Newark-Area Transit Study

DRAFT REPORT

June 2019
Newark Transit Improvement Partnership

Table of Contents

Executive Summary

The Wilmington Area Planning Council (WILMAPCO) is the Metropolitan Planning Organization for New Castle County, Delaware, and Cecil County, Maryland. As the regional transportation planning agency, WILMAPCO initiated the Newark-Area Transit Study to assess the existing fixed-route bus services in the Newark area and identify possible opportunities to improve service. This study is continuing the efforts initiated in 2016 by the Newark Transit Improvement Partnership (TrIP), which was formed to consolidate and coordinate the transit systems in Newark to be more customer friendly and efficient. TrIP members include Cecil County Transit, the City of Newark, Delaware Transit Corporation (DTC), the University of Delaware, and WILMAPCO, all of which participated in the study as stakeholders in the Project Management Committee.

Newark, Delaware, is served by four different bus services:

1. Cecil County Transit, which operates a bus connection with interstate service between Newark, DE, and Elkton, MD.
2. The City of Newark, which sponsors the UNICITY Bus System, a network of three circulator bus routes.
3. Delaware Transit Corporation (DTC, operating as DART First State), which operates eight bus routes to/from Newark with intercity service to Wilmington, Christiana, and Glasgow.
4. University of Delaware (UD) Transportation, which operates shuttle circulator services around their campus and in surrounding areas with off-campus housing for use by students, faculty, and staff.

The first part of the Newark-Area Transit Study emphasized understanding the existing conditions through data collection and analysis, which included an extensive mapping effort to represent demographic conditions such as population density and employment density; along with minority, low-income, and zero-car households. Key findings included that within the City of Newark boundaries, there is a higher proportion of low-income and zero-car households, as well as a higher density of jobs than the outlying areas. The existing conditions analysis also assessed paratransit data, identifying where paratransit pick-ups are concentrated in the Newark area, with the aim of identify opportunities for improved and more cost-effective delivery of services in the future.

Each of the transit providers shared operating data, including service frequencies and hours, ridership, and revenue miles. From these data, a performance analysis of all routes from the four bus service providers was completed. Inputs from residents, current riders, and operators were also obtained. General findings included:

- Ridership decreases between December and February across most services with increases in ridership outside of winter including the summer period when most students are not in school.
- There is no current schedule coordination between transit agencies, but frequent service exists on both DART and UD shuttles.
- The lack of clock-faced headways on Cecil Transit, UNICITY, and UD shuttle evening services could be confusing for riders.
- Large loops and frequent diversions on all UNICITY routes create very long travel times for riders.
- UNICITY is the only real intra-Newark transit service for non-student Newark residents.
- DART service is lacking in areas in the north and west of the city – places where UD service is very strong.

With demographic and route performance assessment completed, input from local residents, bus riders, and bus drivers was obtained. Via an online survey, Newark residents were able to respond to how they currently used local transit services and what changes they would like to see. Passenger intercept surveys took place at the Newark Transit Hub and the Route 896/DE-4 Park-and-Ride with riders able to describe their current transit

experiences and their preferences for service improvements. Popular service improvements identified by residents and passengers in the surveys include:

- Adding extra weekday train trips from Newark to other points in Delaware;
- Providing real-time bus information;
- Extending or rerouting bus routes to serve other areas;
- Improving on-time performance and facilitating better transfer coordination;
- And, running a weekend service on Route 59 (Newark Station to Wilmington) to connect with SEPTA trains from Wilmington, DE.

Bus drivers from all four providers were either interviewed or surveyed to hear their perceptions on issues with specific routes, rider complaints, and suggestions for improvements. An online survey was distributed to local employers soliciting feedback on how transit impacted their employees and customers, but limited feedback was received from the business community. Two public meetings were also held to update residents and riders on the study findings and recommendations.

Based on the existing conditions analysis, route performance assessments, and public feedback, initial recommendations were developed on system coordination and route adjustments. For each transit provider, specific recommendations were provided for minor restructuring of their routes where it could be beneficial, with the understanding that there are oftentimes political or other reasons why segments of a low performing route must remain intact.

Across the entire bus network serving the Newark area, a primary recommendation is to increase cooperation between all the transit service providers, which would be a cost-effective solution to improving transit access in Newark. Suggested initiatives include:

- Create a comprehensive transit network of DART, UD, UNICITY, and Cecil Transit routes that can be used by anyone (i.e., Newark residents, UD students, visitors, etc.).
- Minimize overlapping service and eliminate redundant/poor-performing service.
- Evaluate and restructure routes using transit best practices including:
    - Clock-face headways – easy to read/understand routing and schedule;
    - Bi-directional service when possible – avoid large one-way loops;
    - And, provide connections to other routes at multiple points or destinations, but maintain focus of providing seamless connections at transit hubs in the greater Newark area (e.g. Newark Hub, Newark Train Station, and DE 896/DE 4 Park & Ride).

The objectives of implementing comprehensive network-agency coordination across the different transit providers include increasing transit ridership, expanding transit service reach, seamless and cost-effective travel between service providers, consistent and easily accessible information for riders, and cost-effective service delivery for operators. Potential areas for agency coordination are marketing and technology, branding, fare policies, transit infrastructure such as bus stops, service schedules, route alignments, and service areas.

Moving forward, the members of the TrIP partnership agree that maintaining the group's focus and momentum is of interest and the partnership will continue to coordinate to implement the recommendations proposed as part of this study, including continued interagency collaboration and cooperation to implement and sustain the proposed initiatives. TrIP plans on continuing to work together on implementing some of the short term recommendations, such are route changes, while also considering longer-term initiatives such as a comprehensive bus network redesign.

Chapter 1. Introduction

Study Purpose

Initiated in May 2018, the Newark-Area Transit study focused on identifying short-term changes for Newark's transit systems to address route and service optimization, identifying needs of mobility-challenged populations and the gaps/barriers to fixed route ridership, with the ultimate purpose of better integrating the four transit services.

Goals & Objectives

A series of study goals and objectives were developed to guide the outcomes of the effort, which included the following efforts:

- Understanding the functions of various existing transit services
- Understanding what/where/who is not being served
- Evaluating new ways to serve paratransit populations
- Completing performance analysis of existing transit routes
- Developing recommendations to optimize the Newark-area transit system into a more cohesive network

Participating Agencies

The Newark Transit Improvement Partnership (TrIP) was formed in 2016 to consolidate and coordinate the transit systems to be more customer friendly and efficient. The participating stakeholder agencies in TrIP include:

- Wilmington Area Planning Council (WILMAPCO)
- City of Newark
- University of Delaware Transportation
- UNICITY
- Delaware Transit Corporation (DART First State)
- Cecil County Transit

The latter four agencies provide fixed route bus service in the study area. Additionally, the Newark Train Station provides Amtrak service via several daily Northeast Corridor trains and the Southeast Pennsylvania Transportation Authority (SEPTA) on SEPTA's Wilmington – Newark Line with commuter rail service to Philadelphia. Train service was not included as part of the study effort.

The TrIP partnership is focused on increasing coordination amongst the four transit agencies in order to:

- Improve mobility options to meet demands and needs of Newark residents, employees, students, and visitors
- Provide quality passenger amenities to enhance bus service and attract discretionary riders
- Make transit services easier to understand and use
- Promote transit system efficiency for all providers

Study Process

The study began by working to understand the existing conditions through data collection and analysis, which included an extensive mapping effort to represent the demographic conditions such as population and employment density; along with minority, low-income, and zero car households. With a focus on developing short-term recommendations for changes to bus service in the study area, the process focused on a combination of outreach and analysis including:

- Data-driven analysis of the existing market and demographic conditions
- Performance analysis of existing bus routes
- Surveys conducted of local residents (passengers and non-passengers), employers, and bus drivers
- Public outreach and public input

Six specific tasks were advanced during the study process:

- Task 1: Data Collection
- Task 2: Support the Project Management Committee (PMC)
- Task 3: Snapshot Analysis of Paratransit Data for the Newark Area
- Task 4: Data Analysis
- Task 5: Prepare Final Report
- Task 6: Public Outreach

Extensive mapping efforts were undertaken under Task 1 to represent demographic conditions such as population and employment density; along with minority, low-income, and zero car households. With this information in hand, an analysis of the routes commenced for the four bus service providers to document ridership and operating trends for each route as data were available. This included a comprehensive transit operations analysis as part of Task 4 examining:

- Routes and areas served
- Annual and seasonal ridership
- Hours of service and frequency of service
- Passengers per revenue hour
- Passengers per route mile
- Average daily boardings

Once the operations efforts were complete, a series of initial recommendations on system coordination and route adjustments were made and shared with the PMC. Feedback from this group was incorporated and a summarized version of these recommendations were shared via a presentation to City Council. This final report documents the entire efforts of the study, including input received from City Council and the public.

Chapter 2. Existing Conditions

Transit and Market Need Analysis

A key input to understand existing conditions and inform the transit and market need analysis was the development of maps to depict existing conditions in terms of demographics, transit modes and facilities, and patterns of travel throughout the study area. Taken together with the current ridership patterns, the following maps were of most value during the analysis efforts:

- Population Density (Figure 1)
- Employment Density (Figure 2)
- Minority Population (Figure 3)
- Poverty Rate (Figure 4)
- Zero-Car Household (Figure 5)

The full series of maps developed for the study is provided in Appendix A.

Figure 1. Population Density Per Acre by Block Group

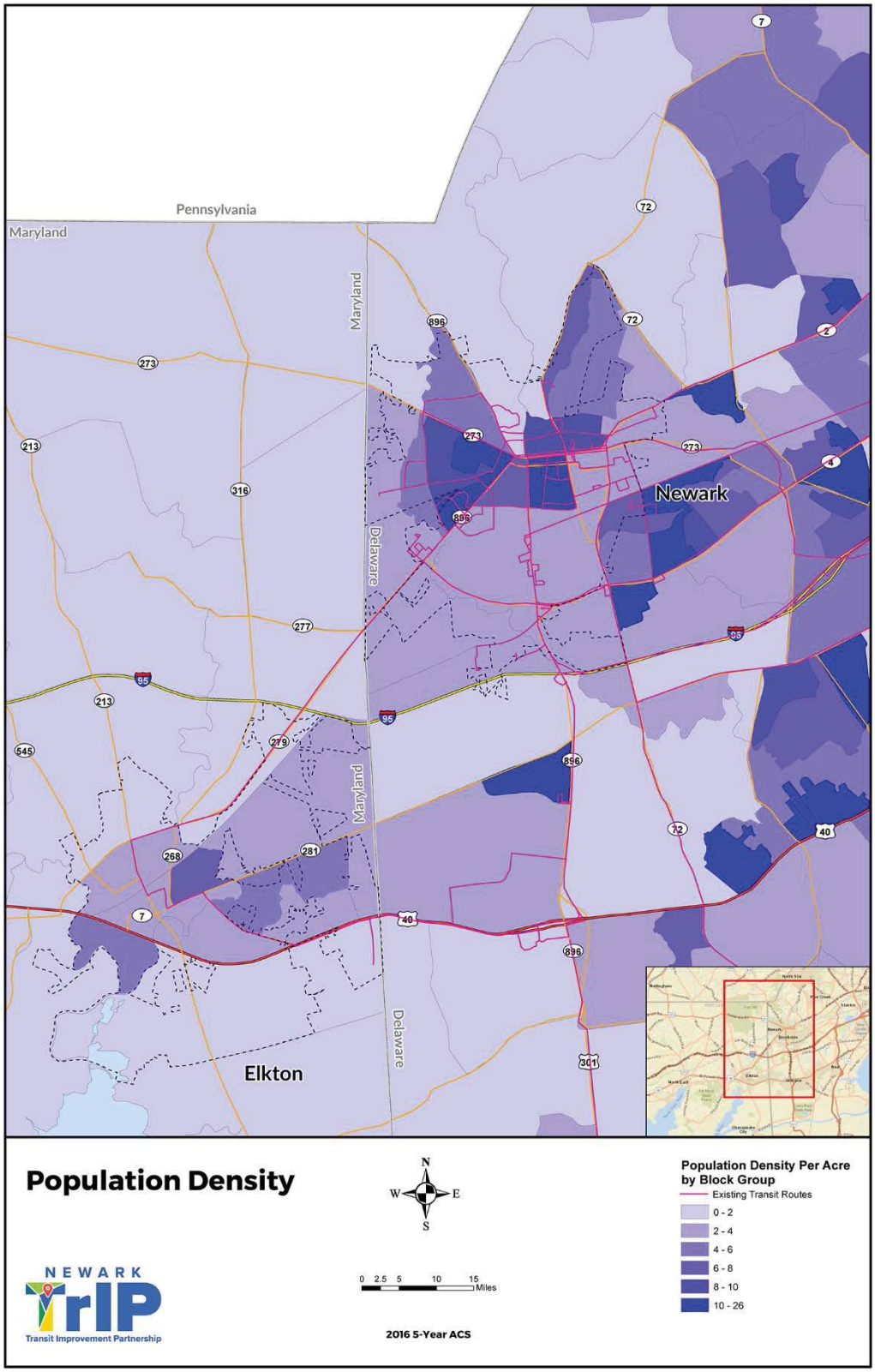


Figure 2. Number of Jobs Per Acre by Block Group

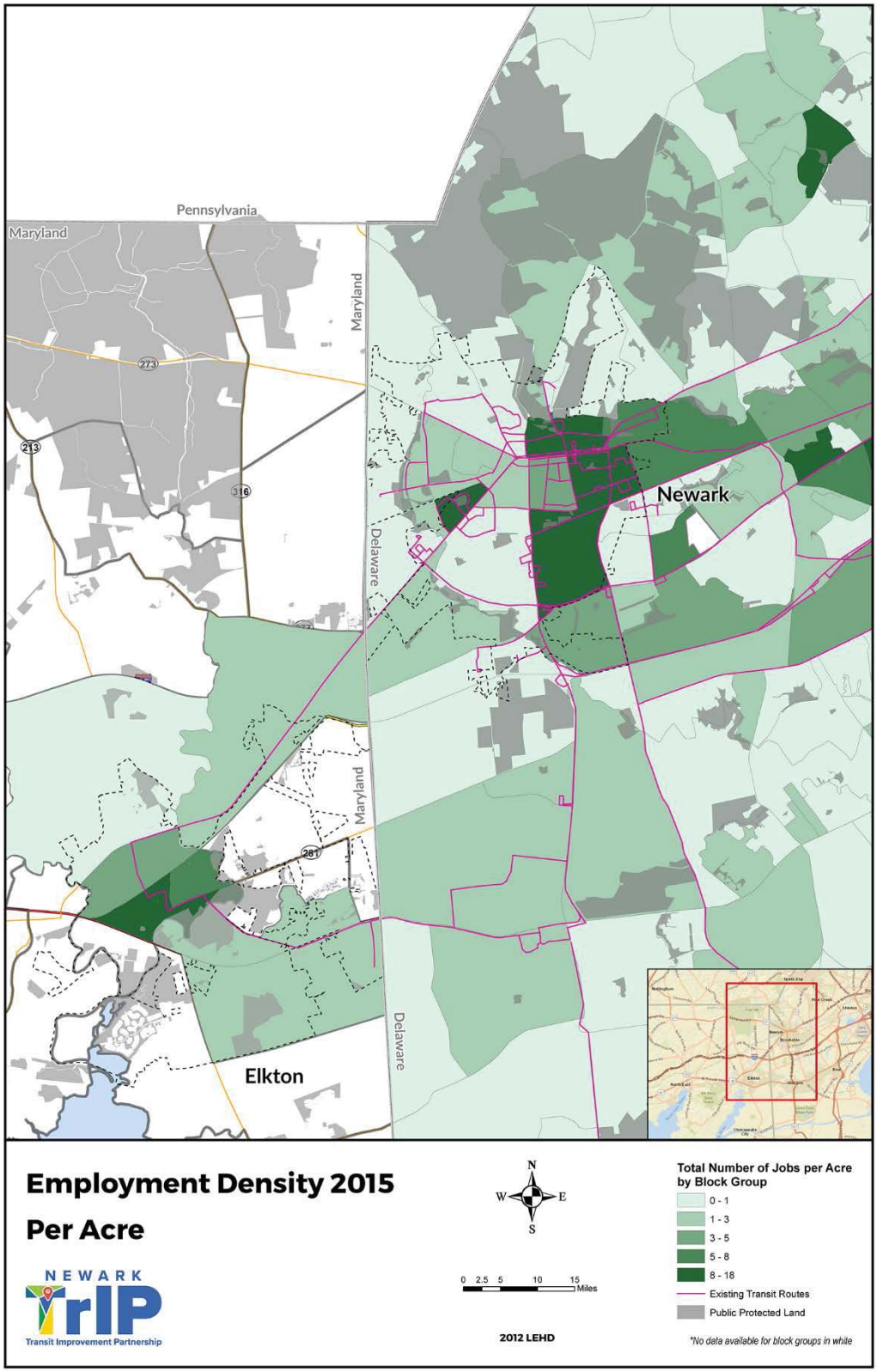


Figure 3. Percentage Minority Population

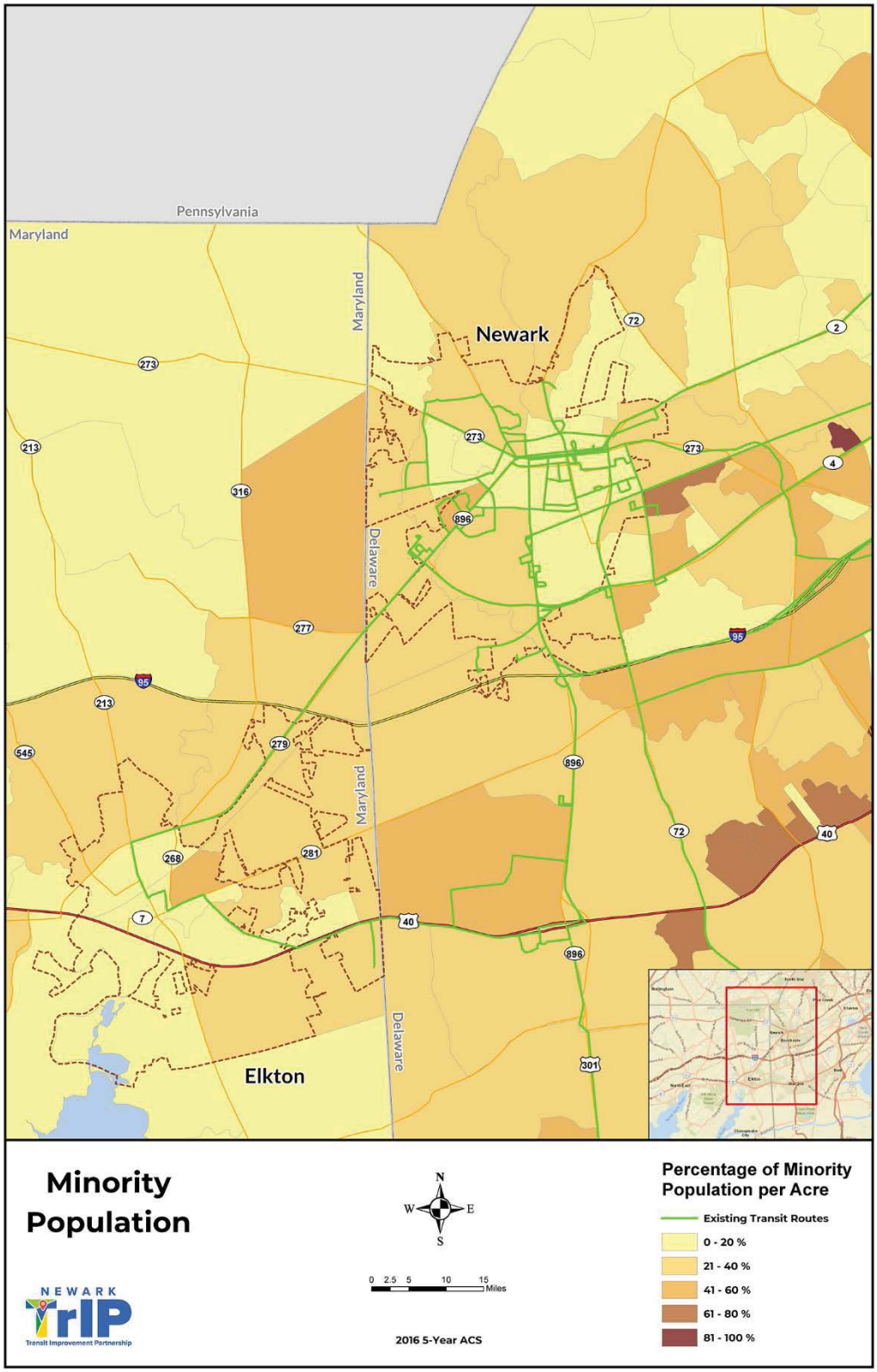


Figure 4. Poverty Rate

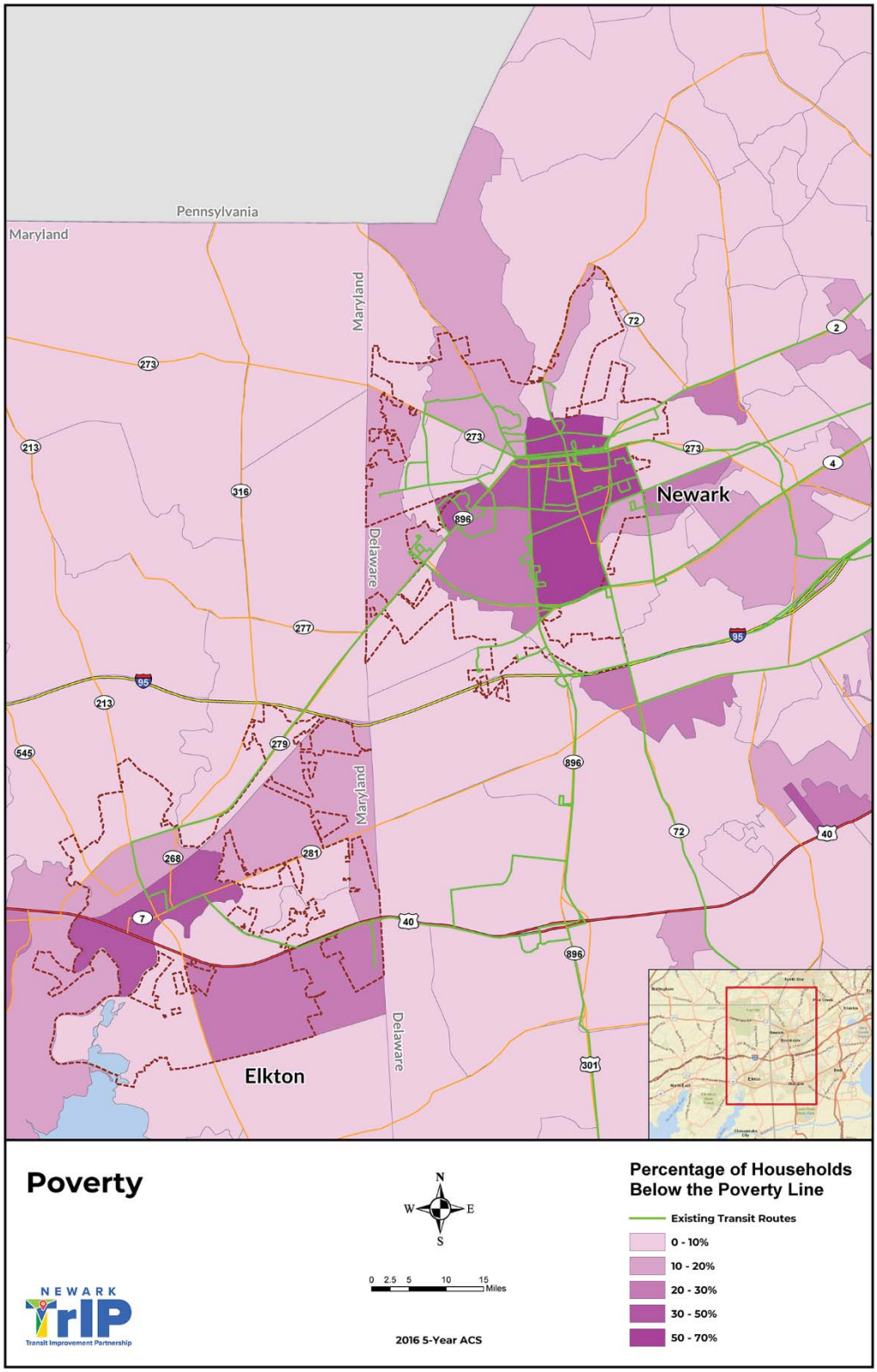
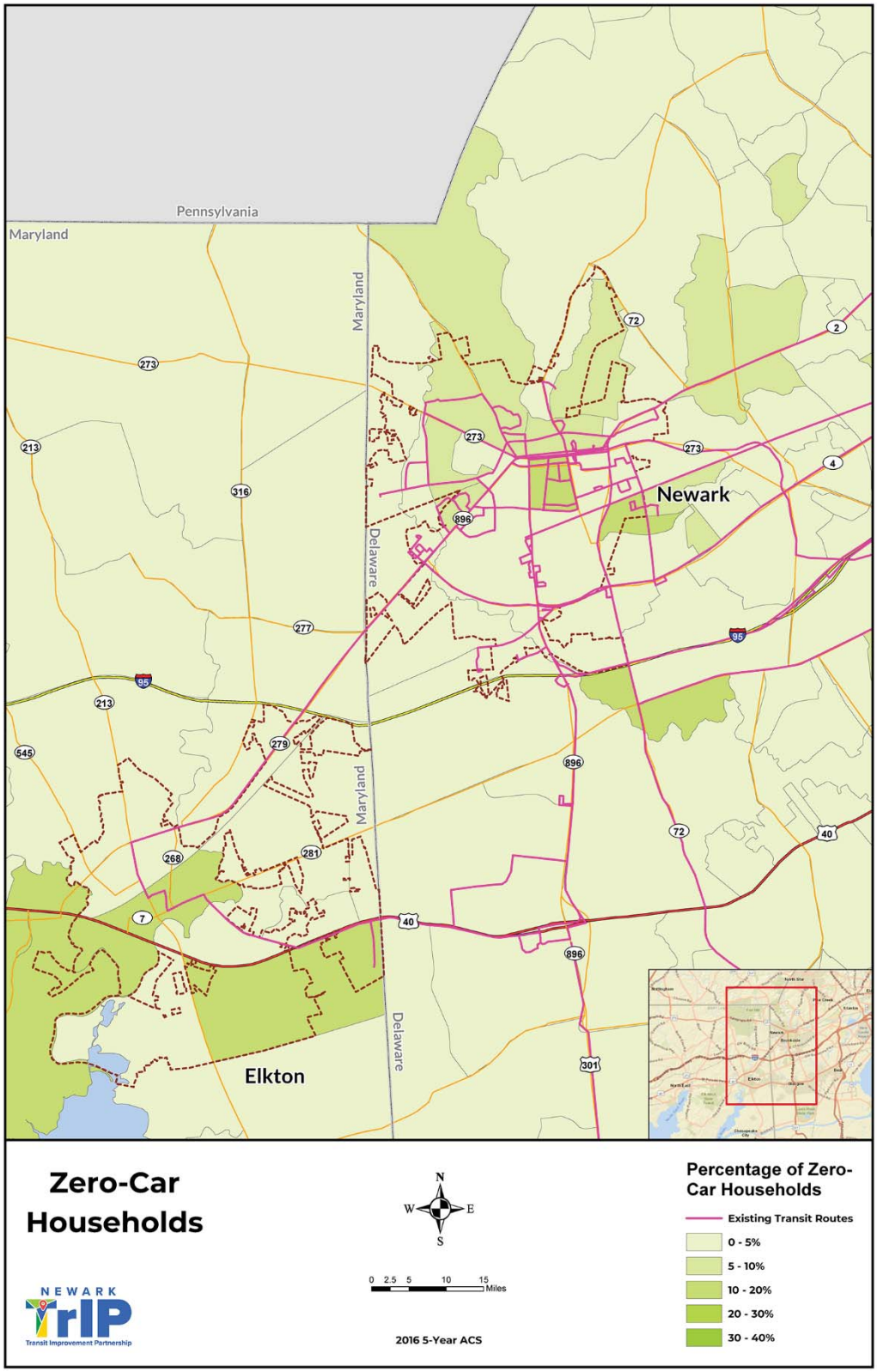


Figure 5. Percentage of Zero-Car Households



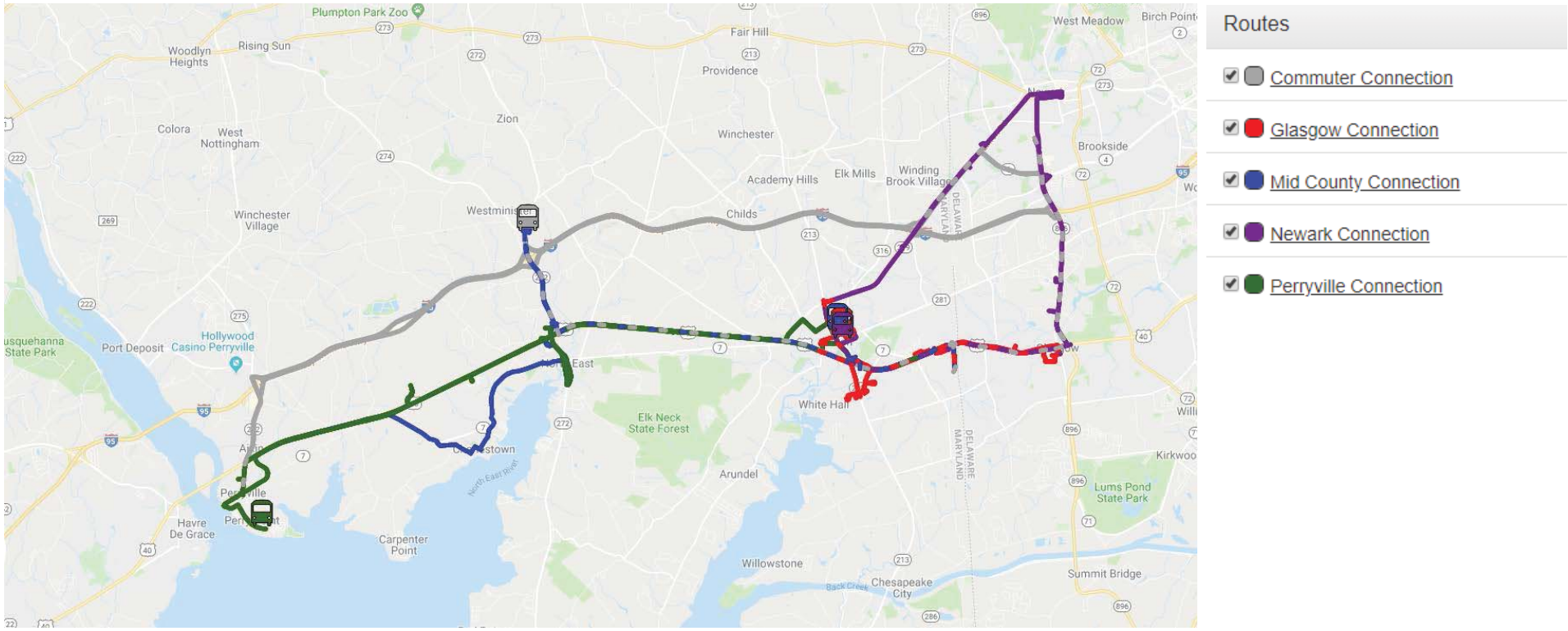
Newark-Area Transit Systems

This section presents a summary of current operations by each operator for the routes serving Newark. Metrics on service delivery, on-time performance, cost efficiency, and cost effectiveness are provided as data were available. These analysis efforts served, along with input received from the various surveys, to inform the development of route recommendations for each operator.

Cecil Transit

Based in Elkton, Maryland, Cecil Transit operates a total of five bus routes. These routes predominantly operate as medium-distance inter-city type routes to Perryville and Elkton in Maryland, and Newark and Glasgow in Delaware. Two bus routes operate into Newark, Delaware: Route 4 which provides service between Elkton, Newark, and Glasgow, and Route 5 which provides commuter service for Elkton residents to connect with Southeastern Pennsylvania Transportation Authority (SEPTA) Regional Rail service in Newark. Figure 6 depicts Cecil Transit's five fixed routes.

Figure 6. Cecil Transit Bus Network



Route 4 Elkton – Newark Connection

The Route 4 Elkton – Newark Connection operates weekdays only, with limited service approximately every 90 minutes. The most popular stop in the Newark area is the Newark Transit Hub, with approximately 13 boardings per day. Figure 7 presents the average daily boardings by stop for the Route 4.

On average, each run of the Route 4 transports less than four (4) riders, with the 10:04 PM departure from Cecil College carrying zero (0) riders. For on-time performance (OTP), Cecil Transit considers a trip an early departure when it departs any time before schedule departure time; a late arrival is when a trip arrives more than five (5) minutes after scheduled arrival time.

Overall analysis of Route 4 indicated that no trips operated at least 70 percent on-time. The highest on-time performance was the 10:21AM departure at 65.2 percent OTP. The worst performing run was the 6:41 PM departure at 36.5 percent OTP. In the short-term, early departures of an average of 2.2 minutes each may be an issue where agency consideration is needed in the short term. Figure 8 and Figure 9 present average daily boardings and on-time performance by trip for Route 4 in FY2018.

Figure 7. Cecil Transit Route 4 - Average Daily Bus Stop Activity

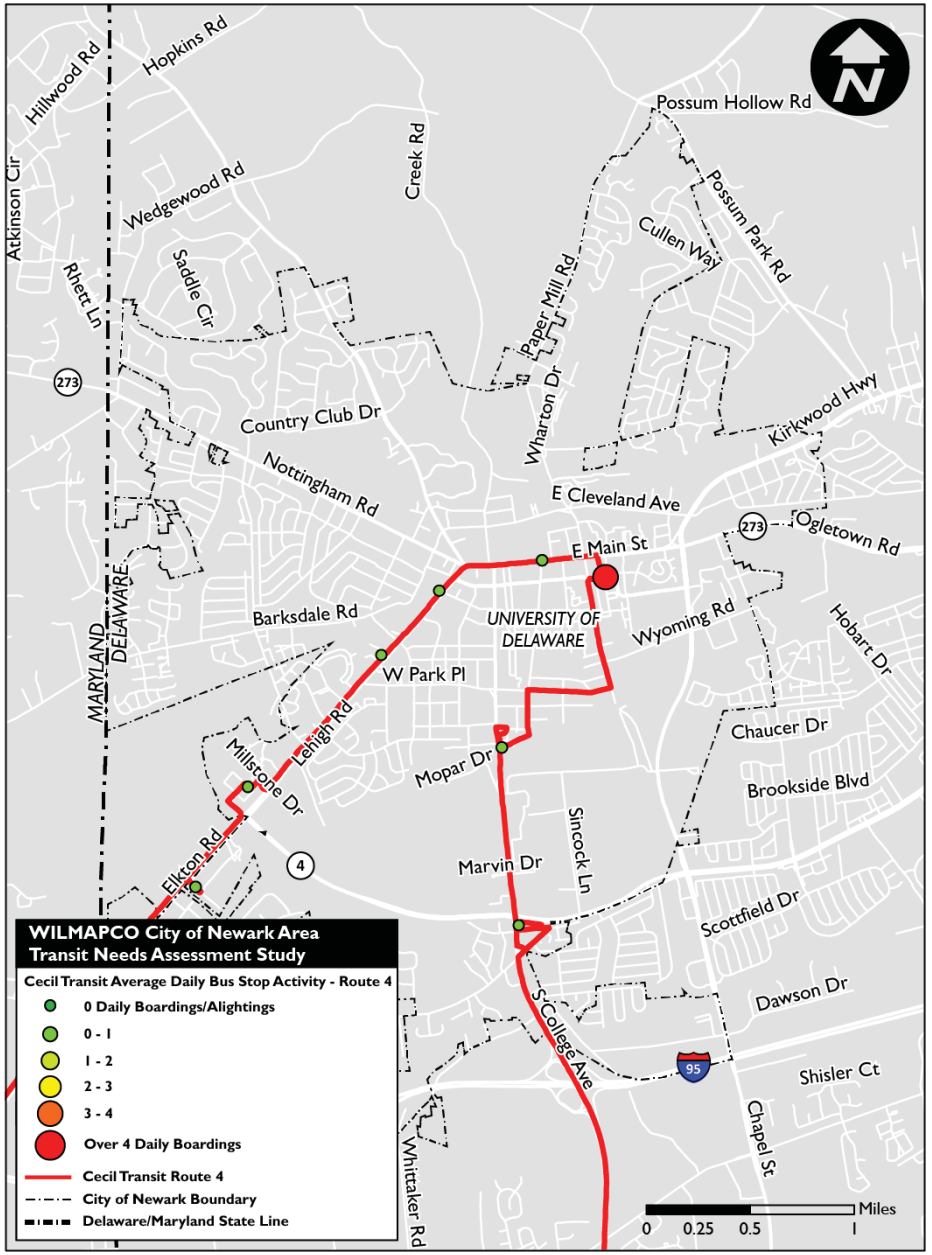


Figure 8. Cecil Transit Route 4 - Average Daily Boardings by Trip (FY 2018)

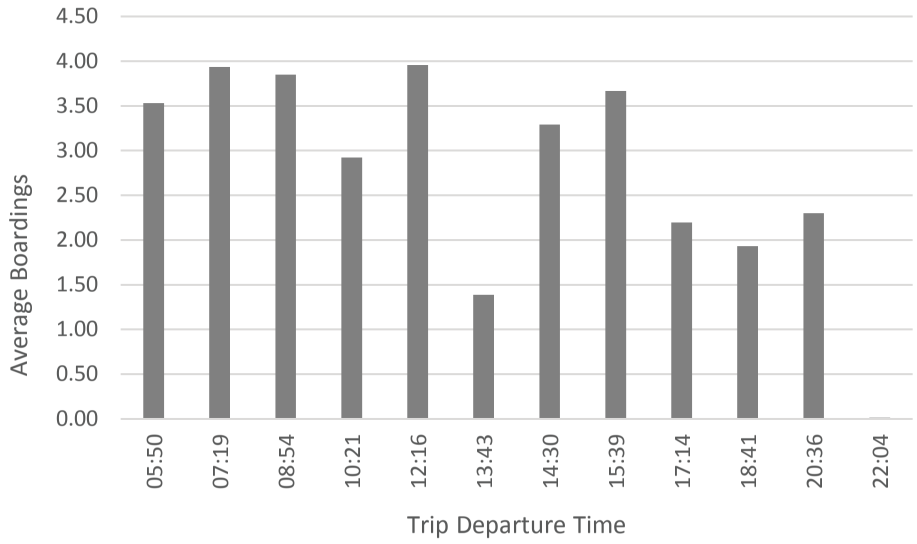


Figure 9. Cecil Transit Route 4 - On-Time Performance by Trip (FY 2018)

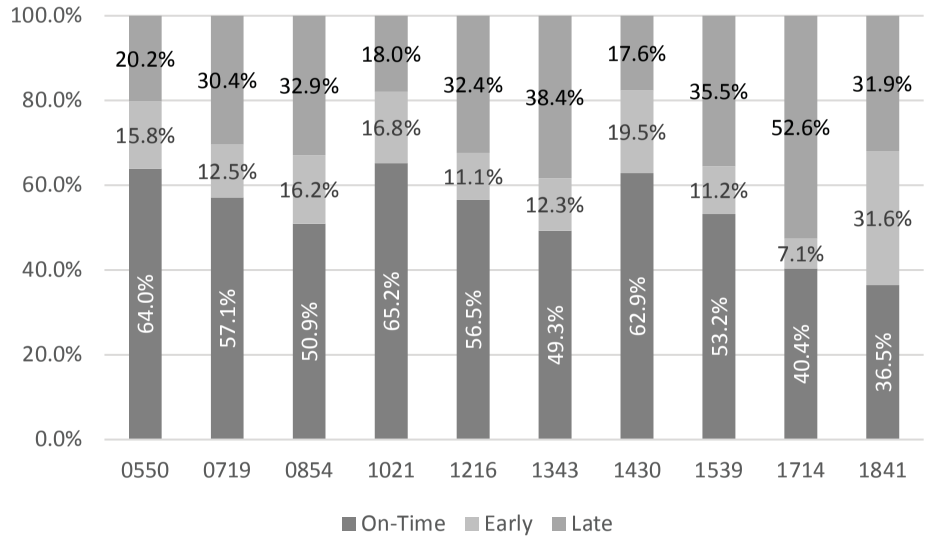
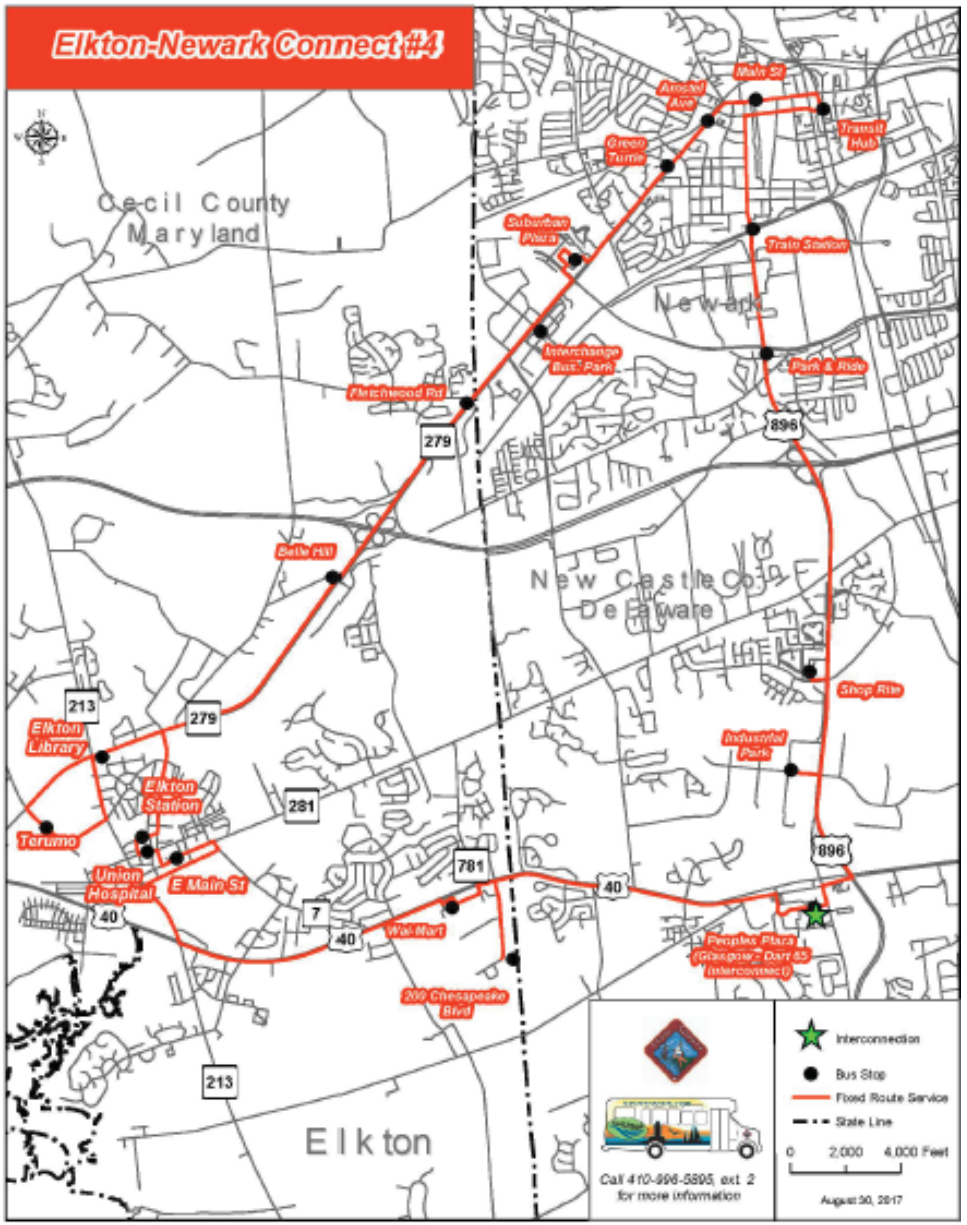


Figure 10. Cecil Transit Route 4 Elkton-Newark Route Map



DART

DART is the statewide transit agency for the State of Delaware, operating bus routes in all three counties. DART provides local and express intercity services to all of the major cities and towns in Delaware including Wilmington, Newark, and Dover. Eight bus routes operate to/from the City of Newark with services primarily destined for Wilmington and the Christiana Mall and limited service to Glasgow and St. Georges.[1] A map of these routes from May 2019 is shown in Figure 12.

Through FY2018, ridership on Newark-area DART routes slightly decreased month-by-month. Ridership is highest in late summer and early fall, peaking in October at 120,000 trips. Conversely, ridership is lowest in winter, with 90,000 trips in January. High ridership in the summer months suggests a largely non-student ridership base. This overall ridership trend for Newark-area DART routes is shown in Figure 11.

Figure 11. DART Total Annual Ridership – All Routes (FY 2018)

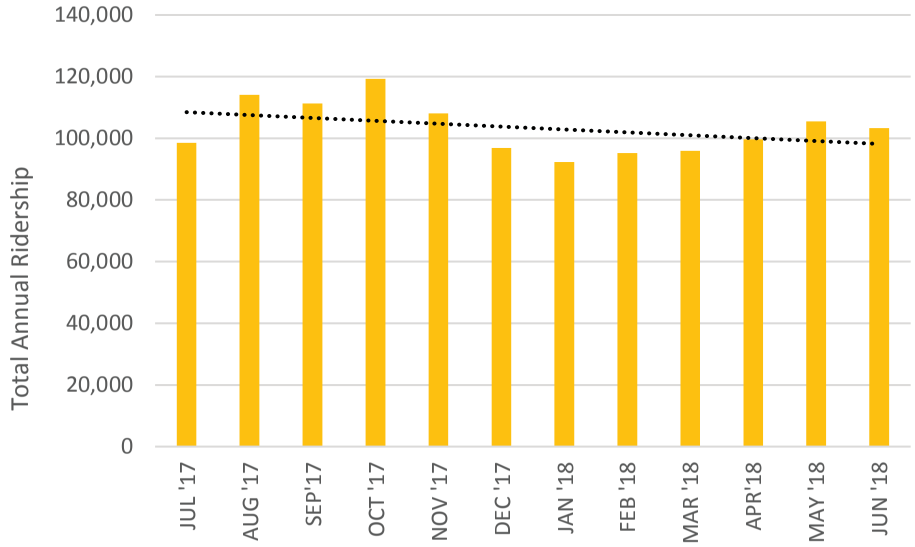
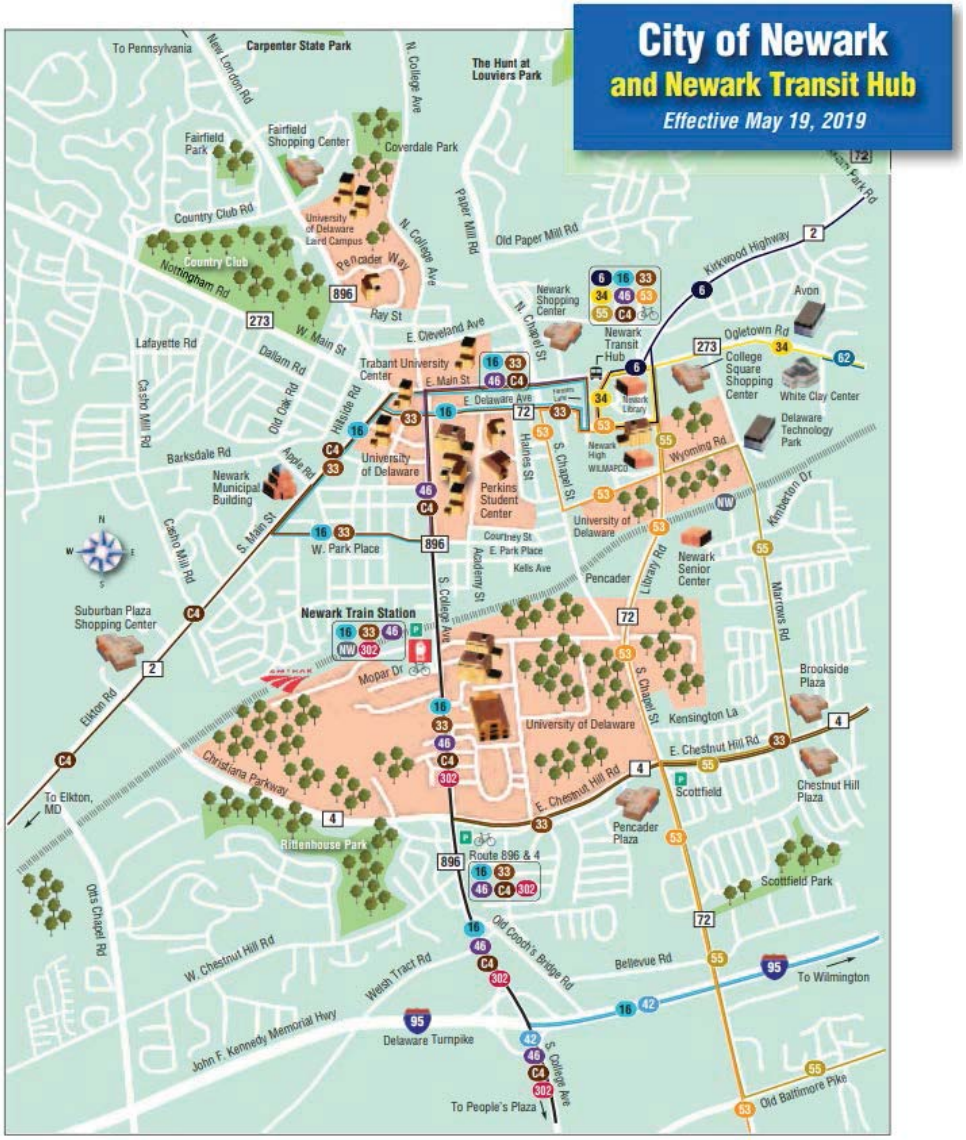


Figure 12. DART Route Map for Newark



[1] At the time of the study there was a ninth route, the Route 59 Newark-Wilmington Train Connection, which was discontinued due to low ridership May 20, 2019.

Route 6 – Kirkwood Highway

DART Route 6 has an average of 2,855 daily boardings. The route operates between the Wilmington Train Station (for connections to other bus routes, as well as Amtrak and SEPTA trains), and the Newark Transit Hub via Kirkwood Highway. It operates frequent all-day service on weekdays and Saturdays and limited service on Sundays. This is DART's highest ridership route in the Newark area and mirrors the same annual ridership pattern as shown for all the DART Newark-area routes, with slightly decreasing month-by-month ridership, demonstrating peak ridership in warmer months and lower demand in the winter months. Month-by-month annual ridership for Route 6 is shown in Figure 13.

The most popular stops in Newark include the Newark Transit Hub, the Newark Public Library and the McDonalds on Kirkwood Highway. Average daily activity in Newark is 843 boardings and alightings per day as shown in Figure 14.

Figure 13. DART Route 6 – Annual Ridership (FY 2018)

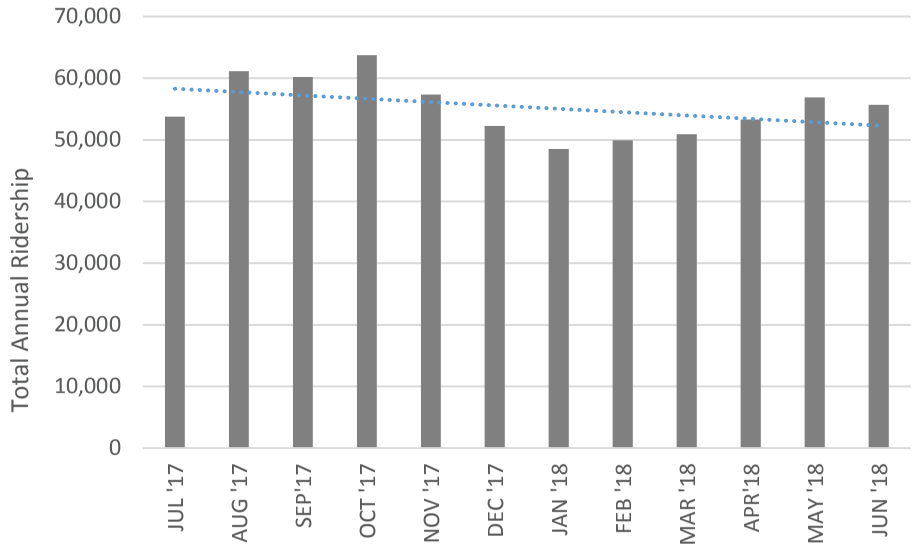
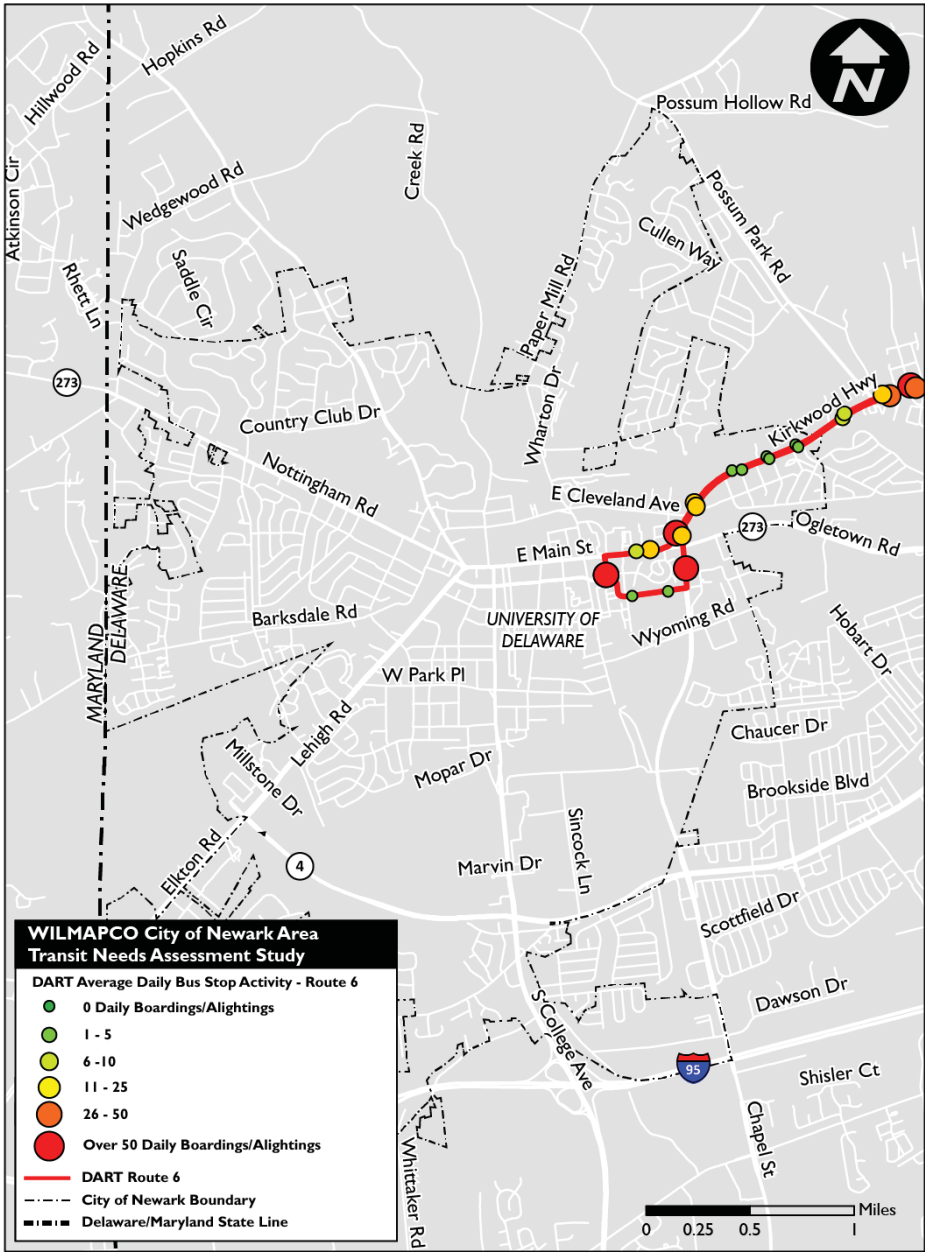


Figure 14. DART Route 6 - Average Daily Bus Stop Activity



Route 16 – Newark Express

DART's Route 16 is an express route operating between Wilmington and the Newark Transit Hub via I-95 and has an average of 172 boardings and alightings per day. This route operates via frequent peak-only service on weekdays. The Route 16 experienced slightly decreasing month-by-month ridership but had less seasonal variation with December 2017 the only month with ridership less than 3,000 as shown in Figure 15. The most popular stops in Newark include the Newark Transit Hub and the DE-896/US-4 Park-and-Ride lot as shown in Figure 16.

Figure 15. DART Route 16 - Annual Ridership (FY 2018)

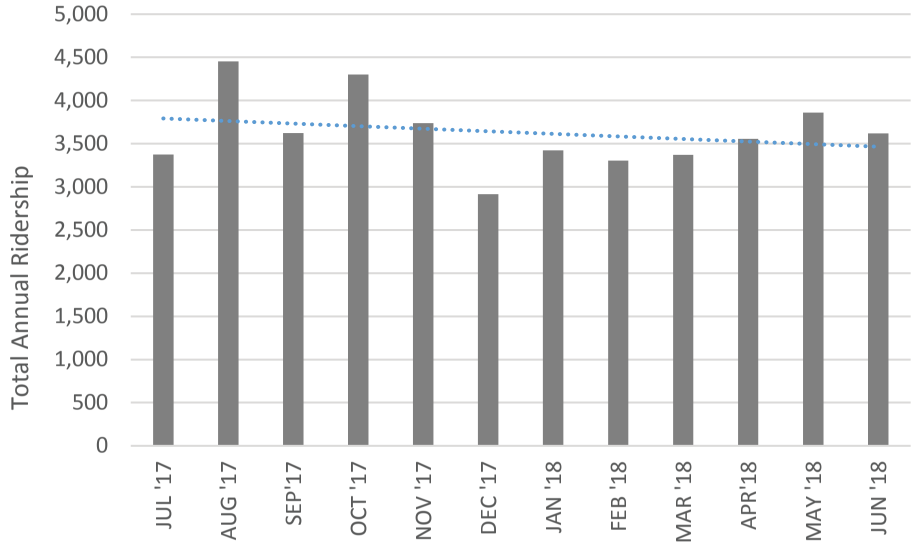
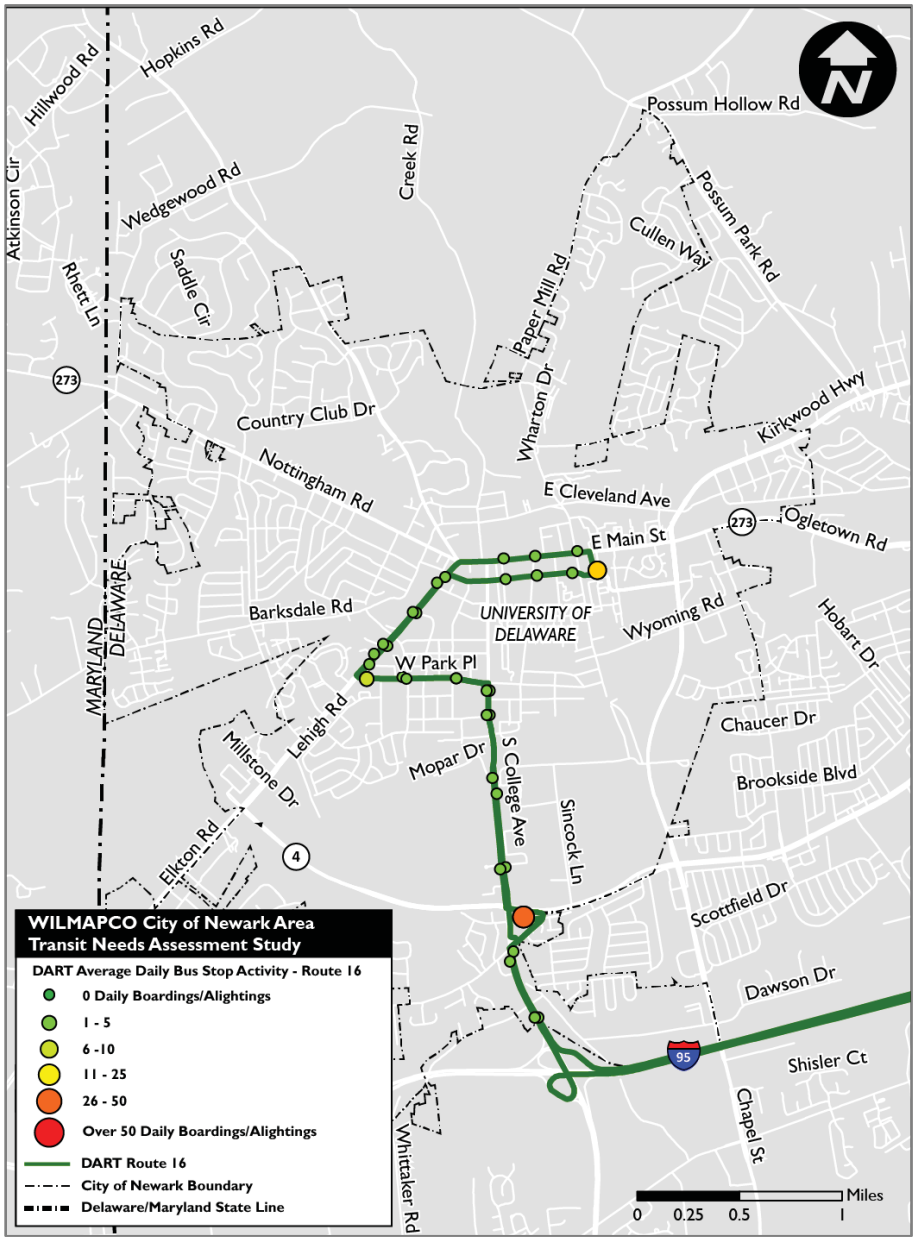


Figure 16. DART Route 16 - Average Daily Bus Stop Activity



Route 33 – Christiana Mall/Newark

DART Route 33 operates between the Christiana Mall and the Newark Transit Hub via DE-4. The route provides frequent service on weekdays and limited service on weekends with an average of 1,342 daily boardings. Route 33 experiences seasonal variations in ridership that are similar to other DART Newark-area routes, but ridership has remained in the 25,000 – 30,000 range every month as shown in Figure 17.

The most popular stops on this route in Newark include the Newark Transit Hub, the DE-896/US-4 park-and-ride lot, the Chestnut Hill Plaza Shopping Center, and the intersection of W. Park Place and S. Main Street. The average daily bus stop activity is shown in Figure 18.

Figure 17. DART Route 33 - Annual Ridership (FY 2018)

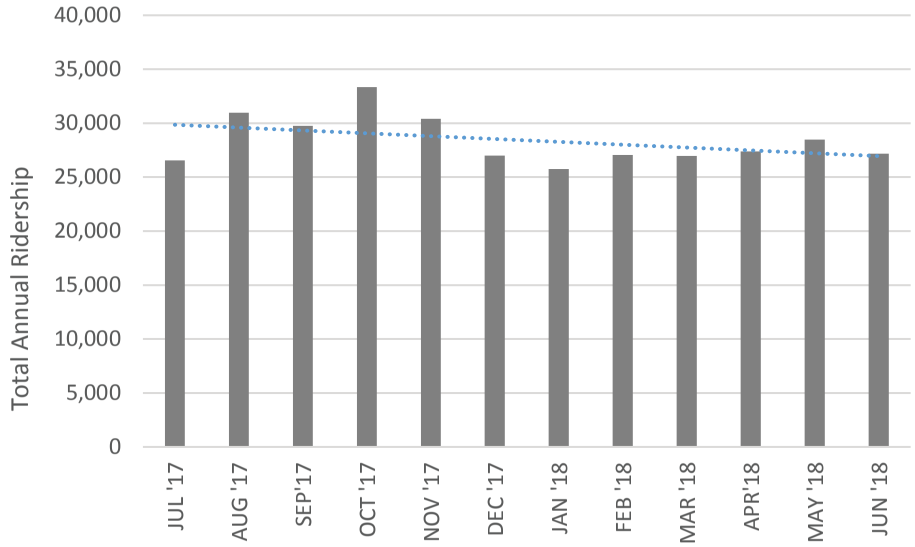
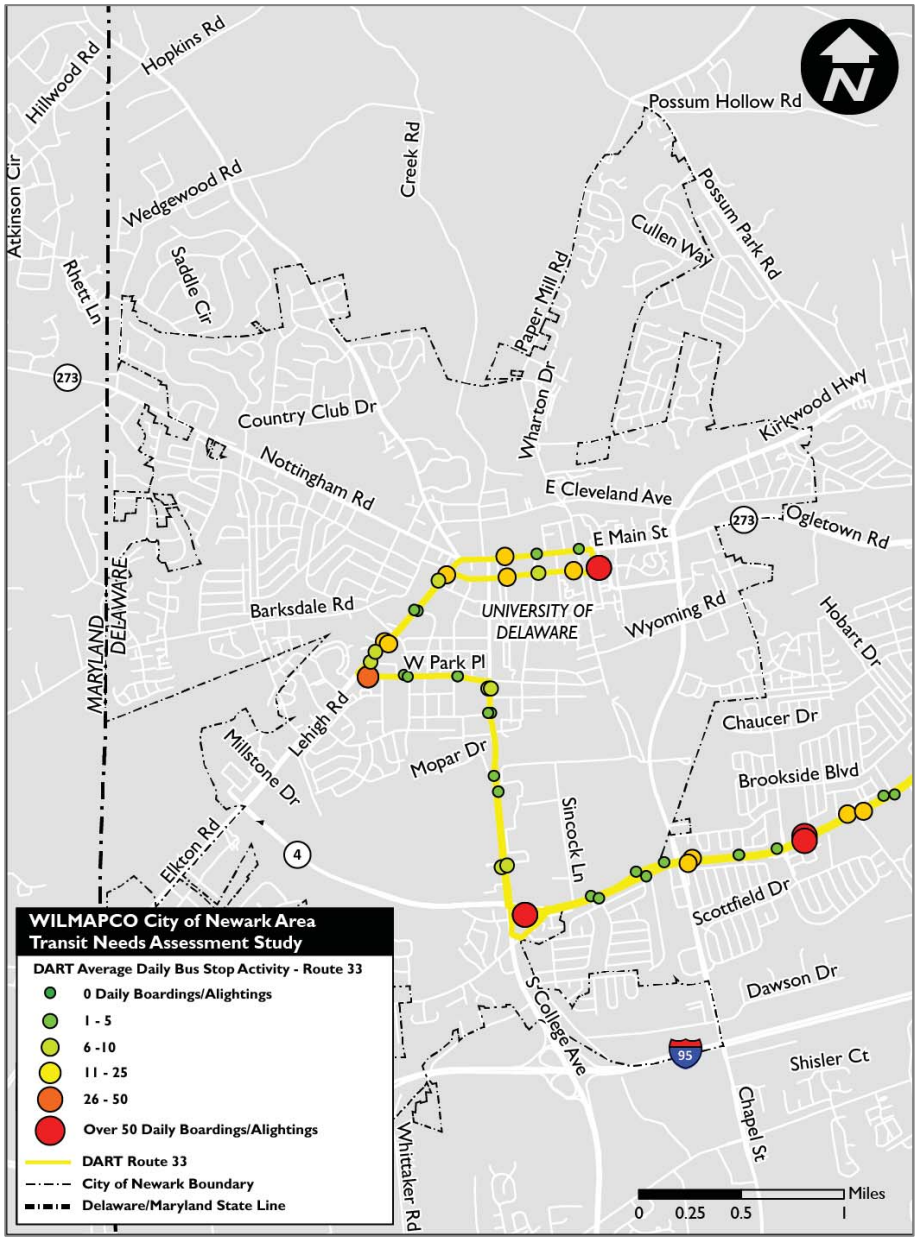


Figure 18. DART Route 33 - Average Daily Bus Stop Activity



Route 34 – Newark/Christiana Mall/Wilmington

DART Route 34 operates between the Newark Transit Hub and the Christiana Mall via Chapman Road or Wilmington via I-95. Operating frequent peak-only service on weekdays there are an average of 126 boardings per route. This route was the only route in the Newark area that experienced general month-by-month ridership increases with approximately 1,700 riders in July 2017 to approximately 2,250 monthly riders in both May and June 2018 as shown in Figure 19. The most popular stop in the Newark area is the Newark Transit Hub as shown in Figure 20.

Figure 19. DART Route 34 - Annual Ridership (FY 2018)

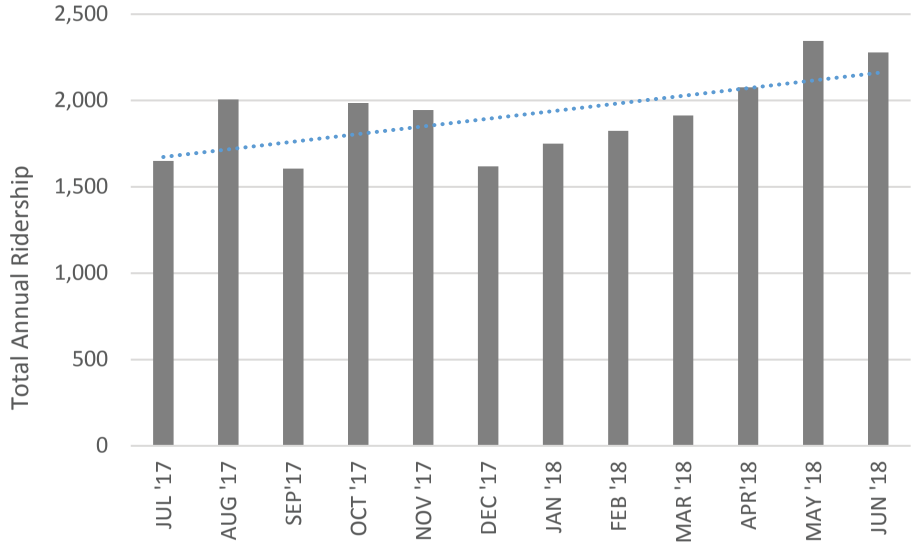
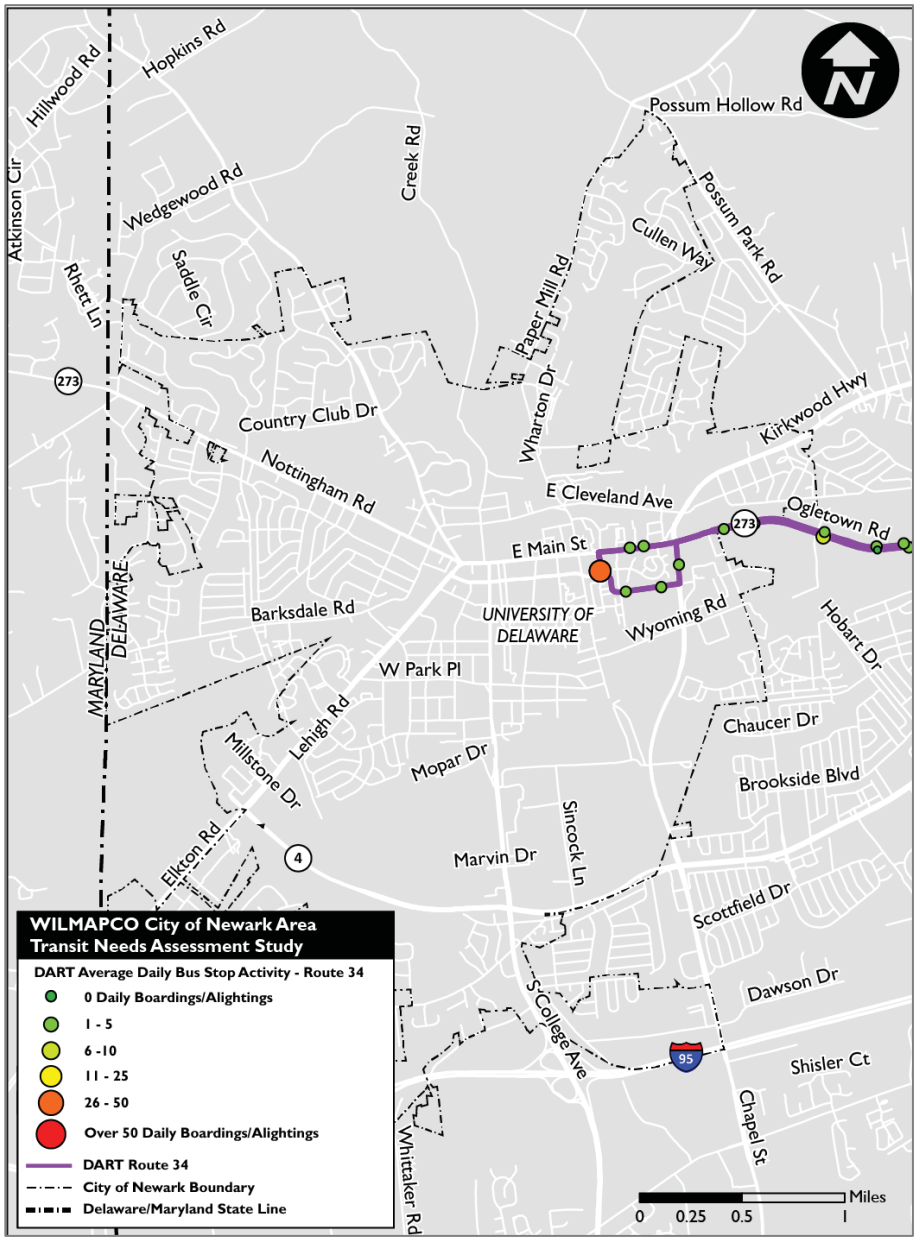


Figure 20. DART Route 34 - Average Daily Bus Stop Activity



Route 46 – Newark/Glasgow

The Route 46 operates between the Newark Transit Hub and Peoples Plaza in Glasgow with limited service on weekdays and Saturdays. The ridership on this route in FY2018 was relatively stable reporting approximately 3,500 trips per month as shown in Figure 21. The most popular stops for this route in Newark are the Newark Transit Hub and the DE-896/US-4 Park-and-Ride lot as shown in Figure 22.

Figure 21. DART Route 46 - Annual Ridership (FY 2018)

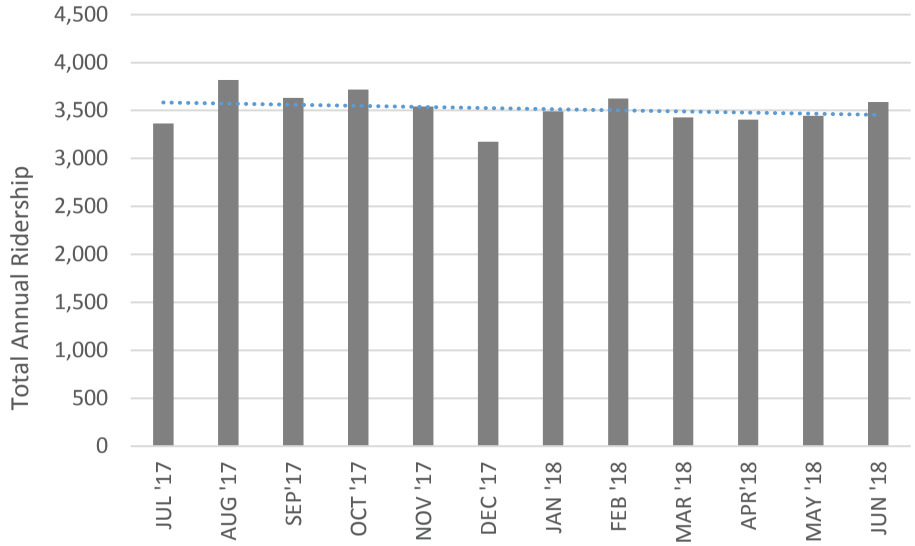


Figure 22. DART Route 34 - Average Daily Bus Stop Activity

Route 53 – Delaware City/Newark

This route operates between the Newark Transit Hub and the Wrangle Hill Park-and-Ride lot in St. Georges. The route is commuter-oriented providing service during limited periods throughout the day, such as 5 - 7 AM, 11 AM – 1 PM, and 2 PM – 5 PM. Route 53 experienced the largest decreases in month-by-month ridership averaging around 1,750 trips per month in summer 2017 to fewer than 750 trips per month from October 2017 through the end of the fiscal year in June 2018 (Figure 23). The most popular stop for this route in Newark is the Newark Transit Hub and the route averages 32 boardings and alightings per day. Daily bus activity for this route is shown in Figure 24.

Figure 23. Route 53 - Annual Ridership (FY 2018)

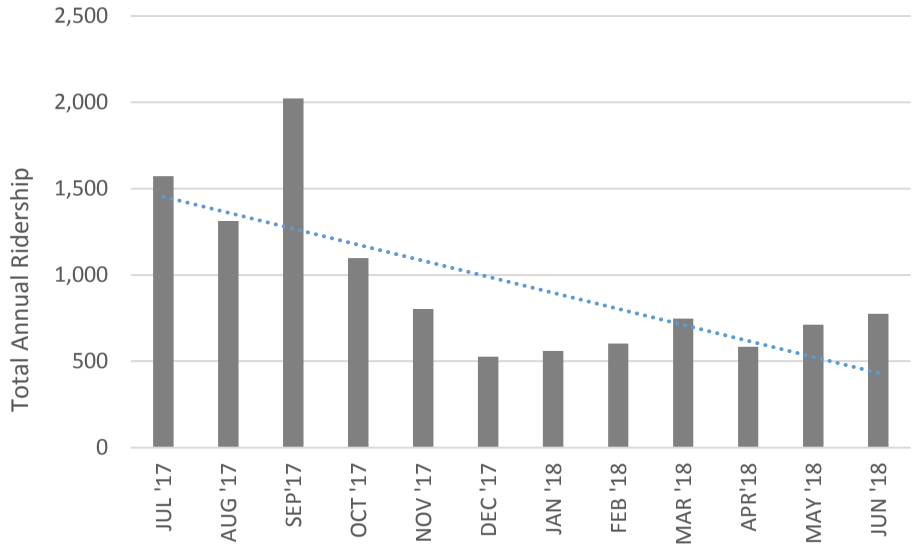
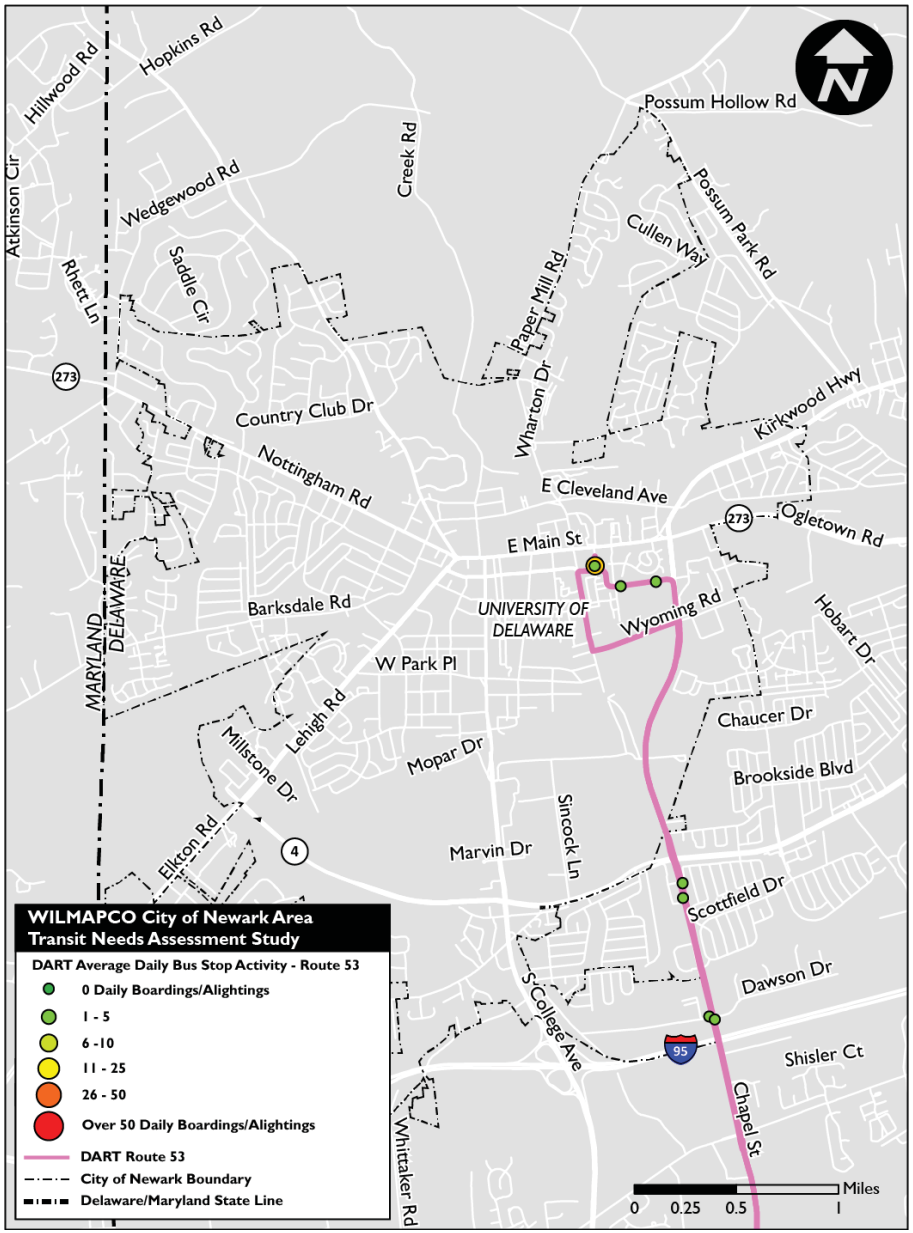


Figure 24. DART Route 53 - Average Daily Bus Stop Activity



Route 55 – Old Baltimore Pike

DART Route 55 operates between the Newark Transit Hub and the Christiana Mall via Old Baltimore Pike with limited all-day service on weekdays and Saturdays. The route has approximately 411 average daily boardings with the most popular stops in Newark at the Newark Transit Hub, Marrows Road and White Chapel Drive, and the Iron Hill Apartments. Figure 25 presents ridership by month and Figure 26 provides average daily bus stop activity for this route.

Figure 25. DART Route 55 - Annual Ridership (FY 2018)

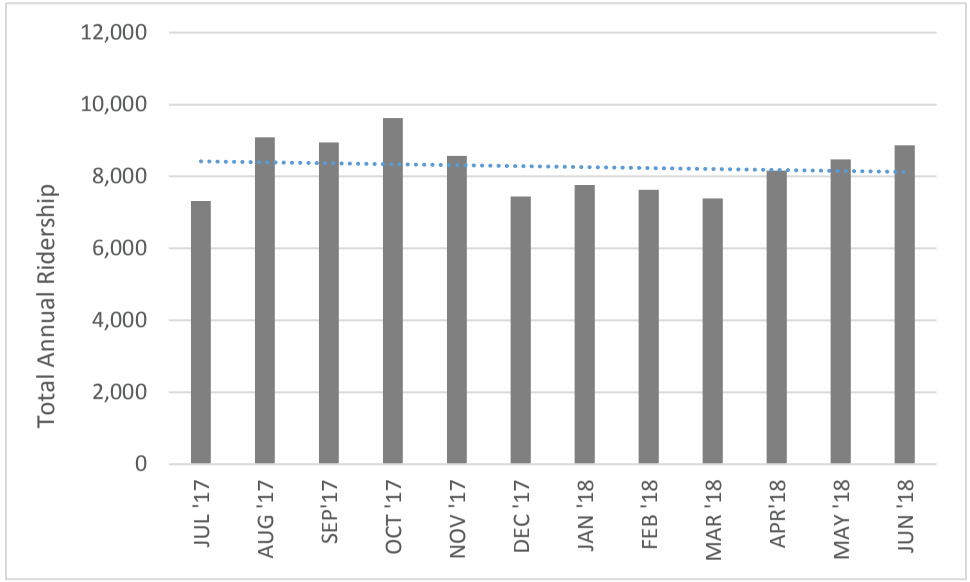
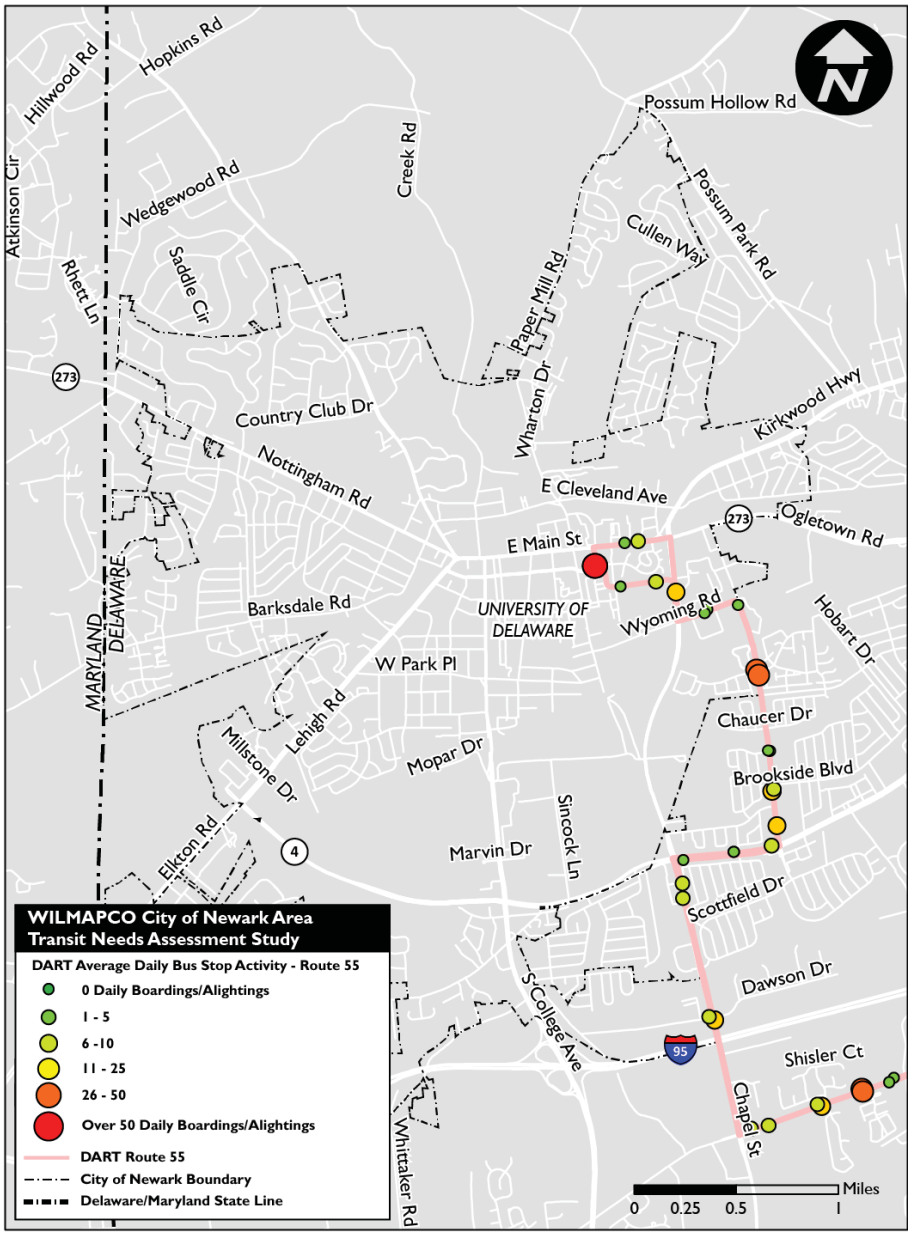


Figure 26. DART Route 55 - Average Daily Bus Stop Activity

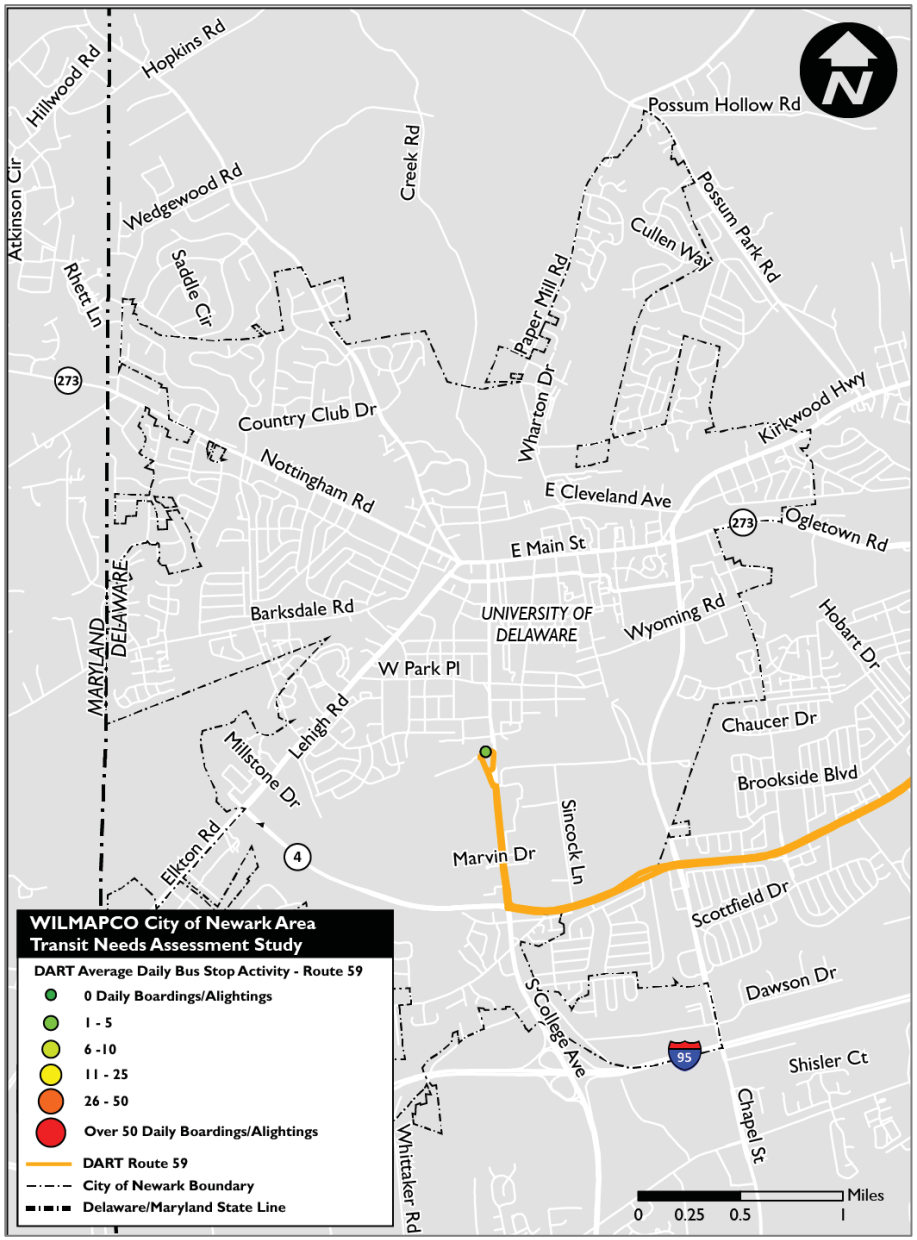


Route 59 – Newark – Wilmington Train Connection

The Route 59 operates between the Newark Transit Hub and the Wilmington Train Station, providing limited service throughout the day on weekdays as a "bus bridge" to Churchmans Crossing and Newark for the SEPTA trains that terminate in Wilmington. The average ridership to Newark is approximately eight (8) boardings and alightings per day. Figure 27 provides a map of the Newark portion of the route.

Effective May 20, 2019 the Route 59 was discontinued due to low ridership, with the Route 33 providing trip opportunities and connections between Wilmington, Churchmans Crossing, and the Newark Train Stations.

Figure 27. DART Route 59 - Average Daily Bus Stop Activity



Route 302 – Intercounty Dover – Newark

Route 302 – Intercounty Dover – Newark operates between the Newark Transit Hub and the Dover Transit Center via Smyrna, Glasgow, and the Amazon Fulfillment Center in Middletown. With limited peak service and one mid-day trip on weekdays, ridership decreased over the fiscal year with peak ridership occurring in summer and fall 2017, and ridership declining significantly in winter and spring 2018 as shown in Figure 29. This route averages 27 boardings and alightings per day in Newark as shown in Figure 28.

Figure 29. DART Route 302 - Annual Ridership (FY 2018)

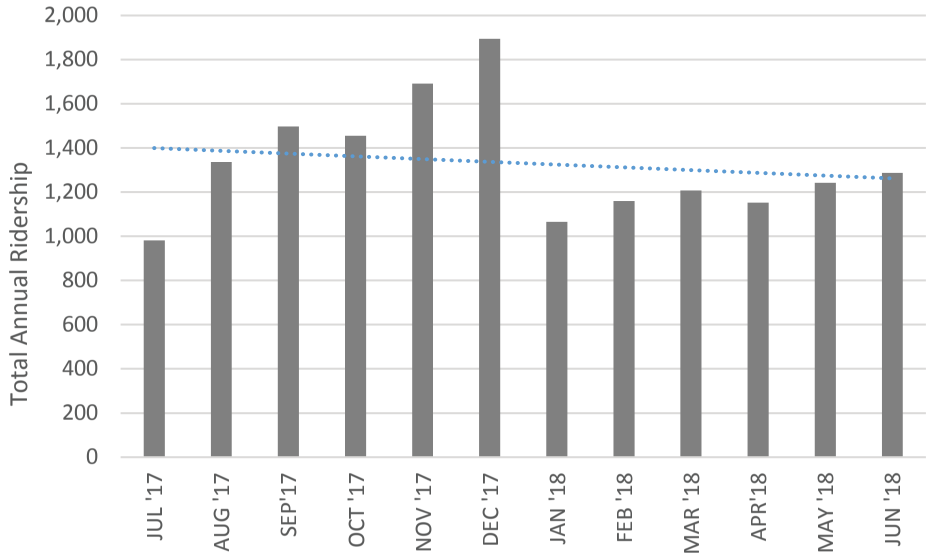
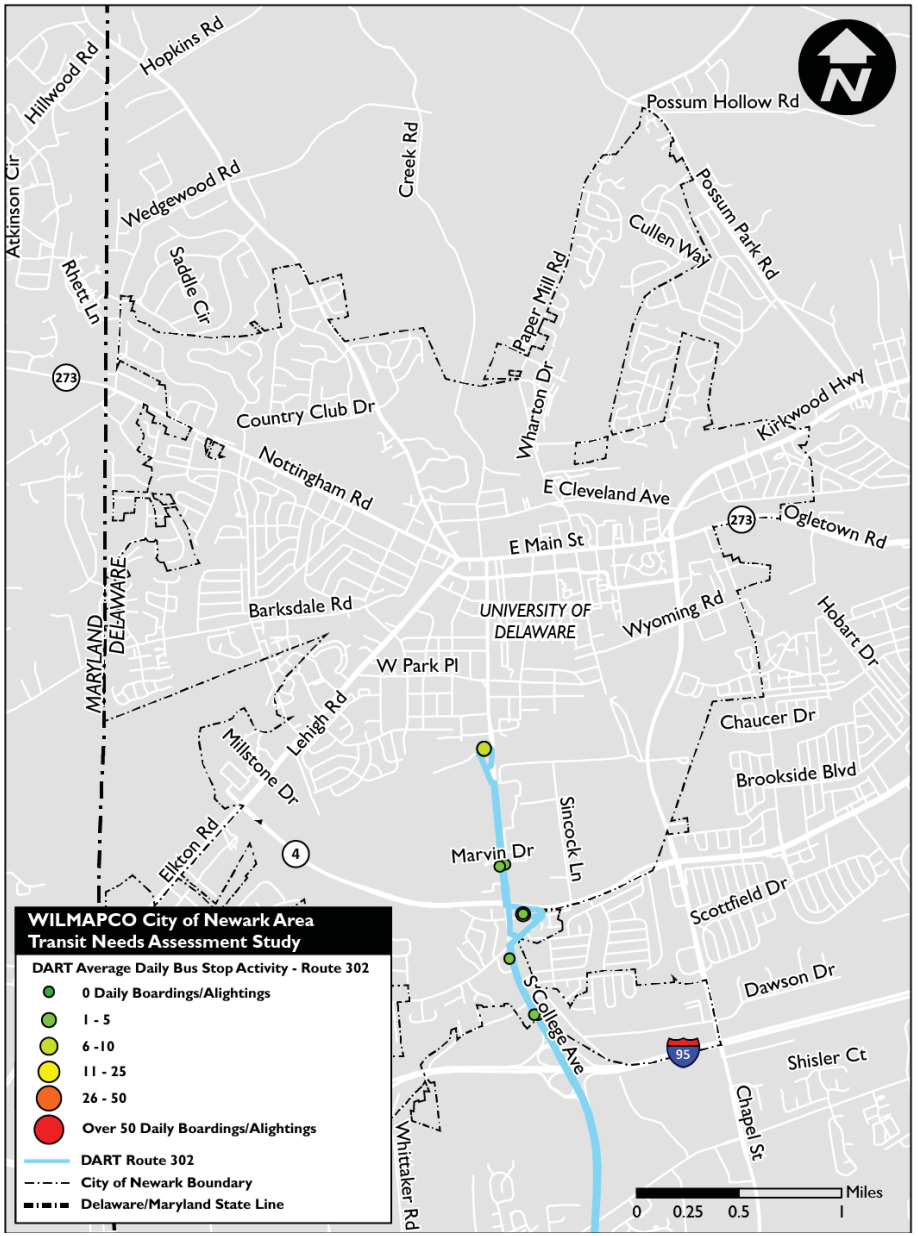


Figure 30. DART Route 59 - Average Daily Bus Stop Activity



UNICITY

The UNICITY service is sponsored by the City of Newark and operates three circulator routes throughout the City: N1, N2 and N3 as shown in Figure 32. The system operates from approximately 6:45 AM to 6:00 PM on weekdays as a circulator-type service, predominantly serving large apartment complexes, senior centers, shopping centers and the University of Delaware campus. The N1 and N2 routes provide connections to DART, CCT and Amtrak/SEPTA at the Newark Transit Hub and Newark Train Station.

UNICITY follows a seasonal ridership pattern similar to DART's, ranging from fewer than 1,300 monthly trips in January, to nearly 2,000 in August. This is shown in Figure 31.

Figure 31. UNICITY System Ridership (July 2017 - June 2018)

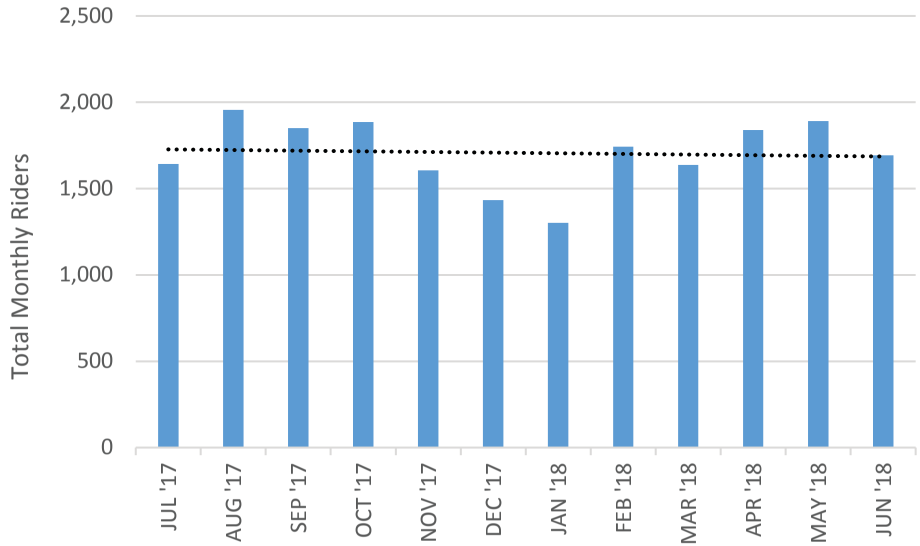
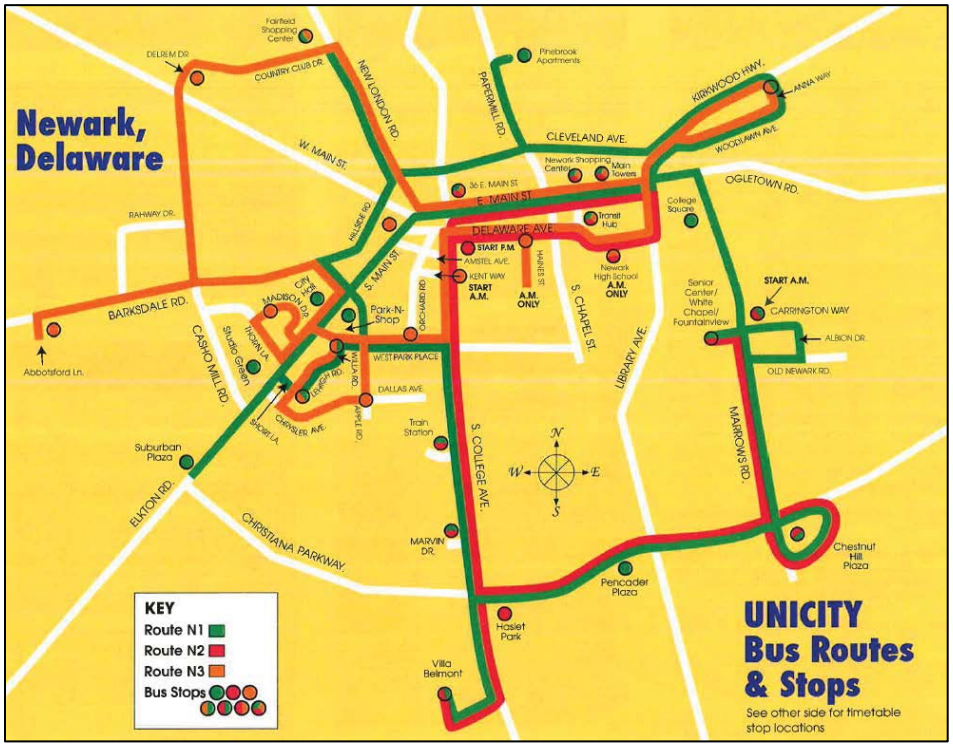


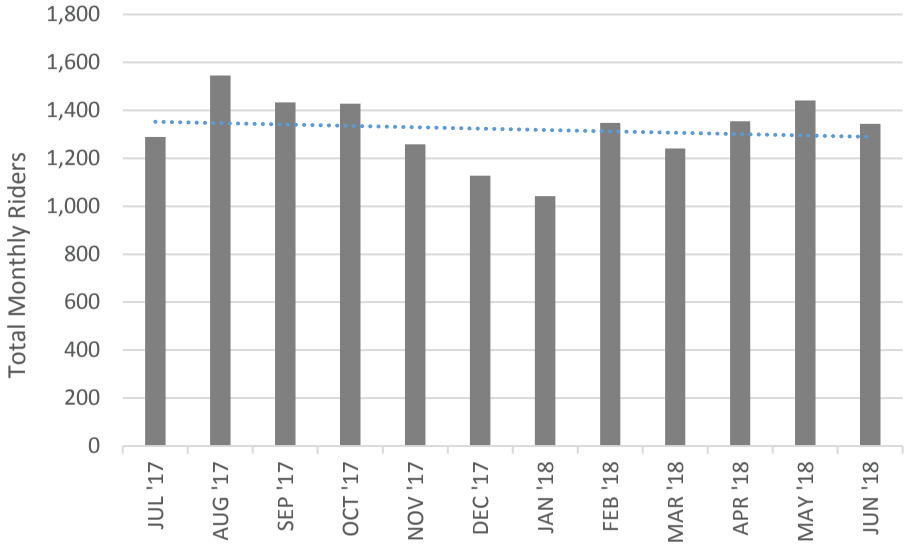
Figure 32. UNICITY System Map



Route N1

The Unicity Route N1 has an average of 63 boardings per day and is by far the highest of the three UNICITY routes, representing more than 77 percent of the system's annual trips. As shown in Figure 33, the N1 route shows a seasonal ridership pattern similar to that of the entire UNICITY system, with ridership highest in later summer/early fall and lowest in December and January.

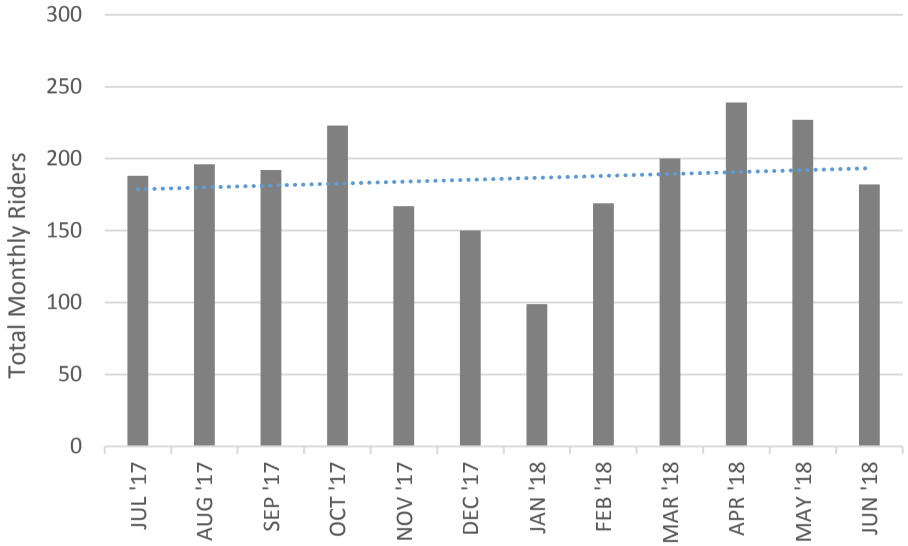
Figure 33. UNICITY Route N1 Ridership (July 2017 - June 2018)



Route N2

The Route N2 has approximately nine (9) average boardings per day and shows a slightly different and more pronounced seasonal variation compared to other UNICITY routes. Ridership peaks in April and May, and January ridership is less than half of this level as shown in Figure 34.

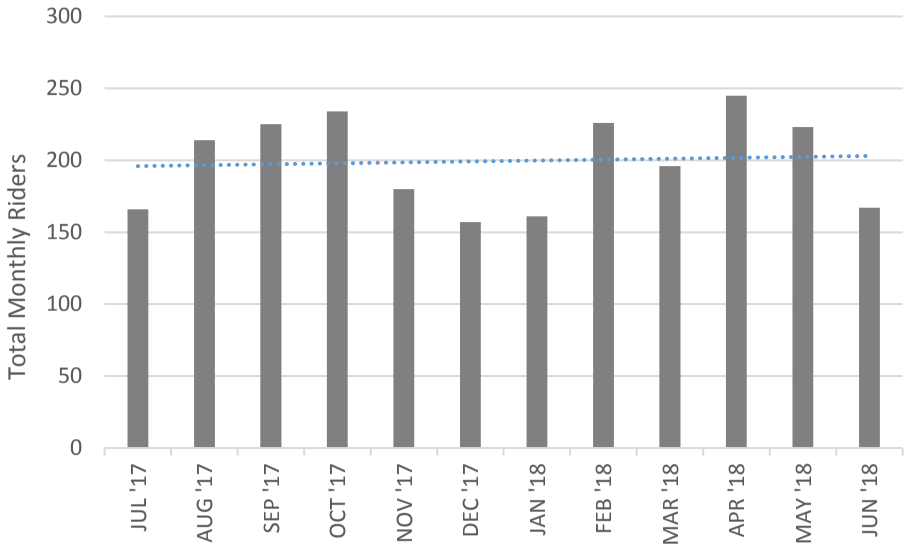
Figure 34. UNICITY Route N2 Ridership (July 2017 - June 2018)



Route N3

UNICITY's Route N3 has an average of ten (10) daily boardings and has a similar seasonal ridership pattern to Route N2, peaking in spring and having the lowest ridership in December and January.

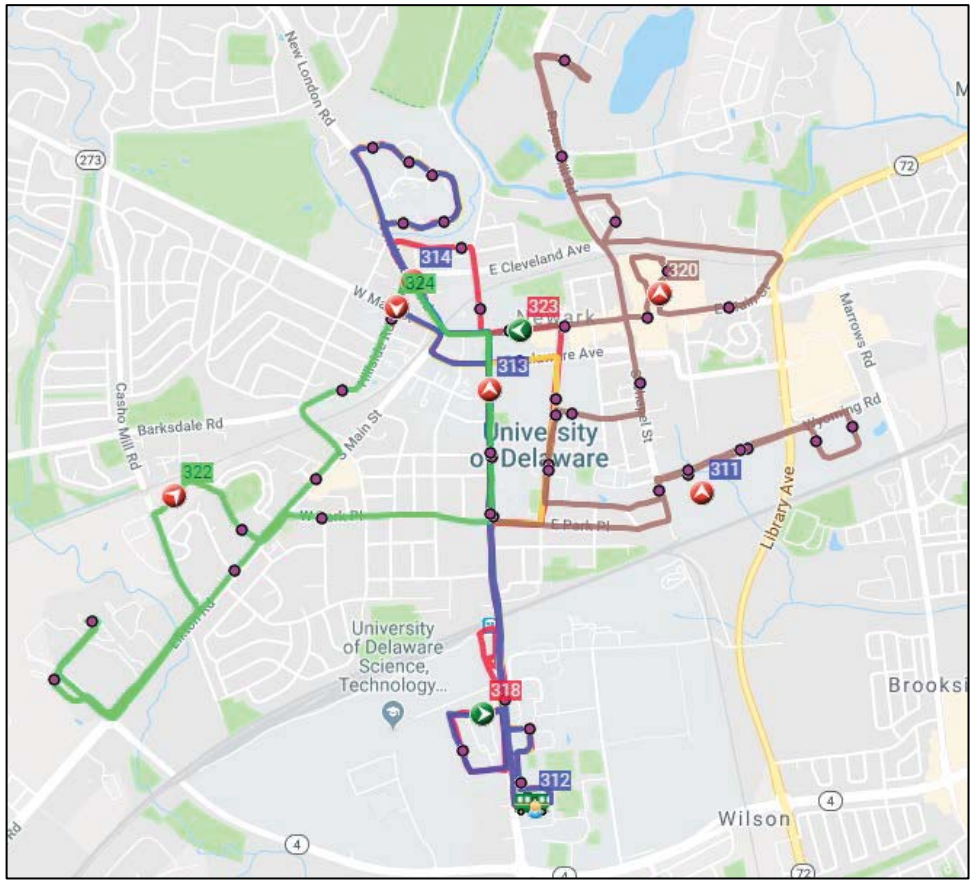
Figure 35. UNICITY Route N3 Ridership (July 2017 - June 2018)



University of Delaware[2]

The University of Delaware (UD) operates five main fixed-route bus routes for students, faculty, and staff around the university campus and important student-oriented destinations in Newark. They also offer numerous other shuttles and specialized services throughout the year including college football shuttles, commencement services, etc. Service is offered from 5 AM to midnight Mondays through Thursdays, 5 AM to 2:30 AM on Fridays, noon to 2:30 AM on Saturdays, and noon to midnight on Sundays. Limited service is provided during the summer term, school breaks, and holidays. Figure 36 depicts these five routes.

Figure 36. University of Delaware Bus System



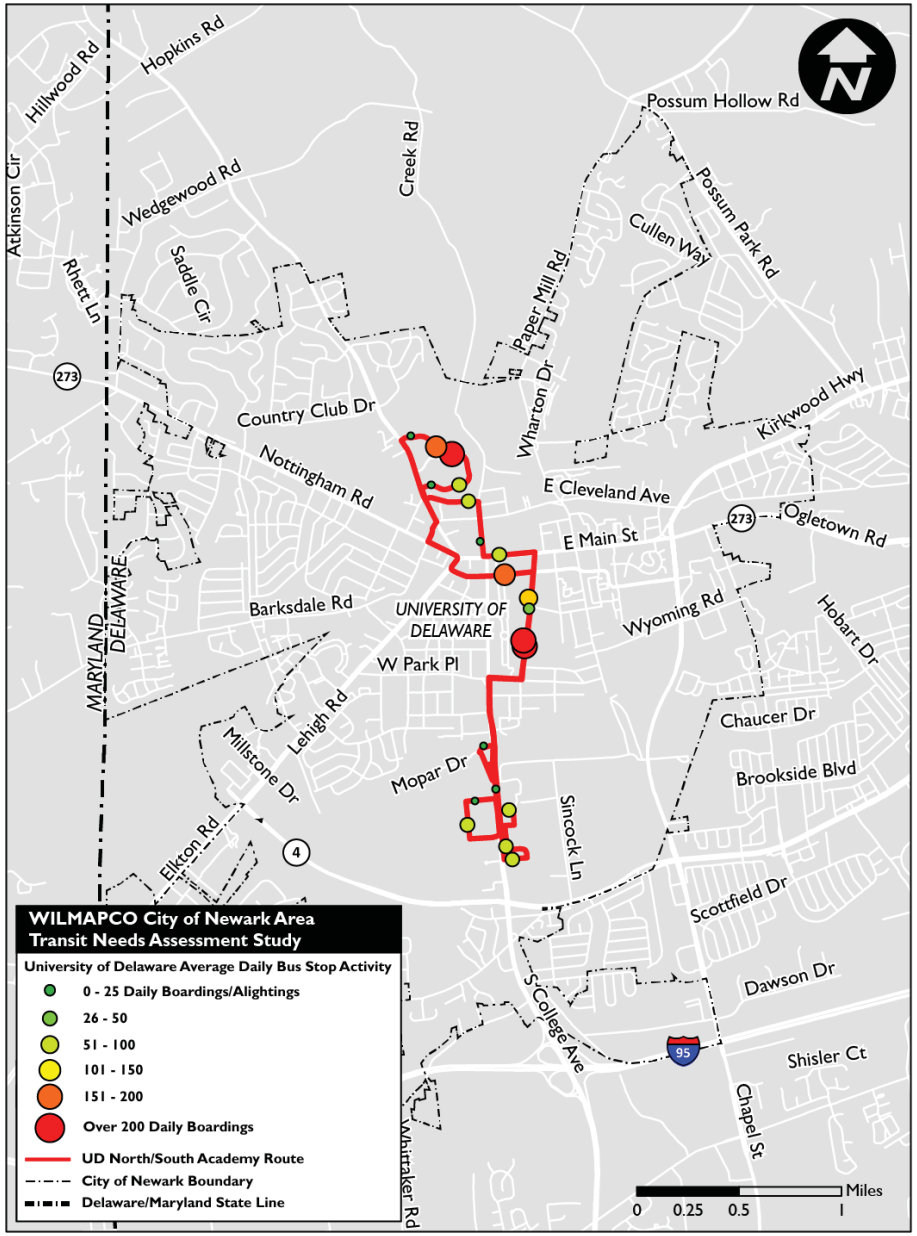
Note: This map is a screenshot of the UD Shuttle Live Bus Map. The numbers indicate which vehicle is operating on a specific route.

[2] Note: measures provided for the other transit systems were not included for UD based on data availability.

North/South Academy

The North/South Academy route operates between the north (Laird), central, east and south (STAR) campuses along Academy Street and College Avenue, providing frequent service during the day, and limited service on evenings and weekends. The route does not operate when the system operates on a summer/holiday schedule. The most popular stops on this route are the Perkins Student Center, Academy Street Dining Hall, George Reed Hall, and Christiana Commons, as shown in Figure 37.

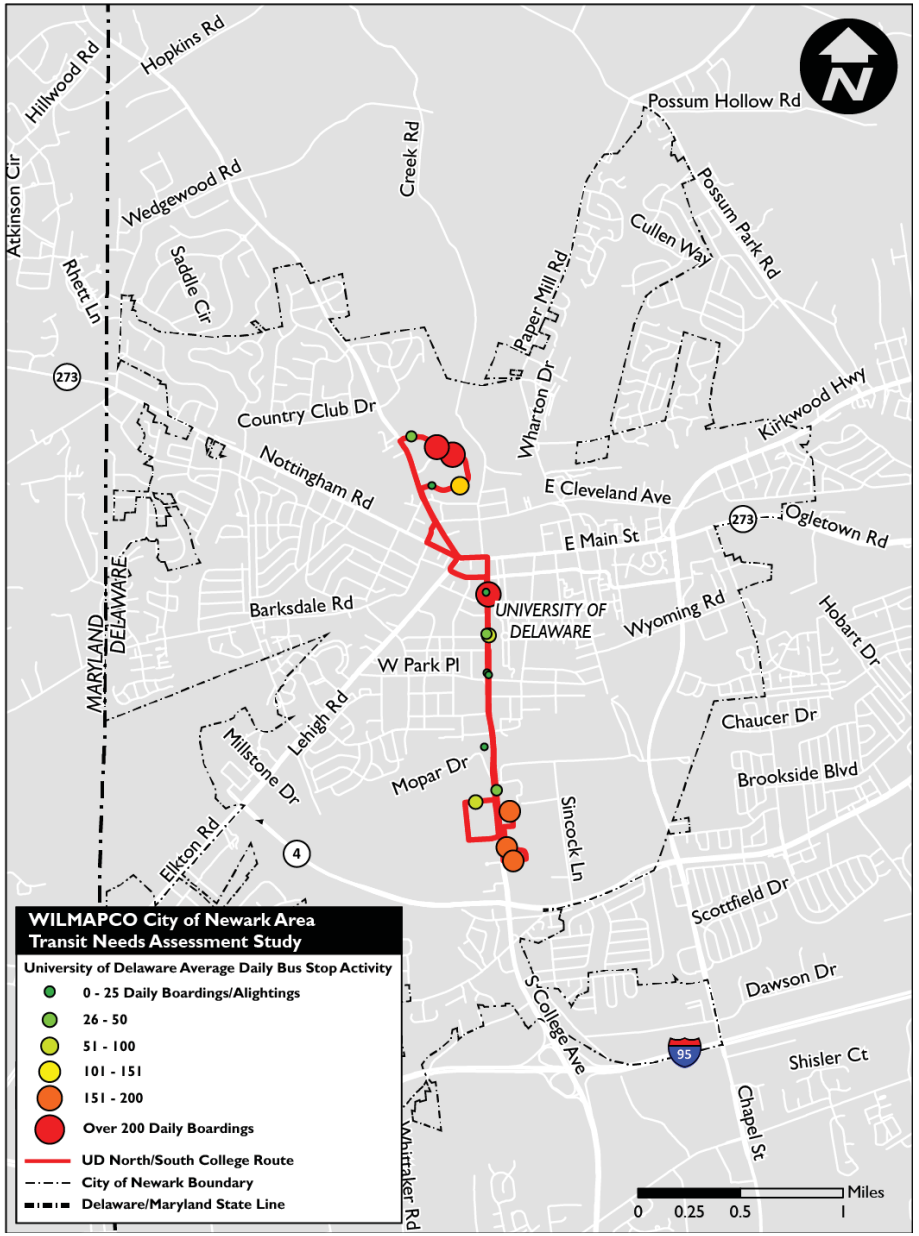
Figure 37. UD North/South Academy - Average Daily Bus Stop Activity



North/South College

This route operates between the north (Laird), central, east and south (STAR) campuses along College Avenue, with frequent service during the day and regular service during evenings. This route operates on holidays, summer, and winter breaks on weekdays and weekends. The most popular stops for this route include Smith Hall, George Reed Hall, Christiana Commons, Ice Arena/Townsend, and the Field House (Front Door and Shelter). The average daily busy stop activity for this route is shown in Figure 38.

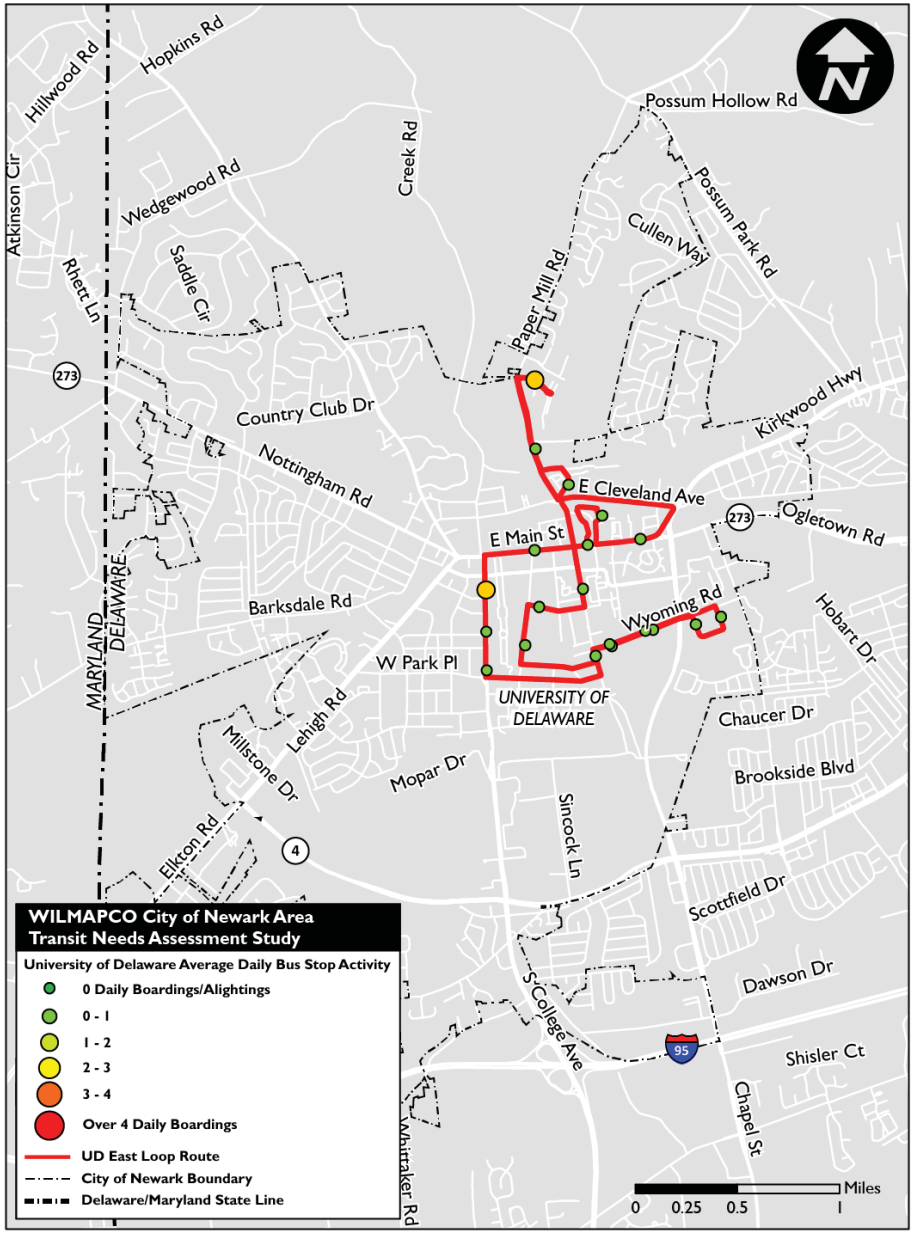
Figure 38. UD North/South College - Average Daily Bus Stop Activity



East Loop

The East Loop Route operates between campus, downtown Newark, and Delaware Technology Park with regular service on weekdays and limited service during evenings and weekends. The route operates on holidays, and summer and winter breaks on weekdays and weekends. The most popular stops on this route include Smith Hall and the Pinebrook Apartments as shown in Figure 39.

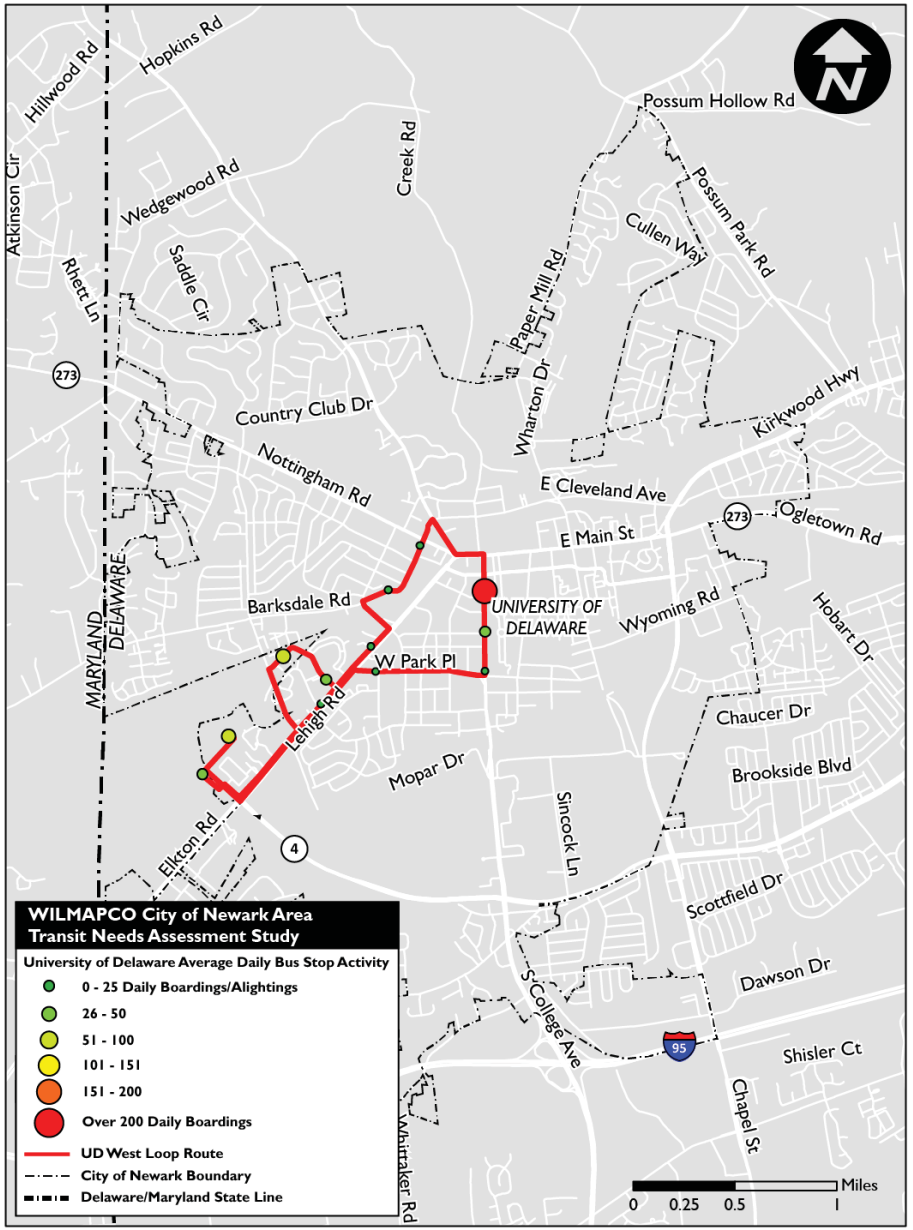
Figure 39. UD East Loop - Average Daily Bus Stop Activity



West Loop

The West Loop operates between campus and west/southwest Newark with frequent service on weekdays and regular service during evenings and weekends. The route also operates on holidays, as well as winter/summer breaks on weekdays and weekends. The most popular stops on this route are Smith Hall, the Retreat North Apartments, and the Thorn Lane Apartments as shown in Figure 40.

Figure 40. UD West Loop - Average Daily Bus Stop Activity



Early Bird

UD's Early Bird route operates between north (Laird), central, east, and south (STAR) campuses along Academy Street and College Avenue. The service only operates on early weekday mornings with the most popular stops of Smith Hall and the main entrance of the Field House, shown in Figure 41.

Figure 41. UD Early Bird - Average Daily Bus Stop Activity

Existing Conditions Analysis Summary

The Existing Conditions analysis efforts provided information on transit and market needs along with performance characteristics for each of the routes serving Newark. The following preliminary findings, together with public input, helped shape the study recommendations. These findings include:

- Ridership decreases between December and February across most services with increases in ridership outside of winter including the summer period when most students are not in school.
- Frequent service all-day to both Christiana and Wilmington is currently provided by DART
- There is currently no schedule coordination between transit agencies but frequent service exists on both DART and UD services
- A lack of clock-faced headways on Cecil Transit, UNICITY, and UD evening services could be confusing for riders
- Large loops and frequent diversions on all UNICITY routes create very long travel times for riders
- UNICITY is the only real intra-Newark transit service for non-student Newark residents

Route metrics for each Newark area bus route, including annual ridership, passengers per revenue hour, passengers per mile, average daily boardings, service span, and headways are shown in Table 1. The existing conditions analysis efforts were then used in developing recommendations for agency cooperation and high-level recommendations for route restructuring for each agency. These recommendations are provided in Chapter 4.

Table 1. Summary of Route Characteristics

Operator	Route	Daily Trips	Service Span	Sat. Service	Sun. Service	Peak Headway	Off-Peak Headway	Annual Ridership (FY18)	Passengers Per Revenue Hour	Passengers Per Mile	Average Daily Boardings
Cecil Transit	Route 4 - Elkton Newark Connection	11.5	05:50–22:21	No	No	90	90	9,812	2.45	0.14	39
DART	Route 6 - Kirkwood Highway	35(EB)/40(WB)	04:30–23:30	Yes	Yes	20	30/60	663,697	24.19	1.73	2,855
	Route 16 - Newark Express	8(EB)/13(WB)	06:00–18:40	No	No	30	-	43,546	7.84	0.32	171
	Route 33 - Christiana Mall/Newark	35(EB)/33(WB)	04:30–00:15	Yes	Yes	30	30/60	340,580	13.7	0.77	1,342
	Route 34 - Newark/Christiana Mall/Wilmington	17	06:00–19:40	No	No	15	30	23,000	3.77	0.26	126
	Route 46 - Newark/Glasgow	19(NB)/21(SB)	05:00–22:15	Yes	No	30	70	42,232	6.04	0.37	203
	Route 53 - Delaware City/Newark	15(NB)/14(SB)	05:00–23:00	No	No	15	15	11,317	3.11	0.13	75
	Route 55 - Old Baltimore Pike	25	05:45–22:45	Yes	No	40	40	99,283	10.05	0.64	411
	Route 302 - Intercounty Dover-Newark	6	05:45–18:45	No	No	-	-	15,973	2.65	0.09	77

Operator	Route	Trips	Service Span	Saturday	Sunday	Peak Headway	Off-Peak Headway	Annual Ridership (FY18)	Passengers Per Revenue Hour	Passengers Per Mile	Average Daily Boardings
Unicity	Route N1	4.5	08:51 – 16:15	No	No	105	105	15,852	8.6	0.77	63
	Route N2	2 (1AM/1PM)	07:20 - 07:59 17:12 - 17:54	No	No	-	-	2,232	3.32	0.42	9
	Route N3	4 (2AM/2PM)	06:47 - 08:51 16:32 - 18:03	No	No	35	10	2,394	1.92	0.17	10
University of Delaware	North/South Academy	41/46(Fri)	07:00 – 23:18 07:00 – 02:38 (Fri)	Yes	Yes	20	40	193,621	-	-	-
	North/South College	81	07:00 – 23:23	No	No	7-10	30	462,174	-	-	-
	East Loop	35/39(Fri)	06:55 – 23:20 06:55 – 02:30 (Fri)	Yes	Yes	20-25	45	2,093	-	-	-
	West Loop	63/69(Fri)	07:00 – 23:04 07:00 – 02:34 (Fri)	Yes	Yes	10-20	30	107,325	-	-	-
	Early Bird	4	04:50 –06:58	No	No	30	-	5,589	-	-	-

Paratransit Analysis

For Newark-area residents within Delaware who are determined to be ADA-eligible, DART provides First State Paratransit Services. ADA-eligible residents are able to request paratransit service by calling a 1-800 phone number and making a pick-up reservation. First State Paratransit Services offers two types of trips: an ADA trip and a non-ADA demand response trip. ADA trips must begin and end within ¾ mile of a fixed route service and be within service hours of that route. Non-ADA demand response trips either begin or end outside of ¾ mile of a fixed route service and/or take place outside of the route's service hours. The fare for an ADA trip is $4.00 and the fare for a non-ADA demand response trip is $6.00.

In Cecil County, Maryland, Cecil Transit allows riders to request fixed route deviations of up to ¾ of a mile. The deviations must be scheduled at least one hour before the pick-up time, but no more than one day prior, via phone call. Each requested deviation costs a total fare of $4.00. Cecil Transit offers an on-demand origin-to-destination service for all users. It operates Monday through Friday from 8 AM to 4 PM and is deployed on a first come, first served basis. Cecil Transit also provides a Taxi Voucher Program (TVP) for senior citizens, people with disabilities, and low-income people. Eligible users are able to buy taxi vouchers at discounted rates which can then be used for scheduled rides with participating taxi agencies.[3]

All Delaware-based paratransit trip requests for the calendar year of 2017 were analyzed. Figure 42 and Figure 43 show the average daily pick-up activity of unlinked trips in the Newark-area. Within Newark, there were 80 average daily pick-ups and within the map extent of Figure 42 and Figure 43 there were 206 average daily pick-ups. The majority of pick-up locations serve one request and most have fewer than 10 requests. There is a high density of pick-up locations on Main Street in Downtown Newark.

Paratransit service has been a challenge in recent years from an operator and rider perspective. Delaware's paratransit services are costly to operate. In 2014, the Delaware Department of Transportation (DelDOT) reported that the average cost to provide a one-way paratransit trip was $47. DelDOT stated that nearly half the transit system's budget was spent on 8% of its riders, who were utilizing the paratransit services. Riders complain of waiting more than two hours for a ride and that scheduling is inconsistent.[4]

A recent national survey from METRO, a transit publication, suggested that there have been widespread increases in demand for paratransit services across many U.S. transit networks. An aging population and growth in the number of people with mobility issues has contributed to growing utilization. Increased demand along with rising costs for providing paratransit services has led many agencies to consider new ways of offering paratransit service.[5]

In Kansas City, besides recently implementing free rides for paratransit users on fixed routes. The Kansas City Area Transportation Authority also developed and deployed an on-demand paratransit service where users can request a ride via an app or via a phone call.

In Boston, the Massachusetts Bay Transportation Authority launched a pilot program where paratransit riders were able to take subsidized trips on ride-hailing services like Uber and Lyft. Through the pilot program, the MBTA learned that riders experienced shorter wait times, were able to do same-day booking as opposed to requesting a ride 24 to 12 hours in advance, and had faster trip times. Additionally, the program saw significant

[3] Cecil Transit, http://www.ccgov.org/government/community-services/cecil-transit
[4] Cape Gazette, *DelDOT will delay some paratransit changes*, Jan 10, 2014, https://www.capegazette.com/article/deldot-will-delay-some-paratransit-changes/59199
[5] METRO, *How Transit Agencies are Alleviating Demand for Paratransit Services*, May 3, 2017, https://www.metro-magazine.com/mobility/article/722158/how-transit-agencies-are-alleviating-demand-for-paratransit-services

cost savings. The MBTA's paratransit service cost $46 per ride, but by utilizing Lyft and Uber the cost was $9 per trip. Paratransit riders also reported significantly greater satisfaction with the pilot program service than with the MBTA's traditional scheduled paratransit service.

In Milwaukee, Wisconsin, the Milwaukee County Transit System deployed a network-wide effort to make fixed-route services more accessible to people with disabilities. Changes included offering free bus fares to paratransit-eligible riders, conducting group travel training, training drivers on how to welcome and assist people with disabilities, and improving over 300 non-ADA compliant bus stops. Between 2009 and 2016, the number of fixed-route boardings requiring securement assistance (e.g., a wheelchair boarding) doubled from approximately 52,000 to 104,000.

These different strategies deployed in other transit service areas could inform further research in the Newark-area on how to more efficiently operate paratransit services.

Figure 42. 2017 Average Daily Paratransit Pick-Up Activity & DART Network

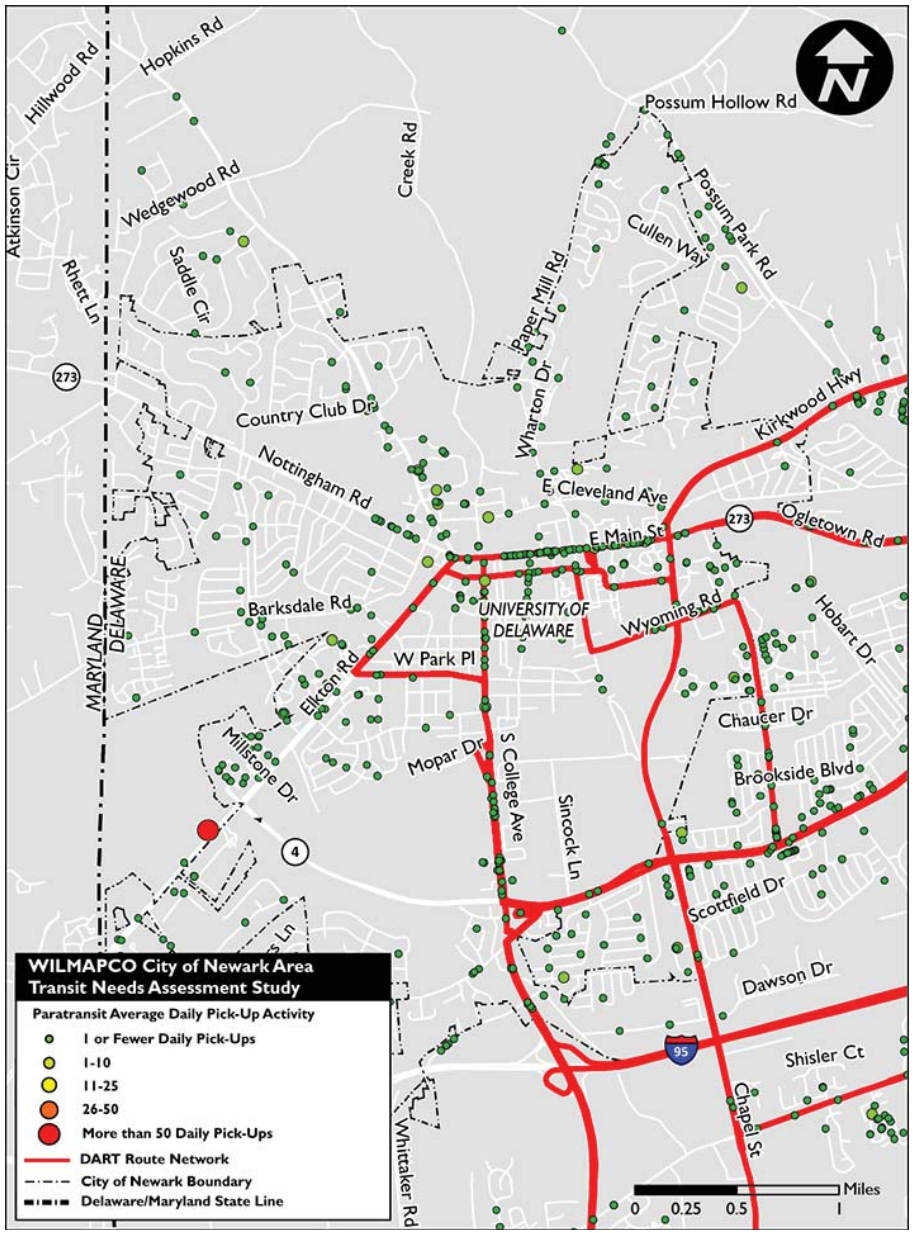
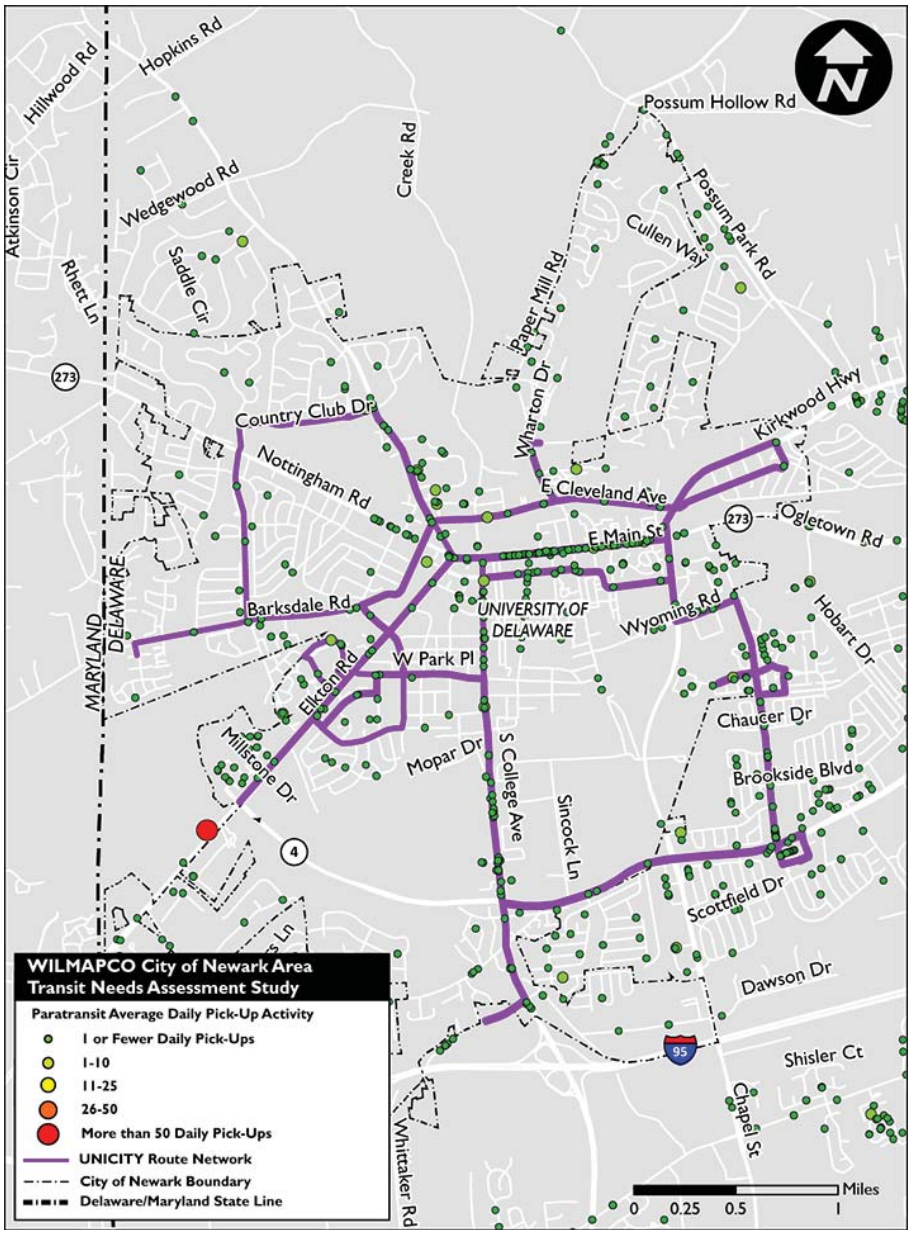


Figure 43. 2017 Average Daily Paratransit Pick-Up Activity & UNICITY Network



Chapter 3. Public and Stakeholder Engagement

PMC Meetings

A series of five Project Management Committee (PMC) meetings were held throughout the course of the project to provide progress updates, respond to inquiries, gather information, and make ongoing project decisions. The dates and purpose for each meeting included:

1. **May 31, 2018:** project kickoff meeting, introduce project participants, establish lines of communication, review project goals and objectives, set standing date for PMC meetings, refine scope of outreach efforts, and review initial data collection efforts.
2. **June 25, 2018:** review mapping efforts, draft maps, data collection efforts, survey development and deployment schedule.
3. **August 7, 2018:** review updated maps, outstanding data collection needs, survey update.
4. **October 2, 2018:** review finalized maps, survey progress and results, data analysis efforts including existing route operational analysis for all agencies, public outreach prep efforts.
5. **January 29, 2019:** project update including survey results, initial draft recommendations by agency, and next steps for presentation to City Council in April.

Agendas, slides, and notes from each meeting are available in Appendix B.

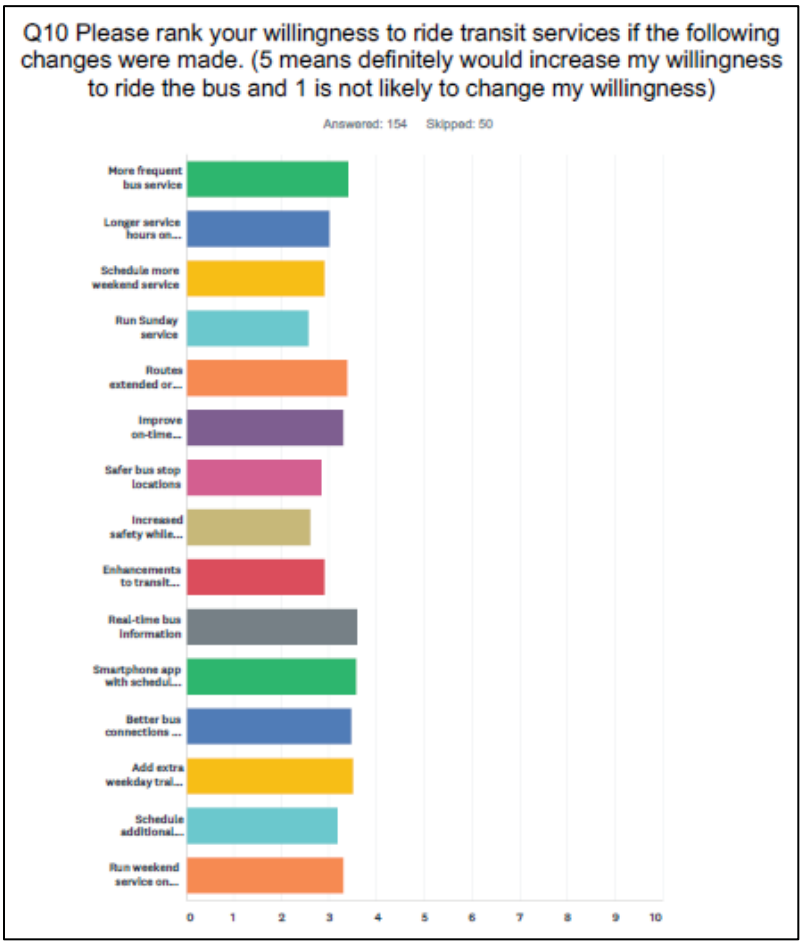
Survey Outreach & Results

Four detailed surveys were developed as part of the outreach efforts and deployed by members of the PMC and WSP. Each had similar types of questions, but geared towards a different audience, with all seeking input on how bus service in Newark could be improved.

1. **Newark Resident Survey:** this survey was available on-line via Survey Monkey and in paper copy in select locations and contained 18 questions focusing on public transportation needs, gaps in service, and how improvements to the bus network in Newark can more effectively and efficiently meet passenger needs. Surveys were publicized by WILMAPCO and the City of Newark. Open from October 2018 to January 2019, 204 total responses were received.
2. **Business Community:** a second survey was developed geared towards business related interests to elicit employer input on the perceived strengths, weaknesses, and opportunities for Newark's existing transit network for their employees and customers. There was little interest from the business community on this topic.
3. **Passenger Intercept Surveys:** these surveys were administered in paper format by WILMAPCO staff at the Newark Transit Hub and Route 896/DE-4 Park-and-Ride focused on obtaining input on riders' perceptions of the existing transit service and their suggested recommendations for improvement, e.g., hours or frequency of service. Input was obtained from 142 riders.
4. **Bus Driver Interviews:** these consisted of one-on-one interviews with operators to obtain their input and ideas for improved service delivery based on their first-hand experience. Maps of their service areas were provided for marking up with areas of difficult turns, congested roadway links and intersections, difficult-to-serve bus stops, and areas of high and low ridership and overloading. A total of 21 responses were received from DART drivers. UD/Unicity and Cecil Transit also surveyed their drivers to obtain input on frequent complaints heard from passengers and their suggestions for improvement.

Full interview and survey results are available in Appendix D.

Figure 44. Sample Question from Resident Transit Survey



Public Outreach Efforts

A public meeting was held on Tuesday November 13, 2018 from 4:00 PM – 6:30 PM at the Newark Municipal Building to obtain feedback on study efforts to-date and garner additional input on bus service in the Newark area. Attendees were able to review select demographic maps, mark-up maps showing the various transit routes with their areas of concern or interest, and provide their opinions on why they use or don't use transit.

The second public meeting was a presentation to Newark City Council on April 22, 2019 at 7:00 PM as part of the monthly City Council meeting. The meeting provided a brief overview of the project, a summary of outreach efforts, the initial recommendations for agency coordination and route restructuring, and next steps for the study. Members of City Council and the public were given an opportunity to ask questions, and City Council members were provided several weeks to review the slide deck and follow up with any additional questions or comments.

Materials from both of these meetings are available in Appendix C.

Figure 45. Flyer Advertising Public Meeting

Chapter 4: Recommendations and Next Steps

With a focus on the project goals developed at the onset of the study, recommendations focused on two main areas: agency cooperation and route restructuring. The transit agencies agreed that interagency collaboration and cooperation would be necessary to implement and sustain the proposed initiatives, working towards a comprehensive transit network that can be used by anyone, i.e., residents, UD students and faculty, visitors, etc.

The second area of focus contains high-level recommendations for route restructuring to adjust route alignments to minimize overlaps and redundant and/or poor-performing service. The route restructuring efforts considered best practices for restructuring including:

- Using clock-face headways to simplify routing and schedules
- Providing bi-directional service when possible – avoiding large one-way loops
- Providing connections to other routes at multiple places, but focusing on seamless connections at transit hubs

Agency Coordination

Goals of Agency Coordination

Overall there are several goals or benefits of agency coordination. These include:

- Increasing ridership
- Expanding where the services reach
- Providing seamless and cost-effective travel for passengers, between service providers
- Providing consistent and easily accessible information
- Providing cost-savings for the transit service provider.

There are several areas or opportunities for coordination. These include:

- Marketing and technology – e.g. a common app
- Branding or co-branding services
- Accepting each other's fares or coordinating to similar fare cards
- Transit infrastructure such as sharing of bus stops & shelters
- Providing information for other providers on schedules for coordination
- Better aligning routes and service area amongst providers

Recommendations for agency coordination in Newark focused on opportunities for cooperation across agencies, highlighting the benefits for doing so via efforts such as cross-honoring fares across transit agencies. Examples of various other systems in the US were provided for consideration, particularly other cities with universities.

These changes, if implemented, would have impacts on operating and maintenance costs as well as peak vehicle requirements. Where possible, consideration of opportunities to reshape transit routes to better serve disabled passengers, reduce reliance on paratransit, and reduce operating or capital costs associated with providing paratransit services.

Examples of Agency Coordination

In the US, there are several types of transit agency coordination, ranging from minimal to expanded, i.e., not much at all to an all-encompassing effort. Newark currently experiences minimal coordination, with multiple transit providers, each providing their own service independently of each other.

Examples of moderate coordination, where transit agencies coordinate through several measures, include:

- Allowing the general public to ride university buses
- Students and faculty can ride the transit buses for free or at a discounted rate (students pay as part of their transportation fee)
- Each agency has a distinct geographic area of focus
- Transfers are facilitated via coordinated or reciprocal fares
- Transfers are also timed between agency services at a central area or station

Some relevant cities with examples of moderate levels of coordination include Palo Alto, CA; Berkeley, CA; and Salt Lake City, UT.

Palo Alto, CA

Five transit providers serve the Palo Alto area: CalTrain, Sam Trans, VTA, Dumbarton Express, and the Marguerite Shuttle operated by Stanford University. Of note:

- VTA and the Marguerite Shuttle are the main transit providers for trips within Palo Alto.
- VTA mainly serves the north and east areas of city while the Marguerite Shuttle serves the south and east areas of the city – transfers are focused at the Palo Alto Transit Center
- Service is provided for free to the general public on the Marguerite Shuttle. Students can take the VTA's U-Line bus for free and monthly passes are heavily discounted. Eligible students, faculty, and staff are free on all VTA and CalTrain services.

Berkeley, CA

Three transit service providers serve the Berkeley area: BART, AC Transit, and Bear Transit operated by UC Berkeley. Of note:

- AC Transit and Bear Transit are the main transit providers for trips within Berkeley.
- Bear Transit service is focused around the main campus and neighboring Richmond with AC Transit serving the greater Berkeley Area and Alameda County.
- Service on Bear Transit is open to the general public for $1-$1.50 depending on the route. UC Berkeley students can use any AC Transit service for free as part of their transportation fee. Faculty and staff pay $40/month (usually $84.60) for the same deal.

Salt Lake City, UT

Four transit providers serve the Salt Lake City area: UTA, TRAX Light Rail, FrontRunner commuter rail, and UT shuttle buses operated by the University of Utah. Of note:

- UTA is the main provider of transit services within Salt Lake City and UT operates four shuttle buses around the university and downtown Salt Lake City.
- University services are focused around the campus in addition to downtown Salt Lake City, and the neighborhoods to the east and south of campus.
- Service is provided for free to the general public on the UT shuttle services. UT students can use any UTA, TRAX, or FrontRunner service for free as part of their transportation fee. Faculty and staff are also free on any of the above transit services.

The remainder of this chapter summarizes the recommendations developed for each transit operator, including recommendations on minimizing overlaps and redundant or poor performing services. Minor restructuring for many routes was developed as part of the study efforts, however it was understood that there were several instances where political or other reasons existed for why segments of a poor performing route would remain intact. Route restructuring efforts focused on changes to improve route alignments, running times by time of day, and frequencies by time of day and span of service for weekday and weekend.

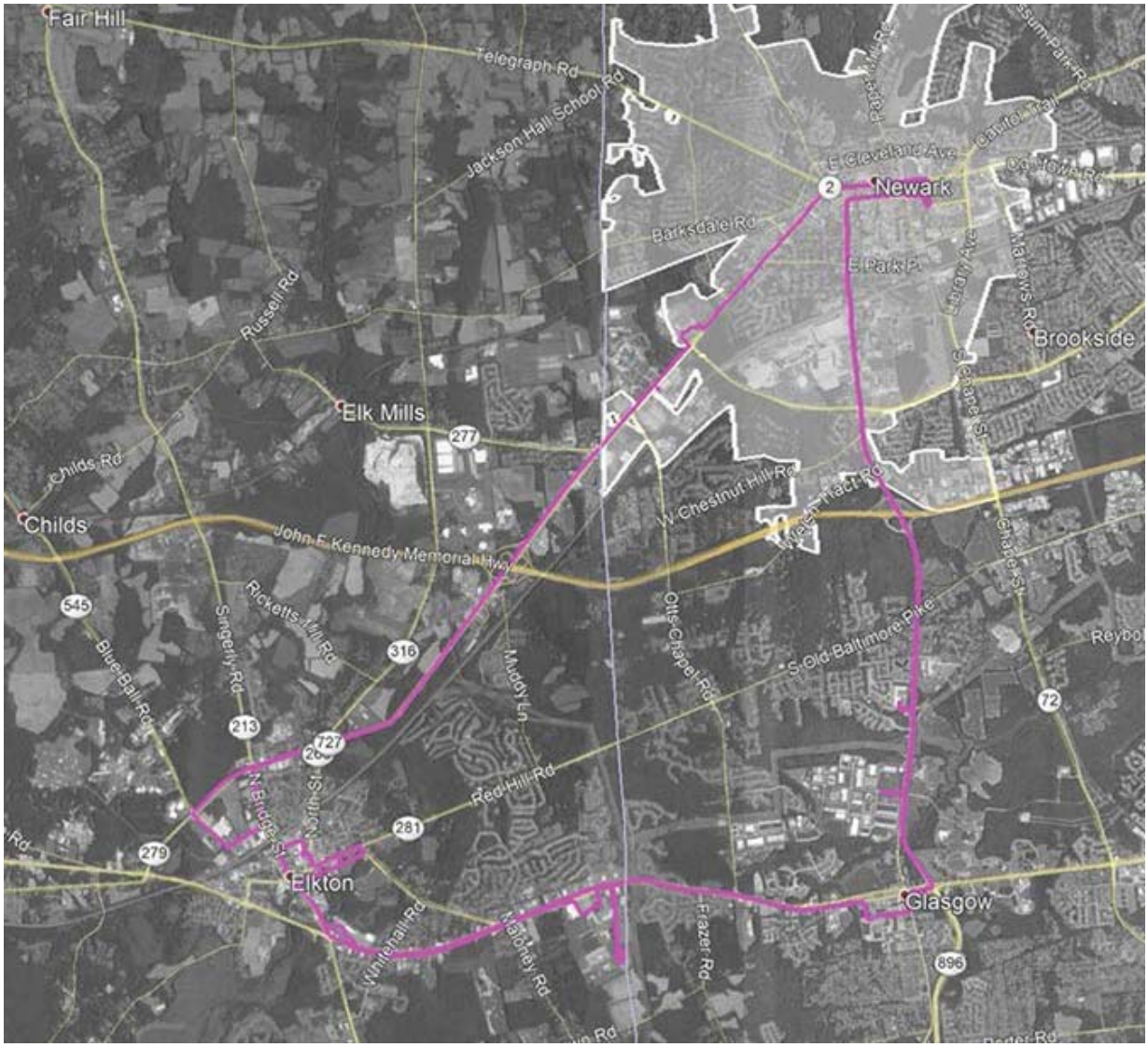
Route Restructuring

Cecil Transit

In terms of initial recommendations Cecil Transit's Route 4 is currently a large loop serving the Elkton Walmart, Newark Transit Center, and Peoples Plaza. Cecil Transit has completed the Cecil County Transportation Development Plan (TDP), which indicates that the Elkton-Newark Connection's daily average ridership has increased by 17 percent since July 2018. The TDP recommends that the Route 4 will maintain the circular route currently operated by the Elkton-Newark Connection, but will eliminate entering the Newark Train Station A minor modification to the large loop will instead add a stop along Route 896 near the train station entrance.

Additionally, Cecil Transit and DART have a commitment to continue efforts to better coordinate service along the 896 corridor between each agency. This coordination also extends to cooperation to accept each agency's fare media for transfers. A fare reciprocity agreement is currently being considered with the launch of Cecil Transit's mobile payment application anticipated Fall 2019.

Figure 46. Cecil Transit Route 4 – Elkton Newark Connection



Route 5, the Commuter Connection Route between Elkton and the Newark Train Station, was initiated in April 2018, and given the newness of this route was not included in the analysis efforts.

DART

As the largest transit service provider in the study area, DART currently has eight routes operating to/from the City of Newark with services primarily destined for Wilmington and the Christiana Mall with lesser amounts of service to Glasgow and St. Georges. DART's main focus in Newark is east-west travel to the Christiana Mall and Wilmington, thus recommendations involve coordinating departures among the Wilmington and mall-bound routes to provide consistent service, such as service to the Mall and Wilmington every ten (10) minutes during the morning and afternoon peaks.

Minor route realignments were developed for most of DART's routes, with recommendations for three of the route's recommendations currently in the process of moving forward. The other recommendations are more in the formative stages and will be developed by DART in the coming months. Recommendations for each route are detailed in the following paragraphs, with a summary of these recommendations below:

- Explore implementation of a clock-faced system to facilitate timely transfers.
    - Coordinate departures among Wilmington-bound routes and Christiana Mall-bound routes to provide consistent service throughout time period (e.g. every 10 minutes to Wilmington during AM/PM peak)
    - Consider rerouting Route 46 in Newark and combining with Route 34.
    - Examine improving service on Route 53.
- Consider discontinuing Route 59, dependent on the outcome of public hearings. Add trips on the Route 33 to support this loss of service. [6]

In general, DART will explore implementing clock-faced headways and concurrently determining if such a change would increase DART's operating expenses and operational resources required for service. DART will also strive to improve connections at the various transit hubs in the greater Newark area, including the Newark Transit Center, Newark Train Station, and the DE-896/DE-4 Park & Ride, to offer a seamless connection for riders who transfer between routes. Seven routes could not be accommodated at Newark Hub at any given time to support a pulse operation, hence the focus on clock-faced system to ensure timely transfers.

The currently scheduled service at the Newark Transit Hub between DART and Cecil Transit does not create conditions where too much service is scheduled to arrive at the same time in a way that would overtax the facility. However, when buses operate late there are times when there are more buses at the Newark Hub than spaces for buses. Ideally there is enough space for four buses to concurrently stop, with two in each direction on Farmer Lane.

For DART and all of the operators it is important to note that any improvements would need to examine impacts on the agency's operating expenses and operational resources.

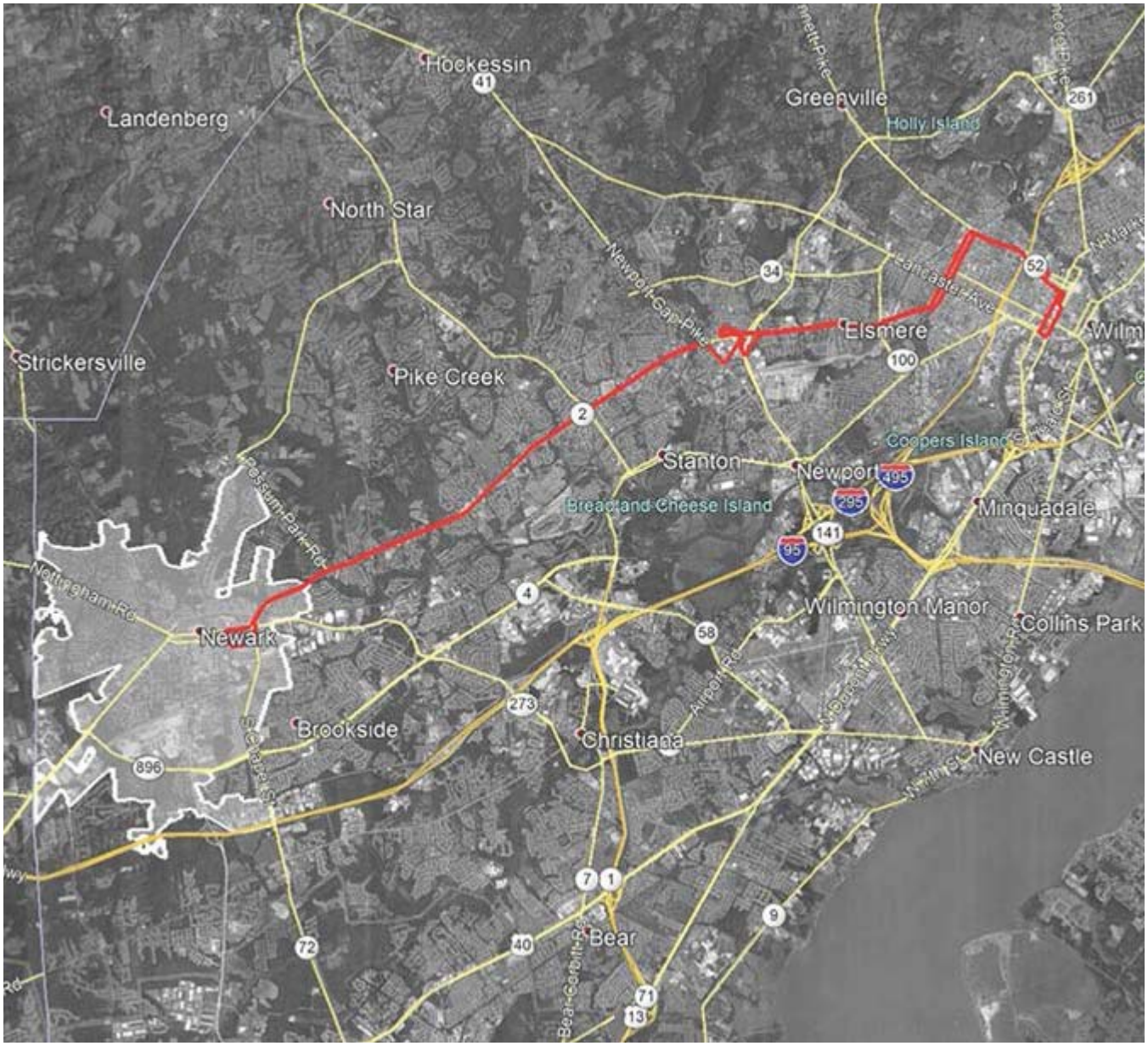
The following sections provide detailed maps and descriptions of the route changes to be considered by each operator.

[6] Effective May 20, 2019 the Route 59 has been discontinued due to low ridership, with the Route 33 providing trip opportunities and connections between Wilmington, Churchmans Crossing and the Newark Train Station.

DART Route 6: Kirkwood Highway

- No proposed route realignment recommendations
- As of May 2019, weekday service to be improved to operate every 20 minutes between 8 AM and 3 PM and additionally from Newark between 4:50 PM and 6:10 PM
- DART to consider coordinating departures from Newark Hub with Routes 16 and 33 to provide consistent service to Wilmington throughout day (e.g. departure every 10 minutes during peak times)

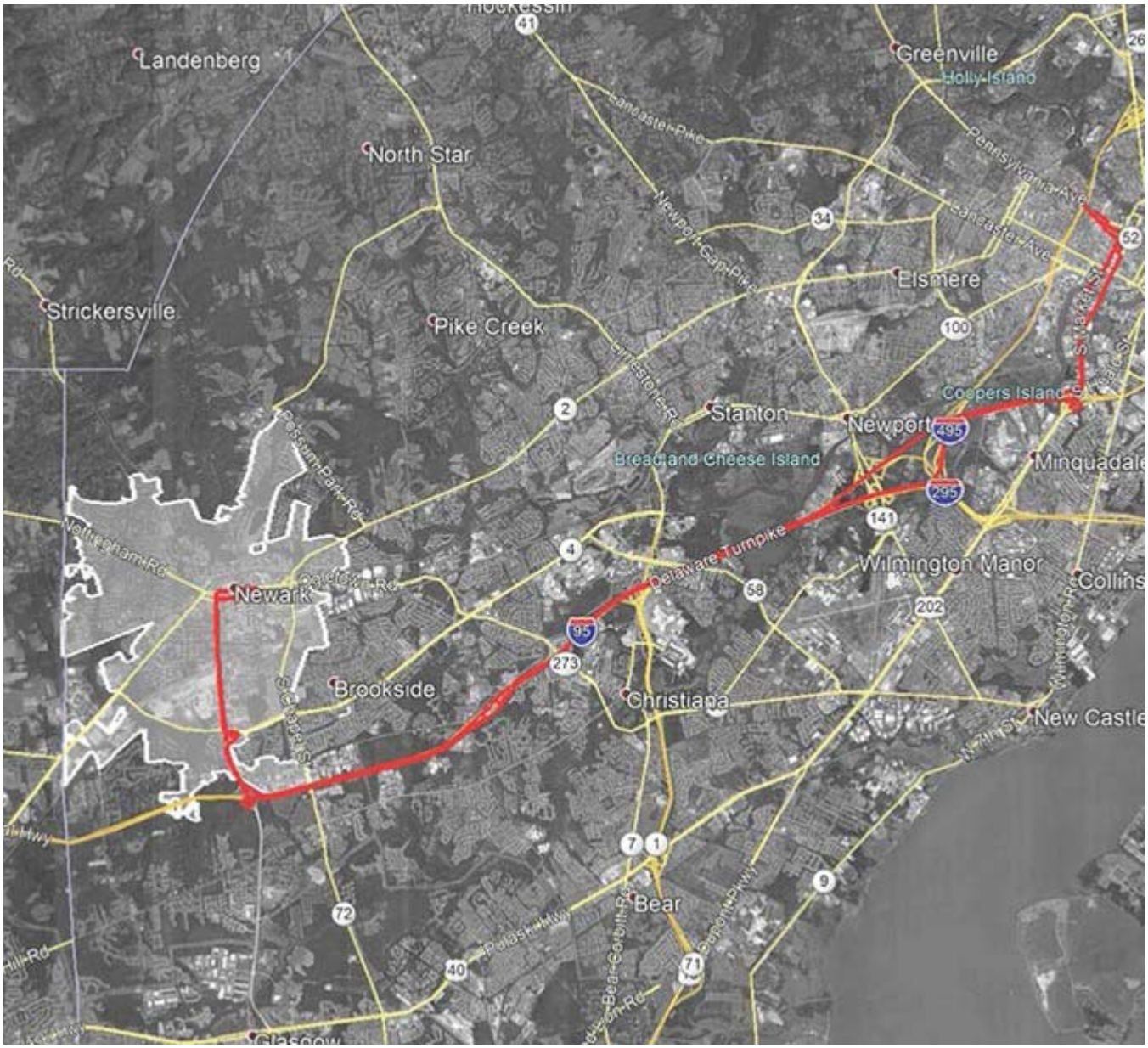
Figure 47. DART Route 6 - Kirkwood Highway



DART Route 16: Newark Express

- DART to consider operating along College Avenue in Newark for direct access to highway – low ridership areas along Elkton Road
- DART to consider tightening up pulse operation at Newark Hub to depart at same time every hour during peak periods (e.g. :15/:45)
- DART to consider coordinating departures from the Newark Hub with Routes 6 and 33 to provide consistent service to Wilmington throughout day (e.g. departures every 10 minutes during peak times)
- Uneven service (8 eastbound vs. 13 westbound trips) is heavily geared towards departures from Wilmington in both AM/PM peaks. DART to consider more evenly spaced and balanced service.

Figure 48. DART Route 16 – Newark Express



DART Route 33: Christiana Mall/Newark

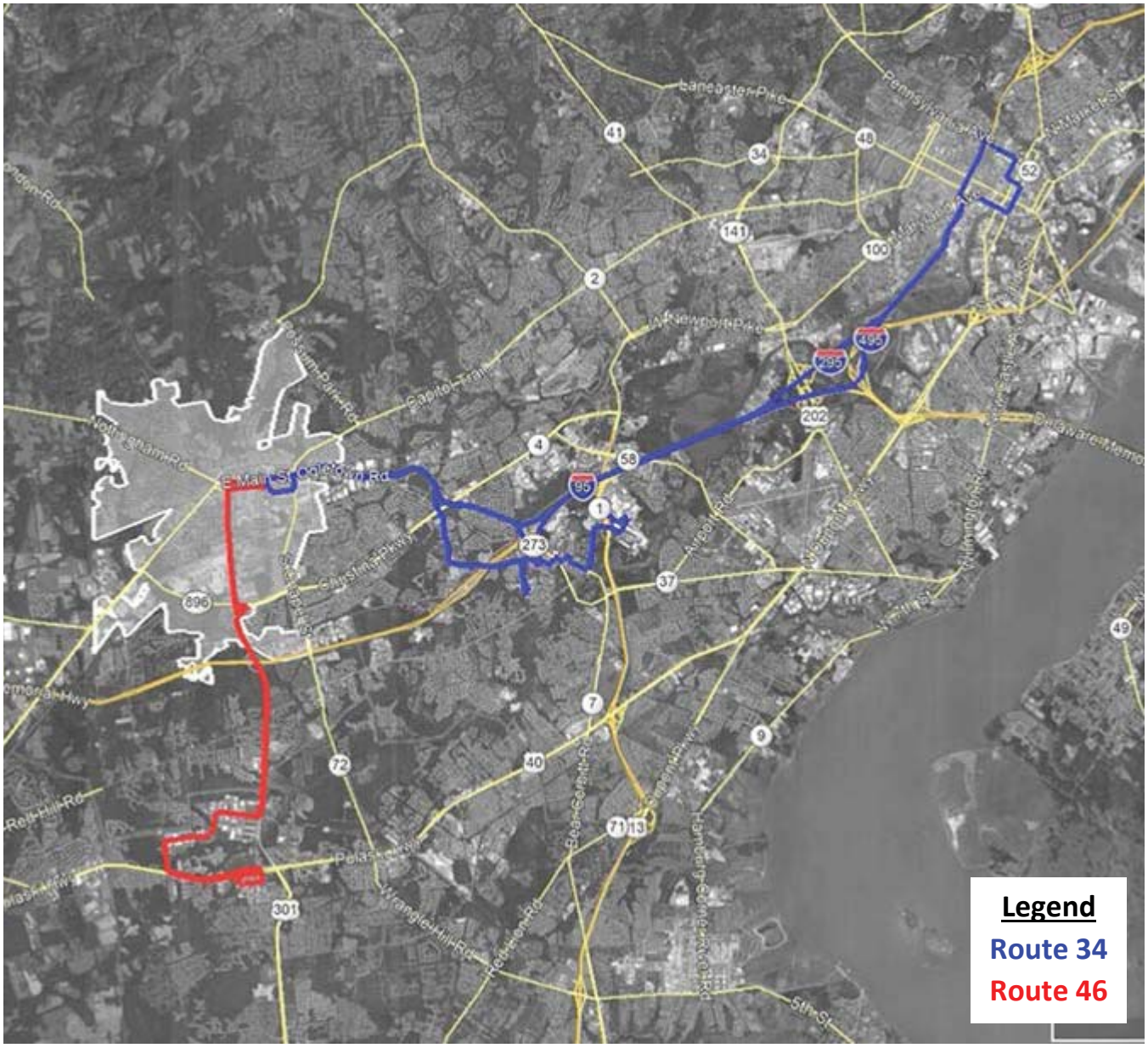
- No proposed route realignment recommendations.
- May 2019 service change to extend seven existing trips to serve Fairplay Station to connect with SEPTA trains, replacing Route 50 service.

Figure 49. DART Route 33 - Christiana Mall/Newark

DART Route 34: Newark/Christiana Mall

- No proposed realignments for this route.
- DART to consider interlining Routes 34 and 46 in peak hours to improve connections and grow ridership.
- This change could also benefit Routes 33 and 55 by providing consistent service to Christiana throughout the day, e.g., departures every 15 minutes during peak hours.

Figure 50. DART Route 34 (Newark/Christiana Mall) and Route 46 (Newark-Glasgow)



DART Route 46: Newark – Glasgow

- Route 34 will potentially be interlined with Route 46 during peak hours in an attempt to improve connections and increase ridership (see recommendations for Route 34).
- DART will consider hourly service all day due to low ridership. It currently runs every 30 minutes during peak hours and every 70 minutes during midday.
- Route 46 will be re-routed via Park Place and Chapel Avenue in an effort to increase ridership as patronage is weak along College Ave. and DE 273.

DART Route 53: Delaware City DMV/Newark Transit Hub

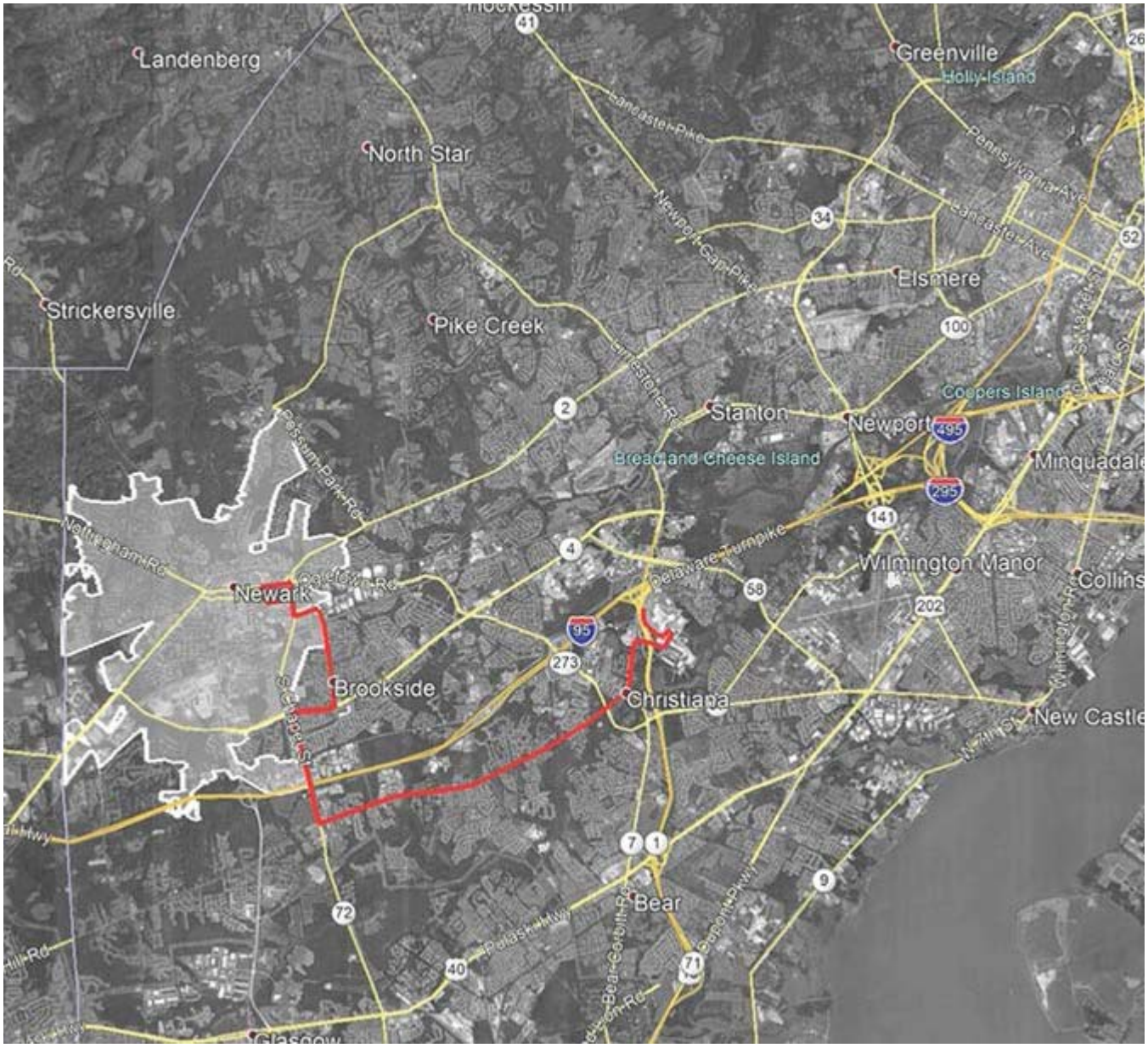
- DART to examine the potential for this route to become a dedicated service, beyond current focus of converting non-revenue trips into revenue service trips, i.e., providing less “not in service” deadhead trips, as well as serving other communities along the route to help increase ridership.

Figure 51. DART Route 53 - Delaware City DMV/Newark Transit Hub

DART Route 55: Old Baltimore Pike

- No proposed route realignment recommendations.
- DART to consider cutting limited rush hour service to Wilmington due to poor ridership and redundant service on other routes. This could provide opportunity to improve rush hour headways between Newark and the Christiana Mall.
- DART to consider streamlining service to every 30 minutes during the peak and every 60 minutes during the midday and evening. It is currently every 40 minutes.
- DART to consider coordinating departures from the Newark Hub with Routes 34 and 33 to provide consistent service to the Christiana Mall throughout the day, e.g., departures every 15 minutes during peak times.

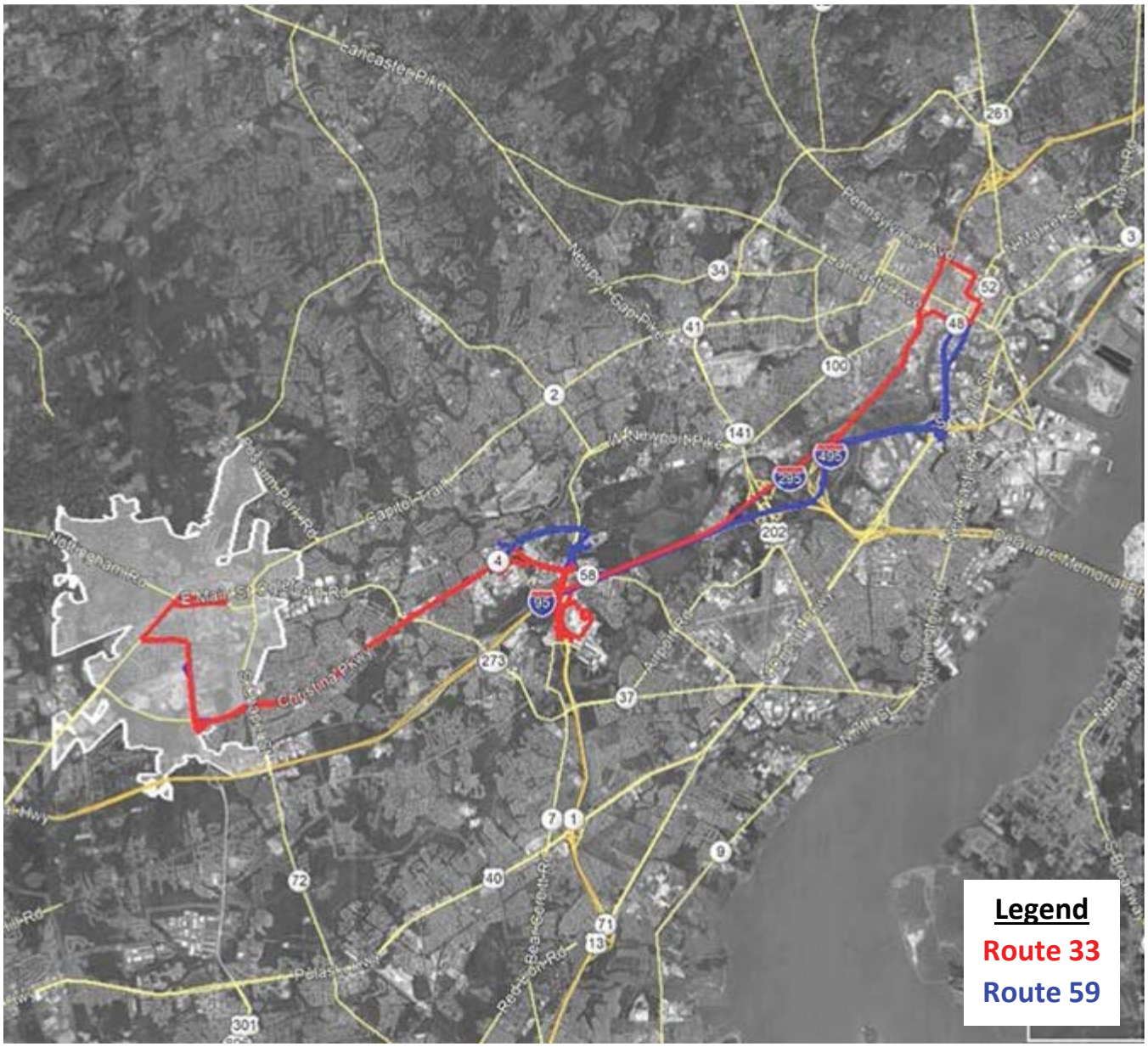
Figure 52. DART Route 55 – Old Baltimore Pike



DART Route 59: Newark – Wilmington Train Connection

- DART discontinued route effective May 20, 2019 and added trips on the Route 33 to support this loss of service.

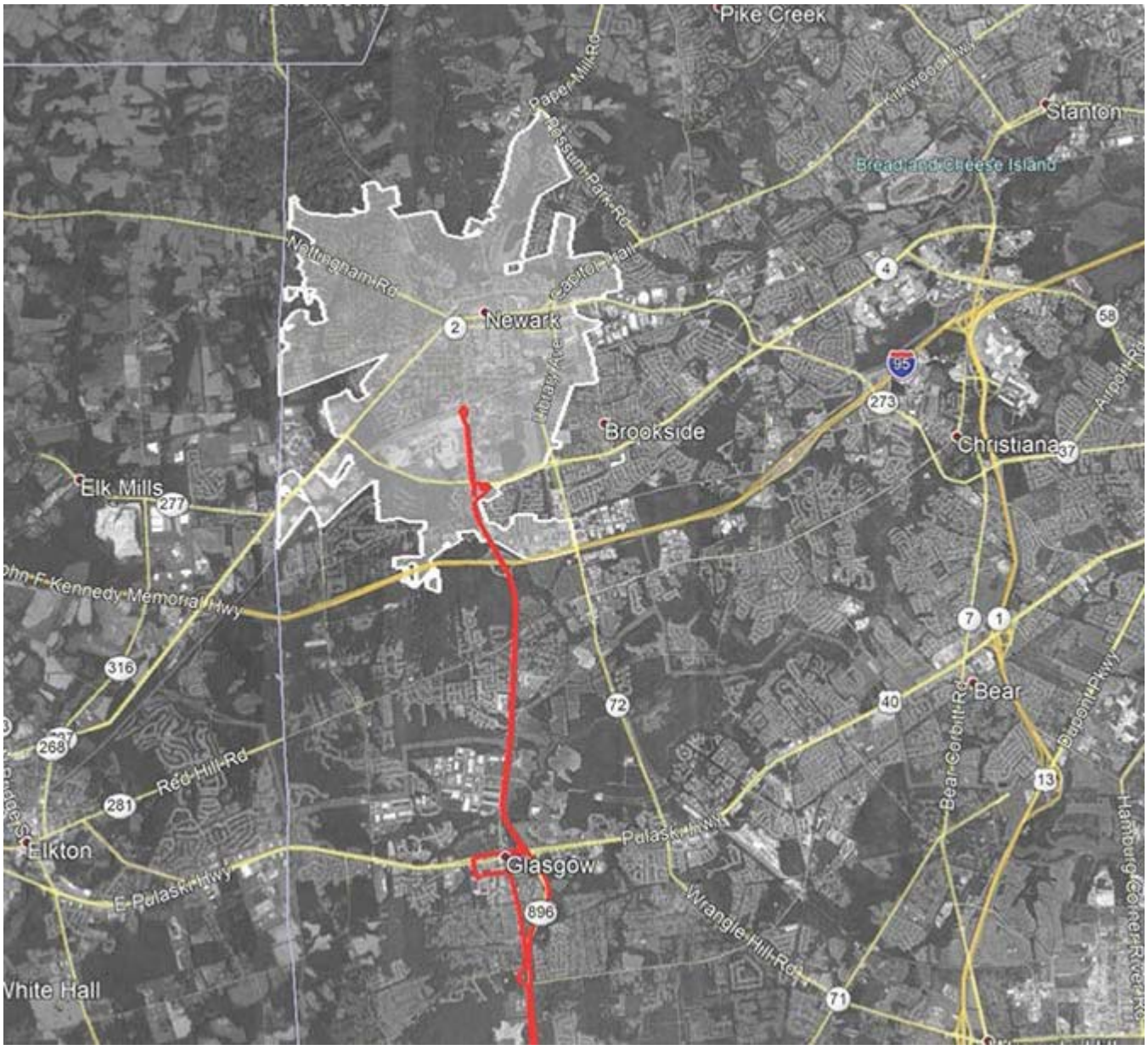
Figure 53. DART Route 59 - Newark-Wilmington Train Connection - Discontinued



DART Route 302: Intercounty Newark – Dover

- Service principally scheduled to coordinate with Amazon shift times in Middletown and SEPTA train arrivals/departures at the Newark Train Station.
- No proposed route realignment recommendations.

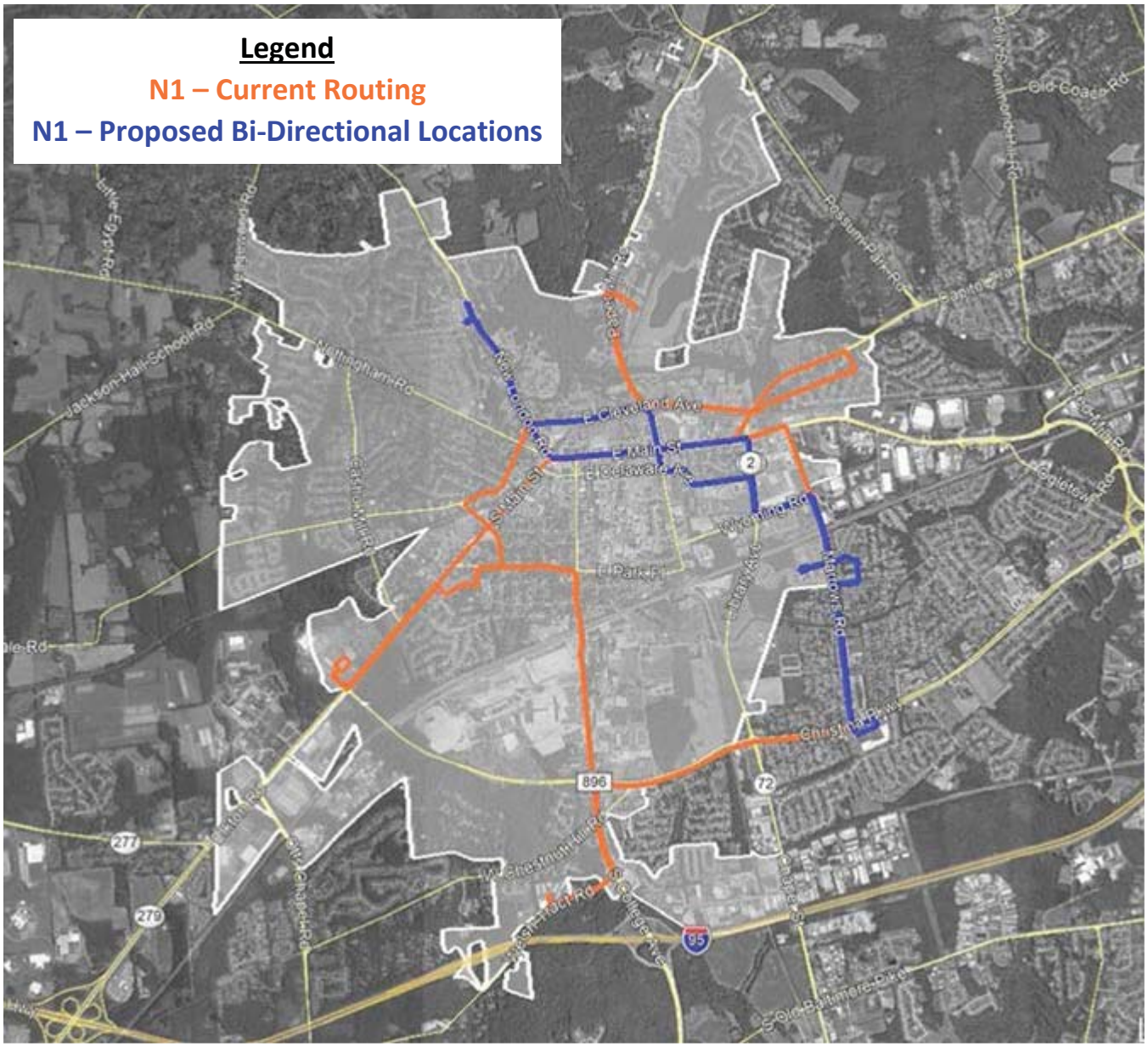
Figure 54. DART Route 302 – Intercounty Newark-Dover



UNICITY

Recommendations for UNICITY focus on re-aligning the N1 route, with no changes to the N2 or N3 routes, with the recommendation to provide bi-directional service on portions of the N1 route including New London Road, Cleveland Ave./Main Street, Delaware Ave., and Marrows Road as shown in Figure 55. The N1 provides hourly service to Fairfield Shopping Center, Newark Transit Hub, Newark Senior Center, Chestnut Hill Plaza, and Newark High School/Delaware Technology Park.

Figure 55. UNICITY - N1 Current Routing and N1 Proposed Bi-Directional Service



These proposed changes address low productivity segments and maximize where service should be targeted together with a future potential change of UD service.

University of Delaware

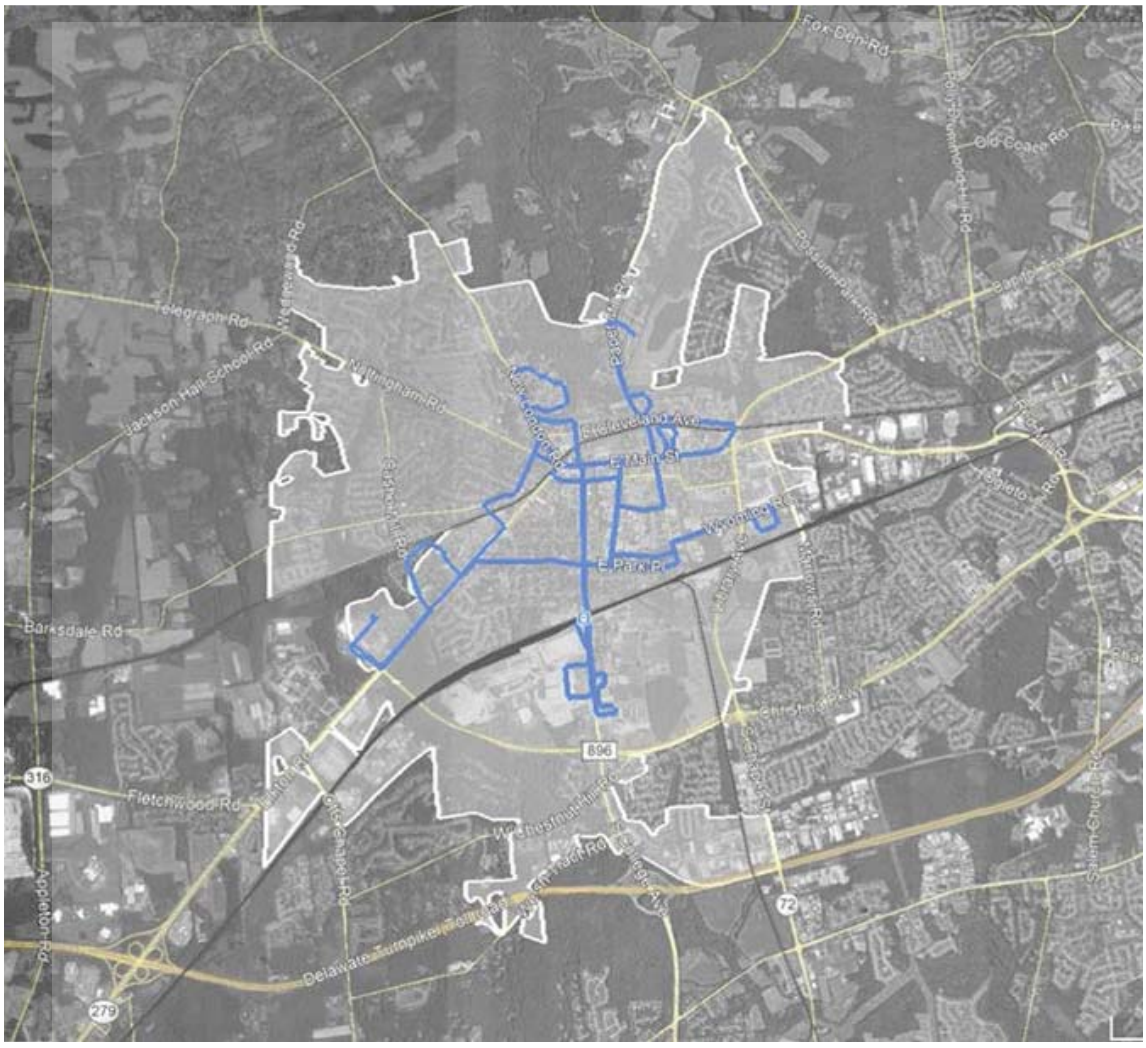
The University operates its five fixed-route services and the sole purpose of these services is to benefit their students and employees. Figure 56 represents the five main fixed-route routes provided by UD.

While the university may be interested in exploring the potential to provide service to non-UD students and faculty at some point in the future, several UD routes currently experience peak time overcrowding. Thus, any type of additional service, student-oriented or not, would require financial resources for additional vehicles, drivers and maintenance facilities. While the frequent service is tailored to students, faculty, and support staff, operating open-door service to Newark residents and DART riders could offer better delivery to areas not directly served by DART transit. Additionally, any changes in service, e.g., allowing the public to ride UD buses would require a policy change, and this would take some time to advance.

Current ideas for service enhancements in development by UD include:

- A new route to serve the STAR campus
- An on-demand type service for late and early hours with several fixed stops for pickups on campus and individual drop-offs.

Figure 56. University of Delaware Fixed-Route Services



Chapter 5. Next Steps

The members of the TrIP partnership readily agree that maintaining the group's focus and momentum is of interest and the partnership will continue to coordinate to implement the recommendations proposed as part of this study, including continued interagency collaboration and cooperation to implement and sustain proposed initiatives.

A significant part of this effort will be working towards coordination of services such that each transit provider has a specific area of geographic focus in order to provide the best network for all users of public transit in Newark. This includes the following areas of emphasis for each agency:

- UD: northern and western portions of the City of Newark
- UNICITY: City of Newark
- DART: trips between Newark and Wilmington and the stops in-between
- Cecil Transit: Elkton to Newark

The TrIP partnership also identified several discrete next steps to focus on:

- Continuing with a Newark TrIP working group; seeking additional funding/grants
- Finalizing daily fare card coordination / fare reciprocity discussions between Cecil Transit and DART
- Considering short-term route change recommendations
- Incorporating connections between various systems into the mobile DART app
- Continuing discussions on coordinating bus stops, adding better amenities where possible (e.g., shelters, benches, trash cans, real time bus arrival information, etc.)
- Undertaking future comprehensive bus network redesign with a future horizon year, e.g., 2030

It is important to note that the partnership desires to advance coordination of services regardless of whether the various transit agency services are integrated. Ultimately these shorter-term recommendations reflect back to the project goals of improving mobility options for Newark residents, employees, students, and visitors; providing quality passenger amenities to enhance bus service and attract discretionary riders; making transit services easier to understand and use; and promoting transit system efficiency for all providers.

With these next steps identified, the TrIP partnership will also identify other areas of coordination that could require longer-term planning. Improvements in the areas of fare policy and collection, paratransit services, and applications of advanced technologies could carry significant costs or require technological assistance. Whether in the areas of paratransit, fare collection, or paratransit, TrIP's goal should be to create for the customer the experience of a seamless transit system allowing them to travel as easily between providers as they can within a particular single transit provider.