Homewood Mobility Plan

City of Pittsburgh,
Department of Mobility and Infrastructure

LETTER FROM THE DIRECTOR

Hello Neighbors:

It is my great pleasure to present to you the Homewood Mobility Plan. This plan is the first step towards achieving the mobility goals outlined in the 2020 Homewood Comprehensive Community Plan (HCCP). The HCCP established a vision for the future where "Homewood will be an African-American cultural destination where people choose to live, work, worship, and visit. It will be safe, green, healthy, and innovative. It will have quality schools. It will be a place that protects long-term and low-income residents and equips them to be engaged and informed." The Department of Mobility and Infrastructure (DOMI) is proud to support this vision.

DOMI's mission is to provide the physical mobility to support the economic and social mobility of the residents of Pittsburgh. By increasing access to healthy and affordable transportation options like walking, biking, and public transit, the Mobility Plan is helping Homewood strive towards its goals. The HCCP recommends an increase in the availability of accessible sidewalks, access to high-quality transit, and the creation of safe routes to school for the neighborhood. Through in-depth analysis of existing conditions including a neighborhood-wide sidewalk and curb ramp inventory, traffic crash analysis, and an exploration of public transit and bicycle facilities, the community in conjunction with DOMI identified and prioritized the specific projects to bring the 2020 HCCP to life.

The Mobility Plan is a short-term, safety, equity, and implementation-focused plan. This Study used several virtual and in-person community engagement activities and techniques to involve community members throughout the planning process. The recommendations included in this plan have been designed to encourage and support multimodal travel and to improve neighborhood connectivity and circulation in a way that will help meet the needs of the residents as well as the businesses that have helped define this neighborhood. I want to thank all of our working group partners, neighborhood advisory organizations, and residents who have contributed their time and ideas to this plan.

Sincerely,

Kimberly Lucas, Acting Director
Department of Mobility and Infrastructure

This study is by the Redevelopment Authority of Allegheny County in partnership with the Allegheny County Health Department.

Prepared For:
City of Pittsburgh
414 Grant Street
Pittsburgh, PA 15219

Prepared By:
Kittelson & Associates, Inc.
1635 Market Street, Suite 1600
Philadelphia, PA 19103
(267) 551-3447

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Department of Mobility and Infrastructure

Kim Lucas, Acting Director

Panini Chowdhury, Principal Planner

Harriet Jackson, SRTS Program Coordinator

Dave Munson, Principal Planner

Allegheny County Economic Development

Ann Ogoreuc, Assistant Director, Mobility and Transportation Initiatives

Anthony Schneider, Planner II - Transportation

Port Authority of Allegheny County

Moira Egler, Transit-Oriented Communities Project Manager

Department of City Planning

Christopher Corbett, Senior Planner

Community Partners

Operation Better Block

Homewood Children's Village

Homewood Carnegie Library

Homewood Community Development Collaborative

Bike PGH

Stakeholder and public meeting participants

Project Consultants

Kittelson & Associates, Inc.

Foursquare

Assedo

Envision Consultants, Ltd.

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STUDY OVERVIEW

Purpose

In 2021, the City of Pittsburgh Department of Mobility and Infrastructure (DOMI) led a planning process to identify mobility improvements needed for automobile, bicycle, pedestrian, and transit accessibility throughout the Homewood neighborhoods.

The Homewood Mobility Plan (the Study) was recommended as a critical next step in the 2020 Homewood Comprehensive Community Plan, which identified goals for creating consistent sidewalks compliant with the Americans with Disabilities Act (ADA), ensuring Homewood residents have access to high-quality transit, and creating safe routes to school. To address these goals, the Study provides an in-depth analysis of existing conditions, including a neighborhood-wide sidewalk and ramp inventory, crash analysis, in-person neighborhood safety audits of three corridors, transit service and ridership, and bicycle facilities. The findings from this analysis are used to identify locations and types of mobility improvements and to prioritize those improvements based on community goals and input. The planning process was designed to be bottom-up and community-driven to ensure the recommendations best meet the needs of the neighborhood. Once implemented, the improvements identified in the study project will improve safety and provide critical connections to important local destinations throughout Homewood and improved access to public transit.

Study Area Context

The Homewood neighborhood is a predominately residential neighborhood with a majority African-American population located in the easternmost part of Pittsburgh. According to the 2020 Homewood Comprehensive Community Plan, the neighborhood population is nearly 6,500 people; there are 2,684 housing units in the neighborhood with the vast majority, 1,500, being single-family homes. The study area is bound by the elevated MLK East Busway to the South, 5th Avenue to the West, Lincoln Avenue/Apple Street/Upland Street to the North, and Brushton Avenue/Oakwood Street to the East. A map of the study area is shown in Figure 1.

Most streets in Homewood are local roads with lane widths around ten to eleven feet, relatively low traffic volumes, two-way vehicular traffic, and parallel parking and sidewalks on both sides of the street. Higher volume arterials and major collector streets that provide connectivity throughout Homewood and into adjacent neighborhoods include Frankstown Avenue, Bennett Street, Homewood Avenue, 5th Avenue, Dallas Avenue, Braddock Avenue, Brushton Avenue, Upland Street, and Oakwood Street.

Homewood is served by on-street Port Authority of Allegheny County (PAAC) bus routes on Hamilton Avenue (Route 71D), Frankstown Avenue (Routes 77 and 86), Homewood Avenue/Upland Street (Route 74), 5th Avenue (Route P10), and Lincoln Avenue (Routes 82 and P17). All of the routes serving the neighborhood connect to downtown with the exception of Route 74 which is a crosstown route connecting to Squirrel Hill. The on-street bus routes also provide connections to East Liberty, Lincoln, the Hill District, Shadyside, Oakland, and the Strip District.

The southern portion of Homewood also has access to Homewood Station and Wilkinsburg Station on the elevated MLK East Busway, providing frequent service to Downtown Pittsburgh. There are Healthy Ride bikeshare locations on Bennet Street in front of the Homewood-Brushton YMCA, at Hamilton Avenue and North Dallas Avenue, and at the Homewood Station. The Pittsburgh Bike Map developed by BikePGH characterizes Homewood Avenue, Upland Street, Lincoln Avenue, Portions of Frankstown Avenue/Bennett Street, Hamilton Avenue, Dallas Avenue, Braddock Avenue, and Oakwood Street as on-street bike routes. These routes are not designated by the City and there are no dedicated bicycle facilities in the neighborhood.

Homewood has several local destinations as shown in Figure 1 that act as activity generators in the community, including churches, schools, a library, and community centers. A few locations that were noted during the safety analysis (Appendix A) include Homewood Station, the Frankstown Business Corridor between Lang Avenue and Sterrett Street, Faison Elementary School, and the Homewood Library.

Figure 1: Study Area Map

Previous Plan Summary

Several completed plans and studies were reviewed to provide an understanding of the study area and to help identify locations for the neighborhood safety audits. Citywide plans were reviewed, as well as plans developed specifically for Homewood. A list of the plans reviewed, and their findings are summarized below.

Previous/Ongoing Plans and Future Improvements Review:

- Homewood Comprehensive Plan (2020).
- Homewood Station Transit Oriented Development Study (2015).
- Pittsburgh Hill/Homewood Research on Neighborhood Change and Health (PHRESH) study (2020).
- Pittsburgh Bike (+) Plan (2020).
- Safe Routes to School Infrastructure Plan for Faison Elementary School (2020).
- Pedestrian Safety Action Plan (2020).

Homewood Comprehensive Plan (2020)

The Homewood Community Development Collaborative in collaboration with the Department of City Planning (DCP) and the Urban Redevelopment Authority (URA) developed the Homewood Comprehensive Plan to develop planning goals and initiatives, build off previous planning efforts, establish a common neighborhood vision, serve the community and its future decisions, and engage residents on the overall community needs. The core team developed a vision statement that echoes these goals and initiatives, and establishes the neighborhood and teams' overall priorities: "Homewood will be an African- American cultural destination where people choose to live, work, worship, and visit. It will be safe, green, healthy, and innovative. It will have quality schools. It will be a place that protects long-term and low-income residents and equips them to be engaged and informed." The comprehensive plan establishes feasible project types and improvements for the community that will allow Homewood to create and guide change at a physical project level and will serve as a guide to policy going forward. The plan proposes 22 goals over four key themes: Community, Development, Mobility, and Infrastructure. Strategies are recommended to complete each goal.

The Mobility Chapter of the Homewood Comprehensive Plan identifies current existing conditions on the state of multimodal features, sets general goals and strategies, and develops public engagement strategies to begin to fill the gaps in mobility. Recommendations and goals from the Mobility Chapter are as follows:

- Create an ADA-compliant network of sidewalks focusing on areas with high traffic, transit, schools, senior housing, and other community assets.
- Ensure that residents have access to high-quality transit starting with improved transit stops and new traffic calming techniques.
- Create safe routes and walking conditions to schools by installing new signage, lighting, and implementing Play Street programming.

Homewood Station Transit Oriented Development Study (2015)

Through the Urban Redevelopment Authority of Pittsburgh (URA) a study examining the feasibility and potential of the Homewood Station area was completed, using the statewide Transit Revitalization Investment District (TRID) tool. They study concluded that the Homewood Transit Oriented Development (TOD) area was recommended for a high-level approach focusing on setting up the community for future investment opportunities. The recommended public plan set up a phased approach to meet the needs heard during the community outreach process and develops a plan to address the current issues. The study called for eight major recommendations; Improve Homewood Station along the East Busway and the surrounding area; stimulate and help bring in new businesses; add lighting, trees, and street furniture; improve pedestrian routes related to nearby schools; build new housing; improve and expand nearby parks; address flooding; and improve bicycle routes and parking throughout the neighborhood.

Pittsburgh Hill/Homewood Research On Neighborhood Change And Health (PHRESH) Study (2020)

The Pittsburgh Hill/Homewood Research on Neighborhood Change and Health (PHRESH) Study is an ongoing project that identifies built and social environmental changes and their impacts on residents within the study areas. This ongoing study is being undertaken by the RAND corporation, which conducts research to inform current public policy. The PHRESH study monitors diet and exercise habits, use of parks and neighborhood green spaces, transportation access, neighborhood safety and condition, physical and mental health, sleep quality, COVID-19 pandemic-related outcomes, and distress and employment. Since 2011 PHRESH has been collecting this data along with other infographic data to identify trends, challenges, issues, and opportunities within the communities. Major takeaways in Homewood are that as of 2018 only 47% of residents feel safe walking at night, 12% feel their neighborhood is safe, 78% of blocks in Homewood are vacant or empty, 44% of sidewalks are classifies as in poor condition, and due to COVID-19, 61% of residents are concerned about being able to pay for essentials.

Pittsburgh Bike (+) Plan (2020)

Stemming from the City of Pittsburgh original 1999 Bike Plan, the Pittsburgh Bike (+) Plan was developed to identify specific policies and improvements that can continue to meet and support the city's goals for mobility. The plan features the city's five main mobility goals:

1. No one dies traveling on city streets.
2. All households can access fresh fruits and vegetables within 20 minutes travel of home, without requiring a private automobile.
3. Walking and bicycling are the most joyful mode for short distance trips.
4. No household must spend more than 45% of household income for basic housing and mobility.
5. Pittsburgh streets and right of ways reflect the values of our community.

The plan categorizes all streets in Pittsburgh according to the Bicycle Level of Traffic Stress (LTS) methodology; Homewood's interior roadway network is classified as low-stress, whereas the major roadways and border roadway are high-stress streets that the average bicyclist would likely avoid. The plan notes crash clusters within Homewood South and Homewood West along these high-stress roadways. The plan proposes a future east-west bike corridor along Bennett Street/ Frankstown Avenue, new bike lanes along Homewood Avenue and Bennett Street, and a shared use path on the Brilliant Branch, as shown in Figure 2.

Mode Emphasis Interactive Database (2021)

The City of Pittsburgh developed the Online Mode Emphasis Interactive Database to allow residents and users to see the planned bike network from the Pittsburgh Bike (+) Plan, street typology, and mode emphasis throughout the city as part of the ongoing Vision Zero focused Complete Street Design Guideline. The database highlights proposed and in-development facilities, existing facilities, and gaps within the network. Challenges, considerations, and alternatives are listed for each proposed facility. Homewood has a proposed priority network along Hamilton Avenue, a city proposed bike trail on the Brilliant Branch, and TD proposed network along Homewood Avenue, as shown in Figure 3.

Pedestrian Safety Action Plan (2020)

DOMI, the Federal Highway Administration (FHWA), and a collaboration of stakeholders developed the Pedestrian Safety Action Plan to identify and address pedestrian safety issues, while monitoring the performance overtime. The plan identified corridors and areas experiencing high crash areas along with analyzing historic crash data, neighborhood connectivity, access to transit, lack of pedestrian infrastructure and equity concerns to identify potential high-risk areas. Within Homewood there were three high-risk corridors identified: Frankstown Avenue, 5th Avenue/Washington Boulevard, and Hamilton Avenue. High-risk corridors were defined throughout the plan as areas more likely to have future crashes, due to combinations of demographic and physical conditions along the corridors. 5th Avenue/Washington Boulevard and Braddock Avenue were also identified as Need for Network Corridors. Need for Network corridors were defined as high-speed, high-usage roadways that lack infrastructure to allow for pedestrians to remain safe when using the facilities. Various streets in Homewood were identified as Business Districts with Frequent Transit Services including Hamilton Avenue, Frankstown Avenue, Kelly Street, Homewood Avenue, and Bennett Street.

Safe Routes To School Infrastructure Plan For Faison Elementary School (2020)

As part of the Safe Routes to School Grants, the plan provided short/mid/long term improvements to enhance the access and connectivity to Faison Elementary School. The Faison Elementary School Plan identified five major walking routes that were approved by Faison administrators for students to walk to and from school each day, as shown in Figure 4. The following routes were identified by colors for students to follow:

1. Pink Route: N. Murtland St to Hamilton Ave to Tioga Street.
2. Orange Route: Hamilton to Tioga.
3. Red Route: Brushton Ave to Frankstown to N. Braddock Ave to Susquehanna Street to N. Richland Street to Tioga Street.
4. Green Route: Susquehanna Street to N. Richland Street to Tioga Street.
5. Black Route: Frankstown Ave to N. Braddock Ave to Susquehanna to N. Richland Street to Tioga Street.

Short-term recommendations were proposed along some of the routes emphasizing new signage, using yield channelizing devices, restriping crosswalks, vegetation trimming, sidewalk and ADA curb ramp improvements. Mid-range planned interventions are chokers (paint and bollard) at cross streets to reduce instances of wrong way travel on Tioga Street, new locations for school zone signs, and no parking zones along the roadway. Long-term recommendations consist of ADA curb ramps, updated signal timing, pedestrian friendly signals, and high-visibility piano key-style crosswalks on N. Braddock Ave and Tioga Street.

Figure 2: Bike (+) Plan Recommendations for Homewood

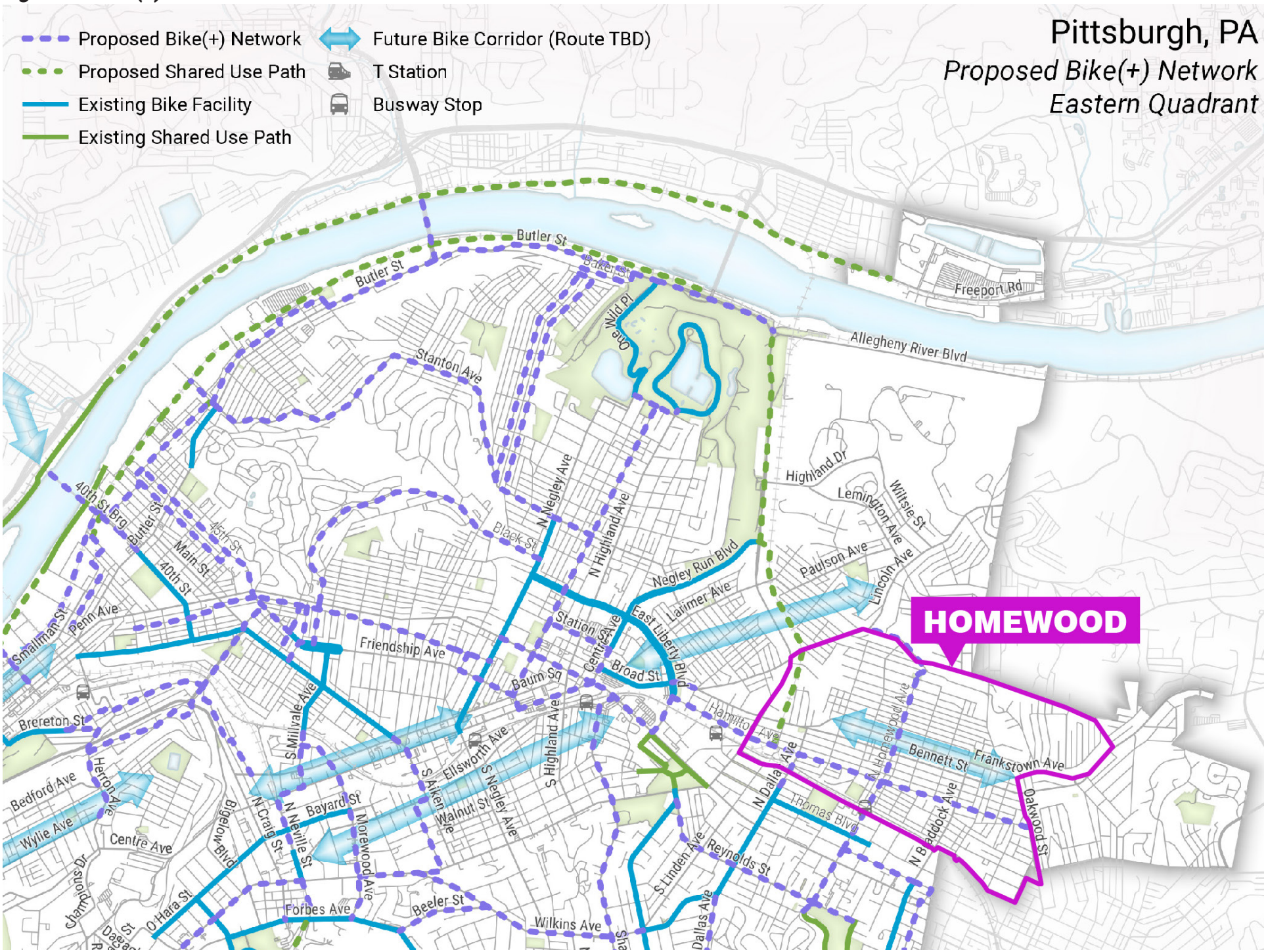


Figure 3: Proposed Bicycle Facilities from the Mode Emphasis Interactive Database

Figure 4: SRTS Final Faison Map

* Due to circumstances beyond our control, some Safe Places may change or be removed from the list as a safe place. Please contact Pittsburgh Faison School with questions about the listed Safe Places.

PUBLIC ENGAGEMENT

Engagement Activities

The Homewood Mobility Plan used several community engagement activities and techniques to involve community members throughout the planning process. These activities were focused on hearing from a diversity of users, understanding the issues and opportunities throughout the study area, and soliciting input and feedback on the identification and evaluation of proposed improvements. Due to the ever-changing COVID-19 landscape, the project used a combination of project-specific virtual meetings and online/social media outreach with in-person engagement at general neighborhood meetings. The following initiatives and activities were performed in order to aide and engage community members across different platforms:

Project-Specific Meetings:

- Neighborhood Safety Audits (in person) - April 14th, 2021.
- Homewood Focus group meeting (virtual) - May 18th, 2021.
- Public Meeting 1(virtual) – June 21st, 2021.
- Public Meeting 2 (virtual) – December 7th, 2021.

General Neighborhood Meetings:

- Homewood Community Development Collaborative Monthly Meeting (in person) - June 15th, 2021.
- Operation Better Block (OBB) cluster meeting (virtual) - July 28th, 2021.
- OBB 50-year celebration (in person) - July 31st, 2021.
- OBB cluster meeting (virtual) - August 13th, 2021.
- Homewood community Health & Wellness summit (in person) - August 14th, 2021.
- State Rep. Gainey's Back to School Giveaway event - August 18th, 2021.

In-person and Virtual Project Advertisements:

- Meetings and activism promoted on Next Door-OCA, Official City Facebook & Twitter accounts, and Allegheny County Economic Development Department accounts.
- Neighborhood postcard mailers to 1,100 addresses along the major corridors of the neighborhood.
- Physical distribution of 500 postcards to community groups, neighborhood destinations, and at events.
- Postcard distribution at Carnegie Library of Pittsburgh-Homewood.
- Paid advertisement in the Homewood Community Health & Wellness Summit program.

Online Community Survey:

- $150 gift card incentives for survey respondents.

The following organizations were partnered with in order to increase and engage relevant community organizations.

- Operation Better Block
- Homewood Children's Village
- YMCA
- YWCA (Homewood-Brushton)
- Homewood Carnegie Library
- Dana's Bakery
- Showcase BBQ
- Community College of Allegheny County - Homewood-Brushton Center
- Pittsburgh Westinghouse High School
- Pittsburgh Faison Elementary School
- Pittsburgh Crescent Early Childhood
- University of Pittsburgh
- Community Engagement Center
- Homewood Concerned Citizens Council
- Homewood AME Zion Church
- Baptist Temple Church
- Bible Center Church Office
- Carrone Baptist Church
- Bethesda Community Church, PCUSA
- Homewood Church of Christ
- St James Baptist Church
- The Church of the Holy Cross Episcopal
- Rapha Ministries Inc
- Christ Missionary Baptist Church
- Sanctuary of Praise
- Nazarene Baptist Church
- Good Samaritan Lighthouse
- Christ Temple Apostolic Church

Engage PGH

A project website for the Homewood Mobility Plan was housed on the Engage PGH site, the City of Pittsburgh's online platform for community engagement. The Engage PGH page for the Study provided general information including the project purpose, timeline, goals, and contact information. Other project information shared on the Engage PGH page include slides from the first and second virtual public meetings in June and December 2021, a toolkit of potential mobility improvements, and a draft of the Final Plan. The Engage PGH website was available the full duration of the project.

The Engage PGH page was also used to solicit community feedback through an interactive comment map where participants could note their mobility concerns and suggest locations for improvements. Respondents were asked to share their demographic information, address, and personal information for the chance to win a $150 gift card in a raffle drawing. Figure 5 illustrates the demographic makeup of the 26 respondents to the survey who provided this information (29 of the 55 respondents did not include the requested demographic information).

The draft of the Final Plan was posted to the Engage PGH page on December 7,

2021, and public comments on the draft were accepted until January 7, 2022. 13 comments were received, and respondents scored their favorability of the plan as 4 out of 5. Comments on the draft were incorporated into the Final Plan.

Summary of Public Feedback

The Study received several forms of public feedback across the different engagement activities. This public feedback included comments received on the study website by means of the interactive comment map which can be found in Figure 6. Comments were also collected through the project website throughout the entirety of the study. Feedback received consisted of the following:

- Corridors identified by community for improvements:
  - Homewood Avenue (Hamilton Avenue to Fletcher Way).
  - Bennett Street (Homewood Avenue to Oakwood Street).
  - Lang Avenue (M.L.K. Jr East Busway to Bennett Street).
  - Dallas Avenue (Frankstown Avenue to Thomas Boulevard).
- Corridors identified by community for traffic calming and safety issues:
  - Homewood Avenue (Hamilton Avenue to Fletcher Way).
  - Dallas Avenue (Frankstown Avenue to Thomas Boulevard).
  - Kelly Street.
- Corridors identified as neighborways:
  - Homewood Avenue.
  - Kelly Street.
- Common transportation issues identified by the community included:
  - Broken or poor condition sidewalk facilities.
  - Lack of pedestrian amenities or connections to other major facilities in the area.
  - Need for traffic safety improvements.
  - Need for traffic calming elements.
  - Lack of signing or roadway markings.
  - Need for Bus station improvements.
  - Need for stormwater infrastructure improvements.
  - Need for implementation strategies.
  - Need to safely connect surrounding neighborhoods and slow traffic as it approaches Homewood.

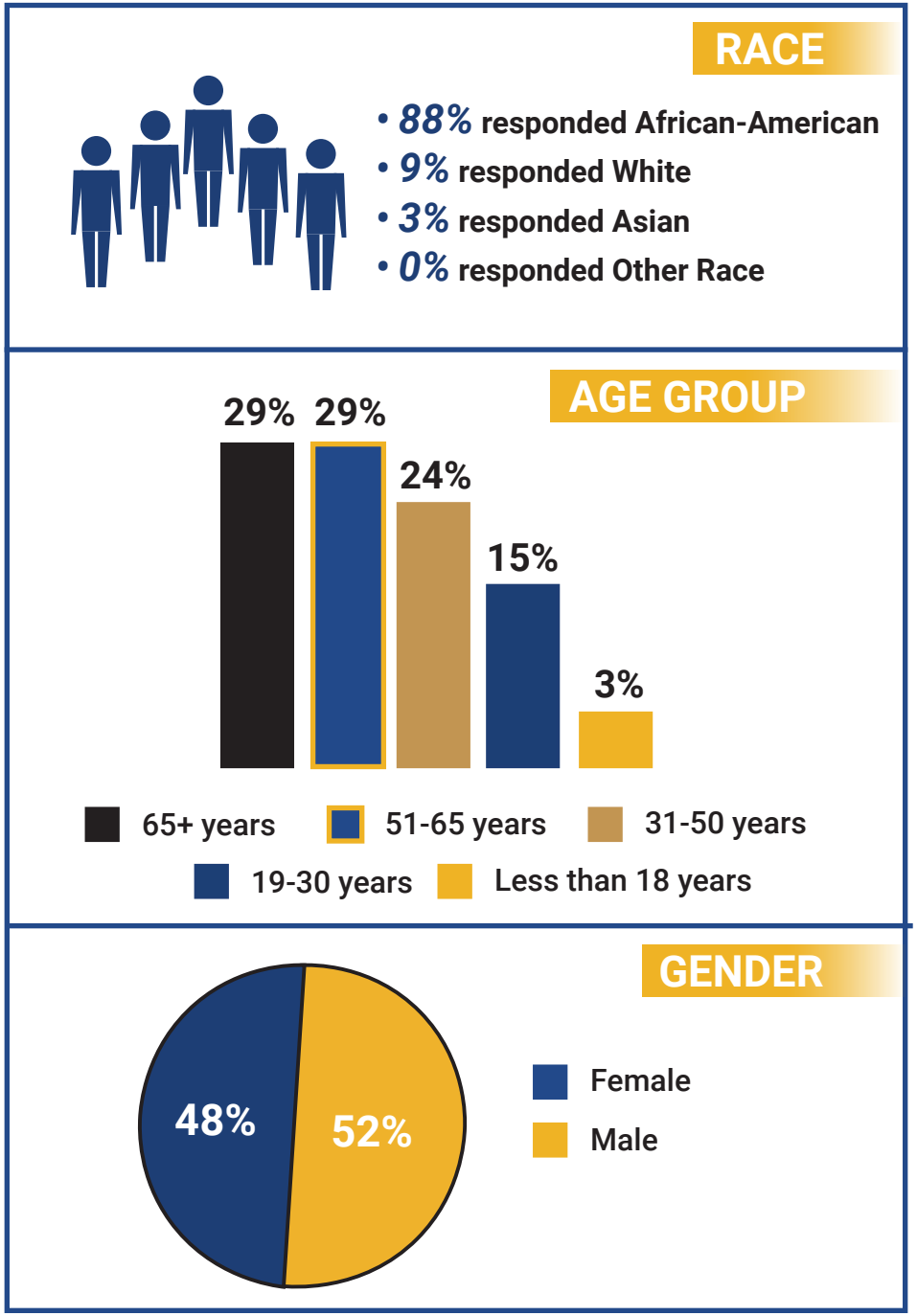


Figure 5: Demographic Survey[1]

[1]*The demographics of the respondents do not represent the demographics of the neighborhood.*

FIgure 6: Interactive Study Map

EXISTING CONDITIONS

Road Network

Most streets in Homewood are local roads with lane widths around ten to eleven feet , relatively low traffic volumes, two-way vehicular traffic, and parallel parking and sidewalks on both sides of the street. Figure 7 identifies the roadway classification within Homewood. State roads under PennDOT control include 5th Avenue/Washington Boulevard, Bennett Street, Dallas Avenue, Blackadore Avenue, and Frankstown Avenue east of Standard Avenue. Higher volume arterials and major collector streets that provide connectivity throughout Homewood and into adjacent neighborhoods include Frankstown Avenue, Bennett Street, Homewood Avenue, 5th Avenue, Dallas Avenue, Braddock Avenue, Brushton Avenue, Upland Street, and Oakwood Street. Throughout most of the neighborhood, the posted speed limit is 25 miles per hour (on arterials, collectors, and some local streets) except for 5th Avenue/ Washington Boulevard where the posted speed limit is 35 miles per hour. Within school zones, the posted speed limit is 15 miles per hour during school hours.

Sidewalk and Crosswalks

A comprehensive sidewalk and crosswalk inventory was completed for the project using pathVu's mobile technology, pathMet (Figure 8). A technician surveyed all of the sidewalks and crosswalks in Homewood using the pathMet device, which measures tripping hazards, roughness, running slope, cross slope, and width. Each ten-foot sidewalk segment was then assigned an aggregate condition score from "Very Poor" to "Good" that is based on the data collected. This information was mapped to determine gaps in the sidewalk network and analyze areas with heavy concentrations of poor and very poor condition. Sidewalk areas with heavy vegetation overgrowth for which data could not be collected were also mapped.

Figure 9 shows the existing 45 miles of pedestrian facilities throughout Homewood. A five-foot sidewalk is present along major arterial and collector roadways with varying conditions across the study area. Gaps in the sidewalk network are typically located along narrow alleys that serve the back side of residential blocks and provide garage access. Sidewalks are also missing in the northeast corner of the neighborhood above Frankstown Avenue.

Figure 9 shows the existing 45 miles of pedestrian facilities throughout Homewood. A five-foot sidewalk is present along major arterial and collector roadways with varying conditions across the study area. Gaps in the sidewalk

Figure 8: pathMET Tool

network are typically located along narrow alleys that serve the back side of residential blocks and provide garage access. Sidewalks are also missing in the northeast corner of the neighborhood above Frankstown Avenue.

Figures 10 and 11 show the sidewalk conditions in Homewood determined by pathVu's analysis. Figure 10 (see on page 25) shows examples within Homewood of each of the varying sidewalk conditions that are mapped in Figure 11. PathVu calculated sidewalk condition based on four characteristics: level, slope, width, and roughness of sidewalks. These categories were scored into four sidewalk condition categories: good, fair, poor, very poor. The analysis determined that seventy-nine percent (79%) of Homewood's sidewalks are in "Good" condition, eight percent (8%) are in "Fair" condition, while the other thirteen percent (13%) are in varying stages of disrepair and require reconstruction to provide a connected pedestrian network.

Thirteen percent (13%) of Homewood's sidewalks have conditions identified as "Poor", "Fair" 2%, and "Very Poor" 11%, which make up 26,000 linear feet of sidewalks that cause major hindrances to mobility. Clusters of poor and very poor condition are found on a few streets (e.g., Lang Avenue and Collier Street) as shown in Figure 11. Many intersections in Homewood have ADA-accessible ramps at the intersections, even if a sidewalk is currently not present leading to the ramp. In addition, some locations only have a ramp on one side.[1]

[1] *Continued on page 25.*

Figure 7: Roadway Classification and State Roads

Figure 9: Existing Sidewalk Network

Figure 11: Sidewalk Condition

Figure 10: Examples of Sidewalk Condition Categories

An inventory of these ramps was developed identifying conditions of existing ramps and locations within Homewood where these ramps are missing as shown in Figure 12. Ramp and sidewalk accessibility is further impeded by cars parking on the sidewalks, vegetation, and other impediments. This may be a result of residents not being comfortable using the parking lane due to high-speed neighborhood traffic and subsequent clipping of side mirrors.

Public Transit

Bus Routes and Connectivity

The Homewood neighborhood is served by 18 PAAC bus routes, 12 of which operate primarily along the East Busway. Additionally, two join the East Busway at Fifth Avenue (P10 and P17). The primary corridors of Homewood Avenue, Frankstown Avenue and Hamilton Avenue are served by Route 74, Routes 77 and 86, and Route 71D, respectively. All of the routes serving the neighborhood connect to downtown with the exception of Route 74 which is a crosstown route connecting to Squirrel Hill. A map of the bus routes serving the neighborhood are shown in Figure 13.

Longitudinal Employer-Household Dynamic (LEHD) displayed in Figure 14 shows where Homewood residents work. Many Homewood residents work in downtown Pittsburgh, Wilkinsburg, East Liberty, North Oakland, and Monroeville. All of these areas have direct bus connections from the southern portion of the neighborhood, including via East Busway routes to downtown, East Liberty, Wilkinsburg, and Monroeville.

Service Levels

Bus service levels vary throughout the Homewood neighborhood. Figure 15 highlights the weekday peak frequency of all routes serving the neighborhood. Stops with four or more trips per hour – defined by PAAC as "frequent transit[1]" – are highlighted in blue.

With its proximity to the East Busway, the southern end of the neighborhood is well-served by frequent transit. Additionally, service on Hamilton Avenue, Frankstown Avenue, and Lincoln Avenue during peak periods provides frequent service between the neighborhood and downtown. Less-frequent service is provided along Homewood Avenue and Frankstown Avenue east of Oakwood Street in the northeastern portions of the neighborhood.

[1] Information in Public Transit section is from data collected in 2021.
[2] Transit service that serve every fifteen minutes for fifteen hours of the day and every thirty minutes for an additional five hours of the day, every day of the week.

Figure 12: Poor and Very Poor Sidewalk Condition

Figure 13: Bus Routes

Figure 14: Workplace Locations for Homewood Residents and Bus Routes

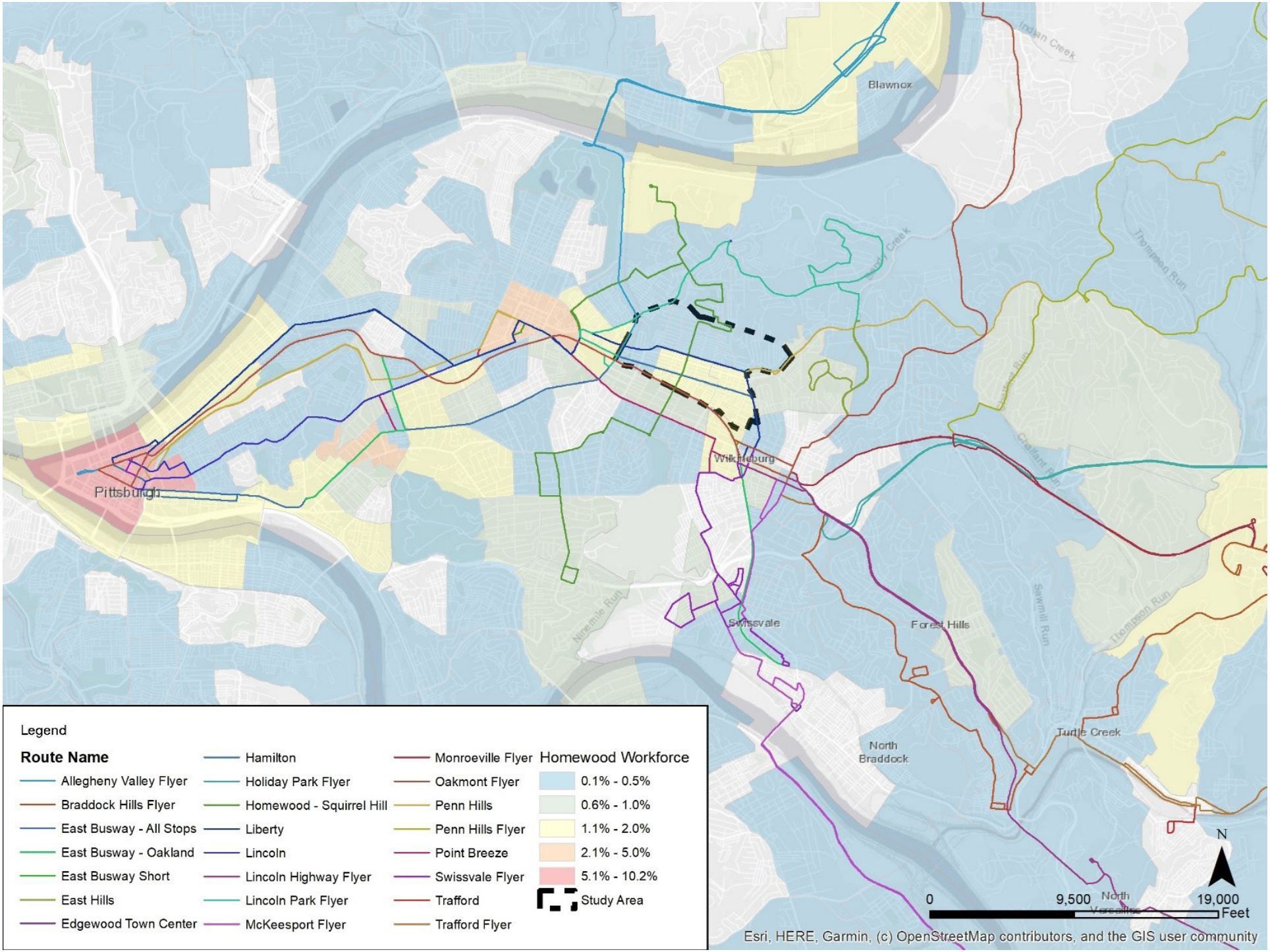
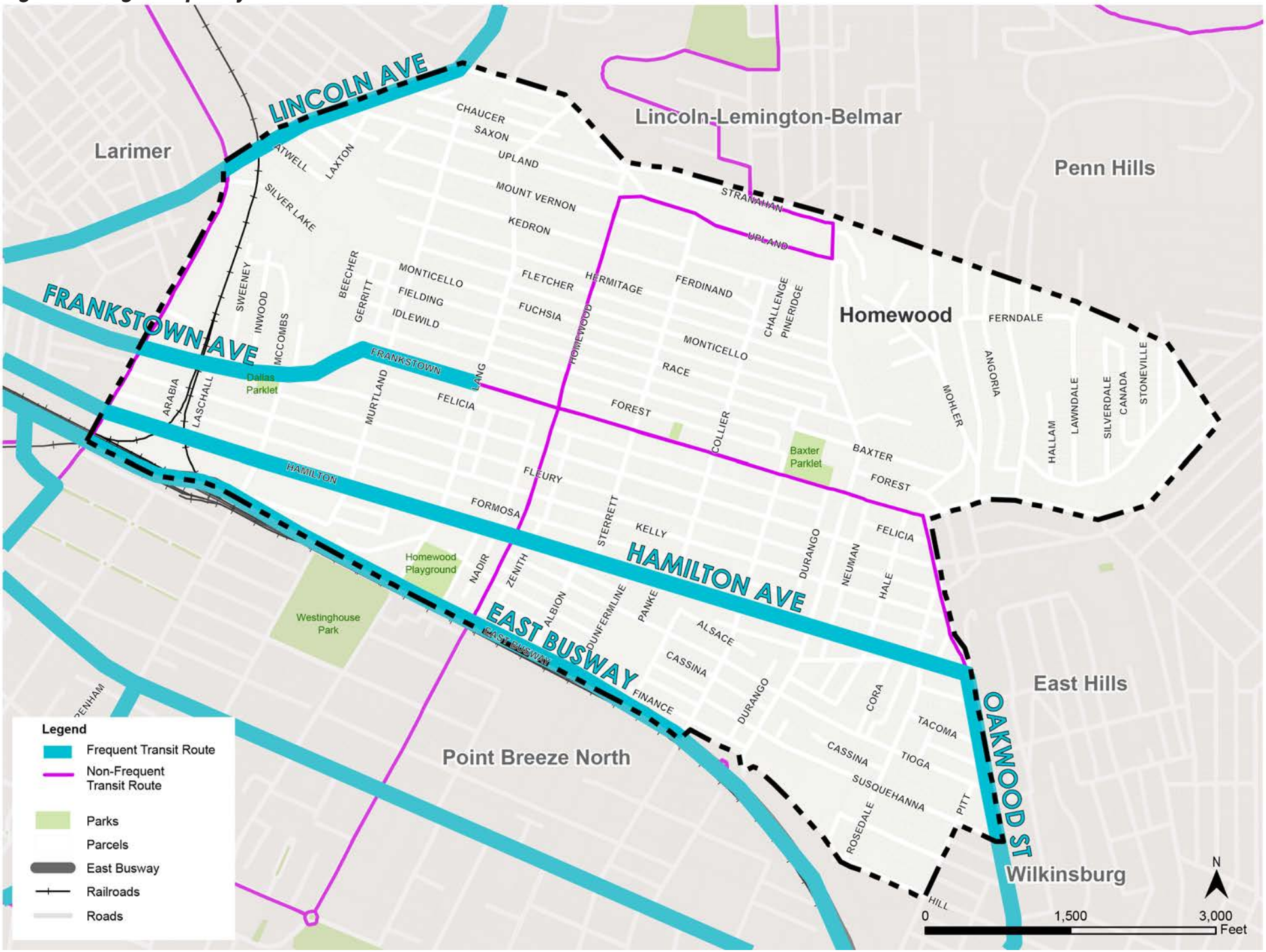


Figure 15: High Frequency Transit



Transit Demand

Transit demand in the PAAC service area was summarized in the market/travel demand analysis of the NEXTransit Study. This study provided an overview of PAAC services, descriptions of major job markets and growth areas, a transit propensity assessment, and a transit gaps analysis. Overall, the Homewood neighborhood was identified as having high transit propensity – meaning residents of the neighborhood are highly likely to use transit to meet their travel needs. Specifically, Homewood West received a transit propensity score of 0.97 out of 1.0, and Homewood South received a transit propensity score of 0.91 out of 1.0. In Homewood West, it was noted that while 41 percent of households do not own a car, missing sidewalks and poor sidewalk conditions make transit difficult to reach for many residents. In Homewood South, it was noted that 42 percent of households do not own a car and many households earn less than $20,000 annually. The East Busway provides premium transit service to this area however access remains a challenge. Regardless, nearly 60 percent of residents in this area use transit as their means of transportation to work.

Coverage

Essentially the entire Homewood neighborhood has access to transit within ¼-mile with the exception of a few residences to the northeast in the Blackadore Avenue area, as pictured in Figure 16. Additionally, the entire neighborhood south of Kedron Street has access to frequent transit, or buses at most every 15 minutes during peak periods.

Ridership

Ridership activity in the neighborhood is concentrated in four areas:

- Homewood Station on the East Busway.
- Along Frankstown Avenue west of Oakwood Street.
- Hamilton Avenue at Homewood Avenue.
- Lincoln Avenue between Fifth Avenue and Apple Street.

Overall, ridership activity is highest at Homewood Station, at the Frankstown Avenue/Homewood Avenue intersection, and at Frankstown Road/Brushton Avenue. Homewood Station and Frankstown Avenue/Homewood Avenue are both major bus transfer locations, while the latter and Frankstown Avenue/Brushton Avenue are also adjacent to businesses and social services. Figure 17 illustrates ridership activity at bus stops on an average weekday.

Passenger loads on neighborhood routes tend to be highest in the inbound direction (towards downtown Pittsburgh) in the AM Peak and the outbound direction (away from downtown Pittsburgh) in the PM Peak. The highest loads overall can be found on the East Busway, on Frankstown Avenue west of Homewood Avenue, and on Fifth Avenue. At the route level (see Figure 17), only East Busway routes have passenger loads in excess of 40, meaning standees may be seen on certain trips. These loads are only seen in the peak direction of travel, and no passenger loads in the neighborhood exceed 52, meaning overcrowding is generally limited.

On-Time Performance

On-time performance of neighborhood routes is poorest on local routes operating along busy corridors (such as Routes 77, 82, and 86) and also on East Busway routes that have lengthy segments off of the busway itself (see Figure 18). Routes with on-time percentages lower than 70 percent likely present issues for riders taking regular trips.

Bus Stops

Overall there are 126 bus stops in the neighborhood, including the two stops at Homewood Station on the East Busway. The majority of bus stops in the neighborhood have plain blue “Bus Stop” signs and no other information or amenities (see Figure 19). Five bus stops (including the Homewood Station stops) have shelters while two additional stops have benches. Stops with shelters include:

- Homewood Station Eastbound and Westbound.
- Hamilton Avenue at Homewood Avenue Eastbound and Westbound.
- Frankstown Avenue at Homewood Avenue Westbound.

Bus stop conditions vary by stop, however conditions at many stops are inadequate:

- 11 percent of bus stops have poor or very poor sidewalk conditions.
- 54 percent of bus stops do not have ADA-compliant five-foot by eight-foot loading areas.
- 52 percent of bus stops do not have crosswalks adjacent to them.

Lighting and curb ramps are more present at bus stops: only two bus stops lack curb ramps adjacent to them, and 92 percent of bus stops have some sort of lighting.

When compared with average weekday daily ridership, all high-ridership stops (30 or more boardings per day) have good or fair sidewalk conditions. Four medium-ridership stops (10-29 boardings per day) have poor sidewalk conditions, while 10 low-ridership stops (fewer than 10 boardings per day)[1]

[1] *Continued on page 34.*

Figure 16: Transit Coverage

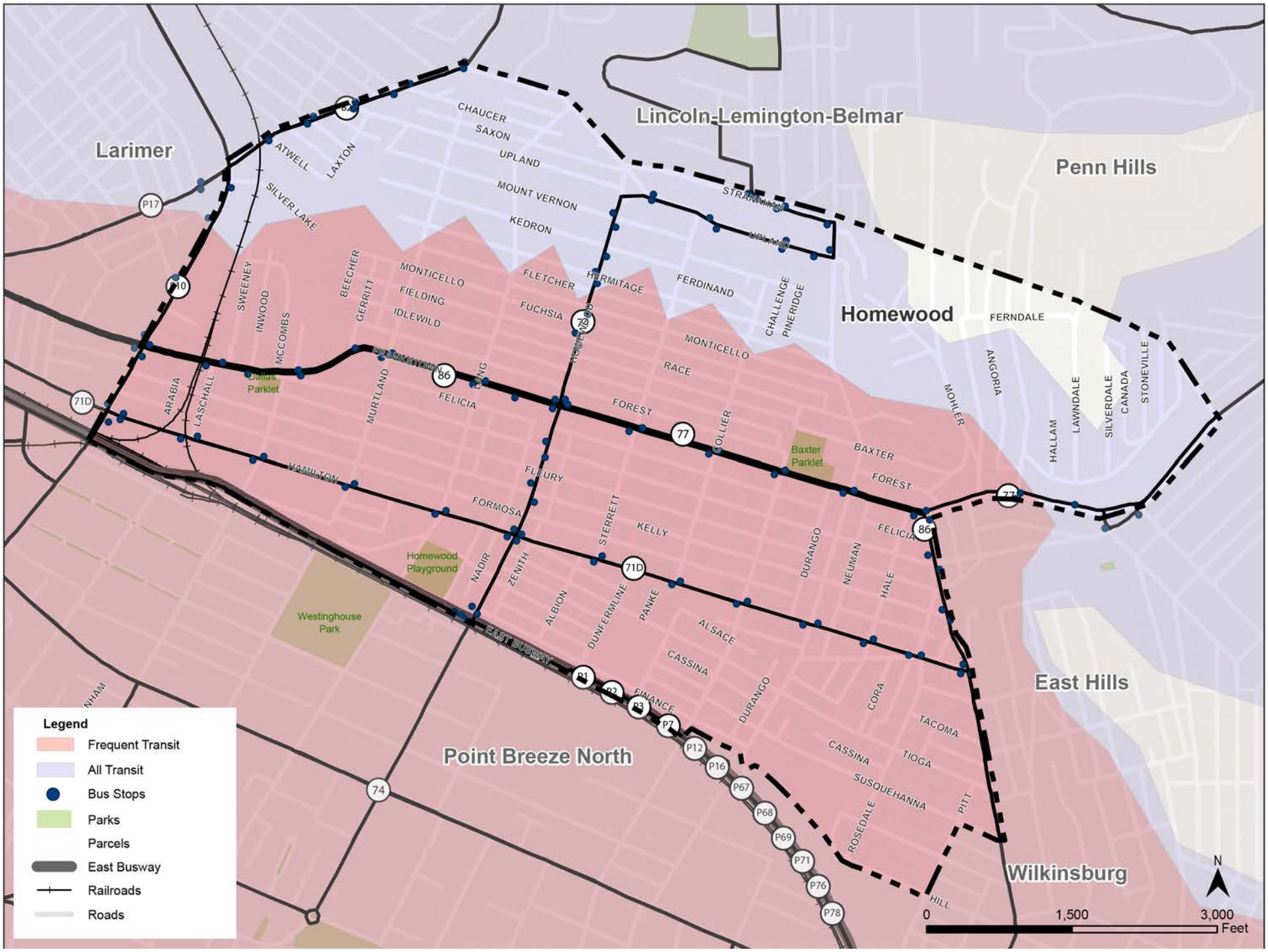


Figure 17: Weekday Transit Ridership Activity

Figure 18: Weekday On-Time Performance by Route

have poor or very poor sidewalk conditions. The two stops that lack adjacent curb ramps both have low ridership and only one of them also has poor or very poor sidewalk conditions (5th Avenue/Washington Boulevard at Silver Lake Drive). Figure 21 illustrates bus stop ridership for bus stops with poor or very poor sidewalk conditions, along with missing curb ramp locations.

Based on PAAC wheelchair ramp deployment data, there are a handful of stops that see more than one ramp deployment per week. Sidewalk conditions and the presence of ADA loading areas and curb ramps are particularly important at these locations. Conditions at these particular stops are summarized in Table 1.

Figure 22 summarizes overall bus stop conditions rated from one to six. The scoring is based on the presence of an ADA loading area, curb ramps, and crosswalks; and sidewalk condition ratings. Bus stops with a score of six have good sidewalk conditions, unobstructed ADA loading areas, curb ramps, and crosswalks. Overall, the majority of the neighborhood has good bus stop conditions, particularly along Homewood Avenue. Outlying portions of the neighborhood have the worst conditions, particularly along 5th Avenue/ Washington Boulevard, Lincoln Avenue, Upland Street, Oakland Street, and eastern segments of Frankstown Avenue and Hamilton Avenue.

Figure 19: Typical PAAC Bus Stop

Figure 20: PAAC Bus Stop with Shelter

Table 1: Conditions at Stops with High Wheelchair Ramp Deployments

Stop Name	Direction	Sidewalk Condition	ADA Loading Area	Curb Ramps	Crosswalks
Homewood Station	Eastbound	N/A	Yes	N/A	N/A
Homewood Station	Westbound	N/A	Yes	N/A	N/A
Hamilton Ave at Homewood Ave	Eastbound	Good	Yes	Yes	Yes
Hamilton Ave at Homewood Ave	Westbound	Good	Yes	Yes	Yes
Frankstown Ave at Homewood Ave	Westbound	Fair	Yes, partially obstructed	Yes	No

Figure 21: Bus Stops with Poor or Very Poor Sidewalk Conditions

Figure 22: Overall Bus Stop Conditions

Bicycle Network

Facilities

There are no bike trails or dedicated bike lanes in the Homewood neighborhood; however, several streets are designated as bike routes by BikePGH, including main thoroughfares like Homewood Avenue, Frankstown Avenue, Hamilton Avenue, Lincoln Avenue, and Oakwood Street. The Bike (+) Plan identifies the need for bicycle facilities on Homewood Avenue and east/west through the neighborhood (e.g., Hamilton Avenue or Kelley Street). The City is currently implementing recommendations from its Bike (+) plan through the MoveForwardPGH program, and this plan is aligned with that plan. Additionally, the city is planning to further evaluate both the Hamilton Avenue and Homewood Avenue corridors as part of a community-driven planning process.

In addition to the current bike routes in the neighborhood, there are three Healthy Ride Bike Share stations in the southwest portion of the neighborhood, one of which is at Homewood Station (see Figure 23).

Level of Traffic Stress

Bicycle Level of Traffic Stress, or BLTS, was measured on a number of major roads in the neighborhood. BLTS is a rating that describes what types of users would be comfortable riding on different types of bicycle facilities, including on-road facilities[1]. For mixed-traffic routes, like in the Homewood neighborhood, inputs to the rating include the prevailing speed (or speed limit) and the number of travel lanes (see Table 2).

Overall, most streets on which BLTS was calculated are rated LTS 3 in the Homewood neighborhood with the exception of Fifth Avenue which is rated LTS 4 (see Figure 24). LTS 3 involves interaction with moderate speed or multilane traffic, or close proximity to higher speed traffic, and is generally only considered acceptable to bicyclists classified as "enthused and confident."[2]

Bicycle Connectivity

Longitudinal Employer-Household Dynamic (LEHD) displayed in Figure 25 shows where Homewood residents work. As discussed in the Public Transit section, many Homewood residents work in downtown Pittsburgh, Wilkinsburg, East Liberty, North Oakland, and Monroeville. Bicycle connectivity from the neighborhood is limited; East Liberty is readily accessible from Homewood via existing bicycle infrastructure, however these connections are only via roadways with shared lane markings on them. To travel downtown, residents would have to use a patchwork of roadways with shared lane markings and bike lanes that are not continuous.

Table 2: Bicycle Level of Traffic Stress on Mixed-Traffic Routes

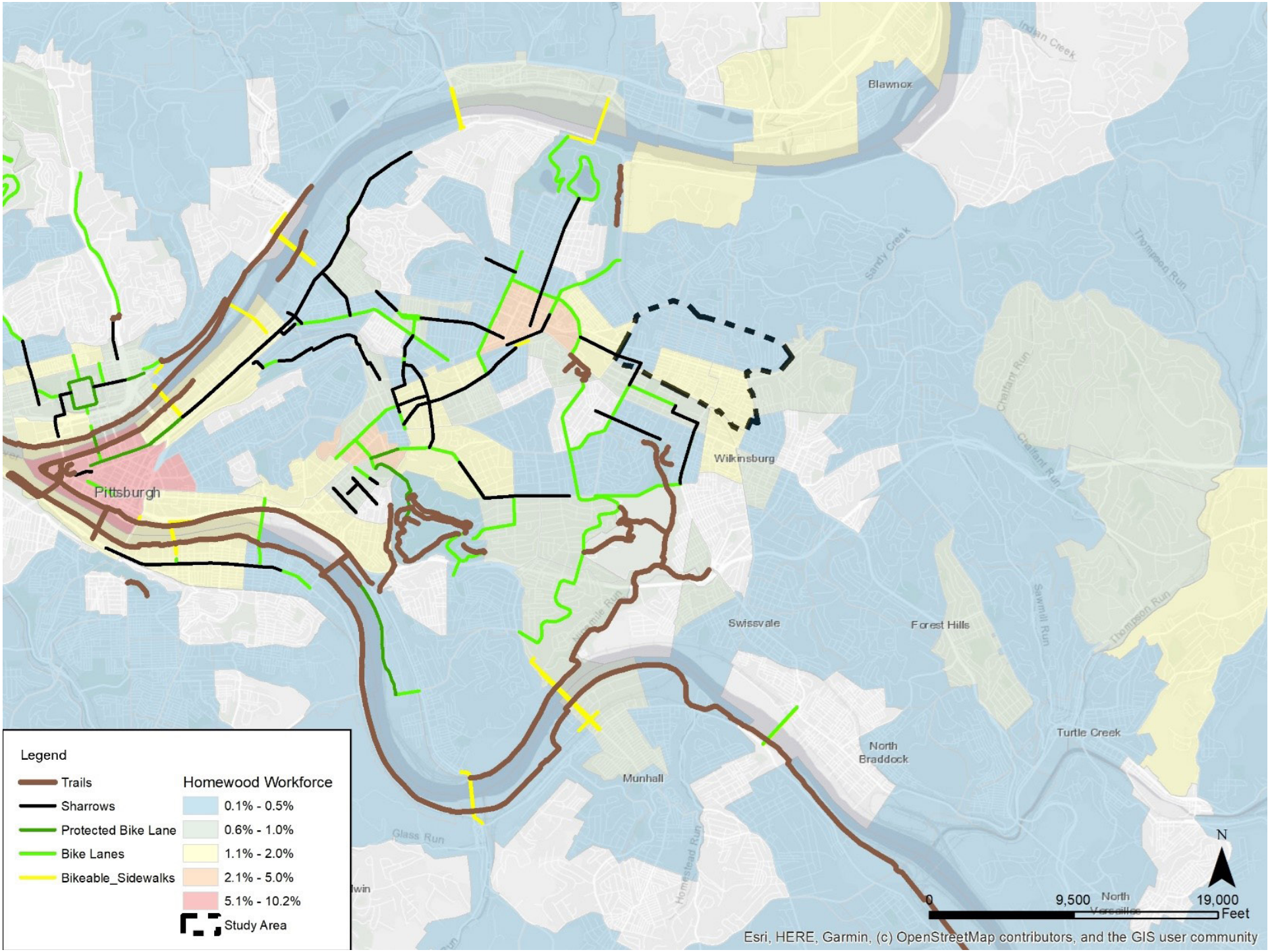
Speed Limit or Prevailing Speed	2-3 Lanes	4-5 Lanes	6+ Lanes
=< 25mph	LTS 1 when ADT=<3,000 LTS 2 when ADT > 3,000	LTS 3	LTS 4
30mph	LTS 2 when ADT=<3,000 LTS 3 when ADT > 3,000	LTS 4	LTS 4
>= 35 mph	LTS 4	LTS 4	LTS 4

[1] *Furth, Peter. Bicycle Level of Traffic Stress. Available at http://www.northeastern.edu/peter.furth/research/level-of-traffic-stress/*
[2] *Furth, Peter. Bicycle Level of Traffic Stress. Available at http://www.northeastern.edu/peter.furth/research/level-of-traffic-stress/*

Figure 23: Bicycle Facilities

Figure 24: Bicycle Level of Traffic Stress (BLTS) Ratings

Figure 25: Workplace Locations for Homewood Residents and Bicycle Infrastructure



Traffic Safety

The following section is a summary of the detailed safety and crash analysis completed as part of the Study. The full Safety Study Memorandum is available in **Appendix A**.

Crash Analysis

2017-2019 crash data within the project study area (January 1, 2017, to December 31, 2019) was analyzed. The data was downloaded from the Pennsylvania Crash Information Tool (PCIT), in April 2021. Crashes were selected within 250 feet of the study area boundary roadways: 5th Avenue to the West, Lincoln Avenue/Apple Street/Upland Street to the north, and Brushton Avenue/Oakwood Street to the East. The data was analyzed by reviewing the spatial location of the crashes, mode involved (pedestrian, bicycle, motor vehicle), crash type, and crash severity. Field observations were also used to understand causes of crashes.

Three of the city's high-risk corridors for future crashes identified in the Pittsburgh Pedestrian Safety Action Plan are in the Homewood neighborhood (Frankstown Avenue, Hamilton Avenue, and 5th/Washington Boulevard). Approximately 424 total crashes were reported in the study area from 2017 to 2019. 41 percent of the crashes were angle crashes (172) followed by 16 percent rear end crashes (66) and 15 percent hit fixed object crashes (64). PCIT data shows that many of the angle crashes are a result of red light running or proceeding without clearance at both signalized and unsignalized intersections. Out of the 172 angle crashes, 146 occurred at an intersection and of the 66 rear end crashes, 21 occurred at an intersection. This may suggest that signal timing/phasing and intersection visibility should be reviewed. In general, higher crash locations typically occurred at signalized intersections of principal arterials or higher volume roadways in the study area. Table 3 displays crashes in the study area by type. Figure 26 and Figure 27 show the total crashes and crash type, respectively.

Five fatal crashes were reported in the study area. All five fatal crashes occurred at night with streetlights present. The fatal crash locations are described below.

- An angle crash at 5th/Frankstown.
- An angle crash at Dallas/Kelly.
- A hit fixed object crash at Frankstown/Gerritt.
- A hit fixed object crash on Frankstown near Wheeler.
- A head on crash at Bennett/Frankstown/Dornbush.

In the Homewood neighborhood, 22 pedestrian crashes were reported between 2017 and 2019. (In some of the crashes involving pedestrians there was more than one pedestrian involved. Therefore, the crash type summary table shows there were 19 "Hit Pedestrian" crashes over the three years, while the pedestrian and bicycle crash summary map shows 22 crashes involved pedestrians.) Based on Homewood's population, this suggests an average of 1.12 pedestrian crashes per 1,000 residents per year, which is higher than the 0.83 crashes per 1,000 residents per year identified for the City in the Pittsburgh Pedestrian Safety Action Plan. The pedestrian and bicycle crash locations are displayed in Figure 28.

Table 3: Total Study Area Crashes by Crash Type (2017-2019)

Crash Type	Count
Non-collision	6
Rear-end	66
Head-on	44
Backing	1
Angle	172
Sideswipe (Same Direction)	36
Sideswipe (Opposite Direction)	11
Hit Fixed Object	64
Hit Pedestrian*	19
Other	4
Unknown	1
Total	424

** In some of the crashes in which pedestrian were involved there were more than one pedestrian involved. Therefore, the Crash Type summary shows there were 19 "Hit Pedestrian" crashes over the three years, while the pedestrian and bicycle crash summary map displays 22 crashes involving pedestrians.*

Figure 26: Total Crashes (2017-2019)

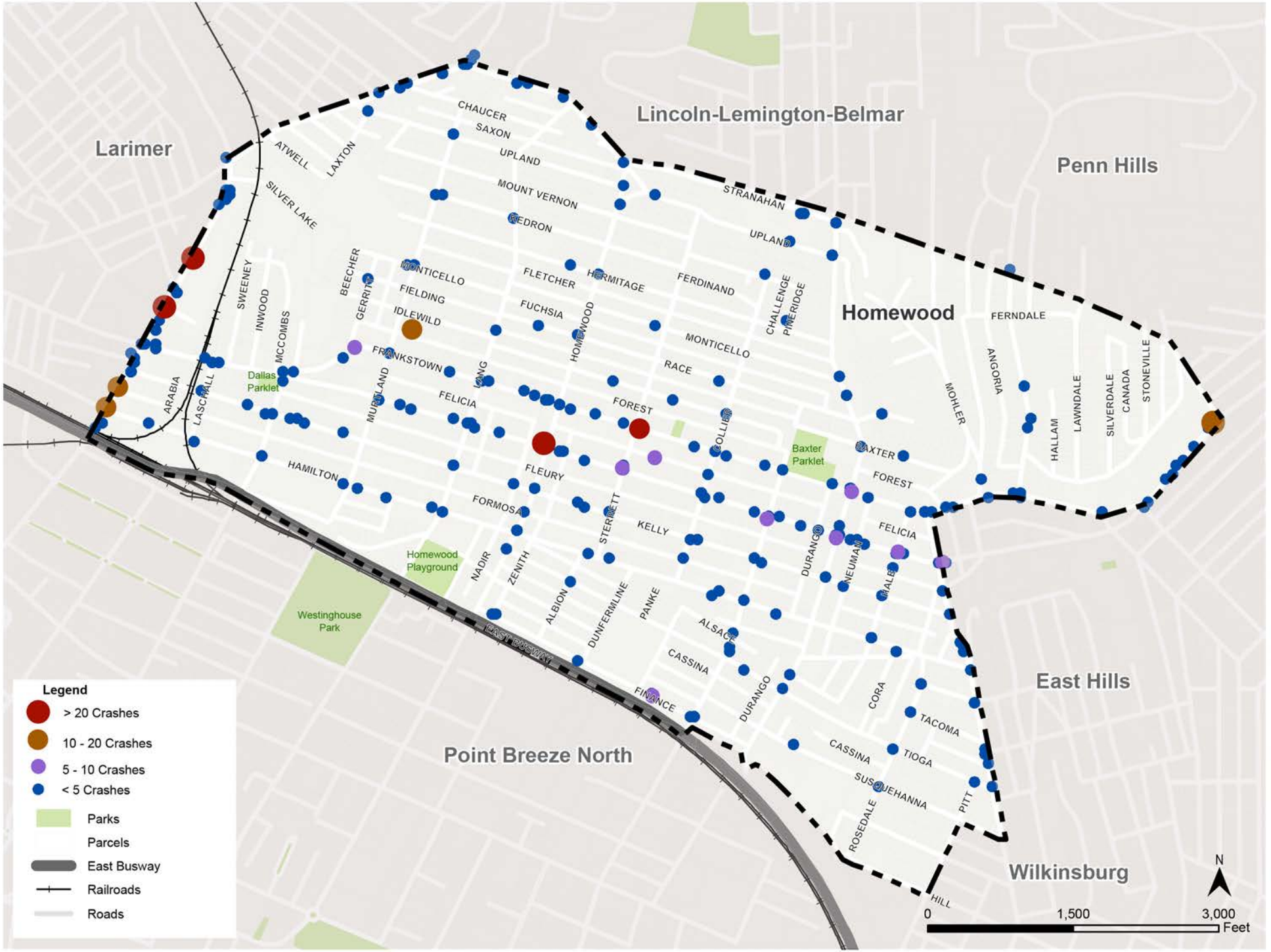


Figure 27: Total Crashes by Crash Severity (2017-2019)

Figure 28: Bicycle and Pedestrian Crashes (2017-2019)

Speed Analysis

Streets with high vehicle speeds create unsafe environments where vulnerable pedestrians and bicyclists are more likely to be struck and increases the severity of such crashes. Speed data (posted speed limits, 85th percentile speeds, and median speeds) and average daily traffic was obtained from DOMI's traffic count database. Counts were collected February 14, 2020 – February 22, 2020. Figure 29 shows ten locations where speed and volume data were available in the study area. The project team reviewed this data to inform the selection of safety audit locations, and to understand where speeding is occurring in the neighborhood. Table 4 shows a summary of the speed data and the average daily traffic and documents the locations where speeding is occurring in the neighborhood. On Frankstown, Bennett, Kelly, Homewood Avenue and Braddock, the 85th percentile speeds are ten miles higher than the 25 mile per hour posted speed limit (between 34-37 miles per hour). The percent of vehicles traveling over the speed limit on these segments is 75% or higher.

Feedback from project stakeholders suggests that speeding is also occurring on Frankstown Road between Homewood and East Hills. Steep topography and ambiguous lane striping lead to high vehicular speeds, confusion for drivers, and conflicts with buses. This street also serves as a walking route for students accessing a nearby school, Faison K-8.

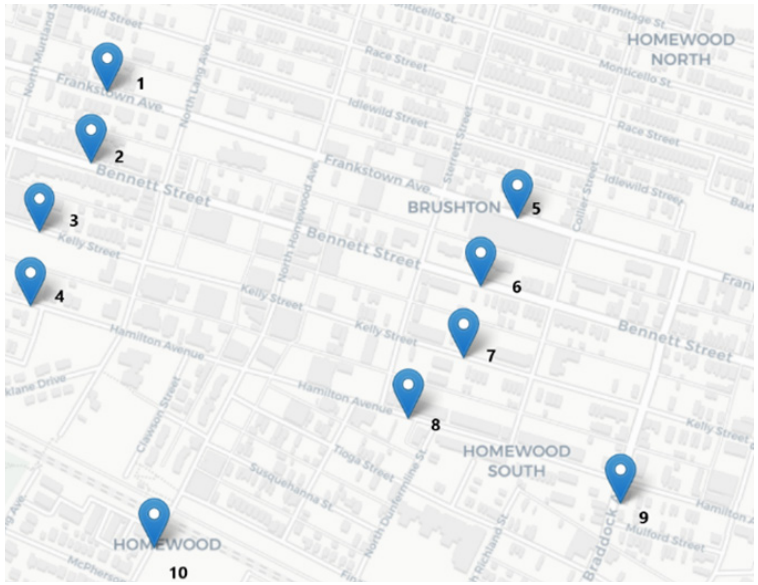


Figure 29: Speed and Volume Data Locations

Table 4: Speed Data in Study Area

Location			Average Daily Traffic	Posted Speed Limit (MPH)	Median Speed (MPH)	Percent of Vehicles over Speed Limit	85th Percentile Speed (MPH)
Frankstown	1- Between North Murtland and North Lang	5- Between Sterrett and Collier	5,357	25	29	78%	35
Bennett	2- Between North Murtland and North Lang	6- Between Sterrett and Collier	6,446	25	31	87%	36
Hamilton	4- Between North Murtland and North Lang	8- Between Sterrett and Dunfermline	3,819	25	24	37%	29
Kelly	3- Between North Murtland and North Lang	7- Between Sterrett and Collier	2,253	25	29	75%	34
Braddock	9- South of Hamilton Avenue		7,277	25	32	95%	37
Homewood	10- South of East Busway and Jonathan Place		2,651	25	30	81%	36

Safety Audits

Kittelson along with DOMI representatives conducted Neighborhood Safety Audits in Homewood to observe traffic, pedestrian conditions, document hazards, and identify opportunities for improvements. The Federal Highway Administration's "Pedestrian and Bicyclist Road Safety Audit (RSA) Guide and Prompt List" was consulted to inform Kittelson's approach to the Neighborhood Safety Audits.

Locations for the Safety Audits were determined by numerous factors including number of crashes, areas identified in previous planning documents, high-speed corridors identified by field data, prevalence of traffic generating community facilities, and DOMI recommendations. Based on this analysis, Kittelson identified three corridors (Figure 30) to conduct the Neighborhood Safety Audits:

- Corridor 1 – Homewood Avenue (north of Hamilton Avenue to Upland Street).
- Corridor 2 – Frankstown Avenue (5th Avenue to Sterrett Street).
- Corridor 3 – Hamilton Avenue Intersections (5th Avenue, Homewood Avenue, Braddock Avenue, and Oakwood Street-Haverhill Street).

The Safety Audits were conducted on Wednesday, April 14 and Thursday, April 15, 2021, by two Kittelson staff; DOMI provided two staff to walk with Kittelson for part of the Safety Audits on April 14th. Site conditions were observed for all three corridors by both walking and driving. Each Safety Audit corridor was observed in three different timeframes: nighttime, daytime peak, and daytime off-peak. These site visits allowed the team to observe vehicular, pedestrian, and bicycle travel behaviors at crash hotspot locations, identify issues and opportunities, and gain a deeper understanding of destinations/high pedestrian traffic corridors previously identified. For each safety audit corridor, the Kittelson team identified the issues, locations, and potential safety countermeasures.

Corridor 1: Homewood Avenue

The Safety Audit on Homewood Avenue was conducted just north of Hamilton Avenue to Upland Street. The corridor south of Frankstown Avenue is mostly commercial with a mix of active and vacant storefronts and several large surface parking lots. North of Frankstown Avenue, the corridor transitions to residential and institutional uses and is bordered by several vacant parcels. The typical street section consists of a single travel lane in each direction with parallel parking on either side; the posted speed limit is 25 miles per hour. PAAC route 74 – Homewood – Squirrel Hill serves this corridor at 35-minute weekday headways. Most intersections along the corridor are stop-controlled; signalized intersections are in the commercial area at Frankstown Avenue, Bennett Street, and Kelley Street. Homewood Avenue has no dedicated bicycle facilities or signage. A summary of the Safety Audit findings for Homewood Avenue is shown in Table 5.

Corridor 2: Frankstown Avenue

The Safety Audit was conducted on Frankstown Avenue from 5th Avenue to Sterrett Street. The corridor is a mixed-use development filled with local businesses, institutions including the YWCA, and single and multi-family residential. The blocks between Lang Avenue and Sterrett Street serve as the main commercial corridor for the Homewood Neighborhood with higher pedestrian activity. Commercial uses are also clustered around 5th Avenue. The typical street section consists of a single lane in each direction with parallel parking on either side; the posted speed limit is 25 miles per hour. PAAC routes 77 – Penn Hills and 86 - Liberty serve this corridor at 30-minute weekday headways. Most major intersections on the corridor are signalized intersections; Sterrett Street, Gerritt Street, and minor streets are stop-controlled for the streets intersecting with Frankstown Avenue. A summary of the Safety Audit findings for Frankstown Avenue is shown in Table 6.

Corridor 3: Hamilton Avenue Intersections

Safety Audits were conducted on Hamilton Avenue at four intersections: Hamilton/5th Avenue, Hamilton/Homewood Avenue, Hamilton/Braddock Avenue, and Hamilton/Oakwood Street-Haverhill. Each of these intersections is signalized and most have a single lane that serves as the left, right, and thru movement for each direction. The typical street section throughout the corridor consists of a single lane in each direction with parallel parking on either side; the posted speed limit is 25 miles per hour. PAAC route 71D – Hamilton serves this corridor at 15-minute weekday headways. A summary of the Safety Audit findings for Hamilton Avenue is shown in Table 7.

Figure 30: Safety Audit Locations

Table 5: Homewood Avenue Summary Findings		
Location	**Issue**	**Potential Safety Countermeasure**
The north side of Bennett Street east of the Bennett/Homewood intersection - overgrown grass, poor sidewalk condition.	**Poor Sidewalk Conditions: Many side streets which operate as alleyways have no sidewalks. Side streets that do have sidewalks are in very poor condition (gravel, grass, cracked concrete).**	Upgrade sidewalks and cut back grass.
Frankstown/Homewood intersection – older signal equipment with no pedestrian equipment. Sidewalk is in poor condition on Homewood Avenue just north of Frankstown on the east side of the street.		Upgrade signal equipment to include pedestrian signal heads and upgrade sidewalks.
Idlewild Street – sidewalk is in bad condition on the north and south sides of Idlewild (east of Homewood) and on the east side of Homewood north of Idlewild.		Upgrade sidewalks.
South of Kedron Street on the east side of Homewood - poor sidewalk conditions.		Upgrade sidewalks.
Hermitage/Homewood intersection – The cross street (Hermitage) has more houses abutting the roadway and there is more parking along the street. There are cars parked right up to the corner of the intersection and on the sidewalk.	**Parked Vehicles Obscure Intersection Visibility: Many intersections have cars parked on the sidewalk and/or cars parked less than 20 feet from a cross street. This causes potential visibility issues for vehicles stopped at stop signs.**	Daylight intersection by eliminating parking from intersection per code or sight distance, whichever is greater.
Race Street/Homewood intersection – Two-Way Stop Control (TWSC) intersection with no crosswalks across the minor street or stop bars.	**Pavement Marking Issues: Many intersections do not have any pavement markings, such as stop bars at stop signs or crosswalks. Existing crosswalks tend to be faded and/or use parallel lines instead of ladder/high visibility crosswalks.**	Add high-visibility crosswalk.
Monticello/Homewood intersection – All Way Stop Control (AWSC) intersection with no stop bars or crosswalks on any approaches. Not all approaches have the supplementary "All-Way" plaque below the stop sign. No street sign present.		Add stop bars and high-visibility crosswalks to approaches; add plaques and additional street signs.
Hermitage/Homewood intersection – AWSC intersection with faded pavement markings and parallel lines crosswalks instead of ladder/high-visibility crosswalks.		Upgrade pavement markings; upgrade intersection to a high-visibility crosswalk.
There are faded shared lane markings in the southern part of Homewood Avenue, but no shared lane markings are visible north of Hamilton.		Repaint current shared lane markings and add additional ones on corridor.

Table 6: Frankstown Avenue Summary Findings		
Location	**Issue**	**Potential Safety Countermeasure**
5th/Washington/ Frankstown Intersection	A high number of crashes were reported at this intersection (23 total) of which thirteen were angle crashes. There are currently "No Turn on Red Restriction" signs for vehicle movements traveling in the north and south directions.	Signal timing should be evaluated further.
	Ramps do not appear to be ADA compliant.	Update ramps.
	Pavement markings (crosswalks and stop bars) are faded at this intersection.	Repaint high-visibility crosswalks and stop bars.
Frankstown Ave/Bennett Street/Dallas Street Intersection	Excess road space and intersection geometry cause confusing vehicular movements. Frankstown Avenue is approximately 58 to 70 feet wide on the west approach and 38 feet wide on the northeast approach of the intersection. Bennett Street (east approach) is approximately 36 feet wide, and Dallas Avenue (south approach) is 30 feet wide. There is a small median in the center of the intersection that causes westbound vehicles to not travel in a straight line through the intersection. The travel lanes are not properly aligned, and vehicles were observed traveling westbound from the Bennett approach clipping the side of the stop bar/crossing the double yellow centerline on the west approach.	Realign intersection with quick-build materials such as road paint and flexposts.
	Five crashes occurred at this intersection (two rear-end, one head-on, and two hit fixed object) which may be a result of the current configuration of the roadway geometry and confusing vehicular movements.	Evaluate roadway geometry.
	Signal equipment appears to be recently upgraded. The orange "Don't Walk" pedestrian signal located between Frankstown, and Bennett is not working for pedestrians walking northbound across the Bennett leg of the intersection.	Fix pedestrian signal.
	Old utility poles at the intersection that have a white spray painted "X" on them that could be removed.	Remove old utility pole.
Frankstown Avenue/ Gerritt Street Curve	No visible pavement markings (crosswalk or stop bar) at the Gerritt Street intersection.	Paint stop bars and high-visibility crosswalks.
	Sevenhit fixed object crashes occurred at the Frankstown/Gerritt curve, one of which was a fatality. Poor vehicle sightline visibility at the curve.	Install daylighting along the curve and at the Gerritt St intersection to enhance visibility for pedestrians and vehicles. Paint parking lane lines to visually narrow the wide travel lanes and to hatch out an area for Sunday only church parking on the south side of the curve.
Murtland/ Frankstown Intersection	Old signal equipment. No pedestrian signals or pushbuttons at this intersection.	Upgrade signal equipment.

Table 7: Hamilton Avenue Summary Findings		
Location	**Issue**	**Potential Safety Countermeasure**
Hamilton/ Braddock	Pavement marking is worn out at this intersection and specifically across the south approach (stop bar and crosswalk).	Repaint high-visibility crosswalks and stop bars.
	Poor visibility of pedestrian signal heads crossing East/West across the south approach due to utility poles in the pedestrian access route (old utility poles at the intersection that have a white spray painted "X" on them which might be marked for removal, in addition to newer appearing utility poles).	Upgrade pedestrian signal heads.
Hamilton / 5th	A high number of crashes were reported at this intersection (23 total) of which thirteen (13) were angle crashes. There are currently "No Turn on Red Restriction" signs for vehicle movements traveling in the north and south directions.	N/A
	5th Avenue/Washington is a two-way two-lane roadway with no left-turn lanes. The northbound left turn lane has a short, protected phase and then has permitted phases for the northbound and southbound left turns. At various time periods it was observed that left-turning vehicles are trying to judge the gap while turning left, but their view may be obscured by vehicles in the opposing left-turn lane. This could contribute to the high number of angle crashes (this intersection has 16 total crashes, of which nine were angle crashes).	Signal timing should be evaluated further.
	Wide intersection curb radii in the southeast corner of the intersection. Vehicles appear to travel fast around this corner.	Install curb extensions or adjust curb radius to slow down cars.
	Curb ramps do not appear to be ADA-compliant.	Upgrade curb ramps.
	Pedestrian signal is on recall, there are no pedestrian pushbuttons.	Add pedestrian push buttons.
	There are "Share the Road" signs on the east and west side of the intersection along Hamilton Avenue, but no shared lane pavement markings are visible.	Add shared lane road markings.
	There are multiple bus stops in the southeast corner of the intersection and further east along Hamilton 215 feet.	Evaluate consolidating bus stops.
	Lack of adequate street lighting.	Upgrade lighting.
	AM peak observations: observed vehicle traffic traveling in the eastbound direction; coming from the south going right, very few vehicles fully stop on red.	Signal improvements.

Table 7: Hamilton Avenue Summary Findings - Continued		
Location	**Issue**	**Potential Safety Countermeasure**
Hamilton/Oakwood/ Haverhill	Signal equipment appears older than others in the neighborhood – rusted poles, etc. There are no pedestrian signal heads and no pedestrian pushbuttons present at this signal. There are no Detectable Warning Surfaces (DWS) at the ramp in the southwest corner of the intersection. The other three ramps have DWS but are Apex ramps.	Upgrade signal equipment.
	Faded shared lane markings south of the intersection on Homewood.	Repaint shared lane markings.
	Sidewalk is in poor condition on the south side of Hamilton west of the intersection.	Upgrade sidewalks.
	Conflicting parking signs on the south side of the intersection.	Remove improper sign.
	Vehicles observed at this intersection do not fully stop at the stop signs.	Signal improvements.
	Oakwood is approximately 36 feet wide and there are no painted centerlines resulting in wide vehicular travel lanes and longer pedestrian crossing distance.	Create pedestrian refuge island and stripe center lines.
	There appears to have been a fatal crash in April 2020 at the intersection where the driver was traveling eastbound on Hamilton Street and crashed into the guardrail on the east side of the intersection. This intersection is a three-way stop controlled intersection and there is a steep incline where the individual crashed.	Evaluate sight distances.
	Visibility on all approaches is poor due to steep grades for all approaches. The north and west approaches are an incline.	Evaluate sight distances.
	Visibility is also compromised due to vehicles parking close to the intersection on the southwest corner of the intersection both on the right side of the west approach and the left side of the south approach (obscuring the visibility of oncoming vehicles for both eastbound and northbound traveling vehicles).	Create no parking zones near the intersection.
	Ramps do not appear to be ADA-compliant and while there is a crosswalk across the south approach of the intersection, there is no ramp at the east side of the crossing. The sidewalk is not present on the east side of the intersection north of Hamilton Avenue.	Upgrade to ADA facilities.
	Mulford Street – West of the intersection there is a cut-through street which has limited to no visibility of vehicles traveling west on Hamilton Street from the study intersection.	Cut back brush near roadway.

Summary Of Safety Findings

A list of high level of findings for the safety analysis for Homewood is provided below.

- A total of 424 crashes occurred in the study area between the years 2017-2019. Many of the crashes were angle crashes (172) followed by rear end crashes (66) and hit fixed object (64).
- Common operational challenges and design issues that potentially contributed to crashes include a lack of painted stop bars and high-visibility crosswalks, poor sightlines at intersections due to parked cars or topography, confusing intersection geometry, permissive left turn phasing, midblock pedestrian crossings due to poor sidewalk condition and/or lack of sidewalks, lack of dedicated bicycle facilities, and lack of pavement markings that clearly delineate vehicular travel lanes and slow traffic.
- Speeding vehicular traffic is documented on multiple streets including Homewood Avenue, Hamilton Avenue, Frankstown Avenue, Bennett Street, Kelly Street, and Braddock Avenue.
- Pavement markings (stop bars, crosswalks, shared lane markings) throughout the study area are missing or faded.
- Existing crosswalks tend to be two parallel lines instead of high-visibility crosswalks.
- Many sidewalks are in poor condition.
- Many intersections have ADA-accessible ramps at the intersections, even if a sidewalk is currently not present leading to the ramp.
- Most neighborhood streets experience speeding vehicular traffic, leading residents to park on the sidewalks to avoid having their mirrors clipped.
- Intersection visibility is compromised due to cars parked too close to the intersection and on the sidewalk.
- Heavy pedestrian activity was observed on Frankstown Avenue near the central business area and the Frankstown/Homewood intersection.
- Recently upgraded traffic signals provide adequate nighttime lighting at intersections; some locations would benefit from increased pedestrian-scale lighting.
- Excess road space and confusing intersection geometry at the Frankstown/Bennett Street/Dallas Street intersection.
- Steep topography and ambiguous lane striping on Frankstown Road between Homewood and East Hills lead to high vehicular speeds, confusion for drivers, and conflicts with buses.
- Unwelcoming underpasses west of La Schall Street on Frankstown Avenue and Hamilton Avenue – poor sidewalk condition and insufficient lighting.
- Bennett Street and Brushton Avenue have several high-activity institutions that could benefit from enhanced sidewalk/curb space for pedestrians and pop-up events.

A total of 424 crashes occurred in the study area between the years 2017-2019. Many of the crashes were angle crashes (172) followed by rear end crashes (66) and hit fixed object (64).

Most neighborhood streets experience speeding vehicular traffic, leading residents to park on the sidewalks to avoid having their mirrors clipped.

RECOMMENDATIONS

A variety of potential improvements were identified to respond to issues noted throughout the study area. These general improvements were considered when developing location-specific projects in the Proposed Projects section of this chapter. All projects identified within the recommendations will require further evaluation and assessment.

Traffic Safety

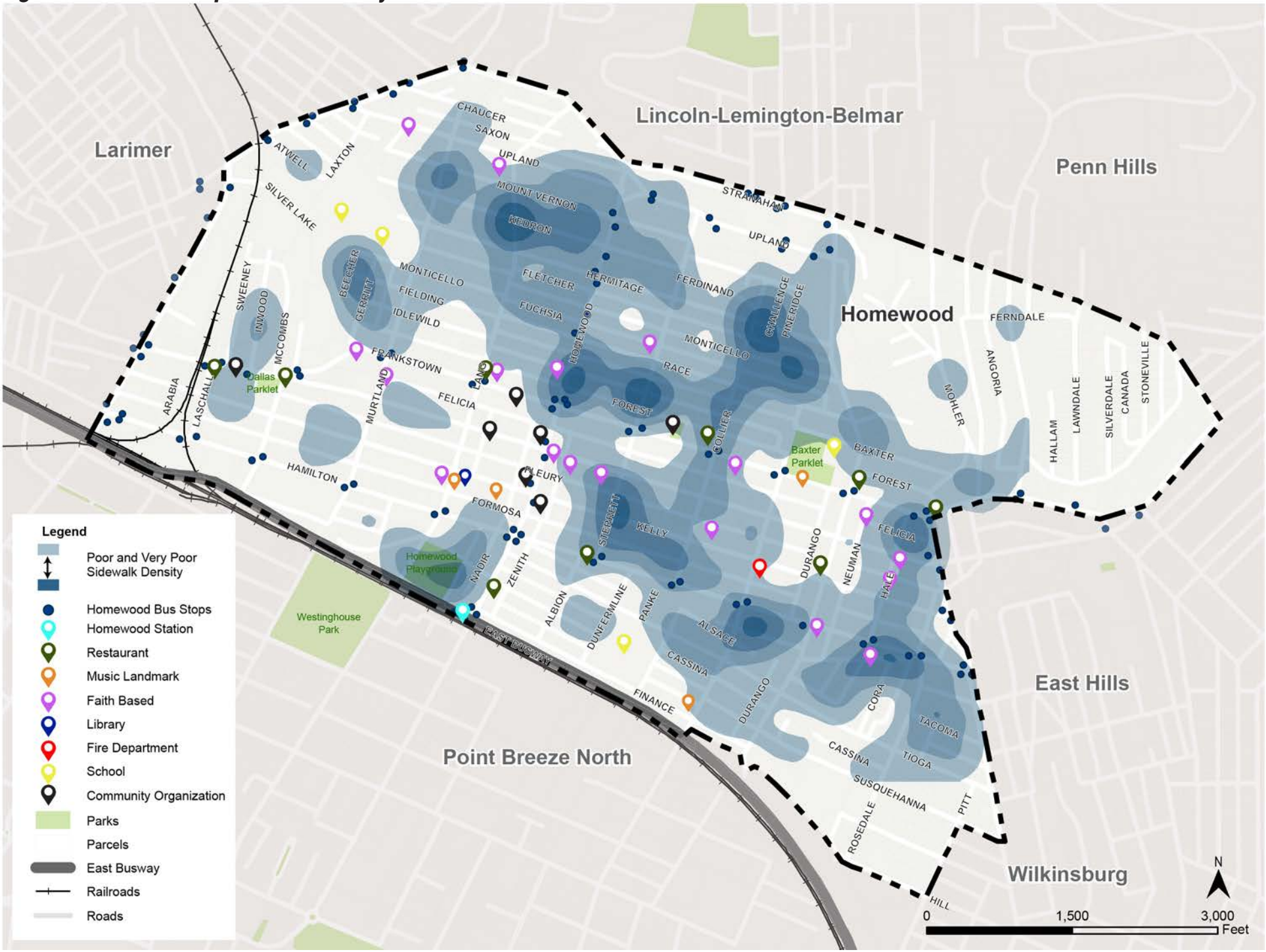
These improvements respond to the issues noted in the crash and safety analysis and can be implemented at multiple locations throughout Homewood to improve safety for all users. These include:

- Signing and Pavement Marking improvements:
  - Install stop bars and high-visibility crosswalks.
  - Install daylighting at intersections to enhance visibility for drivers and pedestrians and to encourage vehicles to not park on the sidewalk.
  - Install double yellow centerline at intersections.
  - Install shared lane markings.
  - Install “No Parking” (R7-4) signage.
  - Install “All-Way” (R1-3P) plaques under stop signs at All-Way Stop Controlled intersections.
- Traffic calming improvements to slow vehicle speeds:
  - Install speed humps where appropriate.
  - Stripe parking lanes to visually narrow the roadway.
  - Install curb extensions at intersections using road paint and flexible delineator posts.
- Other Pedestrian Safety improvements:
  - Underpass improvements such as adding lighting, sidewalk upgrades, and public art.
  - Install Bus Shelters at highly-used transit stops.
  - Pedestrian-scale lighting in high-pedestrian-activity areas (long-term improvement).
- Other potential safety improvements that may be considered for Homewood are as follows:
  - Improve underpasses (lighting, sidewalk, aesthetics).
  - Realign Bennett/Dallas intersection and use pavement markings and delineator posts to direct vehicle movements.
  - Hamilton/Fifth geometric and signal timing adjustments.
  - Make restaurant curbside space more permanent through the City’s outdoor dining program.

Sidewalk Improvements

Sidewalk improvements should be implemented in areas with high concentrations of poor and very poor sidewalk condition and critical sidewalk gaps. Sidewalk improvements should be prioritized around areas with high pedestrian activity (e.g. near high-ridership transit stops and community destinations) as shown in Figure 31. In some cases, sidewalk reconstruction may include the installation of ADA-compliant ramps.

Figure 31: Sidewalk Improvement Priority Areas



Public Transit

Several strategies can be used to improve transit conditions in Homewood and make the public transit more usable and efficient to the neighborhood's residents. These strategies include the following:

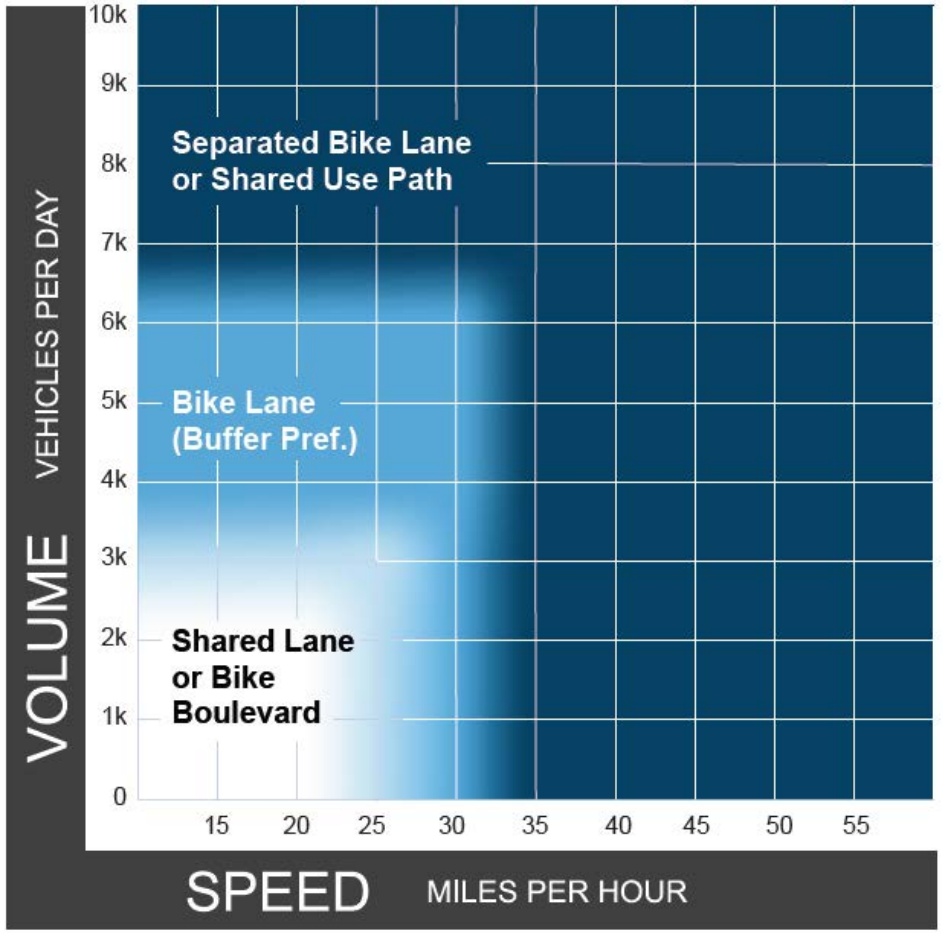
- Improve bus stops with shelters, benches, trash cans, and other amenities at priority locations (as shown in Figure 32).
- In areas with high population density like Homewood, PAAC's bus stop spacing guidelines call for stop spacing between 650 and 900 feet on Key Corridor and Local routes. Following these guidelines, there are several bus stop pairs with low daily ridership (less than 10 daily boardings and alightings per stop) and less than average bus stop conditions that could be consolidated:
  - Frankstown Avenue opposite Inwood Avenue.
  - Homewood Avenue at Bennett Street (stops on both sides of the street).
  - Homewood Avenue at Idlewild Street.
  - Homewood Avenue at Monticello Street.
  - Homewood Avenue at Kedron Street.
  - Lincoln Avenue at Atwell Street.
  - 7500 and 7506 Upland Street.
  - Oakwood Street at Kelly Street (stops on both sides of the street).
- Provide bus stop signage with travel information (e.g., stop i.d. and bus routing)
- Provide real-time information about buses at Homewood Station and at high-ridership stops on Frankstown Avenue, including at Brushton, Homewood, and 5th Avenue/Washington.
- Add a bikeshare station to the northern part of the neighborhood that falls outside of the frequent transit walkshed (near Lincoln/Chaucer and Homewood/Upland).
- Improve east-west bicycle connectivity throughout the neighborhood to East Liberty and Wilkinsburg.
- Improve north-south bicycle connectivity on Homewood Avenue.
- Expand bicycle connectivity to downtown Pittsburgh and North Oakland

Bicycle Facilities

Bike (+) facility selection is a context-sensitive decision that involves a planning and engineering based analytical process. This process accounts for the broader network and unique street context and character.

As part of the initial corridor prioritization phase, this plan identified Homewood Avenue as the best north-south bike corridor in concurrence with the Bike (+) Plan and collected preliminary data on three possible east-west connections for the neighborhood. The goal of this exercise is to better understand the tradeoffs for each of the option. The corridors that have been considered are Bennett Street, Hamilton Avenue and Kelly Street.

The chart[1] below is used to guide decisions about the type of bike (+) facility that is appropriate for the individual roadway of study. This chart[2] follows the FHWA Bikeway selection guide to propose facility types.



[1] *Chart assumes operating speeds are similar to posted speed. If they differ, use operating speed rather than posted speed.*
[2] *Advisory bike lanes may be an option where traffic volume is <3K ADT.*

Figure 32: New Bus Stop Amenity Prioritizations

Table 8: Bicycle Facilities						
Corridor	Who owns or maintains the corridor	Volume per Day[1]	85th Percentile Speed (MPH)	Traffic Crash Statistics (2018-2020)[2]	Preferred Facility Based on Selection Guide	Tradeoff[3]
Bennett St.	State	Over 6,000	36	Total crash - 63. High severity crashes - 51%. Prominent Crash Type - Angle crash (48%).	Separated bike lane or shared use path	Road width - 35 ft. and parking demand is moderate to high in both side. Separated bike facility will require parking removal and also travel lanes need to be narrowed down to 10 ft. Issue with shared use path - Cost.
Hamilton Ave.	City	Over 3,800	29	Total crash - 50. High severity crashes- 58%, 1 fatal, 2 pedestrian incidents. Prominent Crash Type-Angle (40%) & Fixed Object Crash (22%).	Bike lane (buffer preferred).	Road width - 36 ft. and parking demand is moderate in both side. Bike lane will require parking removal and also travel lanes need to be narrowed down to 10 ft.
Kelly St.	City	Over 2,200	34	Total crash - 48. High severity crashes - 40%, 1 fatal, 2 pedestrian incidents. Prominent crash type- Angle (67%).	Separated bikelane or shared use path	Road width - 36 ft. and parking demand is high in both side. Separated bike lane will require parking removal and also travel lanes need to be narrowed down to 10 ft. Note that with traffic calming elements to reduce the 85th percentile speed, a shared lane condition or Neighbor way may be an option for this corridor as large scale parking removal won't be needed and it's suitable traffic volume.

[1] Volume and Speed data have been collected on February, 2020.
[2] Crash Data - Collected through Pennsylvania Crash Information Tool (PCIT).
[3] Parking demand estimates - Qualitative observational estimates based on the corridor walk audit. In the next phase, a detail parking study will be required before making final decision.

Proposed Projects + Prioritization

A list of proposed mobility projects was developed for Homewood that integrate the safety, sidewalk, transit, and bicycle recommendations and strategies summarized in the previous section. These projects were then assigned a priority level for implementation based on a how they address key mobility issues and concerns in the neighborhood. A summary map of the proposed projects by project type at a corridor level is shown in Figure 33. All projects identified and proposed within the recommendations will require further evaluation and assessment.

Safety Improvements:
- Speed mitigation.
- Crash mitigation.
- ADA upgrades.

Connectivity Improvements:
- Sidewalk feconstruction.
- Access improvements.
- Bicycle facilities.
- Healthy Ride stations.

Transit Improvements:
- Corridor level improvements
  - Stop improvements.
  - Route improvements.
  - Stop access.

Clusters of poor and very poor sidewalk conditions are categorized within Table 9 and prioritized based on the percentage of poor and very poor sidewalks, connections to major destinations and amenities, connections to bus stops and stations, and connections and use by the residents and visitors within Homewood. The locations of missing 39 ADA-accessible ramps identified during the existing conditions analysis were prioritized based on their connectivity to public spaces, businesses, and bus stops; their connection to existing sidewalks; the sidewalk conditions; and their location related to population and everyday use.

Table 9: Potential Sidewalk Improvement Corridors

Priority Ranking	Project Name	Project Extent (From-To) (Intersection) (Adjacent business/property)
1	Collier Streetscape	Hamilton to Ferdinand
2	Bennett St	Murtland to Wood
3	Homewood Avenue	Frankstown to Upland
4	Homewood Playground Access Improvement	Lang from Hamilton to MLK East Busway; Clawson Street from Susquehanna to MLK East Busway; Susquehanna from Lang to Clawson
5	Kedron Street	West of Murtland to Homewood
6	Upland Street	Laxton to Homewood
7	Murtland Street	Chaucer to Hermitage
8	Mount Vernon Street	Murtland to Sterrett
9	Lang Avenue	Chaucer to Apple
10	Idlewild Street	Homewood to Collier
11	Hamilton Avenue	Collier to Oakwood
12	Hale Street	Frankstown to Alsace
13	Hermitage Street	Homewood to Brushton
14	Sterret St	Hamilton to Bennett
15	Monticello Street	Collier to Brushton; Lang to Homewood
16	Tioga Street	Collier to Wood Street

Table 10: Missing Ramp Priority					
Priority	Missing ADA Ramp Location	Priority	Missing ADA Ramp Location	Priority	Missing ADA Ramp Location
1	Silver Lake and 5th (North)	2	Mt Vernon and Challenge (East)	3	Silver Lake and 5th (North)
	Silver Lake and 5th (South)				Silver Lake and 5th (South)
	Hudson Place and 5th (North)		Mt Vernon and Pine Ridge (West)		Hudson Place and 5th (North)
	Hudson Place and 5th (South)				Hudson Place and 5th (South)
	Murtland and Hermitage		Formosa and Nadir (East)		Murtland and Hermitage
	Murtland and Kedron (South)				Murtland and Kedron (South)
	Lang and Hermitage		Formosa and Nadir (West)		Lang and Hermitage
	Collier Hamilton				Collier Hamilton
	Rosedale and Susquehanna		Rosedale and Tacoma		Rosedale and Susquehanna
	Cora and Tioga				Cora and Tioga
	Dunfermline and Susquehanna (West)		Beecher and Fielding (North)		Dunfermline and Susquehanna (West)
	Nadir and Susquehannaq		Beecher and Fielding (South)		Nadir and Susquehannaq

Prioritization Methodology

The project team developed a set of project principles to guide the project prioritization process. Each principal relates to a key issue that the Study is trying to address and assigns criteria to assess how well a project responds to the guiding principle. The four principles and their high-level evaluation criteria are shown in Figure 33.

The criteria used to assess each of the proposed projects are based on national standards and DOMI standards for projects and project types, including FHWA Safety Countermeasures, safety audit locations, transit ridership analysis, and implementation costs.

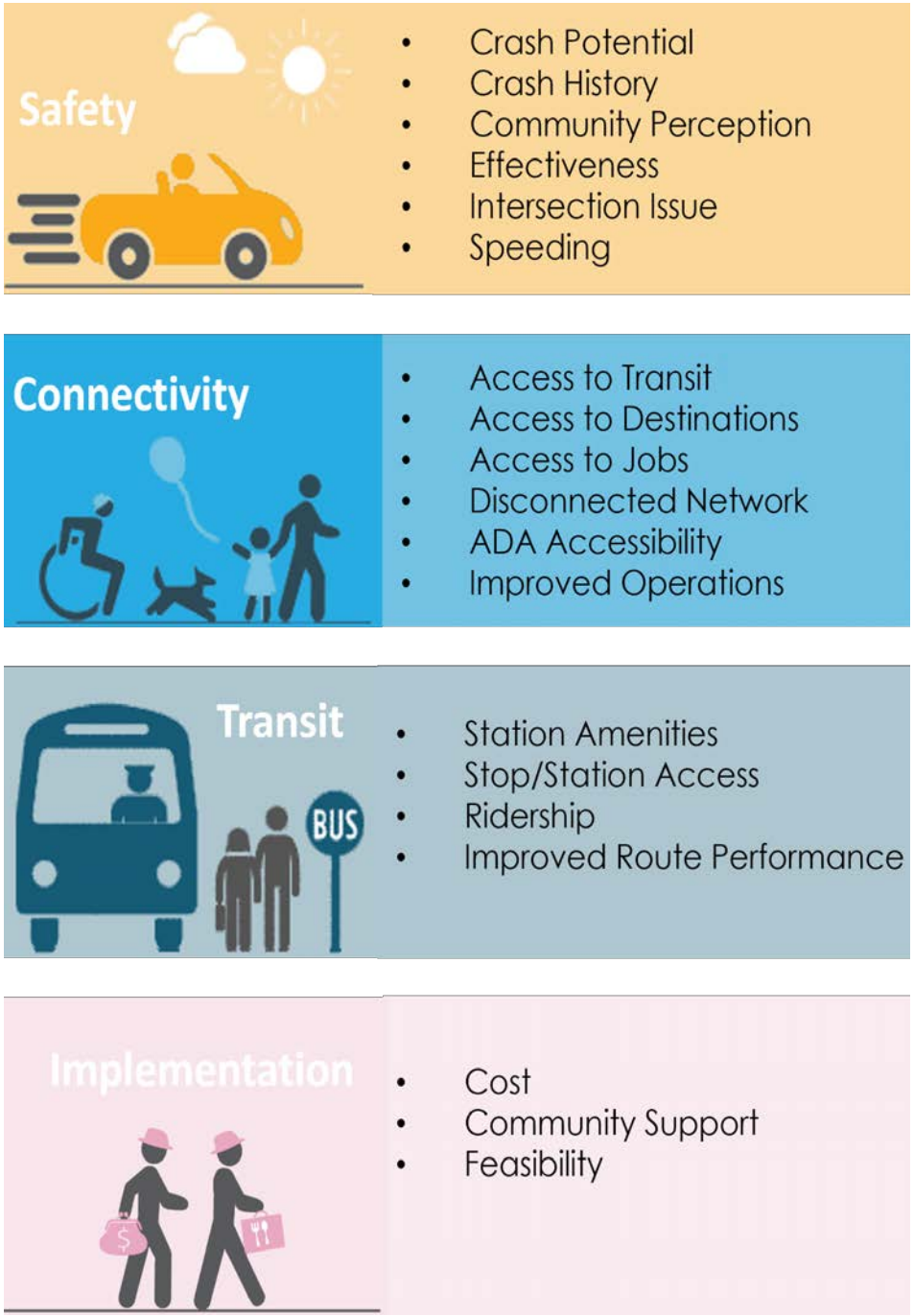


Figure 33: Proposed Prioritization Criteria

Figure 34: Proposed Project Areas

Proposed Projects

The following project list (Table 11) provides a ranking of proposed improvements according to the prioritization matrix to identify the most critical projects for Homewood. Projects are prioritized by type of improvement (e.g., Safety, Transit).

Table 11: Prioritized Project List by Project Type

Corridor Improvement/Ped Safety/Traffic Calming/Signal Improvement

Priority Ranking through Matrix	Project Name	Project Area	Improvement Category	Improvement Details	Timeline Short: (1 to 3 years) Mid: (4 to 6 years)
1	Homewood and Hamilton Intersection	Homewood and Hamilton	Safety	Intersection improvement: refresh pavement markings, intersection upgrades	Mid
2	Homewood and Kelly Intersection	Homewood and Kelly	Safety	Refresh pavement markings, intersection upgrades, curb bump outs	Mid
3	Dallas Traffic Calming	Point Breeze[1] to Fluery	Safety	Traffic calming/pedestrian improvements: sidewalk reconstruction, ADA improvements, refresh pavement markings	Mid
4	Frankstown Traffic Calming	Dallas to Collier	Safety	Traffic calming/pedestrian improvements: sidewalk reconstruction, ADA improvements, refresh pavement markings	Mid
5	Kelly Traffic Calming/Neighborway	Fifth to Oakwood	Safety	Traffic calming/pedestrian improvements: sidewalk reconstruction, refresh pavement markings	Mid
6	Frankstown/East Hills Speed Mitigation	Tokay to Standard	Safety	Intersection improvement/traffic calming: refresh pavement markings, intersection upgrades	Short
7	Hamilton Traffic Calming	Brushton to Oakwood	Safety	Traffic calming/pedestrian improvements: sidewalk reconstruction, refresh pavement markings	Short
8	Monticello and Murtland Intersection	Monticello and Murtland	Safety	Intersection improvement: refresh pavement markings, intersection upgrades	Mid

[1] *Project outside of study limits.*

Table 11: Prioritized Project List by Project Type					
Corridor Improvement/Ped Safety/Traffic Calming/Signal Improvement - Continued					
Priority Ranking through Matrix	**Project Name**	**Project Area**	**Improvement Category**	**Improvement Details**	**Timeline** Short: (1 to 3 years) Mid: (4 to 6 years)
9	Frankstown and Sterrett Intersection	Frankstown and Sterrett	Safety	Intersection improvement: geometry reconstruction, refresh pavement markings, intersection upgrades	Mid
10	Frankstown and 5th Intersection	Frankstown and Fifth	Safety	Intersection improvement: geometry reconstruction, refresh pavement markings	Mid
11	Lang Traffic Calming	Homewood to Collier	Safety	Traffic calming/pedestrian improvements: sidewalk reconstruction, ADA improvements, improved crossings, refresh pavement markings	Mid
12	Homewood Traffic Calming/Neighborway	Frankstown to Upland	Safety	Traffic calming/pedestrian improvements: sidewalk reconstruction, ADA Improvements, daylighting, refresh pavement markings, “No Parking” signage, speed humps, repaving	Short
13	Bennett and Brushton Intersection	Bennett and Brushton	Safety	Intersection improvement/traffic calming: geometry reconstruc-tion, refresh pavement markings, curb bump outs	Mid
14	Dallas and Frankstown Intersection	Dallas and Frankstown	Safety	Traffic calming/pedestrian improvements: geometry adjustments, daylighting, refresh pavement markings	Mid
15	Fransktown and Oakwood	Frankstown and Oakwood	Safety	Intersection improvement/traffic calming: refresh pavement markings, intersection upgrades, curb bump outs	Short
16	Homewood and Bennett Intersection	Homewood and Bennett	Safety	Intersection improvement: refresh pavement markings, intersection Upgrades	Mid

Table 11: Prioritized Project List by Project Type					
Corridor Improvement/Ped Safety/Traffic Calming/Signal Improvement - Continued					
Priority Ranking through Matrix	**Project Name**	**Project Area**	**Improvement Category**	**Improvement Details**	**Timeline** Short: (1 to 3 years) Mid: (4 to 6 years)
17	Oakwood Traffic Calming	Fluery Way to Tioga Street	Safety	Traffic calming/pedestrian improvements: geometry adjustments, speed humps, refresh pavement markings	Mid
18	Frankstown and Bennett	Frankstown and Bennett	Safety	Intersection improvement/traffic calming: tefresh pavement markings, curb bump outs, speed humps	Mid
19	Homewood and Upland Intersection	Homewood and Upland	Safety	Intersection improvement: geometry reconstruction, refresh pavement markings	Mid
20	Frankstown and Tokay	Frankstown and Tokay	Safety	Intersection improvement/traffic calming: refresh pavement markings, curb bump outs, speed humps	Mid
21	Collier Traffic Calming	Frankstown to Ferdinand	Safety	Traffic calming/pedestrian improvements: sidewalk reconstruction, ADA improvements, improved crossings, refresh pavement markings	Mid
22	Hamilton and 5th Intersection	Hamilton and 5th	Safety	Intersection improvement: geometry reconstruction, refresh pavement markings	Mid
23	Hamilton and Oakwood Intersection	Hamilton and Oakwood	Safety	Intersection improvement/ traffic calming: refresh pavement markings, intersection upgrades, speed humps	Mid

Table 11: Prioritized Project List by Project Type				
Transit Improvements - Bus Stop Adjacent Improvement				
Priority Ranking through Matrix	Project Name	Improvement Category	Improvement Details	Timeline Short: (1 to 3 years) Mid: (4 to 6 years)
1	Frankstown Ave. at Homewood Ave.	Transit	Shelter, crosswalks, ADA loading area	Short
2	Frankstown Ave. at Murtland St.	Transit	Shelter, crosswalks	Short
3	Frankstown Ave. at Lang Ave. NS	Transit	Shelter, ADA loading area	Short
4	Frankstown Ave. at Homewood Ave.	Transit	Shelter	Short
5	Lincoln Ave. opp. Chaucer St.	Transit	Shelter, ADA loading area	Short
6	Lincoln Ave. at Rowan St.	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
7	Lincoln Ave. at Rowan St.	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
8	Frankstown Ave. at Standard Ave.	Transit	Sidewalk reconstruction, ADA loading area	Short
9	Frankstown Ave. at Lawndale St.	Transit	Sidewalk reconstruction, ADA loading area	Short
10	Frankstown Ave. at Homewood House	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
11	Hamilton Ave. at Mulford St.	Connectivity	Sidewalk reconstruction, crosswalks, ADA loading area	Short
12	Hamilton Ave. at Mulford St.	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
13	Hamilton Ave. opp. Rosedale St.	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
14	Hamilton Ave. opp. Rosedale St.	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
15	Upland St. opp. Sterrett St. Steps Ns	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
16	Upland St. opp. Sterrett St .Steps Ns	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
17	Frankstown Ave. at Dornbush St.	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
18	Frankstown Ave. at Dornbush St.	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
19	Upland St. at #7310	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
20	Upland St. at #7310	Transit	Sidewalk reconstruction, crosswalks, ADA loading area	Short
21	5th Ave./Washington Blvd. at Silver Lake Dr.	Transit	Sidewalk reconstruction, curb ramps, crosswalks, ADA loading area	Short
22	5th Ave./Washington Blvd. at Silver Lake Dr.	Transit	Sidewalk reconstruction, curb ramps, crosswalks, ADA loading area	Short
23	Upland/Homewood	Transit	New Healthy Ride station	Short
24	Lincoln/Chaucer	Transit	New Healthy Ride station	Short

Table 11: Prioritized Project List by Project Type				
Sidewalk Improvement Corridors				
Priority Ranking through Matrix	Project Name	Improvement Category	Improvement Details	Timeline Short: (1 to 3 years) Mid: (4 to 6 years) Long: (7 to 10 years)
1	Frankstown Ave.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Short
2	Homewood Ave.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Short
3	Bennett St.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Short
4	Hamilton Ave.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Short
5	Homewood Playground Access Improvement	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Short
6	Collier Streetscape	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Mid
7	Murtland St.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Long
8	Lang Ave.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Mid
9	Hale St.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Long
10	Idlewild St.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Long
11	Monticello St.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Mid
12	Tioga St.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Long
13	Kedron St.	Connectivity	Pedestrian improvements: sidewalk reconstruction, ADA improvements	Mid

Table 11: Prioritized Project List by Project Type				
Potential Bus Shelter Location				
Priority Ranking through Matrix	Project Name	Improvement Category	Improvement Details	Timeline Short: (1 to 3 years)
1	Homewood Ave. at Finance St. (East Busway)	Transit	Bus shelter improvements	Short
2	Hamilton Ave. at Homewood Ave.	Transit	Bus shelter improvements	Short
3	Frankstown Ave. at Homewood Ave.	Transit	Bus shelter improvements	Short
4	Frankstown Ave. at Braddock Ave.	Transit	Bus shelter improvements	Short
5	Hamilton Ave. at Fifth Ave.	Transit	Bus shelter improvements	Short
6	Frankstown Ave. at Murtland St.	Transit	Bus shelter improvements	Short
7	Frankstown Ave. at Lang Ave NS	Transit	Bus shelter improvements	Short
8	Frankstown Ave. at Sterrett St.	Transit	Bus shelter improvements	Short
9	Lincoln Ave. opp. Chaucer St.	Transit	Bus shelter improvements	Short

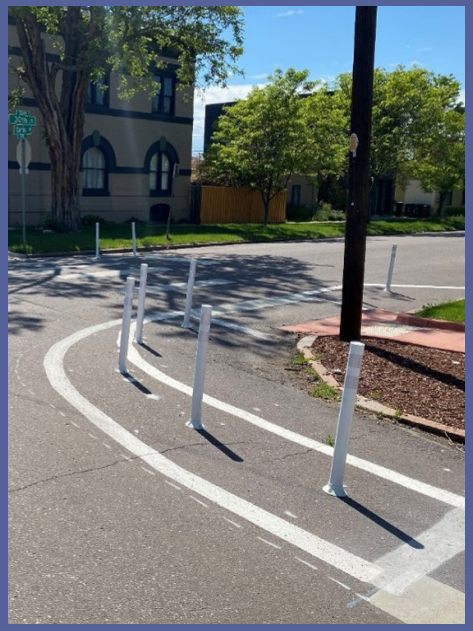
Design Toolkit

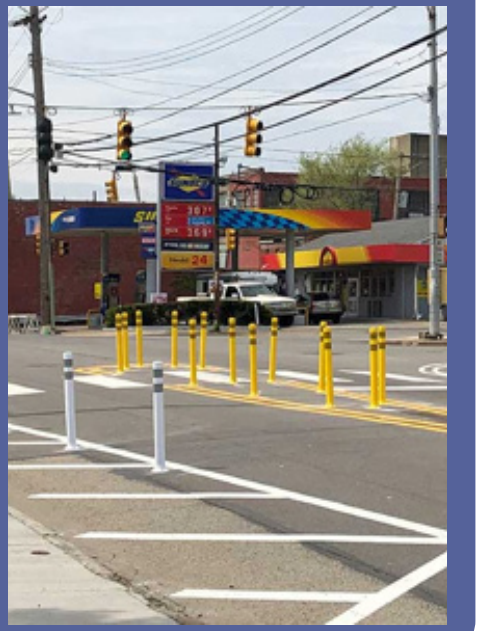
A toolkit of mobility improvements was developed that could be implemented in the proposed projects. The toolkit is focused on treatments that improve safety and that can be implemented relatively quickly using quick-build materials such as flex posts, road re-striping, speed humps, and signage. All treatments in the toolkit have been used previously by DOMI. The toolkit is organized into four categories:

1. Striping and Flex Posts.
2. Traffic Calming.
3. Signage and Pedestrian Improvements.
4. Sidewalk and Transit Accessibility.

Striping and Flex Posts

• Pavement marking/restriping • Painted curb extensions • Flex posts • High visibility crosswalk
• Pedestrian refuge island • Intersection daylighting



Traffic Calming

• Chicanes • Temporary curb bumpouts • Neighborways • Speed tables
• Speed humps • Traffic circles



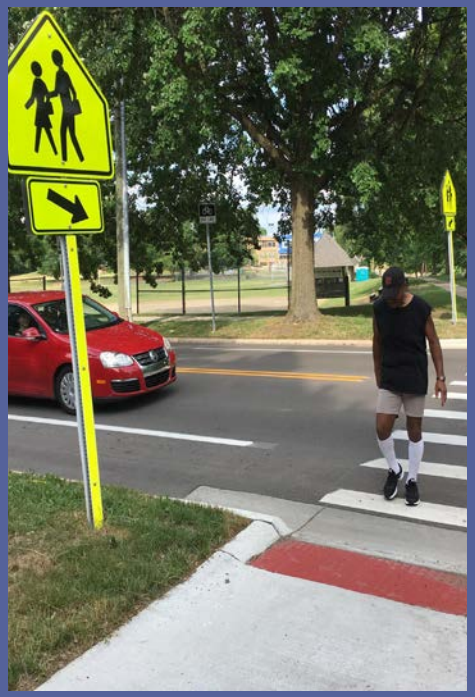
Sidewalk & Transit Accessibility

• Bus shelters • Sidewalk reconstruction • Vegetation clearance • ADA improvements
• Obstruction clearance • Mobility hubs • Bike facilities




Signage & Pedestrian Improvement

• Rectangular rapid flashing beacon • Improved signals • Signage • Improved crossings



NEXT STEPS

Next Steps

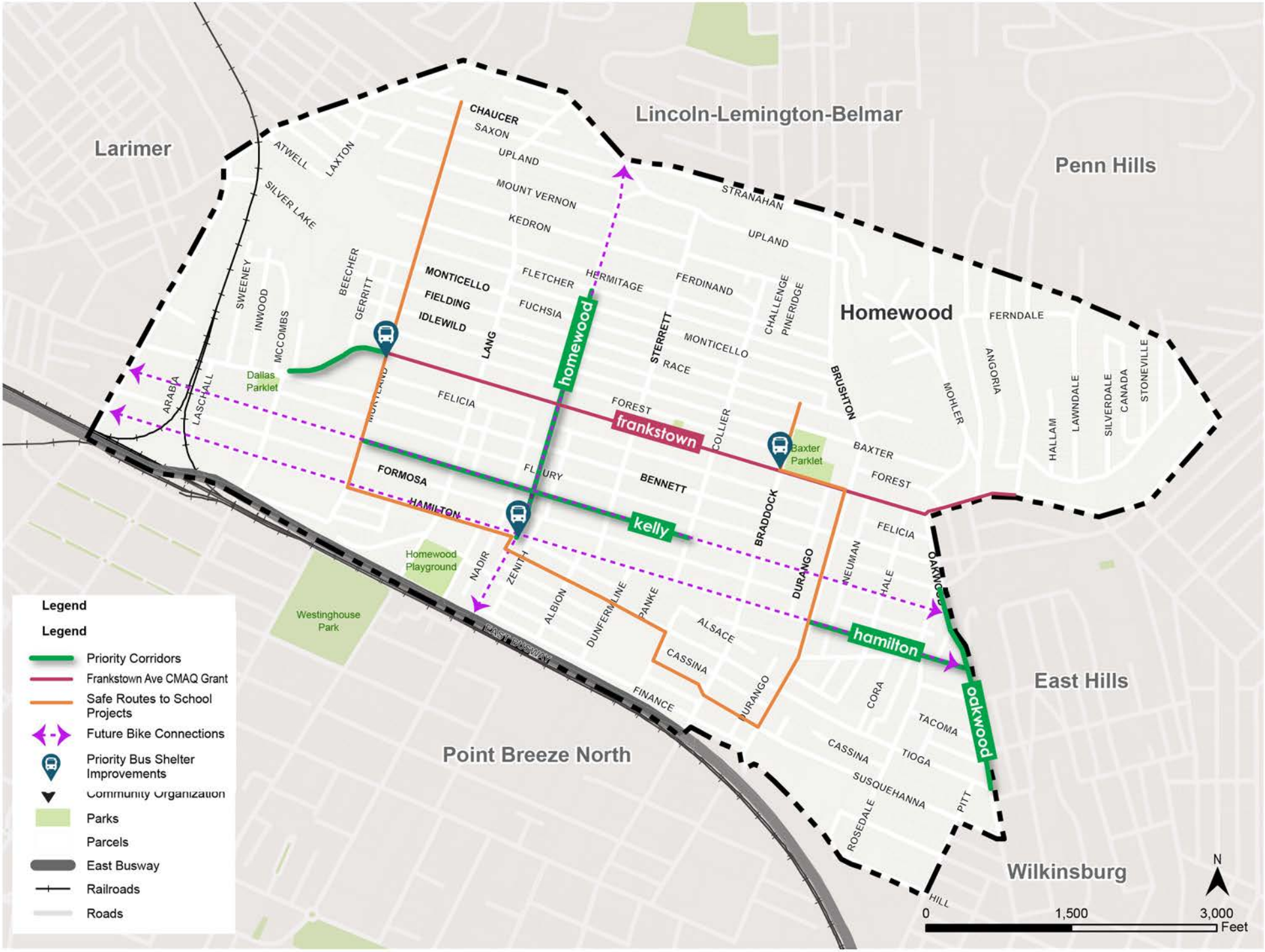
The proposed projects from the Study and other projects identified in previous planning efforts will be advanced incrementally over the next several years. Below is a summary of near-term projects in Homewood — both from this Study and from other planning efforts — that are currently being advanced. These are also identified in Figure 35.

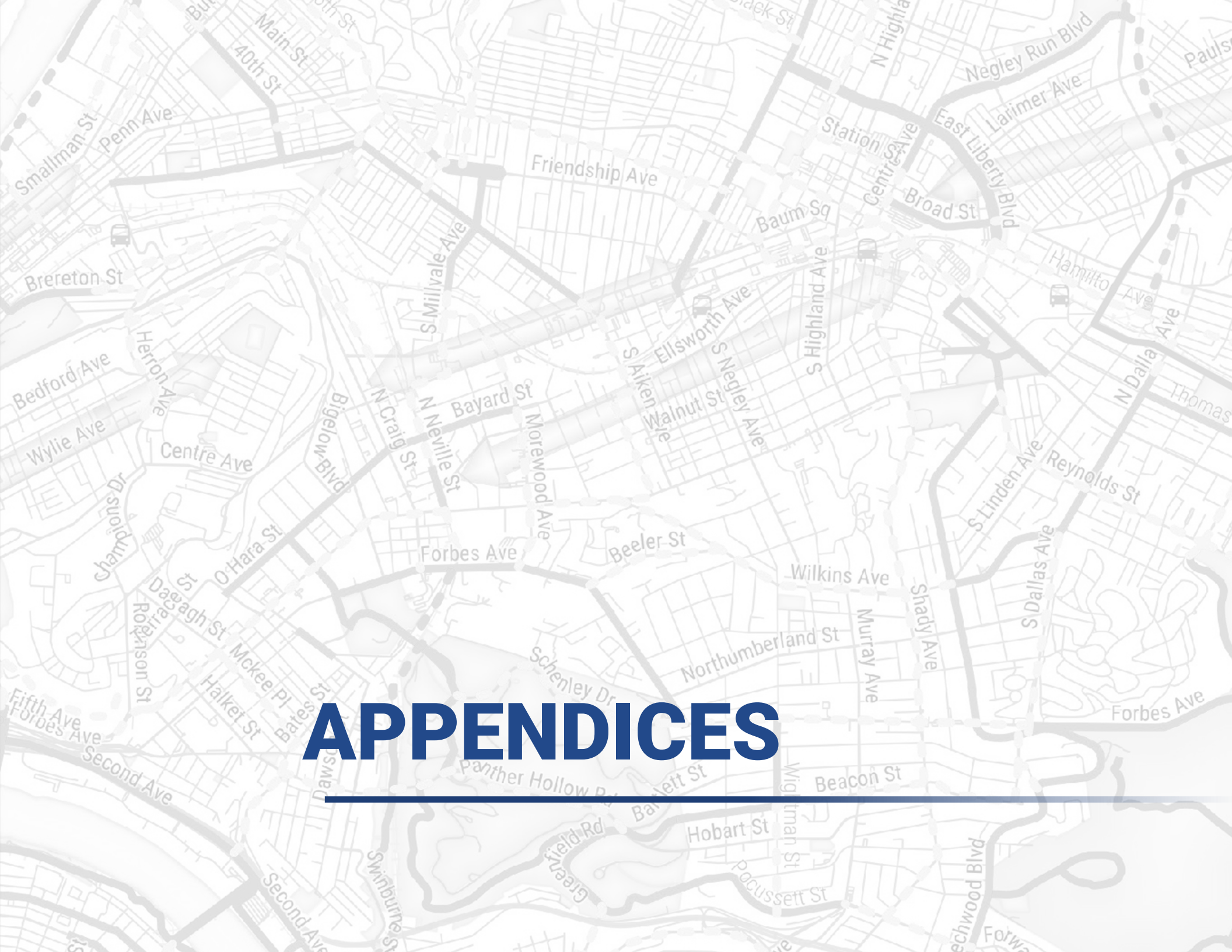
- Priority corridors identified in the study area:
  - Community-identified traffic calming and safety improvements on Homewood Avenue from Hamilton Avenue to Fletcher Avenue will be implemented by DOMI by/before the end of 2022 or 2023.
  - Preliminary design of traffic calming and safety improvements (Oakwood Street, Hamilton Avenue, Kelly Street, and Frankstown Avenue) will be advanced in early 2022 and constructed by DOMI between 2022 and 2026.
  - High priority projects on corridors under PennDOT control - Bennett Street and 5th Avenue - will require additional coordination to determine agency responsibility, funding sources, and gain the necessary approvals.
- DOMI has received a grant for a CMAQ improvement grant to fund signal upgrade and intersection improvements on Frankstown Avenue from Murtland Street to Blackadore Avenue.
- Locations for priority sidewalk improvements will be included in the 2023 Capital Improvement Plan moving forward.
- Locations for priority transit stop upgrades will be submitted to PAAC for consideration.
- Future bicycle connections will be studied for feasibility on Homewood Avenue and Hamilton Avenue as a continuation of the Bike(+) Plan implementation.
- New bus shelters at the following priority locations will be evaluated by city:
  - Frankstown at Murtland.
  - Hamilton at Homewood.
  - Frankstown at Braddock.
- Short-term improvements to five Safe Routes to School (SRTS) corridors in Homewood will be implemented starting in spring 2022 at the following locations:

  1. N. Murtland St to Hamilton Ave to Tioga Street.
  2. Hamilton to Tioga.
  3. Brushton Ave to Frankstown to N. Braddock Ave to Susquehanna Street to N. Richland Street to Tioga Street.
  4. Susquehanna Street to N. Richland Street to Tioga Street.
  5. Frankstown Ave to N. Braddock Ave to Susquehanna to N. Richland Street to Tioga Street.

Projects identified in the Study that are identified above will be implemented over time. DOMI and PAAC will continue to evaluate how these improvements can be constructed with capital funding and grant funding. Partnerships with local organizations such as Operation Better Block, BikePGH, and schools and religious institutions will be critical to the success of the project.

Figure 35: Upcoming Projects




Smallman St
Penn Ave
40th St
Main St
Friendship Ave
Negley Run Blvd
Larimer Ave
East Liberty Blvd
Station St
Centre Ave
Broad St
Baum Sq
Brereton St
S Millvale Ave
S Highland Ave
Ellsworth Ave
S Aiken Ave
Walnut St
S Negley Ave
Hamilton Ave
N Dallas Ave
Bedford Ave
Heron Ave
Wylie Ave
Centre Ave
Bigelow Blvd
N Craig St
N Neville St
Bayard St
Morewood Ave
S Linden Ave
Reynolds St
Champions Dr
O'Hara St
Forbes Ave
Beeler St
Wilkins Ave
Shady Ave
S Dallas Ave
Robinson St
Daeagh St
McKee Pl
Halket St
Schenley Dr
Northumberland St
Murray Ave
Fifth Ave
Forbes Ave
Second Ave
Panther Hollow Rd
Beacon St
Hobart St
Swinburne St
Pocussett St
Forbes Ave

APPENDICES

A. Homewood Safety Study Memorandum