ColumBUS Route Study

Final Report

Prepared by RLS & Associates, October 2024

Table of Contents

INTRODUCTION

The purpose of the ColumBUS Transit Study is to re-examine and optimize public transit service in Columbus, Indiana. The study was conducted by RLS & Associates, Inc., a public transit consulting firm. Employees of the City and the transit system, community stakeholders, ColumBUS riders, and the general public assisted with the community and rider data collection documented in this report.

The City of Columbus has operated a fixed route and complementary paratransit system for many years as a recipient of Federal Transit Administration (FTA) small urban transit funding for the U.S. Census-defined Columbus urban area. In recent years, the City has been challenged by adapting to new areas to support the changing workforce and a shortage of capacity to accommodate demand on the Call-A-Bus paratransit system. The study is intended to help the transit system's leaders identify a fiscally sustainable model for future years' operations that meets more community needs and integrates new mobility technologies.

This study recommends a revised service framework that will allow the transit system to meet more community needs. The recommendations consist of re-designing the fixed routes (consolidating five routes into three routes); providing zone routes that connect Columbus to Walesboro and Taylorsville; and offering demand responsive (point to point) shared ride transportation within the Columbus city limits.

This report is organized into the following sections:

- The **Transit System Information and Peer System Analysis** section provides descriptive and performance data about ColumBUS, and compares its operations and performance to peer communities;
- The **Demographic and Trip Generator Analysis** section provides quantitative information about the nature of transit demand in the community, including residential data and trip destination patterns;
- The **Community Input** section includes the analysis of input collected through surveying ColumBUS riders and the general public, as well as interviews with ColumBUS staff members and community stakeholders; and,
- The **Recommendations and Implementation Plan** section describes the revised service framework, including service parameters, ridership projections, resource needs, and performance monitoring guidance.

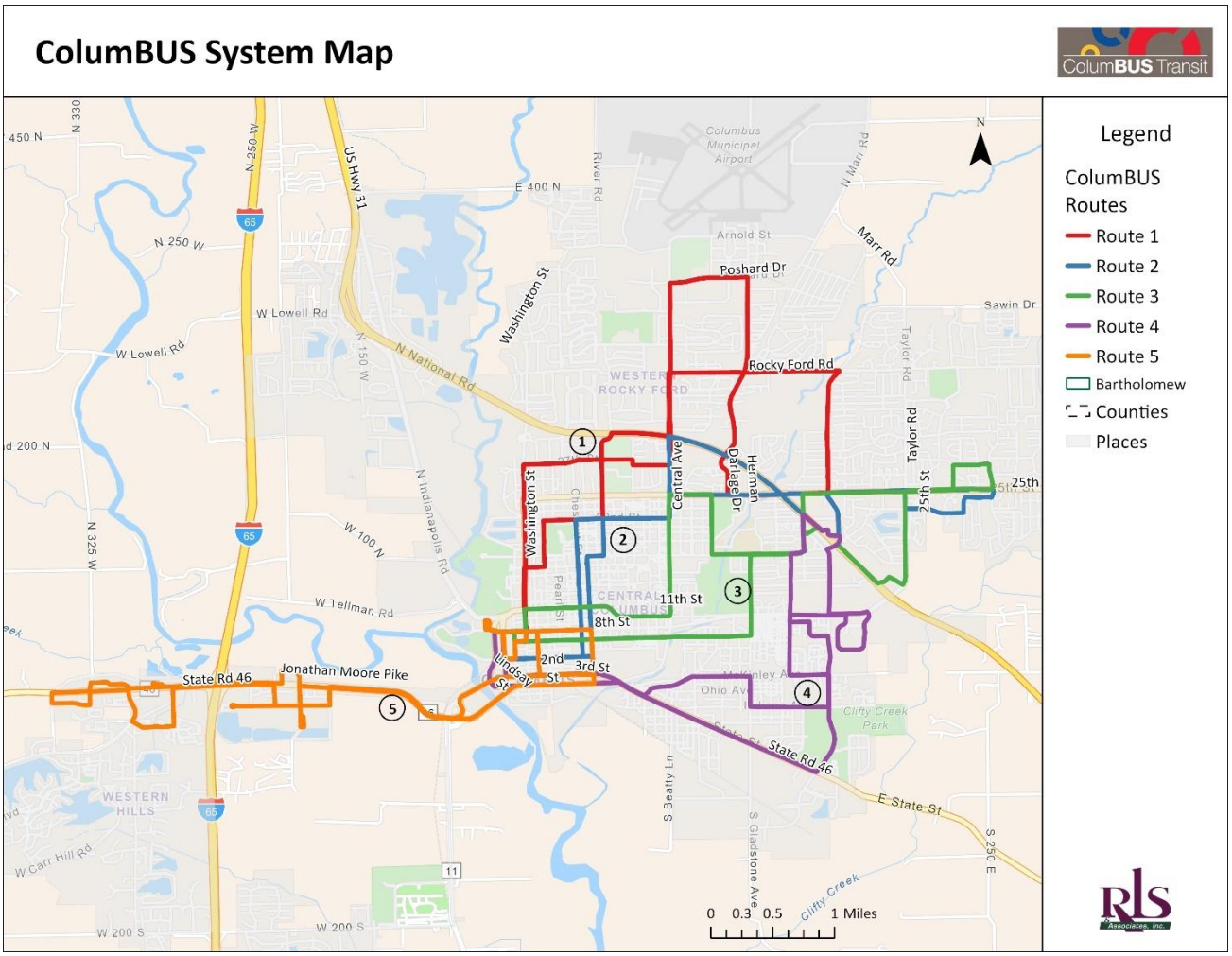
Figure 1: Fixed Route Buses at Mill Race Depot

Source: ColumBUS

TRANSIT SYSTEM INFORMATION AND PEER ANALYSIS

ColumBUS offers five fixed bus routes and Call A Bus paratransit service. Figure 2 shows the current route network. ColumBUS offers paratransit to pre-qualified, eligible individuals with disabilities anywhere within city limits. The system is required under the Americans with Disabilities Act to provide paratransit within ¾ of a mile of any fixed route, but has historically offered Call-A-Bus throughout the City.

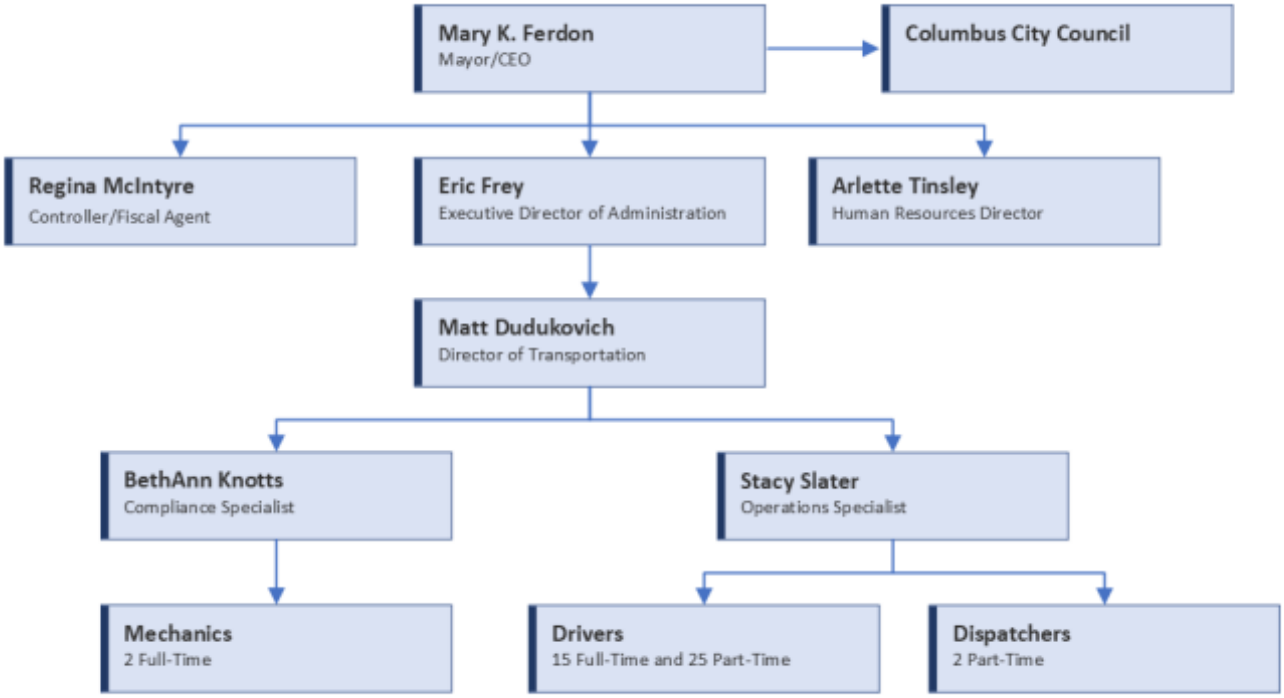
Figure 2: System Map



STAFFING, REVENUE, FLEET AND FACILITIES

The transit system is a unit of the City of Columbus government. An organizational chart is provided in Figure 3. The system operates out of a passenger and administrative facility, the Mill Race Depot, located at 850 Lindsey Street.

Figure 3: Organizational Chart as of December 2024



A fleet inventory is provided in Table 1. ColumBUS maintains a fleet of 20 ADA-accessible vehicles for revenue service and two vehicles for maintenance and supervisory activities. The majority of these vehicles have been purchased with FTA capital grants, most requiring a 20 percent local match which has been generally supplied by the City. The system deploys five (5) fixed route buses and four (4) to five (5) Call-A-Bus vans per day. Two (2) fixed route buses and five (5) vans currently serve as spare vehicles.

Table 1: Fleet Inventory

Vehicle Type	Make/Model	Body Type	Year	Quantity
Non-revenue (Maintenance/Supervisor)	Chevrolet Uplander	Van	2008	1
Non-revenue (Maintenance/Supervisor)	Dodge Ram 4500	Pick-Up	2018	1
Revenue (Demand Response)	Chevrolet Turtle Top	Van	2007	1
Revenue (Demand Response)	Ford E350	Van	2009	1
Revenue (Demand Response)	Ford E350	Van	2015	1
Revenue (Demand Response)	Ford E350	Van	2016	1
Revenue (Demand Response)	MV-1	Van	2016	1
Revenue (Demand Response)	Elkhart Coach	Van	2017	1
Revenue (Demand Response)	Ford E350	Van	2022	2
Revenue (Demand Response)	Ford E350	Van	2024	5

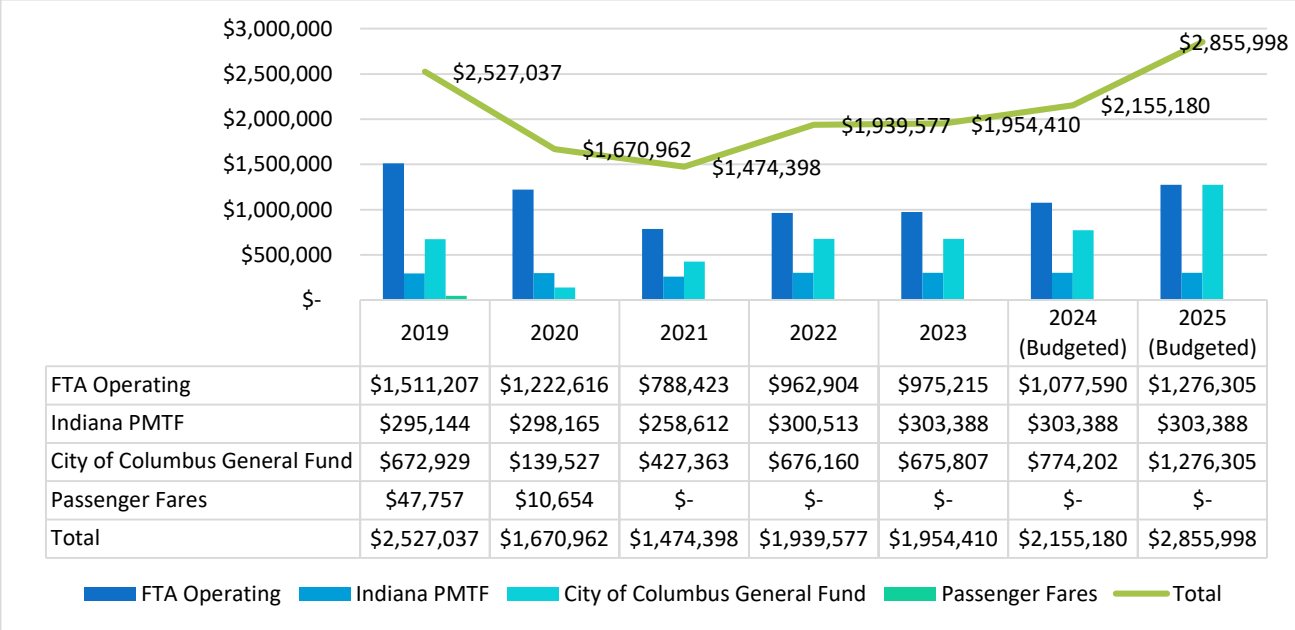
Vehicle Type	Make/Model	Body Type	Year	Quantity
Revenue (Fixed Route)	Gillig Bus	Bus	2006*	1
Revenue (Fixed Route)	Gillig Bus	Bus	2018	4
Revenue (Fixed Route)	Gillig Bus	Bus	2019	2

**Planned replacement to occur in 2025*

Source: ColumBUS

The system's major sources of funding include FTA grants, State of Indiana Public Mass Transportation Fund (PMTF) dollars, and City of Columbus funds. Operating revenues by source for the previous five years, the current year, and 2025 are shown in Figure 4. Passenger fares were discontinued during the outset of the COVID-19 pandemic. All dollar amounts in this figure were derived using cash basis accounting rather than accrual. FTA operating grants require dollar-for-dollar match by state and local sources (other than passenger fares). Therefore, FTA funds typically comprise half of the transit system's operating budget. Operating expenses consist of items such as wages, fringe benefits, fuel, insurance, maintenance costs, supplies, services, and other expenses.

Figure 4: Operating Revenue, 2019-2025

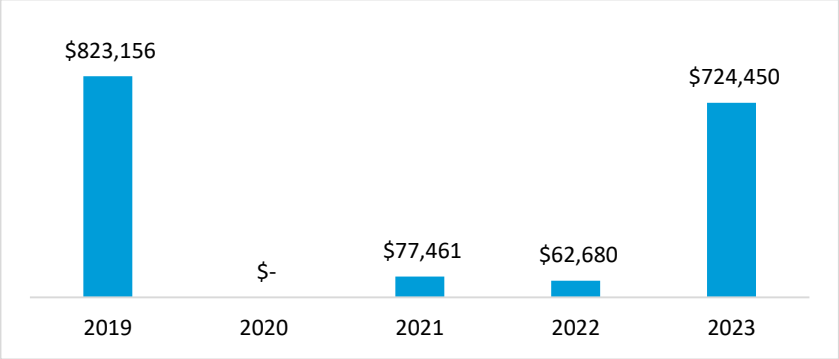


	2019	2020	2021	2022	2023	2024 (Budgeted)	2025 (Budgeted)
FTA Operating	$1,511,207	$1,222,616	$788,423	$962,904	$975,215	$1,077,590	$1,276,305
Indiana PMTF	$295,144	$298,165	$258,612	$300,513	$303,388	$303,388	$303,388
City of Columbus General Fund	$672,929	$139,527	$427,363	$676,160	$675,807	$774,202	$1,276,305
Passenger Fares	$47,757	$10,654	$-	$-	$-	$-	$-
Total	$2,527,037	$1,670,962	$1,474,398	$1,939,577	$1,954,410	$2,155,180	$2,855,998

Source: ARA Cities and City of Columbus

Capital budgets vary from year to year depending on needs and available resources. Capital revenues applied to transit system purchases are shown in Figure 5. These expenses represent rolling stock and other capital items, which may include maintenance equipment, facilities, technologies, or other items. FTA capital funding is matched at 80 percent Federal/20 percent local.

Figure 5: Capital Revenue Expended, 2019-2023



Source: ARA Cities

FTA funding is allocated to the City of Columbus each year based on a formula that considers the population and population density of the U.S.-Census defined Columbus urban area. The current Columbus urban area is shown in Figure 6. Census-defined urban areas do not follow municipal boundaries, but are determined through analysis of population patterns and other factors. The Columbus urban area population in 2020 was 60,982 as compared to the city's 2020 population of 50,474. The urban area's population includes residents of areas in and around Taylorsville and Edinburgh.

Figure 6: Columbus Urban Area Map (2020 Census)

Source: FTA

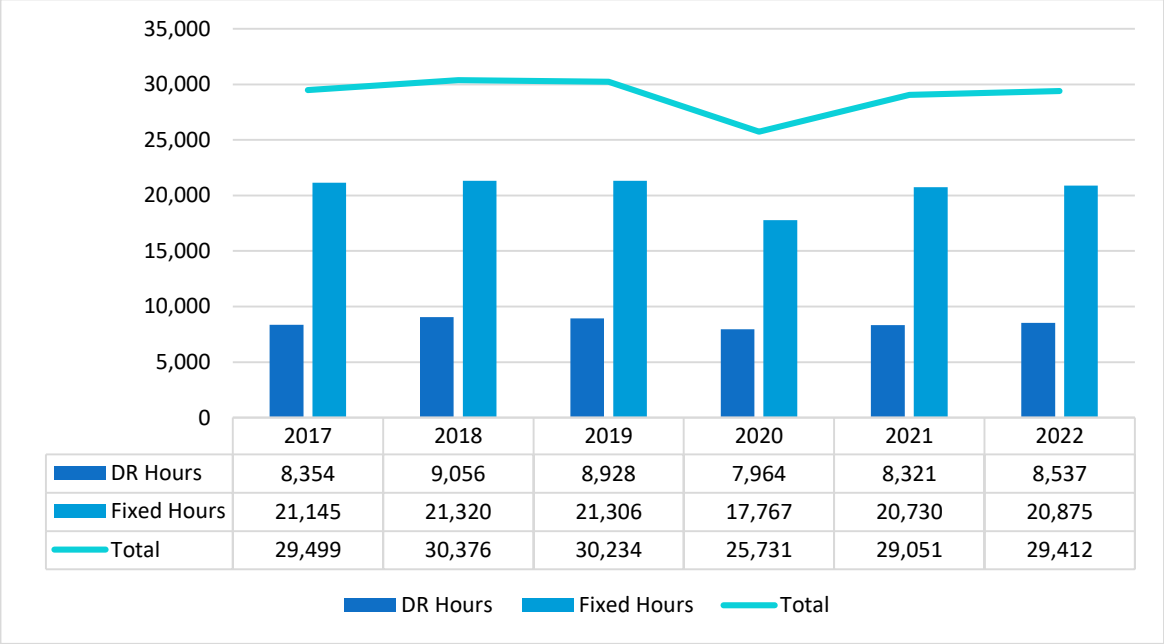
The 2024 FTA funding apportionment to Columbus was $1,315,119, an increase of 13 percent over the 2023 apportionment of $1,162,171. These funds are authorized under 49 U.S.C. Section 5307 for operating or capital expenditures. Section 5307 mandates the 50/50 matching rate for operations and

80/20 for capital. Additionally, the State of Indiana received $1,551,299 in FTA Section 5339 Bus and Bus Facilities funding for capital projects in the state's ten designated small urban areas.

SERVICE DATA AND EFFICIENCY MEASURES

ColumBUS reports service data to the National Transit Database (NTD) on an annual basis. The following two charts provide the annual revenue hours and miles of service provided from 2017 to 2022 on fixed route and paratransit, which is labeled as demand response (DR). 2022 is the most recent year available. Revenue service – measured in hours or miles – is defined as service during which there is the expectation of carrying passengers. When a vehicle is operating, but not in revenue service, it is referred to as deadhead service (for example, operating between the last stop of a route and the bus garage).

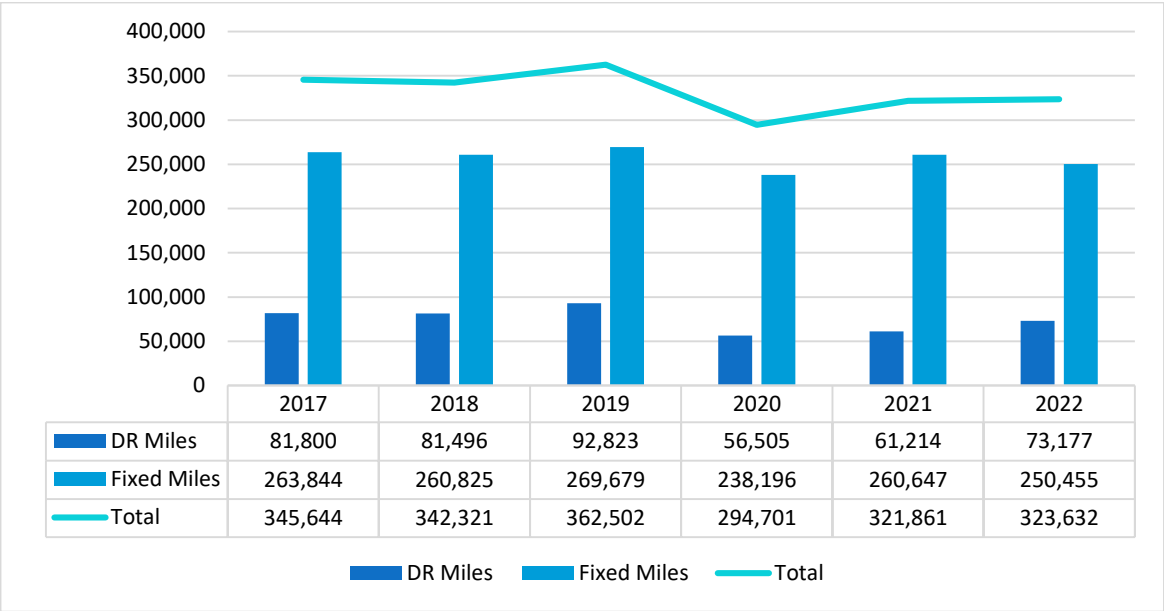
Figure 7: Revenue Hours of Service by Mode, 2017-2022



	2017	2018	2019	2020	2021	2022
DR Hours	8,354	9,056	8,928	7,964	8,321	8,537
Fixed Hours	21,145	21,320	21,306	17,767	20,730	20,875
Total	29,499	30,376	30,234	25,731	29,051	29,412

Source: National Transit Database

Figure 8: Revenue Miles of Service by Mode, 2017-2022

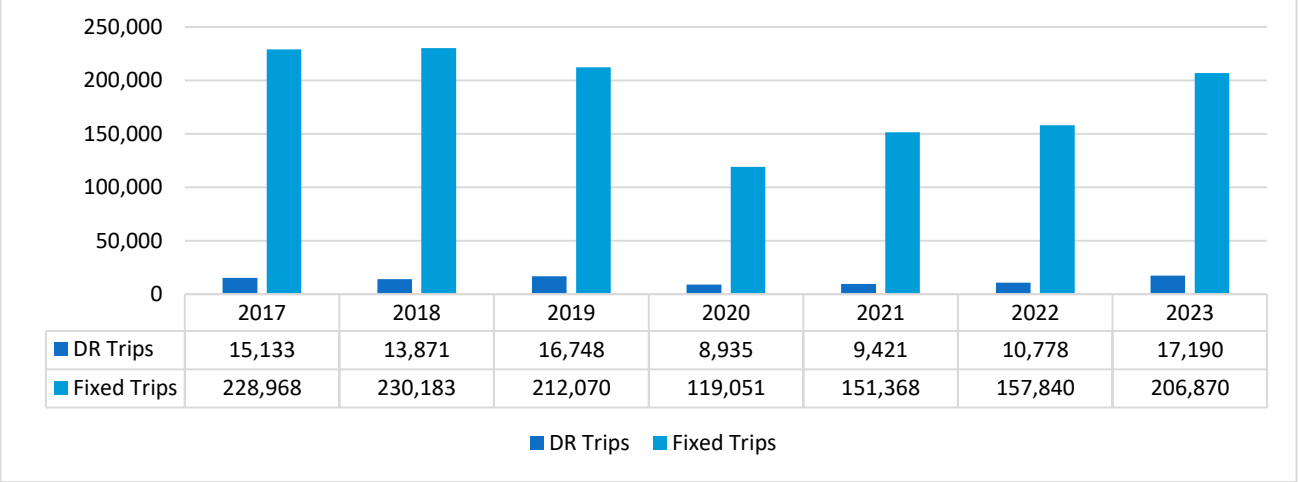


	2017	2018	2019	2020	2021	2022
DR Miles	81,800	81,496	92,823	56,505	61,214	73,177
Fixed Miles	263,844	260,825	269,679	238,196	260,647	250,455
Total	345,644	342,321	362,502	294,701	321,861	323,632

Source: National Transit Database

Figure 9 provides ridership on each mode of service, measured in the number of one-way passenger trips, or boardings. Ridership is gradually recovering from the impact of the COVID-19 pandemic, which caused a significant drop in ridership beginning in 2020. Notably, in 2023, Call-A-Bus ridership surpassed pre-pandemic levels.

Figure 9: Ridership by Mode, 2017-2023

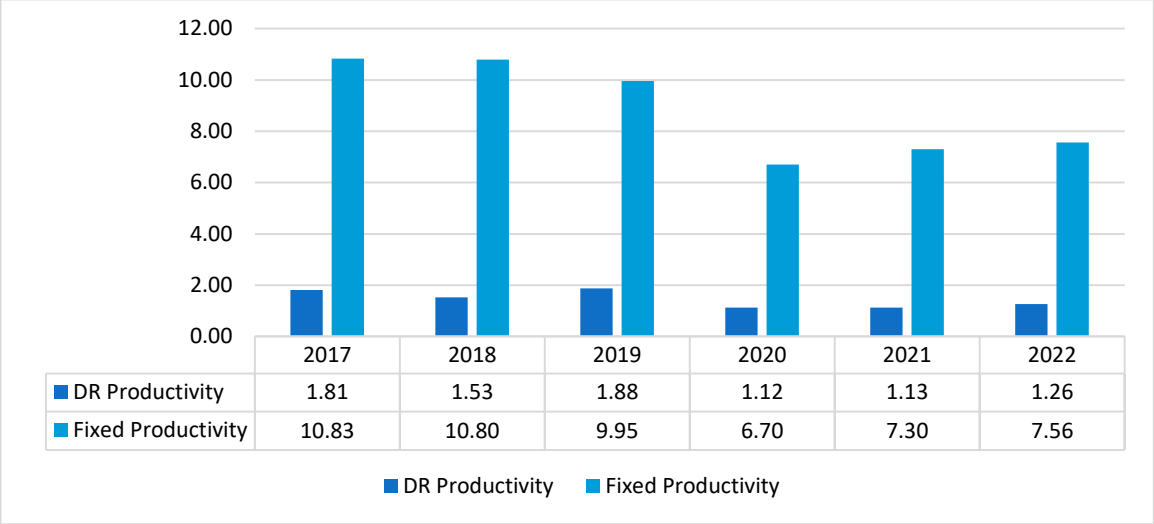


	2017	2018	2019	2020	2021	2022	2023
DR Trips	15,133	13,871	16,748	8,935	9,421	10,778	17,190
Fixed Trips	228,968	230,183	212,070	119,051	151,368	157,840	206,870

Source: National Transit Database (2017-2022) and ColumBUS (2023)

Productivity is the consumption (usage) of public transit service in relation to the amount of service available. The more service consumption in relation to service output (vehicle miles or hours), the higher the level of productivity. Fixed route is more productive than demand response, as shown in Figure 10.

Figure 10: Productivity (Boardings per Revenue Hour) by Mode, 2017-2022

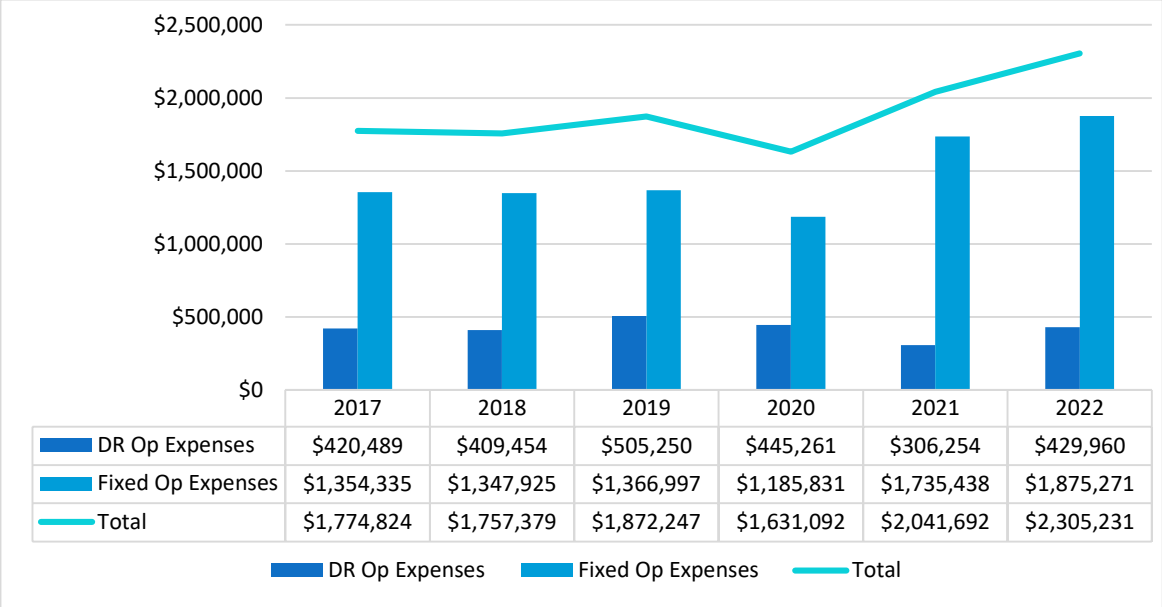


	2017	2018	2019	2020	2021	2022
DR Productivity	1.81	1.53	1.88	1.12	1.13	1.26
Fixed Productivity	10.83	10.80	9.95	6.70	7.30	7.56

Source: National Transit Database

ColumBUS' total annual operating expenses by mode are shown in Figure 11. These amounts do not include capital expenses, such as periodic acquisition of replacement vehicles. Operating expenses include items like wages, benefits, fuel, insurance, maintenance, and other ongoing, regular expenses.

Figure 11: Operating Expenses by Mode, 2017-2022

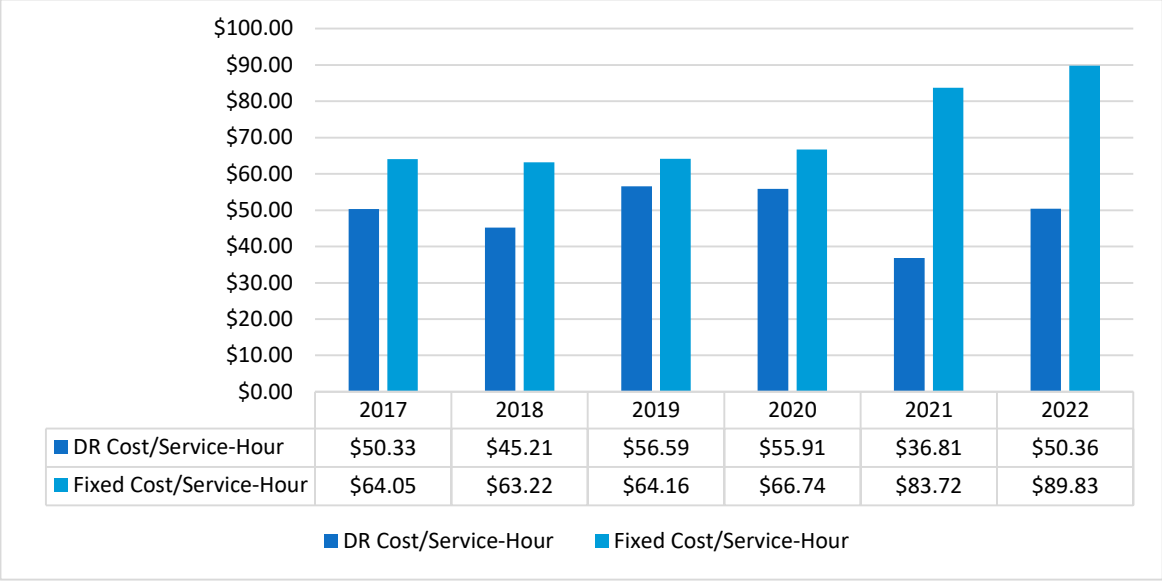


	2017	2018	2019	2020	2021	2022
DR Op Expenses	$420,489	$409,454	$505,250	$445,261	$306,254	$429,960
Fixed Op Expenses	$1,354,335	$1,347,925	$1,366,997	$1,185,831	$1,735,438	$1,875,271
Total	$1,774,824	$1,757,379	$1,872,247	$1,631,092	$2,041,692	$2,305,231

Source: National Transit Database

Figure 12 provides the cost per revenue hour of each mode of service. The trends reflect the increasing cost to operate transportation service beginning in 2021. Labor and other costs have increased due to national economic conditions since the pandemic.

Figure 12: Cost per Revenue Hour, 2017-2022

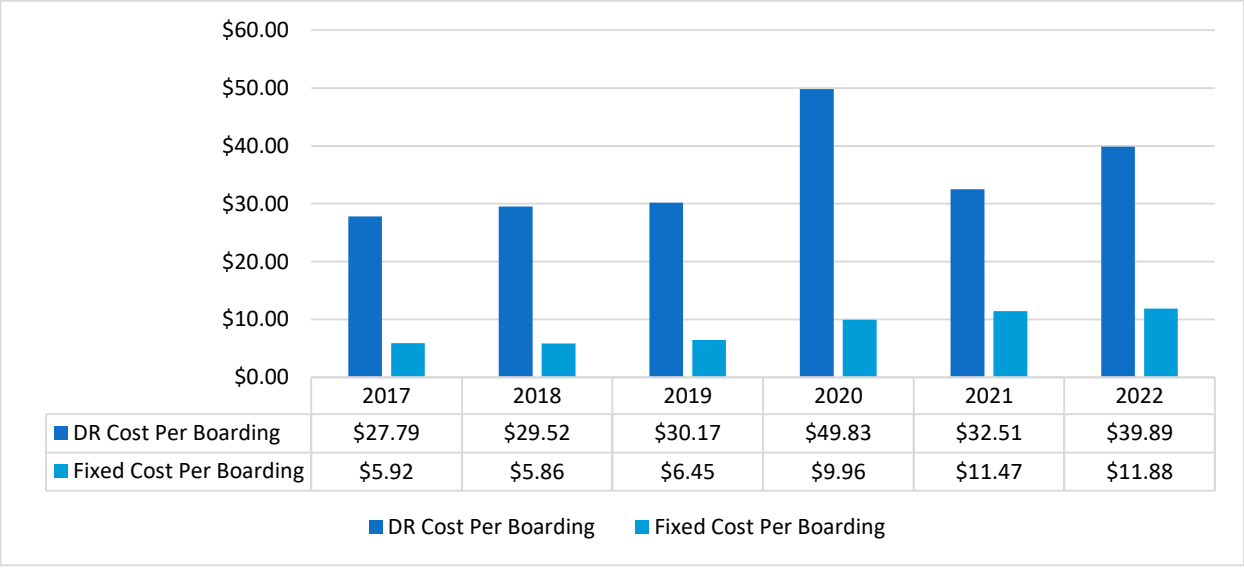


	2017	2018	2019	2020	2021	2022
DR Cost/Service-Hour	$50.33	$45.21	$56.59	$55.91	$36.81	$50.36
Fixed Cost/Service-Hour	$64.05	$63.22	$64.16	$66.74	$83.72	$89.83

Source: National Transit Database

The operating cost per passenger boarding is shown for each mode in Figure 13. These costs demonstrate the relative cost-efficiency of operating fixed route bus service compared to demand response.

Figure 13: Cost per Boarding by Mode, 2017-2022



	2017	2018	2019	2020	2021	2022
DR Cost Per Boarding	$27.79	$29.52	$30.17	$49.83	$32.51	$39.89
Fixed Cost Per Boarding	$5.92	$5.86	$6.45	$9.96	$11.47	$11.88

Source: National Transit Database

MODE PERFORMANCE

As shown in Figure 12, ColumBUS spends more per hour to operate fixed route service than demand response. For this study's planning purposes, the estimated 2025 per-hour costs are projected to be $70.24 for demand response and $78.42 for fixed routes. Fixed route vehicles are more costly to operate, and require a CDL-licensed driver, which typically requires a higher driver wage. However, due to the high productivity (boardings per hour) of fixed route service, the per-trip cost of fixed route is much lower than demand response (see Figure 13).

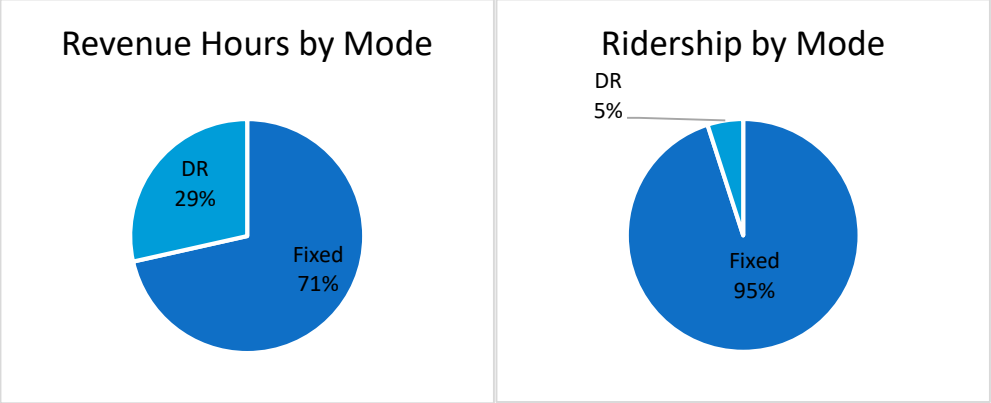
ColumBUS' routes experience different levels of ridership, with Route 4's ridership exceeding the other routes. The ridership, productivity and estimated cost per trip for each route are provided in Table 2.

Table 2: Route Performance, 2023

Route	Ridership	Productivity	Cost per Trip
Route 1	29,027	6.81	$14.69
Route 2	42,791	10.04	$9.96
Route 3	35,329	8.29	$12.07
Route 4	67,660	15.87	$6.30
Route 5	31,683	7.43	$13.46
Call A Bus (2022 data)	10,778	1.3	$39.89

The following pie charts provide a visual that compares the resources (revenue hours) required for each mode of service, compared to the ridership returns**. It is important to note that demand response productivity rarely exceeds 3.0 to 4.0 boardings per revenue hour, meaning that even with efficiency improvements, this type of service is, by nature, less cost-efficient than even the lowest-ridership fixed route.** That being said, demand response service has an important role in providing mobility to individuals who are unable to use fixed route. And, it can be effective in locations where population density or physical development patterns do not support efficient fixed route service. **This is an important consideration for planning potential changes to how ColumBUS uses the demand response mode to meet community needs.**

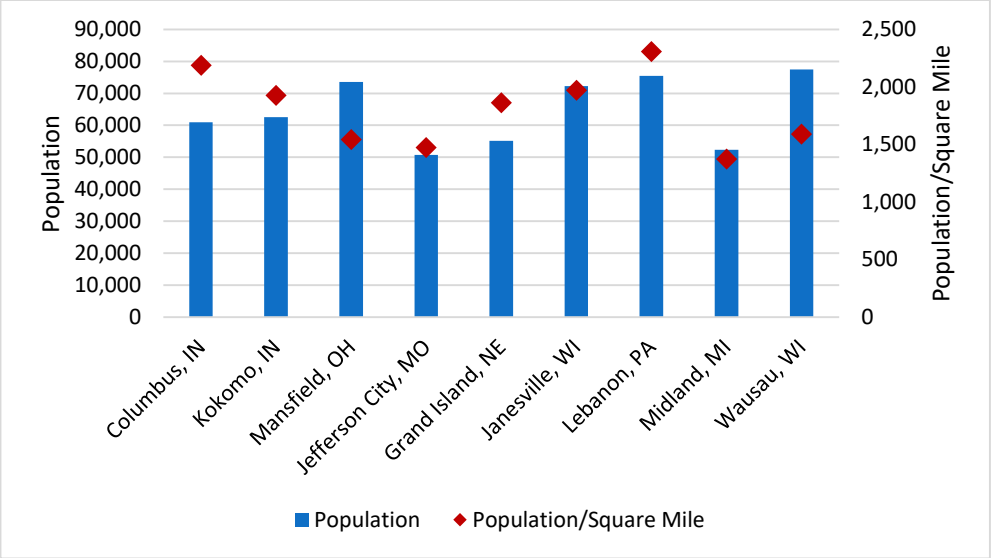
Figure 14: Mode Comparison – Fixed Route Consumes 71% of ColumBUS Hours of Service, but Generates 95% of Ridership



PEER SYSTEM DATA

To provide context, the project consultant analyzed peer transit systems' performance data for the 2022 NTD reporting year. Eight peer FTA small urban funding recipients were selected based on the population size and population density of the Census-defined urban area. Each is located in or near the U.S. Midwest, and is a small urban area (rather than a suburb of a major city/large urban area). The peers are shown in Figure 15.

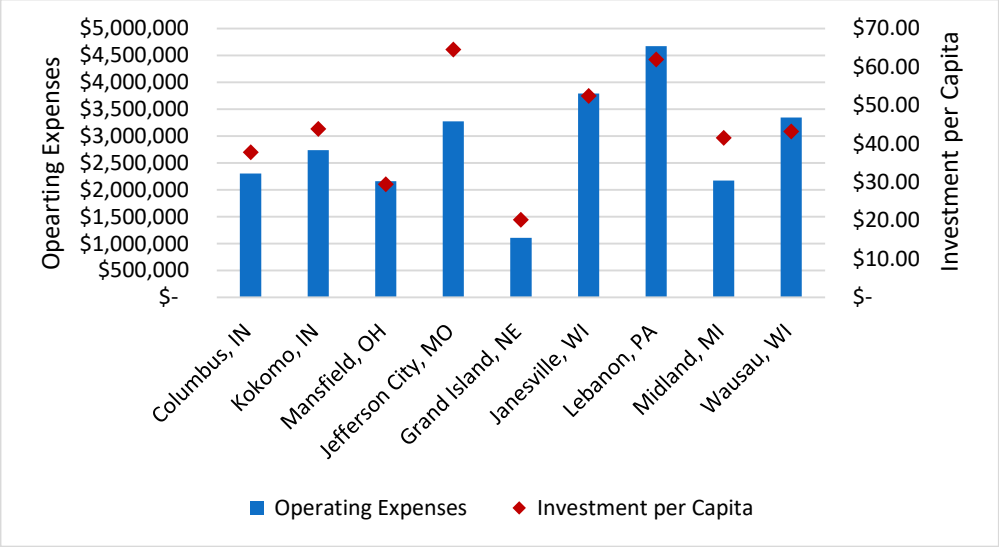
Figure 15: Peer Communities – Population and Density (Population/Square Mile)



Source: National Transit Database

The peer communities invested $1.1 to $4.7 million in operating expenses in 2022, as shown in Figure 16. The per capita operations spending ranged from $29.42 to $64.53. Columbus' 2022 operating expenses totaled $2,305,231, representing a per capita investment of $37.80.

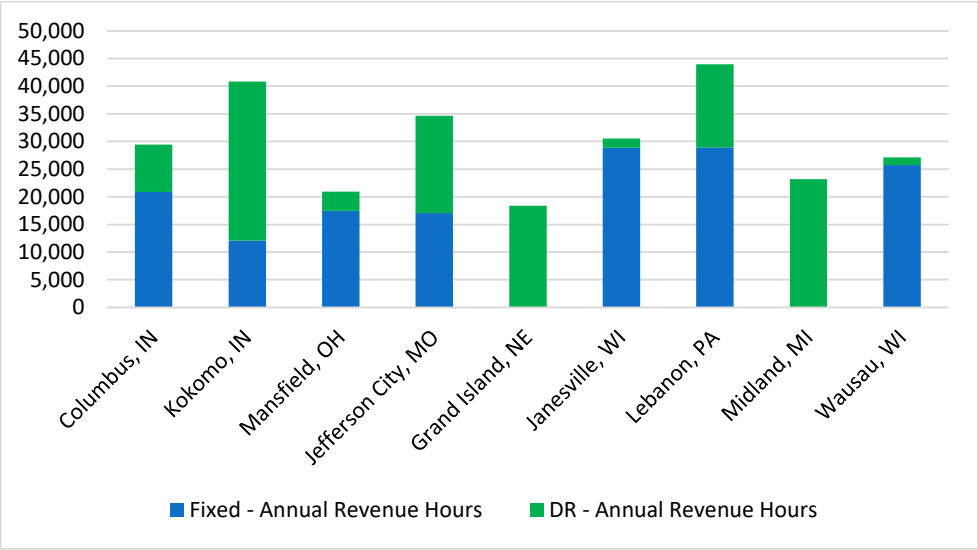
Figure 16: Peer Communities – Annual Operating Expenses and Investment per Capita



Source: National Transit Database

Six of the peers operate a mix of fixed route and demand response services. The annual revenue hours of service by mode for each system are shown in Figure 17. Grand Island, NE and Midland, MI do not offer fixed route service; both cities offer demand response service only. Columbus falls roughly in the middle of its peers in terms of the amount of service offered for both modes.

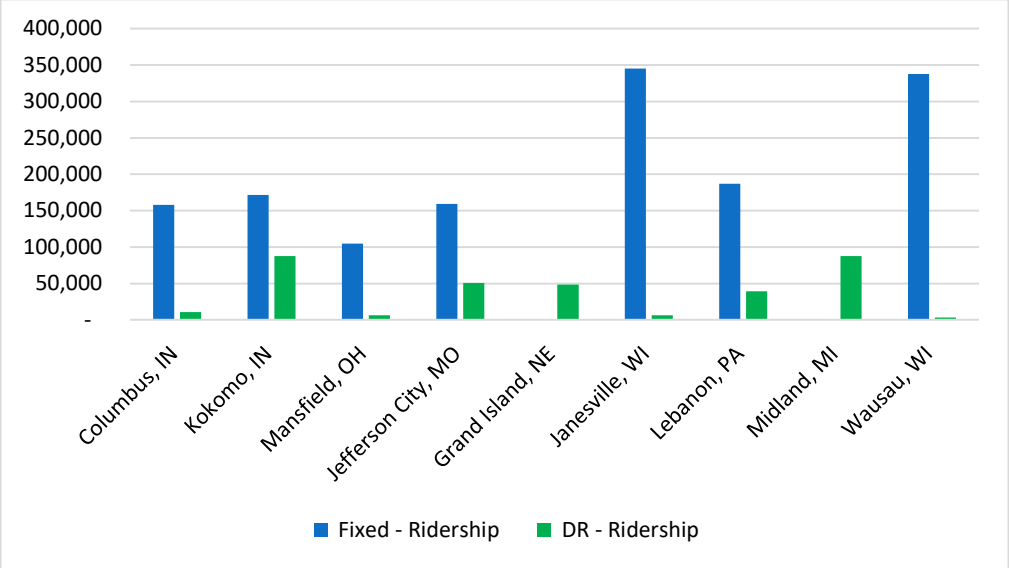
Figure 17: Peer Communities' Annual Revenue Hours by Mode of Service



Source: National Transit Database

Ridership by mode of service in 2022 is shown in Figure 18. It should be noted that the two systems with very high fixed route ridership, Janesville, WI and Wausau, WI, spent significantly more than Columbus on fixed route service - $3.6 and $3.2 million, respectively, while Columbus spent $1.9 million.

Figure 18: Peer Communities' Ridership

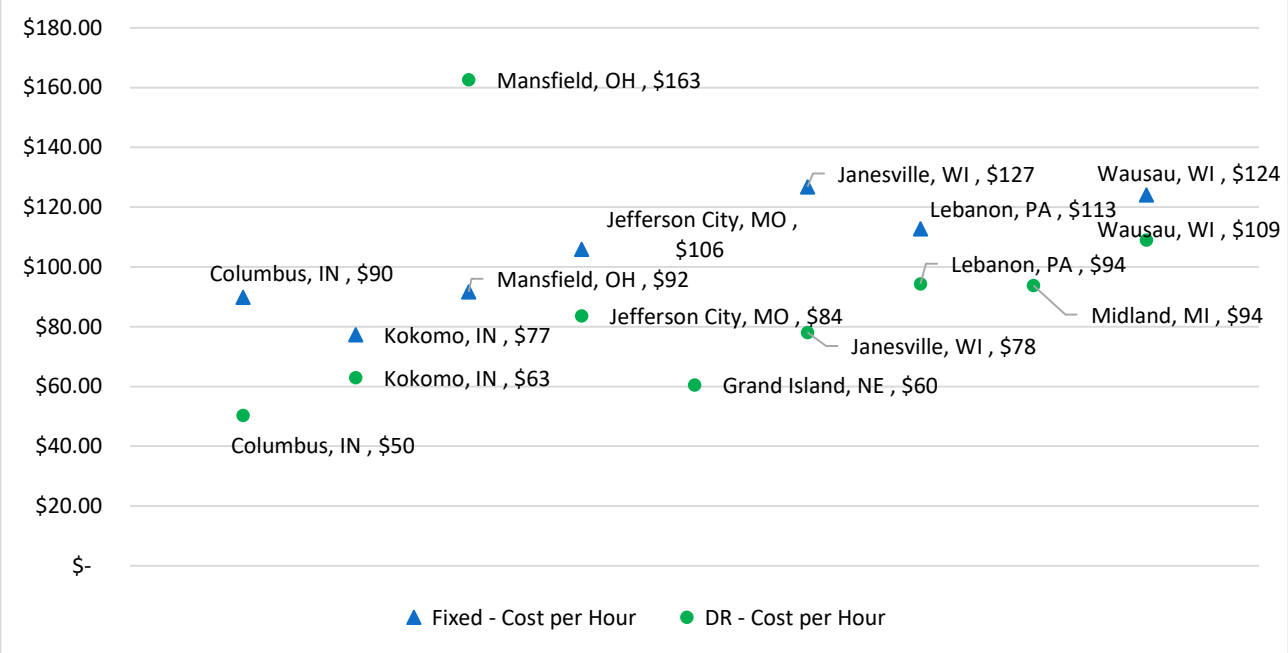


Source: National Transit Database

Efficiency Measures

Figure 19 demonstrates that Columbus' service operates in a more cost-efficient manner than its peers. Only one system, Kokomo, had a lower fixed route cost per hour than Columbus. The demand response cost per hour was the lowest of the peers. It is noted that the study consultant has proposed an alternate methodology for 2025 that projects hourly costs of $70.24 (demand response) and $78.42 (fixed route).

Figure 19: Peer Communities' Cost per Hour



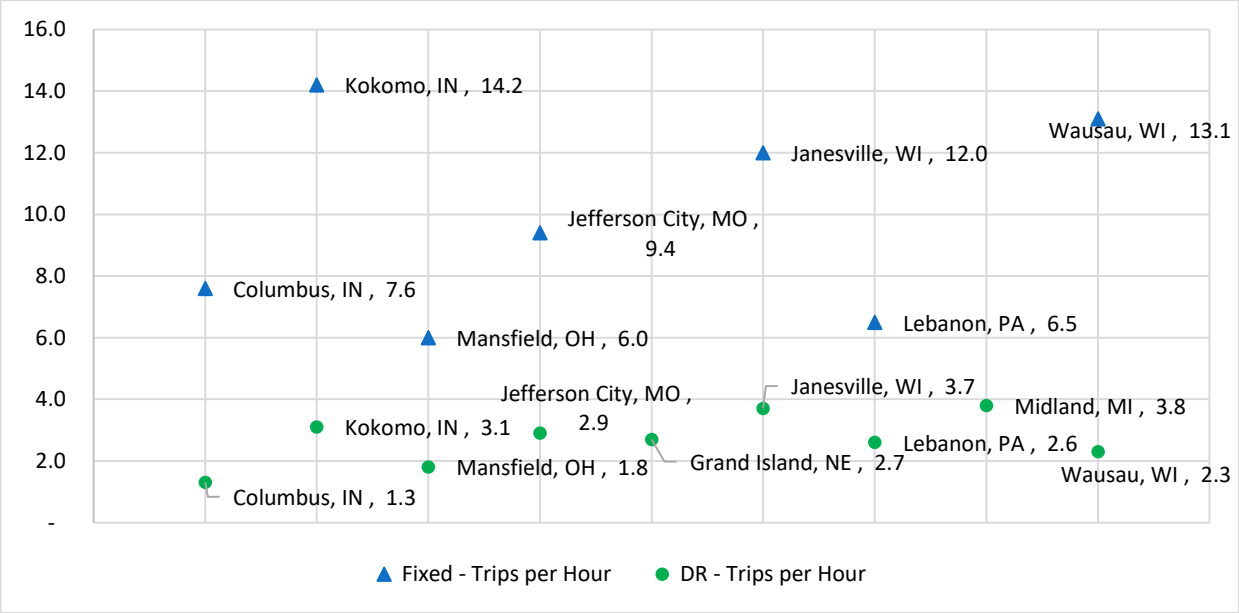
Source: National Transit Database

Figure 20 displays the productivity of each peer's services. Productivity is measured by calculating one-way passenger trips (boardings) per vehicle service hour. Fixed route service offers higher productivity than demand response because it operates along higher-density corridors, and passengers must walk to and from bus stops rather than be taken directly between locations in a curb-to-curb fashion.

Columbus experienced lower productivity than several of its peers in 2022. Its demand response service was the lowest of all peers, with only 1.3 boardings per service hour. Two peers experienced lower fixed route productivity than Columbus, which had 7.6 boardings per hour on fixed route.

The recommendations for this study will include strategies for increasing service productivity. Transit systems can improve productivity through measures such as requiring a 30-minute pick-up window for demand response service (instead of promising a specific pickup time), or shifting fixed routes away from low-ridership areas**. Improving productivity allows systems to effectively expand their service without new financial investment, because more rides are provided with the same amount of resources.**

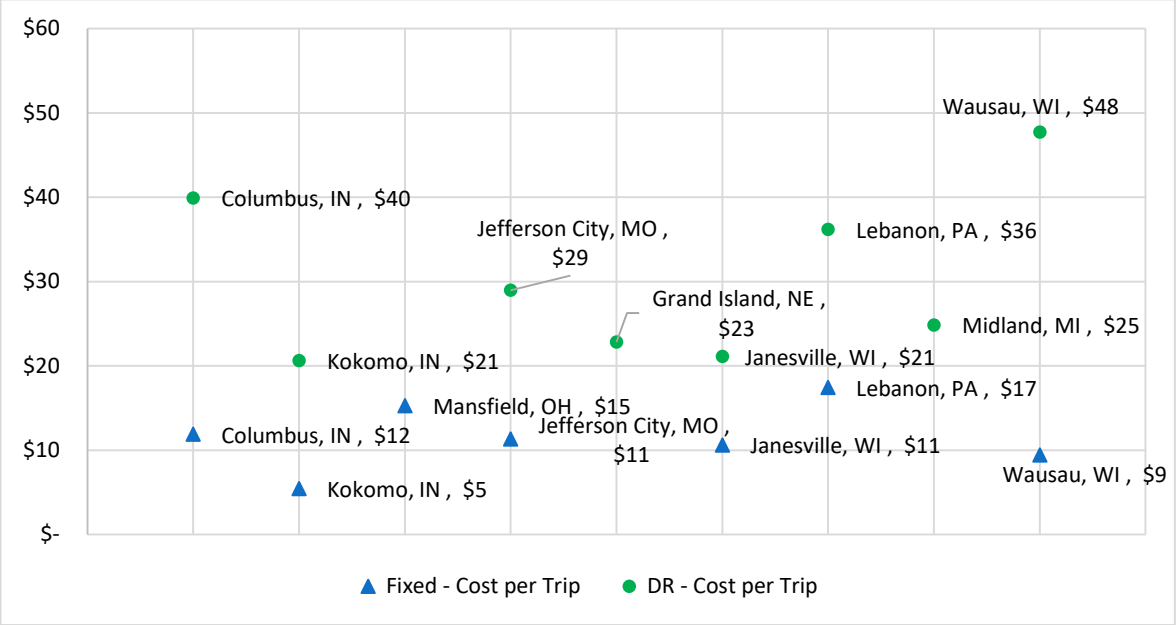
Figure 20: Peer Communities' Productivity (Trips per Hour) M



Source: National Transit Database

Figure 21 provides the cost per trip for fixed route and demand response in each peer community. The per-trip costs for demand response are higher because it is a lower-productivity mode (fewer trips per dollar expended). The demand response cost per trip for Mansfield, OH was an outlier ($89) and is not shown on the figure. Columbus trends moderate-high on its per-trip cost for each mode.

Figure 21: Peer Communities' Cost per Trip



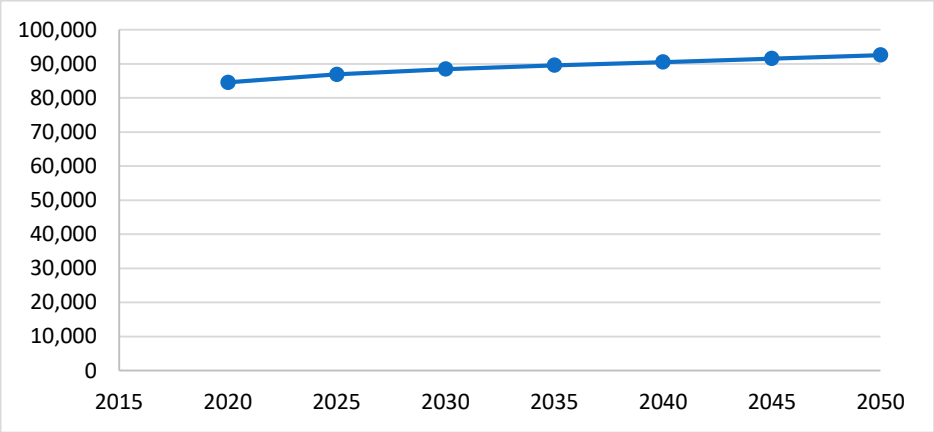
DEMOGRAPHIC AND TRIP GENERATOR ANALYSIS

The study area includes the City of Columbus in Bartholomew County, Indiana. The data for this demographic analysis was obtained from the U.S. Census Bureau's 2022 ACS Five-Year Estimates, 2021 Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics data, 2020 Decennial Census, and ReplicaHQ Spring 2023. The data presented are estimates of conditions at any point within each independent five-year sample period. These estimates are not exact and have margins of error associated with them.

POPULATION

STATS Indiana provides population projections for counties in Indiana. Bartholomew County is expected to see a 9.4 percent increase in population from 2020 to 2050. Figure 22 shows Bartholomew County population and projections through 2050.

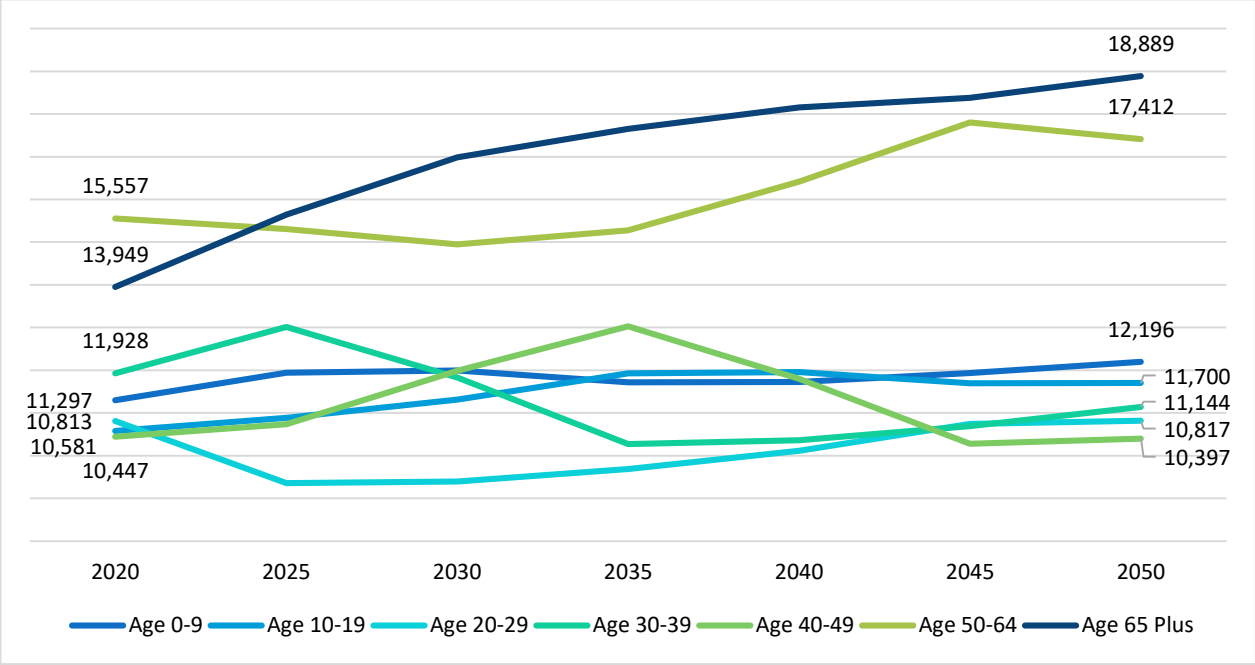
Figure 22: Population Projections



Source: STATS Indiana, 2024

Figure 23 shows the population projections for specified age groups. Population projections for the County include a 35 percent increase in population aged 65 and older. The County will also experience rapid growth in the population aged 50 to 64.

Figure 23: Population Projections by Age



Source: STATS Indiana, 2024

Figure 24 (on the following page) represents the population density for the City of Columbus and Bartholomew County in 2020 at the block level. Many of the areas of highest density are located around apartment complexes including Spruce Ridge and River Stone Apartments, The Cole, the County Sheriff's Office (jail population), Ashford Park Apartments, Stonegate and Monarch Crossing Apartments, Quail Run, Bloomfield Apartments, and Lincoln Village Co Operative. These areas had more than 17,004 people per square mile. The next highest areas of population density (between 8,450 to 17,003 people per square mile) are located throughout the city.

Figure 24: Block Population Density

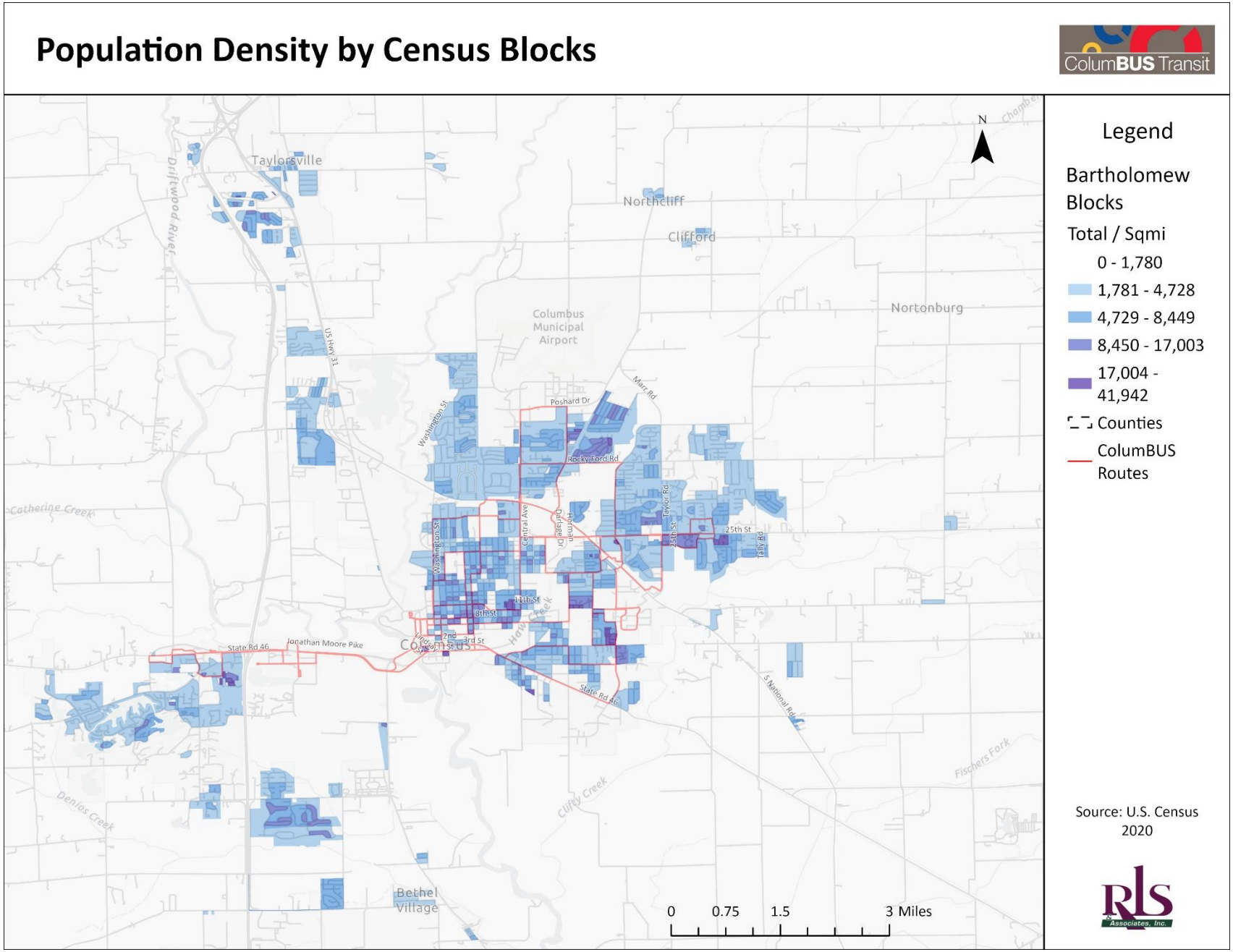
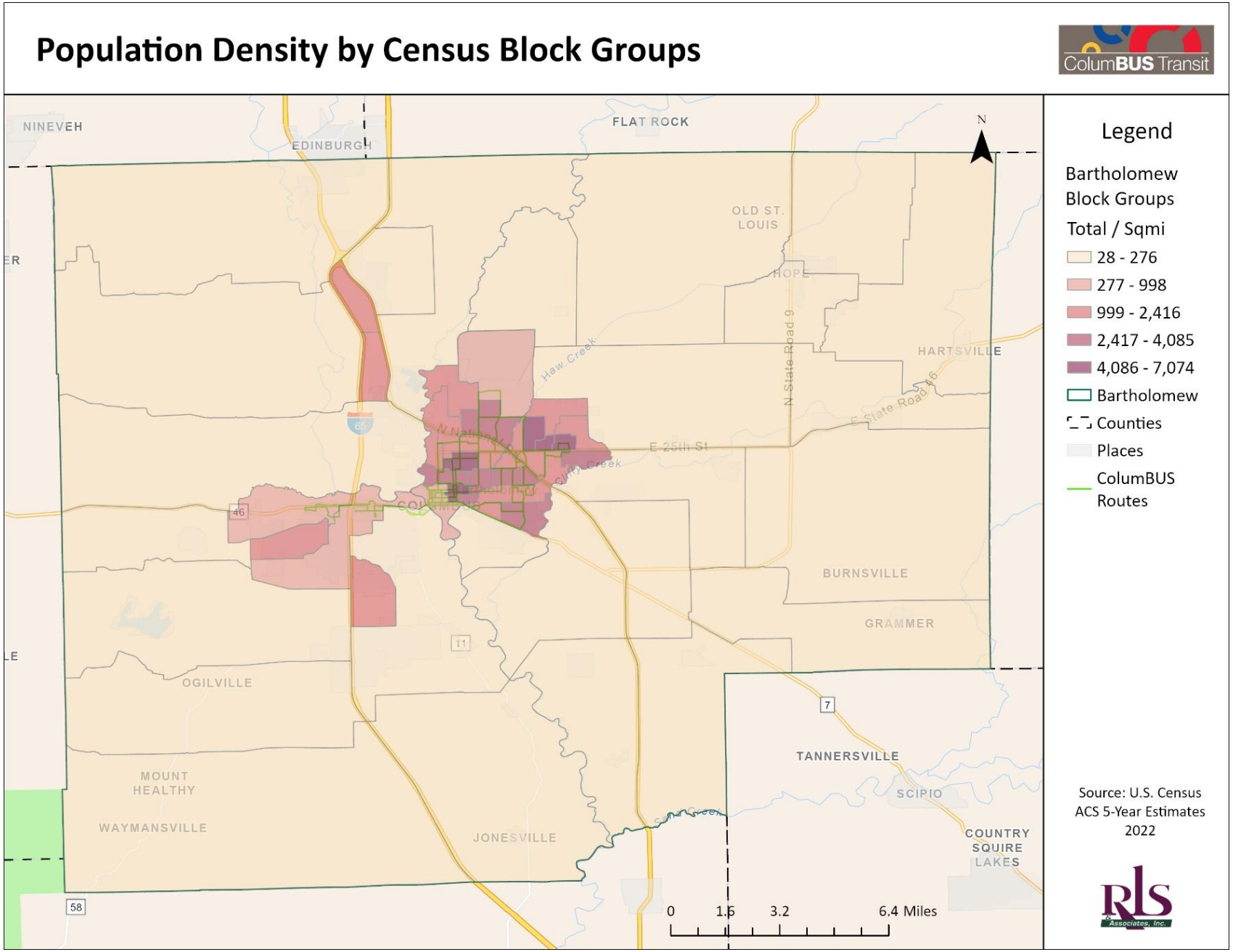


Figure 25 also shows population density in the City and County, but at Census block group level. Generally, fixed route public transit is viable in communities with 2,000 or more persons per square mile. Census block groups with densities of 2,417 to 7,074 persons per square mile are located within the areas of the city located in areas currently served by the fixed route system.

Figure 25: Block Group Population Density

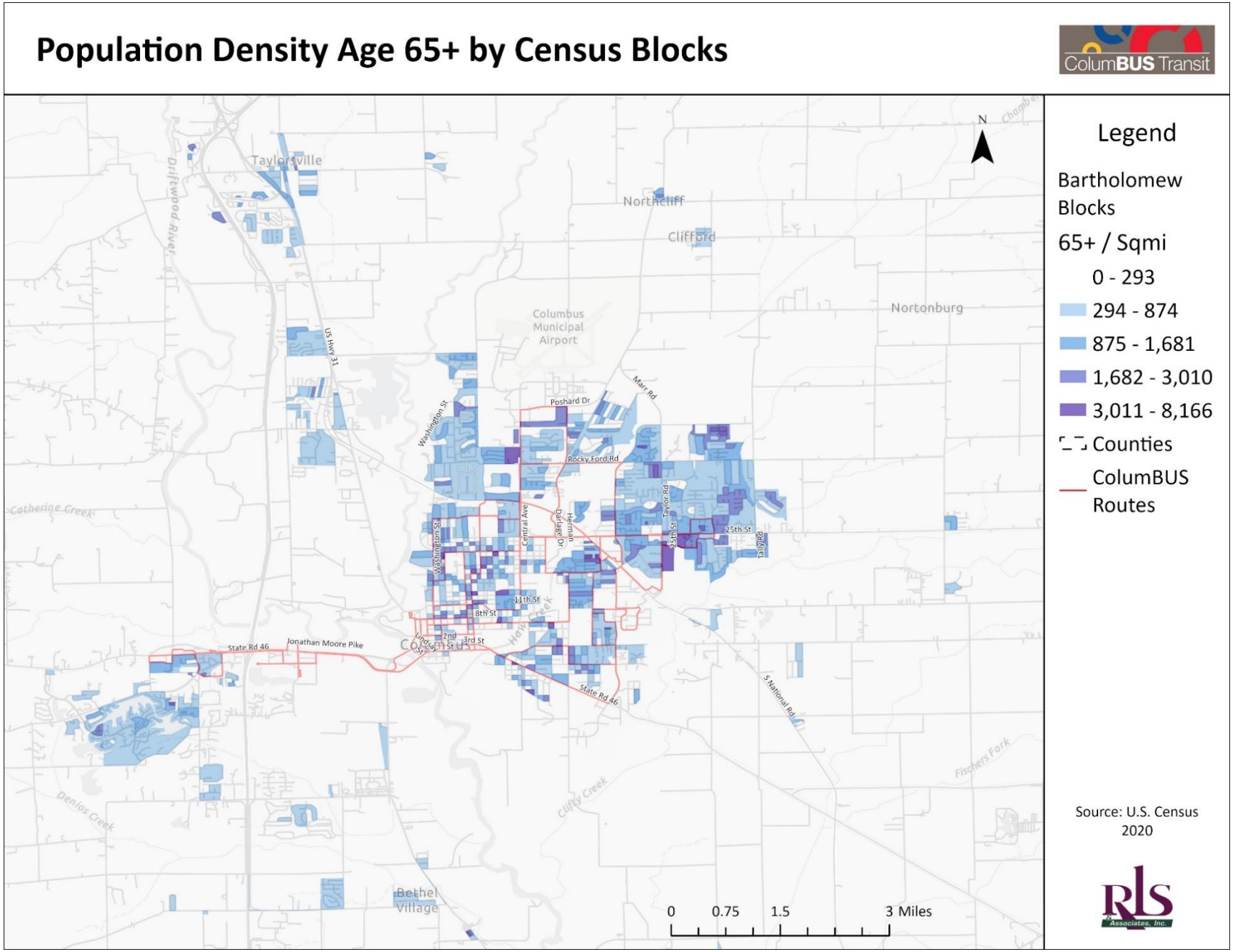


Older Adult Population

The term “older adults” includes individuals age 65 and older. The older adult population is an important factor in transportation planning because as the population ages, they are more likely to need alternatives to driving. Transportation is key to maintaining independence throughout our entire lives. Numerous national studies have demonstrated that having transportation options directly correlates with health and wellness. Older adults are most likely to use transportation services when they are unable to drive themselves or choose not to drive. Self-imposed limitations on driving often include not driving at night or making trips to more distant destinations. As a result of these limitations, older adults need alternative transportation options. Older adults also may be on a limited retirement income and, therefore, need affordable alternatives to owning a vehicle. For these reasons, the population of older adults in an area is one indicator of potential transit demand.

As the population ages, the number of people who are likely to need transportation increases even if the total number of people in the service area is not increasing. As indicated in Figure 26, the areas with the highest older adult population density are more widely dispersed around the city than the overall population density. These highest densities are located around Four Seasons Retirement Center, Vivera, Briarwood Apartments, Vilas of Stonecrest, Old Field Lane, Independence Village of Columbus, west of Donner Park, and a few blocks in the Central Columbus area.

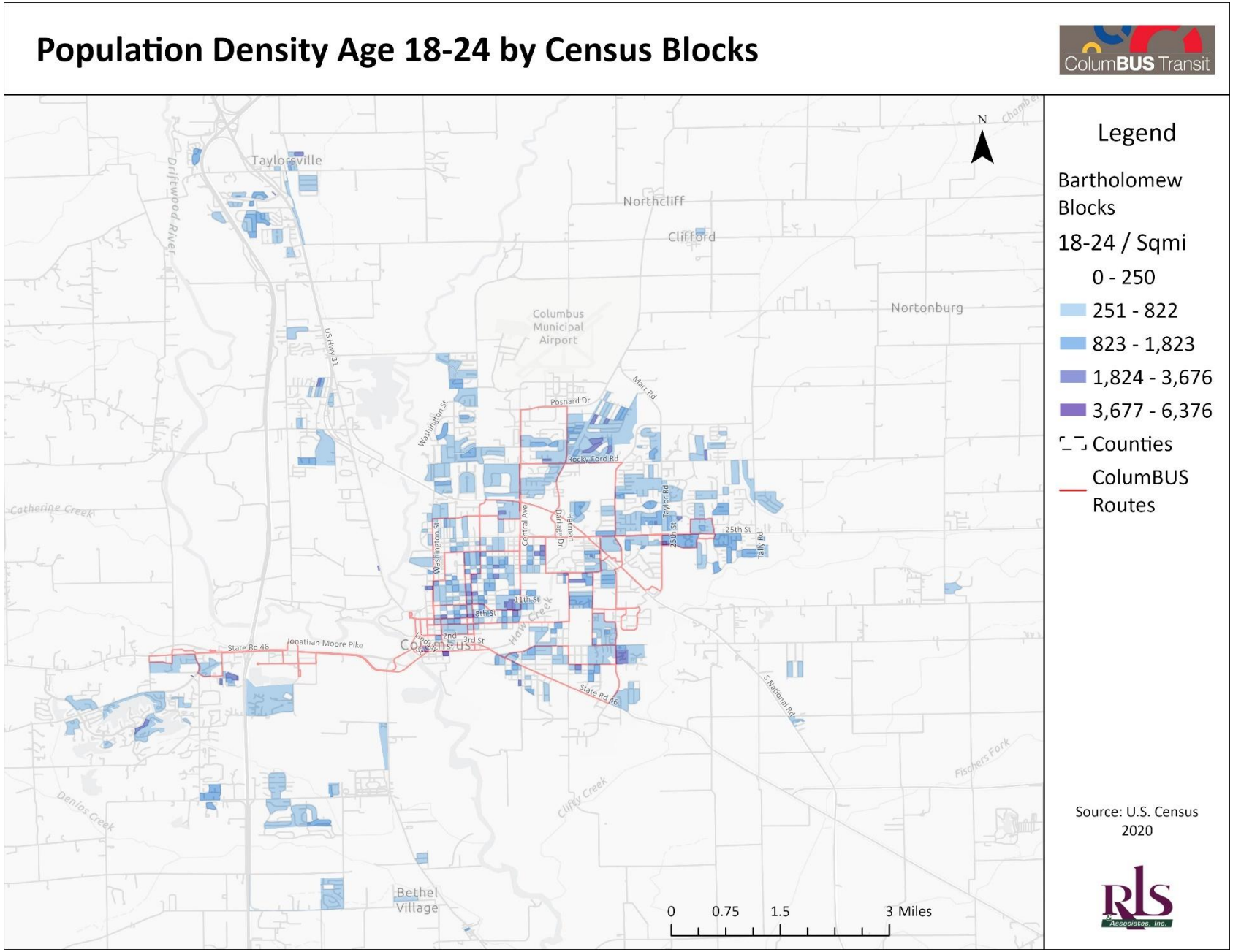
Figure 26: Older Adult Population Density



College Age Population

The location of college-aged individuals (18-24) plays another significant role in public transit planning. Studies show that driving mileage among populations in the 18-24 range has decreased over the past decade. Figure 27 shows the locations of the populations of people aged 18-24 in and around the city. The highest densities are located around The Cole, the County Sherrif's Department, and Applegate.

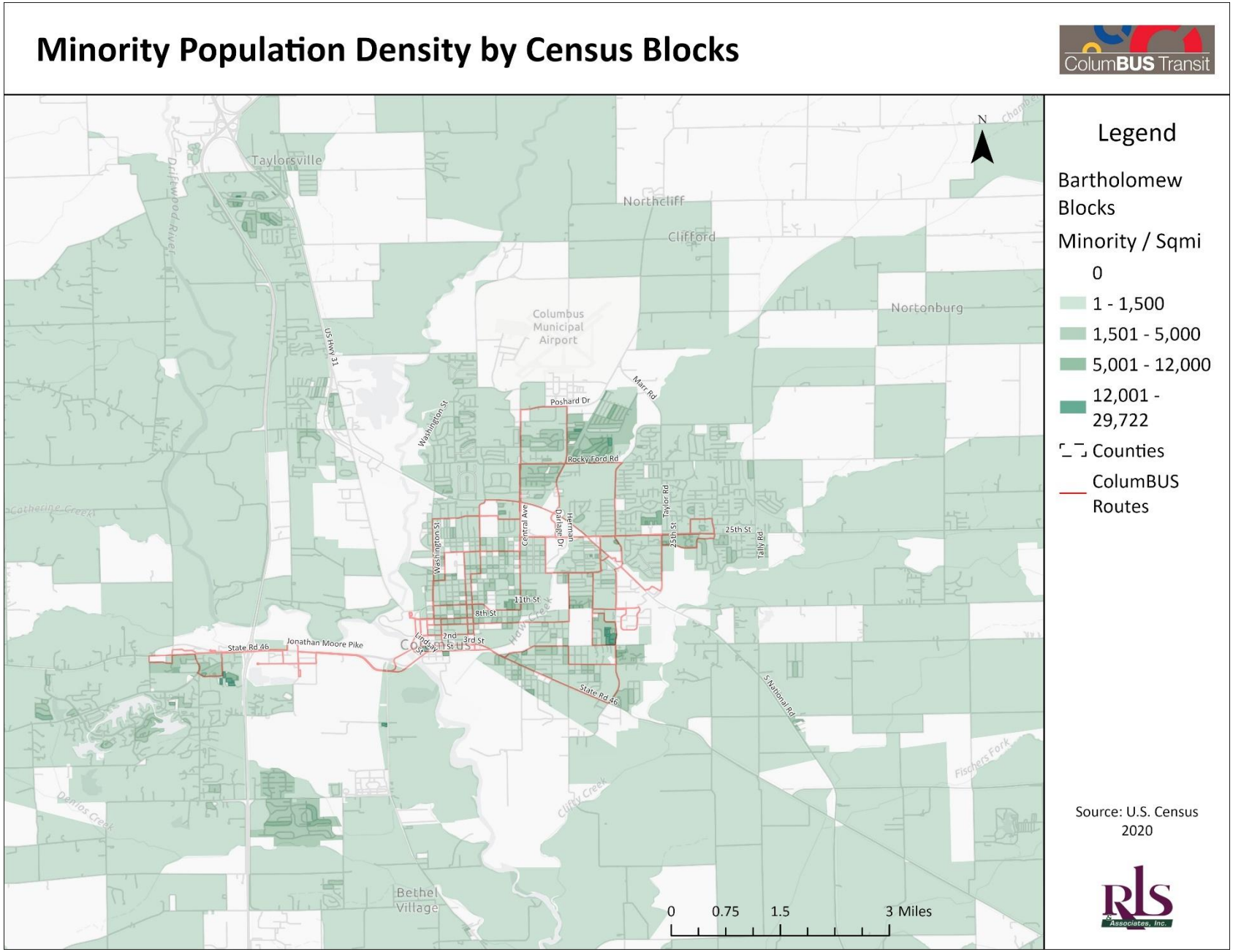
Figure 27: College Aged Population Density



Minority Population

Areas with the highest percentage of minority populations are shaded in dark green in Figure 28. The areas of highest density are around Spruce Ridge and River Stone Apartments, The Cole, Stonegate and Monarch Crossing Apartments, and north of Rocky Ford Road just east of Middle Road. These blocks have minority densities above 12,000 people per square mile.

Figure 28: Minority Population Density

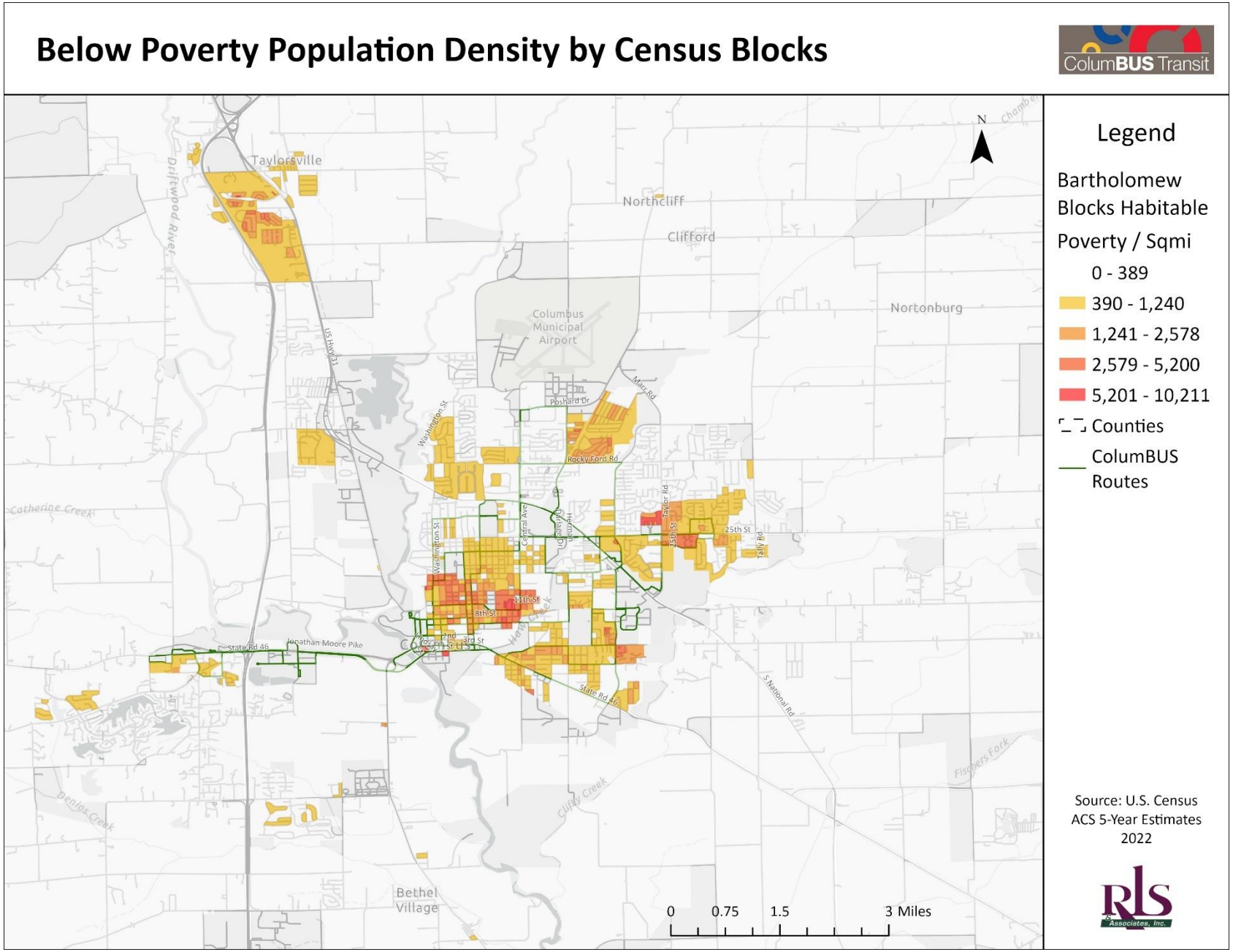


INCOME AND POVERTY

Income is also an indicator of potential demand for public transit services. Individuals and households with lower incomes are less likely to have one or more vehicles and more likely to use alternative transportation options that are budget-friendly. Approximately 12 percent of individuals in Columbus lived in households with incomes below the poverty level in 2022.

Figure 29 illustrates the distribution of the population living below the poverty level throughout Columbus. The blocks that have the highest density of population with incomes below the poverty level are included in red and have a range of 5,201 to 10,211 people per square mile earning incomes below the poverty level. Blocks with the highest density of individuals living below poverty in Bartholomew County are around The Cole, County Sherrif's Department, Ashford Park Apartments, on Central Avenue between 10th and 8th Streets, Williamsburg Way Apartments, and between 8th, 7th, Maple, and Hutchins Avenue.

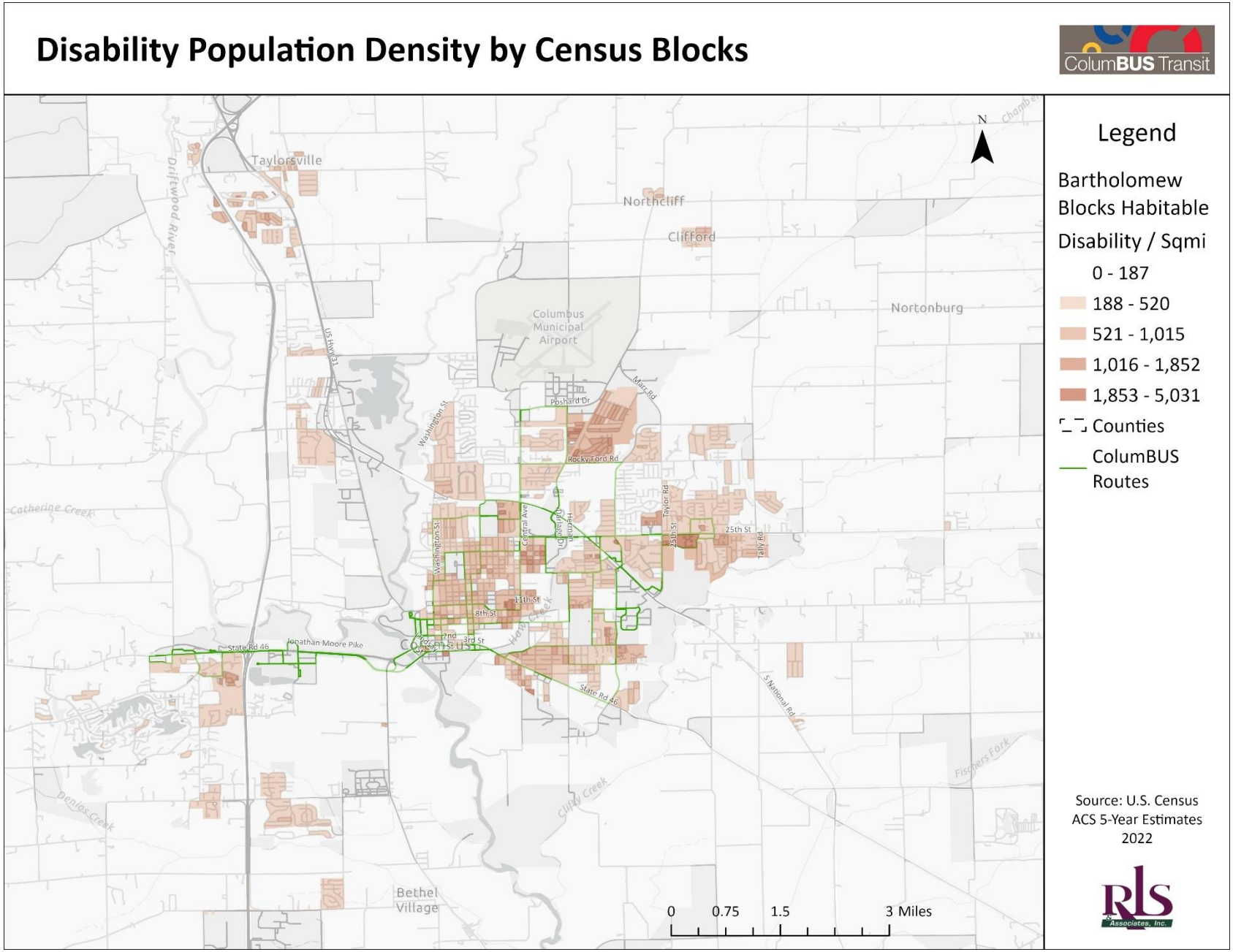
Figure 29: Density of Population Living Below the Poverty Level



DISABILITY

Persons with physical disabilities that impair their ability to drive are often transit users, and it is important to include these individuals and their transportation needs in an analysis of the transit propensity for Columbus. Figure 30 shows the density of the population with disabilities by blocks. The density of persons with disabilities is highest in similar areas to those individuals living below the poverty level and with zero vehicles. These areas can be found around The Cole, the County Sherrif's Department, Applegate, Briarwood Apartments, Bloomfield Apartments, and Pence Apartments.

Figure 30: Density of Individuals with a Disability



AUTO AVAILABILITY

The number of vehicles available to a household is also an indicator of demand for transit because households with no available vehicles are more likely to depend on public transit for all or most transportation needs. In the City of Columbus, over two thirds of residents have two or more vehicles, while 24.3 percent have one vehicle, and 3.5 percent have no vehicles available (Figure 31). As shown in Figure 32, within Bartholomew County, the blocks with the highest density of households without a vehicle are located near The Cole, the County Sherrif's Department, Applegate, Briarwood Apartments, Bloomfield Apartments, and Pence Apartments.

Figure 31: Private Auto Availability, Columbus, IN

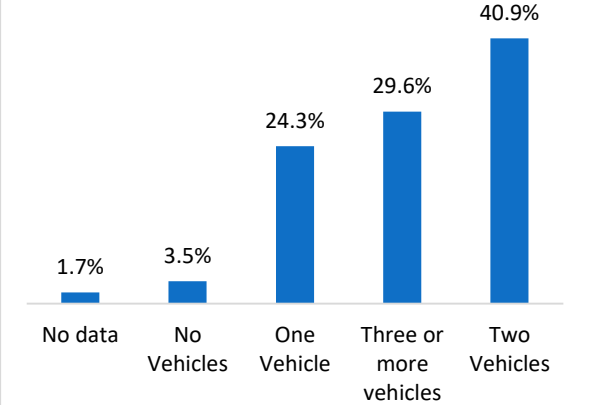
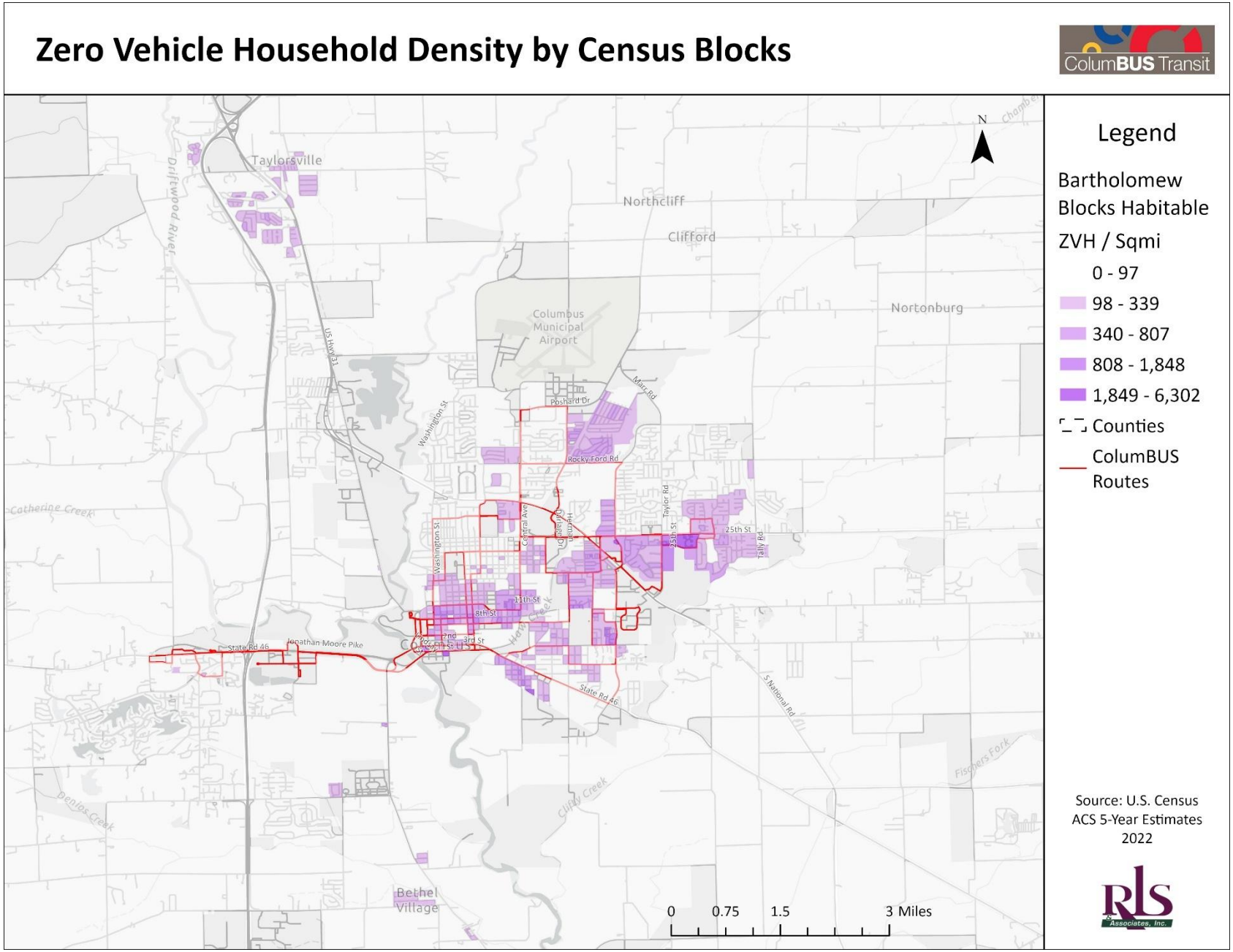


Figure 32: Density of Households with No Vehicle Available



EMPLOYMENT

Equally important to where people live are the locations of the destinations they frequent. There are approximately 399 employers and 43,400 employees in Columbus. Most of the employers provide services such as manufacturing, health care, and retail. The largest employers include:

- Cummins Inc.
- NTN Driveshaft Inc
- Toyota Material Handling, Inc.
- Emcon Technologies LLC
- Enkei America Inc
- Walmart Supercenter
- Columbus Regional Health
- Bartholomew Consolidated School Corporation
- Columbus Risk Management
- PMG Indiana Corp
- Packaging Corp of America

This section includes three maps that portray geographical trends in employment in Bartholomew County. Figure 33 illustrates the location of Bartholomew County employers in 2021.

Figure 33: Employment Density

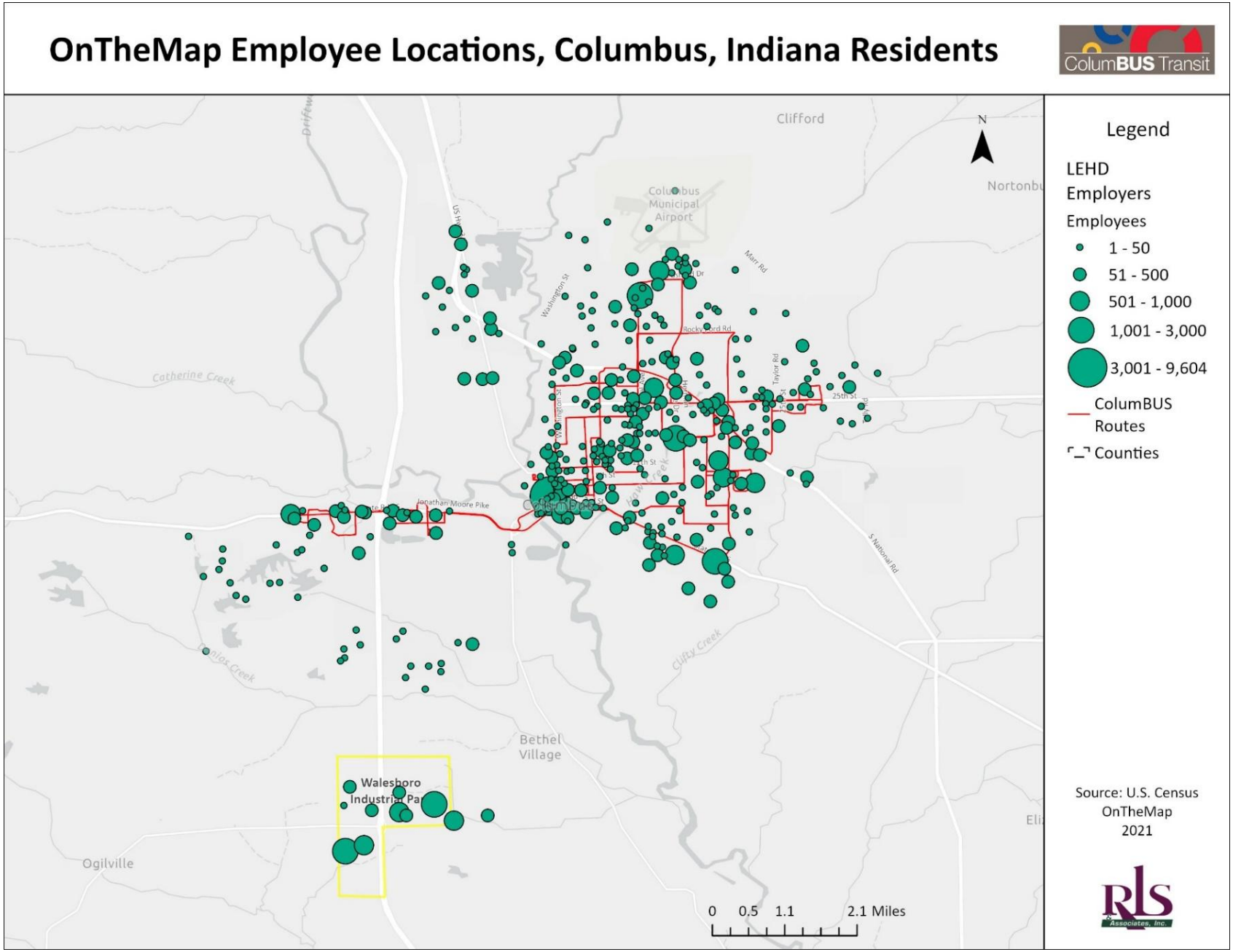


Figure 34 illustrates the 2023 work trip destinations for people who live in Columbus. The areas of highest density for employment are relatively consistent between 2021 and 2023. Employers are located throughout the County, but the largest concentrations of jobs are in the Walesboro Industrial Park, downtown Columbus, the southeast corner of Columbus, and near the airport.

Figure 34: Employment Trip Destinations, 2023

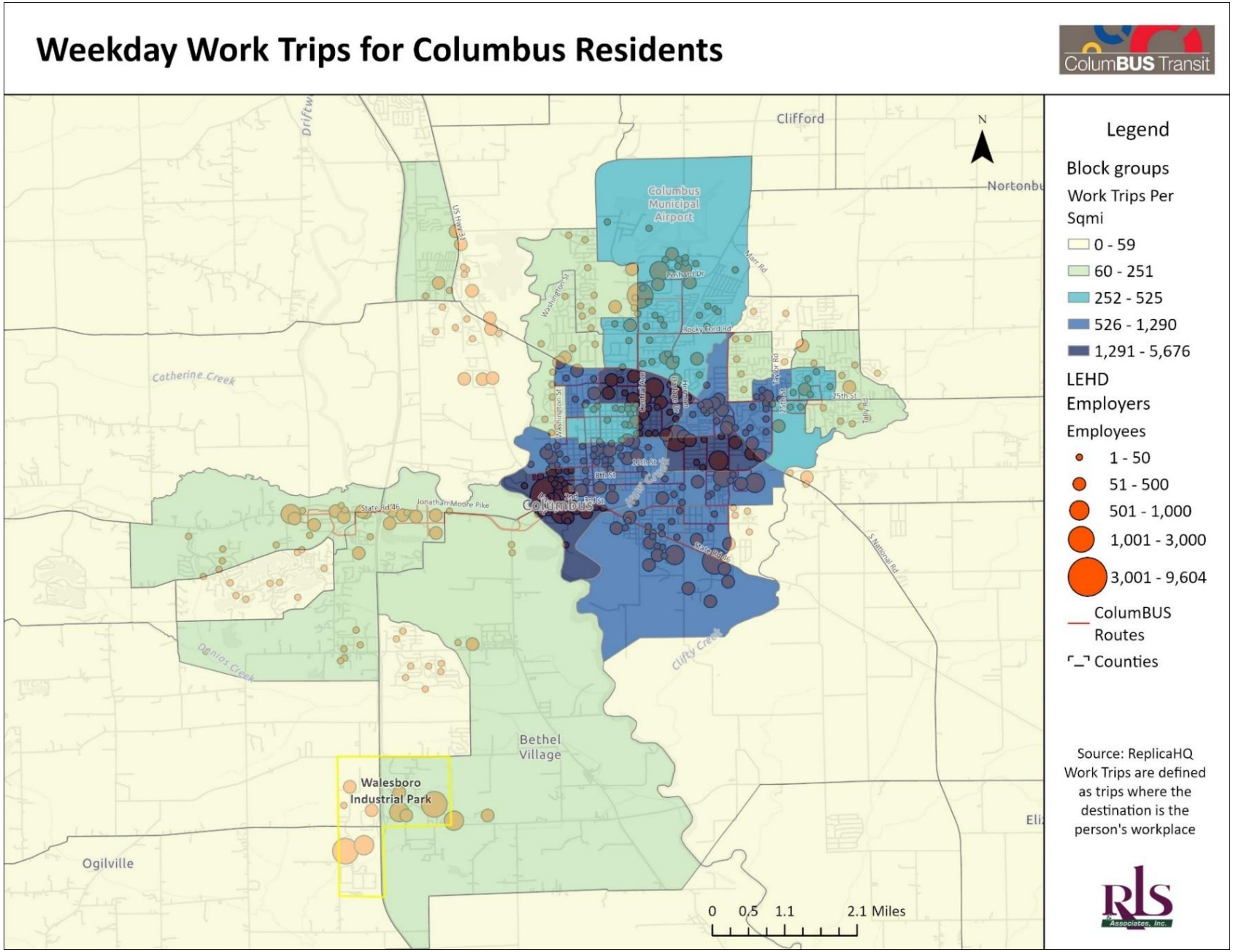
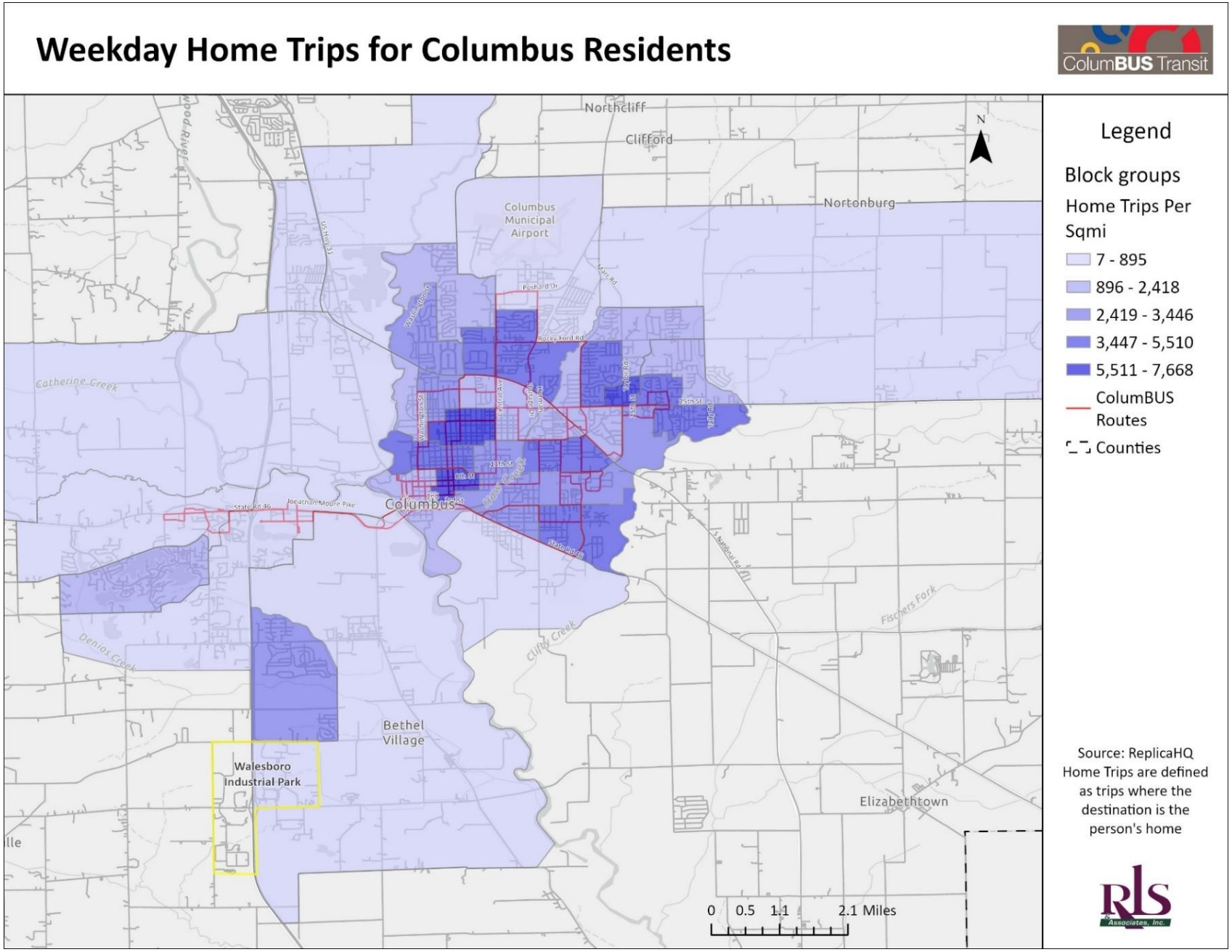


Figure 35 represents the block group locations for home trips of Columbus residents on a weekday. Using this information along with work trip data provides an estimation of the most frequent travel patterns in Columbus.

The source for data included in the work trip and home trip figures is ReplicaHQ which uses aggregate data from public and private sources.

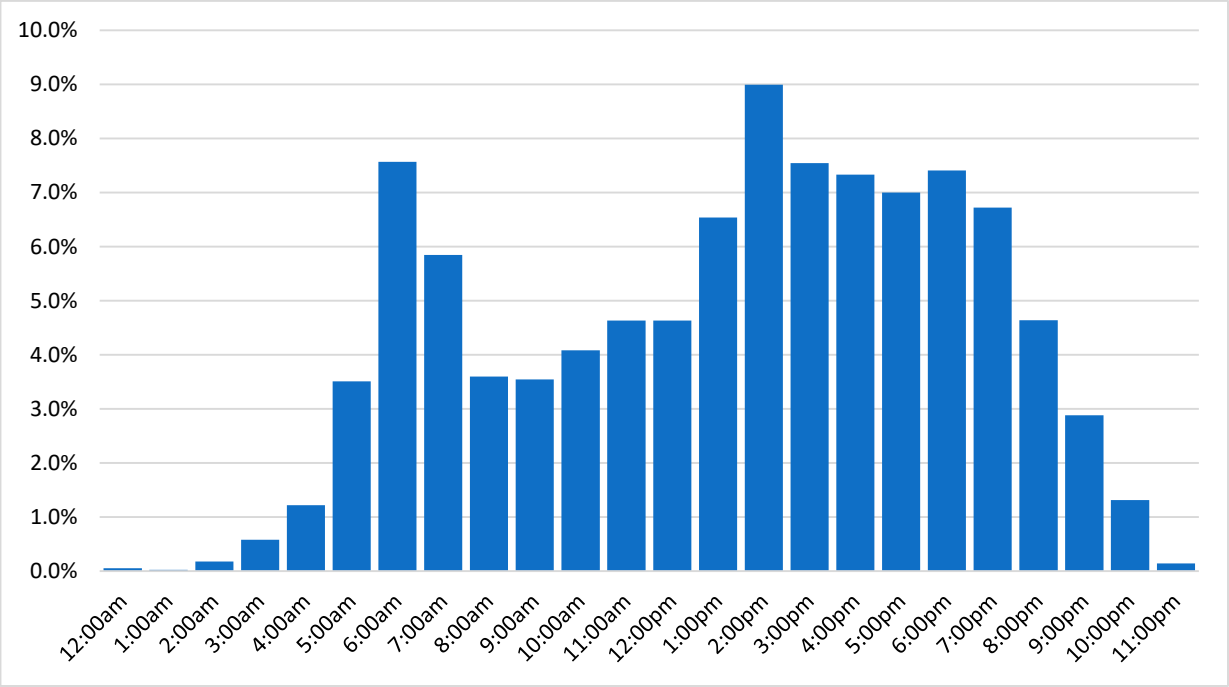
Figure 35: Home Trip Destinations, 2023



TRAVEL TIMES

The chart in Figure 36 illustrates the peak travel times (by all modes of transportation) for Columbus residents. Travel flow reaches its morning peak from 6:00 AM to 7:00 AM and the afternoon peak occurs from 2:00 PM to 3:00 PM. Factors such as school bus traffic combined with work shift changes impact traffic flow data.

Figure 36: Traffic Flow by Hour

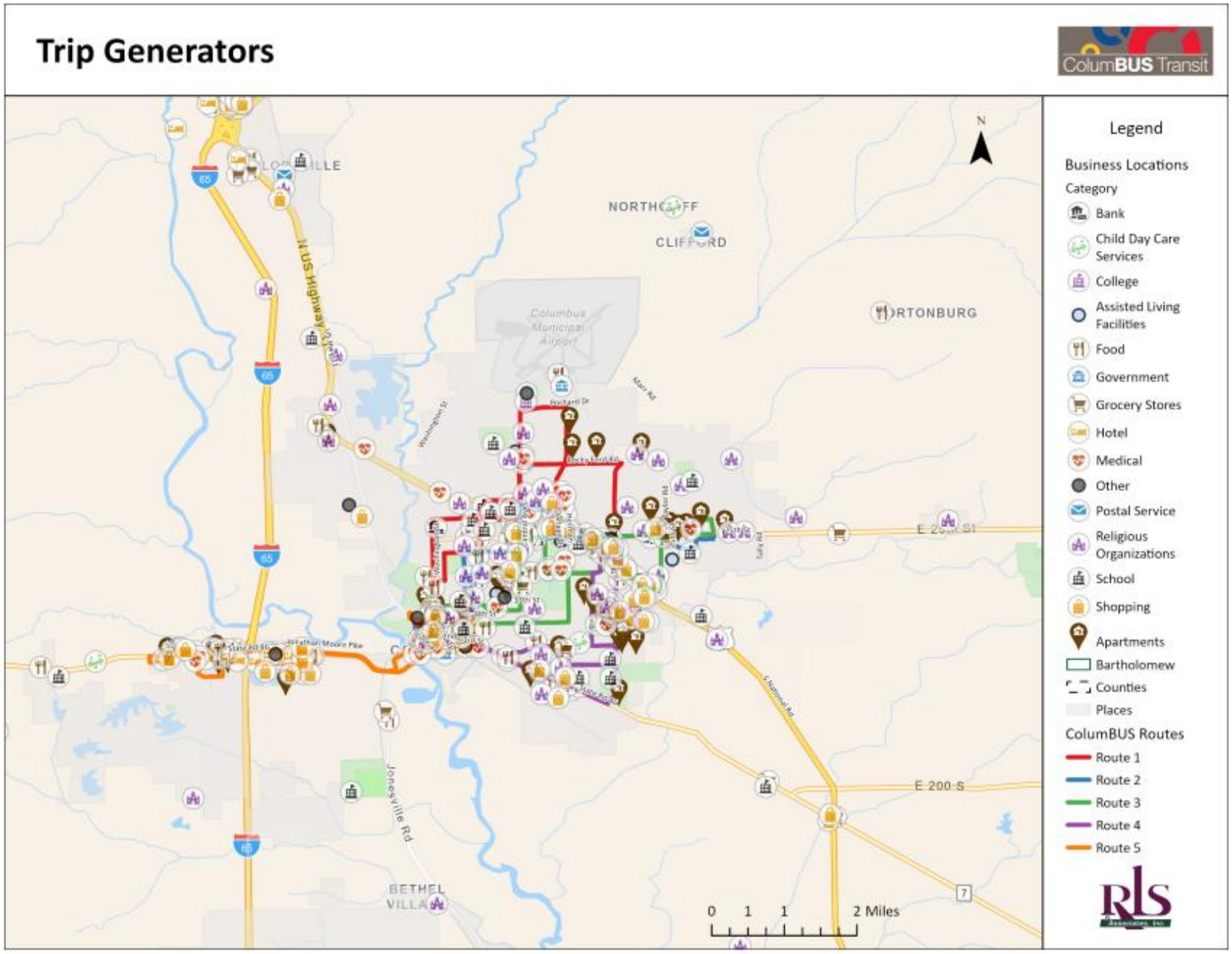


Source: ReplicaHQ, 2023

TRIP DESTINATIONS/GENERATORS

Trip generators are locations or activities that generate the need for trips, whether by foot, bicycle, car, or public transportation. These generators can vary widely. This section considers the locations of specific trip generators, including grocery stores, medical facilities, human service agencies, nutrition sites, and senior centers. Essentially, any destination or activity that prompts people to travel from one place to another can be considered a trip generator. The type of trip generator, in addition to the general locations of trip generators discussed in the previous sections of this chapter, helps to understand the potential frequency and trip purpose that a potential transit rider has when traveling to these areas. For example, a person travels less frequently to a grocery store than they do to their place of employment. Figure 37 displays trip generators.

Figure 37: Trip Generators



DEMOGRAPHIC AND TRIP GENERATOR ANALYSIS SUMMARY

Bartholemew County's population of approximately 84,500 in 2020 is projected to increase by almost 10 percent over the next 25 years. Columbus is the most populous city in the County, with approximately 51,000 people. Approximately 15.7 percent of the population in Columbus is age 65 and older which indicates a potentially significant need for public transportation options as people age out of driving or begin to drive less and rely more often on alternatives. The population of adults aged 50 years and older will grow more rapidly than younger groups.

Approximately 12 percent of individuals in Columbus lived in households with incomes below the poverty level in 2022. Furthermore, the distribution of households below the poverty level and zero-vehicle households supports the need for continuing to offer public transportation and to optimize route locations and frequency to meet more needs. Households in poverty are more prevalent in the traditional urban core of Columbus (south of 22nd Street and roughly between Lindsey and Central) and areas with high-density housing including East 25th Street, Rocky Ford Road between Middle Road and Marr Road, and Marr Road south of 10th Street. Many zero-vehicle households are located in the same areas.

Many work, shopping, and medical trip destinations are located in the City of Columbus. This pattern indicates the need to connect people to as many portions of Columbus as possible. There are growing clusters of trip generators, including employers, that are not accessible on the route network at this time. These include the Walesboro industrial park, the Taylorsville area (and points along the U.S. 31 corridor leading to Taylorsville), and areas southwest of the urban core, including the Shadow Creek housing development.

COMMUNITY INPUT

Community input opportunities for this study was collected through several venues. Two surveys were conducted to collect input for this study: a ColumBUS rider survey and a community-wide, public survey. The project consultant conducted a series of interviews with ColumBUS staff and community stakeholders. The consultant also facilitated three meetings of a study advisory committee. Lastly, two community input meetings were conducted to collect feedback on potential route and service alternatives.

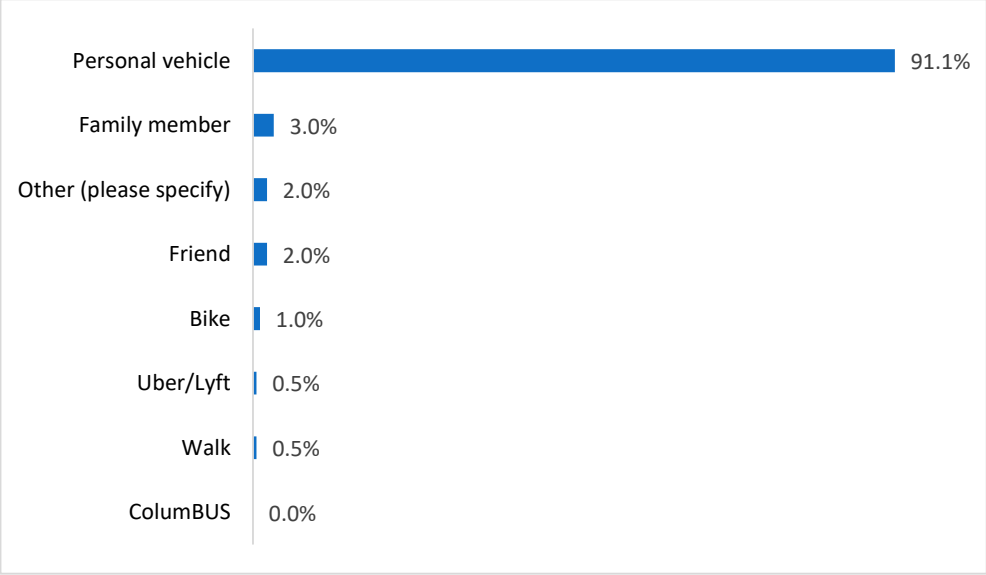
COMMUNITY SURVEY

This section contains the findings form the community survey, which was administered from June 13 to July 17, 2024. Over the course of those four weeks, 220 individuals competed the survey. However, 21 of these respondents indicated that they primarily used ColumBUS Transit for transportation, so their responses were excluded from the community survey analysis, and were added to the responses to the rider survey.

Modes of Transportation

Survey respondents were first asked to provide their primary mode of transportation. The overwhelming majority of respondents used their own personal vehicle. Very small percentages of respondents used family, friends, bikes, Uber/Lyft, walk, or other. As stated above, the nearly ten percent that selected ColumBUS Transit were excluded from this analysis, and instead included in the rider survey analysis.

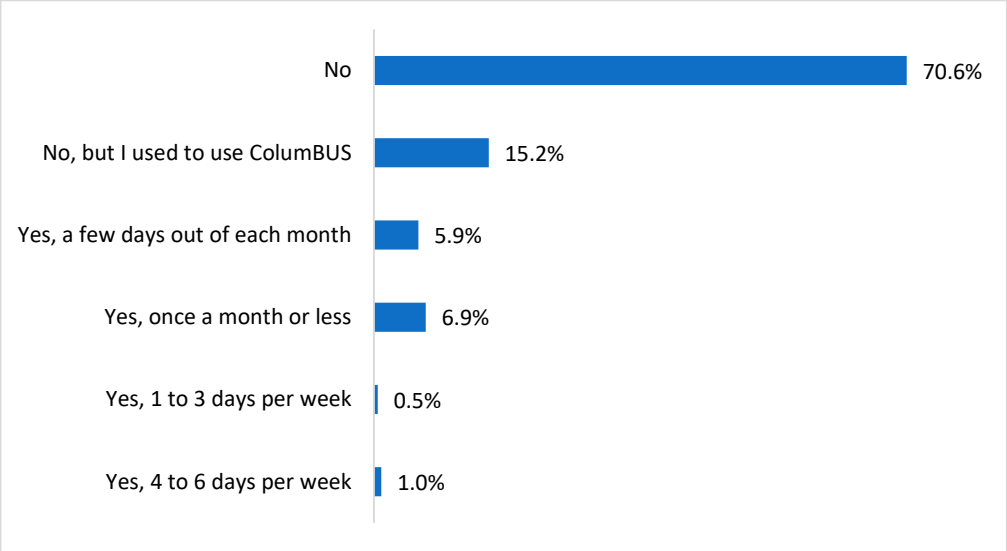
Figure 38: Primary Mode of Transportation



In a separate question, respondents were asked whether they used ColumBUS (at all). The results are shown in Figure 39. Over 85 percent of respondents said they do not ride ColumBUS. For the 15 percent

that said they do ride, 20 said that for their primary transportation, they drive their own vehicle. Smaller numbers reported that they primarily bike, get rides from family members, get rides from friends, and use Uber/Lyft.

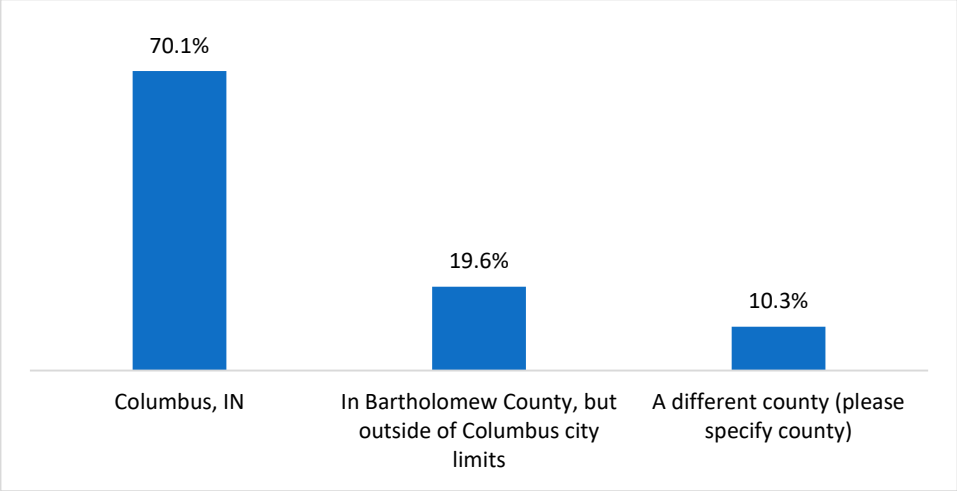
Figure 39: Do you ride ColumBUS Transit?



Home Locations

Over 70 percent of survey respondents were residents of the City of Columbus. Another 19.6 percent were from Bartholomew County but outside of Columbus, and the final 10 percent were from outside of the County. The counties included Brown, Decatur, Jackson, Jennings, Johnson and Shelby Counties.

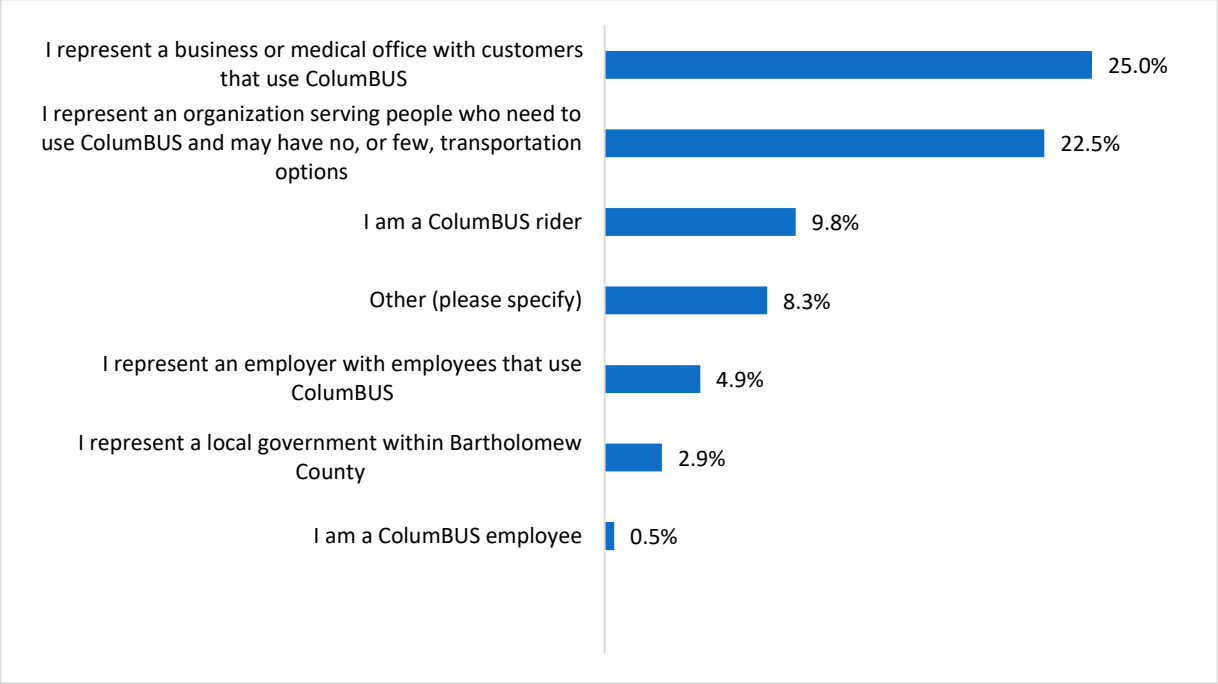
Figure 40: Home Locations



Relationship to Transit System

Survey respondents were asked whether they worked for the transit system, represented an employer or organization whose employees or clients use (or may need to use) public transit, or represented local government.

Figure 41: Relationship to Transit System

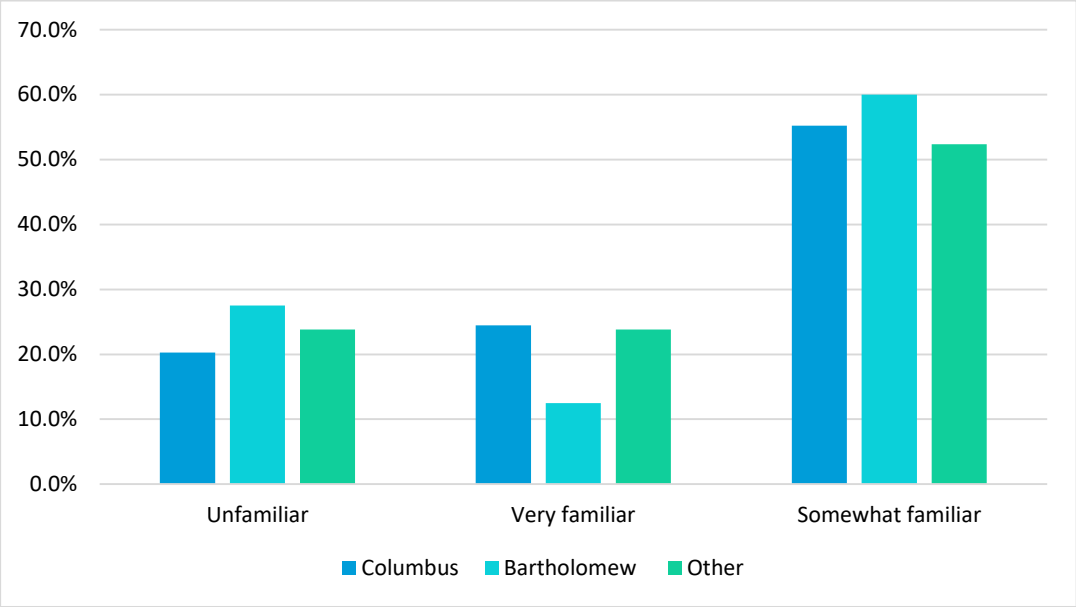


Awareness of Transit Services

Respondents were asked to indicate their familiarity with ColumBUS. This analysis is broken down by the residence of the respondents, who indicated whether they lived in the City of Columbus, in Bartholomew County but outside of Columbus, or another county.

Those respondents outside Columbus less familiar with ColumBUS's services. Respondents who lived in Columbus were more likely to be very familiar with ColumBUS as compared to the other respondents.

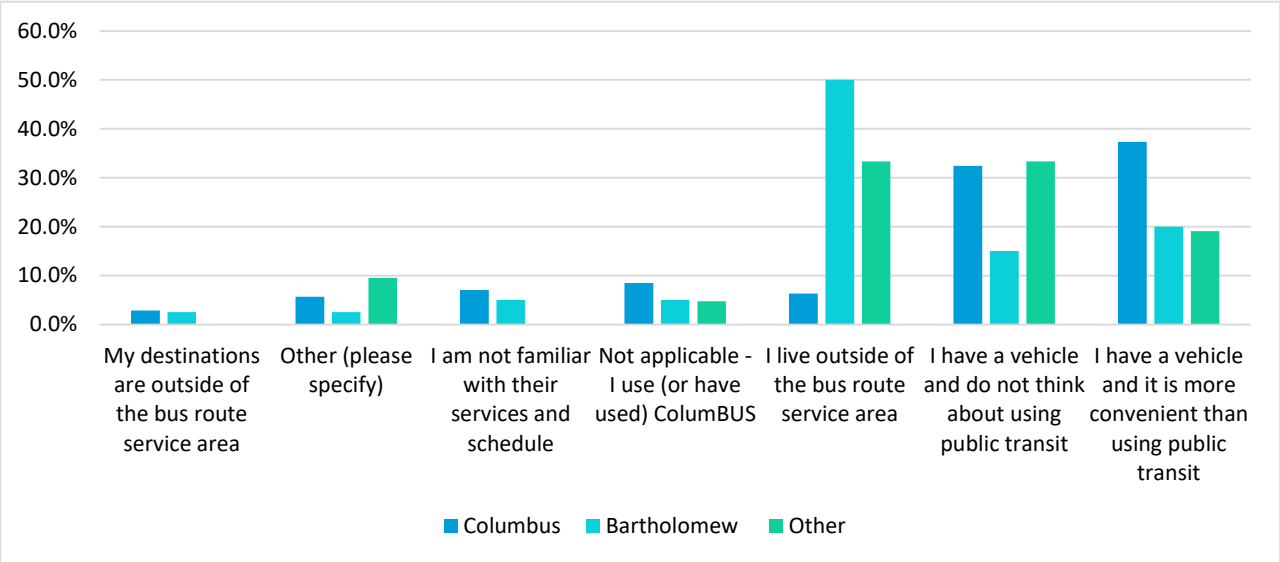
Figure 42: Awareness of ColumBUS Services



Use of Transit

The next question asked respondents why they do not use ColumBUS services. Overall, the use of a personal vehicle being more convenient was the highest response. That was also true of respondents who live in Columbus. Those living in Bartholomew County outside of Columbus said they lived outside of the service area. The next highest response for all respondents and those living in Columbus was having their own vehicle and not thinking about using public transit. From this data, it can be deduced that improving the convenience of the system – making the system as, or nearly as, convenient as a personal vehicle – would attract residents to the service.

Figure 43: Reasons for Not Using ColumBUS



Locations

In an open-ended response question, respondents indicated employers and other types of locations that they felt needed bus service.

- Twenty-one respondents stated that there are unmet transit needs in Walesboro due to the large concentration of employers there. This was the single most frequently mentioned location in the responses.

> *The factories in Walesboro. I take someone out there often because he does not drive.*

- Eleven respondents recommended serving Taylorsville and Edinburgh, where there are abundant employment and shopping opportunities as well as residences including the Driftside mobile home community.
- About 14 respondents mentioned Columbus Regional Health locations (including offices that have moved to NexusPark) and other medical facilities. One respondent noted that many offices have moved to the outskirts of town so they are less accessible. Several other respondents mentioned NexusPark but did not specify whether they were referring to the facility's medical offices or other offerings (stores and recreational facilities).
- Seven respondents remarked that ColumBUS recently removed a segment of Route 3 that stopped on Midway Avenue near 22nd Street, which used to provide access to Columbus Regional Health's Treatment and Support Center (TASC), a voluntary outpatient treatment program for adults with substance use disorders.
- A few respondents mentioned Traditions of Columbus, Miller's Merry Manor (located in Hope), and other residential facilities for older adults.
- Two respondents mentioned the Water's Edge apartment complex on U.S. 31, and one said that there are multiple employers located on Indianapolis Road, which is on the way to Water's Edge.

> *The apartments at Arbors at Waters Edge have several residents without transportation for various reasons. This complex serves many people on housing assistance programs but they are just outside of city limits. This is an underserved population needing help.*

- A few respondents mentioned communities other than Columbus, Walesboro, Taylorsville and Edinburgh. These included Hope (3 respondents), Elizabethtown, Jonesville, Petersville, North Vernon, Franklin (2 respondents), Garden City (including the Columbus Fellowship location on S.R. 11 for 12-step recovery meetings), the Bartholomew county fairgrounds, Clifford, and Seymour.

- Other locations mentioned included Cummins Walesboro plants, BCSC schools, the Bartholomew County United Way, Su Casa, Mill Race Center, REACH Columbus the Bartholomew County Health Department, Middle Road, Rocky Ford Road, and Ivy Tech/IU-Columbus campus. Many of these locations are currently served by the system.

Open-Ended Feedback

Respondents were provided with an opportunity to give open-ended feedback about public transportation. Frequent themes in these responses included the following:

- About eleven (11) comments made reference to respondents' interest in a more flexible public transit service than fixed route. Respondents indicated concerns about the usefulness of the fixed routes for older adults or people needing access to medical facilities.

> *Our patients struggle to find rides to and from appointments. There needs to be additional resources which focus solely on medical appointments for those who do not have their own transportation in Columbus.*

- There were fifteen (15) comments that spoke of a need for better public information about how ColumBUS works. Route maps and schedules can be difficult to interpret, and may need to be distributed more widely in the community. There could be more extensive online and social media information. People need to be able to get information in various formats, including paper copies.
- About seven (7) comments were made about the need for more covered shelters and seating at bus stops.

> *The time frame needed to get to a location is way too long. If I used transit I would have to leave for work an hour early in order to reach my job just in time. It takes me 15 minutes by car.*

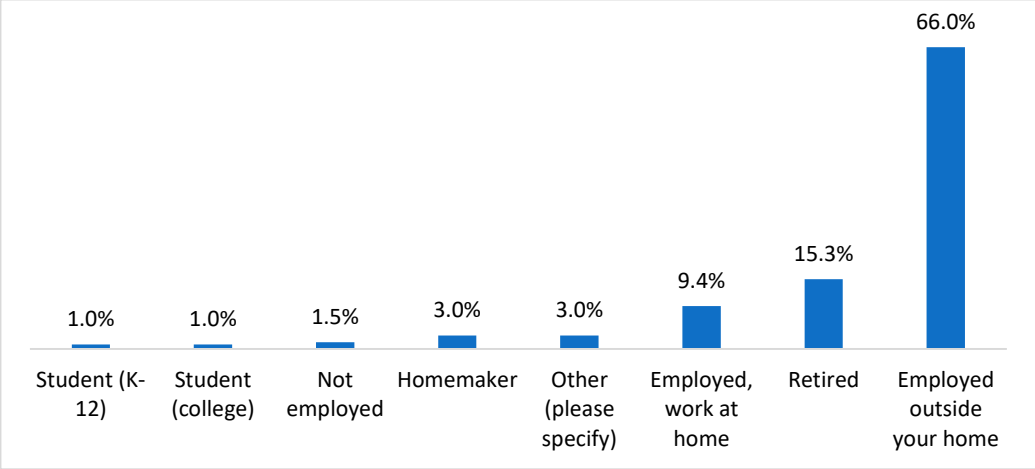
- Ten (10) respondents expressed that the routes are not frequent enough for the service to be convenient, or that the routes are too time-consuming. It can take a long time to reach destinations on the bus as compared to driving.
- Thirteen (13) respondents advocated for ColumBUS serving new areas (e.g., Taylorsville, Walesboro, or areas just outside of city limits).
- Eight (8) respondents spoke of the need for Sunday service, later evening hours, earlier morning hours, and service on holidays.

- A few respondents said that it is difficult for parents with small children to ride, or that the system does not accommodate riders with several bags of groceries.

Respondent Demographics

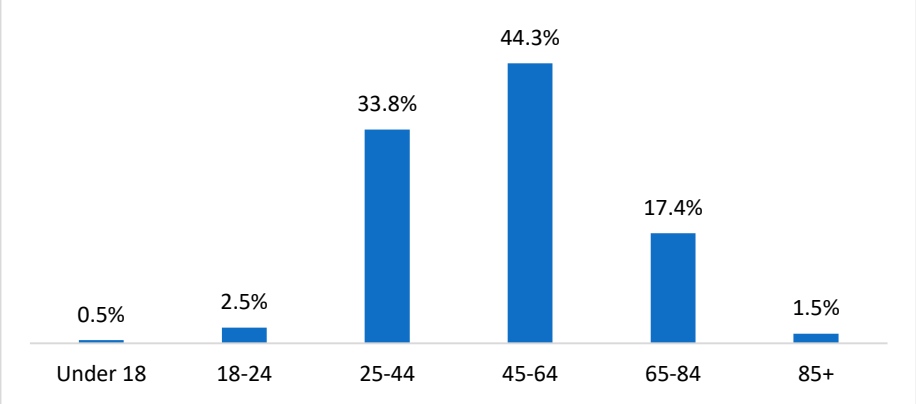
The highest percentage of survey respondents stated they are employed outside of their home. Overall, 66 percent work outside of their home. Respondents who are retired and work from home make up the next highest percentages.

Figure 44: Occupational Status



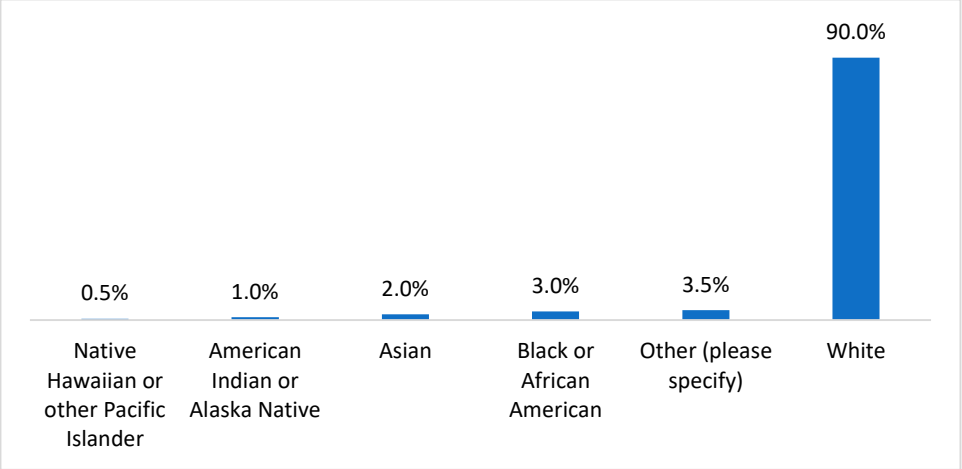
The goal for a public survey is to get an even distribution amongst ages, races, and income levels. The first demographic question asked of respondents was their age. The survey netted fewer responses from younger adults, but the overall distribution was spread out among middle age to older adults.

Figure 45: Age of Respondents



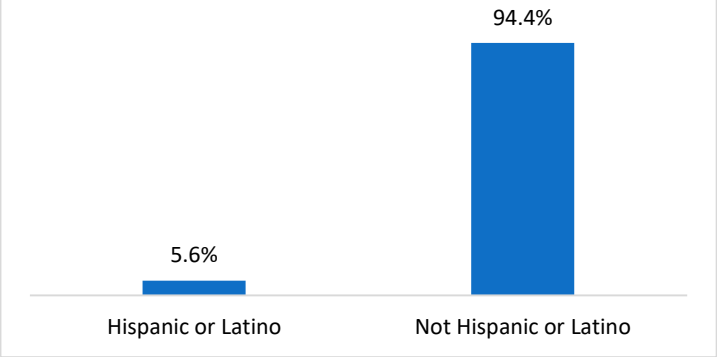
Overall, over 10 percent of survey respondents reported being of a racial minority.

Figure 46: Races of Respondents



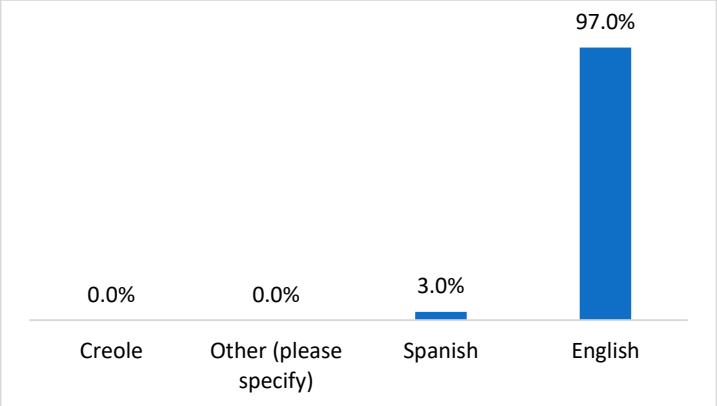
Respondents were also asked to include their ethnicity, Hispanic or Latino. Overall, 5.6 percent of respondents were Hispanic or Latino.

Figure 47: Ethnicity of Respondents



The only other language survey respondents spoke at home beyond English was Spanish.

Figure 48: Language Spoken at Home



Just over seven percent of respondents stated they use a mobility device to get around. For those who said they do use a mobility device, they were asked to identify what type they use. Most respondents used a walker or cane, followed by manual and electric wheelchairs/scooters.

Figure 49: Use of Mobility Aids

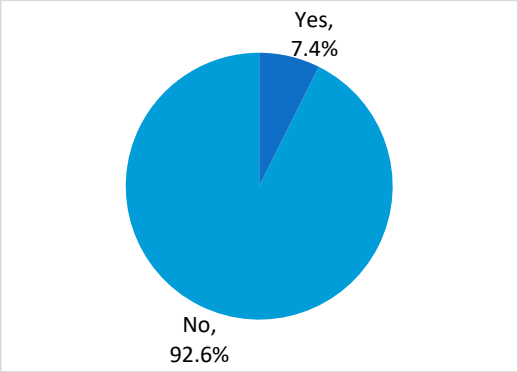
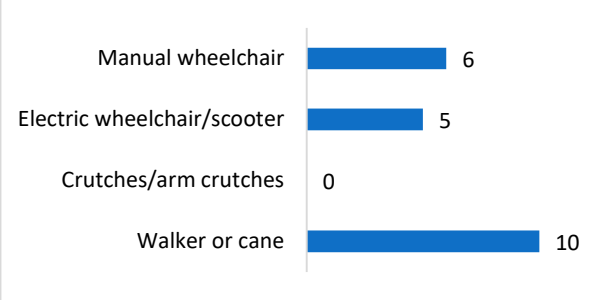
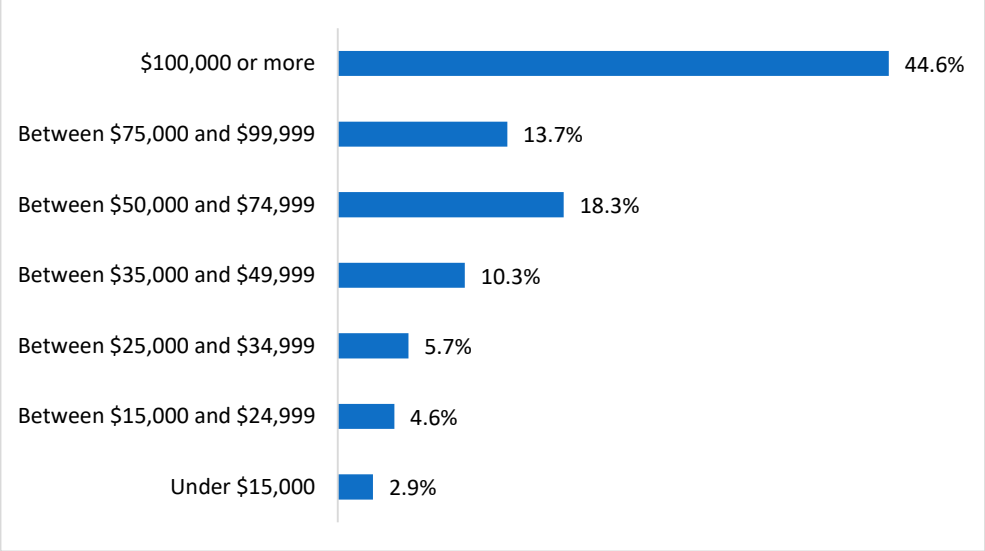


Figure 50: Types of Mobility Aids



The final demographic question asked of survey respondents was their household income level. Overall, 44.6 percent of survey respondents stated their household income was over $100,000 a year.

Figure 51: Household Income of Respondents



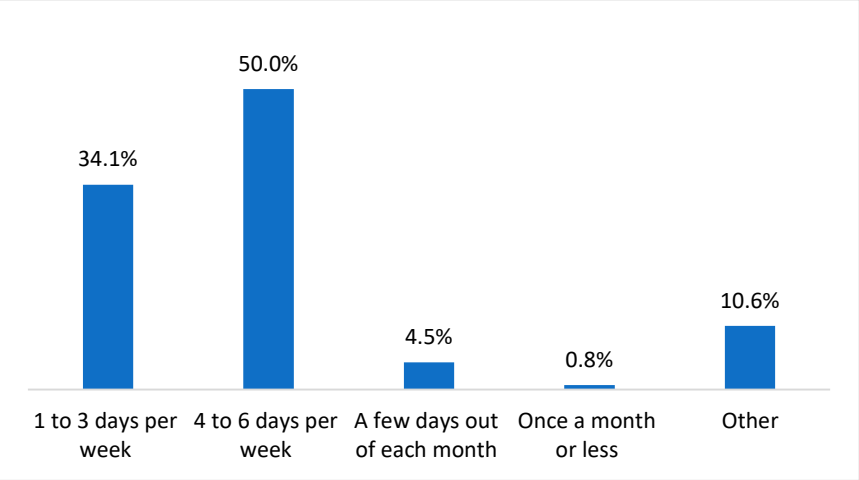
RIDER SURVEY

RLS conducted the rider survey over May 21st through 23rd, 2024 at the Transit Depot. Primarily, riders completed paper surveys while they waited to transfer between routes. There were 134 survey responses, including the 21 responses to the community survey from individuals who indicated that ColumBUS was their primary mode of transportation.

Transit Usage Patterns

Half of the respondents said that they use the bus four to six times per week, with another third of respondents using the service one to three days per week.

Figure 52: Frequency of Using ColumBUS



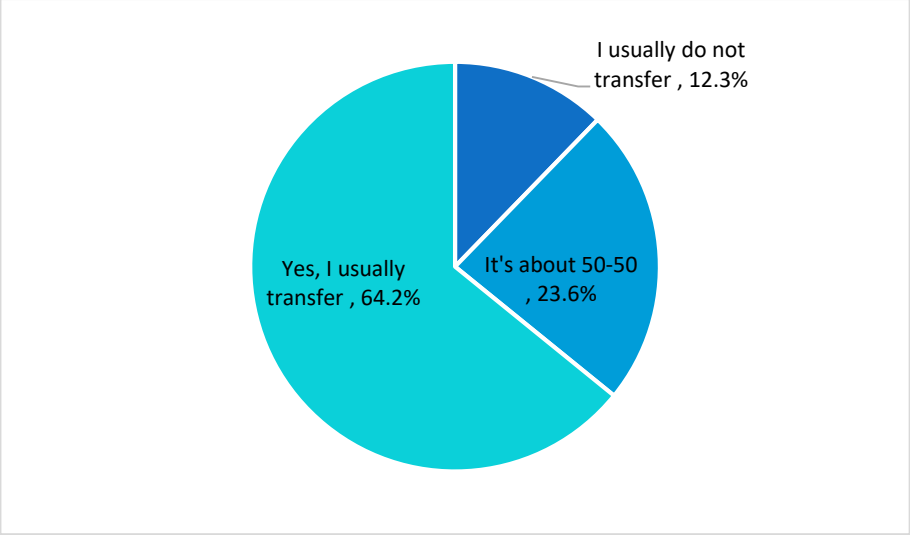
Respondents provided their home addresses and their most frequent destinations. For privacy reasons, home addresses are excluded from this report; however, the survey collected the names of respondents' apartment complexes or mobile home communities, if applicable. The responses included:

- Bloomfield Apartments (1 respondent)
- Briarwood (1)
- Caldwell House (1)
- Cambridge Square Apts (1)
- Candlelight Village (3)
- Canterbury Apartments (1)
- Dogwood Place Apts (1)
- Farrington Place (1)
- Foxpointe Apts (2)
- Gateway Apartments (2)
- Heritage Woods (1)
- Hilltop (1)
- Homestead Mobile Home Park (3)
- Lincoln Village (1)
- Oxford House (1)
- Pence Apts (1)
- Quail Run Apartments (3)
- Spruce Ridge Apts (2)
- Steinhurst Manor (1)
- The Cole (1)
- Town and Garden Apartments (2)
- Water's Edge (1)

The most common destination frequented by riders was Walmart, followed by Target and Kroger for purposes of shopping or employment; other frequent shopping or work destinations included dollar stores, CVS, and Goodwill. Other frequent destinations included the Bartholomew County Library, NexusPark, Centerstone, and Columbus Regional Hospital.

Respondents indicated how often they transfer between routes when riding from their origin to a destination. As shown in Figure 53, riders need to transfer for the majority of rides.

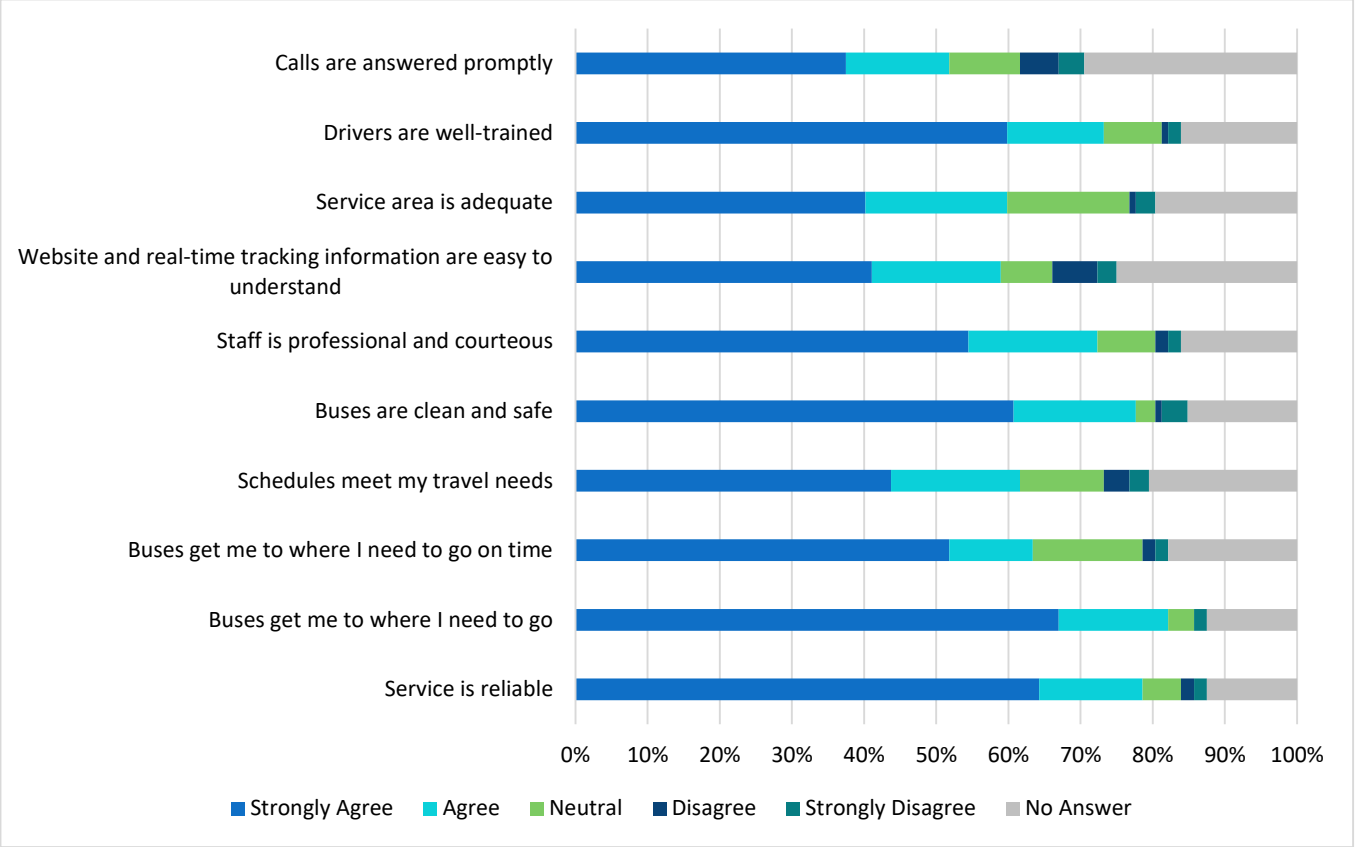
Figure 53: Frequency of Transferring



Views on Service Quality

Respondents indicated how much they agreed or disagreed with various statements about the quality of the service. Respondents rated ColumBUS highest on "Service is reliable" (64.3 percent strongly agreed) and "Buses get me where I need to go" (67.0 percent strongly agreed). The responses are shown in Figure 54.

Figure 54: Service Ratings



Open-Ended Feedback

The rider survey included two questions that allowed respondents to provide open-ended feedback. Respondents were asked to share what they liked and disliked about the riding experience, and to provide any additional feedback on public transit needs or services in Columbus. The responses received for each question were very similar, so they have been combined for analysis purposes.

Between the two questions, there were 136 open-ended responses. These responses were roughly evenly divided between praise for the service and suggestions for improvement. There were many general positive comments from riders who greatly appreciate the service (e.g., “Everything is great, nothing to dislike”; “I like pretty much everything”; “Like it the way it is”). The most common, specific positive theme in the comments was appreciation for the kindness and professionalism of the drivers/staff (20 comments). Riders also expressed appreciation that the service is quiet and calm (six comments), the bus is reliable and on time (six comments), that it is free (four comments), clean (four comments) and offers climate control and wifi (four comments).

Every driver is amazing, friendly and genuinely cares.

The most frequent suggestions for improvement concerned the frequency and timeliness of the routes, and interest in more days and hours of service, especially Sunday service. Thirteen comments concerned frequency and timeliness; in these comments, respondents either called for routes to run more than once per hour or noted that rides take a lot of time, especially if they involve transfer. There were also thirteen comments calling for more hours on weekdays and Saturdays, and the addition of Sundays.

> *If there were more buses there would be a better opportunity to get places in a timely manner.*

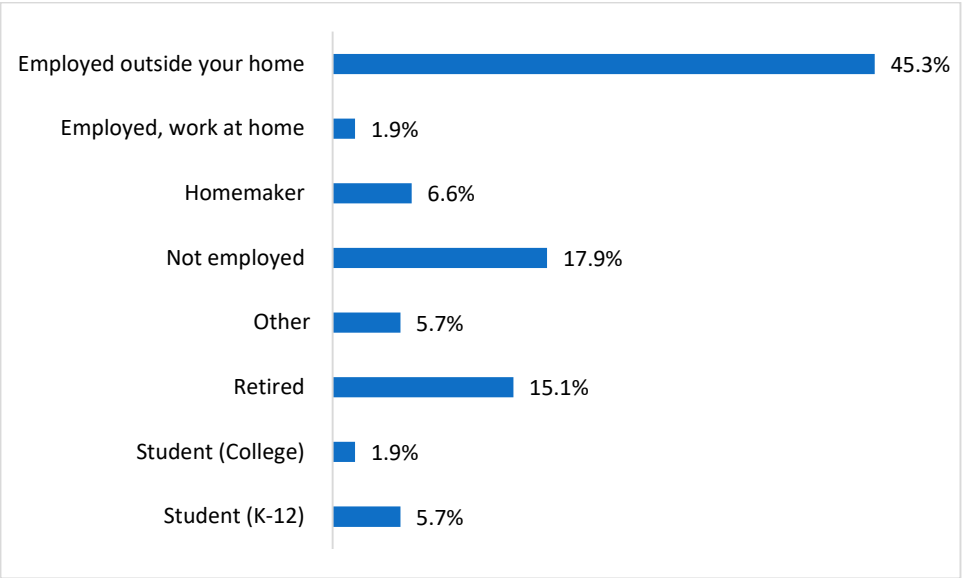
Riders also commented on matters outside of frequency/timeliness and days/hours of service:

- Seven comments concerned reaching more destinations in Columbus, including Clifty Creek School, Southern Indiana Orthopedics, Columbus Fellowship Club, Treatment and Support Center (TASC), and doctor's offices at Central Ave. and Rocky Ford Road.
- Four respondents called for more amenities at bus stops, including benches, trash cans, shelters, and accessibility for wheelchairs.
- Three respondents said that some of the drivers are not personable.
- Two comments called for more comfortable seating on the buses.
- Two comments concerned Mill Race Depot – that it is closed to the public so that bathrooms are inaccessible, and that people smoke in common areas.
- Two respondents said they had difficulty with the drivers not noticing they were waiting at the stops, then passing them without stopping.
- Two comments concerned the need for public information that is easier to understand and real-time bus location tracking.

Respondent Demographics

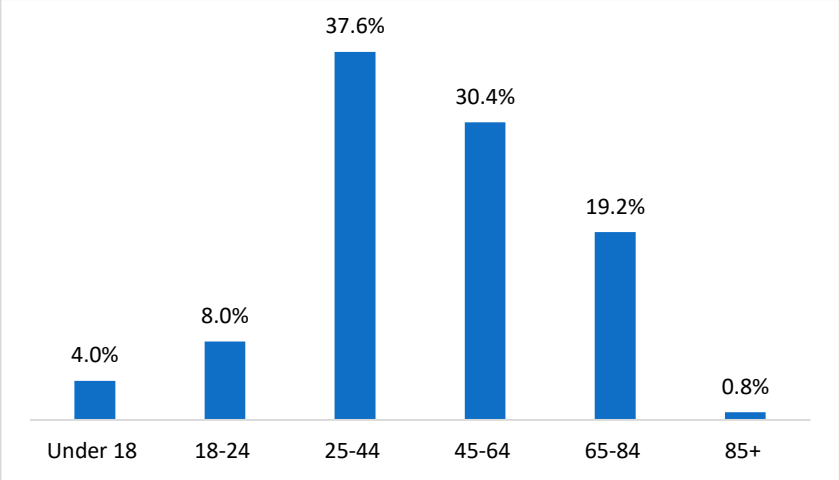
The occupational status of respondents is provided in Figure 55.

Figure 55: Occupational Status



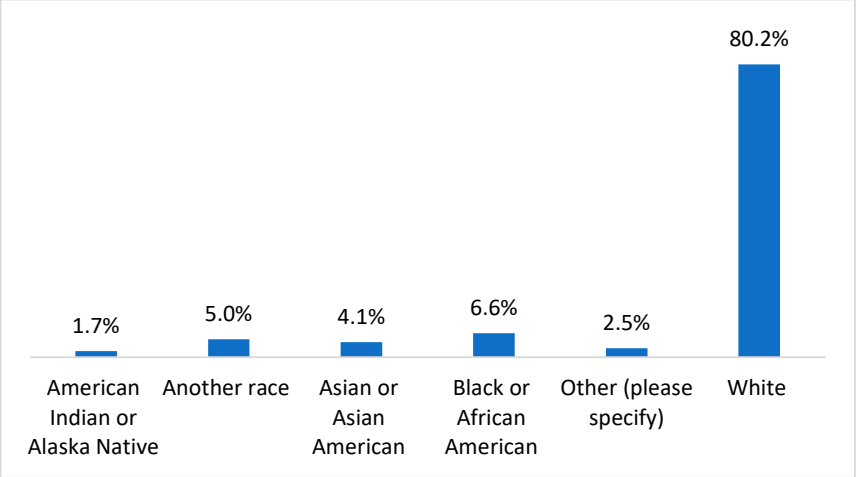
The ages of respondents trended younger than the community survey respondents.

Figure 56: Age of Respondents



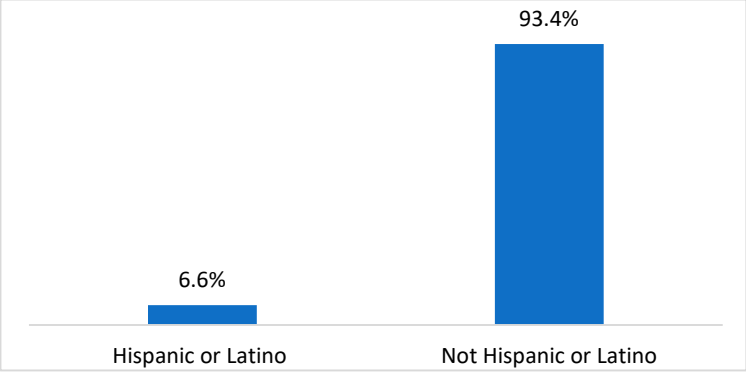
The races of the respondents are shown in Figure 57.

Figure 57: Race of Respondents



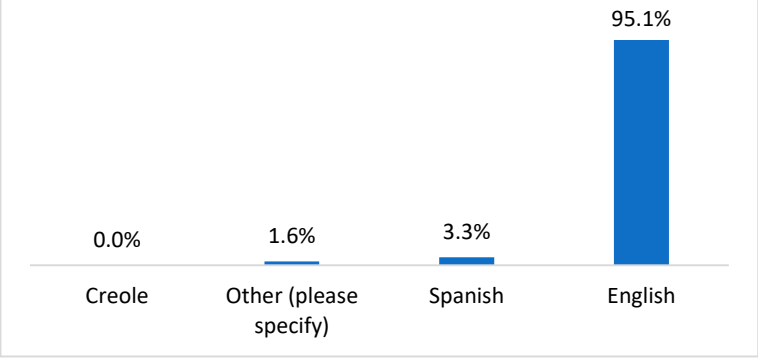
The respondents' ethnicities are shown in Figure 58.

Figure 58: Ethnicity of Respondents



The languages spoken at home by the respondents are shown in Figure 59. The individuals who selected "Other" spoke Korean (1) and Japanese (1).

Figure 59: Language Spoken at Home



As shown in Figure 60, 17.2 percent of respondents reported that they use a mobility device. The types of devices used by respondents are shown in Figure 61.

Figure 60: Use of Mobility Device

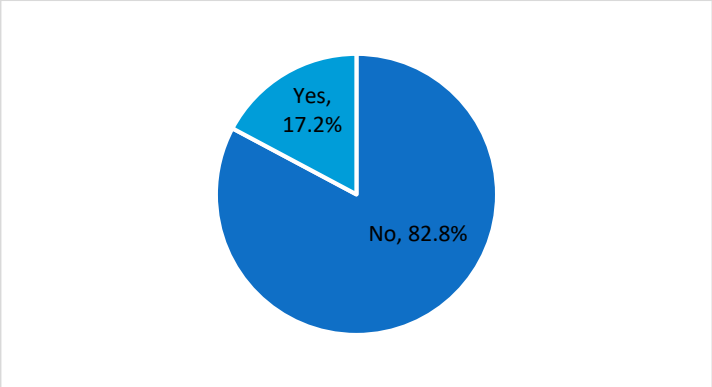
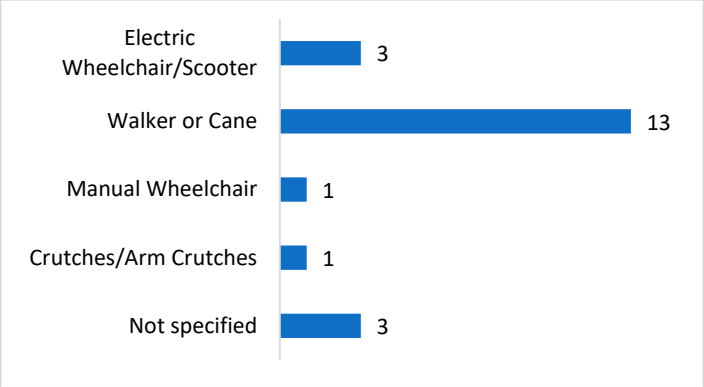
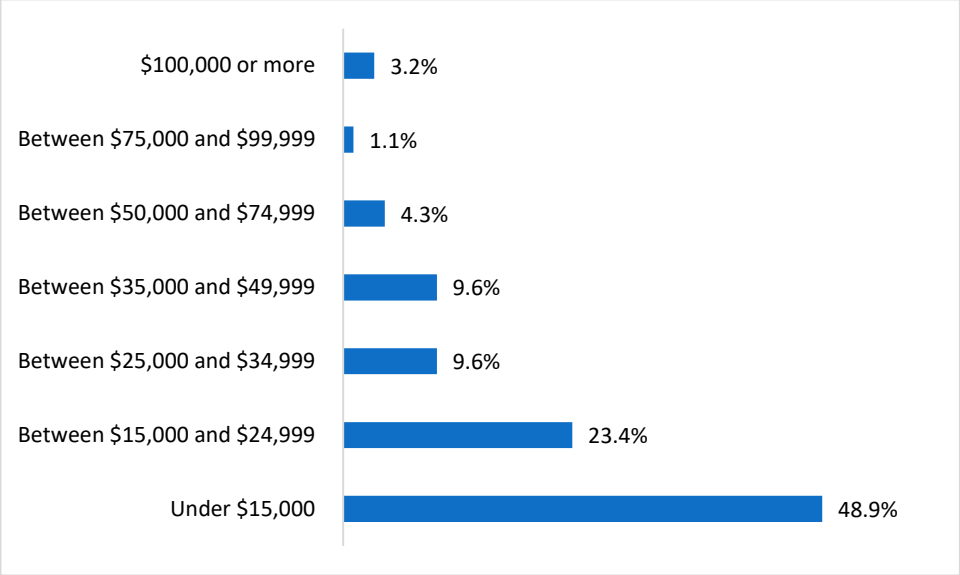


Figure 61: Type of Mobility Device Used



The household incomes of the respondents are shown in Figure 62. The majority of the respondents reported incomes under $25,000.

Figure 62: Household Income of Respondents



STAFF AND STAKEHOLDER INPUT

Staff Input

RLS conducted one-on-one and small group interviews with 18 of ColumBUS' drivers, mechanics and dispatchers in March, 2024. Their input is summarized in this section.

Top Unmet Transportation Needs of Local Residents

Staff said that local residents and riders need access to locations that are outside the city limits, such as Taylorsville. Water's Edge Apartments residents need transit service, located off Indianapolis Road close to Taylorsville. There are factories on Indianapolis Road with employees who sometime make a long and unsafe walk from the Mill Race Depot. A route up this way could take people to the outlet mall. The 2019 route study (which was not implemented) proposed a Route 1 that could go up Indianapolis Road to serve the factories.

There are unmet needs on the west side where the city limits have extended, including Shadow Creek. Other unserved areas on the west side include Belmont, Tipton Lakes and the Barthlolmew County fairgrounds. A top unmet need is transportation to jobs in Walesboro.

Many older, moderate-income adults reside on the east side as far out as Talley Road. People with unmet needs live in the All Saints Community apartment complex near Talley Road.

Some residents, particularly the elderly, would benefit from service that is tailored to those who do not qualify for Call A Bus but still have mobility issues and are unable to walk the distances required to get to the routes. This need includes doctor's offices that are not easily accessible on fixed route, including offices at Washington Street and U.S. 31. Rides are also needed to out-of-town medical appointments.

Top Suggestions or Complaints of Riders

Staff report that riders would say that the fixed routes don't serve enough areas. Too much walking is involved. Riders would like night and Sunday service.

Some people complain that Call A Bus is full when they call for a ride. Drivers tell them they have to call further in advance. On Call A Bus, they tried a new trip scheduling system, but it was too hard on clients and drivers. There was too little training. Riders didn't like the 30-minute window.

Other input included that there is a language barrier with many riders, particularly with Asian languages. The Target transfer is often missed. Route 1 riders don't like having to use bus stops. The other routes have a flag stop system.

Resuming Passenger Fares

Staff provided mixed input on the subject of resuming passenger fares. Several drivers felt that riders should pay, some were on the fence, and others thought there would be too many downsides to resuming fares. Drivers were concerned about low-income people struggling to afford transportation, although some of the poorest individuals would likely be able to get bus passes from social service agencies. Some staff believe that ridership would decline if fares were charged. Fare payment would cause slower service, with increased dwell (down time) time to allow people to pay. Requiring fares may also cause conflict between some passengers and drivers. Still, many drivers – likely a majority, though not a groundswell – feel that riders should pay a fare to ride. If fares are reinstated, the drivers would like not to have to touch the fares too much. They don't like the old paper passes because they were punch passes and had to be handled a lot. A touchless, app-based system would be preferred.

Demand Response Service

Staff discussed the potential of reducing paratransit service to the ADA-required ¾-mile fixed route buffer service area, with some form of general public demand response service offered outside of the buffer for a fare. Many drivers like the idea of a general public version of Call A Bus – if there was the right fare. Some cautioned against running an inefficient service, like taking one person at a time to Walesboro. Staff felt it could be used to cover areas unserved by fixed route – for example, Flat Rock Park and Riverview Acre (up River Road north of the city), Walesboro, and the west or south sides. Drivers noted that Call A Bus needs part-time/stand-by drivers – it can be scheduled too tightly (although sometimes, Call A Bus vehicles idle for long periods of time without activity). They stated that if paratransit is cut back to the ¾ mile buffer, people would lose access. There would still need to be an option for them.

Route Comments

Regarding the routes, there is duplication in some routes (2 and 3 for sure, and 1), yet they system does not serve some areas. They feel that meeting up for transfers at Target isn't feasible. They are having to drive too fast at times to make it. The times are very tight on Routes 1 and 3.

Route 4 may need designated stops. It is too crowded to stop to board and disembark passengers so frequently. The bus stops on Route 1 are too far apart and it's causing riders hardship to walk so far. Designated stops will cause complaints about long walks, but several drivers think it's a better idea to have them.

Some drivers question the value of serving Ivy Tech/IU Columbus. It was added due to comments from the public, but ridership is low. Adding the Social Security Office and BMV to this route would help some riders.

One driver thought Route 5 could alternate between Walesboro and 46, as a way to provide service to Walesboro.

Drivers suggested Route 1 go to NexusPark and still serve the schools, but shift to avoid the low-ridership areas on the route which tend to be more affluent.

Other Staff Input

Drivers wish the system could hire more drivers. They feel that help from part time drivers is limited to 9am to 1pm, but they get hit hardest in the early morning and between 2 and 5. They noted that the last hour of service, 7 – 8 pm, and Saturday mornings, are lower in ridership.

Drivers said that regular riders are sometimes offended by the riders who are taking up space on the bus without destinations.

Signage showing that the buses run until 8pm, but the last run beginning at 7pm, is confusing. Riders see the signage and think they can board at the Depot at 8pm.

Stakeholder Interviews

RLS conducted one-on-one interviews with the following stakeholders:

- Alan Degner, Executive Director, Columbus Housing Authority
- Ben Jackson, Trustee, Columbus Township
- Bryan Burton, Director of Public Works, City of Columbus
- Cindy Frey, President, Columbus Chamber of Commerce
- Grace Kestler, Member, Columbus City Council
- Jessie Boshell, Senior Planner, City of Columbus
- Stacy Heagy, Operations Specialist, ColumBUS

This section summarizes the key issues discussed in these interviews.

Challenges with Meeting Employment Transportation Needs

A common theme was the difficulty of getting to Walesboro for work. People are bicycling and walking to Walesboro even though it is several miles away from inner Columbus. Walesboro has very many job opportunities. Other hotspots for employment were noted as North Indianapolis Road and Edinburgh, but Walesboro was the most frequently mentioned unmet need. King's Hawaiian is building a large production facility in Taylorsville.

Many of these employment opportunities are on second and third shift. ColumBUS' hours would need to extend into the late evening to accommodate these shifts.

Improving Geographical Coverage

The fixed routes only serve a portion of Columbus. While the City has grown outward, the routes have stayed the same, other than the addition of Route 5 on the west side. There are large, well-populated unserved areas including Shadow Creek, eastern Columbus (as far as Talley Road), North Indianapolis Road, and the west side around Goeller Road and Tipton Lake. East Columbus has many older residents on limited incomes. The City View development on the west side will have strong density and a Columbus Regional Hospital location.

There is no transit outside of Columbus. There is need not only in the Taylorsville area, but in the rural areas of the county. Regional transportation that connects to Johnson County and Indianapolis is also a need.

Improving Travel Times and Extending Service Hours

Rides on fixed routes can be long and circuitous. The Mill Race Depot is in an awkward location for transfers, making trips even longer. Point to point, trips on the transit system can several times as long as the same trip would take in a car. There should be convenient, direct, frequent trips available in key locations (e.g., downtown to NexusPark).

Weekend and night service are needed even though they may not get strong ridership.

Better Awareness and Public Information

It can be difficult for the community to understand how the system works. One way of defining success would be for every resident to understand what their transit options are (e.g., what route comes by their home at what time, and where they could go). Columbus has residents who speak many different languages which is an added challenge for outreach. One stakeholder noted that the bus stop signs are very small. The information on the website is not easy to understand. The bicycle and pedestrian planning effort includes a wayfinding plan.

Demand Response Transportation

Curb to curb service may be an effective way to serve new areas of the city. Many people struggle with transportation for medical appointments. The route system does not serve medical trips very well. Many areas covered by the fixed routes do not have safe, accessible bus stops or pedestrian infrastructure.

Feedback on Fares

It is helpful to many people that the service is free, but charging a low fare would also be appropriate. Some stakeholders strongly favor returning to a fare, while others are highly appreciative of the service being free.

ADVISORY COMMITTEE INPUT ON SUCCESS MEASURES

A group of stakeholders and transit system staff formed an advisory committee that met on three occasions during the study to review the project objectives and activities, and provide input on the service alternatives developed by RLS. The presentations from each of the three meetings (two on-site meetings and one virtual) are included in the appendix to this report. Stakeholders who attended one or more of the advisory committee meetings are listed in Table 3.

Table 3: Advisory Committee

Name	Organization
Bryan Burton	City of Columbus/ColumBUS Transit
Matt Dudukovich	City of Columbus/ColumBUS Transit
Stacy Heagy	City of Columbus/ColumBUS Transit
Bethann Knotts	City of Columbus/ColumBUS Transit
Kathy Lee	City of Columbus/ColumBUS Transit
Derek Johnson	City of Columbus/ColumBUS Transit
Kim Bates	City of Columbus/ColumBUS Transit
Jackie Combest	ColumBUS Transit Advisory Committee
Ben Jackson	Columbus Township
Andrew Beckort	City of Columbus – Engineering
Erica Schmidt	City of Columbus – Human Rights
Joel Phillipson	Columbus Regional Health
Sara Dunlap	Council for Youth Development
Laura Thayer	Columbus Area Metropolitan Planning Organization
AJ McKeand	Bartholomew County School Corporation
Trena Carter	ARA Cities
Grace Kestler	City of Columbus – City Council
Alan Degner	Columbus Housing Authority
Eric Frey	City of Columbus - Administration
Ashley Beckort	Columbus Area Metropolitan Planning Organization

The committee provided input into potential success measures for ColumBUS. There is a wide variety of potential success indicators for the system. The committee named the following items as potential success measures:

- % of Area Serviced
- Access to Walesboro, the outlet mall, and Indianapolis
- Clean, Well-Maintained Vehicles
- Community Awareness
- Efficient Travel Outcomes
- Extended Hours
- Free or Very Low Cost
- Good Customer Service
- High Quality Training
- High Ridership
- Inclusive
- Integration of Non-Dedicated Vehicles at Peak Times
- More Call A Bus Availability/Capacity
- More Funding
- Multilingual
- On-Demand Technology
- Realistic Options
- Safety
- Schedules Meet Shift Changes
- Shorter Rides
- Weekend Service

The input gathered from riders and the community reflected support for many of these objectives. The recommendations of this study, presented in the following chapter, are focused on providing access to more places in the community, increasing the footprint of the system. The fixed route service will remain fare-free while continuing to provide access to the highest-density areas of the city, most key shopping and medical areas, many employers, and Ivy Tech/IUPUC. The recommendations will also result in the availability of shorter, more convenient rides, in the form of demand response service for the general public.

COMMUNITY INPUT MEETINGS

The project consultant conducted two public input meetings on draft route and service alternatives on September 18, 2024. Two meetings were held at Columbus City Hall from 1:00 p.m. to 2:30 p.m. and 5:30 p.m. to 7:00 p.m. The meetings were publicized in advance through newspaper legal notices and a press release from the City, which garnered coverage in multiple media outlets.

During the meetings, the consultant presented feedback received through data analysis and community input during prior phases of the route study. This was followed by a presentation of two potential route networks for implementation in 2025, as well as descriptions of demand responsive services that would provide point-to-point service for the general public and scheduled rides connecting Taylorsville and Walesboro to the system's core service area in the City. The presentation provided during the meetings is included in the appendix to this report.

A total of thirteen members of the public attended the input meetings. Members of the public asked various specific questions about the presented alternatives, and submitted written comments on forms provided at the meetings. The questions and comments have been summarized and included in the appendix, following the presentation.

RECOMMENDATIONS AND IMPLEMENTATION PLAN

This chapter describes service and policy changes for implementation by ColumBUS over a one-year period. These strategies involve a redesign of the fixed route network; expansion of service coverage to Taylorsville and Walesboro; expansion of point-to-point transportation to the general public; and, improvements to public information and marketing.

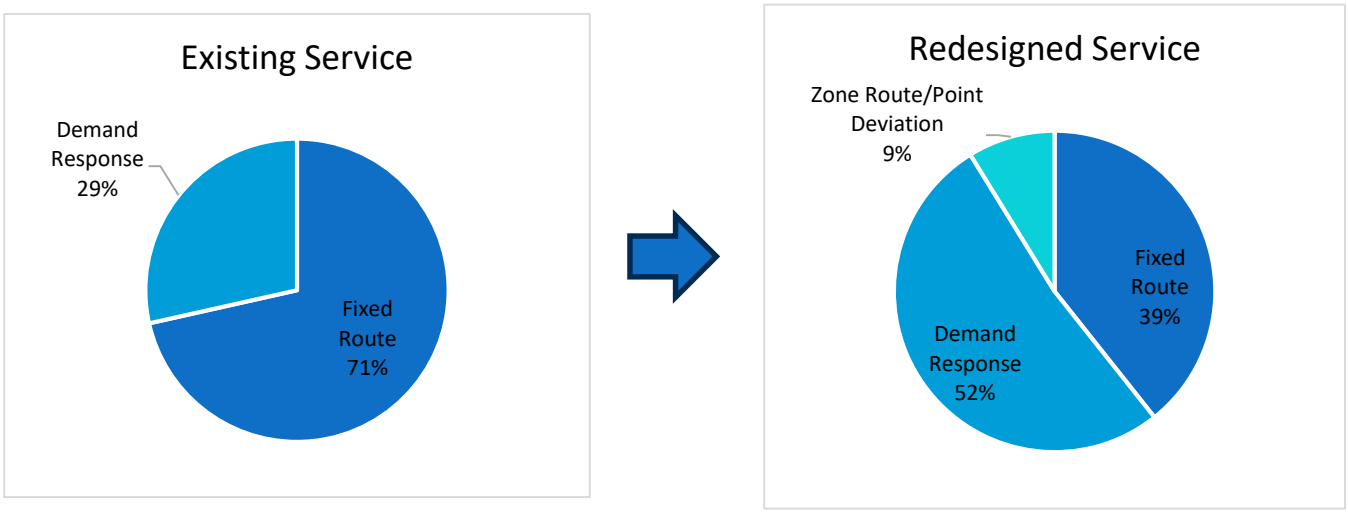
Table 4: Service and Policy Strategies

Type	Strategies
Redesign Fixed Route Service	• Consolidate the system's fived routes into three routes • Move to a designated bus stop model, eliminating flag stops
Expand Service Coverage	• Add zone route service to Taylorsville • Add point deviation service to Walesboro
Expand Point-to-Point Service	• Offer reservation-based point-to-point service to the general public • Comingle ADA paratransit with general public point-to-point • Change ADA paratransit service area • Implement a 30-minute pick-up window
Improve Public Information and Marketing	• Develop new brochures and online content for all services • Maintain accurate, real-time service information through CAD/AVL system and GTFS • Coordinate bus stop signage and wayfinding with the City bicycle and pedestrian network

REDESIGN FIXED ROUTE SERVICE

The first group of strategies includes changes to ColumBUS fixed routes to eliminate duplication and re-allocate resources to other types of services while maintaining fixed route coverage in most of the existing service area. ColumBUS has traditionally operated as a primarily fixed route system, offering complementary paratransit as required under the Americans with Disabilities Act (ADA). Under the new service model, the majority of the service will be demand responsive and hybrid services that have some characteristics of fixed route, but are closer to demand response (zone route and point deviation). The difference in resource allocation between the existing and new models is illustrated in Figure 63.

Figure 63: Resource Allocation for Existing Service vs. Redesigned Service



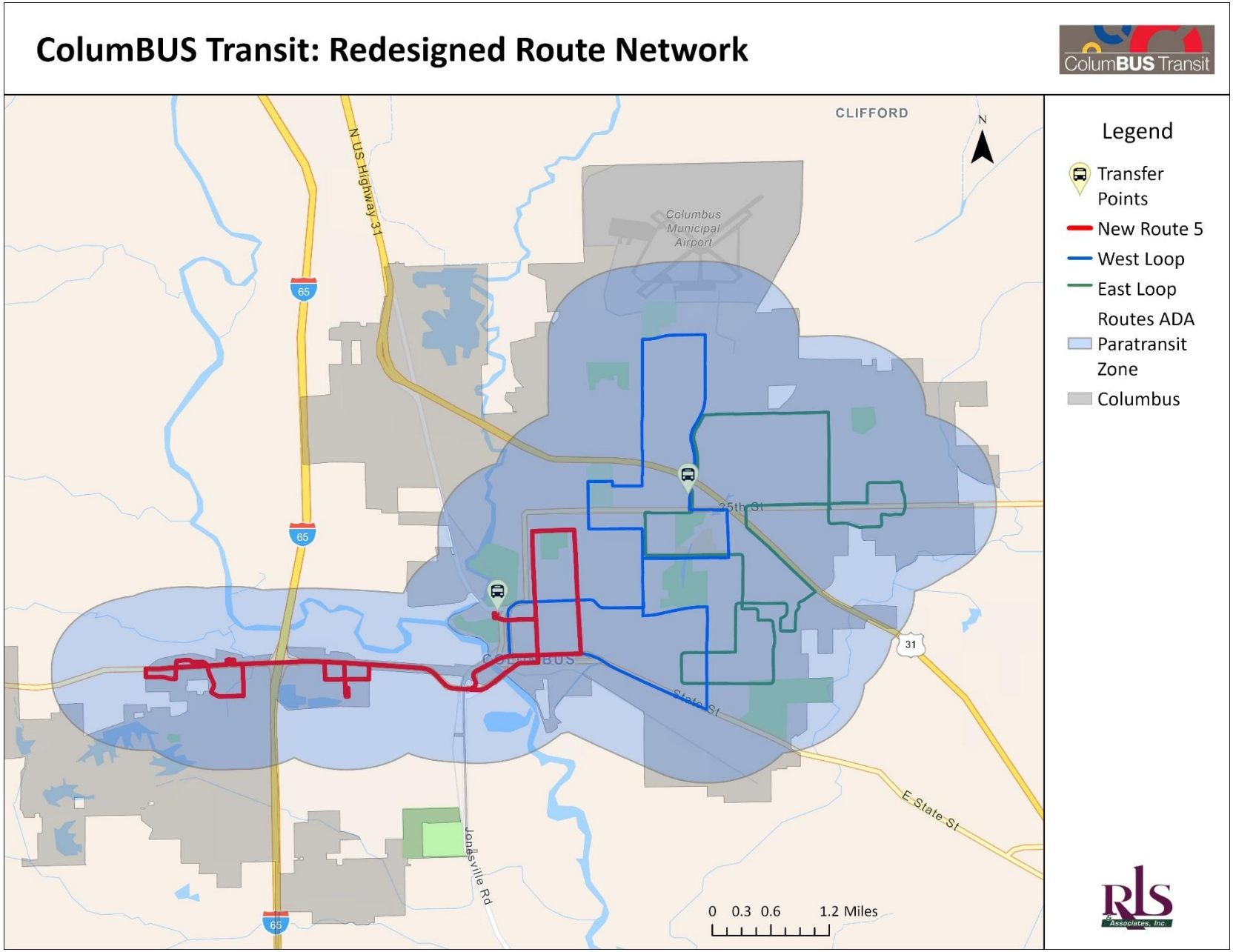
Redesigned Routes

ColumBUS will reduce the number of fixed routes from five to three. During the study, the project consultant developed multiple fixed route network alternatives for consideration by ColumBUS' management and the advisory committee. The selected network offers the transit system the opportunity to preserve routing in the highest-ridership areas while offering significant new services (zone route, point deviation, and general public point-to-point service).

The redesigned route network does not include service outside of the hours of 6:00 a.m. to 8:00 p.m. (Monday-Friday) or 8:00 a.m. to 5:00 p.m. (Saturday) for fixed routes. Instead, resources will be dedicated to expanded services within the existing weekday and Saturday hours of operation.

The redesigned network is shown in Figure 64. Following this figure, a discussion of each new route is provided.

Figure 64: Redesigned Fixed Routes



East Loop

The East Loop is shown on the following page in Figure 65. This route one of two loops that have been designed to replace Routes 1 through 4. The two loops will depart every 60 minutes from NexusPark (marked as a transfer point on the map).

The East Loop will leave NexusPark and turn westbound on 25th Street. It will turn southbound on Central Avenue, then eastbound on 17th Street, providing access to Columbus Regional Hospital. Then, it will travel southbound on McClure Road until turning eastbound on 9th Street, then southbound on Schnier Drive, providing access to Centerstone. After turning southbound on Marr Road, the route will turn right on Indiana Avenue, where there will be a stop serving Columbus East High School. The route will turn northbound on Cherry Street, then eastbound on McKinley Avenue, before turning left on McClure Road. After turning right on 10th Street, it will turn right onto Creekview Drive, providing access to Walmart and nearby businesses.

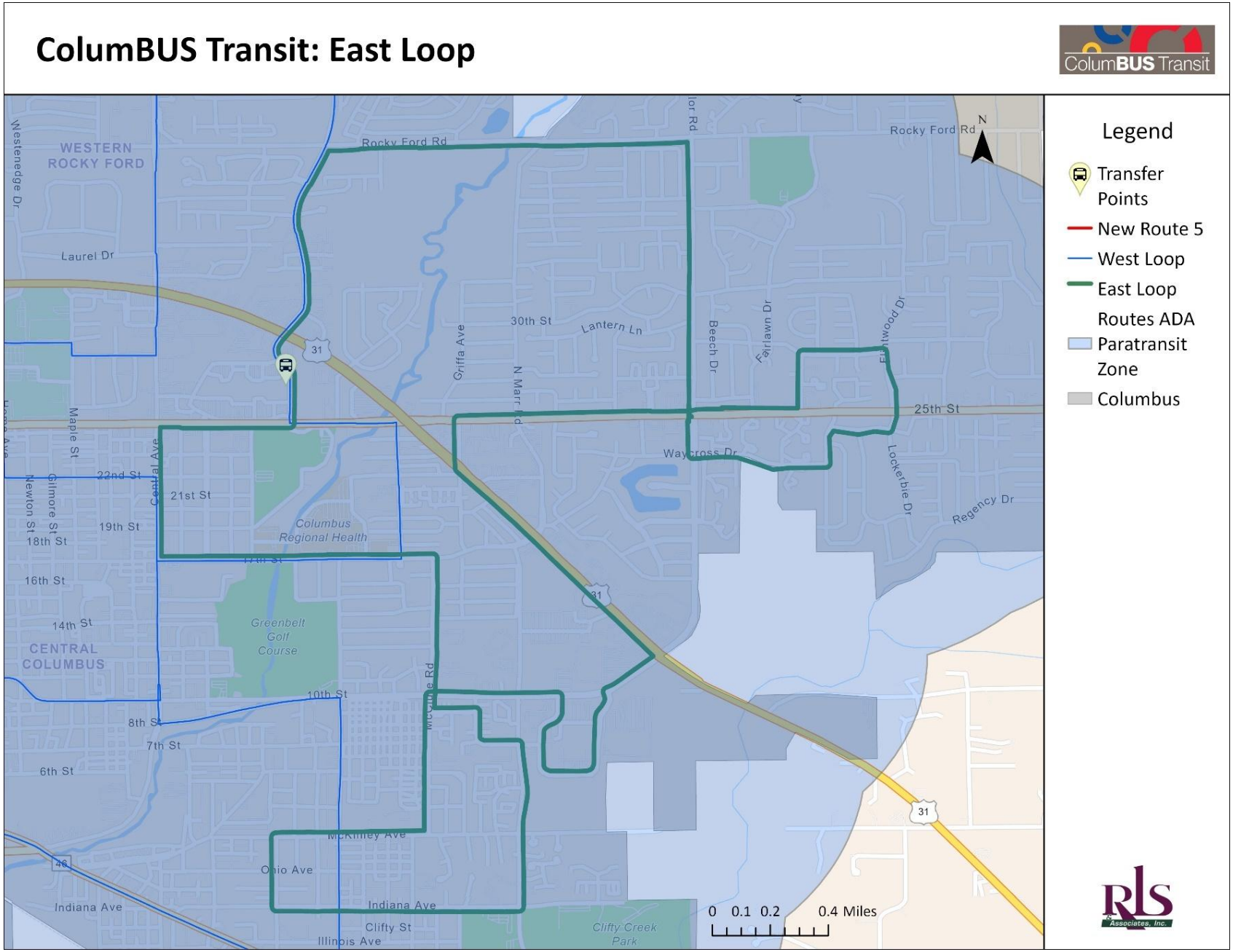
After Walmart, the route will turn right on Taylor Road, then left on National Road/U.S. 31, providing access to the area's retailers. It will turn northbound on Beam Street, then right on 25th Street to serve the high-density residential neighborhoods in this area. The route will cover Waycross Drive, Timbercrest Drive, and Lockerbie Drive similar to the existing Route 2. It will cross 25th Street continuing northbound on Flintwood Drive, serving Foxpointe Apartments and surrounding neighborhood, similar to the existing Route 3. After traveling westbound on 25th, the route will head northbound on Taylor Road, turning eastbound at Rocky Ford Road, providing access to the mobile home community on the north side of Rocky Ford before turning southbound on Middle Road to return to NexusPark.

The East Loop was designed to cover areas served by Routes 1 through 4 on the city's east side. The new route was designed to provide a simpler route design that is easier to understand and will offer more direct "one-seat" rides for many passengers. The route offers the advantage of directly connecting many residences, businesses and healthcare facilities, without requiring customers to travel downtown to transfer to other routes. The route does not serve Mill Race Depot, instead offering a transfer to the West Loop at NexusPark. The West Loop, described in the following section, will connect the city's east side and downtown area, stopping at both NexusPark and Mill Race Depot.

The new route does not cover some areas served by the existing routes on the east side of the city, including Marr Road north of 10th Street and south of Indiana Avenue, State Street east of Gladstone Avenue, and Taylor Road between U.S 31 and Waycross Drive. These segments experienced low ridership on the existing service.

In Figure 65, the blue shading labeled "Paratransit Zone" indicates the ¾-mile radius around the system's fixed routes in which the ADA mandates complementary paratransit service.

Figure 65: East Loop



West Loop

The West Loop originates at NexusPark where a timed transfer with the East Loop will be available every 60 minutes. The West Loop departs from NexusPark by turning eastbound on 25th Street, then southbound on Midway Street, providing access to the Treatment and Support Center (TASC) before turning westbound on 17th Street to serve Columbus Regional Hospital. Then, the route travels southbound on Central Avenue before turning eastbound on 8th Street. The route then travels southbound on Gladstone Avenue until turning westbound on State Street. Multiple key destinations in this area are served by the route, including Dorel Juvenile Group, Love Chapel Food Pantry and Vivera Senior Living.

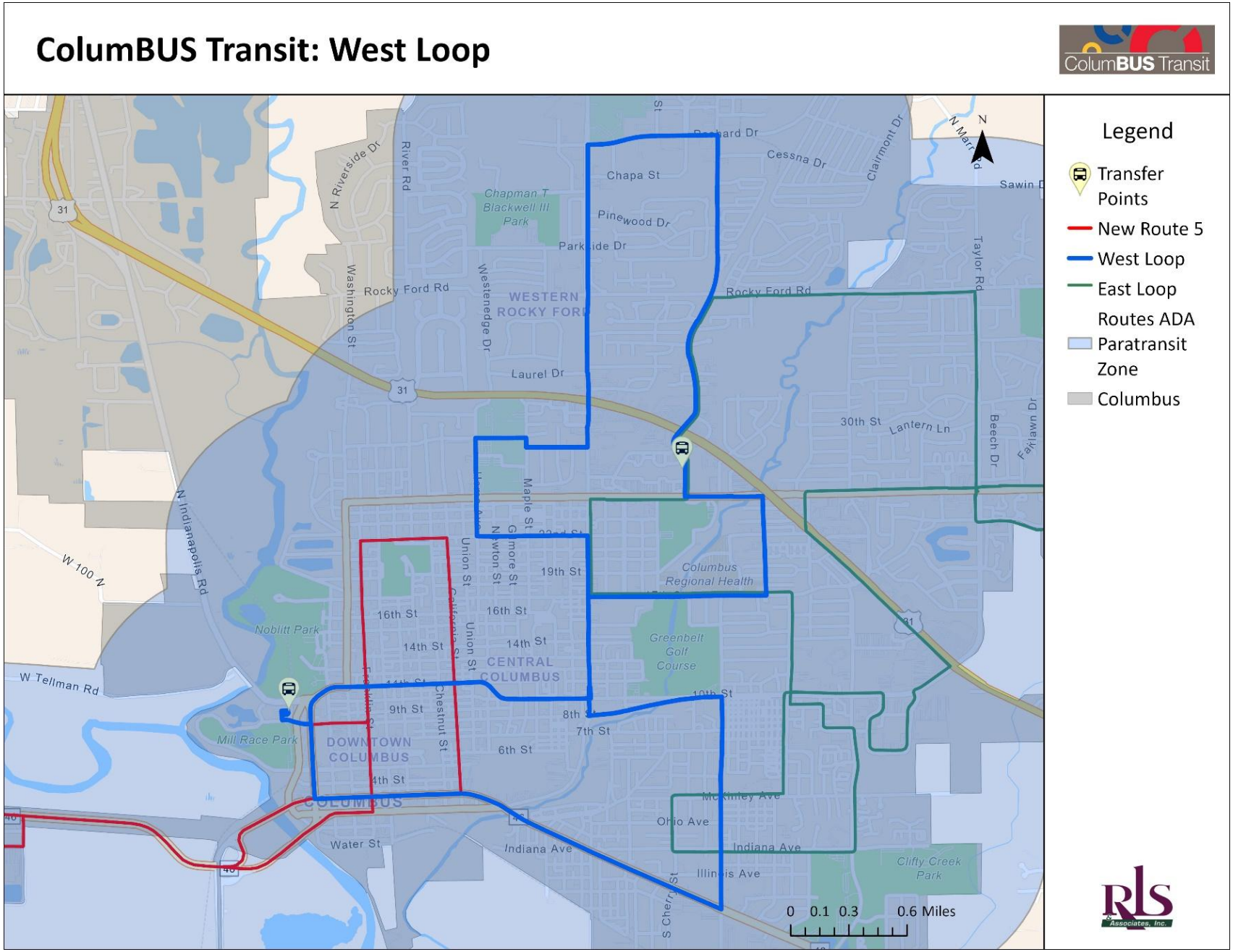
The route continues on State Street into downtown Columbus, eventually turning northbound on Brown Street from 2nd Street, then turning westbound on 8th Street and stopping at Mill Race Depot. At the Depot, there will be a timed transfer with Route 5. After leaving the Depot, the West Loop will turn northbound on Brown Street and travel through the roundabout to continue on 11th Street. It will bear right at the curve to continue eastbound on 10th Street before turning northbound on Central Avenue.

The route will then turn westbound on 22nd Street, then northbound on Home Avenue before turning eastbound on 27th Street after Columbus North High School. Then, the route turns northbound on Central Avenue, serving the stop closest to Kroger, before continuing northbound until turning eastbound on Poshard Drive, serving Ivy Tech Community College. The route then turns southbound on Middle Road, providing access to Faurecia and multiple mobile home and apartment communities before returning to NexusPark.

The West Loop consolidates segments of Routes 1 through 4 primarily in areas west of Gladstone Avenue. Like the East Loop, the route was designed to provide a more straightforward travel pattern and offer more direct “one-seat” rides for many passengers.

Segments that will no longer be served include Washington Street from downtown to 27th Street, 27th Street between Washington Street and Home Avenue, U.S. 31/National Road from Westenedge Drive to Beam Street, Hawcreek Avenue, Gladstone Avenue from 10th Street to 17th Street, McKinley Avenue from State Street to Cherry Street, and 7th Street. Under the redesigned network, many residents in these areas will still have access to a bus route within a half-mile of their homes.

Figure 66: West Loop



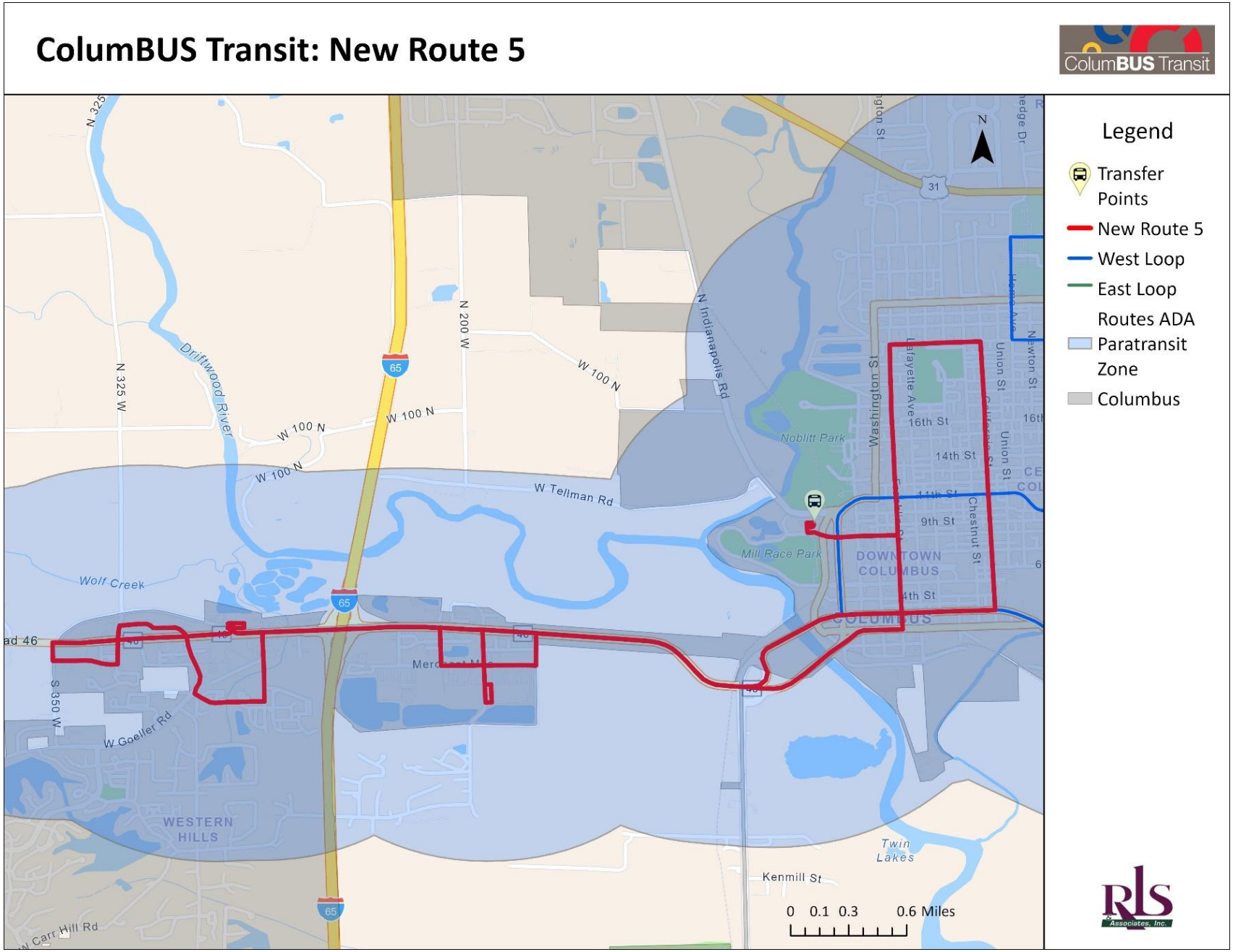
New Route 5

The new version of Route 5 operates similarly to the existing Route 5 in areas west of downtown. A map is provided in Figure 67. West of the Flat Rock River, three changes will be made to the route. The route will not serve Merchant Mile west of Johnson Boulevard, or the roadway that extends north of Jonathan Moore Pike behind AutoZone and German American Bank.

These changes will reduce time and mileage on the route by eliminating or adjusting service to lower-ridership stops. This will allow Route 5 to provide a loop route pattern through the downtown/inner north side areas after leaving Mill Race Depot, prior to leaving downtown to serve the Jonathan Moore Pike corridor. From the Depot, the route will travel eastbound on 8th Street, northbound on Franklin Street, then turn eastbound on 22nd Street passing Donner Park, then turn southbound on California Street. Along California Street, the route will provide access to Cummins and other destinations currently served by Route 2. Route 5 will then turn westbound on 3rd Street to travel out of downtown to serve the Jonathan Moore Pike corridor. Afterward, when coming inbound to downtown, the route will turn northbound on Franklin Street, then westbound on 8th Street, stopping at the Depot. A transfer with the West Loop will be available at the Depot.

The new Route 5 "downtown loop" (3rd, California, 22nd, and Franklin) provides route coverage in the downtown and inner north Columbus areas. The existing route network provides very extensive, at times overlapping, service in the downtown area; all five routes wind through downtown on different streets. In the redesigned network, Route 5 and the West Loop will provide coverage that ensures that bus service is available within a half-mile of any downtown location. Routing on 5th Street, 7th Street, Chestnut Street, Washington Street, and portions of 8th Street will be eliminated. Under the redesigned network, bus service in downtown/inner north Columbus will be available on Brown Street, 2nd Street, California Street, 11th Street, Franklin Avenue, and 8th Street between Franklin and the Depot.

Figure 67: New Route 5



Draft Bus Schedules and Sample Trips

The following tables provide **draft** timetables for the three fixed routes. **These timetables are subject to change.** They will be refined by ColumBUS as the system prepares for the route changes. The routes will operate on 60-minute frequencies under one of two options. Under Option 1, the East and West Loops would leave NexusPark at 30 minutes past the hour; under Option 2, they would leave NexusPark at the top of the hour. As they do today, ColumBUS will continue to offer 14 hours of weekday service, and nine hours of Saturday service, on the fixed routes.

Table 5: Draft Schedule for East Loop

Example Timepoint	Option 1: Example Time (:30)	Option 2: Example Time (:00)
NexusPark	5:30 AM	6:00 AM
Columbus Regional Hospital (**eastbound** 17th)	5:37 AM	6:07 AM
Centerstone	5:45 AM	6:15 AM
Walmart	5:55 AM	6:25 AM
Fox Pointe & 25th	6:10 AM	6:40 AM
Rocky Ford	6:17 AM	6:47 AM
NexusPark	6:23 AM (Transfer with West Loop)	6:53 AM (Transfer with West Loop)

Table 6: Draft Schedule for West Loop

Example Timepoint	Option 1: Example Time (:30)	Option 2: Example Time (:00)
NexusPark	5:30 AM	6:00 AM
Columbus Regional Hospital (**westbound** 17th)	5:37 AM	6:07 AM
Mill Race Depot	6:00 AM (Transfer with Route 5)	6:30 AM (Transfer with Route 5)
Kroger	6:10 AM	6:40 AM
Ivy Tech	6:15 AM	6:45 AM
NexusPark	6:25 AM (Transfer with East Loop)	6:55 AM (Transfer with East Loop)

Table 7: Draft Schedule for New Route 5

Example Timepoint	Option 1: Example Time (:00)	Option 2: Example Time (:30)
Mill Race Depot	6:00 AM (Transfer with West Loop)	6:30 AM (Transfer with West Loop)
Walmart	6:15 AM	6:45 AM
Pine Ridge	6:30 AM	7:00 AM
3rd & Franklin	6:45 AM	7:15 AM
Mill Race Depot	6:50 AM (Transfer with West Loop)	6:20 AM (Transfer with West Loop)

Table 8 provides examples of how specific trips would be impacted by the changes to the fixed route network. The trips described under the redesigned network are subject to change.

Table 8: Example Trips on Current and Redesigned Networks

Example Trips	Current Network	Redesigned Network (Draft/Subject to Change)
Candlelight Village to Columbus Regional Hospital (CRH)	Board Route 1 on Rocky Ford, ride 15 minutes to Depot; transfer to Route 3; ride 10 min to CRH – total time: 30 min	Board East Loop on Rocky Ford; ride 5 minutes to NexusPark; transfer to West Loop; Ride 7 minutes to CRH - total time: 17min
The Cole to NexusPark	Board Route 4 on 2nd; ride 5 minutes to Mill Race Depot; transfer to Route 2; ride 20 minutes to 25th (across from NexusPark) - total time: 30 min	Board West Loop on 3rd; ride 25 minutes to NexusPark – total time:25 min
Williamsburg Way Apartments to Walmart	Board Route 2 or 3 on 25th; ride to Target; transfer to Route 4; ride 55 min to Walmart (includes stop at Mill Race Depot) – total time: 65 min	Board East Loop on Taylor; ride 45 minutes to Walmart – total time: 45 min
McKinley Apartments to Kroger	Ride Route 2 for 30 minutes and walk a half-mile from Central & 24th to Kroger; or, ride Route 2 for 55 minutes (both options include stop at Mill Race Depot) – total time: 45 min or 90 min	Walk 1 block to Route 5 on California, ride 5 minutes to Mill Race Depot, transfer to West Loop (after 10-minute Depot layover), ride 10 minutes to Kroger; or, walk 6 blocks to 22nd, ride West Loop for 5 minutes to Kroger – total time 20 min or 15 min
Doral to Ashford Park Apartments	Walk to State Street; ride Route 4 for 25 minutes to Target; transfer to Route 2; ride 10-15 minutes to Ashford Park – total time: 40 min	Walk to State Street; ride West Loop 20-25 minutes to Ashford Park - total time: 20 min
Centerstone to Fox Pointe Apartments	Ride Route 4 for 15 minutes to Depot; transfer to Route 3; ride 20 minutes to Fox Pointe - total time: 40 min	Ride East Loop for 25 minutes to Fox Pointe - total time: 25 min

Designated Bus Stops

When the new route network is initiated, ColumBUS will shift to a model of requiring customers to use bus stops. Feedback from system staff indicated that the longstanding flag stop system is problematic for safety and efficiency, and is difficult for new and potential riders to understand. Moving to a designated bus stop system will increase the reliability and legibility of the service. This transition should be implemented carefully, with an extensive customer education and adaptation process, and the installation of bus stops on all routes at intervals of distance that are appropriate for customers, including the addition of amenities (i.e., benches and shelters) as funding levels permit. Additional guidance on bus stops is provided in the appendix to this report. ColumBUS has begun to require customers to use bus stops on the existing Route 1; moving to a system wide adoption of designated bus stops will provide consistency and reduce confusion about how to use the fixed routes.

Bicycle and Pedestrian Network Connections

The City has an extensive network of bicycle and pedestrian amenities, including the People Trail, a multi-use trail network that intersects with the planned fixed route network in many locations. The City's Bicycle and Pedestrian Plan includes a document titled Bicycle and Pedestrian Network Wayfinding and People Trail Visual Identity. This document describes a high-level approach to wayfinding along the City's overall bicycle and pedestrian network, as well as a visual identity system for Columbus' People Trail network. This document will be used as a guide as the City moves forward with developing a user-friendly and intuitive wayfinding and visual identity system for the People Trail network.

It is recommended that ColumBUS signage be coordinated with the bicycle and pedestrian network wayfinding system, especially in locations near People Trail access points. Also, when ColumBUS identifies bus stop locations for the new route network, the presence of bicycle and pedestrian access and amenities should be considered. For this purpose, a People Trail map that identifies existing and proposed trail locations is included in the appendix to this report. Route segments that are convenient to the People Trail are listed in Table 9. Stop locations on these segments should be evaluated for access to the People Trail, and signage should be coordinated if feasible.

Table 9: People Trail Segments Convenient to People Trails

People Trail Segment	Fixed Route
Westbound Rocky Ford Road at Marr Road	East Loop
Southbound Marr Road between Pavilion Drive and McKinley Drive (An existing sidewalk on this segment has been proposed as a future People Trail)	East Loop
Northbound Central Avenue between Rocky Ford Road and Poshard Drive	West Loop
Southbound Middle Road between Poshard Drive and Rocky Ford Road	West Loop
Eastbound 8th Street between Central Avenue and the Haw Creek	West Loop
Northbound Home Avenue between 22nd Street and 27th Street	West Loop
Jonathan Moore Pike & Goeller Boulevard (after northbound turn into shopping area)	New Route 5
Franklin Avenue at 17th Street	New Route 5
Eastbound 22nd Street between Franklin Avenue and California Street	New Route 5
California Street at 19th Street	New Route 5

EXPAND SERVICE COVERAGE

A frequent theme in community input for the route study was the need for transit service to the Taylorsville area and the Walesboro Industrial Park. This study proposes two new types of service for these areas.

Taylorsville Zone Route

As shown in Figure 68, the U.S. Census-defined Columbus urban area population includes residents of areas in and around Taylorsville. There are many residential and business developments along the U.S. 31 corridor connecting Columbus and Taylorsville. However, this area has historically been unserved by public transit. The Columbus city limits extend as far north as County Road 400 North.

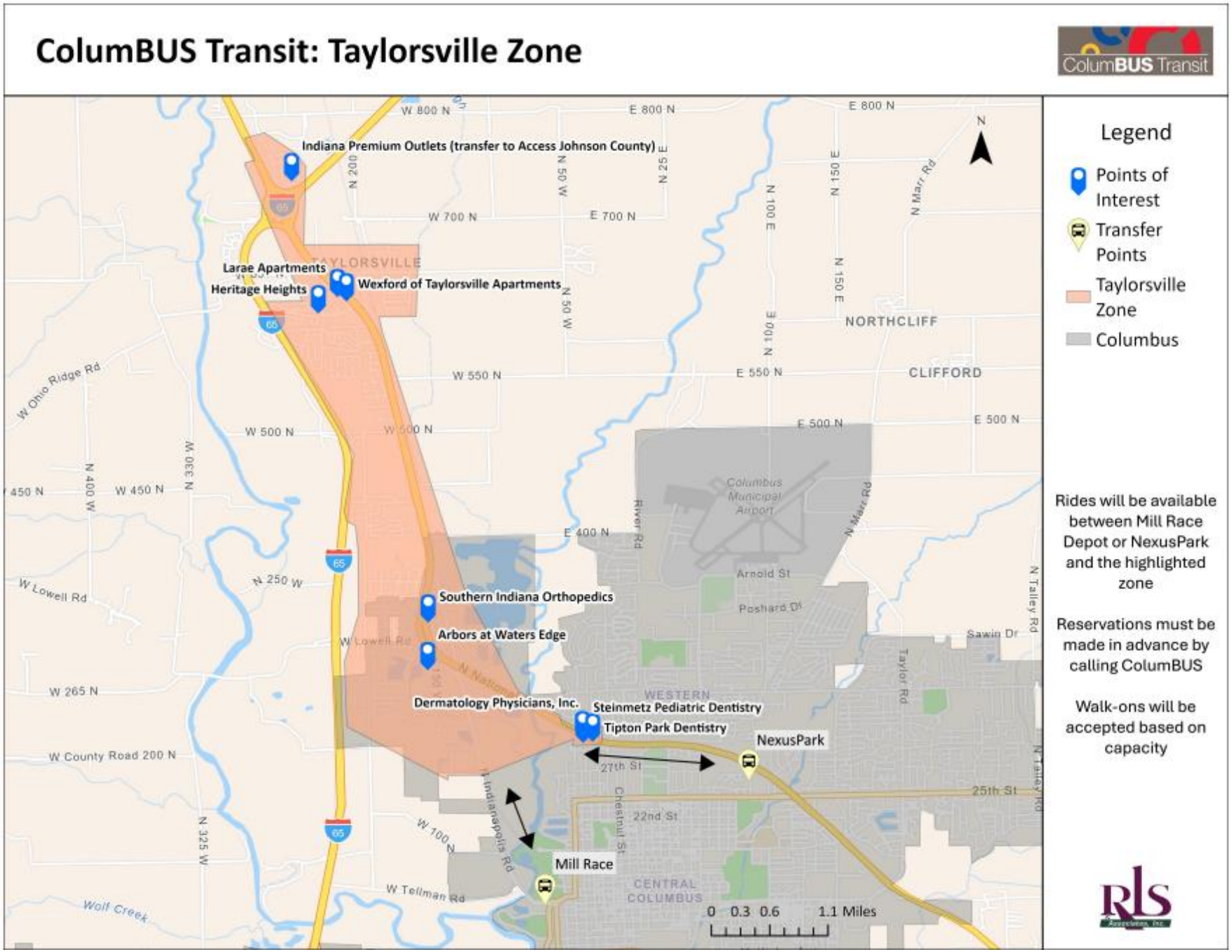
ColumBUS would operate a zone route to serve locations along the U.S. 31 corridor, offering connections to the fixed route network. At specific, advertised times of day, customers will be able to request rides from NexusPark or Mill Race Depot to any point within the identified zone. Or, they will be able to request rides from a point in the zone to NexusPark or Mill Race Depot.

A **zone route** is a service in which transit vehicles operate in demand-responsive mode along a corridor with established departure and arrival times at one or more end points.

This service will provide a basic level of access for residents of locations such as Water's Edge Apartments to destinations in Columbus. After arriving at NexusPark or Mill Race Depot, customers will be able to transfer to a fixed route to get to their final destination. This service will also allow Columbus residents to travel to points such as Southern Indiana Orthopedics or Indiana Premium Outlets. At the outlet mall, customers can transfer to the Johnson County transit system, if they set up a reservation with Access Johnson County ahead of time. This will allow them to travel as far north as Greenwood Park Mall, where the IndyGo system has a fixed route stop – providing access to destinations throughout Indianapolis/Marion County.

This service will require a passenger fare that is yet to be determined. A draft map of the zone is provided in Figure 68. The zone route will initially offer three schedules per day that connect to the zone to NexusPark and Mill Race Depot. The ridership levels over time will inform potential future expansions of the schedule.

Figure 68: Taylorsville Zone Route



Walesboro Point Deviation Route

ColumBUS will operate a point deviation service connecting NexusPark and Mill Race Depot to the Walesboro industrial park. At specific, advertised times of day, customers will be able to request rides from NexusPark or Mill Race Depot to one or more participating Walesboro employers. ColumBUS is in the process of identifying employers to participate in this pilot service.

> **Point deviation** service makes demand-responsive pick-ups and drop-offs within marked zones surrounding specific points. The size of the deviation area is determined for reasons such as the desire to serve a defined neighborhood or other area, such as an industrial park.

The community expressed a clear desire for bus service to Walesboro during the input process for this study. ColumBUS will pilot a weekday schedule that offers a round trip serving first shift at one or two "anchor" employers for the service. Customers will be able to ride one of the fixed routes to NexusPark or Mill Race Depot, and transfer to a vehicle that will travel to the employer. "Point deviation" means that, additionally, customers will be able to request pick-ups or drop-offs at Walesboro locations within a defined distance of the anchor employer, such as a quarter-mile or half-mile radius. These deviated pick-ups or drop-offs will need to be requested in advance, similar to trips requested on the Taylorsville Zone Route. This service will also require a passenger fare that is yet to be determined.

Potential Service Schedule

ColumBUS will operate the Taylorsville Zone Route and Walesboro Point Deviation Route Monday through Friday. The potential schedule is provided in Table 10. This schedule was designed to optimize transfers at NexusPark and Mill Race Depot under the Option 1 schedules presented for the East Loop, West Loop and New Route 5. Under the Option 2 schedules, the Table 10 schedule would be moved ahead by 30 minutes.

This schedule will be updated as ColumBUS works with the employers that will serve as stops on the Walesboro route. The schedule will be finalized to fit the first shift start and end times for these employers. This initial, draft schedule was designed assuming that first shift would run from approximately 7:30-7:45 a.m. to 3:30-4:00 p.m. The times may also be adjusted to offer additional time for pick-ups and drop-offs within a deviation zone in Walesboro.

Table 10: Draft Schedule for the Taylorsville Zone Route and Walesboro Point Deviation Route

Walesboro Point Deviation	**Morning Run**	**Mid-Day Run**	**Afternoon Run**
NexusPark	6:30 AM	No service	3:20 PM
Mill Race	6:45 AM		3:35 PM
Walesboro Stop 1	7:10 AM		4:00 PM
Walesboro Stop 2	7:25 AM		4:15 PM
Mill Race Depot	7:50 AM		4:40 PM
NexusPark	8:05 AM		4:55 PM
Taylorsville Zone Route	**Morning Run**	**Mid-Day Run**	**Afternoon Run**
Mill Race	7:50 AM	12:00 PM	4:40 PM
NexusPark	8:05 AM	12:15 PM	4:55 PM
Zone Pick-Ups/Drop-Offs	8:10 AM – 9:25 AM	12:20 PM – 1:35 PM	5:00 PM – 6:15 PM
NexusPark (upon request)	9:55 AM	2:05 PM	6:45 PM
Mill Race Depot (upon request)	10:10 AM	2:20 PM	7:00 PM

EXPAND POINT-TO-POINT SERVICE

Overview

ColumBUS will expand its Call A Bus service to offer point-to-point rides for the general public. This service will accommodate the needs of individuals whose trip locations fall outside of the fixed route service area, or who need a point-to-point ride for logistical or other reasons. The service will initially be piloted in a limited service area, and eventually be expanded to city limits (as far south as Deaver Road) after a successful pilot period. The service will be especially helpful for individuals traveling to medical appointments, including older adults, who are not eligible for Call A Bus, but still need a more personalized transportation service than fixed route. This will be a first-come, first-served transportation service that requires reservations in advance.

The point-to-point service will be comingled with the ADA complementary paratransit service (Call A Bus). This shared ride service will transport ADA and non-ADA customers, while maintaining compliance with all ADA regulations for complementary paratransit rides. ADA service will continue to be free of charge per ADA regulations, which prohibit fare-free fixed route services from requiring a passenger fare for complementary paratransit. The non-ADA point-to-point service will charge a fare that is yet to be determined.

The route study provides that approximately 52 percent of ColumBUS' annual revenue hours of service will be allocated to the comingled ADA complementary paratransit and general public point-to-point service. This represents a significant expansion of demand responsive service. Potentially, the system will receive four to five times as many trip requests as it does today. **It will be necessary to add new office-based staff to accept trip reservations and schedule/dispatch the rides.**

Technology Needs

ColumBUS will use its current paratransit scheduling and dispatching software platform for this service. However, updated procedures will be necessary to ensure that the agency will be able to absorb an increased number of trip requests. The agency currently schedules approximately 1,000 one-way passenger trips per month; this number is expected to increase to approximately 4,000 monthly trips. It will be necessary for ColumBUS to update its software to add automated trip scheduling and driver tablets. Currently, the system's dispatchers schedule trips manually. Updated technology will ease the process of scheduling rides and offer new efficiencies.

Within the scheduling software, it will be critical to classify customers as ADA or non-ADA customers, and classify addresses as within or outside of the ¾ mile complementary paratransit service area.

30-minute Pickup Window

To schedule rides efficiently, ColumBUS will move to a 30-minute pickup window policy for demand response trips. A pickup window allows the agency to offer an estimated pickup time to the customer (e.g., 9:30 a.m.) but arrive at the pickup point within a 30-minute window (in this example, 9:15 a.m. to 9:45 a.m.). Customers will be educated about this change, and understand that their driver will arrive at any point within the stated window. Using a pick-up window will provide ColumBUS with greater flexibility in trip scheduling. The agency's scheduling technology includes pickup window functionality.

Change ADA Paratransit Service Area

The ADA requires complementary paratransit to be provided to qualified customers within ¾ mile of any fixed route. ColumBUS current offers paratransit throughout city limits. When the new point-to-point service is launched, the agency will establish its ADA paratransit service area as ¾ of a mile within the new fixed route network. ColumBUS will update its paratransit plan accordingly.

Reservation Window

ColumBUS is required by the ADA to offer paratransit rides to qualified customers on a next-day basis, meaning that an ADA customer must be able to request and receive a ride for the following day. This requirement is not applicable to general public demand response service. However, to keep the service simple to manage (for the agency) and understand (for the community), ColumBUS will offer the same reservation window (next-day service) for both ADA and non-ADA riders. If capacity constraints become an issue, it may be helpful to provide a smaller reservation window to the general public (e.g., 48 hours in advance instead of next-day).

When capacity becomes an issue, it will be acceptable to hold some general public trip requests in the unscheduled pool until the day before, then schedule them only if they fit. General public customers should be clearly informed of their reservation status when this occurs. It is recommended that ColumBUS implement interactive voice response (IVR) and text-based ride reminders for all customers to enhance communications about ride times and status.

It is acceptable to accept ADA reservations via voicemail on weekends, and require non-ADA riders to call by Friday for Monday trips. It is also acceptable to allow ADA riders more time in advance to request trips; for example, the agency may decide to allow ADA riders to request trips up to two weeks in advance, but permit non-ADA riders to request rides only one week in advance.

ColumBUS will pilot the general public service for a three-month period using the reservation window policies described above, and make changes as appropriate following the pilot period.

Trip Denials, No-Shows and Cancellations

Trip denials, while prohibited for ADA complementary paratransit, will be necessary for general public customers from time to time. ColumBUS will attempt to schedule rides according to customers' needs, and will have greater leeway in negotiating pickup times with the general public than ADA clients (for a discussion of trip negotiation requirements for ADA paratransit, see https://dredf.org/ADAtg/OTP.shtml#otp).

When a requested general public trip is not available on the schedule, the agency will classify the trip ticket as a denial. The agency will also track customer no-shows and cancellations, and develop a policy for handling these occurrences in order to minimize their impacts on the service. During the pilot period, it is recommended that the agency apply the same policies to ADA and non-ADA customers, and update the non-ADA customer policies as needed following the pilot.

IMPROVE PUBLIC INFORMATION AND MARKETING

The service recommendations of the route study represent significant changes that will require intensive community awareness and outreach efforts. It will be necessary to design and print new printed brochures and online content for all services. It is recommended that ColumBUS engage outside marketing support for this purpose. A budget for marketing has been provided in the 2025 operating budget included in this study.

ColumBUS also needs to maintain accurate, real-time service information through its fixed route computer-aided dispatch/automatic vehicle locator (CAD/AVL) system and General Transit Feed Specification (GTFS) feed. These technologies feed directly into the system's website, bus tracking app, and GTFS-fed online resources such as Google Maps. The agency should dedicate the appropriate staff resources to ensure that the vendors of these technologies are responsive when problems occur, in order to ensure accurate public information.

RIDERSHIP AND FINANCIAL PROJECTIONS

The estimated annual operating costs of the proposed services is shown in Table 11. These projections were based on the average hourly cost of each type of ColumBUS service over a one-year period (July

2023 through June 2024), with three percent added for inflation. The agency's anticipated amount of available funding for 2025 operations (excluding any potential fare revenue) is approximately $2.8 million.

Table 11: Annual Revenue Hours and Operating Costs

Service	Annual Revenue Hours	Cost per Revenue Hour	Annual Operating Cost
East Loop	4,960	$78.42	$388,943
West Loop	4,960	$78.42	$388,943
New Route 5	4,960	$78.42	$388,943
Taylorsville Zone Route & Walesboro Point Deviation Route	3,326	$70.24	$233,616
Co-Mingled ADA Paratransit and General Public Point-to-Point Service	19,632	$70.24	$1,379,049
Total	**37,838**		**$2,779,457**

The projected ridership for all services is shown in Table 12. Ridership projections were based on the estimated productivity of each service (one-way passenger trips per revenue hour of service).

Table 12: Projected Ridership by Service

Service	Annual Revenue Hours	Estimated Productivity	Projected Ridership
East Loop	4,960	12	59,520
West Loop	4,960	12	59,520
New Route 5	4,960	12	59,520
Taylorsville Zone Route & Walesboro Point Deviation Route	3,326	4	13,304
Co-Mingled ADA Paratransit and General Public Point-to-Point Service	19,632	2.5	49,080
Total	**37,474**		**240,944**

Fare Revenue Estimates

ColumBUS has not collected fare revenue since early 2020, prior to the COVID-19 pandemic. The Taylorsville Zone Route, Walesboro Point Deviation Route, and the general public point-to-point fare service will require passengers to pay a fare for each one-way trip. Estimates of fare revenue collections in 2025 are provided in Table 13. The estimates assume fares of approximately $3.00 per one-way trip on the Taylorsville and Walesboro services, and $10.00 per one-way trip on the point-to-point service, however, the actual fares will be set at a later date. The high estimate is based on a full year of ridership (as projected in Table 12); the low estimate is based on 50% ridership. Ridership will take some time to grow as these services are initiated; therefore, it is recommended that ColumBUS take a conservative approach with fare revenue expectations during the first year.

Table 13: Fare Revenue Estimation

Service	Projected Ridership	Fare Revenue – High (based on full ridership)	Fare Revenue – Low (based on 50% ridership)
Taylorsville Zone Route & Walesboro Point Deviation Route	13,304	$39,912	$19,956
General Public Point-to-Point Service	49,080	$292,300	$146,150
Total	**239,490**	**$332,212**	**$166,106**

2025 Implementation Cost

The following tables provide the projected revenues and expenses for ColumBUS' operations in 2025. These figures are estimates, and are subject to change based on local conditions. In Table 15, high-level estimates have been included for bus stop relocations, technical assistance and training consulting to support ColumBUS implementation of the recommendations, and a marketing and outreach campaign. A contingency line of $100,000 is included to cover unplanned situations such as low fare revenue, unanticipated costs, or other events.

Table 14: Projected 2025 Operating Revenue

Revenue Sources	Amount
Federal Transit Administration	$1,276,305
Indiana PMTF	$303,388
City of Columbus	$1,276,305
Fare Revenue	$166,106
Total	**$3,022,104**

Table 15: Projected 2025 Operating Expenses

Operating Expense	
Transit Operations	$2,822,104
Bus Stop Relocations (Estimate of 100 relocations @ $500)	$50,000
Technical Assistance and Training	$25,000
Marketing and Outreach Campaign	$25,000
Contingency/Reserve	$100,000
Total	**$3,022,104**

Operator Shifts and Fleet Needs

ColumBUS fixed routes currently involve first and second operator shifts on weekdays (5:00 a.m. – 1:00 p.m. and 1:00 p.m. – 9:00 p.m.), and one longer shift on Saturdays (7:00 a.m. – 6:00 p.m.). Call A Bus shifts are scheduled around trip needs. Generally, the agency operates four Call A Bus vehicles per weekday and one or two on Saturdays. Table 16 provides suggested vehicle operator shifts; these will be refined by ColumBUS during implementation.

*Table 16: Potential Shift Needs (**Subject to Change**)*

Service	Weekdays	Saturdays
Fixed Routes	5:00 AM – 1:00 PM (3) 1:00 PM – 9:00 PM (3)	7:00 AM – 6:00 PM (3)
Taylorsville Zone Route & Walesboro Point Deviation Route	5:45 AM – 10:30 AM (1) 11:15 AM – 7:15 PM (1)	7:30 AM – 2:30 PM (1) 4:15 PM – 7:15 PM (1)
Co-Mingled ADA Paratransit and General Public Point-to-Point Service	6:00 AM – 2:00 PM (2) 7:30 AM – 3:30 PM (2) 8:00 AM – 4:00 PM (2) 9:30 AM – 5:30 PM (2) 12:00 PM – 8:00 PM (2)	1-2 as needed (ADA Paratransit Only)

IMPLEMENTATION TIMELINE

A timeline for implementation is provided in the form of a Gantt chart in Table 17. A seven-month period for implementation is provided; this timeframe may be adjusted according to the City's needs.

This timeline provides for a public input process in Months 1 and 2 on the fixed route changes and revisions to paratransit operations, including the paratransit service area. Recommended public involvement activities include a well-advertised public input meeting, information on the ColumBUS website and social media, postings inside the transit vehicles, and other methods consistent with the ColumBUS Title VI Plan and the ADA requirement for ongoing consultation with people with disabilities regarding changes to paratransit.

Table 17: Implementation Timeline

Activity	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7
Revise ADA Paratransit Scheduling and Dispatching Procedures to Prepare for December Changes (30-Minute Pickup Window, Driver Tablets, and Automated Trip Scheduling)	X						
Obtain Easy Rides Training	X	X					
Conduct Public Input Process on Fixed Route and Paratransit Changes	X	X					
Launch 30-Minute Pickup Window, Driver Tablets, and Automated Trip Scheduling for ADA Paratransit			X				
Identify Bus Stop Locations for New Routes		X					
Provide Information to GMV Syncromatics on Route Changes; Participate in Update Process		X	X				
Secure Electronic Fare Payment App, Develop Procedures, and Train Staff		X	X				

Activity	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7
Design New Route Brochures and Demand Response Rider's Guides		X	X				
Revise and Publish Paratransit Plan			X				
Notify Public of Feb. 1 Service Changes			X				
Install/Remove Bus Stop Signs			X				
Test Fixed Route Driver Tablets and Automated Voice Announcements; Resolve Issues			X	X			
Train Drivers on Service Changes, New Procedures and Shift Times			X				
Train Office Staff on Co-Mingled Demand Response Service Policies and Procedures			X				
Launch of New Routes and Three-Month Pilot of General Public Demand Response Service in a Limited Service Area				X			
Design Brochures for Zone Route and Point Deviation				X			
Launch of Zone Route and Point Deviation Three-Month Pilot					X		
Conduct Community Outreach Campaign to Promote All Services					X	X	
Evaluate New Services				X	X	X	X
Conclude Three-Month Pilot of General Public Demand Response Service; Identify Necessary Changes and Finalize Service Area						X	
Conclude Three-Month Pilot of Zone Route and Point Deviation; Identify Necessary Changes							X

PERFORMANCE MONITORING

This section provides performance measures for each service type, including guidance on evaluating the three-month pilot of the general public demand response service. ColumBUS will the performance of all services on a monthly basis using data that is tracked in Easy Rides for demand response services and GMV Syncromatics for fixed routes. The performance measures and measurement methods are provided in Table 18. (The targets for on-time performance are based on standards described in the Transit Capacity and Quality of Service Manual, Third Edition, available for downloading at https://nap.nationalacademies.org/catalog/24766/transit-capacity-and-quality-of-service-manual-third-edition).

Table 18: Performance Measures

Performance Measure	Description	Measurement	Target
Passenger Trips per Revenue Vehicle Hour (Productivity)	For fixed route, demonstrates the rate of use by the public. For demand response, captures the ability of the shared ride system to schedule and serve passenger trips with similar origins, destinations, and time parameters, using the least number of in-service vehicles and hours.	Total passenger trips ÷ total revenue vehicle hours	**Co-Mingled ADA and Non-ADA (general public) Demand Response**: 2.5 trips/revenue hour **Zone Route and Point Deviation:** 4 trips/revenue hour **Fixed Route:** 12 trips per revenue hour
Operating Cost per Revenue Vehicle Hour	The financial resources needed to produce a unit of service, defined for this measure as an hour of service.	Total operating cost ÷ total revenue vehicle hours	**Co-Mingled ADA and Non-ADA Demand Response/Zone Route and Point Deviation:** $70.24 in 2025 **Fixed Route:** $78.42 in 2025
Operating Cost per Passenger Trip	Combines elements of operating cost per revenue vehicle hour and passenger trips per revenue vehicle hour, relating productivity to hourly operating cost.	Total operating cost ÷ total passenger trips	**Co-Mingled ADA and Non-ADA (general public) Demand Response**: $28.10 in 2025 **Zone Route and Point Deviation:** $17.56 in 2025 **Fixed Route:** $6.53 in 2025
On-Time Performance (OTP)	Measures the reliability of the system: does the vehicle arrive for the demand response pick-up when promised, or at the fixed route stop when advertised?	**Demand response:** Total on-time trips (provided within the advertised pick-up window), including no-shows ÷ total completed trips + no-shows + missed trips **Fixed route:** Total departures departing scheduled timepoints between 0 and 5 minutes after the scheduled departing time ÷ Total departures from scheduled timepoints	**Co-Mingled ADA and Non-ADA Demand Response:** 90% or better **Zone Route and Point Deviation:** 95% or better **Fixed Route:** 90% or better OTP can be tracked for demand response in Easy Rides, and fixed routes through GMV Syncromatics.
Ridership by Bus Stop	Documents usage level of each bus stop; informs decision-making about adding bus stop amenities (e.g., seating, shelters)	Count of boardings	Amenity recommendations vary for stops with <25, 25-49, and 50+ daily boardings per stop (see Appendix)

Evaluation of Three-Month Pilots of New Services

The implementation timeline for this study assumes that ColumBUS will initiate the three-month pilot of point-to-point general public service during Month 4 of implementation. This will be followed by the initiation of the Taylorsville Zone Route and Walesboro Point Deviation Route approximately one month later. The new services should be monitored on a frequent basis for utilization, performance and quality.

Utilization

Beginning in Month 1, ColumBUS will make efforts to promote the pilot services as described in the implementation timeline. Following the launch of each service, the system will track the number of requested trips, completed trips, denials, no-shows, cancellations and unduplicated customers on a weekly basis.

Annual ridership for the co-mingled (ADA and non-ADA) service is projected at 49,080 one-way passenger trips, or 900 to 1,000 trips per week. This level of ridership is dependent on the system providing 19,632 revenue hours of service annually, or approximately 378 hours per week. During the pilot, the system will provide fewer hours, due to operating in a limited service area with a reduced fleet size. The main goal for utilization during the pilot period is to ensure that the public is able to successfully use the service, with ridership growing gradually over the three-month period.

Ridership projections for Taylorsville and Walesboro were estimated at 11,850 annual one-way passenger trips - approximately 200 to 250 trips per week. As with the point-to-point service, the goal of the pilot is to ensure that the public is aware of the services and ridership increases gradually over time.

Performance

ColumBUS will monitor the pilot services on a monthly basis for the four criteria described in Table 18: productivity, cost per revenue vehicle hour, cost per passenger trip and on-time performance. During the pilot period, the services are unlikely to reach their targets; however, positive trends in these measures should be observed.

Quality

ColumBUS should make efforts to collect input from customers, system staff (drivers and office staff), and community stakeholders to gain insights into the quality of the pilot services. The system should encourage staff member feedback on an ongoing basis, and set weekly evaluation meetings during the initial weeks of the pilot as the services are rolled out. Managers should ride along to make observations of the services in real time.

During the third month of each pilot, it is recommended that the system conduct a customer survey to collect their feedback on the quality of the services and request suggestions for improvement. It is also recommended that ColumBUS seek input from community stakeholders, including local human service agencies and participating Walesboro employers, on the quality of the services.

APPENDIX

- Bus stop guidance
- Community input meeting feedback summary
- Community meeting presentation
- AC meeting presentations
- People Trail Map

BUS STOP GUIDANCE

Bus stops should be easily identifiable, safe, accessible, clean and comfortable for current and prospective transit customers. Bus stop design must account for several factors including customer accessibility and convenience, timeliness of the route, and the natural and built environments. The spacing, location, design, and usage of bus stops influences the transit system's performance and public image.

This document provides industry standards and offers recommendations for bus stops. The principles offered will ensure consistency in the placement and design of bus stops throughout the route service area; encourage the local community to utilize public transit; and enhance/reinforce the service's brand. The design standards presented herein were developed in accordance with the ADA Accessibility Guidelines (ADAAG) FTA Circular 4710.1; ADA Standards for Transportation Facilities (ADASTF) 49 CFR Part 38, and Public Right-of-way Accessibility Guidelines (PROWAG). The location of bus stops and signage must also conform to state and city standards, policies, and guidelines.

ADA Landing Pad

Bus stop boarding and alighting areas must be constructed on a firm stable surface as required by the ADA. Many transit agencies construct a concrete "landing pad" to ensure compliance. A bus stop that includes a pole and sign does not automatically require an ADA landing pad unless passenger infrastructure (amenities, such as benches or shelters) is constructed. In order to enhance access to transit services to all, stops should be assessed on a case-by-case basis to determine the need for and feasibility of construction of an ADA landing pad.

Bus Stop Location Relative to Intersection

Bus stop locations are generally described by their proximity to an intersection or location within a block. The three industry standards include:

1. Bus stops located just prior to an intersection (near-side stop)
2. Stops located just past an intersection (far-side stop), and
3. Stops located away from an intersection (mid-block).

Stop locations can be determined by a variety of factors, such as:

- ADA considerations
- Customer safety
- Pedestrian access
- Location of driveways
- Presence of buildings
- Sightline restrictions
- Traffic signals
- Location of bus stops on connecting streets
- Stop spacing

Bus stops should be located within public right-of-way; however, easements should be considered on a case-by-case basis. Stops should not be placed in front of curb cuts or storm drains and at locations free of above grade obstacles such as utility boxes, power poles, etc.

Stop Location Types: Advantages and Disadvantages

Near-Side Stops

Near-side stops provide close proximity to intersections for passengers. Vehicles stopped at traffic signals may prevent the bus/shuttle from getting too near-side stops on-time. This may result in delays as an operator must wait for vehicles to clear before they are able to access the stop. Near-side stops encourage pedestrians to cross in front of the vehicle, sometimes causing safety concerns because the operator's sight distance for pedestrians is obstructed by front of the bus. However, the bus exit door is traditionally in close proximity to the crosswalk, increasing access and reducing walk time for passengers. Near-side stops decrease the potential for double-stopping (first at the signalized intersection and then at the bus stop), and provide operators with the width of the intersection to pull away from the curb. Although there are some advantages, this option is not preferred, and should be selected only when conditions warrant.

Mid-Block Stops

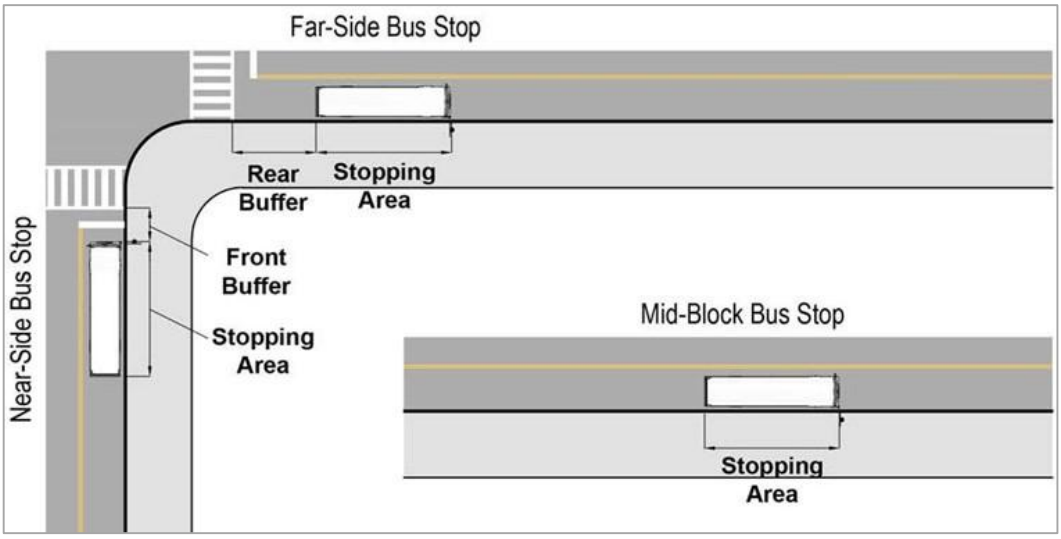
These stops are not located close to intersections. They are generally located in areas where there are long stretches between intersections. Mid-block stops are common practice to accommodate land uses that serve as origins/destinations for passengers (e.g., employment and educational centers). However, they are not the preferred standard and should only be selected as circumstances warrant. Mid-block stops should be located adjacent to marked pedestrian crossings if/as feasible to prevent jaywalking. Additionally, passengers may have to travel further when connecting to other routes after alighting at mid-block stops. However, these stops do not obstruct operator sight distances at intersections and provide greater access to major trip generators. Mid-block stops are not preferred due to inherent challenges and should only be considered in limited applications.

Far-Side Stops (Preferred)

Far-side stops are located after an intersection. These types of stops are often preferred because they reduce conflicts between right-turning vehicles and stopped transit vehicles and encourage pedestrian crossing at the rear of the bus. Far-side stops create shorter deceleration distances for buses since the bus can use the intersection to decelerate. Additionally, buses can re-enter traffic via gaps in flow at signalized intersections. Although the advantages are greater, the disadvantages to this stop type should be noted. Far-side stops can result in the queuing of traffic into the intersection when a vehicle is loading/unloading passengers. Increased potential for dual stops, one at the signalized intersection and the second at the bus stop, may have a negative impact on schedule adherence. Finally, they may result in rear-end collisions if motor vehicles do not anticipate the bus stop after the intersection. Far-side stops are the preferred and should be the standard, provided that safety or operational concerns are not present.

The above referenced stop types are depicted in
Figure A-69.

Figure A-69: Illustration of Bus Stop Types



Source: Ohio Department of Transportation (ODOT) Multimodal Design Guide

Bus Stop Spacing

Bus stop spacing is an important tool in achieving performance and service coverage goals. The objective is an optimal balance between access to the route, customer convenience, and route timing. While close stop-spacing increases access and reduces walking times, it can result in increased travel times and decrease the reliability of service. Stops that are spaced further apart result in longer walking distances; however, fewer stops along a route result in faster speeds and shorter travel times.

In general, bus stops are recommended for every two or three blocks, approximately every ¼-mile of each route. It is important to note that this is a general guideline and that the actual placement of bus stops is influenced by more than these factors. Additional factors include ridership, accessibility, special populations, nearby destinations, costs, and transfer opportunities.

Land use and transit propensity are factors that must be considered when planning bus stop locations. In central business districts and downtown areas where population density is greater, bus stops are spaced closer together. Distant spacing is more common in rural and suburban areas where land use is less dense and trip generators are less concentrated. Additionally, the general lack of overhead lighting and pedestrian infrastructure in rural areas present challenges and limit opportunities for bus stop locations that are safe and accessible. Land use, major trip generators, pedestrian facilities, as well as the geography and topography around the stop all influence bus stop spacing. Options for safe and accessible bus stop locations in rural areas are limited due to the low density of destinations, distances of destinations from roadways, and general lack of sidewalks.

A **timepoint** is a point on a route for which the time that buses are scheduled to pass is specified; usually, the bus's leaving time is used. A route schedule lists the times that buses are due to stop at timepoints. Passengers use timepoint schedules to estimate arrival/departure times at bus stops located between timepoints. Timepoints help keep buses on a schedule, and they help customers predict when the bus should depart or arrive. Bus operators can be flexible about when to leave the stops that are not timepoints. This flexibility helps operators stay on schedule, because traffic along bus routes can be unpredictable. There is no industry standard for the distance between timepoints. For an example of a route schedule that lists timepoints, see https://www.ci.valparaiso.in.us/518/Bus-Schedules-and-Routes.

Bus Stop Signage

Signage must be included at each designated bus stop. Bus stop signs indicate where buses are recommended to stop.

Installation Factors

Signs are typically mounted on galvanized steel posts and installed in the ground, bolted to the concrete, or installed in a small concrete foundation. In some instances, signage is affixed to utility poles or other pre-existing vertical elements. This is common practice within the transit industry and unavoidable in certain circumstances. Agencies should allow for seven feet of clearance below the bottom of the sign. Stops should be placed a sufficient distance from the curb (recommended at two feet but no further than four feet) as ensure visibility while avoiding interference with bus mirrors or obstructing the path of travel for pedestrians.

Design Factors

For quality customer service, the following design factors should be included, at minimum, on all bus stop signs:

- Service name, logo, and branding
- If applicable: route number(s) and name(s)
- Customer service number
- Website address
- A unique identifier

The implementation of a numbering convention for all bus stops is recommended. Stop numbers help to mitigate confusion among customers and agency staff if assistance is needed at the stop, including during an emergency. The bus stop names and numbers should be provided to the Columbus and Bartholomew County emergency operations department and other relevant agencies.

Accessibility Factors

Bus stop signs must adhere to ADA Accessibility Guidelines (ADAAG) and comply with ADA Standards for Transportation Facilities (ADASTF) (Sections 703.5.1 through 703.5.4; 703.5.7 and 703.5.8; 703.5) for finish and contrast, case, style, character proportions, stroke thickness, character spacing and height, width, and visibility. The bottom edge of the sign should be positioned at a height of at least 84 inches above the ground.

Bus Stop Enhancements

ColumBUS should investigate opportunities for adding passenger amenities, improving pedestrian access and enhancing the customer experience at identified bus stops. The built environment at and around the bus stop provides access for passengers. Although it would be ideal for every bus stop to be equipped with passenger infrastructure, this is not feasible do to budgetary and the capacity of staff to maintain amenities in good state of good repair.

A *Bus Stop Enhancement Plan* may include a planning horizon of five or ten years. Transit agencies traditionally adopt a bus stop hierarchy consistent with the following:

- Basic Stop
- Enhanced Stop
- Transit Center

Each stop type has clearly defined elements associated with each. These include a combination of equipment types such as, bus stop pole and signage, landing pad, trash receptacle, bench, covered shelter, bike rack, lighting, wayfinding information.

Bus stops should include passenger infrastructure that is appropriate for the level of passenger activity that occurs at each stop. As with bus stops, industry standards related to the referenced have been established to ensure amenities are distributed in an equitable manner. Table A-19 includes recommendations on thresholds for identifying bus stop locations that warrant upgrades. Guidelines presented are consistent with industry standards.

Passenger boardings are one metric and should considered in consultation with land use and other evaluative criteria including, the number of routes that serve the stop, high percentage of elderly or disabled individuals in the area, proximity to major activity centers and the availability of space to install passenger amenities. Stops are often classified into tiers (Tier I, II, II) with defined features/amenities associated with each classification.

Table A-19: Suggested Guideline Weekday Daily Boardings for Passenger Infrastructure

Feature	<25 Boardings	25-49 Boardings	50+ Boardings
Bus Stop Sign and Pole	X	X	X
Unobstructed 5’ x 8’ (minimum) Passenger Boarding Area	X	X	X
ADA Landing Pad		X	X
Bench/Seating/Lean Bar(s)		X	X
Trash/Recycling Receptacle		X	X
Bike Racks	Site Specific	Site Specific	Site Specific
Covered Shelter			X
Lighting			X

ADA Guidelines

Passenger infrastructure and associated amenities must adhere to ADA guidelines. Covered shelters must comply, at minimum, with the following ADA standards:

1. Clear path of 3’ minimum in front or behind shelter for sidewalk.
2. Entrance must be 2’8” wide at minimum.
3. Minimum clear floor area of 30 inches wide by four feet deep.
4. Not placed on the ADA landing pad.
5. Minimum height of 6’8”.
6. If it abuts a building, there must be 12” between the shelter and building at minimum.
7. Connected to route to the landing pad.
8. Accessible connections to a street, sidewalk, path etc.

The design of passenger amenities for the route should be universal; however, opportunities to incorporate art into the design are often present in certain neighborhoods or districts within a city. Agencies may leverage talent form the local arts community or local colleges and universities in the design, construction, or sponsorship of passenger amenities. However, design restrictions for amenities installed in state and local rights-of-way may apply. The City must work in consultation with and adhere to state and local regulations and ordinances in the design and permitting process.

COMMUNITY INPUT MEETING COMMENTS SUMMARY

The following comments and questions were documented during the September 18, 2024 community input meetings. The presentation provided during the meetings follows this summary.

- An attendee asked whether the consultant had considered moving Mill Race Station into a central part of town. The consultant presented alternatives that maintained some fixed route transfer activity at Mill Race Depot, and added transfers in the NexusPark area. Both alternatives' networks require there to be two transfer points to keep each route on 1-hour (vs. longer) headways. Both alternatives include new, non-fixed route options (call-ahead service to Walesboro and Taylorsville and point-to-point service), which don't require a transfer point. It's possible that the new services will be more successful than standard fixed route service, so, in the future, the system may shift to offering more call-ahead/curb-to-curb service and less fixed route, which would lessen the need for a transfer facility. Because of these unknowns, it is not recommended to invest in a new facility at this time.
- An attendee asked for the study's measures of success. Success is measured not just by ridership, but access and coverage for people throughout the community, as well as cost-efficiency and how well the system respects the dignity of the customers. The study advisory committee had many different ideas about what makes the system successful. Generally, a system is successful if it meets the mobility needs of the community – which can mean a lot of things. A clear priority that came out of the research was that people would like the system to serve more areas.
- An attendee asked whether the system could use smaller buses. Smaller buses would not accommodate some of the routes' heavy ridership at peak times. Using smaller buses would not save a meaningful amount of money because the majority of operating expenses consist of personnel expenses, not fuel/maintenance. The current fixed route buses are the smallest standard transit bus on the market. Standard transit buses have a much longer lifespan (12 years vs. 4 or 5 years) than cutaway vehicles such as those used for Call A Bus.
- An attendee commented that these alternatives seems like you are getting rid of some economies of scale available from fixed route. This was acknowledged as true. The study consultant found that we could consolidate some fixed route segments and use the freed-up resources to do other types of service that would help people get more places.
- An attendee said that it seems like the alternatives have some duplicated areas between fixed routes, because some routes cover the same streets. In alternatives, there is less duplication than the existing system. Some duplication is necessary because of how the city is laid out and how the roads are designed (not all roads can accommodate buses safely). The consultant committed the reviewing the duplicated mileage and considering alternate proposals. The attendee specifically recommended the westmost route (Route 5) be extended into Tipton Lakes.
- An attendee asked if there can be more frequent routes. The proposed routes are once an hour. The consultant and staff tested some options for 45-minute loops but found that they would have to cut out too many important areas. The system's budget is not able to cover running routes more frequently than one hour unless the footprint of the service was significantly reduced.

- An attendee wrote that they thought Alternative 2 (which featured three fixed routes) would provide many opportunities although they were concerned that the service may be difficult to utilize. They said that the changes represented ColumBUS “stepping into the future.”
- An attendee wrote that curb to curb service for the general public would be crucial for providing better transportation in Columbus, particularly for access to medical services, and the Walesboro and Taylorsville services would be great for employment.