



Monmouth
PATHS
Access for All

Executive Summary

Date: July 22, 2024



ACKNOWLEDGEMENTS



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Introduction

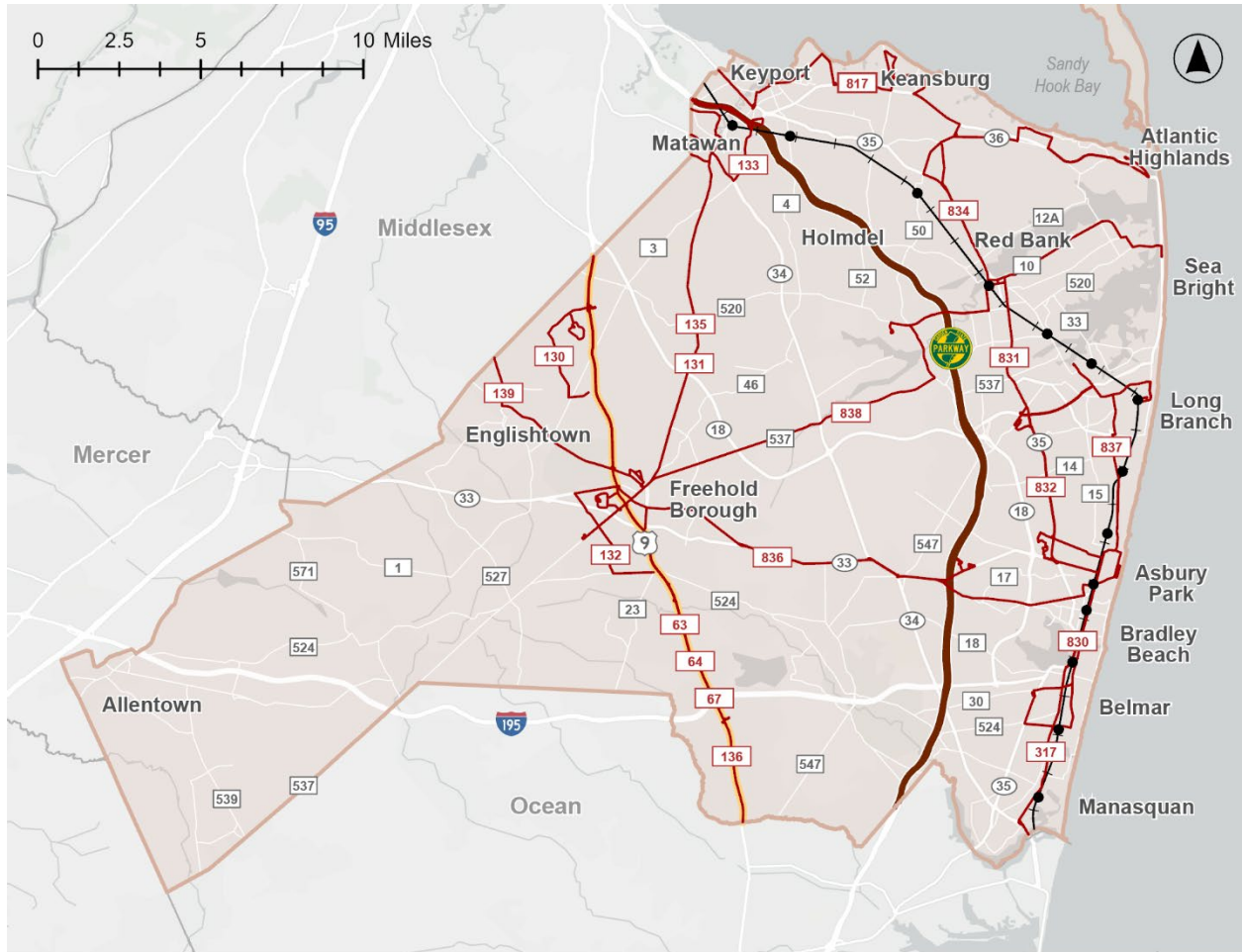
Monmouth County is a place that people want to live, work, and play: with vibrant downtowns, theaters, entertainment venues, excellent agricultural resources, a multitude of recreational opportunities, proximity to major urban centers, ample shopping, and dining options. However, accessing all that Monmouth County and the region has to offer is not so easy for many of the County's low-income, minority, elderly, young, or disabled residents. For these residents, trips like going to work, visiting the doctor's office, buying fresh food at a grocery store, or enjoying the shore on a hot summer day can be challenging because they are often confronted by barriers to their mobility.

Transportation disadvantaged populations do not have equitable mobility options and are often overburdened by limited transit connectivity, limited access to information about options, gaps in the sidewalk network, challenging cycling conditions, missing curb ramps, lighting, security concerns, and long crossing distances across wide roadways, among others. These barriers can also vary seasonally within the County. Visitors to the County's shore communities and event venues, particularly over the summer, add roadway congestion and increase travel times. Increased volume has other impacts on mobility, such as making it more difficult to find parking, or higher pass-through volumes on local streets.

The orientation of the transportation network can also exacerbate mobility issues for transportation disadvantaged populations. Major roadways such as US Route 9 and the Garden State Parkway as well as the two major spines of transit access, the North Jersey Coast commuter rail line and most bus service, make it relatively easy to travel to and from major cities to the north (see **Figure E-1**). However, these transit services are not always optimal for serving the basic needs of low-income, minority, elderly, and disabled populations, which make more local trips to various communities within and around Monmouth County.

The purpose of the Monmouth County Barriers to Mobility Study, referred to as Monmouth PATHS: Access for All, is to identify mobility and accessibility barriers that Monmouth County residents face, and strategies and tools for infrastructure, services, and policies that would help to reduce or eliminate them.

Figure E-1: Major Roadways and Transit Service in Monmouth County



- Monmouth County
- Rail Stations
- Passenger Rail
- NJ Transit Bus Routes
- US Route 9
- Garden State Parkway

Source: Monmouth County, NJGIN Open Data

Study Vision, Value Statement, and Mobility Equity Goals

Study Vision: Improving access to opportunities through improved mobility options.

Study Value Statement: Enhance access to employment opportunities, education, healthcare, services, and recreation for Monmouth County residents by using actionable strategies that create the infrastructure, services, and policies for a safer, more equitable, and more efficient transportation system.

Mobility Equity Goals:

- Reduce the monetary, time, and quality of life costs of accessing employment, education, healthcare, retail/services, and recreation.
- Be more intentional when linking land use, affordable housing, and transportation.
- Improve awareness of transportation options for the County's vulnerable communities.
- Create opportunities for the latest technologies, such as mobility hubs, microtransit, and electric vehicle (EV) charging stations, etc., to be deployed within the County's vulnerable communities to ensure that the benefits offered by new technology are available in these communities.

Methodology

The study team adopted a six-step process based on the guidance provided by the United Kingdom Department for Transport. This prescriptive process combines data analytics with the lived experiences of the community to identify the barriers Monmouth County residents face when undertaking a trip and develop strategies and tools to mitigate these barriers. The Monmouth PATHS: Access for All study addresses each step in greater detail in appendices to the Final Report and Toolkit. The County, its municipalities, other state agencies, and private developers, among other interested parties, can utilize the information outlined in this study to begin implementing the strategies and monitoring their performance.

How are Mobility Barriers Defined?

The analysis primarily focuses on the barriers experienced by a user, or a potential user, of the transportation network in Monmouth County. These barriers can be considered as one or more of the following:

- Something that **negatively affects a journey**. This makes a trip less efficient, more expensive, less comfortable, or more stressful in terms of safety and/or well-being.
- Something that **discourages people from travelling by (generally) more sustainable modes**. This primarily leads to more private vehicle use and associated negative impacts across a range of policy areas including environment, climate change, equity, and safety.
- Something that **stops people from making the trips they would like to make**, or goods being moved. This impacts quality of life, well-being, and access to opportunities.

Barriers were identified through a combination of data analysis as well as public and stakeholder outreach as described below.

Data Analysis

The data and analysis that was used to identify barriers discussed in the following section is available in detail through an ArcGIS dashboard that includes information on the transportation network, socio-demographics, active travel, public transit, and car travel, among other information. This was used to identify potential mobility issues by overlaying different data sources together to visualize trends. In addition to the dashboard, the project team utilized a custom tool, the Community Deprivation Audit Tool (CDAT) to further the analysis. The CDAT combined transportation data with demographic data to highlight areas where poor connectivity may be contributing to issues such as access to employment, healthcare, education, and recreation.

Public and Stakeholder Outreach

Stakeholder and public outreach were critical elements to this study and provided a substantial source of additional information that was used to verify barriers identified within the data as well as to identify barriers that were not apparent within the data. Outreach consisted of the following:

- **Three Technical Advisory Committee (TAC) meetings.** The TAC included representatives from numerous Monmouth County departments, municipalities, organizations, and agencies that are involved with transportation. Its purpose was to guide the project process and provide insight/recommendations about the project findings.
- **Three Experiences Committee (EC) meetings.** The EC included representatives from advocacy and community groups that represent/support vulnerable populations within the County. The purpose of the EC was to provide important information regarding the needs of the people they serve and to help spread the word about the study and encourage public input.
- **Three public meetings.** The project team conducted public meetings in Asbury Park (November 2023), at Brookdale Community College (February 2024), and in Freehold near the transit center (April 2024). The locations of the public meetings were informed by the results of the Underserved Communities Assessment (see **Appendix A**) which identified locations of communities that may be adversely or disproportionately affected by limited mobility. As such, the meeting locations were selected because they were accessible via transit and were in areas with higher proportions of the County's disadvantaged populations. In addition, there was a desire to conduct the meetings in different areas of the County to provide more opportunity for participation by different communities. Virtual meetings were also held after the Brookdale and Freehold public meetings for those unable to attend in person.
- **An online survey was available from November 16, 2023, through February 9, 2024.** An online survey was prepared, and links were provided on the study website, on social media posts, press releases, and via QR codes at the Asbury Park and Brookdale public meetings. The survey included a mapping tool, which allowed respondents to select from six comment types that they could pin on a map of the County and then provide additional details as to the exact issues they experienced.

The survey tool was utilized to collect comments online and was also available during the public meetings to collect public comments. Online comments and those collected during the public meeting resulted in a total 617 comments left by 499 respondents. Of the six comment types, pedestrian issues received the most comments (288 or approximately 46 percent), followed by traffic safety (137 or approximately 22 percent), biking (90), transit (58),

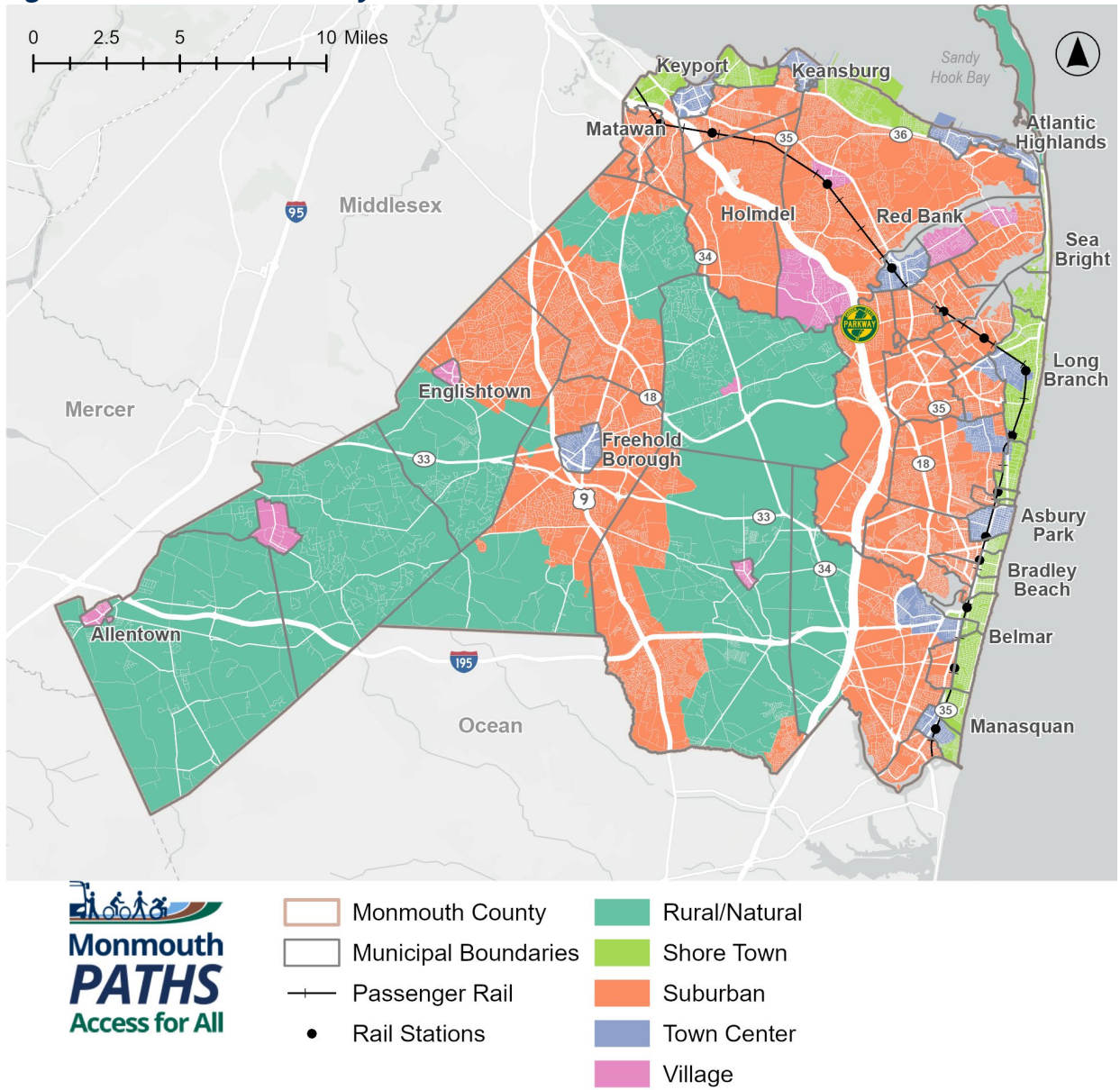
parking (11), and other (34). Common themes among the comments were gaps in the pedestrian and bicycle network across the County; concerns regarding safety of pedestrians and bicyclists when crossing busy roadways; limited and infrequent transit service, particularly east-west in the County; and, the need for new land use and parking policies to support multi-modal travel.

Identification of Barriers

An equitable transportation system is one that works for all users. It means that no matter a person's age, physical abilities, or socioeconomic status, they enjoy the same level of mobility as any other user. Where a person lives can also have a substantial impact on the type and severity of mobility barriers they experience. It is critical that the mitigation strategies developed consider the unique challenges and opportunities of the different types of communities as well as residents in the County.

To account for the different areas of the County, barriers were identified by transect. A transect is a land-use term that describes an area based on its relative development density or other characteristics of the natural or built environment. Current zoning was reviewed to identify the County's main transects. Based on the assessment of zoning and the natural and built environment in the County, five transects were defined (**Figure E-2**). It should be noted that the definition of the transects was not bound by municipal borders. Smaller municipalities like Freehold Borough, Allentown, and Keyport, tend to consist of one transect, while larger municipalities such as Marlboro, Manalapan, Middletown, and Howell Township are made up of multiple types of transects.

Figure E-2: Monmouth County Transects



Source: Monmouth County, NJGIN Open Data

The transects and a summary of key findings for each are described below:

- **Rural/Natural:** Large parcel sizes primarily consisting of agricultural uses, parks and open space, very low-density residential, and limited low-density commercial and industrial uses, with limited to no transit, pedestrian, or bicycle facilities.

This transect is the most auto-oriented due to the low-density nature of the land uses. Less than 4 percent of households are within 1/2 mile of transit and only 28 percent of roadways are considered low-stress for bicyclists. Several comments received from the public indicate that there are a substantial number of bicyclists that use the roadways in this transect but there is a lack of bike lanes or shoulders. It should also be noted that there are very few accessible services in this transect. For example, there are only two supermarkets within this transect, despite it being the largest transect in terms of land area.

- **Village:** Small areas of low- to moderate-density residential development that typically surrounds a small commercial area. The transportation network in this transect consists of a small but more connected and walkable street network than in the surrounding areas. However, there are few pedestrian and bicycle connections outside of the village area, and there is typically very limited to no transit serving the village.

Despite having higher densities, only 6 percent of households in this transect are within 1/2 mile of a transit stop, and approximately 9 percent of jobs in the County are accessible with up to one seat change, which refers to transferring between mass transit modes. Furthermore, less than 1 percent of jobs are accessible via low-stress bike routes from this transect, which is primarily due to the overall lack of low-stress routes in and around the County's villages. Public comments received for this transect indicate a lack of pedestrian and bicycle connectivity between land uses, as well as high vehicle speeds, and drivers failing to stop for pedestrians.

- **Suburban:** Areas of the County that consist of low- to moderate-density residential, as well as low-density commercial, industrial, and office uses. This transect is also characterized by disconnected subdivisions, discontinuous street networks with cul-de-sacs, and limited connections between land use types. There are limited pedestrian and bicycle connections in this transect, and transit typically occurs along major arterials and has a low frequency of service.

This transect is the largest in terms of population; however, less than 10 percent of households are within walking distance of a transit stop and less than 3 percent of households are within ½ mile of a transit stop with service after 7:00 PM. Furthermore, only 10 percent of jobs are accessible from this transect with up to one seat change (transfer between different transit routes or services). This indicates that residents that do not have a car in this transect will have substantial difficulty traveling throughout the County, particularly after 7:00 PM. Despite having the highest number of services of any transect, only three of the 11 services evaluated for this study are within walking distance of households in this transect. It should also be noted that 60 percent of all fatal crashes between 2019 and 2022 in the County occurred within this transect. Public comment identified gaps in the pedestrian and bicycle network, dangerous crossing conditions on major state roadways, and a lack of mobility options to connect to nearby land uses.

- **Town Center:** Areas of moderate- to high-density development with a more traditional grid network that is typically oriented toward a central business core or a “Main Street” corridor. Most streets within this transect have sidewalks and the large number of local streets provide some low-stress bicycle routes. Within Monmouth County, Town Center transects have a mix of commuter rail and bus service with varying frequencies.

The key metrics for this transect are different than those of the previous three transects. This transect has the highest population of low-income residents and the highest percentage of zero-vehicle households. In addition, this transect has the highest pedestrian and bicycle crash rates of any of the transects, likely because of higher amounts of walking and biking. However, it also indicates a lack of safe facilities for these users, many of which are low-income residents who rely on walking and biking. Less than 11 percent of households are within 1/2 mile of transit with service after 7:00 PM; less than 5 percent of jobs are accessible via biking; and only 25 percent of jobs are accessible from this transect with up to one seat change. Although these metrics are better in this transect than the others, there is still a substantial gap in options for people without access to a private vehicle.

Furthermore, unlike the previous three transects whose comments related to the lack of pedestrian and bicycle facilities, most of the comments provided in the Town Center transect have to do with the condition and safety of these facilities, as well as a lack of transit services, particularly after 7:00 PM.

- **Shore Town:** This transect has many features that are similar to that of the Town Center transect with regards to density and the traditional grid network. Within Monmouth County, communities in this transect may also be served by bus or rail. The primary difference between a Shore Town transect and a Town Center transect is the seasonality of activity in the communities, with population fluctuating between the peak summer season and the rest of the year. This transect also includes some Bay Shore towns. These communities along Raritan Bay do not have the seasonality to the degree of the towns along the ocean but are still oriented to the waterfront.

This transect has the second highest population of low-income residents, as well as the second highest percentage of zero vehicle households. In addition, this transect has the second highest pedestrian and bicycle crash rates of any of the transects. Similar to the Town Center transect, this transect typically experiences more people walking and biking, particularly during the summer months.

The Shore Town transect also has limited connectivity to employment areas within the County, and very few households have access to bus service after 7:00 PM, making it difficult to access low-skilled or shift jobs which can start or end after 7:00 PM. Furthermore, despite having a high percentage of low-stress bicycle routes, less than 2 percent of jobs are accessible using low-stress bicycle routes. Public comments within this transect were largely related to lack of connectivity for transit and active modes between municipalities as well as concerns regarding safety when crossing busier roadways.

The key metrics discussed above as well as other data assessed for each transect were then translated to specific critical barriers as identified in **Table E-1**. A “◆” symbol indicates a critical barrier that was identified for the transect through the data analysis, outreach, or combination thereof. A “○” symbol indicates that the barrier likely exists in the transect given land use and infrastructure similarities with other transects; however, the data and/or outreach did not specifically identify the barrier for that transect.

Table E-1: Critical Barriers by Transect

Barrier	Rural/Natural	Village	Suburban	Town Center	Shore Town
(A)CTIVE MODES					
A01: Limited low-stress bicycle facilities and poor connectivity to adjacent land uses.	◆	◆	◆	◆	◆
A02: Intersections that are challenging to cross for pedestrians and bicyclists.	◆	◆	◆	◆	◆
A03: Lack of sidewalks throughout the transect that connects neighborhoods, parks, schools, or other complimentary land uses.	◆		◆		
A04: Missing pedestrian and bicycle connections to major destinations outside of the transect.		◆			
A05: Gaps in the sidewalk network, including missing crosswalks.		◆	◆	◆	◆
A06: Sidewalks and/or bike lanes lack a buffer from moving vehicular traffic.	○	◆	○	○	○
A07: Recent roadway projects that have not included enhanced accommodations for pedestrians or bicyclists.	○	○	◆	○	◆
A08: Major state routes act as barriers to pedestrian activity due to difficult crossings and lack of pedestrian and bicycle infrastructure.			◆	○	
A09: Sidewalks, curb ramps, and/or crosswalks are in poor condition.		○	○	◆	◆
A10: Poor lighting that makes it difficult to see pedestrians and bicyclists.	○	○	○	◆	◆
A11: Missing ADA curb ramps or other accessible features.	○	○	○	◆	○
(L)AND USE					
L01: Low-density development with limited connections between land uses.	◆	◆	◆		
L02: Critical services, including supermarkets, pharmacies, healthcare services, etc. are located outside of the transect.	◆	◆		◆	◆
L03: Limited access to employment opportunities.	◆	◆		◆	◆
L04: Lack of affordable, mixed-use, and walkable development.	○		◆		
L05: Zoning policies encourage trips by private vehicles.	◆	○	◆	◆	○

Barrier	Rural/Natural	Village	Suburban	Town Center	Shore Town
(S)AFETY					
S01: High vehicle speeds, unsafe passing behaviors, and/or limited lighting on roadways in this transect.	◆		◆	◆	◆
S02: Vehicles cutting through residential streets to avoid congestion on arterials.		◆	○	○	○
S03: Lack of driver compliance for yielding at crosswalks.	○	◆	○	◆	◆
S04: On-street parking that impacts sight distance and the ability to see turning vehicles, pedestrians, and bicyclists.		○		◆	○
(T)RANSIT					
T01: Limited access to transit, particularly to east-west service.	◆	◆	◆	◆	◆
T02: Difficulty accessing transit stops due to lack of infrastructure for first-mile/last-mile connections.	○	○	◆	○	◆
T03: Difficulty accessing transit due to missing or damaged rider amenities at stops, and/or lack of ADA accessibility.	○	○	◆	◆	◆
T04: Low frequency transit services with limited operating hours, particularly late-night and on weekends.	◆	◆	◆	◆	◆
T05: Unreliable transit operations and difficulty making connections.	○	○	○	◆	◆
(O)THER					
O01: Seasonal traffic congestion negatively impacts mobility and parking within the transect.	○	○	○	○	◆

◆ - indicates that there is supporting data and/or public feedback that identifies this barrier in this transect. ○ - indicates where this barrier is likely present but not specifically found in the data or public feedback.

Strategies to Mitigate the Barriers

Based on the barriers identified above, a toolkit was developed to outline the strategies and tools that could be used to mitigate the County's mobility barriers. The tools in the toolkit are grouped into the following nine strategy statements:

- Strategy 1: Adopt design standards that support active modes like walking, biking, and scootering for all users.
- Strategy 2: Develop multi-modal programs that prioritize mobility for the County's transportation disadvantaged populations.
- Strategy 3: Improve County-wide active mode connections between neighborhoods, land uses, and municipalities.
- Strategy 4: Improve access to transit by addressing transit stop conditions and first and last mile challenges.
- Strategy 5: Improve transit service and increase transit connections to major activity centers to the west of the County.
- Strategy 6: Implement policies that encourage mixed-use, multi-modal-supportive development patterns that provide a variety of housing options.
- Strategy 7: Improve connections between the County's transportation disadvantaged populations and critical services necessary for wellness such as healthcare, education, recreation, grocery stores, and pharmacies.
- Strategy 8: Improve safety for all roadway users.
- Strategy 9: Enhance transportation-supported sustainability and resilience efforts.

Each strategy consists of a series of tools that could be implemented to satisfy the strategy. Each tool is associated with the transect(s) that it applies to, the parties responsible for implementation, implementation timeline, and magnitude of cost. The strategies and 64 associated tools are outlined in Appendix C: Limiting Effects and Positive Solutions.

Recommendations and Next Steps

The County, state agencies, and municipalities can review this document and the attached toolkit to begin working toward a more equitable mobility future for people living, working, and visiting the County. The attached toolkit includes 64 tools that can be used to address

barriers to mobility within the County. However, the large number of tools, while providing flexibility for implementation, can also impede implementation because implementers may not know where to start. The project team has assessed the critical barriers and has highlighted up to five tools that each implementer should consider implementing in the short term (**Table E-2**). Municipality-led initiatives are also broken down by transect. However, there should be no limit as to how many tools can be implemented, and implementers should have flexibility to pick and choose which tools they want to implement based on changes in needs and priorities. A full summary of Strategies and Tools to Mitigate Barriers can be found in Appendix C: Limiting Effects and Positive Solutions, as well as the toolkit.

Table E-2: Tools to Consider for Priority Implementation by Lead Implementer

Lead Implementer	Tools for Priority Implementation
Monmouth County	Tool 1D: Implement policies that require County-funded roadway re-paving or development projects to include upgrades to pedestrian infrastructure, and to install bike lanes if the roadway in question is identified as a bike corridor in a municipal or County plan.
	Tool 2E: Build relationships and increase faith in governance through robust engagement and addressing low-hanging infrastructure and service issues.
	Tool 3A: Update the County-wide bicycle master plan with a focus on cross-County connectivity. Prioritize filling gaps in existing trail networks.
	Tool 8A: Prioritize traffic calming measures in high crash areas.
	Tool 9A: Create a County-wide sustainability plan.
NJDOT	Tool 1D: Consider evaluating the implementation of policies that require State-funded roadway re-paving or development projects to include upgrades to pedestrian infrastructure, and to install bike lanes if the roadway in question is identified as a bike corridor in a municipal or County plan.
	Tool 6F: Consider whether updated traffic impact study guidelines should be used to require pedestrian and bicycle level of service analyses as a measure of effectiveness that has equal weight to vehicle metrics.
	Tool 5G: Consider evaluating the installation of bus priority measures in congested areas.
	Tool 1K: Consider developing electric bicycle and scooter regulations.
NJ TRANSIT	Tool 5A: Consider conducting a County-wide re-evaluation of NJ TRANSIT bus services.
	Tool 5B: Consider evaluating the improvement of east-west connections within the County.
	Tool 4H: Consider evaluating the improvement of rider amenities at train stations and enhanced accessibility.
	Tool 4B: Ensure that stops are Consider evaluating the accessibility of stops by pedestrians, including those with lower levels of mobility, and support integration with bicycle facilities.
	Tool 4C: Consider identifying intermodal transportation facilities and create mobility hubs.
Municipalities - Rural/Natural	Tool 6A: Update subdivision and zoning standards to support cluster development.
	Tool 6D: Adopt an official map.
	Tool 1B: Update municipal sidewalk ordinances to reflect latest guidance on sidewalk widths, buffers, and other implementation requirements to create a network of ADA-compliant sidewalks and walking paths.

Lead Implementer	Tools for Priority Implementation
	<p>Tool 8D: Adopt municipal complete streets policies.</p> <p>Tool 1G: Enhance rural main streets and highways through the addition of bicycle and pedestrian infrastructure in the vicinity of commercial and cultural centers. Add bicycle facilities to connect between these centers.</p>
Municipalities – Village	<p>Tool 1B: Update municipal sidewalk ordinances to reflect latest guidance on sidewalk widths, buffers, and other implementation requirements to create a network of ADA-compliant sidewalks and walking paths.</p> <p>Tool 1C: Require that bicycle and pedestrian elements are incorporated into all intersection projects regardless of the appearance of immediate demand.</p> <p>Tool 7D: Permit missing middle and compact housing types in residential neighborhoods.</p> <p>Tool 8D: Adopt municipal complete streets policies.</p> <p>Tool 7A: Plan for growth in nodes and mobility-rich areas through unified land use and circulation planning.</p>
Municipalities – Suburban	<p>Tool 1B: Update municipal sidewalk ordinances to reflect latest guidance on sidewalk widths, buffers, and other implementation requirements to create a network of ADA-compliant sidewalks and walking paths.</p> <p>Tool 1C: Require that bicycle and pedestrian elements are incorporated into all intersection projects regardless of the appearance of immediate demand.</p> <p>Tool 1E: Activate public spaces, such as schools, libraries, parks, and municipal buildings as mobility hubs.</p> <p>Tool 6B: Plan for walkable communities that can be enhanced through transit expansion.</p> <p>Tool 7B: Plan for housing for vulnerable communities near transit and mobility-rich areas.</p>
Municipalities – Town Center	<p>Tool 1C: Require that bicycle and pedestrian elements are incorporated into all intersection projects regardless of the appearance of immediate demand.</p> <p>Tool 7B: Plan for housing for vulnerable communities near transit and mobility-rich areas.</p> <p>Tool 1E: Activate public spaces, such as schools, libraries, parks, and municipal buildings as mobility hubs.</p> <p>Tool 7D: Permit missing middle and compact housing types in residential neighborhoods.</p> <p>Tool 8D: Adopt municipal complete streets policies.</p>
Municipalities – Shore Town	<p>Tool 8D: Adopt municipal complete streets policies.</p> <p>Tool 1E: Activate public spaces, such as schools, libraries, parks, and municipal buildings as mobility hubs.</p> <p>Tool 7A: Plan for growth in nodes and mobility-rich areas through unified land use and circulation planning.</p> <p>Tool 7B: Plan for housing for vulnerable communities near transit and mobility-rich areas.</p> <p>Tool 1I: Reduce seasonal visitor reliance on vehicles through expanded wayfinding and bikeshare or scooter share programs.</p>