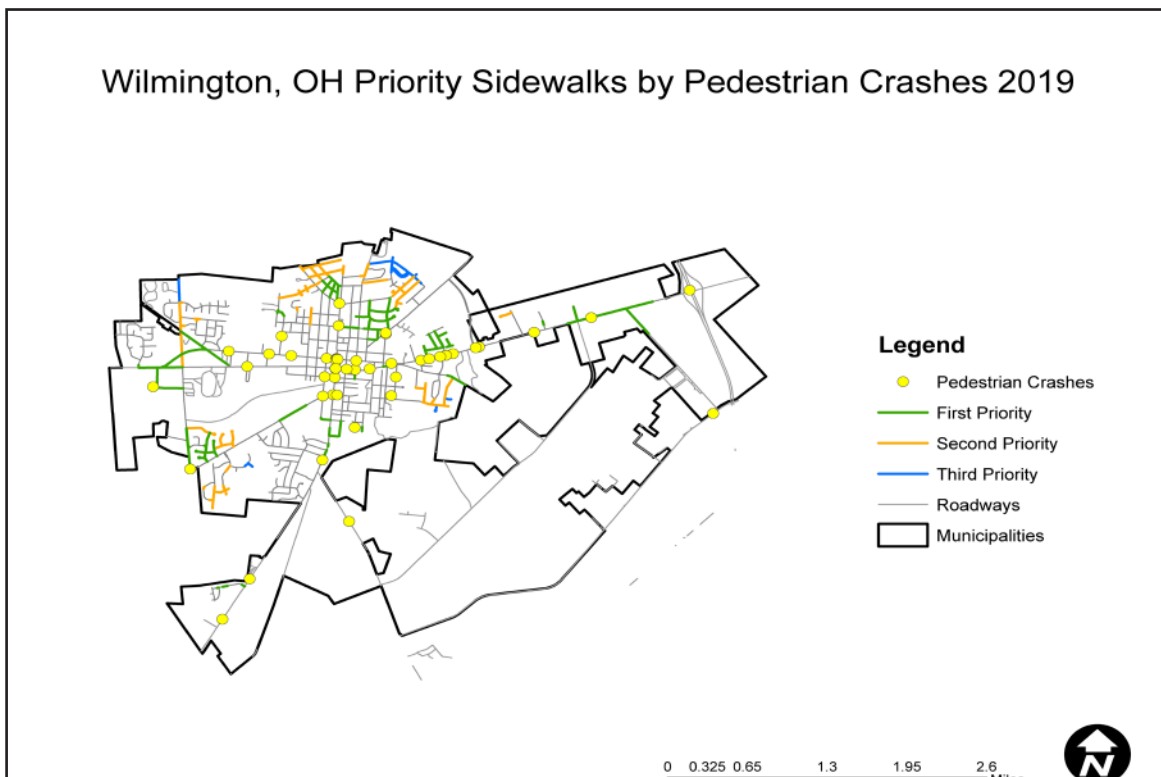
Social Factors

When it comes to sidewalk improvements, there are key social factors that come into place when prioritizing which missing sidewalk segments to address first. It is important to consider groups of people who are less likely to own a car or even drive, which include the following: Residents living below poverty level, residents aged 65 and over, and residents aged 14 and under. Residents living below poverty level are less likely to be able to afford a car, which is why they are more likely to walk where they need to be. Residents aged 65 and over are likely to develop disabilities and incapacities due to their aging, preventing them from operating a vehicle and forcing them to have to use sidewalks. Lastly, residents aged 14 and under are too young to legally drive, which is why they need to be able to use sidewalks to walk from place to place. With all of this in mind, it becomes clear regarding who exactly needs these sidewalks most and how they can be prioritized to accommodate their needs.

Residents Living Below Poverty Level

The first group of people addressed in this section are residents living below poverty level. As previously mentioned, they were included in this plan because they are less likely to afford a car due to their circumstances, making walking one of their only modes of transportation. When evaluating this demographic, it is important to get an idea of where these specific residents live. That is why population density maps were created to show the percent of population within each census block living below poverty level for both Wilmington and Blanchester: (on next page)
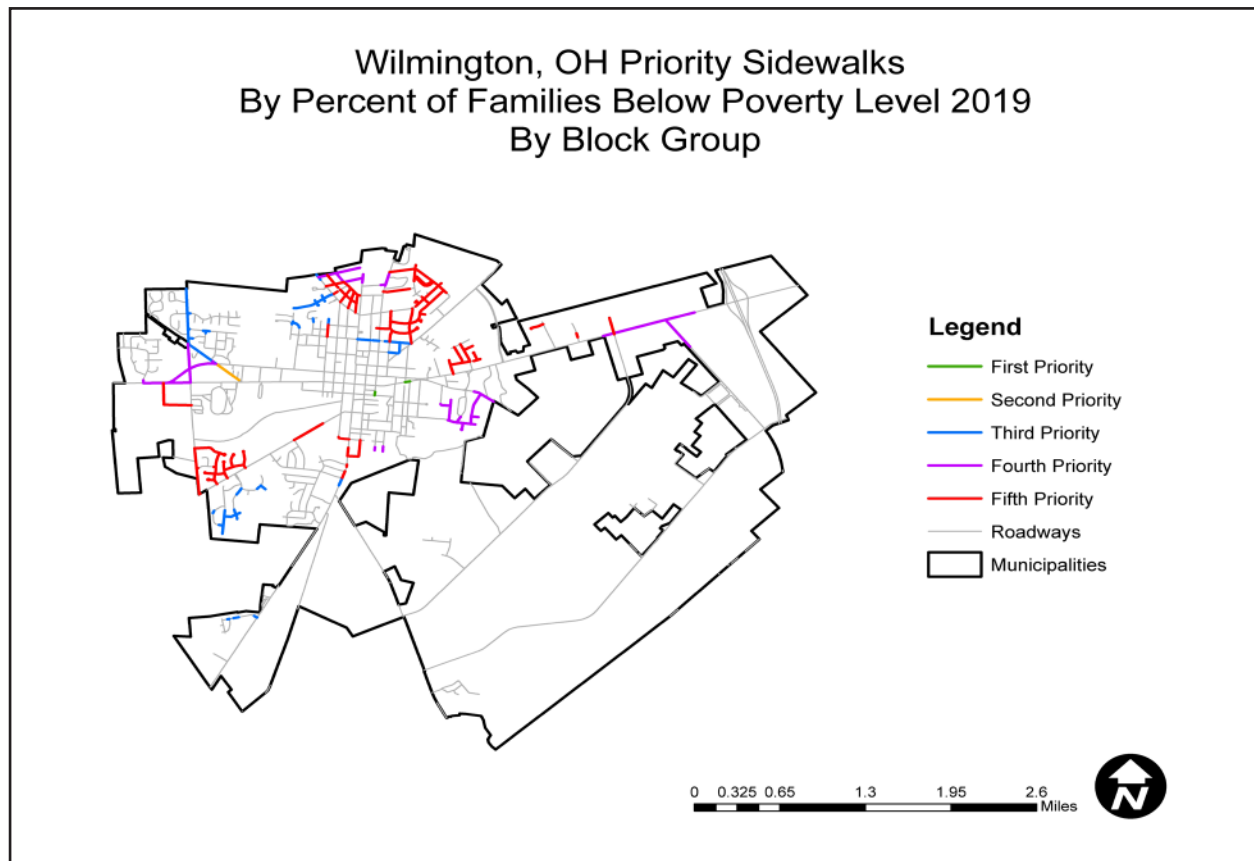
Wilmington, OH
Percent of Families Living Below Poverty Level 2019
By Block Group
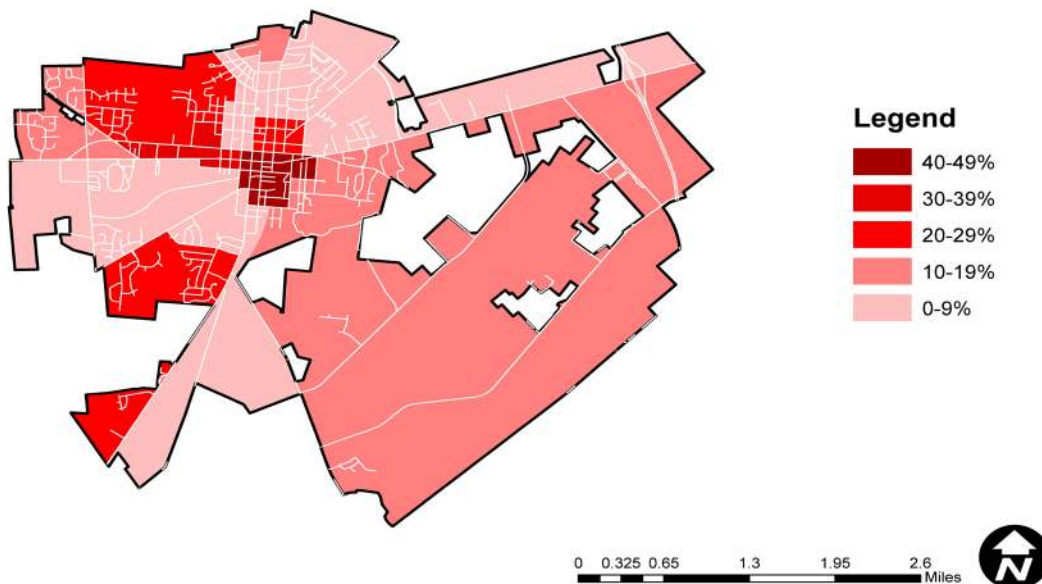
Legend
40-49%
30-39%
20-29%
10-19%
0-9%

Blanchester, OH
Percent of Families Living Below Poverty Level 2019
By Block Group

Legend
40-49%
30-39%
20-29%
10-19%
0-9%
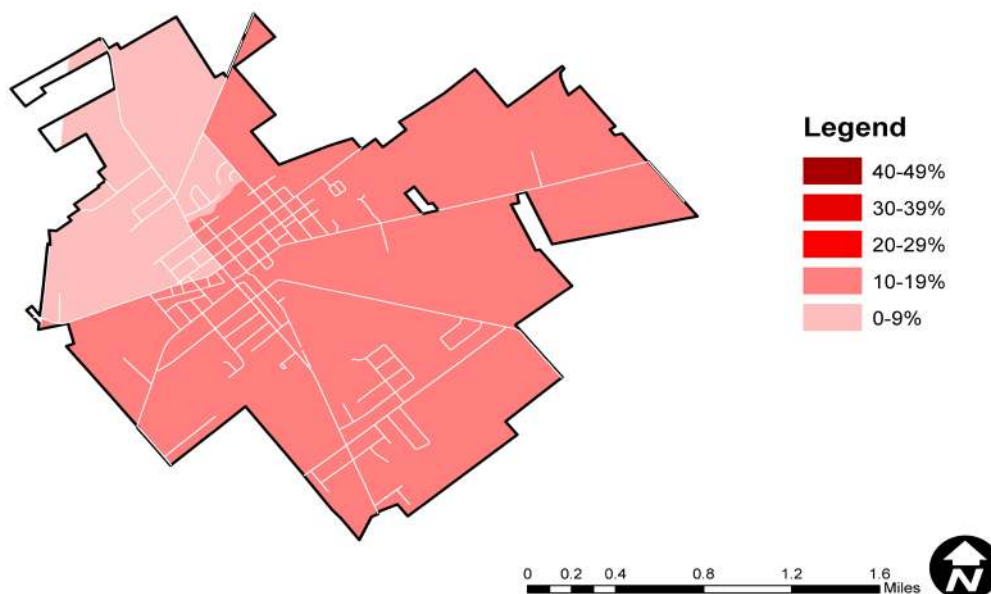
The next step was to highlight the missing sidewalk segments and prioritize them based on the percentage of the block group they're located within. Missing sidewalks that fell within the block groups with the highest percentage were prioritized first, those within the block groups with the second highest percentage were prioritized second, those within the block groups with the third highest percentage were prioritized third, those within the block groups with the fourth highest percentage were prioritized fourth, and those within the block groups with the lowest percentage were prioritized fifth and last.

Wilmington, OH Priority Sidewalks
By Percent of Families Below Poverty Level 2019
By Block Group

Legend
—— First Priority
—— Second Priority
—— Third Priority
—— Fourth Priority
—— Fifth Priority
—— Roadways
☐ Municipalities

0   0.325 0.65   1.3   1.95   2.6
                                              Miles

Blanchester, OH Priority Sidewalks
By Percent of Families Below Poverty Level 2019
By Block Group

Legend

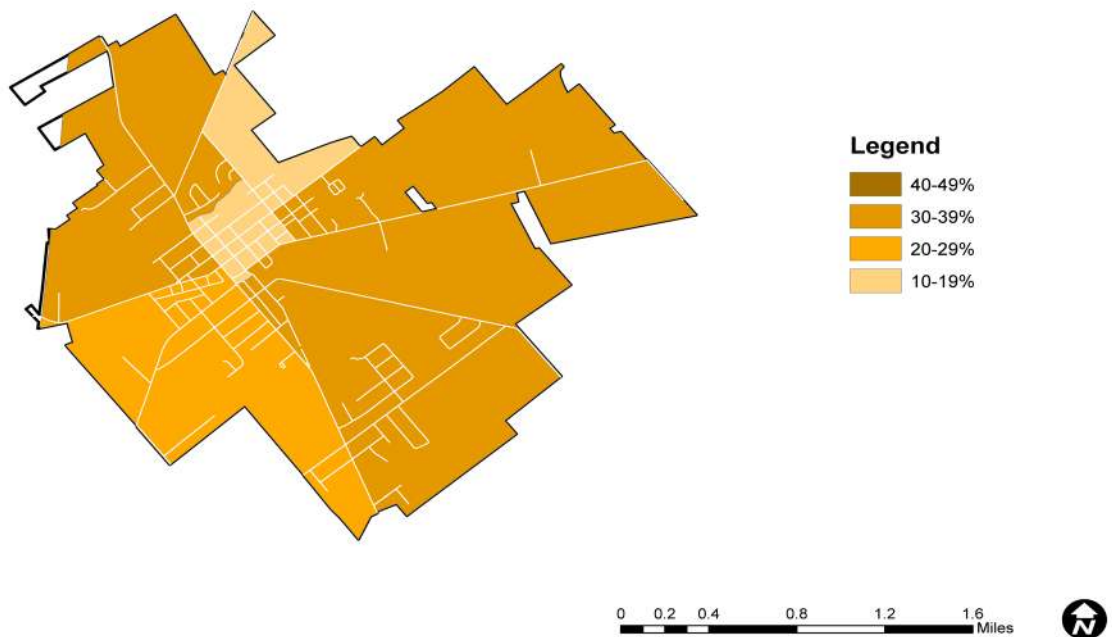First Priority
Second Priority
Roadways
Municipalities
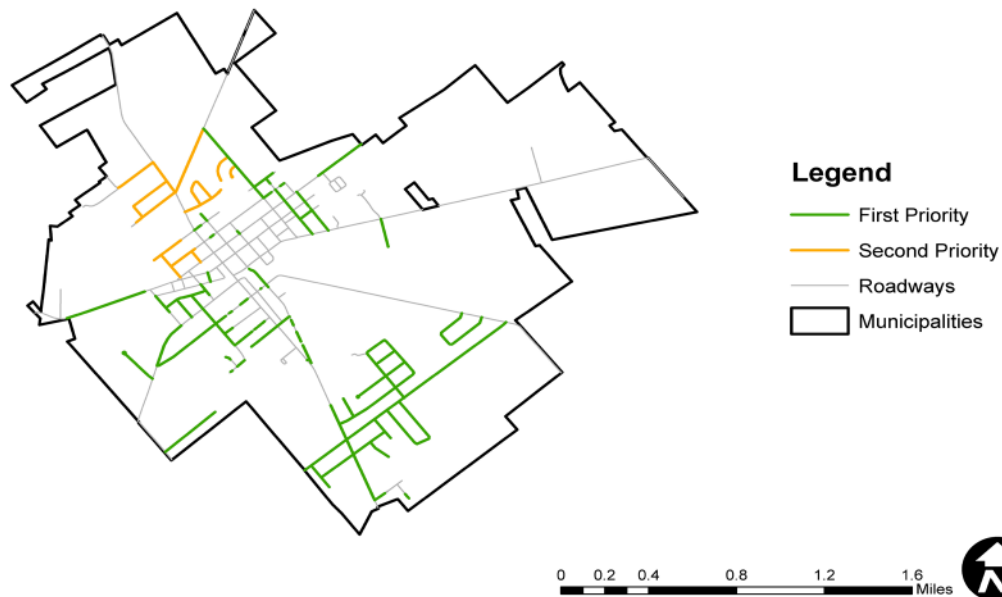
Residents Aged 65 and over

The second group of people addressed in this section were residents aged 65 and over. As previously mentioned, they were included in this plan because they are likely to experience disabilities due to their aging, preventing them from being able to drive a car and forcing them to use sidewalks. When evaluating this demographic, it is important to get an idea of where these specific residents live. That is why population density maps were created to show the percent of population within each census block aged 65 and over for both Wilmington and Blanchester:

Wilmington, OH Percent of Population Aged 65 and Over By Block Groups 2019

Legend
- 40-49%
- 30-39%
- 20-29%
- 10-19%

0   0.325 0.65   1.3   1.95   2.6
Miles

Blanchester, OH Percent of Population Aged 65 and Over By Block Groups 2019

Legend
- 40-49%
- 30-39%
- 20-29%
- 10-19%

0   0.2   0.4   0.8   1.2   1.6
Miles

The next step was to highlight the missing sidewalk segments and prioritize them based on the percentage of the block group they are located within. Missing sidewalks that fell within the block groups with the highest percentage were prioritized first, those within the block groups with the second highest percentage were prioritized second, those within the block groups with the third highest percentage were prioritized third, and those within the block groups with the fourth highest percentage were prioritized fourth and last.

Wilmington, OH Priority Sidewalks by Population Aged 65+ 2019
(By Block Group)

Legend
— First Priority (40-49%)
— Second Priority (30-39%)
— Third Priority (20-29%)
— Fourth Priority (10-19%)
— Roadways
☐ Municipalities

0   0.325 0.65   1.3   1.95   2.6
                                           Miles

Blanchester, OH Priority Sidewalks by Population Aged 65+ 2019 (By Block Group)

Legend
— First Priority (30-39%)
— Second Priority (20-29%)
— Third Priority (10-19%)
— Roadways
▢ Municipalities
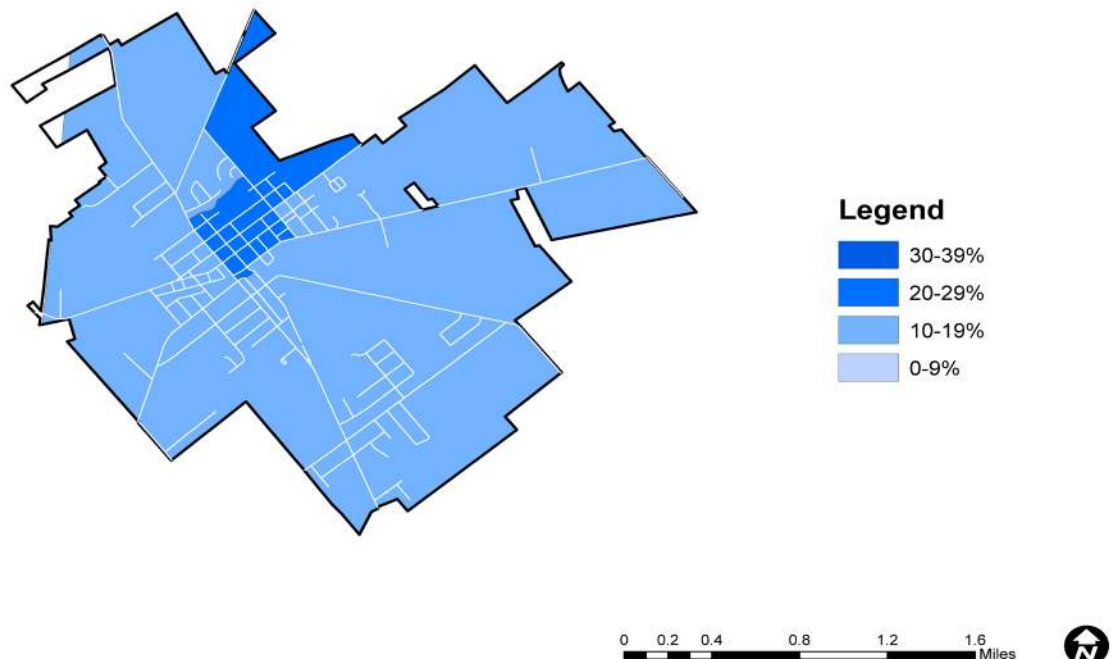
0   0.2   0.4   0.8   1.2   1.6
Miles

Residents Aged 14 and Under

The third and final group of people addressed in this section were residents aged 14 and under. As previously mentioned, they were included in this plan because they are too young to legally drive and must resort to walking. When evaluating this demographic, it is important to get an idea of where these specific residents live. That is why population density maps were created to show the percent of population within each census block aged 14 and under for both Wilmington and Blanchester: (on next page)
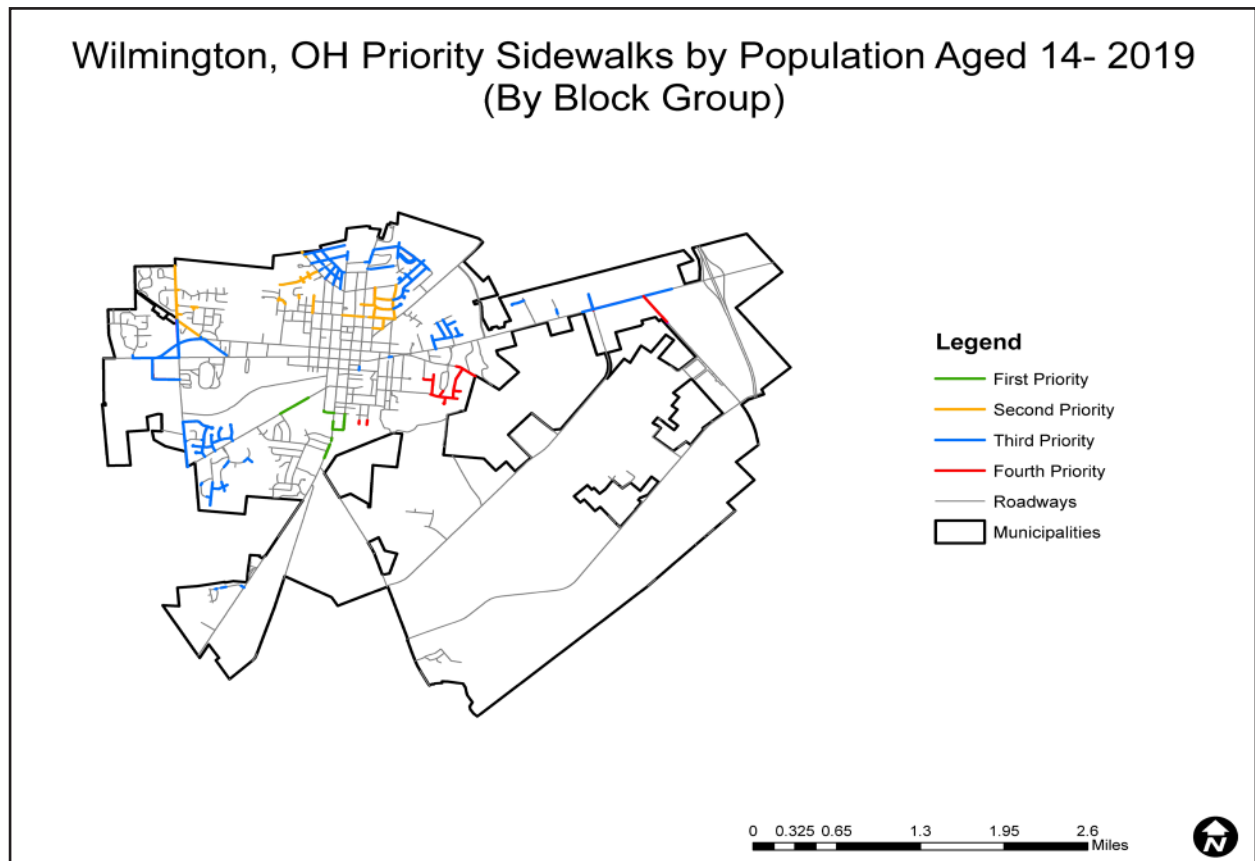
Wilmington, OH Percent of Population Aged 14 and Under
By Block Groups 2019

Legend

30-39%
20-29%
10-19%
0-9%

0   0.325 0.65   1.3   1.95   2.6
                                                    Miles

Blanchester, OH Percent of Population Aged 14 and Under
By Block Groups 2019

Legend

30-39%
20-29%
10-19%
0-9%

0   0.2   0.4   0.8   1.2   1.6
                                                  Miles

The next step was to highlight the missing sidewalk segments and prioritize them based on the percentage of the block group they are located within. Missing sidewalks that fell within the block groups with the highest percentage were prioritized first, those within the block groups with the second highest percentage were prioritized second, those within the block groups with the third highest percentage were prioritized third, and those within the block groups with the fourth highest percentage were prioritized fourth and last.

Wilmington, OH Priority Sidewalks by Population Aged 14- 2019 (By Block Group)

Blanchester, OH Priority Sidewalks by Population Aged 14- 2019
(By Block Group)

Legend
— First Priority
— Second Priority
— Roadways
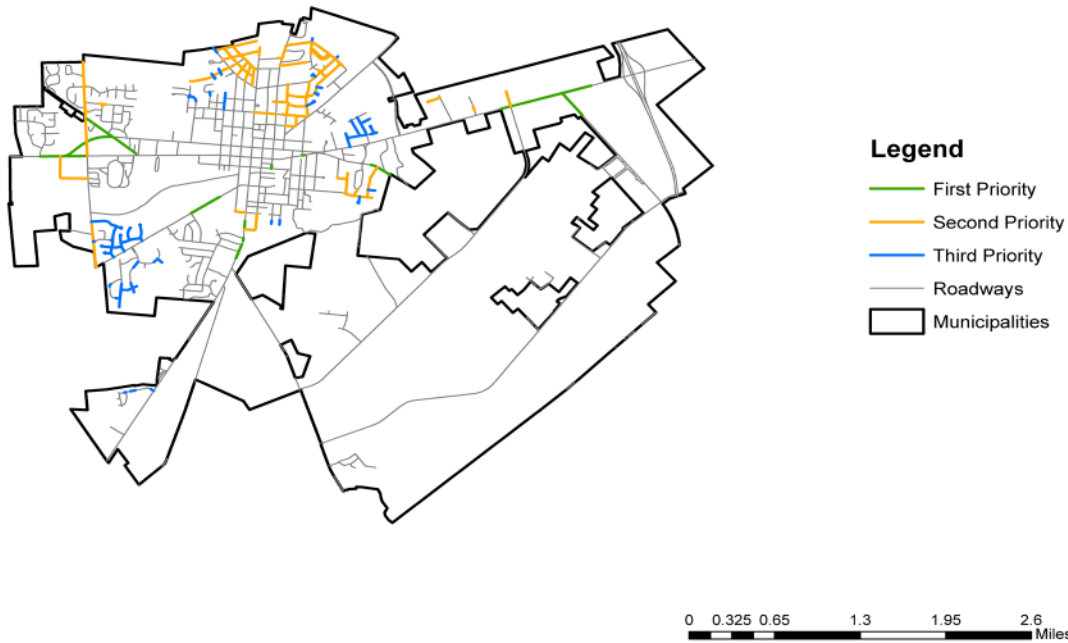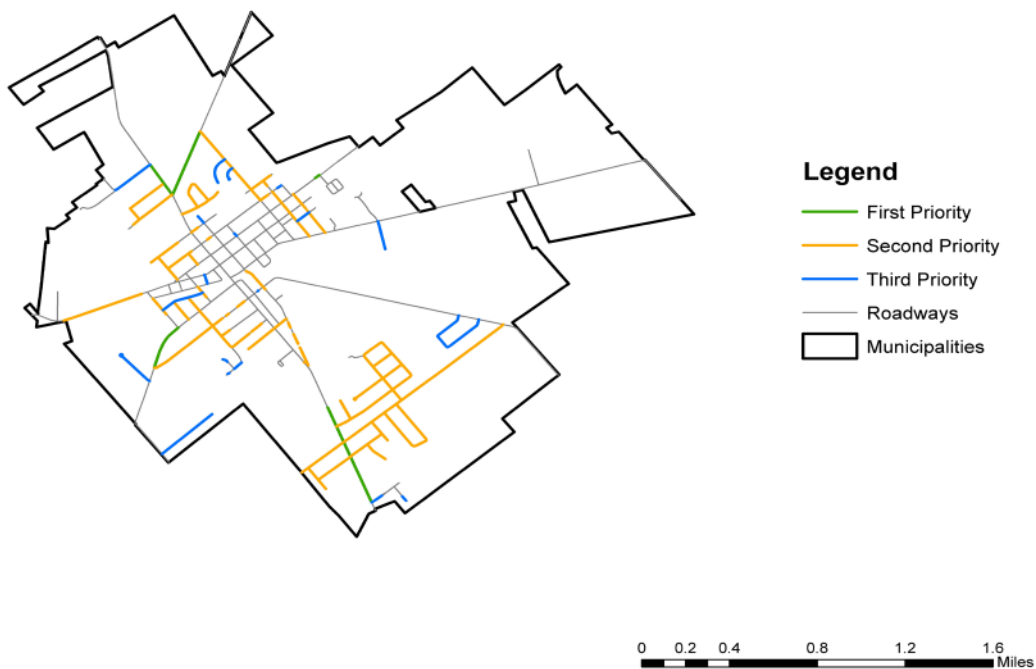☐ Municipalities

0   0.2   0.4   0.8   1.2   1.6
Miles

Final Recommendations/Results

The final step in the process of developing this plan was to create maps that highlight the final recommendations for the final prioritizations. This was executed by looking at all of the maps created for the previous sections and incorporating all of the data together to make informed decisions about the final prioritizations. The best judgment was used to create these final maps in order to produce reasonable and accurate results. Such maps can be found on the next page.

Wilmington, OH Priority Sidewalks - Final Recommendations

Legend
— First Priority
— Second Priority
— Third Priority
— Roadways
☐ Municipalities

0   0.325 0.65   1.3   1.95   2.6
                                              Miles

Blanchester, OH Priority Sidewalks - Final Recommendations

Legend
— First Priority
— Second Priority
— Third Priority
— Roadways
☐ Municipalities

0   0.2   0.4   0.8   1.2   1.6
                                            Miles

In addition, it is important to show where future trails will be added. The only city that has a plan for future trails is Wilmington, which is why only their proposed trails are being shown. The reason they are being shown is because it is important to see where pedestrians are still able to access different areas of the community with and without sidewalks.

Wilmington, OH Priority Sidewalks - Final Recommendations With Existing and Future Trails

Legend
First Priority
Second Priority
Third Priority
Existing Trails
Davids Dr Trail
Davids to Rombach Trail
Fife to Davids Dr Trail
Lytle Creek Connector
Future Unnamed Trail
Wilmington to Clarksville Trail
Clinton-Fayette Friendship Trail
Fisher Plains Trail
Roadways
Municipalities

As the map shows, the existing trail network in Wilmington only allows people access to the downtown area and parts of the western and northern sides of the city. On the other hand, with the proposed trails, people will be able to access areas throughout most of the city's limits and even communities outside of Wilmington, such as Clarksville.

Notable Examples

Rombach Ave. and Progress Way - Wilmington

This image displays Rombach Ave/US-22 facing east next to BP, with Progress Way and Walmart in the distance. The plan for this street is to possibly extend existing sidewalk segments on the north side of Rombach Ave to the intersection of Rombach Ave and Progress Way, and then extend it down Progress Way, stopping at the intersection next to the Game Stop and Subway. It would also be beneficial to add a walking and biking trail that follows the same path as the proposed sidewalk, only it would be on the right side of Rombach Ave facing east.

S Lincoln St. - Wilmington

     This image displays S Lincoln St. facing north at the intersection of S Lincoln St. and E Sugartree St. The plan is to add sidewalks on both sides of S Lincoln St., extending from this intersection to the intersection at E Main St. This would be a great way to clean up the declining side of the street on the right and promote pedestrian safety on the left.

S South St. - Wilmington

    This image displays S South St./OH-134 facing north at the intersection of S South St. and Randolph St. The plan is to extend sidewalks on both sides of S South St. to the northernmost entrance of King Commons so that pedestrians can have safe and efficient access to it.

E Center St. - Blanchester

This image displays E Center St. facing southwest next to Blanchester Mobile Home Park. The plan is to extend the sidewalk on the south side of E Center St. to the entrance of the mobile home park so that they have access to it.

S Broadway St. - Blanchester

      This image displays S Broadway St. facing north, with Veterans Memorial Park on the other side of the tree line to the right. The plan is to extend the sidewalk that ends at Veterans Memorial Park to the residential areas on the right along S Broadway St. so that residents can have access to it and be able to walk to the park and to downtown.