NEXTransit

Market/Travel Demand Analysis

APPENDIX F

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Introduction

This report provides an overview of the Allegheny County transportation market and contains an evaluation of where transit demand is located within the Port Authority of Allegheny County's (the Authority) service area. Specifically, this report provides:

- An overview of the Port Authority system
- A description of the job market and where job centers are located
- Travel patterns within the market
- Transit demand within the market
- Regional population changes
- Public input gathered during this analysis
- Potential gaps in the Authority's current services.

Transit agencies assess markets to identify potential customers, focus their strategies, and prioritize their investments. This market analysis is the second step in the Authority's NEXTransit project. It is intended to bridge the gap between our understanding of existing conditions in Allegheny County and our future discussion of investments, high-level service planning priorities, and major policy directions.

Throughout this process, the NEXTransit project team has coordinated a number of key engagement and outreach activities. We conducted a brainstorming exercise with experienced transit planners including current leaders within the Authority's planning department. The project team conducted a transit propensity analysis to assess the potential transit ridership of each census tract within the service area. The team also conducted extensive market research to identify current and future trends which may impact the future of transit ridership in Allegheny County.

Throughout this report, pre-COVID-19 pandemic data was utilized including travel data, travel patterns, populations, and operating statistics.

System Overview

Port Authority of Allegheny County (PAAC) was established through state enabling legislation in 1959 and began operations in 1964. PAAC is the second largest transit system in the Commonwealth of Pennsylvania providing variety of transportation services in Allegheny County, and in several areas immediately adjacent to Allegheny County, in Southwestern Pennsylvania. PAAC serves a population of approximately 1,230,000 in a 775 square mile area (496,000 acres) with 97 bus routes, three light rail routes, and two inclined planes (the Monongahela Incline and the Duquesne Incline—the latter of which is operated by an outside entity, the Society for the Preservation of the Duquesne Heights Incline). The Authority also sponsors the ACCESS paratransit program, which provides door-to-door, shared-ride service contracted through a third-party provider.

To deliver transit service, PAAC maintains significant infrastructure assets. The fleet consists of 729 buses, servicing over 7,000 transit stops and stations throughout the Allegheny County; 82 light rail vehicles servicing 27 stations from the South Hills to the North Side area, and 2 inclines with two cars each servicing upper and lower stations. Port Authority customers have access to more than 700 shelters and over 50 Park and Ride lots with more than 13,000 parking spaces. The agency's operational centers are comprised of one light rail maintenance and storage facility, four bus garages, and one heavy maintenance bus facility.
Port Authority's approximately 2,700 employees support bus routes, light rail lines, inclines, and a paratransit service which serve over 62 million annual trips with an average of 215,000+ daily riders.

Route Overview

The delivery of the various transportation routes and services are tailored to the needs of riders based on geographic accessibility. Port Authority provides variety of services that are designed to connect people living outside of the city with Downtown Pittsburgh, to and from Pittsburgh International Airport and nearby shopping centers, and within Pittsburgh itself. Port Authority operates many routes for 20 hours per weekday, with routes generally beginning service between 4:00 AM and 5:00 AM and ending service between 12:00 AM and 1:00 AM. Routes generally operate at least 17 hours on Saturdays and at least 15 hours on Sundays. While the service span is generally adequate for a service area with the population and job density of Allegheny County (with some exceptions, as noted in this report). Transit service types in Allegheny County consist of:

Commuter Network routes are designed primarily to serve commute trips to and from downtown Pittsburgh and Oakland, and reverse commute trips to suburban destinations such as shopping centers and Pittsburgh International Airport.

Local network routes are basic transit serivces that operate on surface streets and are intended to be as direct as possible. These routes each typically serve 1,000 or more weekday riders on average.

Coverage network routes mainly operate in low-density areas (or where street networks are poorly connected), and this basic transit accommodation often results in indirect or infrequent service. In these areas, routes have to be circuitous to serve small pockets of ridership.

Rapid service network routes operate mainly on fixed guideway infrastructure made up of Light Rail Transit (LRT, commonly referred to as the "T") and Busways. The 26.2-mile LRT system connects the South Hills to the greater Downtown area (inclusive of Station Square and the North Shore). The three LRT

lines operate in several configurations: at-grade in mixed traffic through the Beechview neighborhood, on dedicated right-of-way with some grade crossings, on a short section of aerial alignment in the North Shore and in a subway within the Golden Triangle. The three busways are dedicated bus-only roads that facilitate both dedicated BRT-like service (such as the P1 East Busway or the G3 West Busway) and express/commuter service (where part of the route uses the busway to avoid congestion on surface streets).

Inclines (funicular railway) are a unique way of travel to traverse some of the steep hills of Pittsburgh. Popular with tourists and daily commuters alike, the Monongahela Incline travels 635 feet to Mount Washington and the Duquesne Incline travels 400 feet to Duquesne Heights. These are vital connections for communities that would otherwise have much more difficult and lengthy journeys up and down the hillside.

Paratransit service, known as ACCESS, is a shared-ride provides door-to-door advanced reservation transportation to the general public, primarily focusing on riders with disabilities, seniors, and clients of human services.

Regional Commuter bus routes from several surrounding counties provide transit service to locations within Allegheny County. Westmoreland County Transit Authority, Beaver County Transit Authority, Butler Transit Authority, and Washington County Transit Authority each provide service each weekday into Port Authority's service area.

Planned Services

Transit services are vital for the regional economy and its growth as they are connecting riders to their place of work on daily basis. It is crucial for PAAC to provide adequate services to support identified need and to connect residents to the dense clusters of employment that drive the region's competitive advantage.

In order to promote regional growth, enhance and consolidate existing service, and to provide a better rider experience, PAAC is planning to implement a new on-street **Bus Rapid Transit (BRT)** service—a first for the agency, as its existing BRT services use separated fixed guideways. The Downtown-Uptown-Oakland-East End Bus Rapid Transit project is in final design as of the date this repor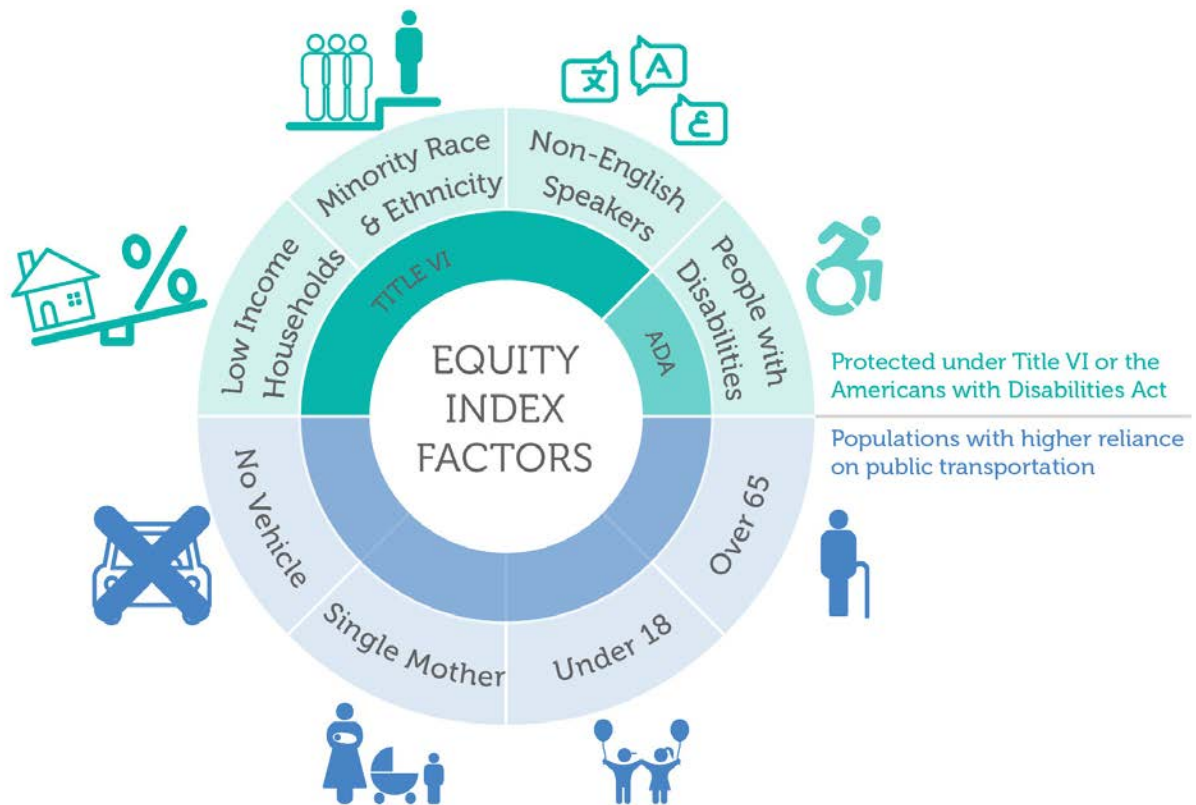t was released, with an expectation that once constructed it will provide a higher-quality bus-based transit network with dedicated lanes, offering fast, safe, comfortable, reliable, convenient, and cost-effective service. The BRT will provide riders with a more light rail-like experience between Downtown and Oakland with branches that connect further to the East Busway (to Wilkinsburg), East Liberty/Highland Park, Squirrel Hill/Greenfield neighborhoods, (with standard service continuing to several Mon Valley communities outside of the City of Pittsburgh).

Premium Transit Network
- Light Rail
- Busway
- Future BRT Alignment
- City of Pittsburgh
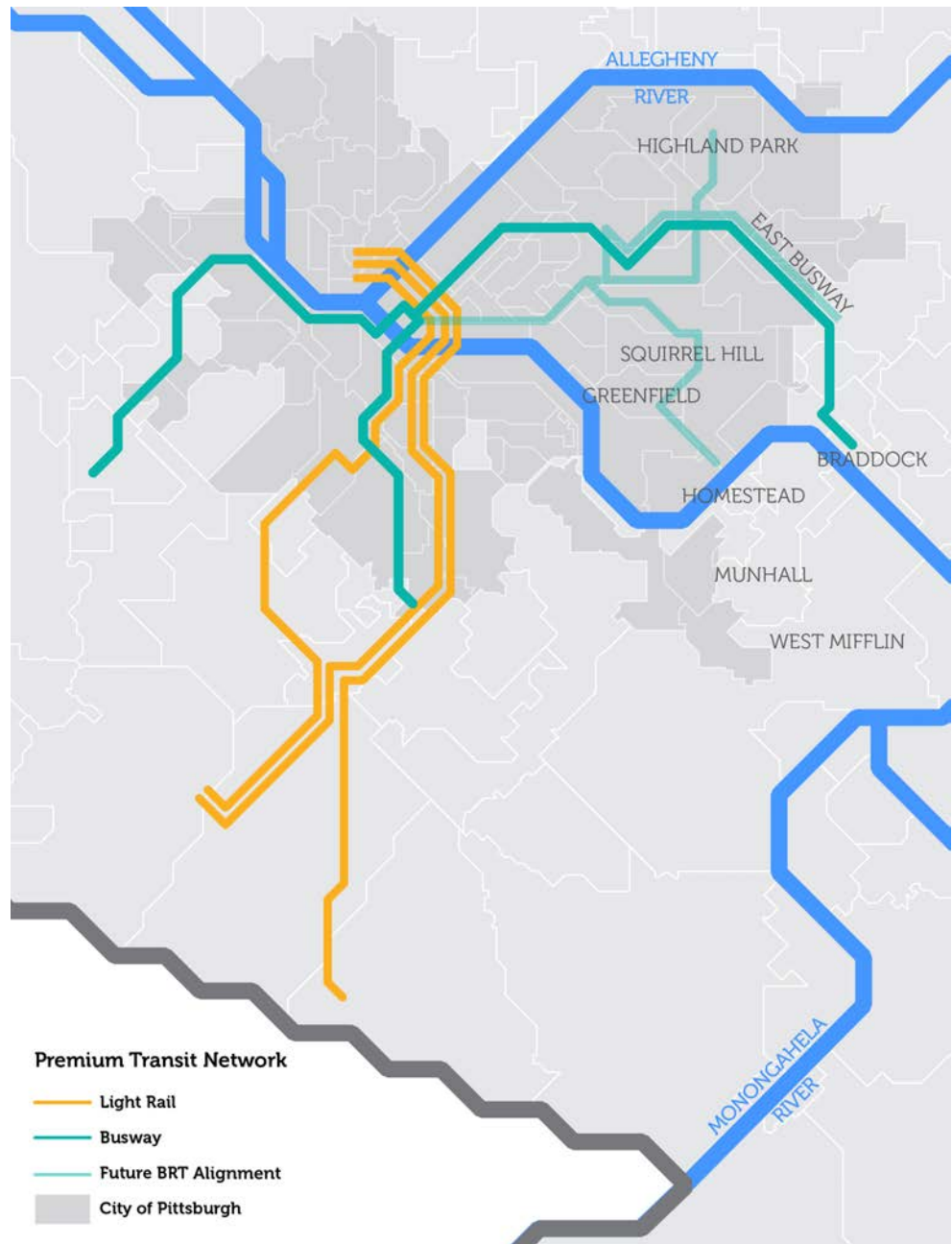
Equity for At-Risk Populations

The Authority is committed to serving those with the greatest need in the Pittsburgh Region. The Federal Transit Administration's Title VI requirements prohibit discrimination by recipients of Federal financial assistance on the basis of race, color, and national origin, including the denial of meaningful access for limited English proficient (LEP) persons under the Civil Rights Act of 1964. The Authority strives to go above and beyond these Federal requirements, however, and has created an "Equity Index of Mobility Need" to help in planning and prioritizing system, asset, and infrastructure changes and projects based on these groups. The Index includes populations which have been shown through research to have higher need for public transportation services.

The Authority's equity analysis will impact recommendations made in future stages of the NEXTransit plan.

EQUITY INDEX FACTORS

Minority Race & Ethnicity · Non-English Speakers · People with Disabilities · Over 65 · Under 18 · Single Mother · No Vehicle · Low Income Households

TITLE VI · ADA

Protected under Title VI or the Americans with Disabilities Act

Populations with higher reliance on public transportation

Population and Jobs

Population density and job density are important factors in transit productivity. Areas of high density, where a single bus stop can be accessed by a greater number of residents or employees, correlate to potential transit productivity. On the other hand, communities that may have a sizable number of people willing to access transit may not have the density to support fixed-route bus service. These areas are often long-distance or intercity transit markets better served by Park & Ride facilities.

Within the City of Pittsburgh, the neighborhoods of North Oakland, Central Oakland, Bluff (more commonly referred to as Uptown), Shadyside, and Bloomfield all have high population densities of over 18,000 residents per square mile. Outside of Pittsburgh, there are pockets of high density in Bellevue, Mount Lebanon, Swissvale, Wilkinsburg, Edgewood, McKeesport, and Dormont. These locations represent significant potential for origin-based transportation trips.

While shorter (under five miles) personal trips like shopping, childcare, education, medical visits, etc. represent the majority of overall transportation trips taken, employment represents the largest clustered destination-based activity of mostly longer trips that draws from a much larger area. Density of jobs can play an enormous role in land use and equity, as access to jobs can provide upward mobility and financial independence. Density also plays a large role for innovative companies that hope to attract skilled workers to urban and mixed-use downtowns, waterfronts, and public spaces where entrepreneurs gather and connect.

Population per SqMi

- 5,000 - 10,000
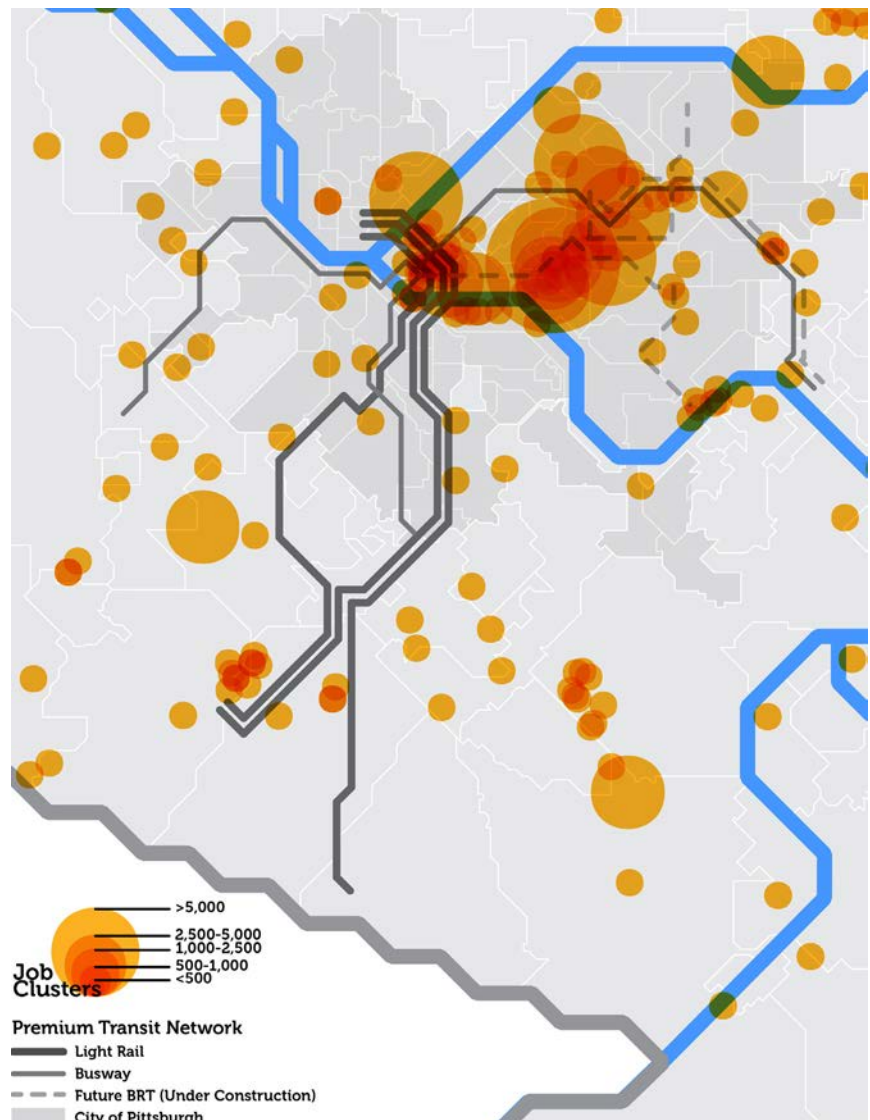- 2,000 - 5,000
- 1,000 - 2,000
- 500 - 2,000
- 0 - 500
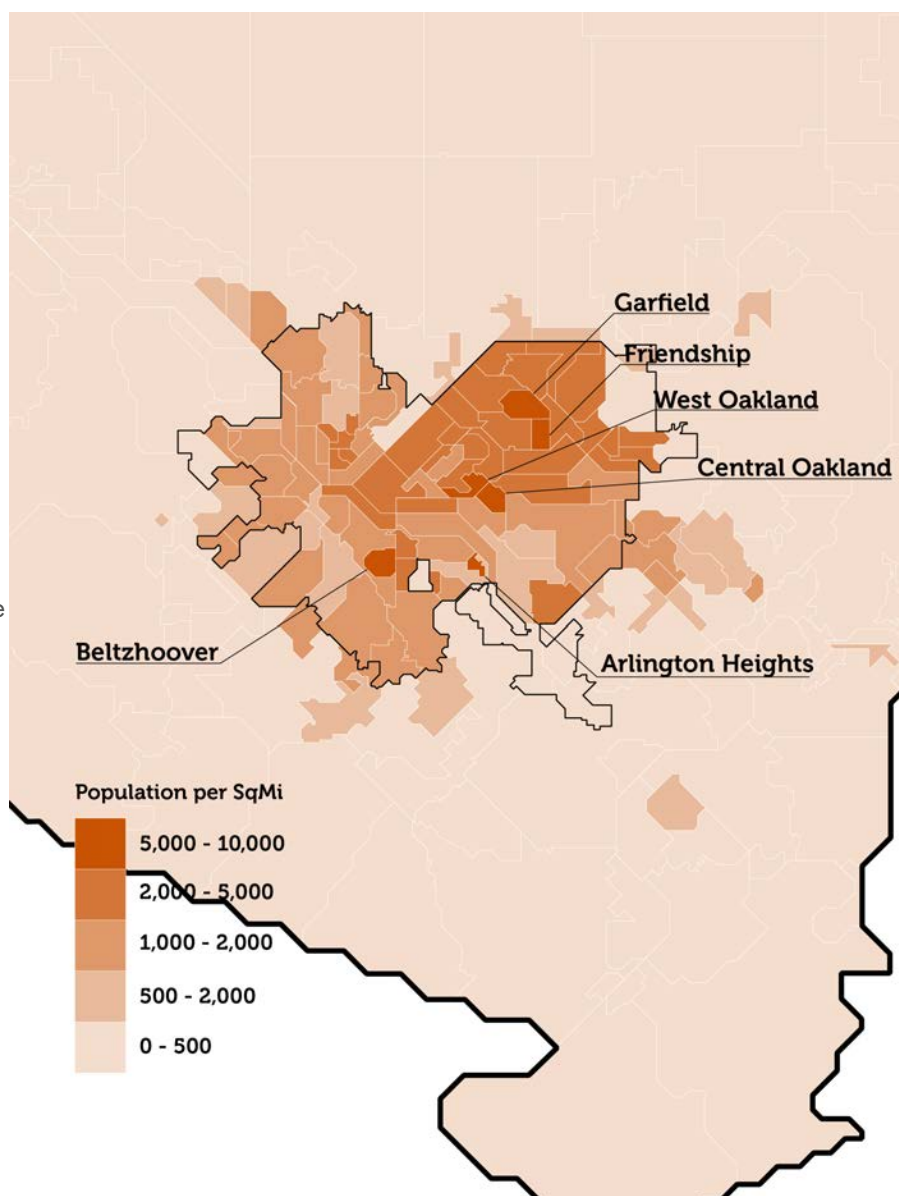
Job density is also important in determining the location and frequency of transit service, as is the type of employment offered within each cluster. Some job sectors are more transit-oriented than others-- warehousing, manufacturing, and large retail facilities are not easily built at-scale within high density urban settings, and often do not promote high transit ridership when located outside of the city in isolated, single-zone districts. Some of these are clustered together in a manner that could be transit-friendly, though walkability is often poor. At large retail facilities, though wages are predominantly lower, driving is often the main way employees reach their place of employment. Conversely, the office, professional services, financial, public (government), university, and medical sectors are mainly clustered in the CBD and other dense areas. Hotels, restaurants, custodial, and similar types of services that complement major

CBD employment sectors attract many commuters from areas of high transit propensity and can generate significant ridership.

With more than 30 colleges and universities in the Pittsburgh region, including the University of Pittsburgh (Pitt) and Carnegie Mellon University (CMU), institutions of higher learning are also a large source of ridership, both as origins and destinations within the region. Transit use to and from these two campuses is encouraged via contract programs at Pitt and CMU that allow both students and staff to use their university IDs as transit passes, subsidized in part by student fees.

The map to the right shows significant job clusters relative to the existing and currently planned rapid transit network.

Job Clusters
>5,000
2,500-5,000
1,000-2,500
500-1,000
<500

Premium Transit Network
Light Rail
Busway
Future BRT (Under Construction)
City of Pittsburgh

Per the US Bureau of Labor and Statistics, in the Pittsburgh metropolitan area (including Allegheny, Armstrong, Beaver, Butler, Fayette, Washington, and Westmoreland Counties), professional and business services had the largest employment gain among all job sectors from March 2019 to March 2020, adding 3,300 jobs. Three other sectors had a significant job increase during this time frame: financial activities gained 2,800 jobs, construction gained 2,400 jobs, and government gained 1,800 jobs.

Trends in the Job Market

Large technology companies are expanding their employment in Allegheny County. Amazon, a global leader in logistics, online retail, and web services, is building a 1,000,000 square foot product fulfillment facility in Findlay Township, and will bring in estimated 800 full-time jobs--other such facilities are likely to follow along other highway corridors. Other tech giants such as Google, Bosch, SAP, Facebook, Microsoft, Apple, and others, have established offices in Pittsburgh, drawing from the talent pool offered by Carnegie Mellon University and University of Pittsburgh. Uber has a large autonomous vehicle research and development center in the City's Hazelwood neighborhood, employing hundreds of people who are developing autonomous vehicle technology—this facility is projected to relocate to the Airport corridor both to expand as well as to make way for development of the Hazelwood Green site. Argo AI is also growing in Pittsburgh's Strip District, and is actively testing autonomous vehicles in mixed traffic.

Jobs in the hospitality industry are also on the rise. Several hotels were rebuilt in 2019 and more are planned for construction in future years, bringing hundreds of jobs to Pittsburgh area. The former Macy's building in Downtown Pittsburgh includes a 160- room hotel as part of a larger mixed-use project. A luxury 167-room hotel, the Oaklander, was built on the property of Pittsburgh Athletic Association, located at the University of Pittsburgh. The former Washington Education Center in the Lawrenceville neighborhood was converted to TRYP by Wyndham Hotel, providing 108 rooms. Maxy Hotel with 174-rooms was built in the former Saks Fifth Avenue store in Downtown Pittsburgh. A $35 million-dollar hotel is planned to open with 221 rooms, built along the North Shore adjacent to the Rivers Casino.

Job gains and losses in the Pittsburgh, Pa. Metropolitan Statistical Area
between March 2019-March 2010 (preliminary)

Employment Sector	Net Change (in thousands)	Percent Change
TOTAL NONFARM	3.0 ↑	0.3
CONSTRUCTION	2.4 ↑	4.2
MANUFACTURING	0.1 ↑	0.1
INFORMATION	0.2 ↑	1.0
FINANCIAL ACTIVITIES	2.8 ↑	3.7
PROFESSIONAL AND BUSINESS SERVICES	3.3 ↑	1.8
LEISURE AND HOSPITALITY	0.8 ↑	0.7
GOVERNMENT	1.8 ↑	1.5
MINING AND LOGGING	-1.0 ↓	-8.3
TRADE, TRANSPORTATION, AND UTILITIES	-3.6 ↓	-1.7
EDUCATION AND HEALTH SERVICES	-2.2 ↓	-0.8
OTHER SERVICES	-1.6 ↓	-3.3

Source: US Bureau of Labor Statistics

The Covid-19 pandemic is had a significant impact on the hospitality industry as public health measures have limited travel. Economists have estimated the industry may not return to pre-pandemic demand levels until 2023. However, the recovery could be quicker if wide-spread effective public health measures are enacted or a vaccine is developed.
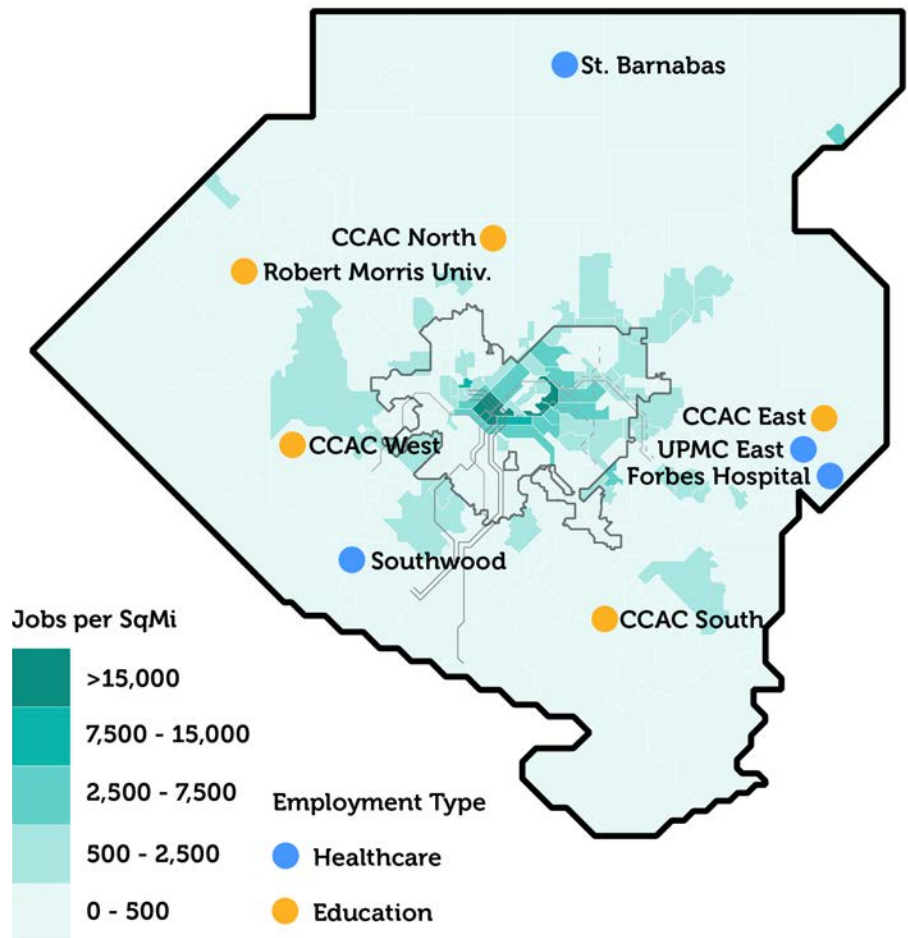
Major Employment Centers

The top industries based on North American Industry Classification System (NAICS) code were general medical and surgical hospitals; restaurants and other eating places; elementary and secondary schools; colleges and universities; management of companies and enterprises; depository credit intermediation; offices of physicians; individual and family services; executive, legislative, and general government; and insurance carriers. Medical centers are the most significant centers of high-density employment. In the first quarter of 2020, six of the top ten employment centers in the county were UPMC facilities and affiliates in the City of Pittsburgh.

Outside of Pittsburgh, however, the St. Barnabas Health System in Gibsonia and the Southwood Psychiatric Hospital in Bridgeville employ around 600 and 400 staff, respectively, who are not currently served by fixed-route bus service. Given the 24-hour need for staff at hospitals, it is also important that employees working late or early shifts can access transit over long service spans seven days a week, which is less common outside of Pittsburgh. For example, the two major medical centers in Monroeville (Forbes Hospital and UPMC East) together have over 1,800 employees, though Forbes Hospital is not yet served directly by transit.

Institutions of higher learning are also significant employment hubs—seven colleges and universities in the City of Pittsburgh (Community College of Allegheny County (CCAC), Pitt, Carnegie Mellon, Duquesne, Carlow, Chatham, and Point Park Universities) employ over 7,000 between them. Outside of Pittsburgh, Robert Morris University in Coraopolis has over 400 employees. These schools are all well served by transit throughout the week, helping connect employees to each of these major employers.

The map to the right shows significant job clusters throughout the County by concentration per square mile. Most employment is located within the City of Pittsburgh, with concentrations in the inner-ring suburbs bordering the City. The highlighted points represent significant employers in the medical/education industries that exist outside of major clusters.

Jobs per SqMi

>15,000

7,500 - 15,000

2,500 - 7,500

500 - 2,500

0 - 500

Employment Type

● Healthcare

● Education

Travel Patterns

The project team examined origin and destination (O&D) data to understand how people are moving around Allegheny County. Working with the Southwest Pennsylvania Commission (SPC), the regional metropolitan planning organization, O&D data was obtained from Streetlight Data, Inc. Streetlight aggregates and maps trip data from internet-connected vehicles and smartphone location data (from users who have allowed apps to access their location). For purposes of this report, the project team specifically examined O&D data regardless of mode of travel. Several of the areas have already been identified earlier in this analysis as having increasing populations including the Strip District, Central Business District, and neighborhoods in the North Shore. Below are the top origins and destinations in Allegheny County regardless of mode of travel. The locations mapped below represent the center point of each municipality (or neighborhood, for those within the City of Pittsburgh).

- Strip District
- North Shore
- Central Business District
- South Shore
- Chateau
- Bluff (Uptown)

- Findlay Township
- East Allegheny
- North Oakland
- Shadyside
- Monroeville Municipality

- Central Oakland
- McKeesport Municipality
- Robinson Township
- McKees Rocks Borough
- Moon Township
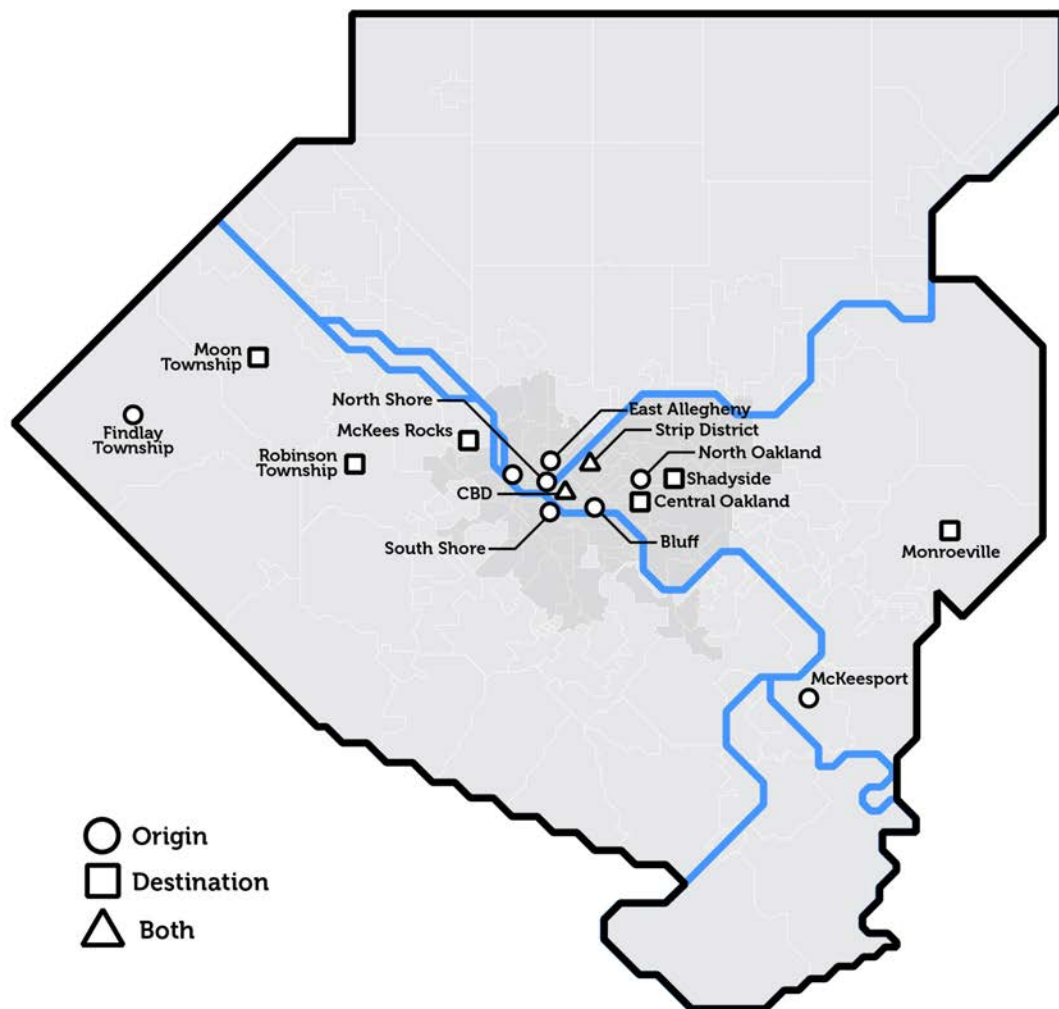
Origin/Destination Pairs - Top 20 of Any Distance

To shed some further light on these origins and destinations, the project team also looked at pairs of locations which are frequently traveled and typically reflect daily commuting patterns. The data indicates that many travelers are starting and ending their trips outside of the Central Business District--it also shows some significant clusters of trips taking place entirely within suburban communities.
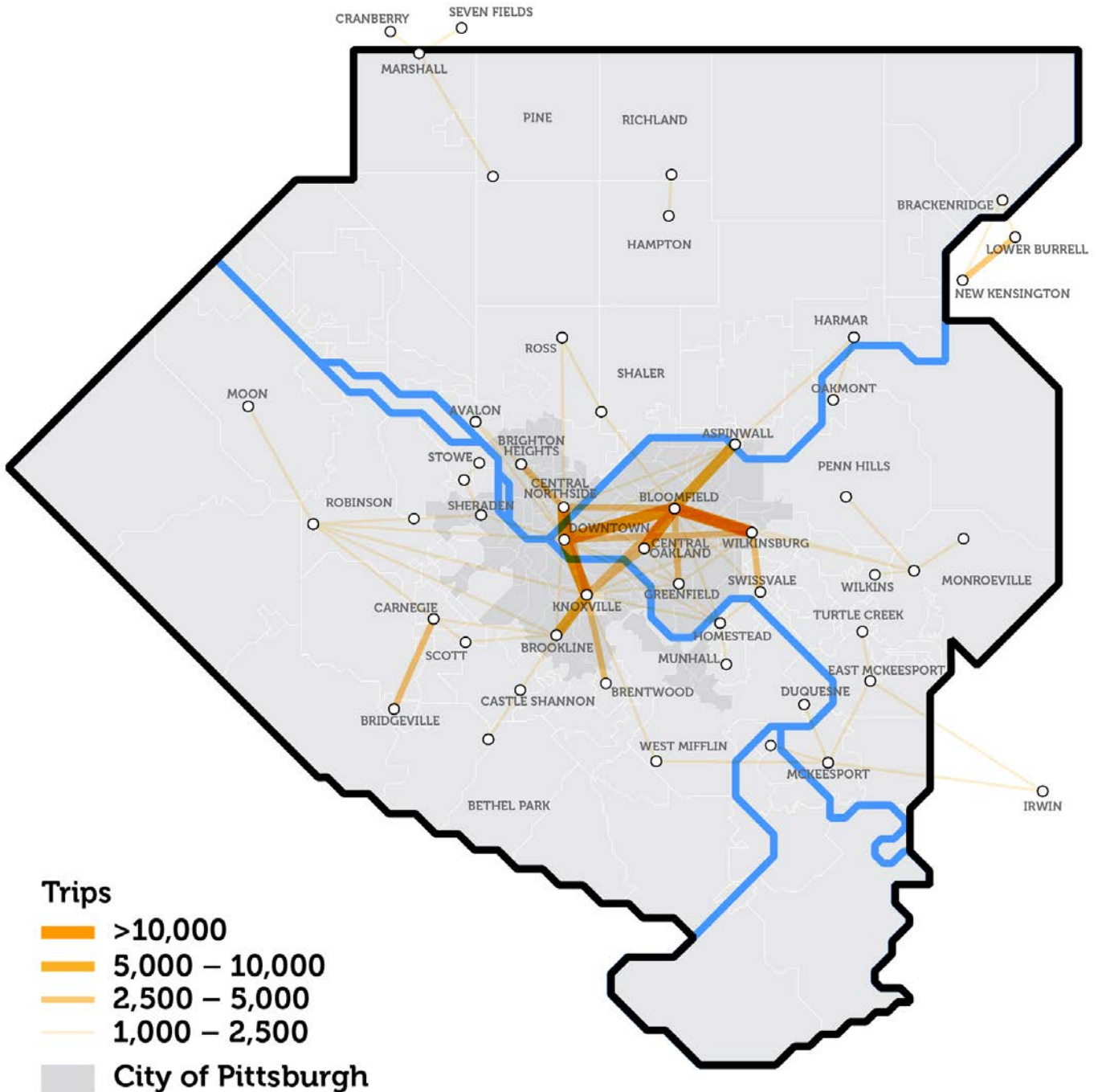
Anecdotal evidence that most peoples' trips are under five miles is borne out of the data--while commute trips tend to be longer, they typically only happen twice per day (to work and back home). Other trips such as shopping, medical appointments, childcare, school, visiting friends, etc. tend to be clustered around a small radius around peoples' homes. The following map is a representation of the top 20 origin/destination pairs within Allegheny County. It does not represent all clusters of activity, but does show areas where short trips are taken the most (i.e. other places within the County take fewer and/or longer distance trips than the pairs shown here). In the map below, points are mapped as the center point of each census tract to allow for short trips to be shown.

Trips

■ >10,000
■ 6,000 – 10,000
— 1 – 6,000
○ Origin
□ Destination
△ Both
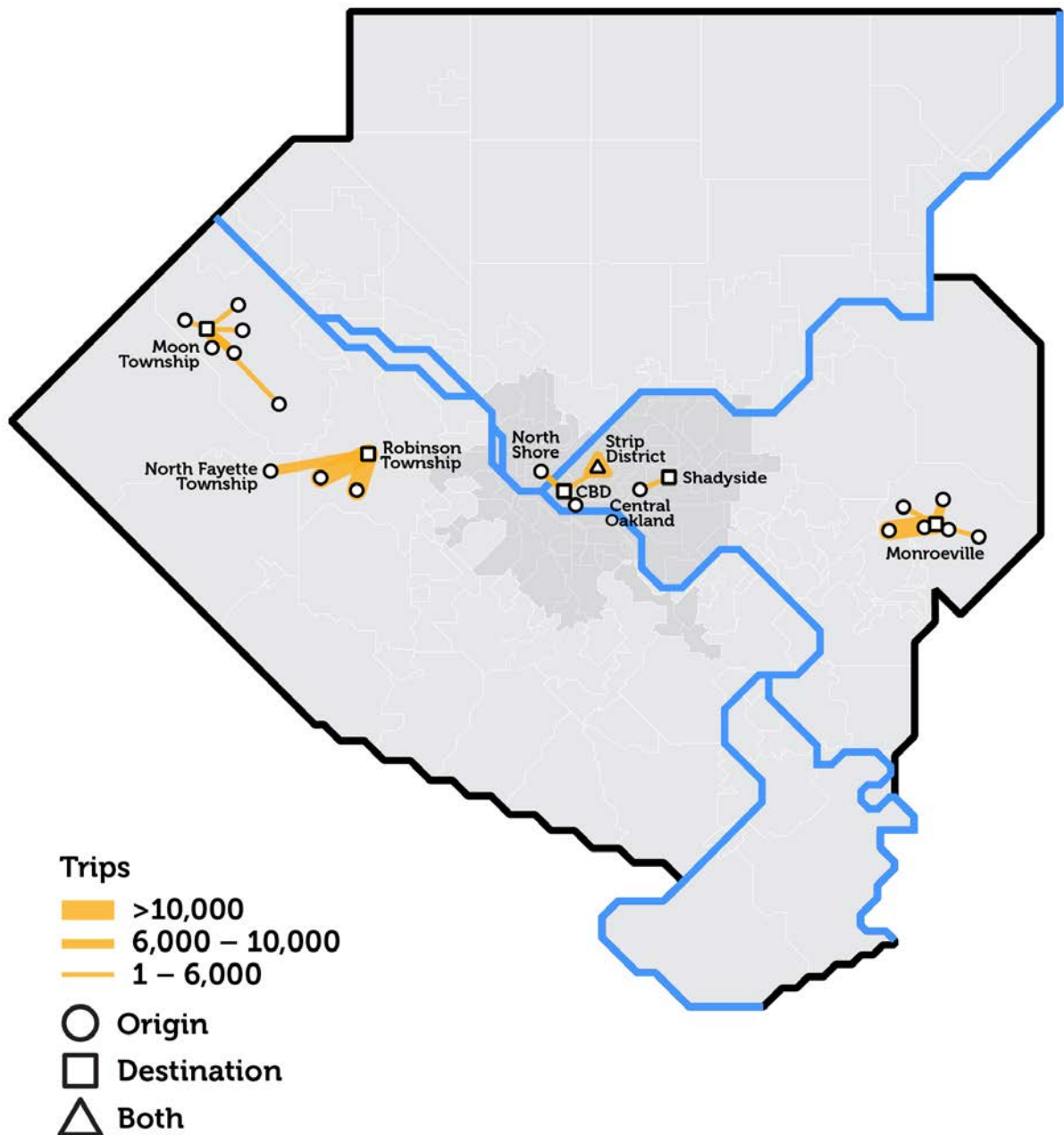
Origin/Destination Pairs - Significant Desire Lines

To get a better sense of neighborhood-to-neighborhood connections that are happening now within the County, it is important to understand the frequency of trips that are taking place across longer distances. While the 3-5 mile distance of trips is most prevalent and can help to identify clusters of need, people also require ways to connect *between* clusters when their needs cannot be met within their immediate area.

The following map shows all major origin/destination pairs from the Streetlight data set that have at least 500 daily trips between them. Some trips are still short, but many cover significant distance and have nodes that branch in multiple directions.
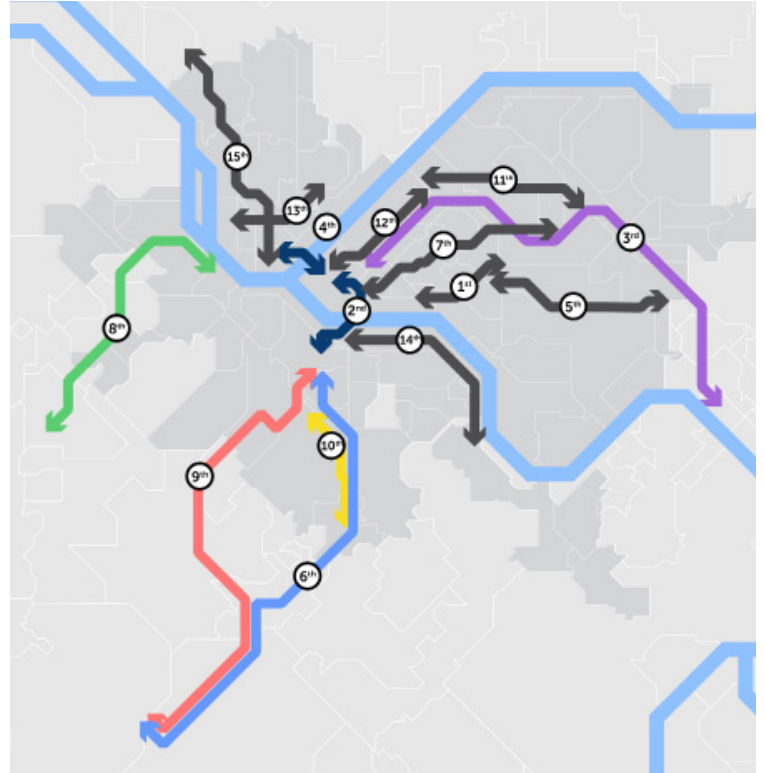

CRANBERRY SEVEN FIELDS
MARSHALL
PINE RICHLAND
BRACKENRIDGE
LOWER BURRELL
HAMPTON NEW KENSINGTON
HARMAR
ROSS SHALER OAKMONT
MOON AVALON
BRIGHTON HEIGHTS ASPINWALL
STOWE PENN HILLS
CENTRAL NORTHSIDE
ROBINSON SHERADEN BLOOMFIELD
DOWNTOWN
CENTRAL OAKLAND WILKINSBURG
SWISSVALE MONROEVILLE
CARNEGIE KNOXVILLE WILKINS
GREENFIELD TURTLE CREEK
SCOTT BROOKLINE HOMESTEAD
MUNHALL EAST MCKEESPORT
BRENTWOOD DUQUESNE
BRIDGEVILLE CASTLE SHANNON
WEST MIFFLIN
MCKEESPORT
IRWIN
BETHEL PARK

Trips
━━ >10,000
━━ 5,000 − 10,000
━━ 2,500 − 5,000
── 1,000 − 2,500
▧ **City of Pittsburgh**

Corridors

Transportation corridors provide vital connections between geographic areas, often connecting residential and commercial areas. They are often characterized by higher volumes of traffic via one or multiple modes of travel. For example, a corridor in an urban area may have high volumes of automobile traffic, as well as transit service and pedestrian traffic.

Transit Corridors

Transit corridors are typically characterized by higher volumes of traffic when they operate in mixed traffic on urban arterials, however significant ridership is carried by rapid modes such as light rail and bus rapid transit operating on dedicated rights of way. Transit corridors are major generators of pedestrian traffic as riders typically walk through transit access sheds to reach their desired transit routes. There are generally three types of transit corridors: destination connectors, commuter, and circulator. However, most corridors tend to be a mix of these three and are difficult to clearly


delineate.

Allegheny County's major transit corridors include the Light Rail network, South Busway, East Busway, and West Busway. While these facilities are significant and move lots of people quickly, many of the top people-moving corridors in the County are transit routes that operate in mixed traffic. The map on this page identifies the top 15 transit corridors in the system, the mode they utilize, and the average weekly passenger volume they carry--these volumes are inclusive of all routes that operate within the segments shown.

Rank	Mode	Corridor	Average Weekly Volume
1		Oakland	24,847
2		LRT to CBD	18,500
3		East Busway	16,395
4		LRT to Northside	16,000
5		Squirrel Hill	10,728
6		Blue Line	9,000
7		Centre Ave	8,206
8		West Busway	6,627
9		Red Line	6,500
10		South Busway	6,433
11		Penn Ave	5,527
12		Liberty Ave	5,467
13		North Ave	5,462
14		E Carson St	5,355
15		Brighton Rd	4,430

Arterial Corridors

Urban transportation corridors are made up of complex combinations of land-uses. Segments are typically defined by public perception (i.e. arts district) or by major interchanges. Traffic volume is measured by annual average daily traffic (AADT). AADT is the total volume of vehicle traffic of a roadway for a year divided by 365 days. For purposes of this study, we considered significant corridors with AADT greater than 10,000. In addition to the Interstate highways which traverse Allegheny County, there are numerous state and local streets (other arterials) that experience higher levels of traffic that impacts overall mobility in our region.
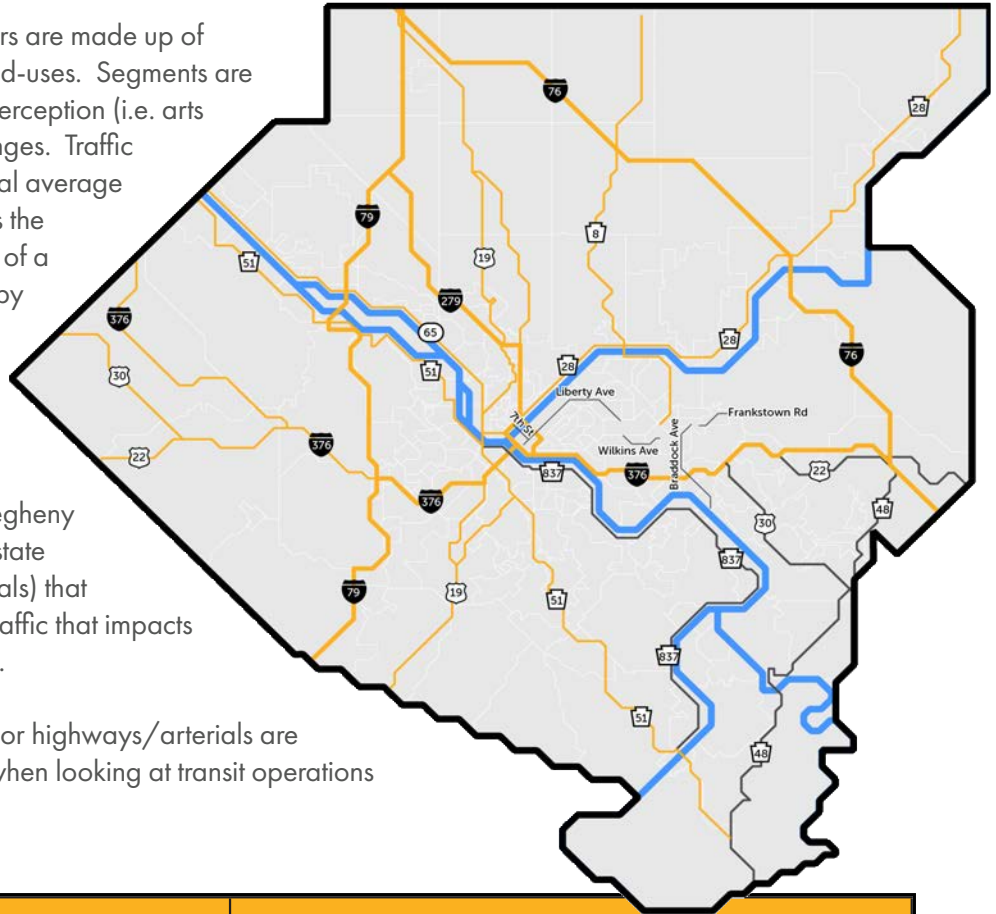
The following portions of major highways/arterials are major corridors to consider when looking at transit operations and overall traffic volumes:

Corridor	Segment Start	Segment End	AADT
28	North Shore	PA Turnpike at Harmar	48,000-78,000
19	Washington County	Butler County	28,000-40,000
65	Beaver County Line	Pittsburgh	21,000-29,000
8	Richland	PIttsburgh	25,000-28,000
380	PA 8	I-579	20,000-25,000
22	Washington County	Robinson	17,000-25,000
30	Forest Hills	Westmoreland County	17,000-25,000
51	Westmoreland County	Beaver County	11,000-30,000
837	Duquesne	South Side	12,000-22,000
48	McKeesport	Monroeville	16,000-18,000

Local Streets

Local streets provide primary access to residential areas and businesses. AADT for local streets is typically calculated during periodic traffic counts during normal traffic conditions. The following selected local streets have AADT greater than 10,000.

Street Name	Segment Start	Segment End	AADT
Liberty Ave	Commonwealth Pl	11th St	~17,000
S Braddock Ave	Penn Ave	Rankin Bridge	~17,000
Bennett St/ Frankstown Rd	Oakwood St	Robinson Blvd	~14,000
Wilkins Ave	Fifth AVe	S Dallas Ave	~10,000
Sandusky St/ 7th St	North Shore	Liberty Ave	~10,000

Interstates

Multiple Interstate highways traverse Allegheny County. Limited-access highways typically carry large volumes of vehicular traffic, though this is highly variable depending on the segment and the intensity of the land use nearby. Pedestrians and bicycles are prohibited from these facilities, though transit vehicles regularly utilize highways for portions of their routes, mainly for express commuter services.

Corridor	Segment Start	Segment End	AADT
76	Cranberry	Monroeville	~38,000
79	Washington County	Ohio River/PA-65	~65,000
79	Parkway North	Butler County	~70,000
279	Parkway North	Fort Pitt Bridge	~79,000
376	Monroeville	Airport	~100,000
579	North Shore (I-279)	Liberty Bridge	~45,000

I-76 (Pennsylvania Turnpike)

The Pennsylvania Turnpike passes north of Pittsburgh. I-76 travels in a southeasterly trajectory from Youngstown, Ohio, toward central Pennsylvania and Harrisburg, and ultimately Philadelphia. As a cross-state toll road, the primary function of the Turnpike is to facilitate long distance travel, though cross-County commuters regularly utilize it for trips between population and employment centers such as Cranberry/ Marshall Township and Monroeville. No transit routes currently utilize the PA Turnpike.

I-79

Interstate 79 is the primary north-south route in western Pennsylvania. Generally, it parallels U.S. 19. However, while U.S. 19 enters Pittsburgh, I-79 bypasses it to the west. Though it is a major through route for traffic between West Virginia and I-90 in Erie, portions of I-79 facilitate local commuter traffic. Through western Allegheny County, I-79 functions in two major segments to facilitate local commuting patterns. The segment from the Washington County line to the Ohio River/PA-65 is the core collector for suburbs such as Robinson, South Fayette, and Moon Townships. The northern suburban section from the Parkway North to the Butler County line is similarly busy as the core collector for North Hills communities around Wexford and Cranberry, and has been growing steadily in recent years.

I-279 (Parkway North)

Interstate 279 travels southeast from I-79 at Franklin Park along a suburban course through Ohio and Ross Townships before entering the City of Pittsburgh. It is 13.3 miles in length, entering Pittsburgh along the Parkway North and terminating at the Fort Pitt Bridge (I-376). An HOV-express lane accompanies Parkway North from I-579 (Veterans Bridge) to US-19 at the Ross Park and Ride. The HOV facility requires 2 or more vehicle occupants during peak periods—it is gate-controlled and flows inbound from 5:00 AM to 3:00 PM (Monday-Friday) and outbound at all other times. The peak traffic volume for I-279 is near West View, while the segment in the City of Pittsburgh drops through the East Street Valley before picking up again along the North Shore segment. Three transit routes utilize the Parkway North: O1 (Ross Flyer), O5 (Thompson Run Flyer), and O12 (McKnight Flyer).

I-376 (Beaver Valley Expressway / Parkway West / Parkway East):

Interstate 376 traverses Allegheny County mainly in an east/west direction from Monroeville to the Airport (with Downtown Pittsburgh at its midpoint), and then takes a more north/south alignment toward Beaver County. Its major segments differ greatly from one another in terms of function, design, constraints, traffic volume, and usefulness for transit.

In the eastern part of the County, I-376 connects with the PA Turnpike at Monroeville and heads west toward Pittsburgh. A major bottleneck in this segment is the Squirrel Hill tunnel, which carries approximately 92,000 vehicles per day, and is situated in a narrow valley that requires non-standard interchange designs that further limit movement. In this section, route P12 (Holiday Park Flyer) operates as a commuter link from Plum Borough to Pittsburgh via the East Busway, connecting at Wilkinsburg.

The central portion of I-376 (between the Squirrel Hill Tunnel and Green Tree) is the most congested segment of highway in the region. In this segment there are numerous non-standard interchanges that cause delay due to high volumes of merging activity. Many transit routes use portions of I-376 through the central segment, though mainly out of necessity as few (if any) alternate routes exist. In the section between Oakland and Downtown, the 52L (Homeville Ltd.), 53L (Homestead Park Ltd.) use the highway as a short connector. For western routes, a number of routes use the Fort Pitt Bridge out of necessity, even though it is very high volume facility with frequent congestion. These routes include the G2 (West Busway - All Stops), G3 (Moon Flyer), G31 (Bridgeville Flyer), 20 (Kennedy), 21 (Coraopolis), 22 (McCoy), 24 (West Park),

26 (Chartiers), 27 (Fairywood), 28X (Airport Flyer), 29 (Robinson), 31 (Bridgeville), 36 (Banksville), and 38 (Green Tree). For routes destined for the West Busway, the Fort Pitt Bridge chokepoint causes frequent delays, though ultimately the Busway itself allows for transit to skip the most congested part of I-376 just west of the Fort Pitt Tunnel.

Beyond Green Tree heading west to Carnegie, no transit utilizes this section until the transit-only ramps from the West Busway allow further westward operation for the G3 and 28X. The segment from Carnegie to Robinson/Moon Townships is becoming increasingly congested as development continues. Peak traffic volume is at the I-376/I-79 interchange, with 104,000 vehicles per day passing through. Volumes taper off heading west into Robinson and Moon, respectively.

The final segment is that which operates from Moon Township west to the Airport and north to Beaver County. Traffic volumes fall significantly compared to Robinson Township, and decrease further just west of the Airport. The G3 splits from mainline I-376 onto I-376 Business Loop, and the 28X remains on I-376 itself until it reaches the landslide terminal building at the Airport.

I-579 (Crosstown Boulevard / Veterans Bridge)
Interstate 579 travels north and south within Pittsburgh. The highway serves as a spur from I-279 southbound to I-376 (to Oakland and Monroeville) and from the Liberty Bridge to both I-279 north and PA-28. Approximately 45,000 vehicles per day use this short highway segment. Transit routes O1, O5, and O12 use the Veterans Bridge northbound as a connector from Downtown to I-279, and the 28X uses a short portion of I-579 from Downtown to westbound I-376 via the Boulevard of the Allies.
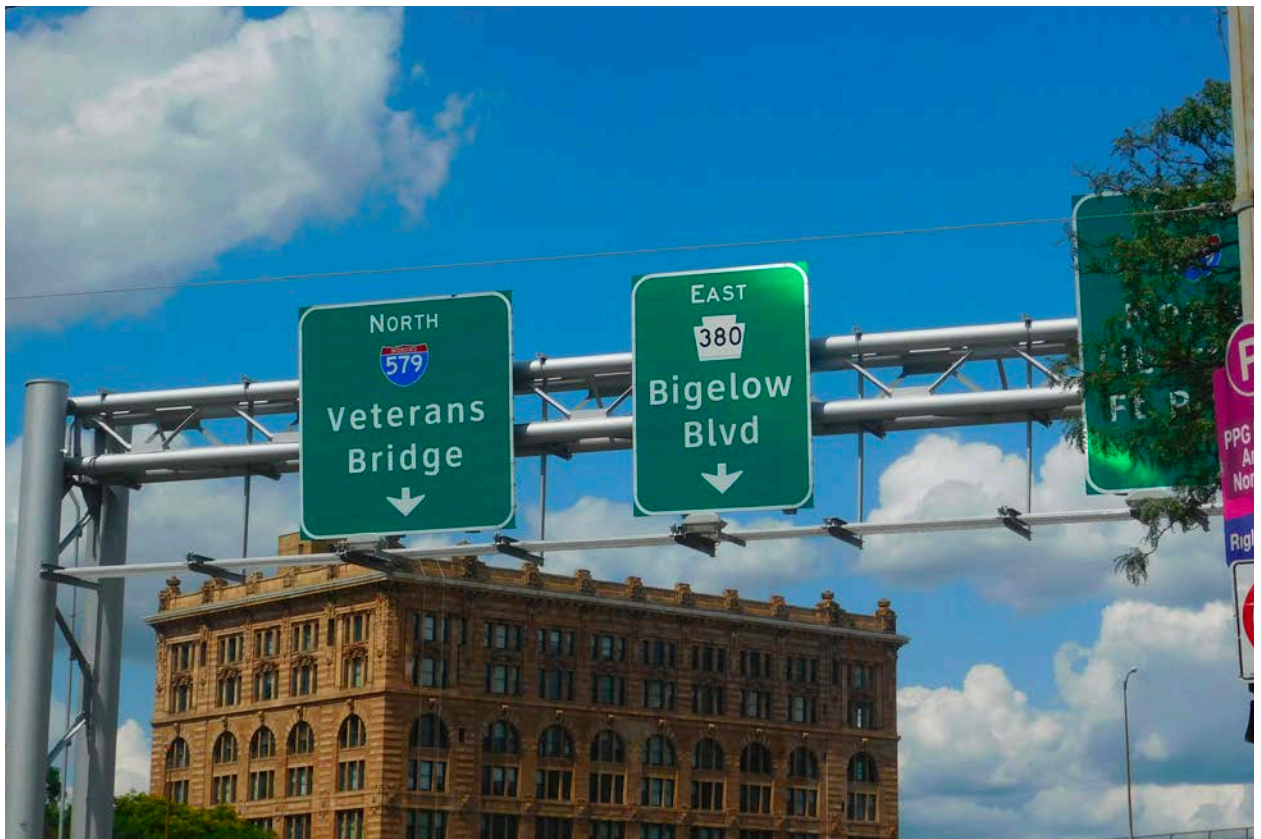
Overview of Transit Demand

Demand for transit is generally made up of derived demand – meaning that most people generally do not ride transit for the sake of riding transit (with the notable exceptions of the Monongahela and Duquesne Inclines), but instead do so as a means to reach key destinations such as employment, entertainment, and other essential services. Therefore, the demand for transit is derived from the demand for people to travel to those key locations.

Population density and employment density are the primary drivers of transit demand and provide strong indications of underlying transit demand. As outlined in the existing conditions report, the reach of transit is generally limited to within a one-quarter to one-half mile walk to a transit route, depending on the walking network, walking conditions, and topography. Transit routes that serve areas with higher population and employment densities are likely to have higher levels of ridership and cost recovery than areas with low population and employment densities. Planners must balance the need to provide transit options to both types of areas with appropriate levels of service.

While population and employment density drive transit demand, other factors have an influence over the decision for a traveler to actually take transit, or someone's 'propensity' to use transit. Those factors include the rate of car ownership, the price of gas, the price of parking, the frequency and reliability of transit, connections between transit stops and stations (and the origin and destination points), the cost of the trip via transit, and the difference in travel time between modes of transportation. How those factors combine to influence potential transit riders is described in the transit propensity section of this analysis.

In addition to population density and job density, socioeconomic characteristics influence an individual's propensity toward transit use. National research shows that many population groups often have a higher propensity for transit use than the overall population. These include women, seniors, adults under 25 years old, low-income residents, zero-vehicle households, persons with disabilities, ethnic and racial minorities, workers with a GED-equivalent degree or less, and foreign-born residents.

An analysis of socio-economic variables related to transit usage is important for determining need. This topic is explained in greater detail in Transit Cooperative Research Program (TCRP) Report 28, *Transit Markets of the Future*. The authors of the 1998 report identified groups that have a higher propensity to utilize transit. They further assigned index values (factors) to attributes of those groups. The attributes included gender, race and ethnicity, vehicle ownership, age, education, household income, immigration status, and physical or mental limitations. Based on TCRP 28, women are more likely to ride transit than men. Individuals without a car are more likely to ride transit than those who have a car. Immigrants are more likely to ride transit than non-immigrants. Those initial values from the TCRP report are now outdated and no longer align with data collected by the U.S. Census Bureau.

The project team utilizes a proprietary transit propensity model that has updated those initial values to reflect current data collected by the American Community Survey (ACS) as well as specific research over the past 5 years. The model uses a scale of 0 to 1, with 1 representing individuals with the highest propensity to ride transit. The scores are aggregated at the census block group level.

Data for this analysis were collected from the U.S. Census American Community Survey Five-Year Estimates for 2018. It's important to understand propensity as a measure of need and not necessarily efficiency. A propensity of "1" means that the residents of that census block group are most likely to ride transit service, but it does not mean that transit service would be most productive there. Other variables such as land use and walkability are likely to factor into the relative productivity that can be expected in a given geography.

The census block groups with the highest transit propensity are mainly concentrated in central and northeastern sections of the City of Pittsburgh. Additional pockets of high transit propensity are in municipalities farther east and southeast along the Monongahela River. The block groups with the lowest transit propensity are generally concentrated in the northern and western portions of the County. In the City of Pittsburgh itself, transit propensity is fairly high across the board, with the exception of industrial/commercial areas like the Strip District and lower-density neighborhoods like Highland Park, Summer Hill, and New Homestead. Commuters primary mode choice data is collected though the American Community Survey.

Higher percentages of commuters that primarily use transit align generally aligned with areas with higher transit propensity. All of the areas in table 1 with the exceptions of Summer Hill and Upper Hill exceeded the Allegheny County transit ridership average of 12%. However, some areas had lower transit usage than expected based on their very high transit propensity. McKeesport, South Oakland, and Larimer had transit ridership below 25% but were among the highest scoring areas. We expected to find ridership in excess of 40% in those areas. A map displaying transit propensities for the service area can be found on the following page and in the Appendix.

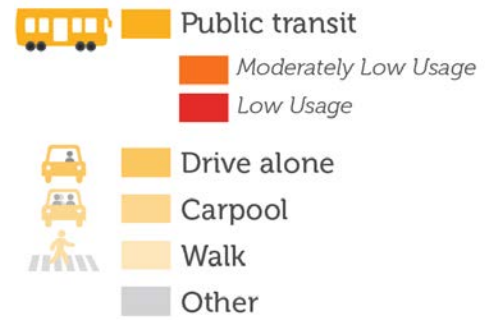# Transit Propensity by Census Tract - Allegheny County

Transit Propensity Score

- 0.75 - 1.00
- 0.50 - 0.75
- 0.25 - 0.50
- 0.00 - 0.25
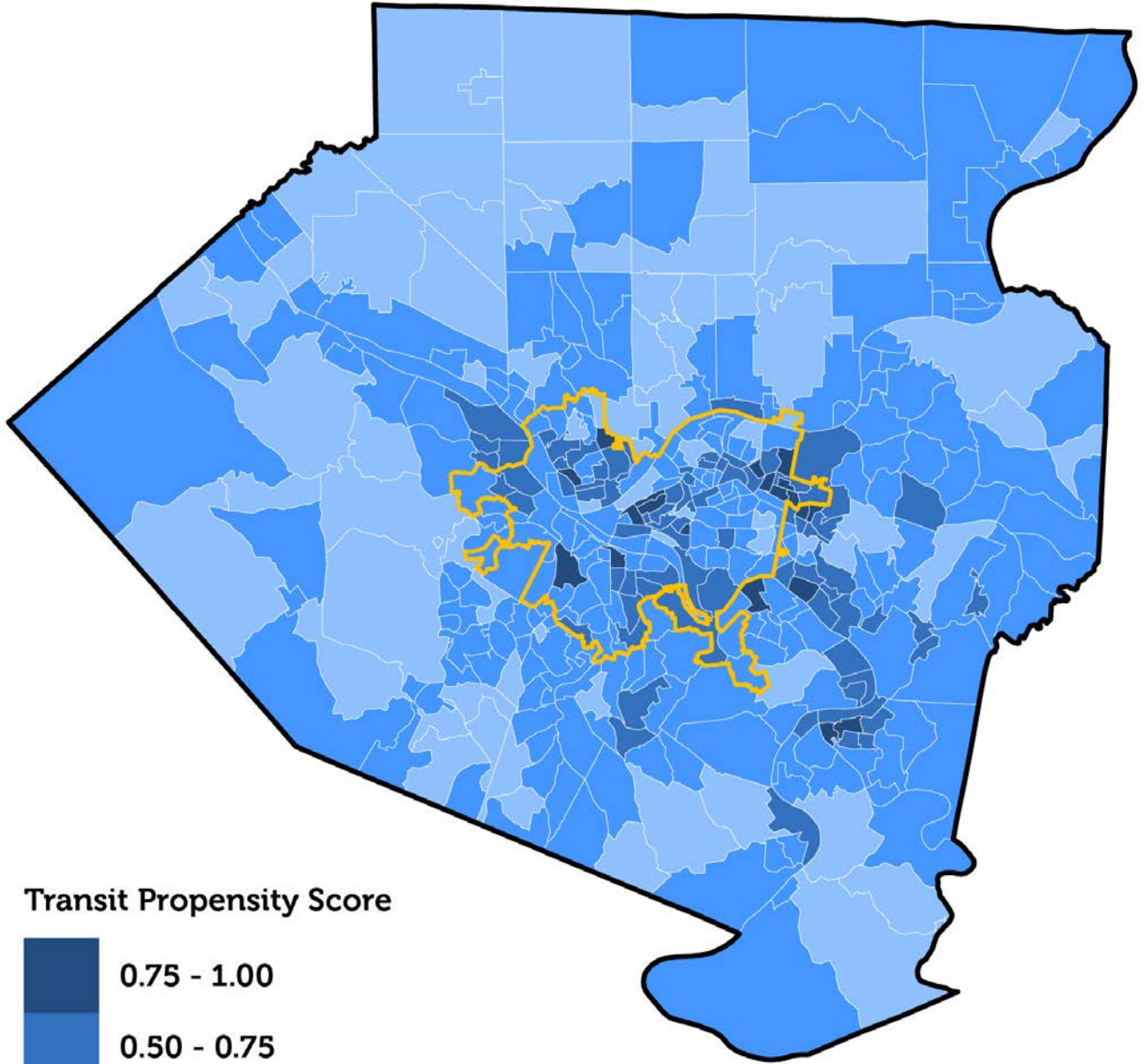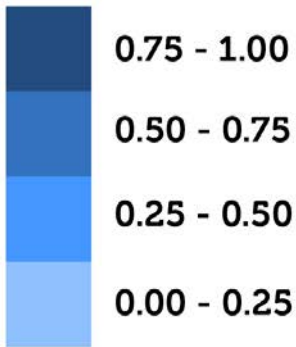
* City of Pittsburgh boundary shown in yellow outline

Highest Transit Propensity Areas: Additonal Context

TRANSPORTATION BY MODE

- **Public transit**
  - *Moderately Low Usage*
  - *Low Usage*
- Drive alone
- Carpool
- Walk
- Other

EAST MCKEESPORT

PROPENSITY SCORE 1.00

- 20.7%
- 44.7%
- 22.2%
- 12.2%

Concentrations of poverty, high population density, and low vehicle ownership create a high mobility need. Transit coverage in McKeesport is inadequate.

SOUTH OAKLAND

PROPENSITY SCORE 0.99

- 12.4%
- 30.7%
- 7.4%
- 28.2%

A highly walkable environment and university-sponsored transit passes contribute to low vehicle ownership, which in turn boosts transit and walking/biking.

HOMEWOOD WEST

PROPENSITY SCORE 0.97

- 22.5%
- 51.5%
- 17.8%
- 7.4%

Over 41% of households don't own a car. Throughout the whole neighborhood of Homewood, access to public transit is crucial, though walkability is challenged by missing or poor quality sidewalks.

SWISSVALE

PROPENSITY SCORE 0.95

- 34.0%
- 46.5%
- 11.9%
- 6.5%
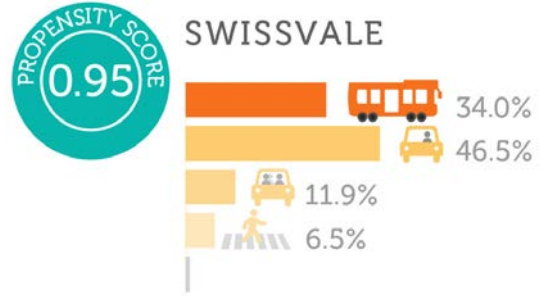
The close proximity to rapid transit makes this neighborhood likely to use transit more if convenient access were improved.

SUMMER HILL

PROPENSITY SCORE 0.95
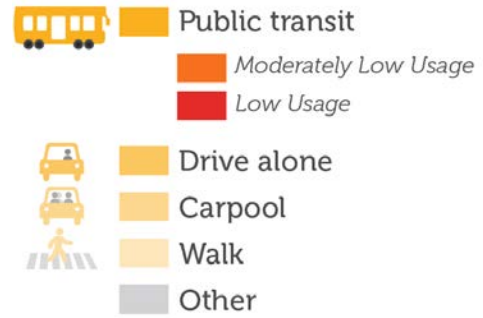
- 5.1%
- 77.2%
- 10.2%
- 0.7%
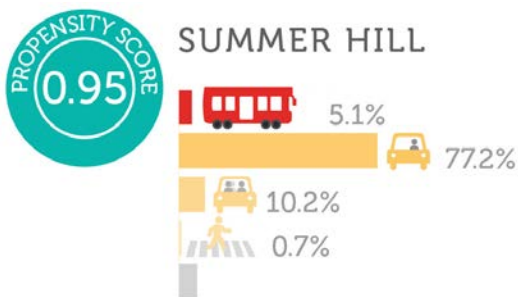
Summer Hill is accessible by both bus and the I-279 highway. The bus ride to downtown is three times longer than an average drive time, though, which discourages transit use.

HOMESTEAD

**PROPENSITY SCORE 0.95**

- 38.7%
- 45.1%
- 5.3%
- 3.2%
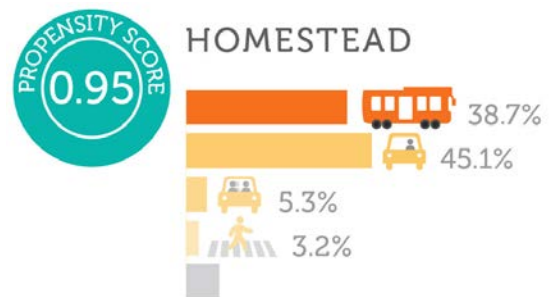
The Homestead Grays Bridge provides fast connections to Pittsburgh by car, yet frequent bus stops make journeys by public transit very slow. Homestead's high equity index rating calls for efficient, reliable service.

Highest Transit Propensity Areas: Additonal Context

TRANSPORTATION BY MODE

- 🚌 Public transit
  - Moderately Low Usage
  - Low Usage
- 🚗 Drive alone
- 🚗 Carpool
- 🚶 Walk
- Other

HOMEWOOD SOUTH

PROPENSITY SCORE **0.91**

- 🚌 59.2%
- 🚗 30.6%
- 🚗 0%
- 🚶 14.4%

Nearly 42% of households don't have access to a vehicle, and many households report under $20,000 in income. Direct access to the busway makes residents likely to use transit where access and service are provided.

WILKINSBURG (Tract 5612)

PROPENSITY SCORE **0.88**

- 🚌 30.1%
- 🚗 42.8%
- 🚗 6.4%
- 🚶 2.3%
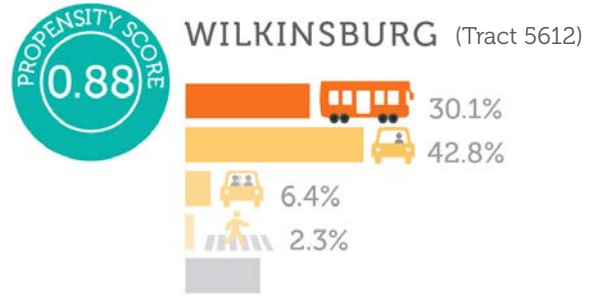
The East Busway serves the western edge of Wilkinsburg, but across the borough bus risership is lower. Many residents rely on driving, yet high poverty is a barrier to car ownership. Reliable transit is a need.

WILKINSBURG (Tract 5611)

PROPENSITY SCORE **0.87**

- 🚌 46.2%
- 🚗 24.7%
- 🚗 8.7%
- 🚶 19.5%

Located on the East Busway, Wilkinsburg has a well used express bus route that enables fast and efficient transit. Ridership could be higher with more efficient connections in other directions.

FINEVIEW

PROPENSITY SCORE **0.87**

- 🚌 40.5%
- 🚗 36.7%
- 🚗 10.5%
- 🚶 9.4%

Steep topography separates Fineview from its surroundings, despite close geographic proximity to Downtown and Northside jobs and activities. Walkability to and from bus stops is limited by hills.

LARIMER

PROPENSITY SCORE **0.86**

- 🚌 24.7%
- 🚗 58.2%
- 🚗 6.7%
- 🚶 5.1%
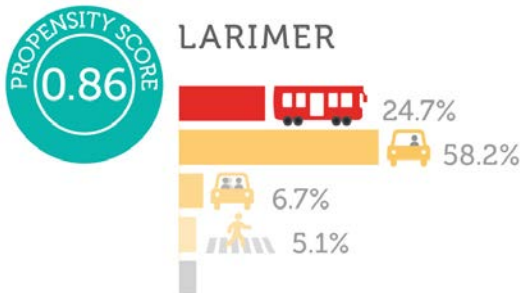
With low vehicle ownership and nearby transit routes, Larimer residents would likely use transit more if access were improved.

UPPER HILL

PROPENSITY SCORE **0.86**

- 🚌 9.6%
- 🚗 44.6%
- 🚗 23.0%
- 🚶 7.0%
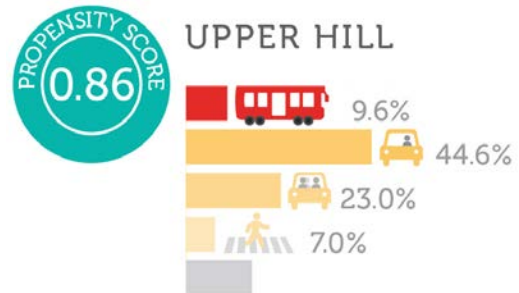
Despite high poverty, low vehicle ownership, and nearby bus routes, transit use is quite low. Sidewalk safety and topography impede access to and from stops.

Table 1: Top Transit Propensity Scores

Location	Propensity	Transit %	Drove Alone %	Carpool %	Walk %
McKeesport	1.00	20.68%	44.74%	22.18%	12.20%
South Oakland	0.99	12.39%	30.69%	7.37%	28.15%
Homewood West	0.97	22.51%	51.52%	17.75%	7.36%
Swissvale	0.95	33.98%	46.51%	11.91%	6.50%
Summer Hill	0.95	5.09%	77.18%	10.18%	0.66%
Homestead	0.95	38.68%	45.11%	5.32%	3.15%
Homewood South	0.91	59.16%	30.55%	0.00%	2.25%
Wilkinsburg[1]	0.88	30.08%	42.80%	6.36%	2.29%
Wilkinsburg[2]	0.87	46.18%	24.65%	8.68%	19.50%
Fineview	0.87	40.46%	36.69%	10.48%	9.43%
Larimer	0.86	24.68%	58.23%	6.69%	5.06%
Upper Hill	0.86	9.63%	44.59%	22.96%	6.96%

1   US Census Tract 5612 (bounded by Penn Ave, Pitt St, McKee St, and Mill St)
2   US Census Tract 5611 (bounded by Penn Ave, Mill St, Laketon Rd, and Swissvale Ave)

Though much of the analysis relies on quantitative data from government sources, it is critical to balance this with quantitative and qualitative input from the people of Allegheny County. To analyze this propensity to use transit in the region we engaged the general public, transit professionals, and Port Authority stakeholders to obtain more qualitative information. Key points of those discussions provided additional insights into our understanding of transit demand locally. For instance, it is important to consider total costs and total travel time when determining the impacts on a decision to take a trip on transit. A potential rider that has to drive to a parking lot, in some cases pay for parking, and then walk to their destination once getting off of the bus is less likely to take transit than someone who boards near their home and gets off near their destination.

While some initial assumptions about why an area's transit usage is low relative to its propensity can be made based on an area's mode share (such as South Oakland's high walk share) or availability of existing transit services (much of McKeesport, for example, is not walkable to transit service), much can be learned from the anecdotal information the project team solicited through the public outreach efforts of Theme 2 ("Where do you want to go?"). We will continue to explore factors which may have influenced lower than expected ridership in future public engagement efforts.

Example Transit Gap Contexts

Transit gaps take many forms--some areas do not have transit service at all, some lack direct or frequent service relative to demand, some have topographical barriers, and some lack walkable connections to transit facilities. Transit gaps exist in many contexts, but further analysis shows areas where opportunity exists (due to high transit propensity, high mobility need, or underutilized service, or a combination of each of these factors). The examples shown below represent a sample of the types of transit gap contexts the NEXTransit team intends to identify for future consideration of infrastructure and policy proposals in the next phase of the plan.

McKeesport

McKeesport generally had the highest transit propensity from our analysis yet only had transit ridership percentage was 20.7%. However, three census tracts in the areas had transit ridership of below 10.5%. The area's carpool percentage was 22.2%, which indicates a segment of the population likely to take transit if it met their needs. The top destinations of individuals departing McKeesport are West Mifflin, Duquesne, East McKeesport, Glassport, and Irwin. The amount of transit routes serving McKeesport is low considering its high transit propensity. The P7 McKeesport Flyer provides service between Downtown and McKeesport, however the route takes 60 minutes. It also provides service to the Duquesne park and ride. The 61C (with service to Oakland and Downtown) McKeesport-Homestead also stops in Duquesne and West Mifflin--a trip that takes approximately 75 minutes. East McKeesport, Glassport, and Irwin are more difficult to reach using transit. Other routes serving McKeesport include the 55, 56, 59, and 60.

Upper Hill

Upper Hill had a transit propensity score of .8564 yet only had transit ridership of 9.63%. Similar to McKeesport, it had a carpool percentage of 22.96. The 77 Penn Hills and 82 Lincoln both stop within .25 miles of the area (approximately a five-minute walk), and the 83 Bedford Hill directly traverses the Upper Hill. Travel to time to downtown is 20 to 25 minutes. North Oakland is a nearby community which is highly walkable. Topography challenges, along with infrequent and slower transit, creates gaps in overall mobility.

Turtle Creek

Turtle Creek had a transit propensity of .6327 but very low transit ridership of 3.89%. Commuting in the area was dominated by individuals driving alone (78.06%) and carpooling (10.74%). The area has a low population density of 382.87 per square mile, which is only 10% of the density of McKeesport (3911.8). Turtle Creek has transit service to areas within the Mon Valley via the 59 route, and nearby Monroeville via the P68 Braddock Hills Flyers, with trips taking less than 15 minutes. However, service from downtown Pittsburgh takes 45-50 minutes via the 69 Glassport or P69 Trafford Flyer.

Penn Hills

Penn Hills had very low transit ridership with only 2.14% reporting commuting by transit. Although it has a transit propensity of .5253, more than 83% of residents reported they commute by driving alone. There is frequent travel between Penn Hills and Monroeville and Penn Hills and Wilkinsburg. There is transit service to Downtown Pittsburgh via the 77 Penn Hills and P16 Penn Hills Flyer. The trip takes approximately 50 minutes. Wilkinsburg can be reached via the P78 Oakmont Flyer. There is no direct transit service between Penn Hills and Monroeville. Potential riders would need to travel though Wilkinsburg to transfer to a route to Monroeville. The trip takes approximately 1 hour. As with many suburban areas, sidewalks are discontinuous or non-existent, further creating gaps and challenges to transit.
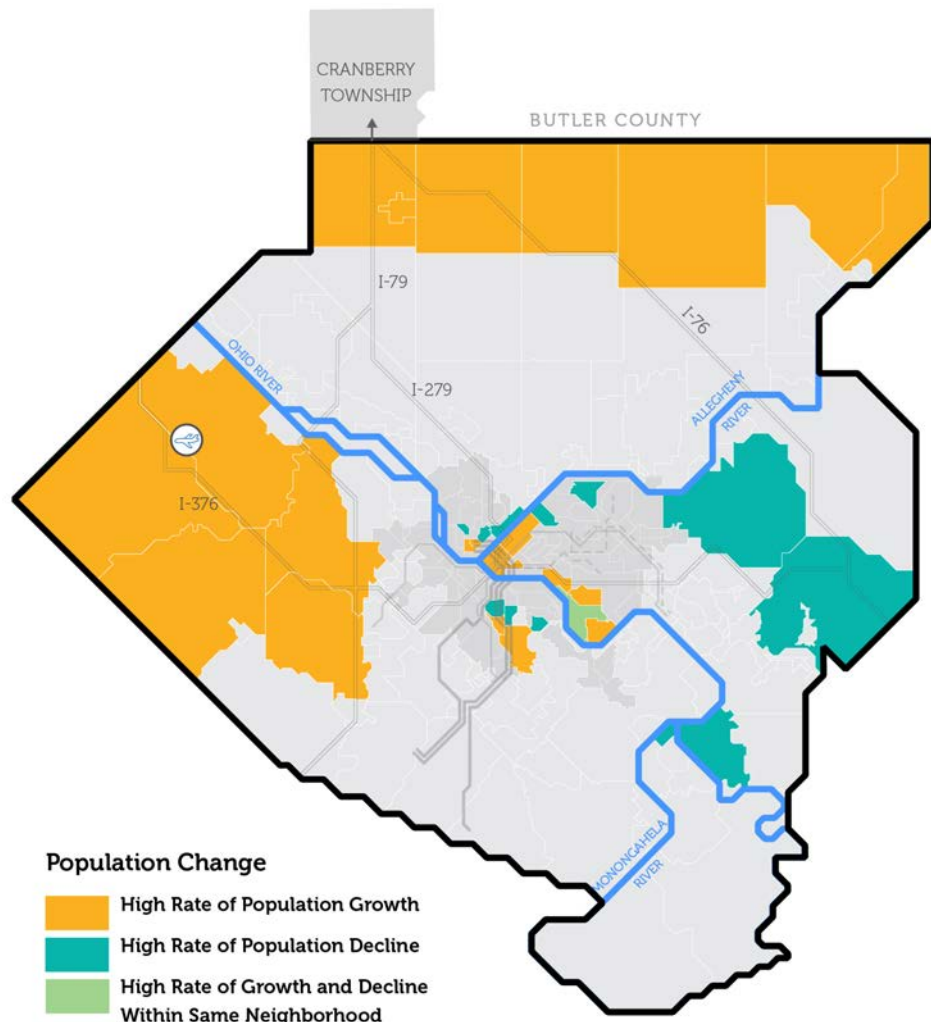
Regional Changes

In any region, the only constant is change. Even in a region such as Pittsburgh's where population has been stagnant or declining for decades, new development is occurring, populations are shifting, and the economy is evolving. Transit demand is impacted by these underlying changes, especially as transit-dependent populations migrate to areas with fewer options. Understanding those changes is critical to planning for the future of transit infrastructure. In this section, we identify areas where changes may have an impact on current or future transit services.

Allegheny County has maintained a population of approximately 1,230,000 people from 2003 to 2018. The County's educational attainment increased by 14.6% for those reporting a bachelor's degree, and a 17.4% increase in those reporting a graduate or other professional degree. During the same period, the population of the City of Pittsburgh decreased by 2,475 (- 0.8%) while the municipalities within the County but outside of the City grew by 1,103 (+ 0.1%). The demographic composition of the County shifted during the same period. Asian residents increased by 3,086 (+ 21.7%), while African American residents decreased by 6,945 (- 9.0%). There was an increase in residents in the 25-44 age range of 8,330 (- 9.5%) while every other demographic under 65 years old decreased.

Changes to where groups with higher transit propensity reside may have an impact on where the demand for transit will be found in future years of the long-range plan. The NEXTransit team identified areas of growth and decline which may have future impacts on transit demand. The map below includes area which have either grown or declined by at least 20% or 400 people. Further detail about each can be found on the following pages.

Population Change
- High Rate of Population Growth
- High Rate of Population Decline
- High Rate of Growth and Decline Within Same Neighborhood

Neighborhoods with growing or declining population are indicators of changing travel patterns. Growing populations show where more people want to be, reflect changing job markets and employment centers, and place increasing demand on infrastructure and roads. In this section, neighborhoods experiencing high growth rates are identified and examined to understand how they are changing and what impact that will have on the needs of the population over the coming years. Areas with declining populations likewise have multiple causes and effects. Changing job markets and the closure of primary industries and shift towards new industries located elsewhere is a big factor in the region, but evolving real estate markets and desires of younger demographics also impact why people choose to leave certain areas and move towards others. Understanding where populations are aging or economically struggling is imperative to address the population's transit needs.

Table 2: Top Areas for Growth and Decline

Neighborhood	Population Change (2013-2018)	
	Percentage	Number of individuals
Allegheny Center	50.50%	496
Allegheny West	62.60%	218
Bon Air	55.50%	482
Carrick	12.60%	1213
Central Business District	18.90%	1869
Glen Hazel	57.9%	392
Greenfield	10.1%	744
South Oakland	28.5%	756
Strip District	49.60%	338
Cranberry (Butler County)	12.80%	3534
Beltzhoover	-38.20%	-731
California-Kirkbride	-27.70%	-233
East Allegheny	-25.70%	-627
Hazelwood	-13.1%	-534
Knoxville	-20.50%	-958
Lower Lawrenceville	-15.5%	-410
McKeesport	-3.70%	-721
Monroeville	-3.40%	-965
Penn Hills	-3.70%	-1522
St. Clair	-51.60%	-241
Stanton Heights	-14.8%	-758
Troy Hill	-16.3%	-416

GROWTH AREAS
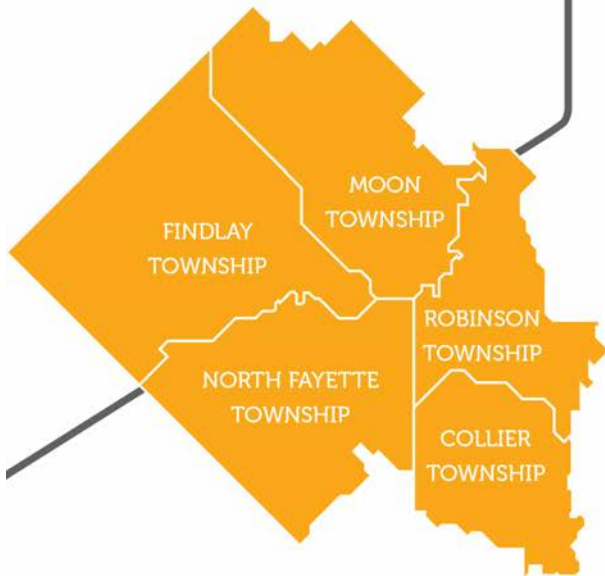
AIRPORT CORRIDOR

$ 1.1 billion
Airport terminal modernization project

2023 Anticipated completion

> 10,000 new jobs expected

The Airport Area Corporate Partnership (AACP) alliance drives new development.

Pittsburgh Airport Innovation Campus

Airport Area Chamber of Commerce

Robert Morris University

28X Airport Flyer ACTA shuttle

Surrounding corridor service: G3, 29, and 24

The Airport Corridor impacts communities along I-376 (including Robinson, Moon, North Fayette, and Findlay Townships) and to the West Busway terminus in Carnegie.

MOON TOWNSHIP

FINDLAY TOWNSHIP

ROBINSON TOWNSHIP

NORTH FAYETTE TOWNSHIP

COLLIER TOWNSHIP

GROWTH AREAS
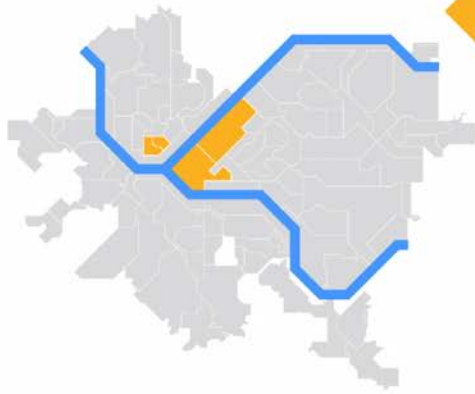
The 25-44 age range accounts for the largest population growth in these neighborhoods.

CENTRAL BUSINESS DISTRICT
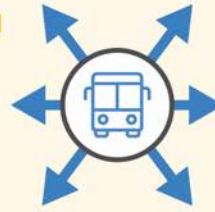
BUS AND T ROUTES
Center of the hub and spoke transit network

+18.9% population growth *(2013 - 2018)*

Increase of >1400 adults with higher education degrees

... and decrease of 200 adults without a high school diploma

Decreasing auto dependence *since 2013*

+102.1%

+376.9%

ALLEGHENY WEST AND ALLEGHENY CENTER

8, 11, 13, and 15 bus routes
Walking distance to T light rail

Work force benefits promote home ownership in the Northside, walkable from Allegheny General Hospital.

+ 714 individuals *(2013 - 2018)*

+ 721.1% population with professional degrees *(Allegheny West)*

+ 120.6% population with professional degrees *(Allegheny Center)*

Rising auto dependence *since 2013*

58.9% | 40%
38.6% *(Allegheny West)* | 26.5% *(Allegheny Center)*
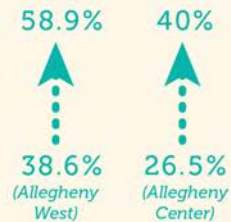
Light rail ridership is slightly on the rise - though in Allegheny Center only.

STRIP DISTRICT

54, 87, 88, and 91 bus routes

Bus ridership and car use both increased since 2013.

Major growth and new development treat this area as an extension to Downtown.

+ 88.9% population with higher education degrees
- 92.9% population without a high school diploma

GROWTH AREAS
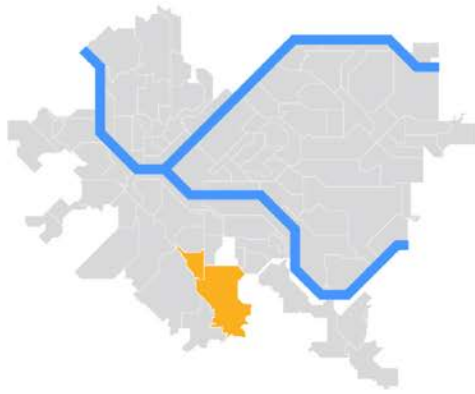
BON AIR

51 and 51L bus routes
Blue and Silver line light rail service

+ 55.5% population growth
(2013 - 2018)

Children under age 18 represent almost HALF of the population growth.

- 44.4% population without a high school diploma

Bus ridership and car use both increased since 2013.

CARRICK

51 and 51L bus routes

+ 1213 individuals
(2013 - 2018)

Ages 25-44 represent over half of the population growth:

a significant demographic shift!

Rising auto dependence *since 2013*

67.2%

63.6%

+ 61.2% population with professional degrees

- 13.2% population without a high school diploma

19.2%

15%

Shifting demographics
in areas with light rail access indicates opportunities to grow ridership. However, much of Carrick is not easily accessible to the T system due to its topographically challenged location in this area.
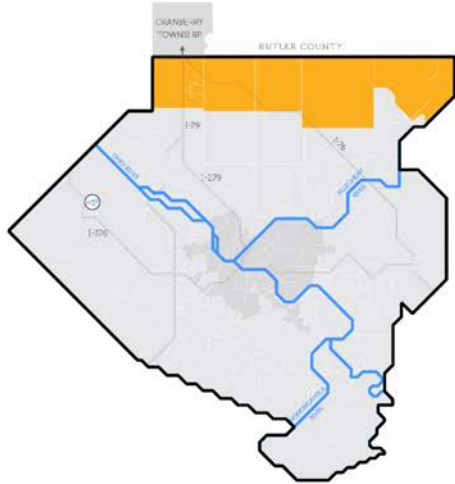
GROWTH AREAS

Rapid growth around county borders reveals the need for transportation options to address regional areas as opposed to politically defined jurisdictions.

CRANBERRY TOWNSHIP

BUTLER COUNTY

MARSHALL TOWNSHIP

PINE TOWNSHIP

RICHLAND TOWNSHIP

WEST DEER TOWNSHIP

FAWN TOWNSHIP

HARRISON TOWNSHIP

BRADFORD WOODS
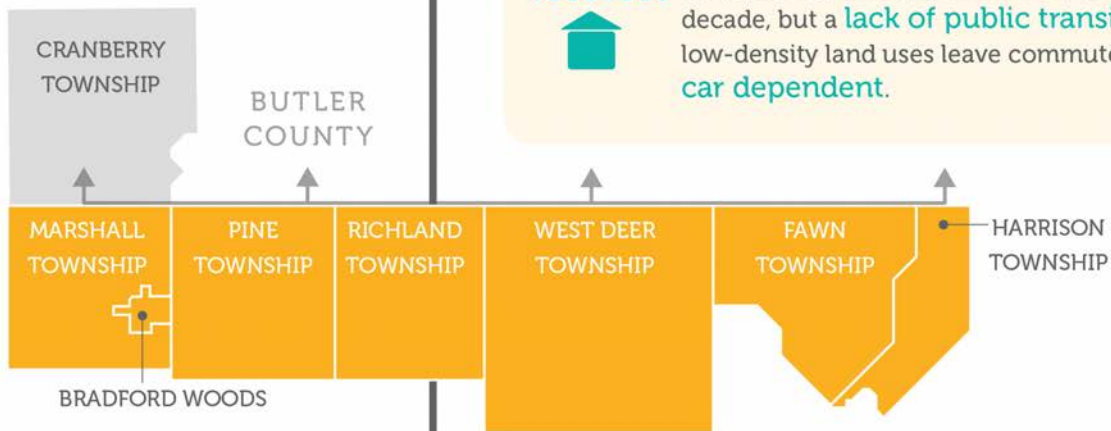
BUTLER COUNTY CONNECTION

No Port Authority service

Butler Transit Authority, New Castle Area Transit, and commercial buses run by Lenzner serve commuters.

CRANBERRY ON THE RISE

+ 3,534 individuals in Cranberry Township *(2010 - 2019)*

.... a 12.8% increase!

+ 550 additional households anticipated through 2022

Cranberry Township has the **youngest population** in the region.

median age **39**

CROSS JURISDICTIONAL COMMUTING

Growth along the County borders has outpaced regional growth in the past decade, but a **lack of public transit** and low-density land uses leave commuters **car dependent**.

DECLINING AREAS
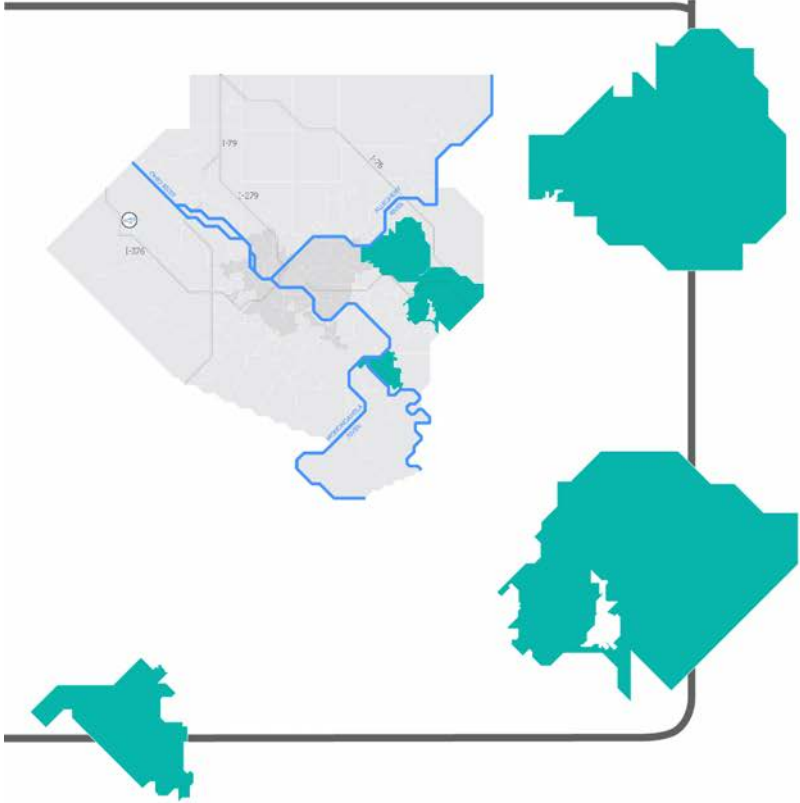
PENN HILLS

P16 and 77 bus routes

- **1522** individuals
(2010-2019)

which represents a **3.7%** population decrease

MONROEVILLE

P12, 67, P67, and P68 bus routes

- **965** individuals
(2010-2019)

which represents a **3.4%** population decrease

Declining populations heading east into Westmoreland County further slow growth potential.

MCKEESPORT

P7, 56, 59, 60, and 61C bus routes

- **721** individuals
(2010-2019)

which represents a **3.7%** population decrease

McKeesport's population has been falling steadily for decades.

Industry declines and shifting markets have moved jobs further away.

Although only 12 miles from Downtown Pittsburgh, winding rivers and topography result in **indirect connections** that make commuting long and discourage transit use.

In 2018, the I-376 corridor was ranked the #5 most congested corridor in the USA. Although that ranking improved in 2019, continued high traffic creates the perception of distance between adjacent communities and reliance on car ownership to access jobs and daily needs. There is an opportunity to expand transit, both to offer an alternative for commuters and improve equitable access to jobs in this area.

Source: INRIX Global Traffic Scorecard

DECLINING AREAS
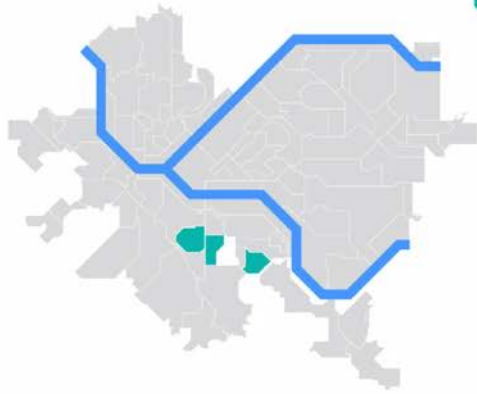
Rising transit use excluded Beltzhoover, despite its proximity to light rail service. There is an opportunity to improve connectivity and build upon current neighborhood investment.

BELTZHOOVER

44, 48, and South Busway bus routes Red, Blue & Silver line light rail service

- 731 individuals
(2013 - 2018)

↓ **- 53.8%**
decrease in 45-64 age bracket

↓ decreases occurred across all age brackets

Rising auto dependence *since 2013*

50%

39.7%
40.7%

30.6%

KNOXVILLE

44 and 54 bus routes

- 958 individuals
(2013 - 2018)

+ 6.6%
ages 45-64

+ 13.5%
over 65

- 25% or more
for all age brackets under 45 years old

Rising transit use *since 2013*

33.5%

24%
54.6%

50.8%
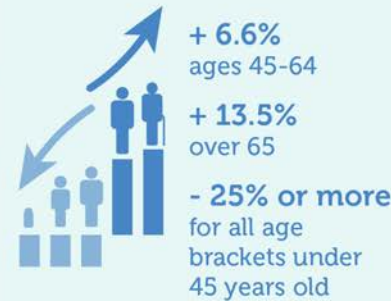
ST. CLAIR

44 bus route

Significant rise in public transit ridership *since 2013*

- 241 individuals
(2013 - 2018)

↓ greatest decrease under age 18

+ 37.5%
population without a high school diploma

30.8%

15.7%
69.6%

53.8%

DECLINING AREAS

Each neighborhood experienced population shifts towards different age brackets.

EAST ALLEGHENY

1, 2, 4, 6, 7, 8, 11, 12, 15, 17, and 54 bus routes

- 627 individuals
(2013 - 2018)

65+

Decreasing auto dependence
since 2013

38.3%

35.1%

-55.3% population without high school degrees

STEADY 12%

CALIFORNIA-KIRKBRIDE

13 and 16 bus routes

- 233 individuals
(2013 - 2018)

- 45.5% children under 18

+ 57.1% population with professional degrees

+ 21.4% population without high school degrees

Rising auto dependence
since 2013

36%

30.9%

30.9%

30.8%

TROY HILL

4 bus route

-416 individuals
(2013 - 2018)

- 42.6% between ages 45-64

+ 73.5% population with professional degrees

- 9.8% population without high school degrees

Travel Mode Changes

Changes to travel mode choice over the next 20 years is likely to be heavily influenced by technological changes rather than demographic changes to Allegheny County. Despite subtle migrations of people from neighborhood to neighborhood, the overall population of the County has remained steady. The City of Pittsburgh is one of America's oldest cities, and infrastructure development is constrained by its topography. However, technological advancements in remote working, connected and autonomous vehicles, and mobility as a service may change the method and frequency by which people move throughout the County.

Working from home will reduce the underlying demand for travel overall. In 2017, 5.2% of Americans reported working from home. According to the U.S. Census Bureau, the number of Americans working from home occasionally increased from 39% in 2012 to 43% in 2017. Technology has made working feasible as employees have the ability to safely connect to their employers' information systems. The 2020 COVID-19 pandemic has forced many organizations to close traditional office spaces and allow employees to work remotely. An estimated 42% of Americans are now (as of late 2020) working remotely full-time due to the pandemic[1]. While many of those workers are expected to return to traditional offices when it is safe, this same research estimates indicate that 20% of Americans will continue to work from home full-time following the pandemic. Assuming these trends continue, the percentage of individuals driving alone to work is likely to decrease proportionally. It is unclear at this point if demand for transit will decrease by a similar percentage.

Autonomous and connected vehicle technology is an emerging topic in the transportation industry. Autonomous vehicles can drive themselves without human intervention by sensing their environment, detecting and classifying objects, and identifying a safe navigation pathway while obeying applicable transportation rules[2]. As of April 2020, there are at least 50 known autonomous transit vehicle projects of which 19 are receiving USDOT funding. Several significant connected and autonomous vehicle transit projects have launched in 2020 including ones by the Corpus Christi Regional Transportation Authority (CCRTA) and a partnership of Fairfax County, Virginia, and Dominion Energy in the Washington, DC, area. While it is unclear how rapidly connected and autonomous technology will be adopted by the public transportation industry, it is evident that it will continue to grow. Driver salaries are a major contributor to operating expenses. Autonomous vehicle projects may increase the economic viability of transit in areas with lower population and job densities, as well as dense areas with lower demand for transit. This has the potential to increase transit ridership in areas not currently served.

Mobility as a service (MaaS) is the integration of various modes of transport services into a single platform which is accessible on demand. MaaS usually takes the form of a mobile application. MaaS can facilitate a varied list of transport options which may include public transport, car- or bike-sharing, taxi or car rental/lease, or a combination of them all. Mobility as a service makes using transit more efficient and convenient for riders because it incorporates the payment method, organization, first and last mile options, and other vital information all in one user-friendly service. MaaS addresses travelers concerns over the need to have multiple applications on their mobile devices, the need for multiple payment methods, and the lack of coordination between modes. MaaS may increase demand for transit by encouraging discretionary riders to make trips they currently make by car, taxi, or transportation network company.

1   Wong, M. (2020). Stanford research provides a snapshot of a new working-from-home economy. Stanford News. Retrieved from https://news.stanford.edu/2020/06/29/snapshot-new-working-home-economy/
2   Campbell, M., Egerstedt, M., How, J.P., & Murray, R.M. (2010) Autonomous driving in urban environments: approaches, lessons and challenges. Phil. Trans. R. Soc. A., 368, 4649–4672. doi: 10.1098/rsta.2010.0110

Public Input

Engaging the Public to Identify Transit Values and Gaps

Understanding the demand for travel must include a conversation with transit users to help inform planning efforts on where future transit should go (transit gaps) and the values statements that will guide future planning and prioritization of projects for the region. The goals of the outreach efforts were to establish the transit needs and create opportunities for public to identify gaps in the current system.

While the NEXTransit team was collecting and analyzing quantitative data, a parallel process of engagement with the public was using this data to enhance outreach efforts both online and in-person. This process was cyclical, as information gathered from the public was continually summarized and relayed to the data team as it became available.

During Theme 2 ("Where Do You Want to Go?") the outreach team gathered insight and learned about transit gaps from the public, invested regional stakeholders, and transit professionals through a series of online meetings, COVID-19 safe in-person pop-up information tables, stakeholder meetings and correspondence, a statistically representative public survey, social media polls, and interactive online activities. Throughout our engagement efforts, we asked the public questions such as:

- What are your transit goals for the region?
- What do you value about transit? What should we (as a region) value about transit?
- What are reasons that you do not take public transit?
- What gaps in the transportation system need to be addressed? What are gaps that you most often experience?
- If your reasons for not riding were addressed, for what purpose would you most likely to use public transit?

These questions and interactions yielded thousands of identified gaps and input on the needs for future transit systems in the region.

The graphic to the right summarized the Theme 2 public engagement statistics.

THEME 2 PUBLIC ENGAGEMENT

6 — Online Public Meetings

170+ — Meeting Participants

500+ — Written Comments

2000+ — Website Engagements

29 — Pop Up, in person events

350+ — Social media comments

760+ — Survey Respondents

What Did People Tell Us?

To begin the discussion of transit gaps, Port Authority's board and staff, stakeholders, and the public identified up to eight values-based terms that represent values important to them when prioritizing planning transit. The definitions of the values as presented and described to these groups can be found in the Appendix.

The choices of values were intended to be simple and easy to understand--though interpretations can and do vary from person to person, the results of the values selected by the various groups were largely consistent. The most significant difference in alignment of values was regarding equity--a topic that can have different meanings to different people. A summary of the top-ranked selections is below.
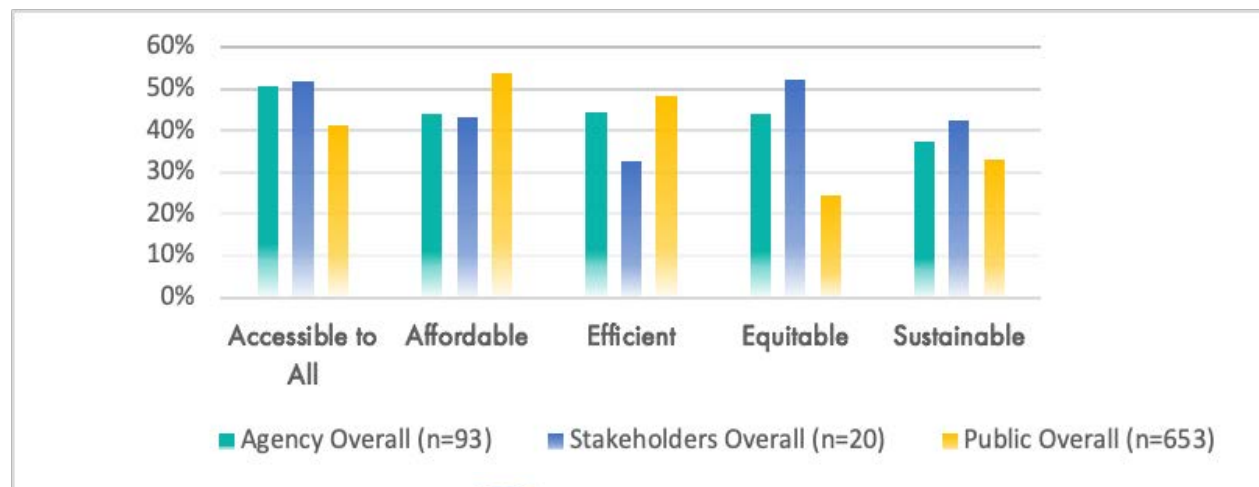
In addition to understanding transit values, in-person comments and survey results provided insight on the public perception of gaps in transit. We asked the participants to define gaps as:

- Physical Gaps - Are there places you'd like transit to connect to that aren't currently connected, or hard to connect to?
- Service Gaps – Are there places where transit currently goes, but doesn't go often enough?
- Accessibility Gaps – Are there accessibility barriers to your use of transit?
- Infrastructure Gaps – Are there infrastructure issues that make it hard for you to use transit?
- The results of this discussion identified service gaps relating to reliability, frequency, speed of service; the cost, duration and frequency of transfers; and the lack of weekend services needed travel to and from work or to entertainment destinations represented the greatest transit gaps.
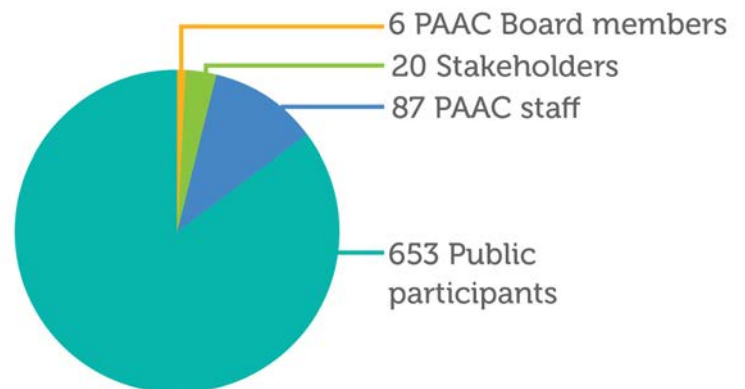
Who Participated in the Outreach Process?

The goal of any public-facing effort should be to reach a population that represents the demographics of the community the plan serves. For transit planning, the goal reaches further, as the demographics of transit riders does not match that of Allegheny County as a whole. Where Allegheny County is 83% White and 13% Black/African American, public transit commuters in the county are 62% White and 28% Black/African American. The County's median household income at the time of survey distrubution was $61,000. The outreach team's goal was to achieve representative input that more closely matched the demographics of riders.

While COVID-19 made traditional in-person methods of active engagement impossible, the team employed a slightly more passive approach of pop-up tents in traditionally under-represented communities. In addition, recognizing that many lower-income communities lack internet access at home (and libraries remained closed through most of 2020), alternate methods of input such as SMS text messaging and land-line voicemail were employed.

The survey results overall skewed more toward the overall County demographics (80% White, 12% Black/African American, 8% other) than anticipated. Approximately 29% of the respondents had household income levels below $50,000 (below the County median), and another 17% reported household income of between $50,000 and $75,000, which encompasses the median level.

The survey data does statistically represent the diversity of our County as a whole, and therefore will be used for this planning effort, but additional effort in Theme 3 will be placed on attempting to improve this representation to go beyond the County's demographics as a whole and better represent lower income and minority race riders. Anecdotally, the participation and conversations captured at the pop-up tent sessions (located primarily in lower-income and/or minority communities) were valuable to the process of documenting transit gaps, despite a less rigorous effort to record demographic information. Special focus on gathering input from under-represented areas will continue into the next Theme of outreach ("How Can Transit Get You There?").

A brief graphic summarizing the Transit Values and Gaps Survey is below, with further detail about the results on the following page. When combined with the quantitative analysis, the information gathered from the public merges to form a rough draft of the focus areas and corridors that will be further defined and refined in the next stage of the NEXTransit planning process.
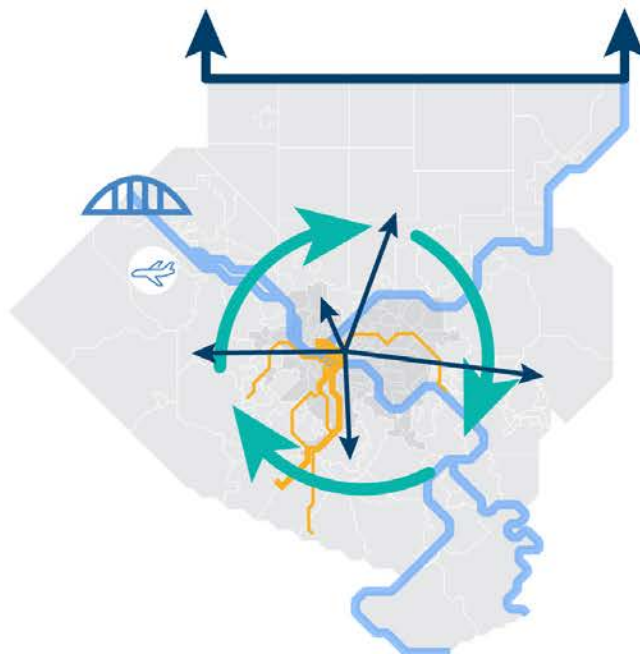

Transit Gaps Survey PARTICIPANTS
1536

QUESTIONS ASKED
Transit gaps? Rider Patterns? Demographics? Priorities?

DATES
August 10- October 1, 2020

DISTRIBUTION
ConnectCard list
In-person
Online

WHO RESPONDED?
Mostly riders!
79% Rider
21% Non-Rider
87% under age 35

WHERE TO?
Top desired destinations are Downtown Pittsburgh, Oakland, and neighborhood to neighborhood connections that don't require connecting Downtown.

Transit Gaps Survey
RESULTS

51% Public transit is **too infrequent.**

49% Public transit **takes too long** to get where I want to go.

46% I have to ride multiple vehicles and **transfer.**
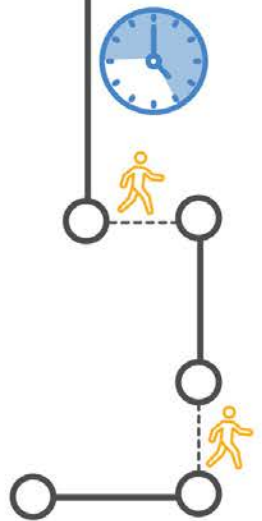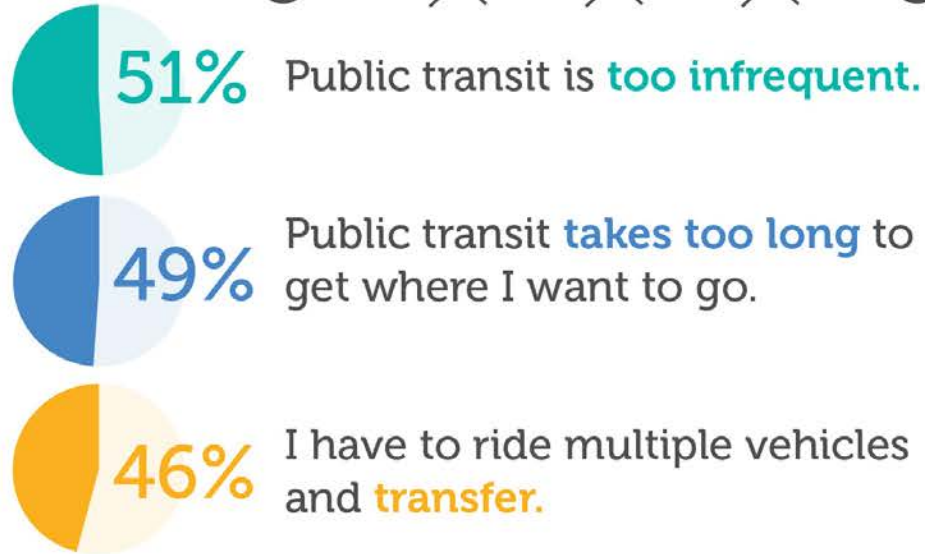
SUMMARIZING THE GAPS:

Across County borders

Along and across rivers

Suburban entertainment areas

Increased service along existing busways

Inner ring suburbs

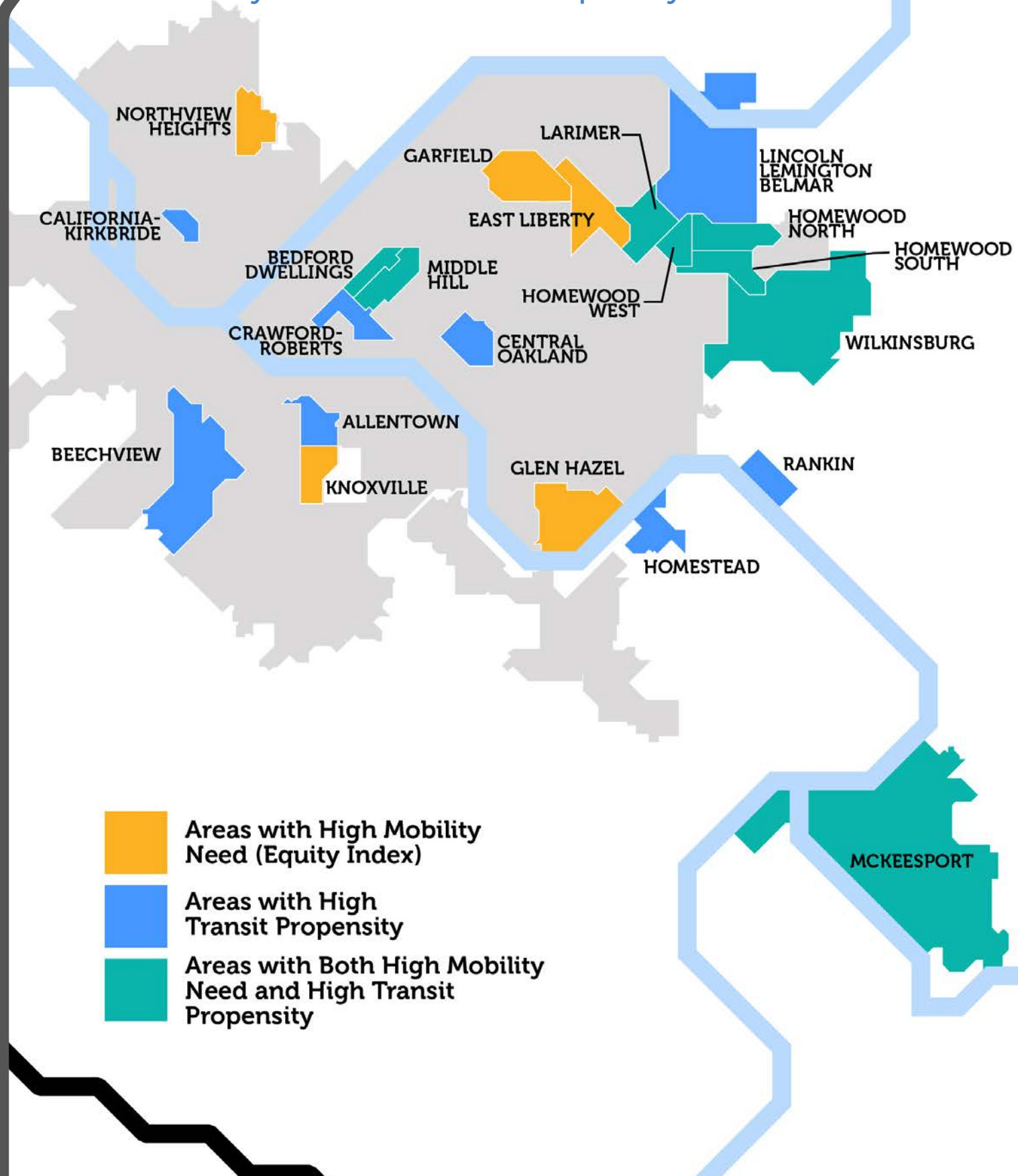Reliable, fast and frequent transit to the Airport

Transit Gaps

The conclusion of this market and travel analysis is the identification of transit gaps that can be filled with future infrastructure projects. Transit gaps can include not only areas where transit service does not exist today, but also places where service doesn't meet local needs based on propensity, geography, or similar factors. An example of two prominent data sets (equity need and transit propensity) is shown in map form on the following page. In addition to data analysis, the team aggregated public input and classified transit gaps based on service, infrastructure, accessibility, and physical gaps that people experience. The map on page 42 is an aggregate of quantitative and qualitative information. It helps us to form a more complete picture of transit gaps in Allegheny County, but this map is not *the plan*--at least not yet. It is the basis for further discussion, refinement, and analysis to come as the NEXTransit Network begins to reveal itself and come more into focus.

Table 3 below represents the summary of a much larger data analysis effort. It indicates areas (municipalities or clusters of the City of Pittsburgh) where certain conditions are met. Each factor is different in what it measures, so individual thresholds were developed to attempt to ensure a representative spread for each data set. When each condition is either present as per the threshold mentioned below an "x" is marked. We have totaled each area's score and used these locations to form a basis (along with public input) for identifying "transit connection areas," within which projects will be proposed to fill transit gaps. The transit connection areas are identified those areas as the highest opportunities to grow transit ridership. City of Pittsburgh neighborhood clusters are shown in the Appendix to add additional context on the portions of the City that are referenced in the table.

Table 3: Transit Connection Focus Areas: Quantitative Analysis

Municipality/Area	Equity Index (cluster in top third)	Transit Propensity (over 0.5)	Population Density (over 500/sq. mi)	People + Job Density (cluster in top third)	Major Job Ctr. (>500 jobs/sq. mi)	O/D Pairs (over 1,000)	Transit Ridership Data (top 15 corridors)	Growth Areas (top 25 tracts)	Area Score
Pittsburgh - Oakland / Hill Dist.	x	x	x	x	x	x	x	x	8
Pittsburgh - Lower Northside	x	x	x	x	x	x	x	x	8
Pittsburgh - Downtown		x	x	x	x	x	x	x	7
Borough of Swissvale	x	x	x	x		x	x		6
Pittsburgh - Mon Valley	x	x	x		x		x	x	6
Pittsburgh - Lower East End		x	x	x	x		x	x	6
Borough of Wilkinsburg	x	x		x		x	x		5
Pittsburgh - S. Hills (B'kline/Carrick)		x	x			x	x	x	5
Pittsburgh - Strip / Lawrenceville			x		x	x	x	x	5
City of McKeesport	x	x			x	x			4
North Braddock Borough	x	x	x		x				4
Borough of Homestead	x		x	x	x				4
Pittsburgh - Upper East End			x	x	x		x		4
Municipality of Mt. Lebanon			x	x	x		x		4
Borough of McKees Rocks	x	x				x			3
Pittsburgh - Upper Northside	x	x					x		3
Borough of Bridgeville				x	x	x			3
Borough of Carnegie				x		x	x		3
Pittsburgh - South Side/Shore					x	x	x		3
Findlay Township					x	x		x	3
Moon Township					x	x		x	3
Municipality of Monroeville				x	x	x			3
Robinson Township					x	x		x	3

Transit Opportunity Areas Based on Mobility Need and Transit Propensity

NORTHVIEW
HEIGHTS

CALIFORNIA-
KIRKBRIDE

GARFIELD

LARIMER

EAST LIBERTY

LINCOLN
LEMINGTON
BELMAR

HOMEWOOD
NORTH

HOMEWOOD
SOUTH

BEDFORD
DWELLINGS

MIDDLE
HILL

CRAWFORD-
ROBERTS

HOMEWOOD
WEST

WILKINSBURG

CENTRAL
OAKLAND

ALLENTOWN

BEECHVIEW

KNOXVILLE

GLEN HAZEL

RANKIN

HOMESTEAD

MCKEESPORT

Areas with High Mobility Need (Equity Index)

Areas with High Transit Propensity

Areas with Both High Mobility Need and High Transit Propensity

Transit Gaps - Qualitative and Quantitative Summary

The product of this phase of the NEXTransit plan is not just an analysis of the current market and its data--it is also a strategic baseline for moving to the next phase where corridors, projects, and policies emerge. The map on the following page is informed by data, including qualitative public input. A crucial step taken in this round of public engagement was the values survey, as each project or policy that will be advanced for prioritization will be analyzed through the lens of the stated values of this plan.

This map represents a bridge from the data-gathering first half of the planning process to the analytical and aspirational second half. This bridge links data on significant origins/destination pairs, areas of high mobility need and transit propensity, and an aggregation of public input from the process to-date. The next task in the planning process is to develop a draft slate of infrastructure solutions to the transit gaps mentioned below.

Some specific corridors and/or desired movement patterns became apparent through the team's analysis—areas such as the Mon Valley are of particular focus. Also, north/south movement across the eastern portion of the City of Pittsburgh is not only highly desired as per public input, the data bears out the fact that these trips are occurring, but transit isn't carrying a significant portion of them.

Other areas presented more as area-wide transit gaps. The Airport corridor was the most frequently mentioned one throughout the public engagement process, and origin/destination data correlates with this desire to access this area, not only for air travelers, but especially for workers who are filling the abundant (and quickly growing) service sector jobs across the western portion of the County. While the transit gap area shown from the City to the North Hills is developed less densely and has a lower transit propensity, it was frequently mentioned in public engagement. It is of interest mainly due to the nature of service sector employment that is abundant along McKnight Road—there are potentially opportunities for quicker connections to these jobs from the City.

The Allegheny Valley is another gap area that was frequently mentioned by the public, and although the transit-supportive development along the river is generally linear, it doesn't function strictly as a "corridor" due to the disjointed nature of the development that shifts from one side of the river to the other, with few crossings available. The upper valley shows significant origin/destination pairs among New Kensington and Tarentum/Brackenridge.

The Mon Valley area is represented not only by a specific corridor gap, but also a larger area-wide gap that extends from McKeesport to Monroeville. There is a lack of connection to the employment clusters that exist in Monroeville, not only in the service sector, but in healthcare as well.

Key Transit Connection Areas to Advance for Further Study and Prioritization

Illustrating the connection between public input and the data analysis summarized in Table 3 (p. 39) is the Transit Connection Areas map below. Each municipality shown in the table is labeled below, reflecting its place within each of the 9 proposed connection areas (the City of Pittsburgh clusters can be seen in detail in the Appendix). While not all areas shown here were highly scored in the quantitative summary, all were topics of discussion in the various public forums the team hosted. For instance, area #2 (North Hills) was not an area that currently shows high equity need or transit propensity, but was highly requested for further analysis. Such analysis will occur in subsequent phases of NEXTransit, and proposed projects in some areas may require other catalysts (such as transit oriented land use policies to encourage denser growth) to be realized. Continued study for project prioritization will follow in the next phase of the plan.

Transit Connection Areas:
- # 1 – Parkway West
- # 2 – North Hills
- # 3 – Allegheny Valley
- # 4 – Parkway East
- # 5 – Mon Valley
- # 6 – South Hills East
- # 7 – South Hills West
- # 8 – Pittsburgh Neighborhood Connections
- # 9 – Inner-ring Suburban Connections
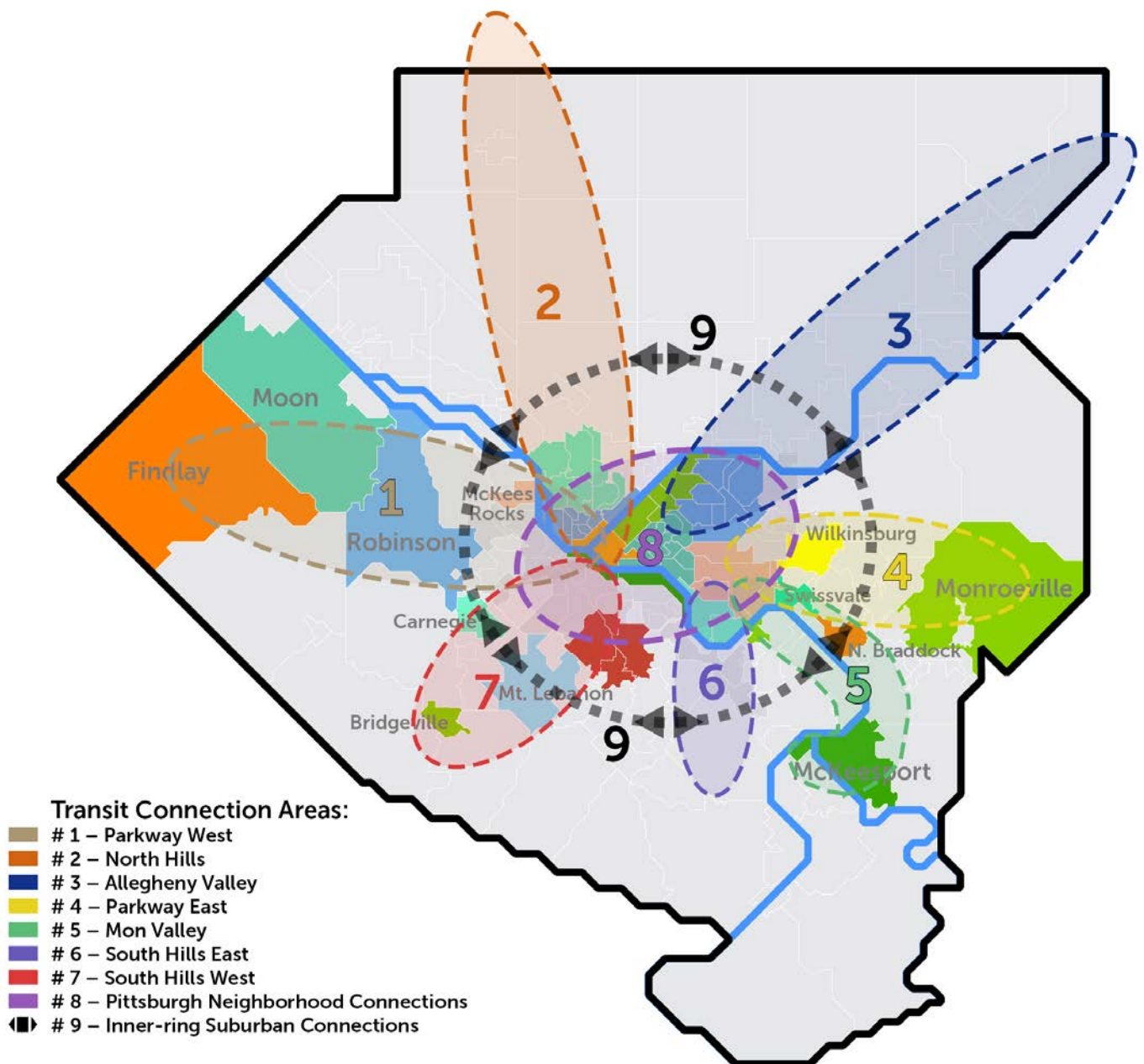
Summary

This market analysis builds on the previous existing conditions report through multiple evaluations of where transit demand may be located. In this analysis, the NEXTransit team examined characteristics of the service area including regional growth, population demographics, transit demand factors, and current travel patterns. Throughout this analysis, quantitative data from government and commercial sources, as well as data collected through NEXTransit public engagement efforts were used to identify potential transit gaps and potential opportunities for additional transit service. This analysis will provide the planning team with the information necessary to frame future discussions about investment opportunities in the service area.

Public outreach Theme 3 ("How Can Transit Get You There?") will pair up with the analysis and outcomes of Task 5 (Identify Investment Opportunities) to get the project one step closer to developing the NEXTransit Network. This theme will include the development of infrastructure project ideas and policy proposals that will move transit forward in Allegheny County. The next phase of the plan will be constructed from a foundation of the Existing Conditions Report, which provides the baseline data for the system as it is in 2020 and the most salient ideas from previous and concurrent plans. This report (Market/Travel Demand Analysis) helps to focus efforts on specific geographies that investment should focus on, based on equity, mobility need, transit propensity, and market and demographic trends.

A Appendix

Appendix

NEXTransit Workers Using Public Tranportation
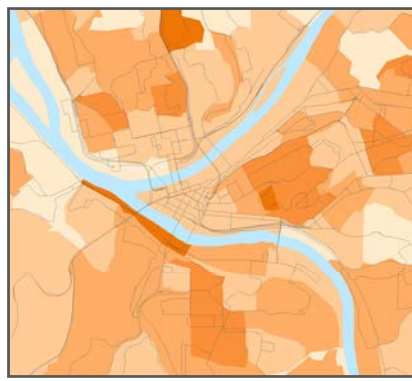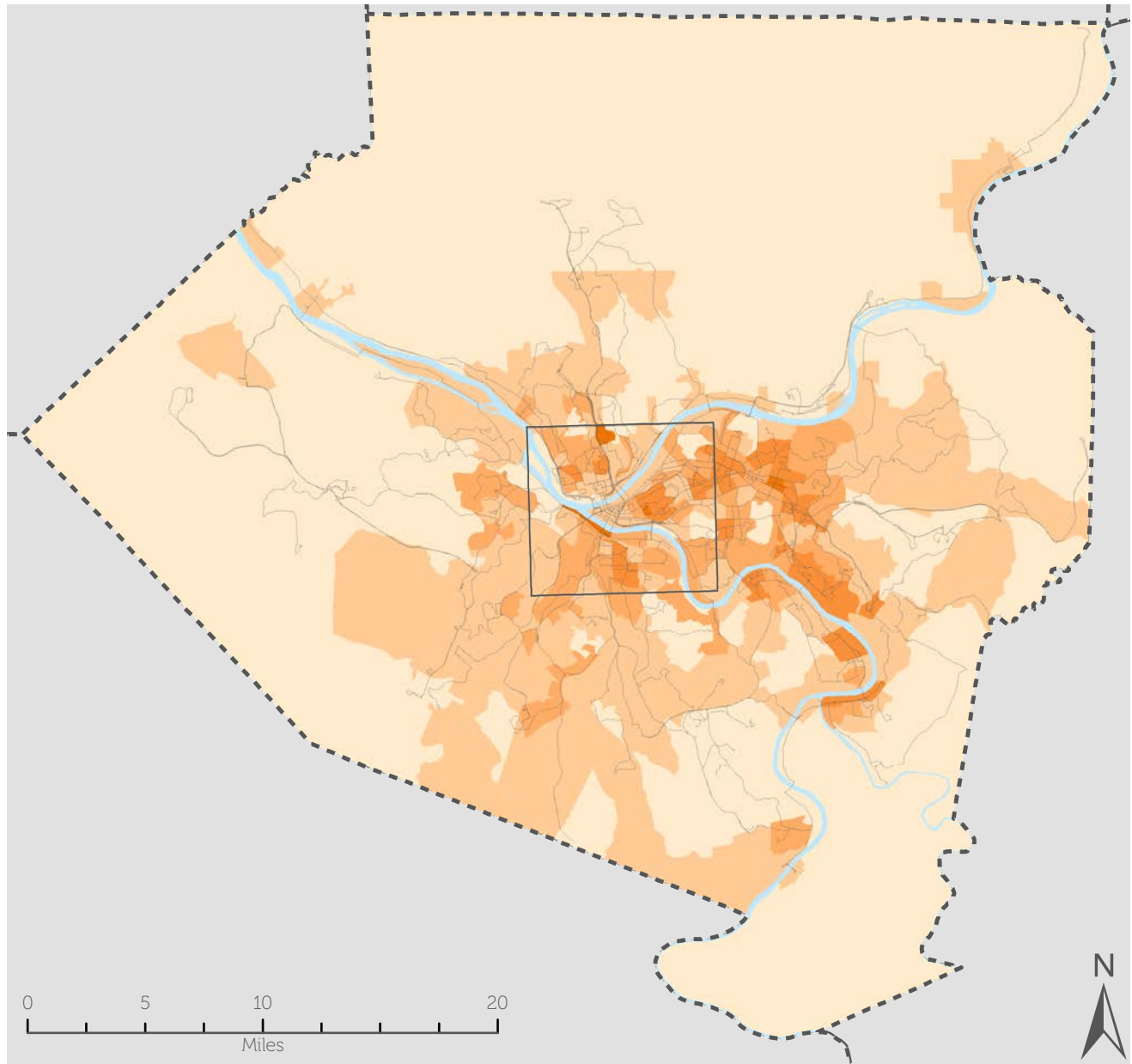
**Percent of Commuters Using
Public Transportation**

- 0.0% - 5.0%
- 5.1% - 15.0%
- 15.1% - 25.0%
- 25.1% - 50.0%
- 50.1% - 100.0%

—— PAAC Routes

—— Rivers

⌐⌐⌐ Allegheny County

0   5   10   20
Miles

0   0.5   1   2
Miles

N

NEXTransit

Equity Index

0   5   10   20
Miles
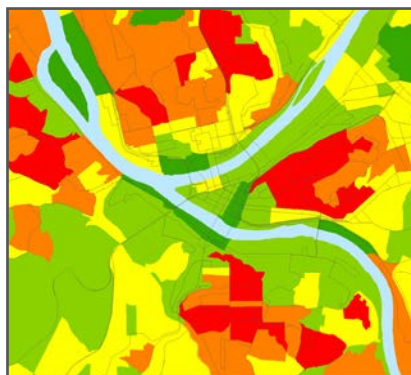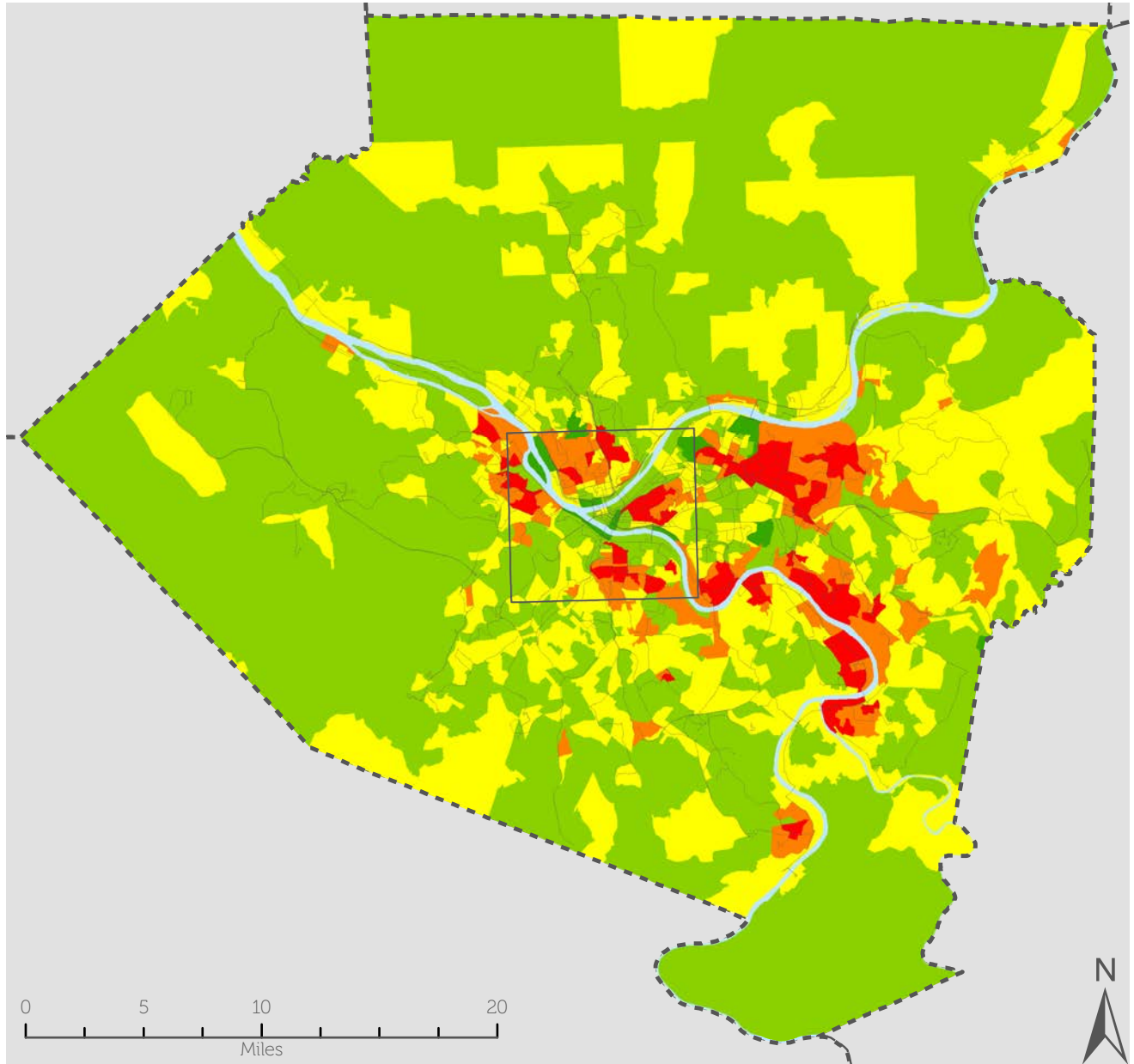
Whole Index Indicator

- 0.000000 - 0.075259
- 0.075260 - 0.187376
- 0.187377 - 0.261279
- 0.261280 - 0.366202
- 0.366203 - 0.544218

— PAAC Routes
▬ Rivers
▢ Allegheny County

0 0.5 1   2
Miles

Appendix

Highest Propensity

0   5   10   20
Miles

N
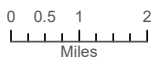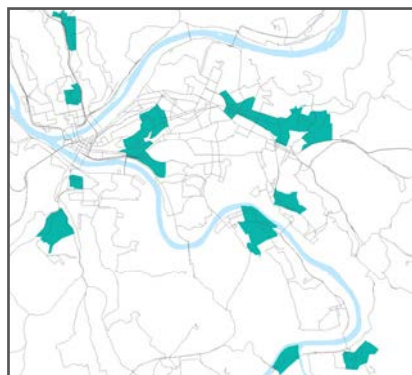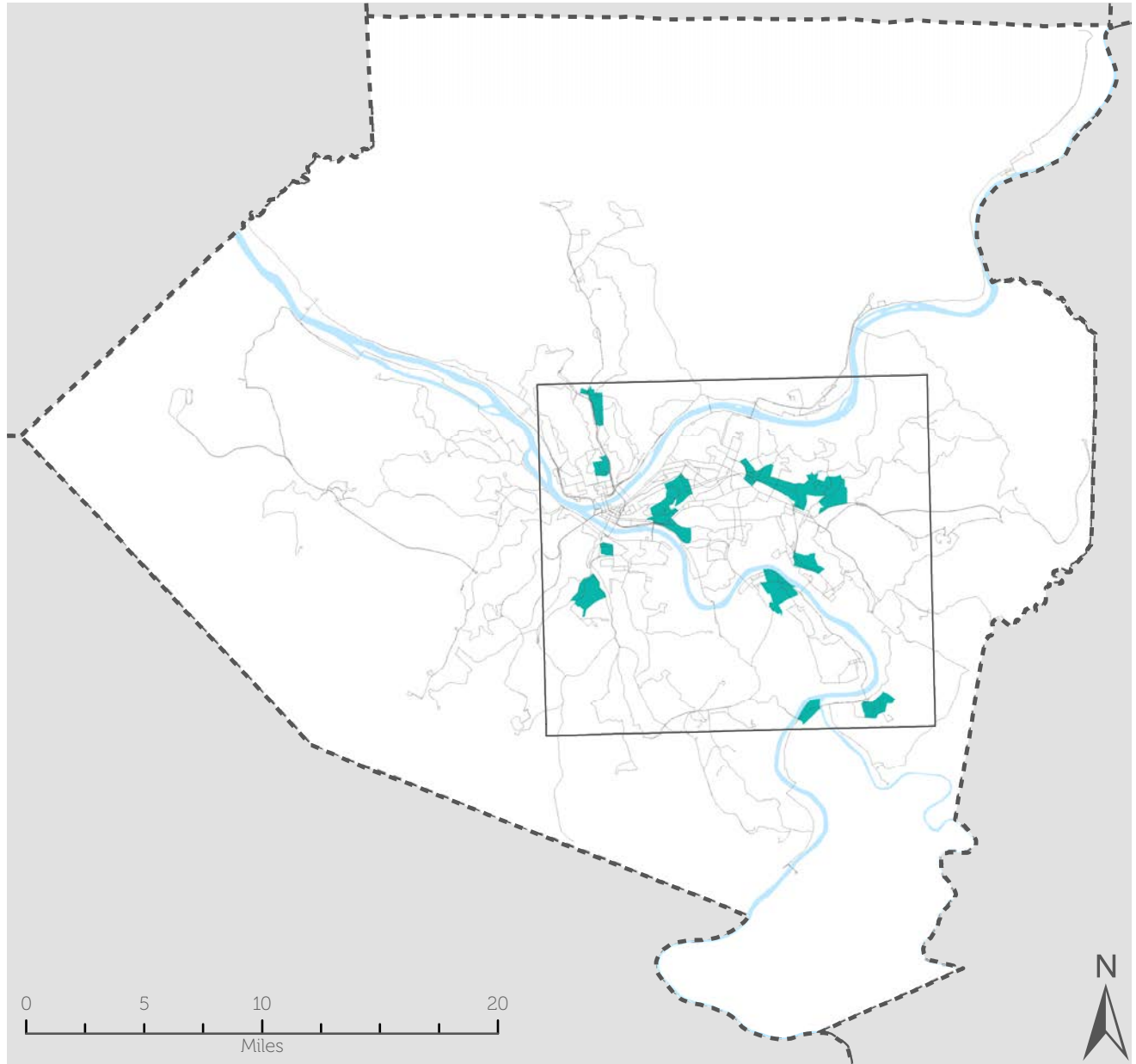
Highest Propensity

PAAC Routes

Rivers

Allegheny County

0 0.5 1   2
Miles

NEXTransit

No Vehicles Available
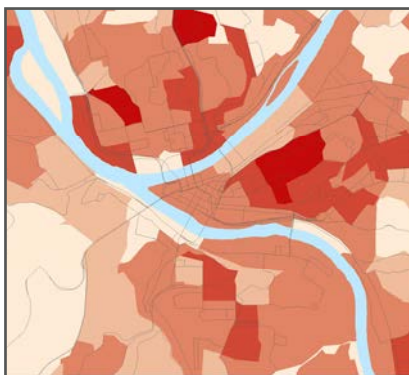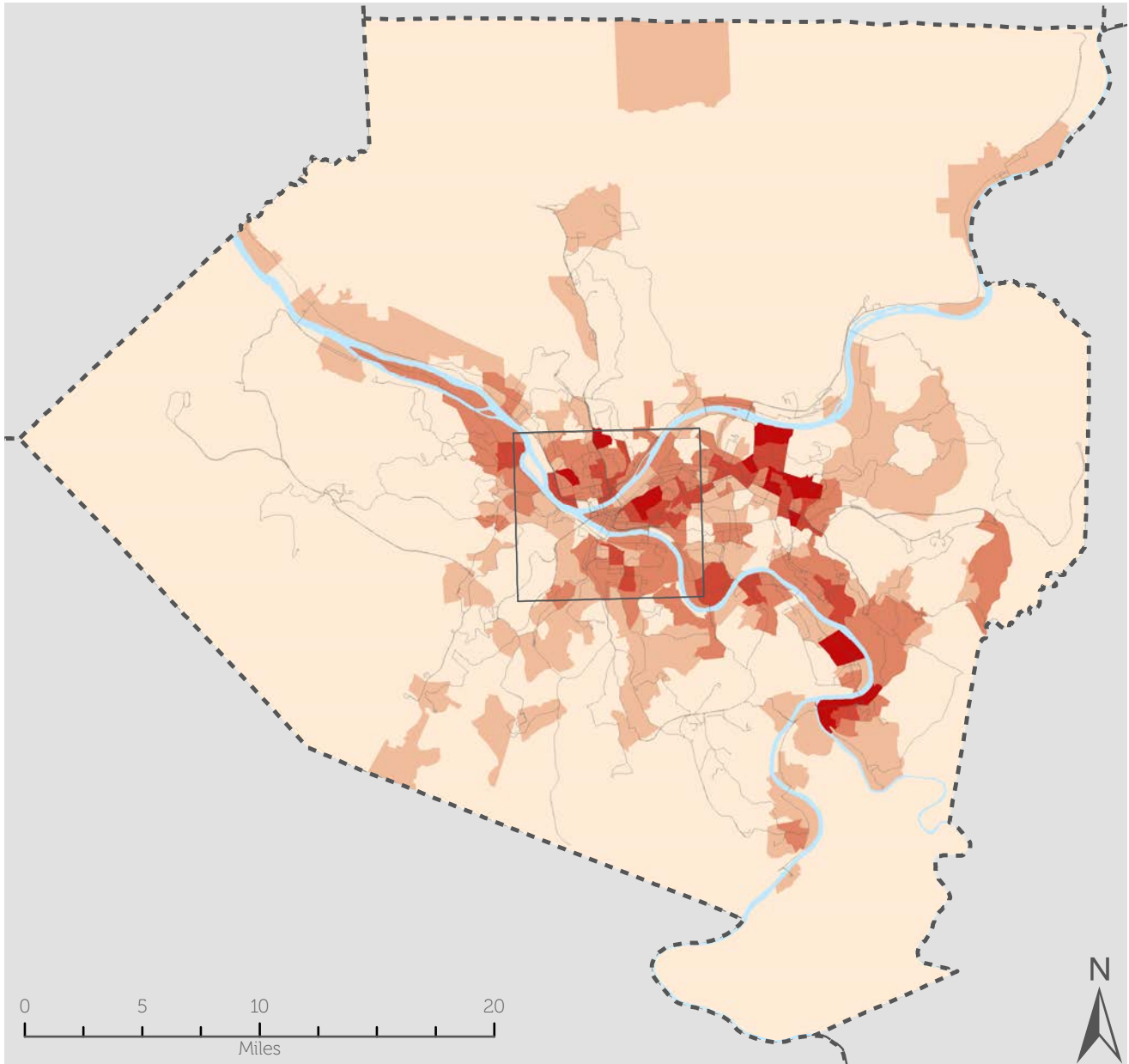
Percent of Occupied Housing Units
With No Vehicles Available*

- 0.0% - 10.0%
- 10.1% - 20.0%
- 20.1% - 35.0%
- 35.1% - 50.0%
- 50.1% - 100.0%

— PAAC Routes
— Rivers
⌐ ¬ Allegheny County

*Data Source: 2018 US Census

0   5   10   20
Miles

0   0.5   1   2
Miles

N

Appendix

NEXTransit Transit Stop Data - Disembark

Fifth Ave at Atwood Station

0   5   10   20
Miles

N
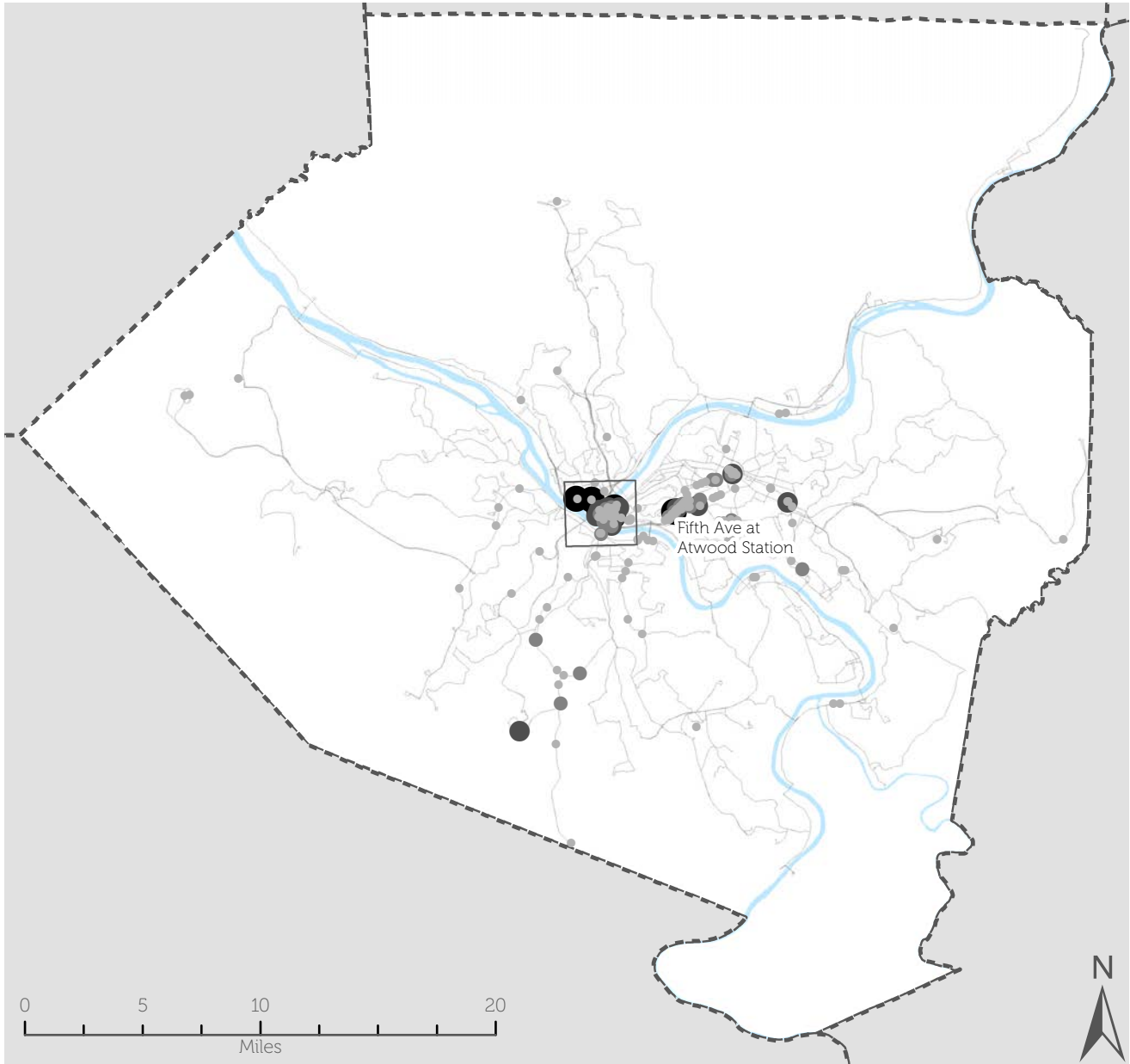
Avg Weekly Disembarkations
- 0 - 100
- 101 - 500
- 501 - 1000
- 1001 - 2500
- 2501 - 4360

- - - Allegheny County
— PAAC Routes
Rivers

Named Station - Greater Than 2500
Outside Downtown

0 0.5 1   2
Miles

NEXTransit

Transit Stop Data - Embark

0   5   10   20
Miles

N
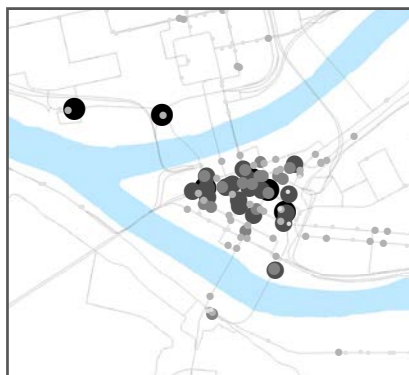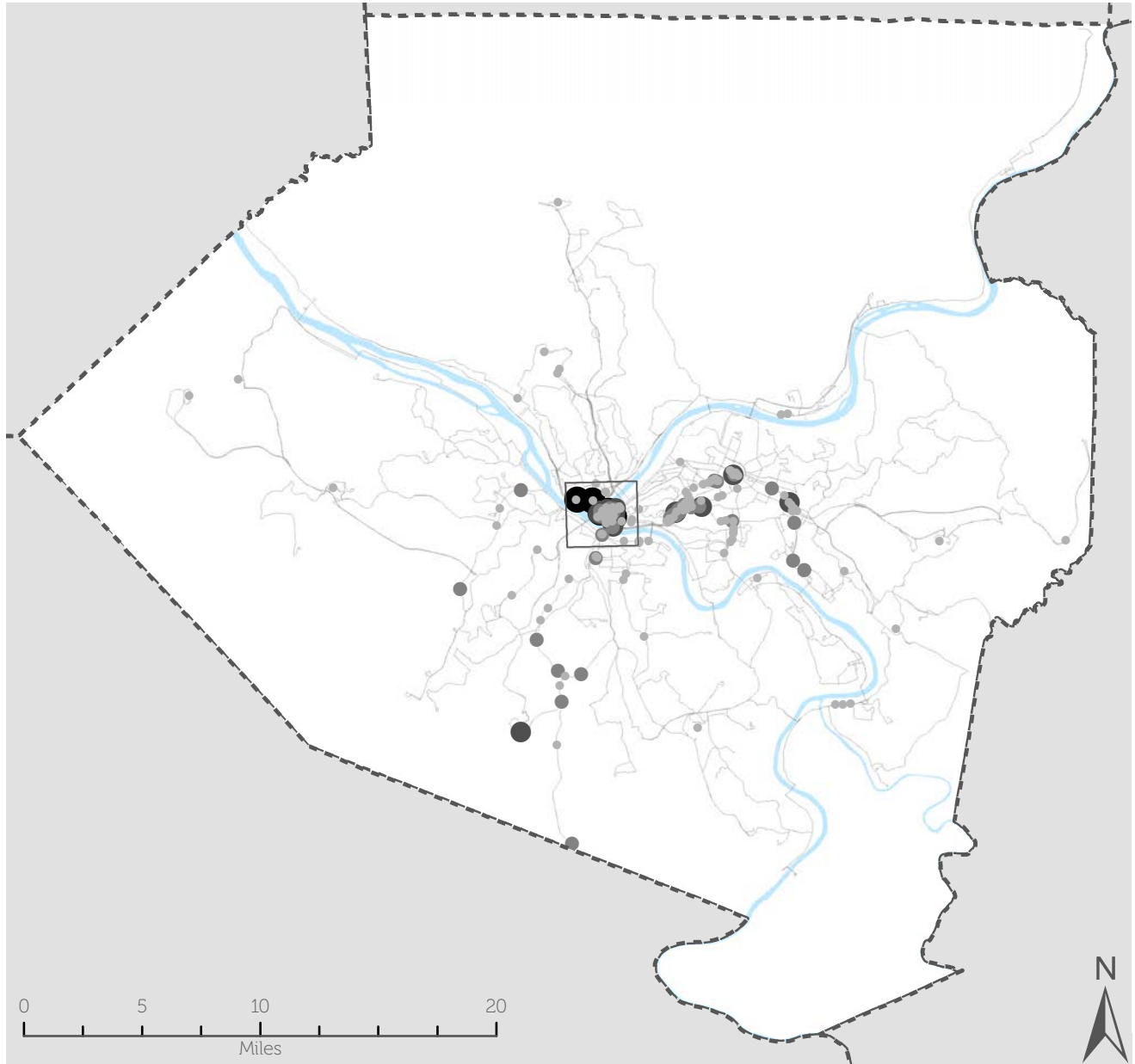
Avg Weekly Embarkations
· 0 - 100
• 101 - 500
● 501 - 1000
● 1001 - 2500
● 2501 - 4871

- - - Allegheny County
——— PAAC Routes
Rivers

0   0.5   1   2
Miles

Appendix

Population Density

0   5   10   20
Miles

N
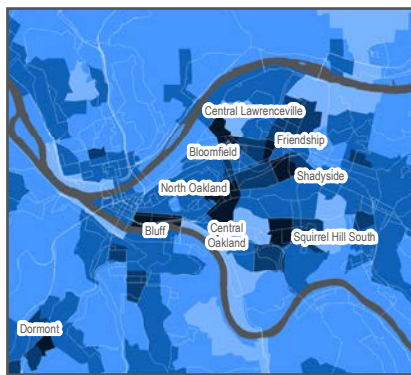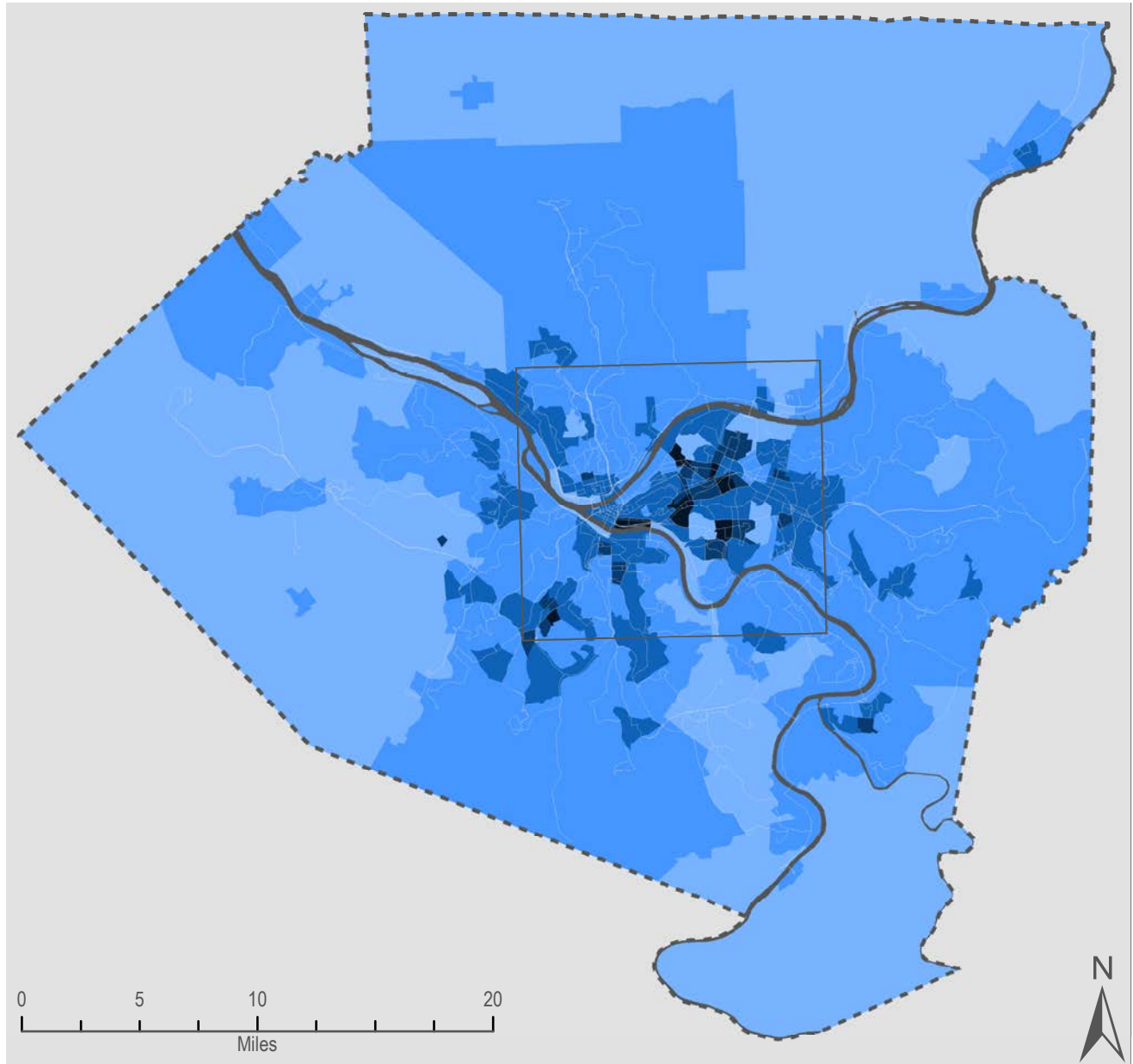
Estimated 2018 Population Per Square Mile

- 0 - 1,000
- 1,001 - 5,000
- 5,001 - 10,000
- 10,001 - 15,000
- 15,001 - 26,000

PAAC Routes
Allegheny County
Rivers

Labels showing population density
greater than 15,000 people per
square mile provided in the Inset Map

0   0.5   1   2
Miles

Appendix

NEXTransit

Employment Centers

0   5   10   20
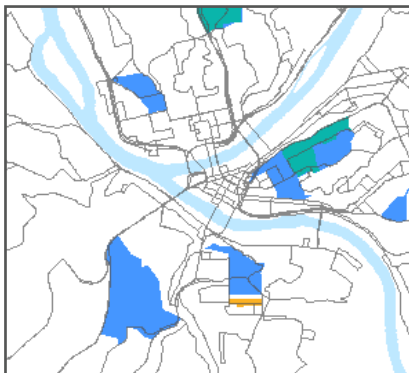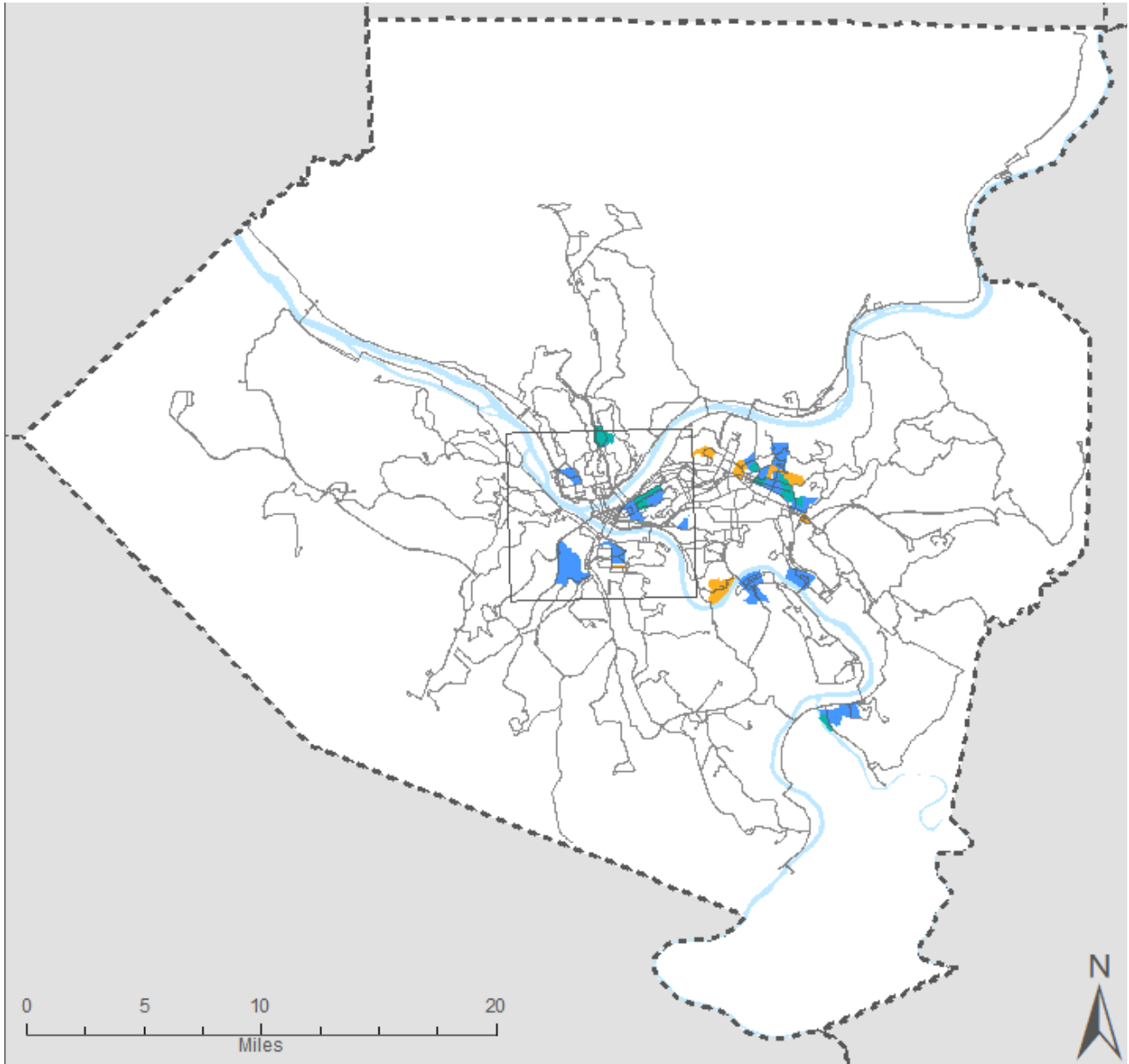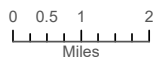Miles
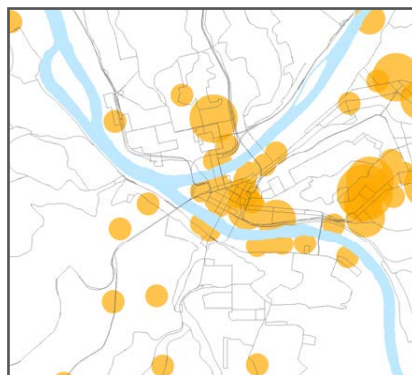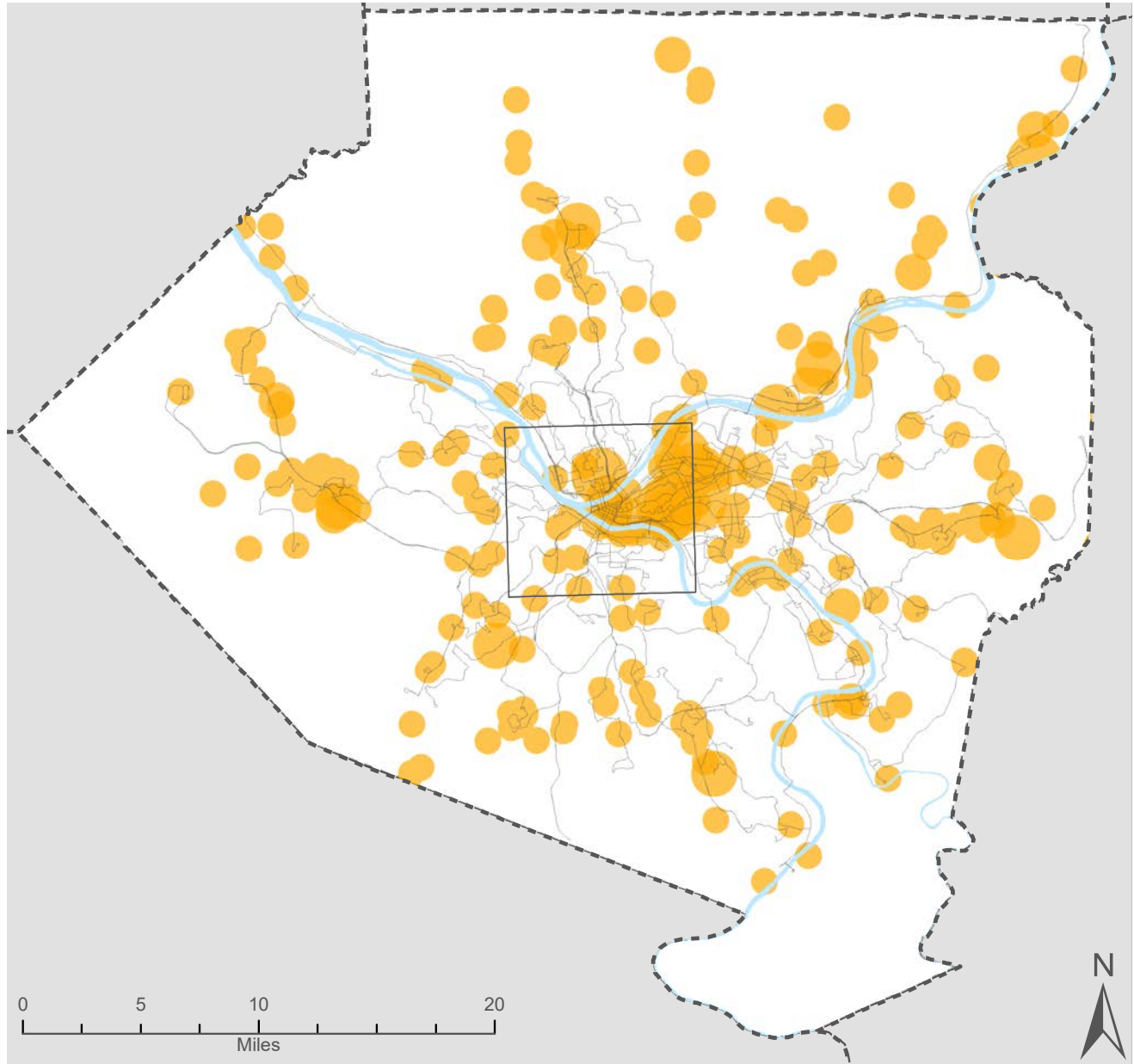
Employees

- 100 - 500
- 500 - 1000
- 1000 - 2500
- 2500 - 5000
- 5000 - 11899

Allegheny County
PAAC Routes
Rivers

N

0 0.5 1   2
Miles

NEXTransit Transit Propensity and Mobility Need
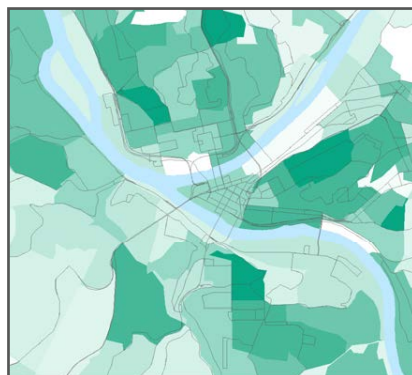

Legend:
- High Equity Index of Mobility Need
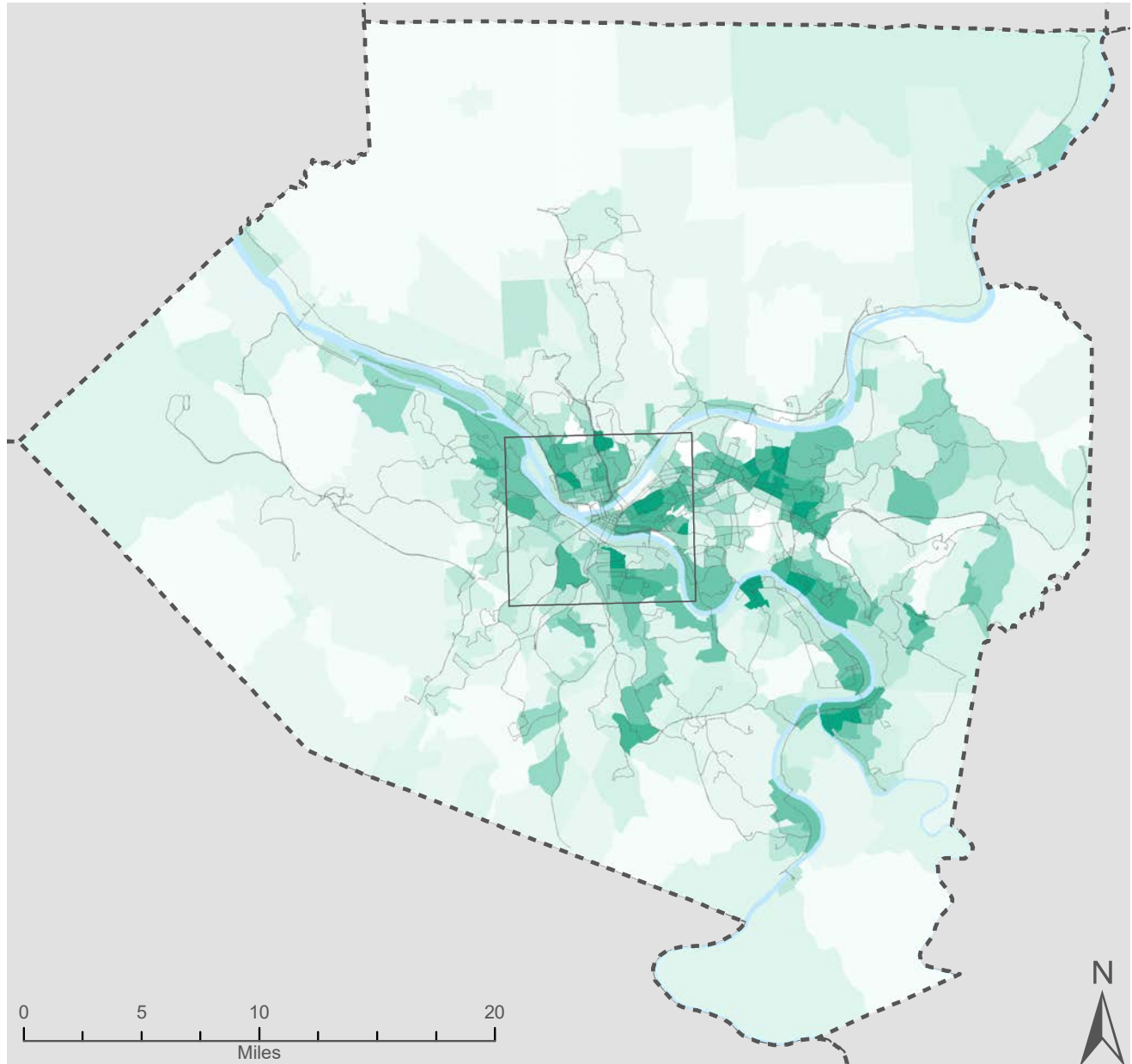- High Transit Propensity
- Both High Transit Propensity & High Mobility Need
- PAAC Routes
- Rivers
- Allegheny County

Appendix

Transit Propensity
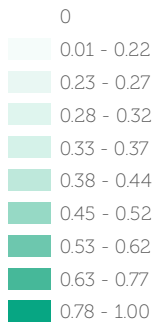

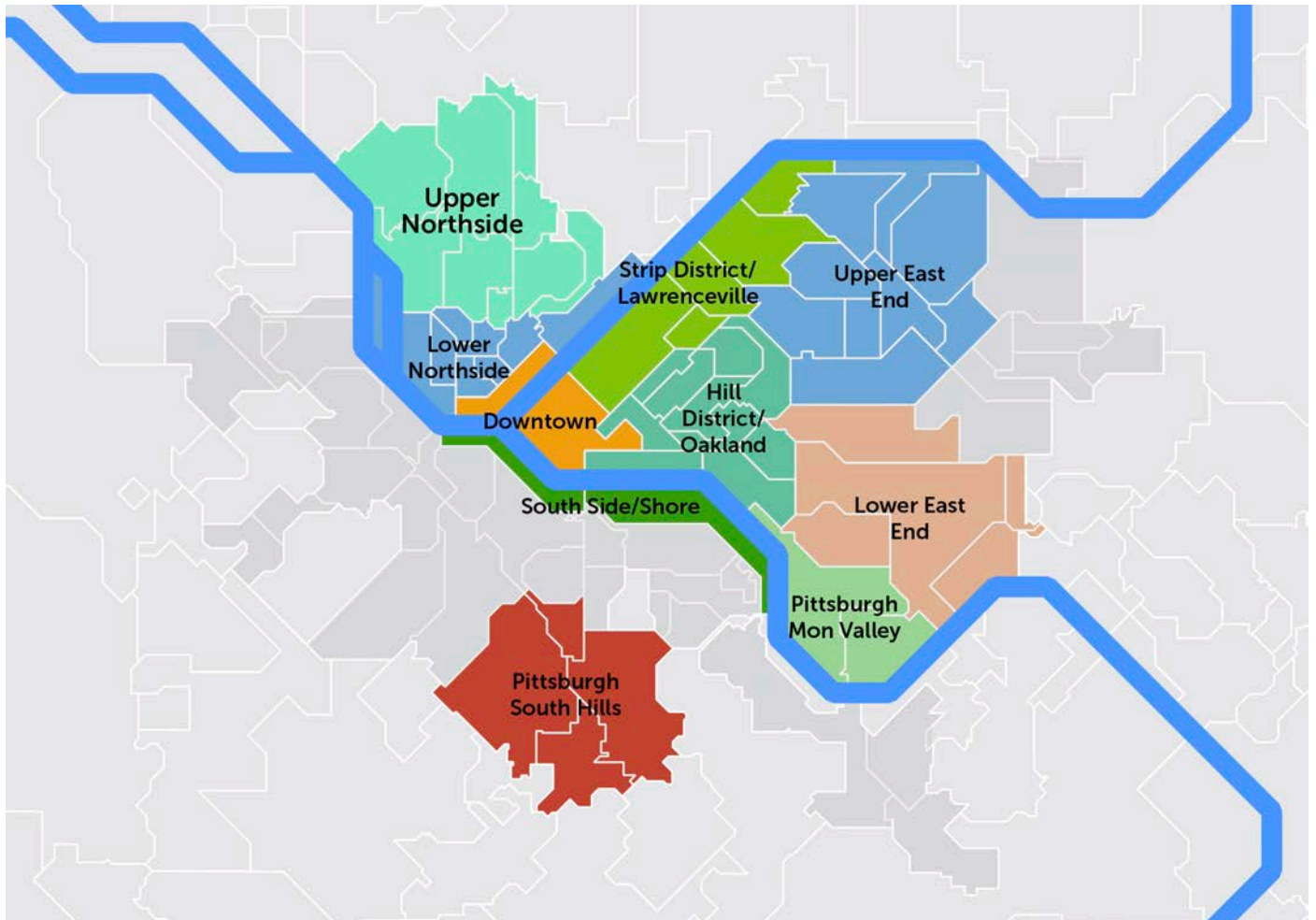0   5   10   20
Miles

N

Propensity

0

0.01 - 0.22

0.23 - 0.27

0.28 - 0.32

0.33 - 0.37

0.38 - 0.44

0.45 - 0.52

0.53 - 0.62

0.63 - 0.77

0.78 - 1.00

Allegheny County

PAAC Routes

Rivers

0 0.5 1   2
Miles

NEXTransit

City of Pittsburgh
Neighborhood Clusters

Upper Northside
• Brighton Heights
• Perry North/South
• Summer Hill
• Northview Heights
• Marshall-Shadeland
• Fineview
• Spring Hill-City View
• Spring Garden

Lower Northside
• Chateau
• Manchester
• Allegheny West
• Central Northside
• East Allegheny
• Allegheny Center

South Side/Shore
• South Shore
• South Side Flats

Downtown
• Central Business District
• North Shore

Strip District/Lawrenceville
• Strip District
• Lower Lawrenceville
• Central Lawrenceville
• Upper Lawrenceville
• Polish Hill

Upper East End
• Stanton Heights
• Morningside
• Highland Park
• Garfield
• Bloomfield
• Friendship
• Shadyside
• East Liberty
• Larimer

Pittsburgh South Hills
• Brookline
• Bon Air
• Overbrook
• Carrick

Hill District/Oakland
• Bluff (Uptown)
• Crawford-Roberts
• Middle Hill
• Bedford Dwellings
• Terrace Village
• Upper Hill
• West Oakland
• Central Oakland
• South Oakland
• North Oakland

Lower East End
• Squirrel Hill North
• Squirrel Hill South
• Regent Square
• Greenfield
• Swisshelm Park
• Hazelwood
• Glen Hazel

Transit Values Survey Definitions

Accessible to All - "I value a transit system which ensures our infrastructure is fully available in every way to those with specific needs, such as physical or mental disabilities, those traveling with infants or small children, those traveling with groceries or other goods, etc."

Affordable - "I value a transit system that allows those of all means, including the underemployed and unemployed populations to utilize transit without needing to sacrifice other life sustaining activity, such as buying food, medicine or heating, to do so."

Amenities-focused - "I value a transit system which ensures riders have the physical improvements that make it safe, easy, and comfortable to ride, such as stops on sidewalks with shelters, benches, lighting, and other improvements."

Digitally Connected - "I value a transit system that is transparent and wholly integrated online, making real time decision-making, trip planning, and service purchasing simple, quick and understandable."

Efficient - "I value a transit system that operates internally like a business and uses our limited public dollars to the greatest extent possible to provide the most effective service possible."

Equitable - "I value a transit system that not only ensures the fair provision of services to those with limited means or higher risk, but which affirmatively acts to better the services offered to these groups in an effort to combat historical and environmental imbalances in our community. For the Authority, these groups are defined as those with low or no incomes, those of minority races and/or ethnicities, those with a disability, those without access to a vehicle, those who do not speak English well, single mothers, children, and senior citizens."

Environmentally Sustainable - "I value a transit system that enhances the health of our communities and natural environment via its operations with regard to energy use, water use, raw material use, land use, and waste production."

Fast - "I value a transit system which is competitive with driving times, or at least not significantly longer than drive times."

Multi-modal - "I value a transit system that is integrated across all modes, making movement between modes like biking, walking, getting dropped off, shuttles, taxies and transportation network companies, carsharing, microtransit, intercity transportation, and new modes of transportation simple and intuitive."

Regionally Integrated - "I value a transit system that makes movement across county lines in the Region easy to understand and seamless from a rider perspective."

Resilient - "I value a transit system that can respond quickly, efficiently, and in the best interest of riders and operators to sudden and impactful changes such as natural disasters, economic disruptions, pandemics, or community unrest."

Simple - "I value a transit system which is as simple and easy for everyone to understand and use for existing riders and for those who've never before used transit."

Supports Economic Vitality - "I value a transit system that focuses on getting people to work, school, and training and on developing around transit amenities in a way that support job growth and wealth building for our region's communities. I value a transit system that enables locals and visitors to travel to shopping/entertainment/cultural/recreation and sports events as all such activities are major components of the region's economic vitality."

Walkable - "I value a transit system that prioritizes safe, accessible, direct, and easy to use paths to and from transit stops and stations."

Visionary - "I value a transit system that sets the bar for new technologies and new ways of thinking about how we can move people and works quickly to try out new things."

Appendix

pennsylvania
DEPARTMENT OF LABOR & INDUSTRY
CENTER FOR WORKFORCE INFORMATION & ANALYSIS

Allegheny County
Top 50 Employers

Allegheny County   # 1st Quarter, 2020

Combined Government Ownerships

Rank	Employer	Rank	Employer
1	UPMC Presbyterian Shadyside	26	Dick's Sporting Goods Inc
2	University of Pittsburgh	27	Universal Protection Service LLC
3	Federal Government	28	Duquesne University
4	PNC Bank NA	29	Community College of Allegheny Cnty
5	Western Penn Allegheny Health	30	Highmark Inc
6	Giant Eagle Inc	31	Target Corporation
7	Allegheny County	32	PPG Industries Inc
8	Carnegie Mellon University	33	University Health Ctr of Pittsburgh
9	Bank of New York Mellon	34	UPMC Passavant
10	School District of Pittsburgh	35	Rivers Casino
11	Allegheny Clinic	36	FedEx Ground Package System Inc
12	UPMC Health Plan Inc	37	UPMC Community Medicine Inc
13	State Government	38	Jefferson Regional Medical Center
14	Wal-Mart Associates Inc	39	Home Depot USA Inc
15	University of Pittsburgh Physicians	40	Core Network LLC
16	United States Steel Corporation	41	GMRI Inc
17	City of Pittsburgh	42	Lowe's Home Centers LLC
18	UPMC Children's Hospital of Pittsburgh	43	HM Health Solutions Inc
19	Magee-Women's Hospital of UPMC	44	Duquesne Light Company LLC
20	Eat'n Park Hospitality Group	45	North Allegheny School District
21	Fluor Marine Propulsion LLC	46	Heartland Employment Services LLC
22	Port Authority of Allegheny County	47	Highmark Health
23	UPMC Mercy	48	Comcast Cablevision Corp (PA)
24	UPMC Physician Ops and Prof Svcs	49	UPMC Saint Margaret
25	St Clair Memorial Hospital	50	Bayer US LLC

Source: Quarterly Census of Employment and Wages