



TECHNICAL MEMORANDUM #3

Recommendations
August 22, 2023



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INTRODUCTION

This report is the third technical memorandum for the ten-year Transportation Development Plan (TDP) that is overseen by the Richland County Regional Planning Commission (RCRPC) and the Richland County Transit Board (RCTB). This report provides the RLS consultant team's draft recommendations for efficiency improvements and service expansions over the next ten years.

The recommendations consist of near-term, mid-term and long-term recommendations.

- **Near-term recommendations** can be implemented within one to three years (2024-2026). During Year 1, RCT would implement cost-neutral modifications to existing fixed routes for efficiency purposes and expand Dial A Ride service to allow same-day trip reservations. During this period, RCT would also pilot a set of new services to improve access to employment and meet other community needs. These pilot services include enhancing service in the Lexington/Springmill corridor in Ontario, adding a Final Friday on-demand service in downtown Mansfield, adding early morning and evening on-demand service for the general public, and expanding contracted transportation services for community organizations.

Near-term recommendations also include technology upgrades, expanded marketing strategies, and moving to a designated bus stop system (replacing the current flag stop system).

Also during the near-term timeframe, RCT will invest time in developing potential new funding partnerships to support the pilot services for long-term sustainability. These services will require local matching support for FTA operating and capital grants, beyond what is provided by local sources today.

- **Mid-term recommendations** consist of additional enhanced services that will meet needs identified during the market analysis and customer/community input process for the TDP. These services can be implemented in a piecemeal fashion depending on available funding. The services are intended to serve as pilot projects to test the demand for service expansion to unserved, or underserved, areas of the county. They include:
 - Suburban On-Demand services East Mansfield/Madison Township, Lexington, and Bellville;
 - On-Demand service on Saturdays; and,
 - General Public Demand Response service for rural areas of Richland County.
- **Long-term recommendations** are presented in the form of four service alternatives that (1) institutionalize the near-term and mid-term recommendations and (2) take one of three approaches to the core Mansfield urban area service: increase fixed route frequency, permanently transition some fixed routes to on-demand service, or move to a 100% on-demand model. Implementing the full extent of any of these alternatives can only occur if RCT secures an ongoing, dedicated source of local match funding. At the end of Year 6 (2029), RCT will evaluate

the performance of the near- and mid-term pilots, as well as investigate peer transit system experiences with shifting significant resources from fixed routes to on-demand service.

This report concludes with a discussion of potential revenue sources to fund these recommendations. Following RCT's consideration of this technical memorandum, and planned community input opportunities, RLS will develop a draft implementation plan with operating and capital budgets for the ten-year planning horizon.

NEAR-TERM SERVICE RECOMMENDATIONS (1 TO 3 YEARS)

In this section, near-term service changes are recommended. These changes include modifying underperforming routes and redesigning routes that have either excessive or inadequate layover time. The recommendations are the most impactful for Routes 3, 9, and 13, and would occur in tandem with the addition of an Ontario Circulator. The near-term service changes also include demand response services including same-day Dial A Ride service, a Final Friday service, on-demand early morning and evening service, and potential new contracted services.

Routing and schedule adjustments are described in the following subsections, followed by a summary table of the changes. Maps are provided to illustrate the route changes. Each map also indicates key destinations, including group homes and weekly motels, as well as existing RCT bus stops. Group homes are noted due to RCT contractual requirements to serve these locations. Weekly motels are identified so that RCT can evaluate whether it can serve individuals residing at these locations, who comprise a vulnerable population with critical transportation needs.

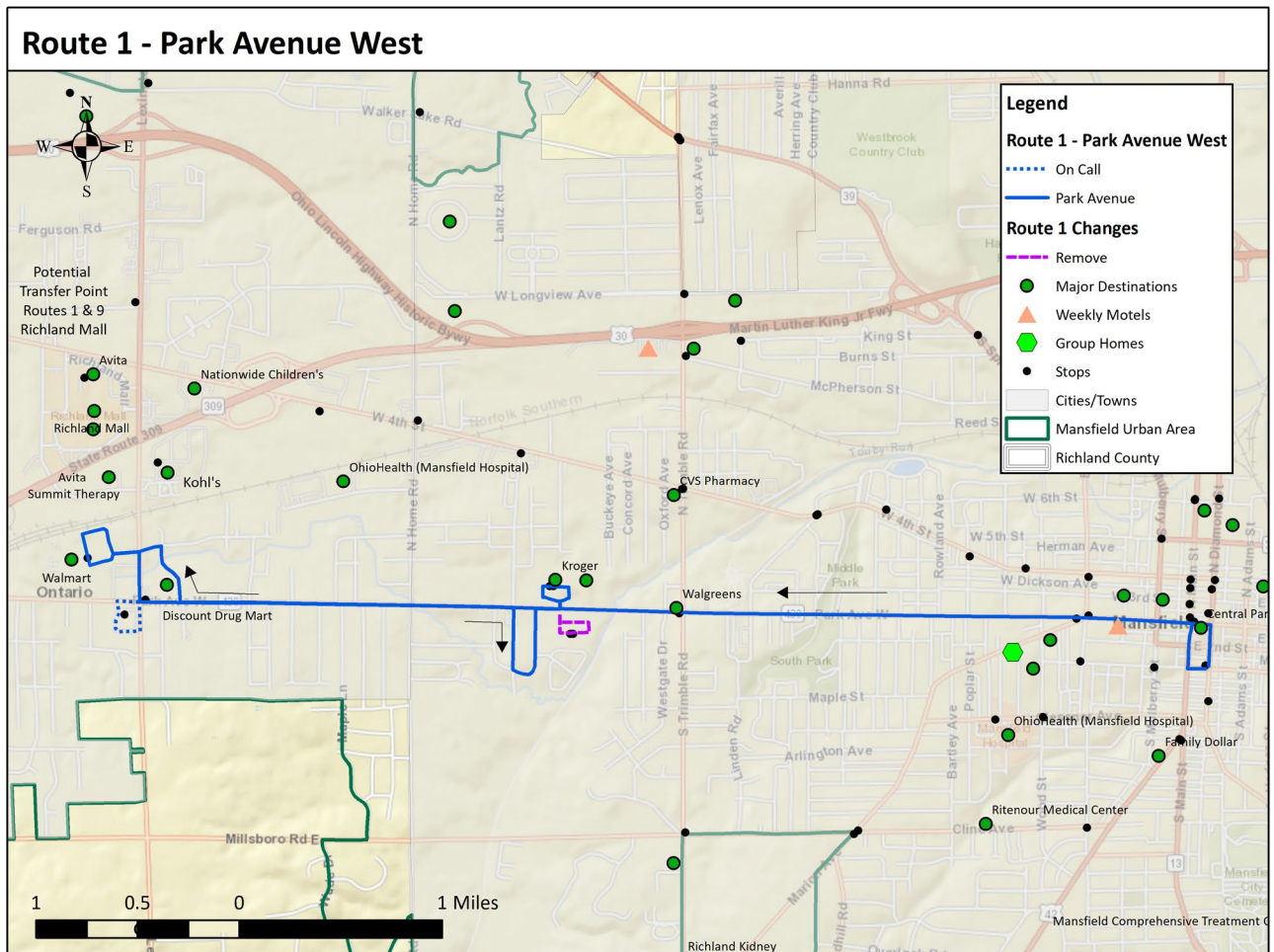
ROUTE 1 – PARK AVENUE WEST

Outbound, Route 1 would no longer service the West Park shopping center. The City of Mansfield has ordered the partial demolition of the shopping center. The inbound route will no longer service the West Park shopping center either.

Instead, the route will turn off Park Avenue to serve the apartment complex on Harwood Drive. This is represented in the map of the revised route in Figure 1. An on-call deviation will be available for passengers traveling to the Area Agency on Aging prior the route's terminus at Walmart.

Presently, Route 1 begins service at 7:00 a.m. at Walmart to perform an inbound trip. Because the driver "deadheads" the bus (drives it, but allows no passengers) from the RCT administrative facility to Walmart each morning, it is recommended that the route officially start at 6:30 a.m. at the Transit Center.

Figure 1: Recommended Near-Term Changes to Route 1



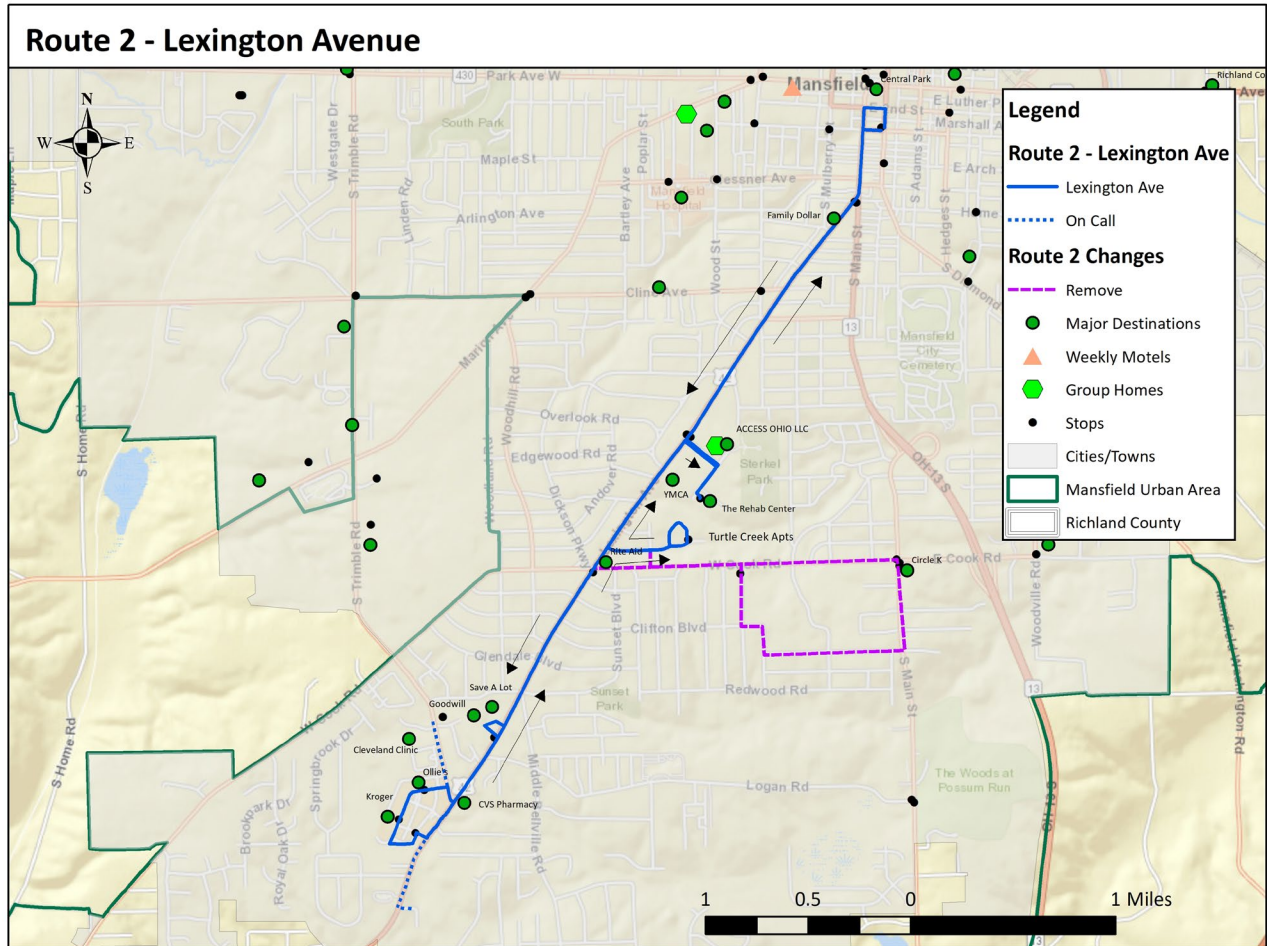
ROUTE 2 – LEXINGTON AVENUE

Currently, Route 2 has significant layover time. Route 2 is recommended for a transition to a 30-minute run time instead of the 60-minute run time currently in place. Outbound, Route 2 would remain the same. The route would travel south on Lexington Avenue to Kroger. Instead of laying over at Kroger, the route would immediately head north on Lexington Avenue. The route would not turn right on Cook Road, but continue to Turtle Creek Apartments. The portion of Route 2 that is no longer served would be covered by an updated Route 3. After the route turns around at Turtle Creek Apartments, the rest of the route would continue as operated currently.

The change from a 60-minute to 30-minute run time would allow the same driver to operate Routes 2 and 7 in an alternating fashion, similar to how RCT operates Routes 5 and 8. Route 2 would depart from the Transit Center at the bottom of the hour, with Route 7 changing its schedule to depart at the top of the hour.

Route 2 would retain the Social Security Office and Executive Court as on-call deviations.

Figure 2: Recommended Near-Term Changes to Route 2



ROUTE 3 – S. MAIN ST./SOUTHSIDE

Route 3 would continue to operate on a 60-minute headway with service to and from Walmart on Possum Run Road. Several changes are recommended to improve travel times for customers and the cost-efficiency of the route.

As shown in Figure 3, on the outbound portion, instead of going south on Main Street to Walmart, Route 3 would turn left on 1st Street, right on Diamond Street, and left on Arch Street. This is opposite of how the route is currently run. The route would then turn right on Cleveland Avenue and left on Diamond Street. Instead of turning left onto Topaz, the route would continue on Diamond until it takes a right on Plainview Avenue. The route would continue with a left on Woodville Road and a right on Cook Road. The route would then continue west on Cook until Burkwood Road, and turn left. It would then turn left on

Clifton Boulevard, right on Charwood Road, and left on Elmridge Road until it meets Main Street. (The coverage on Cook, Burkwood, Clifton, Charwood and Elmridge would replace service currently provided by Route 2.) Route 3 would not continue south on Main Street, eliminating the turn on Logan Road. The route would instead continue southbound on Main, turn left on Hanley Road, turn right on Washington Parkway, turn right on Stander Avenue, and turn left on Possum Run Road, passing the Greyhound bus stop at Marathon/7-11 on the way to Walmart.

Inbound from Walmart, the route would follow the outbound routing until reaching the Main Street/OH-13 access loop, where the route would continue northbound on Main Street/OH-13 until turning right on 1st Street and left on Diamond to reach the Transit Center.

Elimination of Service on Logan, Middle Bellville, and Straub Roads

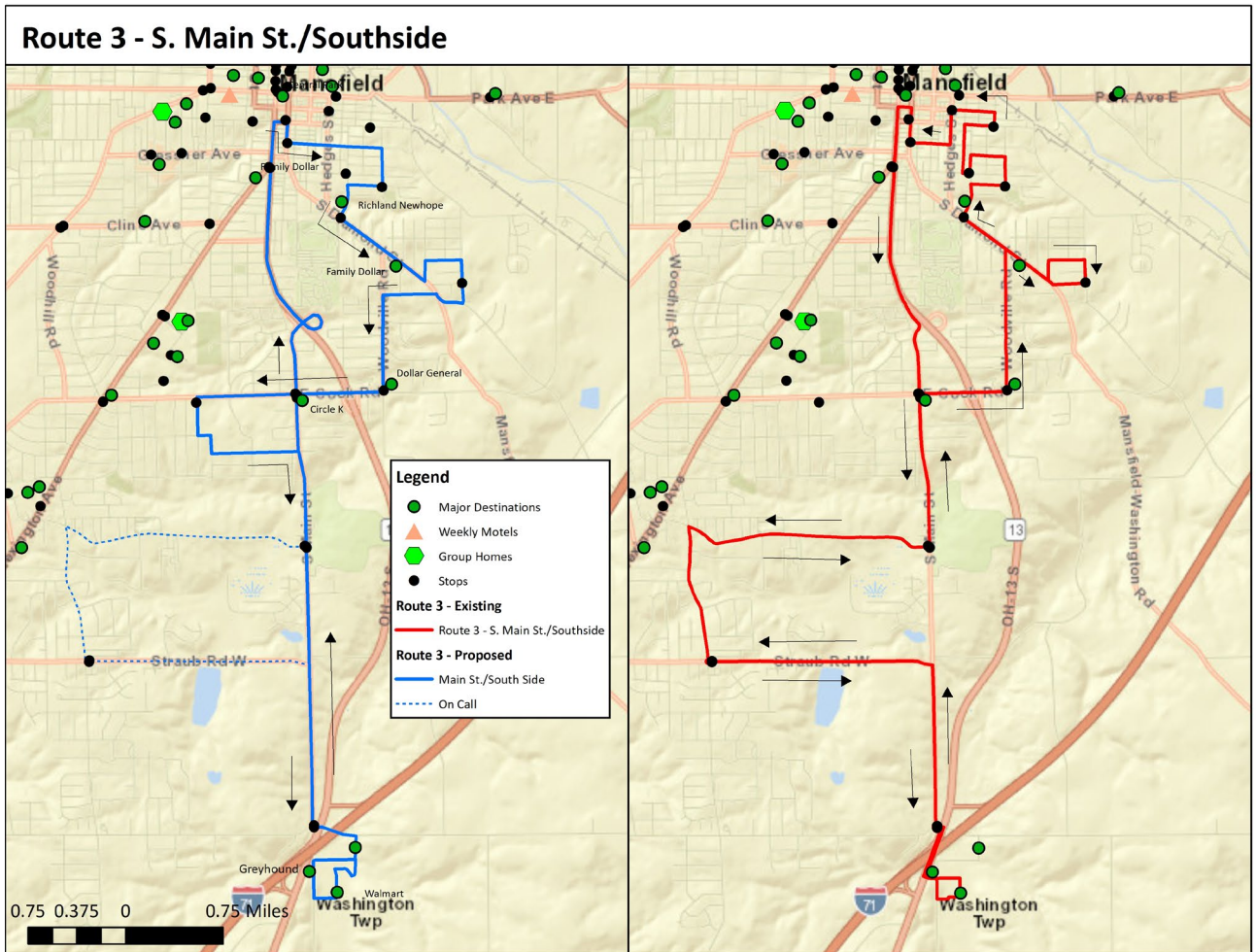
The recommended Route 3 changes eliminate regular service on Logan, Middle Bellville, and Straub Roads. These areas will be available as on-call deviations. This change would improve the timeliness and cost-efficiency of Route 3. Drivers have reported that the route is difficult to operate on-time. Customers who ride Route 3 have lengthy travel times due to the route's deviation from Main Street to operate this segment. There is low ridership on this portion of the current route. During the sample month (November 2022) of ridership data that was evaluated by RLS, approximately two customers boarded Route 3 per day on this segment (one on Straub and one on Middle Bellville).

This area will remain part of the RCT Dial A Ride service area, providing the opportunity for service for people with disabilities who meet ADA criteria for complementary paratransit. RCT also has the option to offer on-call deviations on select Route 3 schedules in order to maintain service for residents of this area.

Simplification of Route in Mansfield's Southwest Quadrant

The recommended changes include revising the current path of the route through southwest Mansfield. Several of the turns are very tight, and cause the route to be difficult to operate in snowy or icy road conditions. The complexity of the routing makes the route difficult for the public to interpret and remember. The number of turns adds time and mileage to the routes, increasing travel times for customers and adding operating expenses (e.g., fuel and vehicle wear and tear). The recommended, simplified routing would increase the distance that some customers must walk to the bus by a few blocks.

Figure 3: Recommended Near-Term Changes to Route 3

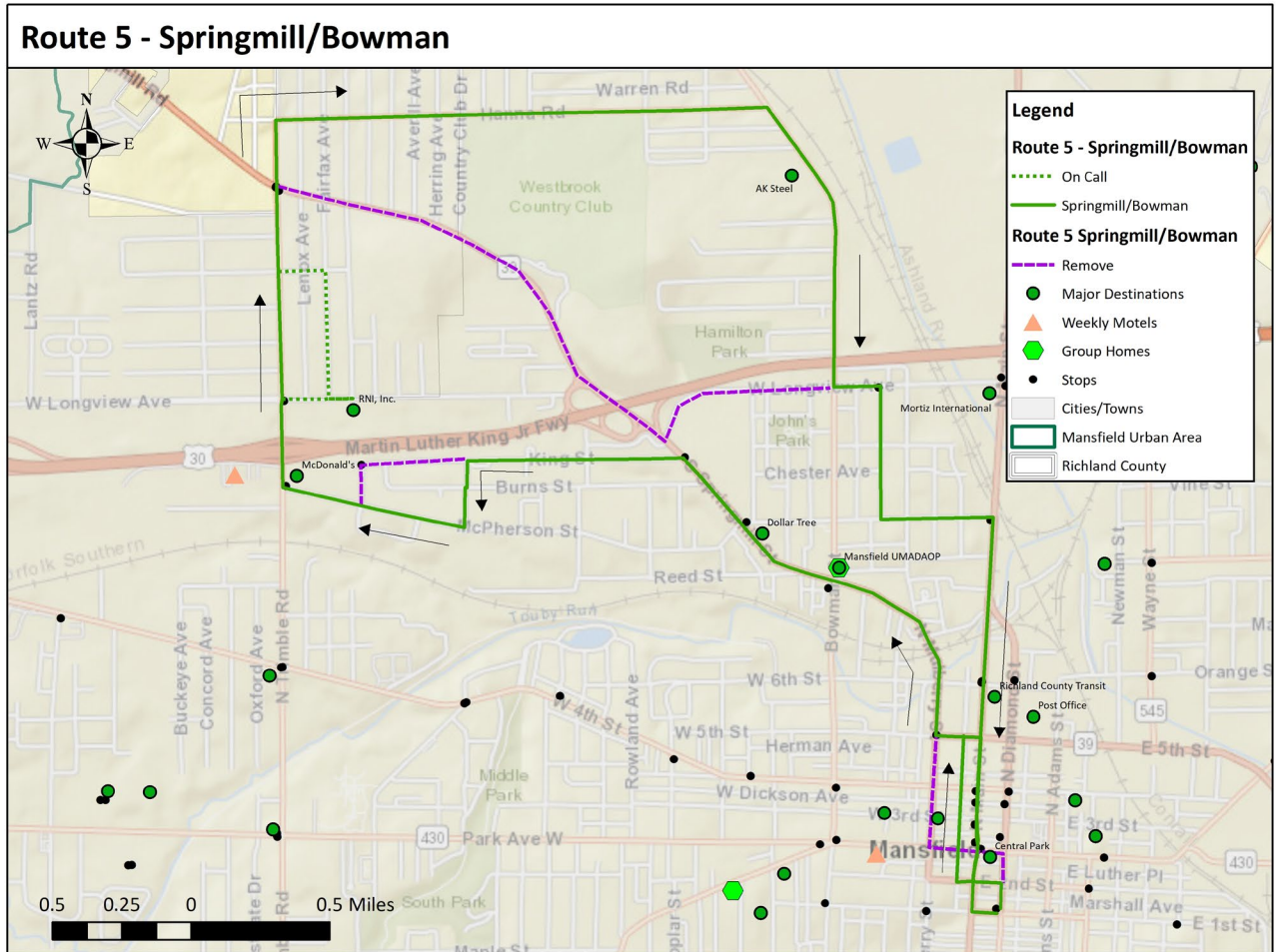


ROUTE 5 – SPRINGMILL/BOWMAN

Route 5 would continue to have a 30-minute run time but its routing would change in order to add coverage to an unserved area of Mansfield, and improve efficiency. As shown in Figure 4, when heading westbound on King Street, instead of going all the way down to Bryden Road, the route would turn left on Allison Avenue and then right on McPherson Street. The next adjustment would be for the route to continue northbound on Trimble Road rather than turning right on Longview Avenue from Trimble, left on Fairfax Avenue, and left on Caldwell Street, eliminating regular service directly to an RNI location. Ridership at this RNI location has been very low since the onset of the COVID-19 pandemic. This area would become available as an on-call deviation. The route would then turn right on Hanna Road continue east, then turn right on Bowman Street, and then left on Longview Avenue. The route would turn right on Main Street and continue its current routing to the Transit Center. As shown in Figure 4, service on Hanna Road would replace the route’s existing mileage on Springmill Road.

The Hanna Road stretch of the route would serve Little Kentucky, which is likely to generate more ridership than the current inbound routing on Springmill and Longview. The Springmill/Longview segment of the inbound route has low ridership, with fewer than one boarding per day in November 2022.

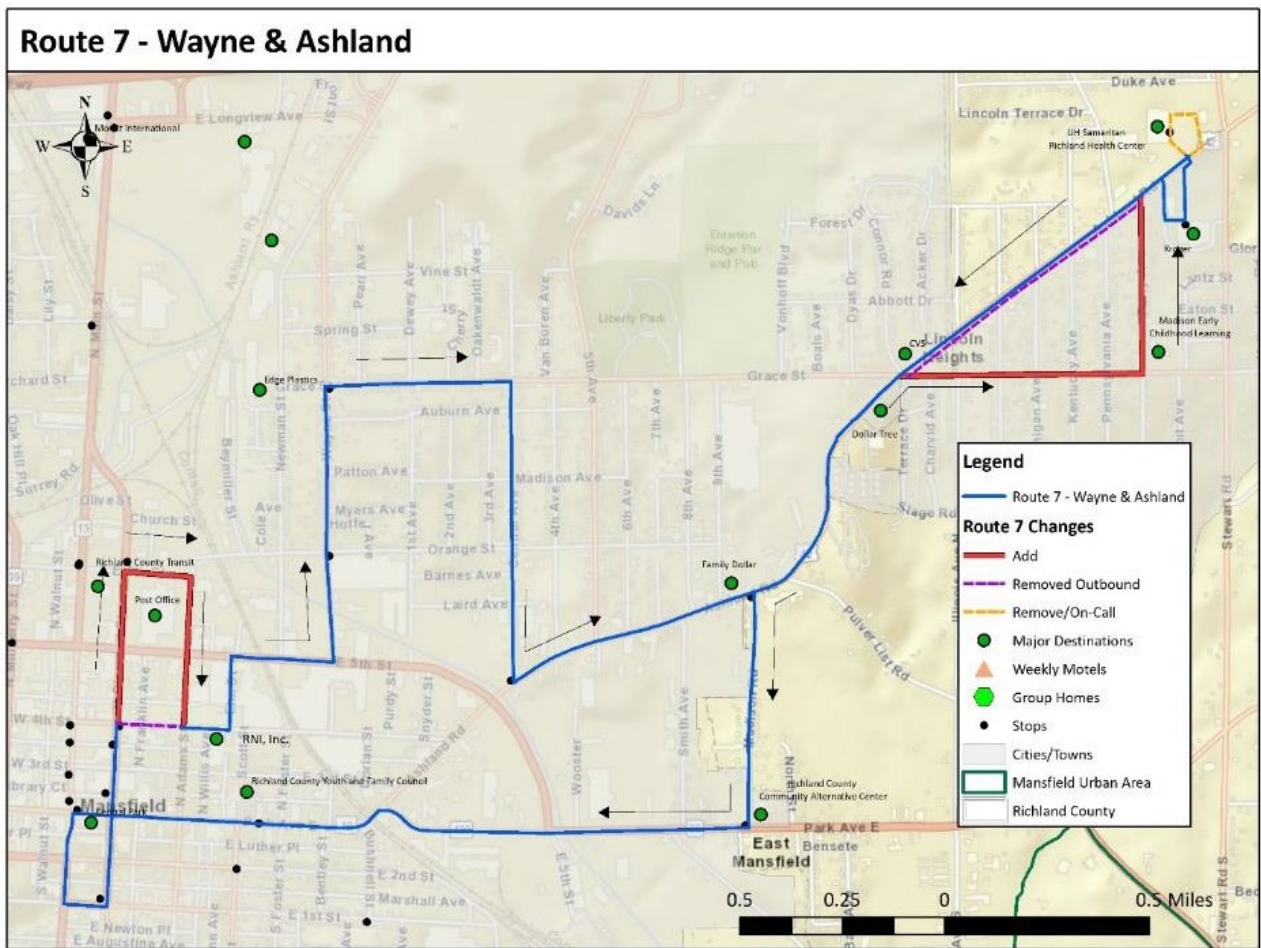
Figure 4: Recommended Near-Term Changes to Route 5



ROUTE 7 – WAYNE & ASHLAND

On the outbound Route 7, after leaving the Transit Center, instead of turning right on 4th Street, the route would instead continue north on Diamond Street until it reaches 6th Street. At that point, the route would turn right, then turn right again on Adams Street. Once the route gets to 4th Street, the vehicle would turn left on 4th Street and continue the route as is currently run. When the route turns onto Ashland Road and reaches Grace Street, the route would turn right on Grace Street, left on Parry Avenue, then right back onto Ashland Road to Kroger. The routing on Parry Avenue would include a stop at Madison Terrace Apartments. The University Hospital Samaritan Richland Health Center would become an on-call deviation due to infrequent ridership at this location. The remaining inbound portion of Route 7 would continue as is currently run.

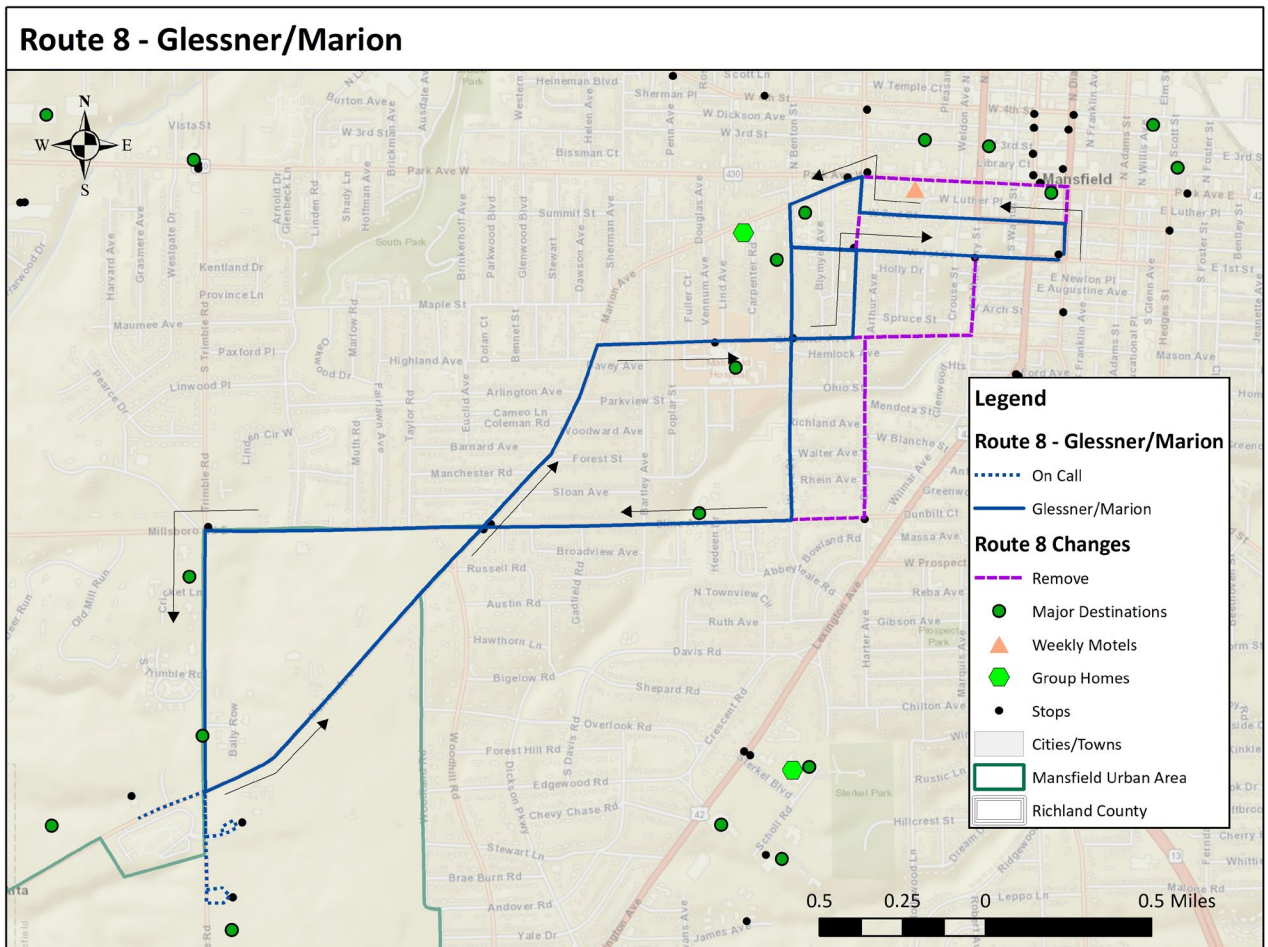
Figure 5: Recommended Near-Term Changes to Route 7



ROUTE 8 – GLESSNER/MARION

Modifications to Route 8 are shown in Figure 6. The modifications would be to continue to serve locations with higher ridership, while transitioning low-ridership stops to on-call deviations. The modified route would run west on 2nd Street and take a right on Sturges Avenue. When it reaches Park Avenue, the route would turn run west left on Marion Avenue. The route would then continue with a left on Wood Street, then right on Cline Avenue. This segment would provide access to two UMADAOP locations on Wood Street and Chelsea Square Apartments. Cline Avenue turns into Millsboro Road. Continuing on Millsboro Road, once the route reaches Trimble Road, it would turn left. Instead of traveling to Akron Children’s and the VA, the route would turn left onto Marion Avenue. The vehicle would continue on Marion Avenue until it turns right onto Glessner Avenue and passes Mansfield Hospital. To return to the Transit Center, the route would turn left on Bowman Street and right on 1st Street.

Figure 6: Recommended Near-Term Changes to Route 8



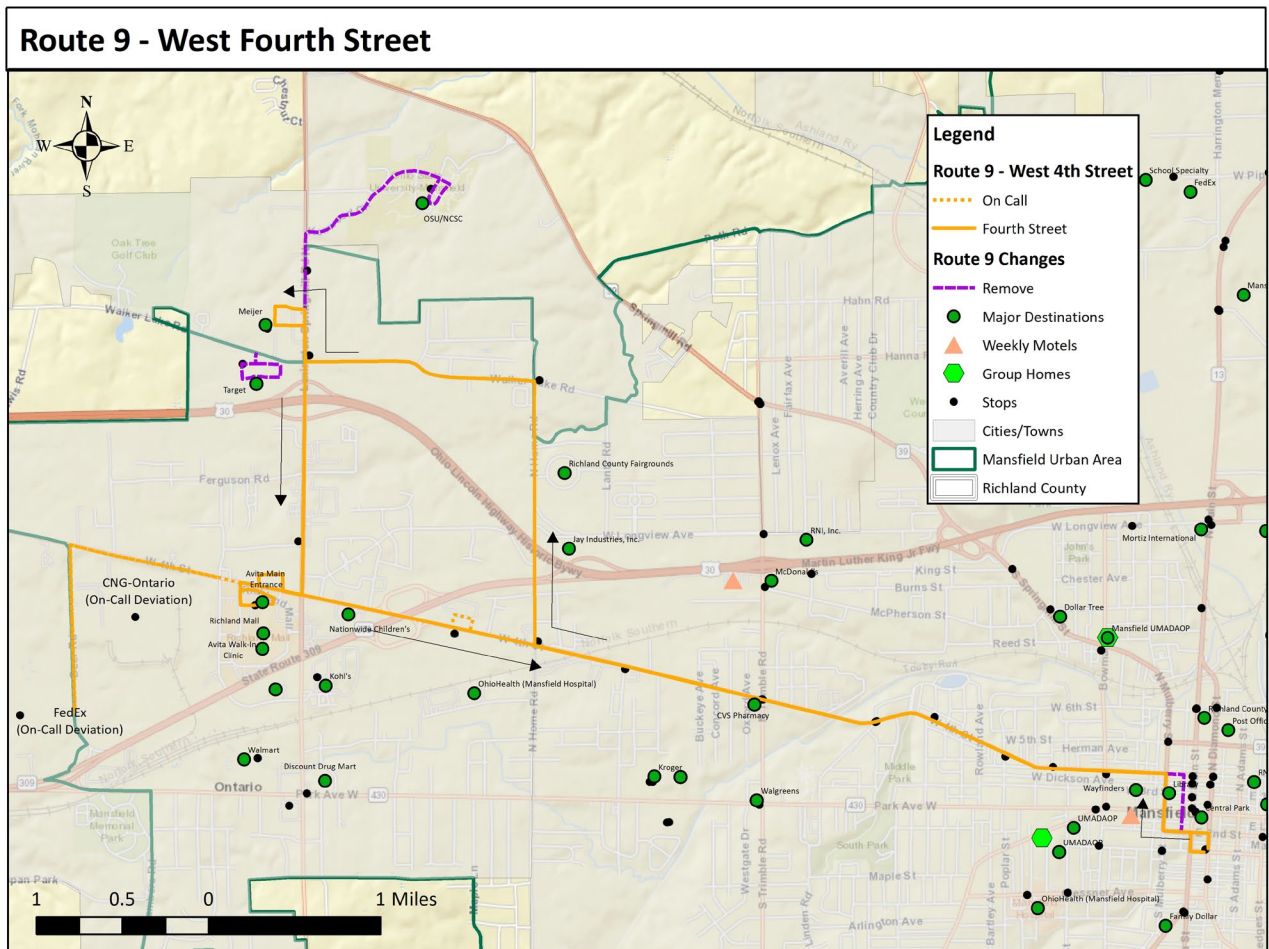
ONTARIO CIRCULATOR AND REVISED ROUTE 9

This recommendation would improve access to destinations along Lexington-Springmill Road in Ontario. An Ontario Circulator would be introduced to improve the ability of RCT customers to get to employers, stores, medical care providers and other destinations in this area. Currently, customers have limited options using Routes 1 and 9 to travel to this location. Although these routes can be used to ride to and from Lexington-Springmill destinations, the schedules do not allow for convenient travel within the corridor.

Under this recommendation, RCT would adjust the Route 9 route and schedule to complement the Ontario Circulator. Because the Circulator would provide access to some of the destinations served by Route 9, Route 9 could be shortened by removing service north of Meijer. OSU/NCSC and Walker Lake Apartments would instead be served by the Circulator. Also, the Target stop would be moved off Route 9 and onto the Circulator. Because Route 9 would be shortened, the schedule would allow RCT to offer on-call deviations to Fed Ex (515 Urwin Parkway) and CNG-Ontario (2525 West 4th Street).

Other modifications to Route 9 would include a change in the routing through downtown Mansfield and the addition of a stop at a new Walk-In Clinic at Richland Mall. Leaving downtown Mansfield, Route 9 would use Mulberry Street to 4th Street instead of Walnut Street. This would provide closer access to the downtown public library and Wayfinders/Harmony House. Inbound, Route 9 will add a stop at Richland Mall. After it stops at Avita's main entrance, the vehicle would continue around Richland Mall to the southside Walk-In Clinic. The vehicle will return to 4th Street and continue the route back to the Transit Center.

Figure 7: Recommended Near-Term Changes to Route 9



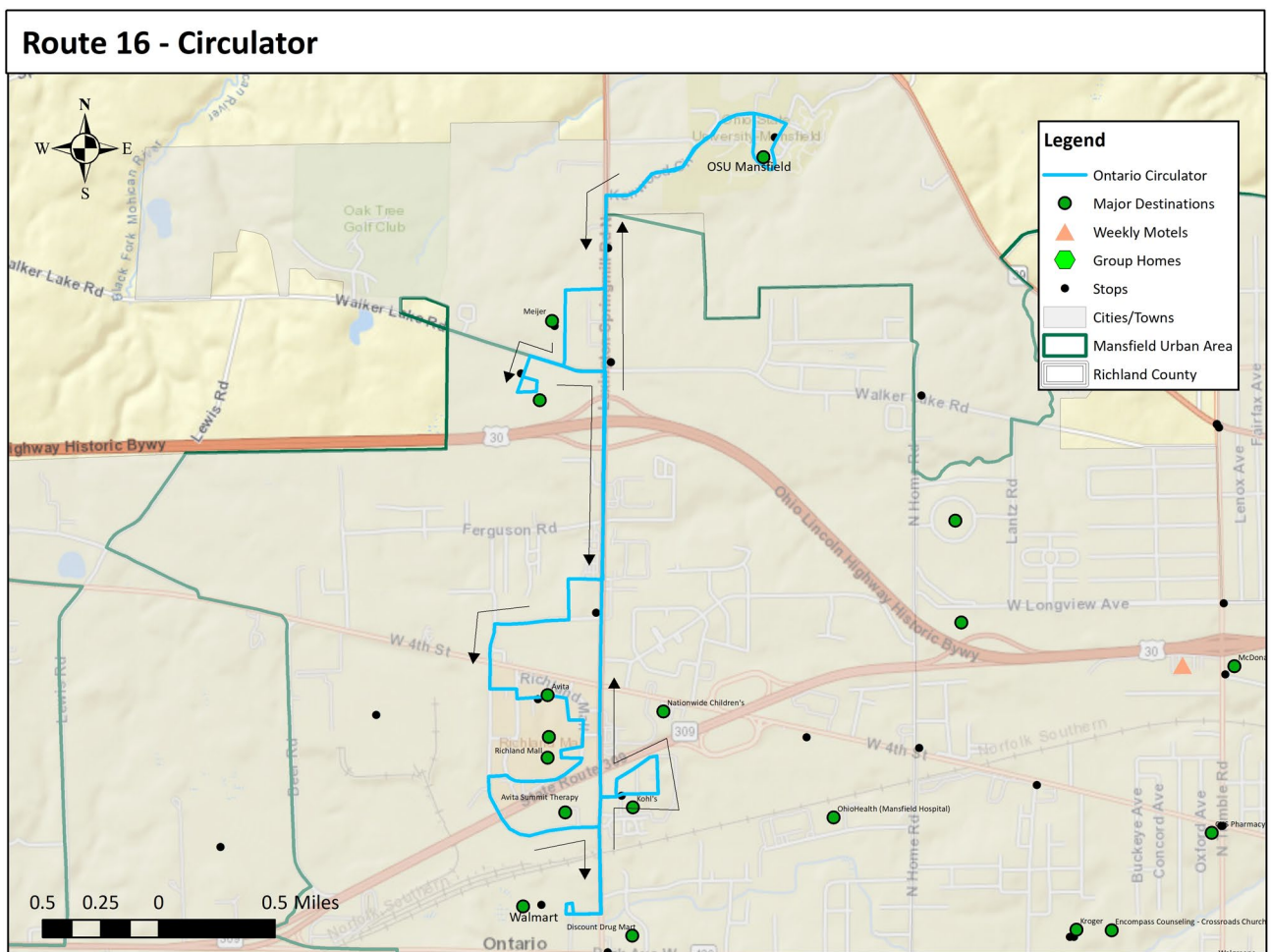
Ontario Circulator

An Ontario Circulator is recommended to improve the convenience of travel within the commercial area along Lexington-Springmill Road. The new route would allow individuals to travel between Walmart on and areas as far north as OSU/NCSC. Customers would be able to transfer to the circulator from Routes 1 or 9.

The Ontario Circulator will travel along Lexington-Springmill Road from Walmart to OSU/NCSC. The route will initially go north from Walmart and turn into the Kohl's parking lot. The route will continue north all the way to OSU/NCSC. After departing from OSU/NCSC, the route will travel south to make a stop at Meijer. The route will then go to Target and then travel south on Lexington-Springmill Road to Avita and Richland Mall. The route will stop at its current location in front of Avita and will also stop in the back for the Walk-In Clinic. Finally, the route will continue south on Lexington-Springmill Road back to Walmart.

The Circulator will allow connections with Routes 1 and 9 at Meijer, Richland Mall, and Walmart. Some of the other locations serviced by Ontario include Target, OSU/NCSC, Meijer, Avita, Richland Mall, Kohl's, and Walmart. The route has an estimated run time of 60 minutes.

Figure 8: Ontario Circulator



ROUTE 13 – SHELBY

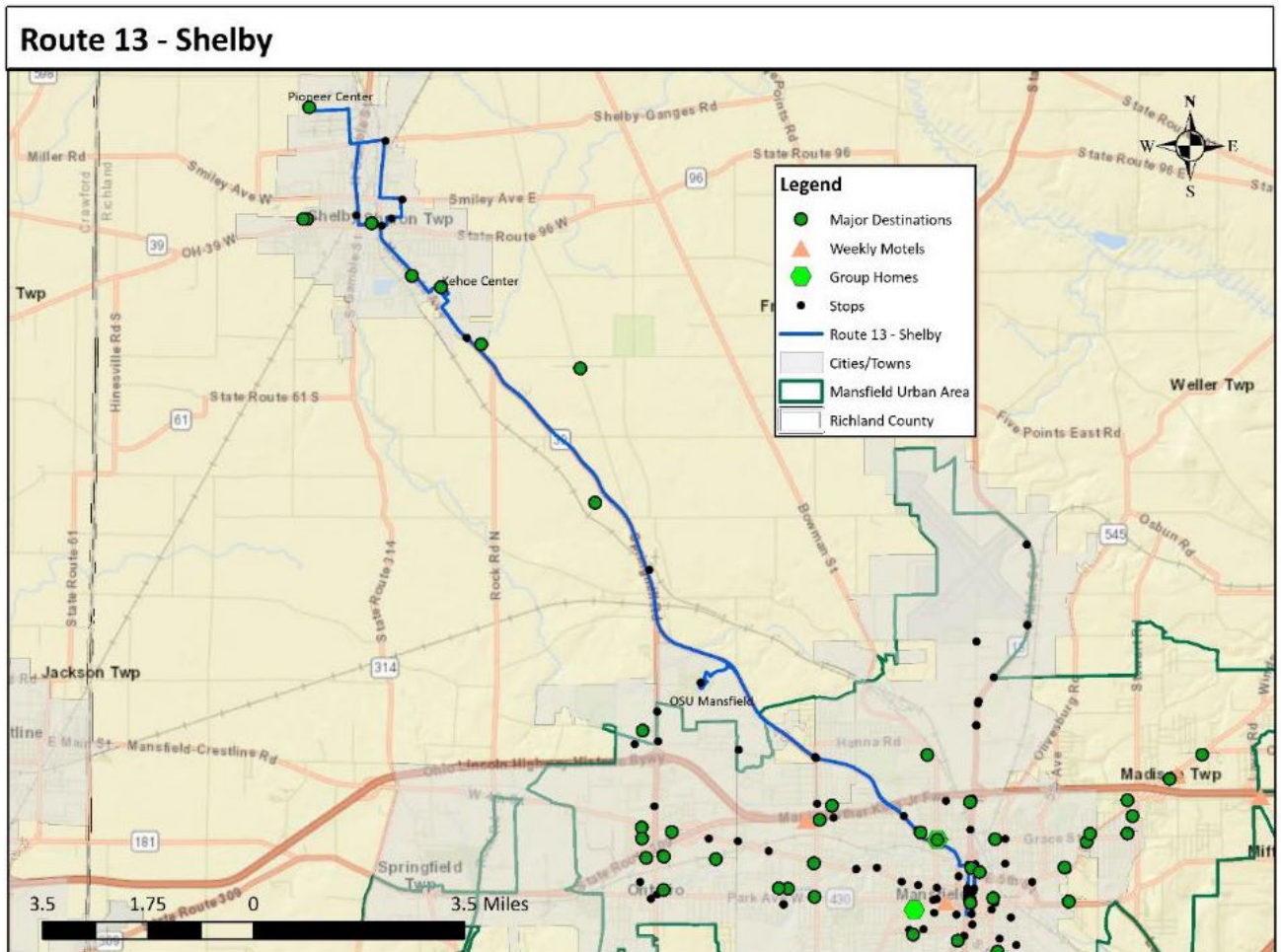
A tentative recommendation of this plan is to partially or completely eliminate Route 13 to Shelby. This route is subsidized by NCSC, Pioneer Career and Technology Center, and the City of Shelby. A map is

provided in Figure 9. Approximately eight individuals use Route 13 per day. In the summer months, this number drops to approximately two. The majority of Route 13 customers are Pioneer students.

Route 13 passes through a rural area of Richland County between Shelby and Mansfield. Very few boardings occur between the two cities. Occasionally, a customer uses the route to access the NCSC Kehoe Center, located on Shelby's south side. During November 2022, a boarding occurred at the Kehoe Center on three occasions. The route's drivers report that there is one regular customer, who is not a Pioneer student, who uses the route to travel between Shelby and Mansfield.

The near-term recommendation is to eliminate the route due to its low cost-efficiency. The mid-term recommendations, described later in this report, include restoring the Shelby route using rural transit funding, a Federal transit funding program for service outside of urban areas.

Figure 9: Existing Route 13 - Shelby

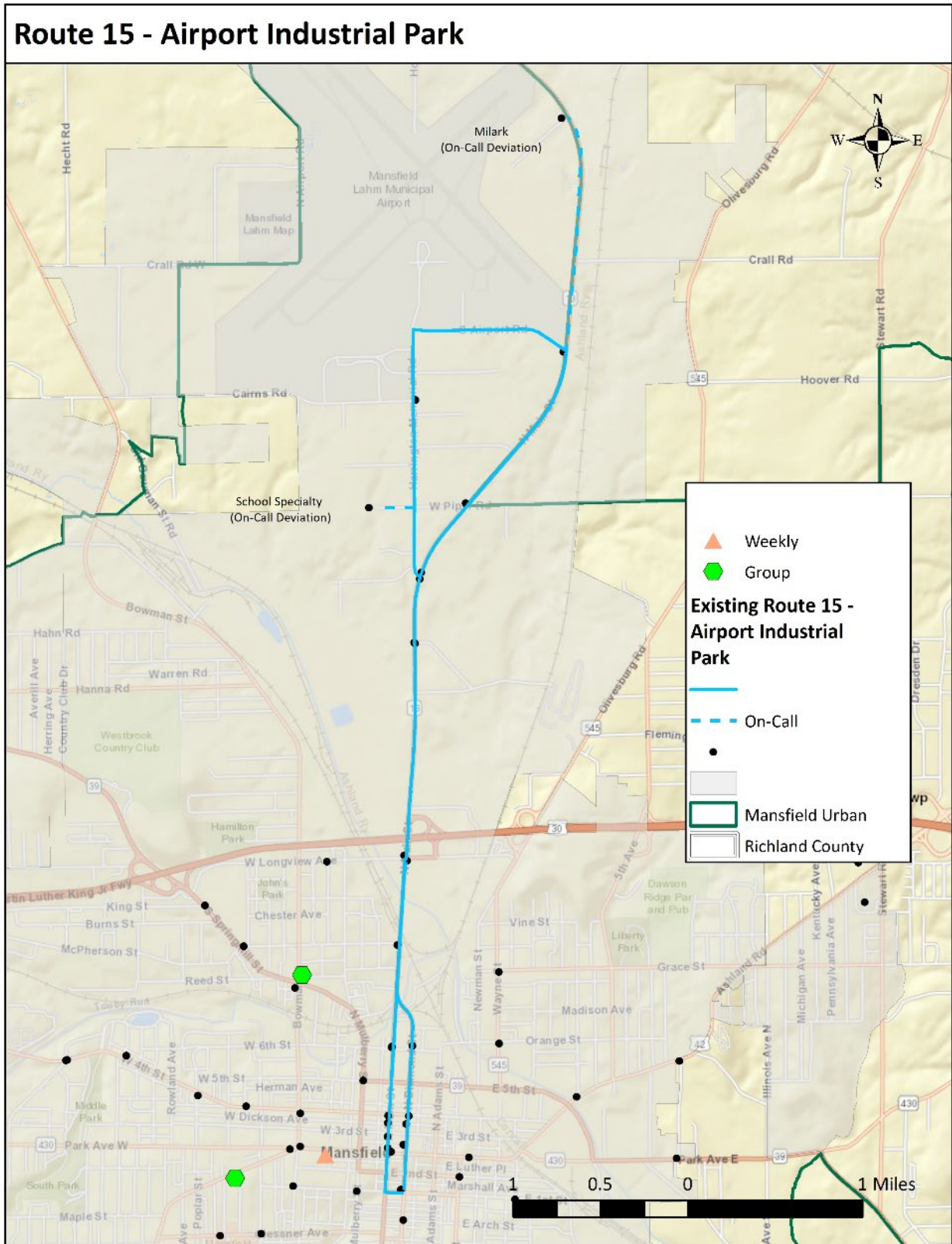


ROUTE 15 – AIRPORT INDUSTRIAL PARK

Route 15 was added to RCT's network in 2012 to provide transportation to the job-dense industrial area surrounding the Mansfield Lahm Municipal Airport. Route 15, shown in Figure 9, currently provides limited service between the Transit Center and this industrial park area, operating for a total of two revenue hours per day. This service is highly productive, achieving more than ten boardings per revenue hour of service. Only Route 1 (Park Avenue) has higher productivity than Route 15.

The near-term recommendation is to add more schedules to Route 15 in order to serve more employment shifts at the industrial park's employers. The current schedules depart from the Transit Center at 6:00 a.m., 6:30 a.m., 3:00 p.m., and 3:30 p.m. Tentatively, schedules would be added at 5:30 a.m., 1:30 p.m., 2:00 p.m., and 2:30 p.m. This would allow customers to ride to first shifts that begin at 6:00 a.m. or second shifts that begin at 2:00 p.m., and provide rides home from first shifts that end as early as 2:00 p.m. School Specialty, 100 Paragon Parkway, should be offered as an on-call deviation. This employer has a busy seasonal shift in late spring and summer that currently begins at 6:00 a.m. Their second shift begins at 3:00 p.m. Shift end times vary, depending on workload.

Figure 10: Existing Route 15 – Airport Industrial Park



ADD SAME-DAY SERVICE TO DIAL A RIDE

Currently, RCT offers next-day trip reservations to Dial A Ride customers. The service had adequate capacity to fulfill same-day trip requests on a first-come, first-served basis, upon availability. RCT will pilot same-day trip reservations in late 2023. Potentially, RCT would charge a premium fare for same-day trips. For ADA complementary paratransit, public transit systems are limited to charging a fare that is no greater than two times the amount of the standard fixed route fare. However, same-day service does not fall under the definition of ADA complementary paratransit, as opposed to next-day service. Therefore, RCT may charge a higher passenger fare for same-day rides.

FINAL FRIDAY ON-DEMAND SERVICE

To meet local needs for service to recreational opportunities, RCT will offer contracted demand response service within a defined service area during Final Fridays in downtown Mansfield. Final Fridays are outdoor concerts held on the last Friday of each month, May through September. The events occur in the Brickyard area of Mansfield from 5:30 p.m. to 10:30 p.m.

RCT will pilot a demand response service on Final Fridays in 2024, transporting customers from the Transit Center to the Brickyard beginning at approximately 4:30 p.m. Final Friday attendees would ride an RCT route to the Transit Center, then board the Final Friday vehicle for the half-mile ride to the Brickyard. Rides would be available from 4:30 p.m. until 6:30 p.m., following the arrivals of the last RCT fixed routes at 6:25 p.m.

Then, RCT would offer rides home from the Brickyard from approximately 8:00 p.m. to 11:00 p.m. Rides would be provided first-come, first-served, to residences within a defined geographical area, such as the City of Mansfield, select townships, or the Mansfield Urban Area. Customers would provide their home address to the driver upon boarding. Rides would be shared, with vehicles leaving the Brickyard when they were full.

For regulatory compliance purposes, this service must be an advertised, routine offering of service to the general public.¹ RCT would station one vehicle at the Transit Center for the early evening rides to the Brickyard, and three to four vehicles at the Brickyard for the rides home. Following the May 2024 event, RCT would adjust the number of vehicles provided based on anticipated demand. Each Final Friday would require RCT to offer approximately 15 to 20 hours of revenue service. A dispatcher would need to be on duty at the bus garage during the evening service. RCT would fund the service through partnerships with sponsors. To maximize ridership during the pilot, RCT would offer fare-free rides on the demand response vehicles as well as fare-free fixed route rides beginning at 4:30 p.m.

¹ According to 49 CFR Section 604.3(u), "Special transportation" means demand response or paratransit service that is regular and continuous and is a type of "public transportation." Per FTA guidance, special transportation must be shared ride service that is open to the general public.

NIGHT AND EARLY MORNING ON-DEMAND SERVICE

To satisfy the demand for RCT service in the evenings and early mornings, particularly for getting to and from employment, off-hours service is recommended in the form of demand response for the general public. This service should be rolled out in phases, starting with a limited area as a pilot. For example, RCT may offer a first phase of night service in a target area identified through a partnership with one or more stakeholder organizations. The service area should include areas of strong ridership generators, such as multifamily, low-income housing, and employment destinations (e.g., the Lexington-Springmill service industry corridor or the Airport Industrial Park area). Serving the Madison Adult Career Center would be helpful to individuals enrolled in night classes, which run from 4:30 p.m. to 9:30 p.m., Monday through Thursday, as of May 2022.

If, after a successful pilot, the service is provided over a larger area, such as the Mansfield city limits, RCT has the option to implement a zone system wherein vehicles stay within zones set up so that customers transfer between zones at the Transit Center or other key transfer points. This will help the service to operate efficiently, avoiding long cross-city trips that tie up vehicles for long stretches of time, creating capacity constraints that lead to trip turn-downs.

Night service should be offered on weekdays from 6:00 p.m. to 10:00 p.m. or later, depending on available funding. Customers would request trips through the same process used by Dial A Ride customers today. Increased call volume and dispatcher workload will require expanded RCT office staffing. RCT may charge a fare that is higher than the standard fixed route fare for this service.

Night service should be evaluated at regular intervals for ridership, productivity, and cost-efficiency. The TDP implementation plan and final report will include a performance monitoring plan for night service and other new services.

EXPAND CONTRACTED DEMAND RESPONSE TRANSPORTATION

RCT has offered demand response transportation under contract to human service agencies include the Area Agency on Aging, Opportunities for Ohioans with Disabilities, Richland New Hope Industries, and other agencies. RCT has limited capacity to offer contracted to service, but could grow this side of its operation through the expansion of its staff and fleet. Many small transit systems in Ohio provide contracted medical transportation using small vehicles (shuttles and vans with 12 or fewer passenger seats). As part of the TDP process, RCT is drafting a new policy for contracted service, and could expand this type of service in the future. The revenue recommendations for the TDP include submitting funding applications to acquire small, accessible vehicles in 2023; these vehicles would likely be delivered in 2025.

NEAR-TERM SERVICE RECOMMENDATIONS SUMMARY

The near-term recommendations were designed to be budget-neutral changes that RCT could implement to improve cost-efficiency and increase ridership through providing access to new trip generators, especially to workplaces. The impacts of these recommendations are described in Table 1. Operating and capital costs will be described in the TDP implementation plan and final report.

In addition to making these service changes, it is recommended that RCT transition from a flag stop to a bus stop system within two years, as described in the following section. This transition will involve extensive customer and community education and outreach, as well as a significant effort to relocate bus stop signage throughout the fixed route network. Concurrently, marketing and advertising efforts should be undertaken within the near-term timeframe.

Table 1: Impacts of Near-Term Service Recommendations

Route	Near-Term Service Recommendations	Change in Revenue Hours/Day
Route 1 – Park Ave.	<ul style="list-style-type: none"> Start schedule from Transit Center at 6:30 a.m. Eliminate West Park Shopping Center Extend route to Richland Mall/Avita 	Adds 0.5 hour
Route 2 – Lexington Ave.	<ul style="list-style-type: none"> Eliminate coverage on Cook/Main Retain Social Security Office and Executive Court as on-call deviations Route becomes 30 minutes long; driver alternates between Routes 2 and 7, with Route 2 leaving the Transit Center 30 minutes after the hour 	Neutral
Route 3 – South Main/Southside	<ul style="list-style-type: none"> Remove service on Logan, Middle Bellville, and Straub Roads Simplify route in Mansfield’s southwest quadrant 	Neutral
Route 5 – Springmill/Bowman	<ul style="list-style-type: none"> Routing changes at McPherson/Trimble Extend coverage to Hanna/Bowman 	Neutral
Route 7 – Wayne/East Mansfield	<ul style="list-style-type: none"> Routing change at 6th/Adams Add coverage on Parry Avenue (includes Madison Terrace Apartments) Make University Hospital an on-call deviation Depart at top of the hour so driver can alternate between Routes 2 and 7 	Eliminates 5.5 hours
Route 8 – Glessner/Marion	<ul style="list-style-type: none"> Adjust routing and schedule order Make Balgreen Medical, Akron Children’s Hospital, and Veteran’s Administration on-call deviations 	Neutral
Route 9 – West Fourth	<ul style="list-style-type: none"> Move downtown Route routing from Main Street to Mulberry Street Move OSU/NCSC, other stops north of Meijer, and Target to Ontario Circulator route Add on-call deviations to FedEx, CNG, and OhioHealth 	Neutral
Ontario Circulator	<ul style="list-style-type: none"> Add Ontario Circulator Route 	Adds 11 hours
Route 13 – Shelby	<ul style="list-style-type: none"> Eliminate service 	Eliminates 6 hours
Route 15 – Airport Industrial Park	<ul style="list-style-type: none"> Offer additional schedules in 2024 (5:30 a.m., 1:30 p.m., 2 p.m., 2:30 p.m.) Offer additional schedules in 2025 (9:30 p.m., 10 p.m., 10:30 p.m., 11:00 p.m.) 	Adds 2 hours in 2024 Adds 2 more hours in 2025
Add Same-Day Service to Dial A Ride	<ul style="list-style-type: none"> Allow eligible customers to request same-day trips 	Neutral

Route	Near-Term Service Recommendations	Change in Revenue Hours/Day
Add Final Friday On-Demand Service	<ul style="list-style-type: none"> • Provide demand response service for Final Friday (using 3 to 4 existing cutaway vehicles) 	Adds up to 20 hours on 5 days per year
Night and Early Morning Service	<ul style="list-style-type: none"> • Add morning service between 4:30 a.m. and 7:00 a.m. (would not cover Routes 1 and 15 service areas during their early morning hours of operation) (requires 2 to 3 new, small-capacity vehicles) • Add evening demand response service between 6:00 p.m. and 10:00 p.m. (requires 3 to 5 new, small-capacity vehicles) 	Adds 14 to 30 hours
Expand Contracted Demand Response Transportation	<ul style="list-style-type: none"> • Apply to ODOT for grants to fund new, smaller vehicles appropriate for medical trips and other human service transportation • Hire non-CDL drivers and add contracts with human service agencies as resources allow 	N/A (dependent on available drivers/vehicles and contracts)

TRANSITION FROM FLAG STOPS TO BUS STOPS

Feedback from RCT drivers and community stakeholders indicated that RCT’s longstanding flag stop system is problematic for safety and efficiency, and is difficult for new and potential riders to understand. It should be noted that 70% of surveyed RCT customers stated that they preferred to keep the flag stop system, and several RCT drivers with long tenures at the agency feel that the flag system is better for riders than bus stops. Table 2 summarizes the advantages and disadvantages of each approach. This study’s recommendation is to require customers to use bus stops. This requirement should be implemented only after 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.

Table 2: Comparison of Designated Bus Stops and Flag Stop Model

Model	Advantages	Disadvantages
Designated Bus Stops	<ul style="list-style-type: none"> - Increased safety, as pick-up and drop-off locations are clear to customers and drivers. - Tangible stop locations are easily communicated to current and prospective customers. - Increased operational efficiency and service reliability. - Seamless integration with technology (Automatic Vehicle Location, Real Time Tracking, Google Transit Feed) increasing the accuracy and reliability of data. - Supports targeted investment (prioritization of capital) in enhancements to passenger infrastructure (covered shelter, bench, trash can, bike racks, etc.). 	<ul style="list-style-type: none"> - Increased travel time/walking distance to the bus stop making it less convenient for passengers. - When first implemented, may lead to a bump in applications for Dial A Ride service from customers who have difficulty walking to their nearest established bus stop location.
Flag Stop System	<ul style="list-style-type: none"> - Increased level of customer service due to convenience and flexibility. - Minimized travel time/walking distance to catch a bus. 	<ul style="list-style-type: none"> - Decreased level of customer service when operators are unable to accommodate a pick-up due to safety concerns. - Adverse impact on schedule adherence and operational efficiency due to (accommodation of) unscheduled stops. - Decreased service reliability resulting from impacts on schedule adherence - Challenges with integration to technology (Automatic Vehicle Location, Real Time Tracking, Google Transit Feed).

Model	Advantages	Disadvantages
		- Passenger confusion at shopping centers, where they must stand by the stop

RCT’s peer transit system, Allen County Regional Transit Authority (ACRTA) in Lima, Ohio, has historically operated under a flag stop model. Unscheduled stops were having an adverse impact on route timing and the need to transition to a revised model was realized. In 2018, a transition was set into motion. The announcement was met with opposition from customers as they were accustomed to the convenience of flag stops. The decision was retracted based upon the response from the riding community. However, concerns over route timing and the need to address operational efficiencies remained. A transition was revisited, adopted, and went into effect October 2022. The transition is underway and slated to conclude in the 2023 calendar year.



The approach to the current transition has been significantly different from the initial 2018 plan. The change has been implemented in phases, accompanied by a comprehensive public education campaign. Changes have been implemented on a route-by-route basis, with two routes selected for each phase, and will continue until the transition is complete for all ten routes in the RTA network. During the first phase and each subsequent phase, customers have been permitted to continue to flag down the vehicle; however, customers are educated on the changes and associated benefits and coached on how to use the new system. The initial education comes from the operators with additional information and formalized travel training available/provided upon request.

This phased approach allows the agency to provide adequate notification and address feedback provided by customers. The educational campaign is imperative in communicating the need for and benefits of a revised model, such as increased safety and service reliability. Due to customer feedback, more stops were installed than initially planned for; however, the agency has been able to meet their goal of increased service reliability and operational efficiencies and offer a high level of customer service.

The spacing, location, design, and usage of bus stops influences the transit system’s performance and public image. The TDP implementation plan will provide guidance on industry standards for RCT bus stops. Preliminary analysis demonstrates that RCT may need to increase the number of bus stops to meet industry standards for fixed routes. It is recommended that RCT place bus stops approximately every 0.25 mile on most routes. For example, Route 1 (Park Avenue West) currently has 12 identified bus stops. The recommended number of stops on a 12-mile route in a moderately population-dense area would be 45 to 50.

The implementation plan will provide planning-level cost estimates, action steps, and timeframes the planning and capital investment that will be required to implement this recommendation. A planning effort will be required to address current amenities and plan for future enhancements. This will allow for agency goal-setting at the route and system level, programming and securement of funds, formal solicitations for equipment, engineering services and construction, and the mobilization and completion

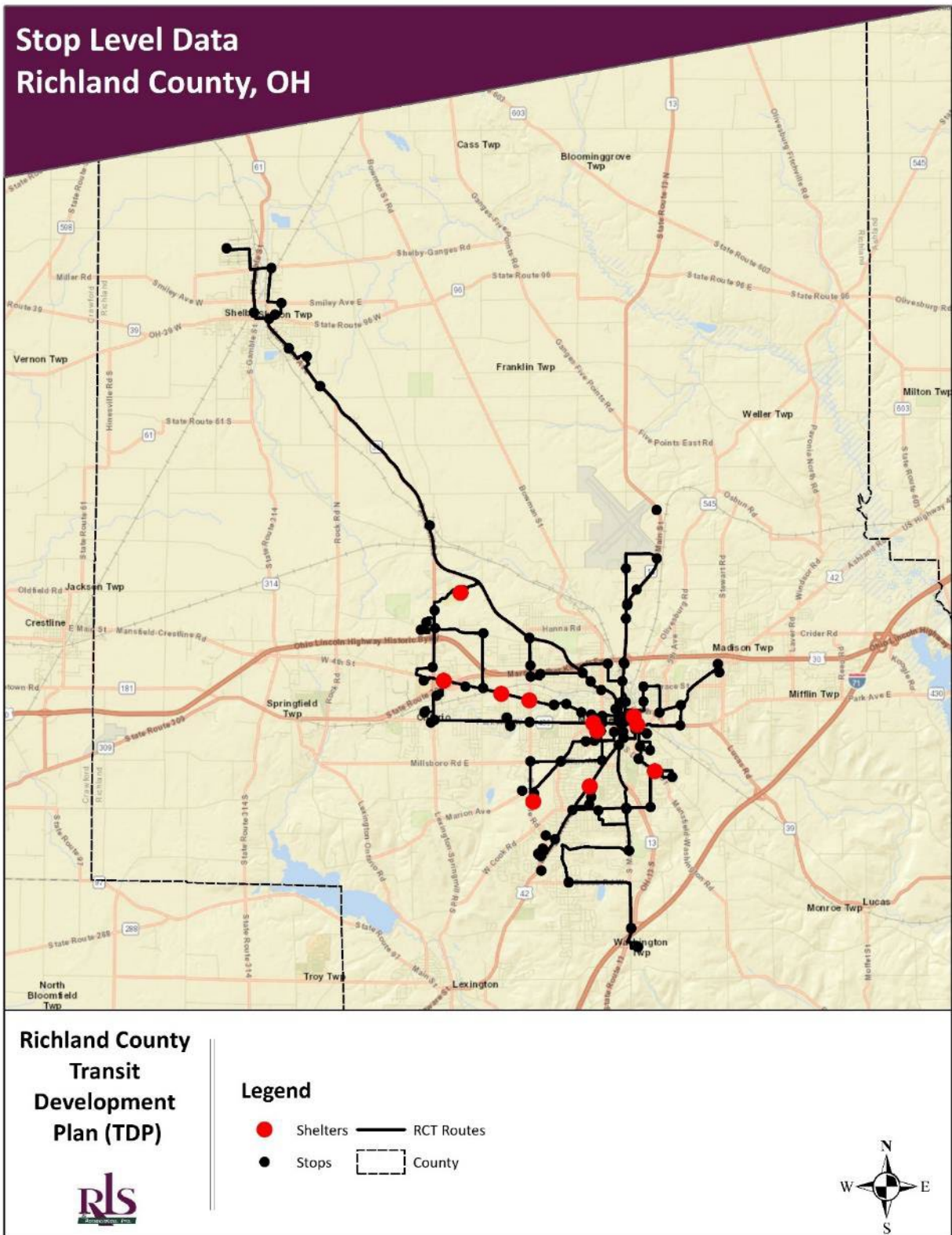
of enhancements. A *Bus Stop Enhancement Plan* may include a planning horizon of five or ten years; the former is recommended for RCT to perform upgrades to existing amenities and enhancements to new stops.

RCT's existing bus stop amenities are listed in Table 3. Figure 11 provides a map of all RCT bus stops and amenities.

Table 3: Existing Bus Shelters

Route	Address	Location/Reference Point	Total	Percent
1 - Park Ave. West	171 Park Ave. East	Richland County Job and Family Services	2	20%
	295 Park Ave. West	Drive Thru Store		
2 - Lexington Ave.	555 Lexington Ave.	Richland County Health Department	1	10%
3 - South Main St.	660 South Diamond St.	Family Dollar	1	10%
8 - Glessner/Marion	N/A	Corner of Blymer and First St.	1	10%
9 - West Fourth St.	1049 West Fourth St.	CVS	4	40%
	1345 West Fourth St.	Corner of Brookwood Way and West Fourth St.		
	2003 West Fourth St.	Nationwide Children's (Home Center)		
	150 E. Fourth St.	Richland Newhope Industries		
	OSU Mansfield Campus	Horseshoe Circle	1	10%

Figure 11: Bus Stops and Amenities in Current RCT Network



MARKETING AND ADVERTISING

Agencies use marketing techniques to communicate information to the riding public, educate the community on the programs and services offered, and garner support by conveying the importance and value of public transportation to the local economy and community as a whole. Fiscal constraints will impact the type of marketing program any agency is able to develop and implement. However, there are creative and low-cost strategies that RCT can implement as part of a “Marketing Toolkit.” It is recommended that RCT develop a more formalized marketing plan. The strategies referenced below are effective strategies that RCT can include as part of the toolkit and incorporate into a marketing calendar.

Brand Development

Brand recognition is essential for marketing the public transportation services and programs administered by RCT. The community survey effort revealed that over half of respondents were familiar with RCT and hold the agency in a positive regard. A reinvestment in the current branding will reinforce brand awareness and allow RCT to reposition itself in the community. A brand refresh will assist RCT in efforts to educate the community on enhanced service offerings and planned improvements. Effective branding supports the engagement required to strengthen existing relationships and cultivate new partnerships with stakeholders and community groups. A revised brand will more appropriately align with a renewed vision for the agency and the direction of Richland County public transportation in the future. For effective branding that will drive RCT into the future, addressing the following is recommended.



Mission and Vision Statement

The RCT mission and reviewed vision that will guide the agency into the future should be presented prominently on the website. This will allow RCT to leverage a renewed vision for continued and increased support from the riding and general public. RLS & Associates will provide a vision/mission development workshop to the Richland County Transit Board in the fall of 2023.

Example from Peer Agency

Licking County Transit delivers demand response public transportation services to the residents of Licking County, OH. Although services and programs differ from those offered by RCT, the department is effective in communicating both mission and vision, with each displayed prominently on the department’s [website](#).

Logo, Tagline, and Color Scheme



An upgrade to the current logo and design scheme will more appropriately reflect the service and technology enhancements that will advance the agency in the near and long term. The RCT tagline is “City Bus Service at its Best”. However, the service area is not limited to Mansfield’s city limits, and services delivered extend beyond the “bus” to shuttles and vans. A fresh new logo, tagline and color scheme will carry to business templates, bus wrap designs, schedule brochures, operator apparel, bus stop and transit facility signage. Revised design including logo, tagline, and color scheme will be applied to the vehicles through a phased approach as resources are identified.

Example from Peer Agency

The Mid-Ohio Valley Transit Authority, Inc. (MOVTA) provides public transportation services to the residents of Parkersburg and Vienna in West Virginia via ten fixed routes and demand response services. Each mode operates under a designated program name. Fixed route services are administered under the *Easy Rider* brand and demand response as *Easy Lift*. The agency tagline is “Bus Transportation Made Easy”. A theme of rider ease is present in both agency and program branding; a common communications strategy for transit agencies. Variations of agency branding are often applied to services, initiatives, events, and social media campaigns.



Website and Social Media

An update of the RCT website and social media platform (Facebook presently) is recommended, following the selection of new branding. The site should be user-friendly and easy to navigate, just like the agency’s services. The site should include rider tools such as a real-time bus tracker and trip planner to help customers travel smarter. Agencies similar in size and service scope within Ohio identified as benchmarks for analysis use different vendors for brand and website development and hosting as per Table 4.

Table 4: Branding/Website Development Vendors

Agency	Website Host	Brand Development	Website Design	Website Hosting	Social Media Marketing
Allen County Regional Transit Authority	Now Marketing Group	x	x	x	x
Licking County Transit	Granicus	x	x	x	
Butler County Regional Transit Services (BCRTA)	Planeteria Media		x	x	
Springfield City Area Transit (SCAT)	Holmes Marketing	x	x	x	x
Sandusky Transit System	Revize		x	x	

The cost for logo and brand redesign can range from a few hundred to a few thousand dollars. This includes professional services associated with development and does not include the cost associated with application to printed materials (e.g., bus schedules, bus wraps, and bus stop signs). The cost for a website redesign can range from \$10,000 to \$20,000, not including fees for hosting.

Marketing Strategies

It is recommended that RCT develop a marketing calendar and promote industry-adopted and agency-celebrated events. Informational campaigns spotlighting services, programs, various initiatives, and associated benefits can be developed and incorporated into the marketing calendar and, subsequently, a social media calendar. RCT can seek professional assistance with the creation of promotional content. Strategies to include in the RCT marketing toolkit are listed as follows:

Industry and State Initiatives

- Transit Equity Day (February)
- Ohio Loves Transit Week (February)
- Bus Driver Appreciation Day (March)
- Earth Day (April)
- National Dump the Pump Day (June)
- Try Transit Day/Week (September)
- Veteran’s Day (November)

National Dump the Pump Day

The National Dump the Pump Day was created in 2006 by the American Public Transportation Association (APTA) and encourages commuters to forgo their cars by using public transit. This allows people to save money on gas while bringing awareness to public transit and its benefits as a greener way to travel (than the single occupancy vehicle). Promotional materials are generated and some agencies suspend fares on this day. Free fare days are accounted for in the budgeting process.



Customer Appreciation Day

Agencies may elect to offer activities and giveaways spanning longer than a day. Ohio Loves Transit is a week-long initiative established by the Ohio Public Transit Association (OPTA) to celebrate transit in Ohio. A customer appreciation day is often memorialized with a special event.

Agency Initiatives

- RCT Newsletter (Independent of/in addition to the RCRPC newsletter)
- Employee and Customer Survey Program
- Public Education Program in Schools
- Transit Customer Advocacy Group



- Community Outreach Program (Pop-up and Community Events)
- Educational Campaign (Ex: Economic benefits of transit green initiatives)
- Holiday Events

Agency initiatives would expand upon efforts currently underway including the RCRPC newsletter, public engagement events, and holiday celebrations. Additionally, operators and customers are recognized through appreciation events conducted by the management team. These efforts would be expanded upon under a formalized marketing plan. A social media campaign could accompany select or all initiatives and event included in the marketing calendar.

Printed Content

Revisions in printed materials including the system schedule and individual route maps are warranted following the rebranding effort and commitment to near-term route and service changes. Major stops for each route must be identified and included in published material. An ADA requirement, major stops must be published, announced through the onboard AVA system and interior vehicle displays. The number of major stops is at the discretion of the agency and will vary among routes and service providers. Design and print services can be secured from vendors who specialize in the production of transit schedules or local vendors, if/as available. The process may take two to five months depending on the level of design and print needed. It is recommended that RCT develop specific brochures and other informational materials to educate the community about using atypical or new services such as on-call deviations, Dial A Ride/on-demand zones, and night service.

Travel Training

The current travel training program includes classroom and field training. A formalized program under a revised branding would bring awareness and assist RCT in promoting this service to the community. The program can expand, for example, to include a standing “Transit 101” morning/afternoon commute effort, that could be offered in-person and via Facebook live. A *How to Ride* video should be created, published and distributed for promotional purposes. Additional training materials are recommended for development and distribution in print format. Ongoing engagement and standing travel training sessions can be established with the local school systems, health and human service agencies and senior centers, major employers, and/or primary housing complexes located within the service area. Targeted outreach will be focused on major destinations on RCT routes, particularly new destinations added due to TDP recommendations. An example of a destination for targeted outreach is School Specialty, an Airport Industrial Park employer, whose main shift will be newly served by RCT due to the addition of early morning service on Route 15.

MID-TERM SERVICE RECOMMENDATIONS (4 TO 6 YEARS)

RCT would make the mid-term service changes described in this section within the next four to six years. These recommendations include the addition of on-demand services in three suburban areas, offering Saturday on-demand service, and providing general public demand response service to rural areas of Richland County. Also, RCT would restore regular route service between Shelby and Mansfield during this

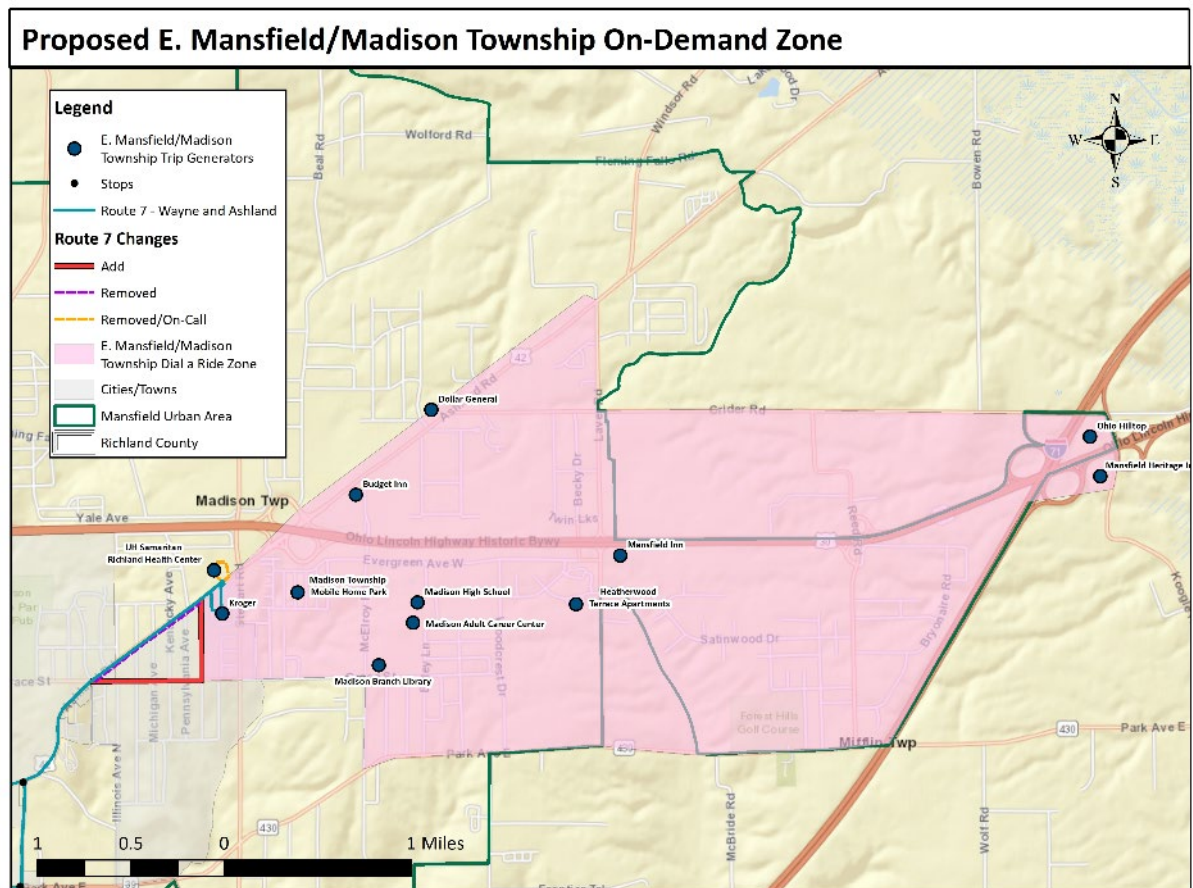
phase. Prior experience with early morning and night on-demand service during the first phase of the TDP would allow RCT to gain experience with providing a new type of service, and apply lessons learned in the suburban on-demand zones. For these zones, service hours would be scalable, based on available funding, as well as the availability of vehicles and drivers to operate the service. These services could be offered as short-term pilots (for a minimum of six months), then continued or expanded depending on whether performance targets were achieved.

SUBURBAN ON-DEMAND ZONES

E. Mansfield/Madison Township On-Demand Zone

The E. Mansfield/Madison Township On-Demand Zone would be a new service for Richland County Transit. The service would allow individuals to be picked up and dropped off in locations east of the Ashland Road Kroger, as shown in Figure 12. Some of the locations served would include Madison High School, Mansfield Heritage Inn, Heatherwood Terrace Apartments, Kroger, Madison Township Mobile Home Park and Madison Adult Career Center. The inclusion of Kroger in the zone would allow individuals to transfer to or from Route 7. Service hours would be scalable, based on available funding, as well as the availability of vehicles and drivers to operate the service.

Figure 12: E. Mansfield/Madison Township On-Demand Zone

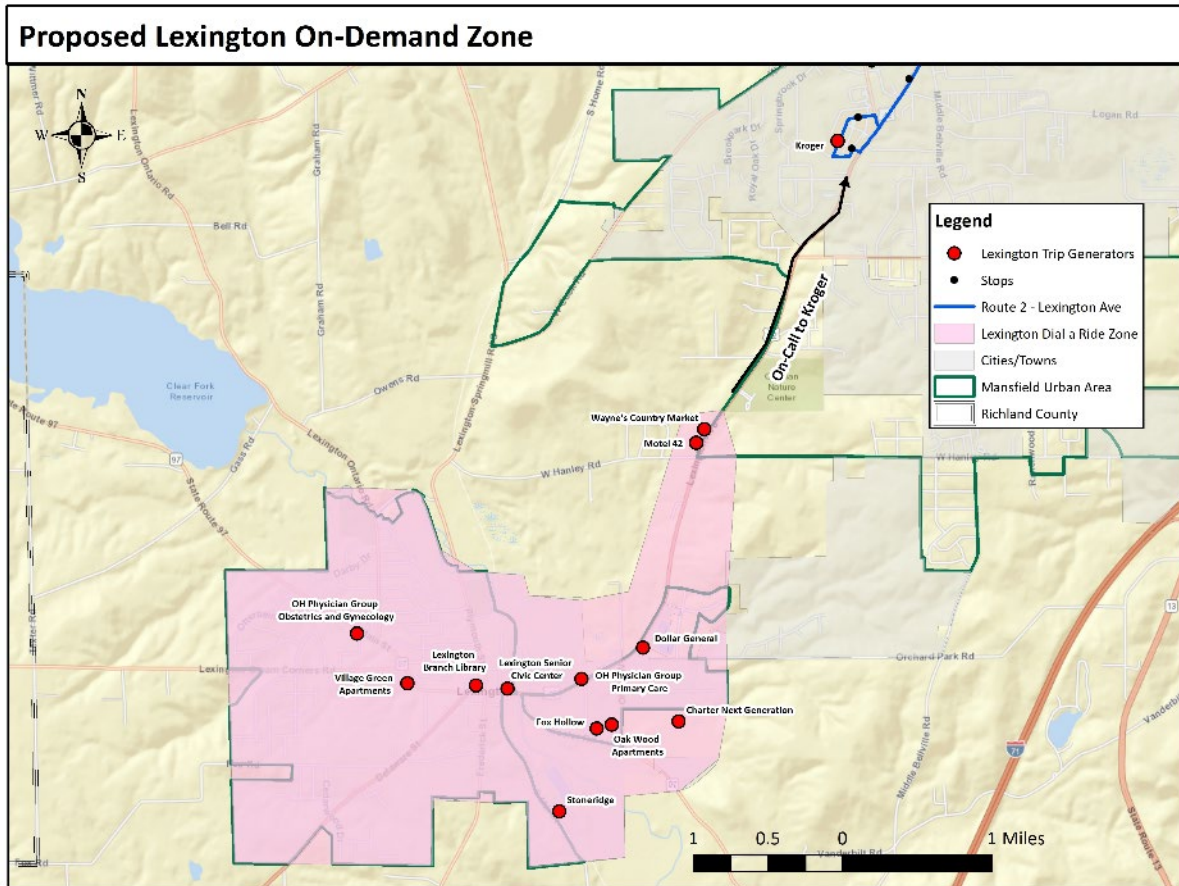


Lexington On-Demand Zone

An On-Demand Zone for Lexington is also recommended. The service would allow individuals to be picked up and dropped off in locations around the City of Lexington, as shown in Figure 13. Some of the locations served would include Lexington Senior Civic Center, OhioHealth Physician Group, Stoneridge, Charter Next Generation, and Motel 42.

On-call trips to Kroger on Lexington Avenue to connect with Route 2 will be available if requested at least one day in advance. RCT customers could also ride Route 2 from Mansfield, and request a ride from Kroger to destinations within the Lexington zone. Service hours would be scalable, based on available funding, as well as the availability of vehicles and drivers to operate the service. Trips would be provided based on availability.

Figure 13: Lexington On-Demand Zone



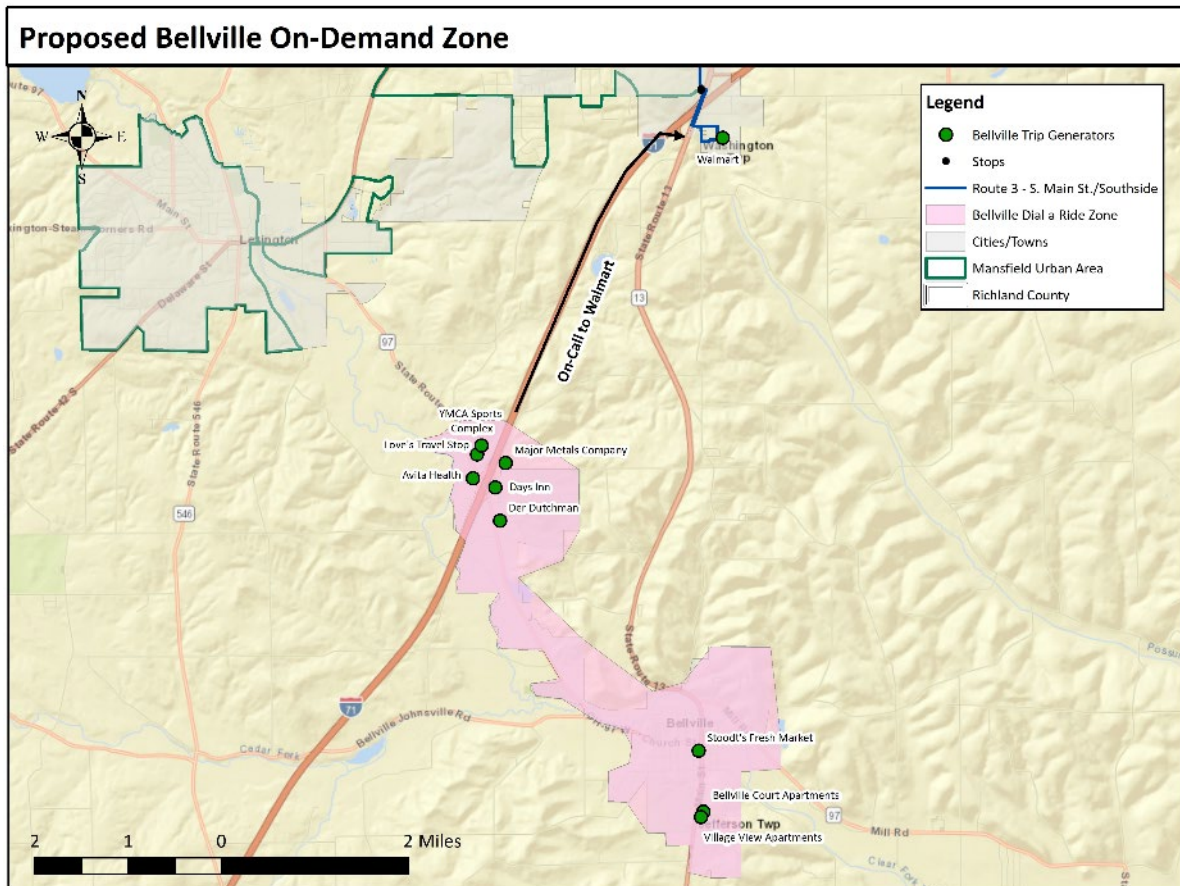
Bellville On-Demand Zone

The Bellville On-Demand Zone, shown in Figure 14, would allow individuals to be picked up and dropped off in locations around Bellville. Some of the locations served include Avita Health, Major Metals

Company, Der Dutchman, Village View Apartments, and the new YMCA sports complex. On-call trips to Walmart to connect with Route 3 will be available if called ahead.

Bellville is outside of the 2020 Mansfield Urban Area boundaries, meaning that Section 5307 funding could not be used to fund this service. Therefore, it is recommended that RCTB work with ODOT to determine whether RCTB should apply for FTA Section 5311 funding, which supports public transit in rural areas.

Figure 14: Bellville On-Demand Zone



SATURDAY ON-DEMAND SERVICE

To provide service on Saturdays, RCT would offer on-demand service between the hours 7:00 a.m. and 3:00 p.m. As with other on-demand services, this could be phased in gradually to specific areas of the RCT service area over time. As shown in Table 5, the recommendation is to operate between two and three vehicles per Saturday on eight-hour shifts.

RESTORE SHELBY SERVICE

A successful application for FTA Section 5311 rural transit funding, and the identification of local match, would allow RCT to restore Route 13 between Mansfield and Shelby. During the period of preparation for the grant application, RCT would work with local stakeholders to identify the most effective routing and schedules for this service. Options include, but are not limited to:

- Reduce time and mileage (as compared to the current Route 13) by eliminating unproductive stops.
- Add one round trip to the schedule, increasing the options that customers have for travel.
- Include a stop on the Ontario Circulator route to provide opportunities to transfer, providing access to the Lexington/Springmill shopping area.
- Identify a location for a bus shelter in Shelby.

RCT would operate the Shelby route as a commuter bus service. “Commuter bus” is a mode of bus service defined under 49 CFR 37.3 as “fixed route bus service, characterized by service predominantly in one direction during peak periods, limited stops, use of multi-ride tickets, and routes of extended length, usually between the central business district and outlying suburbs. Commuter bus service may also include other service, characterized by a limited route structure, limited stops, and a coordinated relationship to another mode of transportation.” 49 CFR 37.121(c) states that requirements for complementary paratransit do not apply to commuter bus. The National Transit Database glossary includes the characteristics of multiple stops in outlying areas, limited stops in the central city, and at least five miles of closed-door service in its description of commuter bus. The reinstated version of Route 13 should conform to these descriptions if RCT does not provide complementary paratransit service for the route.

RCT should develop a brochure and other marketing materials that advertise Route 13 and the Shelby taxi, including separate timetables for atypical schedules, such as those serving Pioneer Career and Technology Center. RCT would work with the City of Shelby to distribute the Route 13 brochure by mail to Shelby residents following the launch of the service.

RURAL RICHLAND COUNTY DEMAND RESPONSE

This recommendation concerns rural general public transit service for Richland County, outside of the Mansfield urban area. Population density levels outside of the urban area are not high enough to substantiate a need for fixed route bus service. Therefore, public transit in Richland County should be provided as demand response service. This service should be operated using advance reservations, rather than as an on-demand service. Rural trips are generally longer than urban trips, and would be difficult to manage without planning drivers’ schedules at least one day in advance.

For planning purposes, it is recommended that RCT anticipate running two to three rural demand response vehicles per service day. RCT could run rural demand response as feeder service for its fixed route network, or offer rides from the customer’s origin to their final destination. Trip demand is likely to

be dispersed throughout the rural areas of the county, with most trip destinations in Mansfield and Ontario. It is recommended that RCT begin to operate this service in the central and middle sections of the county at first. An expansion to the northern townships of the county would occur at a later date, depending on capacity and available funding.

MID-TERM RECOMMENDATIONS SUMMARY

The impacts of the mid-term recommendations on daily revenue hours of service are provided in Table 5. It must be noted that these recommendations are scalable, and could be implemented in phases and/or service-by-service as funding allows.

Table 5: Impact of Mid-Term Recommendations

Route/Service	Mid-Term Recommendations	Change in Revenue Hours/Day
Urban Area Services (Fund with Section 5307 funding and new sources of local match)		
E. Mansfield/Madison Township Dial A Ride/On-Demand Zone	<ul style="list-style-type: none"> • Add demand response service between 8:00 a.m. and 4:00 p.m. (1 to 2 small-capacity vehicles) • Expand hours if warranted following evaluation of initial six months of service 	Adds 8 to 10 hours
Saturday On-Demand Service	<ul style="list-style-type: none"> • Add demand response service between 7:00 a.m. and 3:00 p.m. (2 to 3 small-capacity vehicles) • Expand hours if warranted following evaluation of initial six months of service 	Adds 16 to 24 hours
Lexington Dial A Ride/On-Demand Zone	<ul style="list-style-type: none"> • Add demand response service between 8:00 a.m. and 4:00 p.m. (1 to 2 small-capacity vehicles) • Expand hours if warranted following evaluation of initial six months of service 	Adds 8 to 12 hours
Rural Services (Contingent on Receipt of Section 5311 funding and local match)		
Restore Shelby Fixed Route with Added Schedules	<ul style="list-style-type: none"> • Restore a modified version of the Shelby bus route, adding additional schedules as resources allow (use existing cutaway vehicles) 	Adds 8 hours
Bellville Dial A Ride/On-Demand Zone	<ul style="list-style-type: none"> • Add demand response service between 8:00 a.m. and 4:00 p.m. (1 small-capacity vehicle) • Expand hours if warranted following evaluation of initial six months of service 	Adds 8 hours
Richland County Demand Response Rural Service	<ul style="list-style-type: none"> • Add demand response service between 8:00 a.m. and 4:00 p.m. (2 to 3 small-capacity vehicles) 	Adds 16 to 24 hours

LONG-TERM SERVICE RECOMMENDATIONS (7 TO 10 YEARS)

In the long-term, if funding is secured for expansion, it is recommended that RCT retain the services discussed in the near- and mid-term recommendations (add the Ontario Circulator, add on-demand services, add rural services and restore the Shelby route). RCT would choose the long-term direction for its services following a formal evaluation of the first five years of the TDP. The formal evaluation, conducted during Year 6 (2029), would provide RCT with criteria for retaining, adjusting, or eliminating specific routes or demand response services. This evaluation would include an examination of the performance of the on-demand services, including ridership, productivity, and cost-efficiency. Suggested performance metrics will be provided in the final TDP. Recently, RCT was informed that ODOT will now require small urban transit systems to conduct a TDP once every ten years, and conduct an interim update five years into the TDP period. The formal evaluation could easily be included in the process of conducting a five-year update in 2029.

Four alternatives are provided in this section for the long-term service model. RCT would select one of these alternatives or adopt a hybrid that blends aspects of multiple alternatives. The first two alternatives retain the existing fixed route network, the Ontario Circulator, and the demand response services implemented in the near- and mid-term periods. Alternative 1 offers services that are closest to RCT's existing services. Alternative 2 features increased frequency on most fixed routes. Frequency on Routes 1, 2, 5, 8, 9, and Ontario Circulator would increase from 60-minute to 30-minute headways. Due to adding an additional driver and vehicles to most routes, Alternative 2 is the costliest of the four alternatives.

Under Alternative 3, RCT would retain some fixed routes, but transition much of its service to an on-demand model. A limited network of fixed routes would act as a "spine," with on-demand service for rides in areas unserved by fixed routes. Alternative 4 would involve eliminating all fixed routes and moving to a fully on-demand/demand response model.

An overview of the four alternatives is provided in Table 6. Planning-level cost estimates and funding sources are provided in the Recommendations Summary, Cost Estimates and Potential Revenue Sources section of this report.

Table 6: Alternatives for Long-Term Service Changes

Alternative	Fixed Route	Demand Response/On-Demand
Alternative 1: Existing Network with New On-Demand Services	Preserves existing network, retains Ontario Circulator and restores Shelby route	Retains Final Fridays, Morning/Evening On-Demand, Saturday On-Demand, Suburban On-Demand, and Rural Demand Response
Alternative 2: Increased Frequency with New On-Demand Services	Preserves existing network and doubles frequency on Routes 1, 2, 5, 8, 9, and Ontario Circulator, restores Shelby route	Retains Final Fridays, Morning/Evening On-Demand, Lexington and Bellville On-Demand, and Rural Demand Response; Changes Route 7 to On-route

Alternative	Fixed Route	Demand Response/On-Demand
		Demand, merging with E. Mansfield On-Demand
Alternative 3: “Spine” Network with Increased On-Demand Services	Retains Routes 1, 15, and Ontario Circulator, Restores Shelby route	Retains Final Fridays, Morning/Evening On-Demand, Saturday On-Demand, Suburban On-Demand, and Rural Demand Response; Adds Daytime On-Demand to Areas Formerly Served by Fixed Routes
Alternative 4: 100% On-Demand/Demand Response	Eliminates all fixed routes	Retains Final Fridays, Morning/Evening On-Demand, Saturday On-Demand, Suburban On-Demand, and Rural Demand Response; Adds Daytime On-Demand to Areas Formerly Served by Fixed Routes

TECHNOLOGY RECOMMENDATIONS

This section overviews existing conditions for onboard technology and software solutions employed by RCT, identifies available technology solutions to increase efficiencies in agency processes and operations and offer an enhanced customer experience. Alternatives for building a technology landscape that will mitigate immediate, short-term challenges and offer a solid foundation for integration of enhancements are outlined herein. The options researched are most appropriate for small urban transit systems such as Richland County Transit.

Existing Fixed Route Technology

A matrix of RCT’s current fixed route technology applications is provided in Table 7.

Table 7: Inventory of Fixed Route Technology Solutions

Onboard Equipment		
Type	Manufacturer	Date Employed
Automated Voice Annunciation System (AVAS)	Adaptive Ride Systems	Installation occurred post-delivery before each vehicle was placed into revenue service
Mobile Data Terminal	Samsung Tablet	October 2019; contract for hardware and support expires January 2024
Exterior Destination Sign	Luminator Technology Group	Included with vehicle procurement
Interior Passenger Advisory Sign		

Onboard Equipment		
Type	Manufacturer	Date Employed
Farebox	Diamond - Manual Drop-box	Installation occurred post-delivery before each vehicle was placed into revenue service
Two-way Radio	Kenwood	New equipment installed March 2023
Video Surveillance System	247 Surveillance	Each vehicle is equipped with 6 camera units; equipment upgraded 2017
In-Office / Software		
Type	Manufacturer	Date Employed
Computer-Aided Dispatch/Automatic Vehicle Location (CAD/AVL)	Doublemap / TransLoc	October 2019; contract for hardware and support expires January 2024
Asset Management Platform (Maintenance Department)	Ron Turley Associates (RTA)	Software has been in place since 2000
Video Surveillance Viewing Software	247 Surveillance Live	Software update occurred 2017 in consultation with the equipment upgrade
General Transit Feed Specification (GTFS)	The standard format for uploading schedule and geographic data to trip planning platforms including Google Transit, Apple Maps, Transit App, etc. GTFS data for RCT is not currently published. The data will need to be maintained and published routinely by RCT following the adoption of new CAD/AVL technology.	N/A

Further descriptions of these technologies are provided below.

Computer-Aided Dispatch (CAD)/Automatic Vehicle Location (AVL)

CAD/AVL refers to a system that tracks the locations of vehicles in service and communicates their locations to customers for trip planning purposes. This technology supports the overall operations and management of RCT fixed route service and vehicles. It allows for direct communications between

dispatchers (central office) and vehicles through the mobile data terminal (MDT), a tablet located on the vehicle. AVL onboard hardware is required to collect and deliver location information while software exchanges information between the various parts of the system. Data collected and communicated through the existing RCT CAD/AVL system includes GPS location, schedule adherence status (number of minutes ahead of or behind schedule), breakdowns, and emergencies. This technology integrates with onboard equipment to communicate information to exterior and interior vehicle signage and passenger information systems including real-time tracking and estimated time of arrival at stops. Real-time predictions are communicated on a thirty-second frequency. RCT customers are able to track the location of their vehicle in real time through the Doublemap/TransLoc “Ride Systems” app.

CAD/AVL is an integral component of the agency’s “Intelligence System.” It results in improved safety for customers and operators, increases operational efficiencies, enhances the customers’ experience and increases the reliability of data required for monitoring system performance, including reports.

Automated Voice Annunciation System (AVAS)

The AVAS consists of speakers inside the vehicle, integrated with the CAD/AVL system, which convey real-time service updates including next stop information and other pre-recorded, public service announcements. This system is implemented fleet-wide to satisfy a requirement under the Americans with Disabilities Act and improve the customer experience. RCT’s fixed route fleet is equipped with this technology although it is not currently functional.

Exterior Destination Sign and Interior Passenger Advisory Sign

Variable displays are installed on the outside of the vehicles, integrated with the CAD/AVL system, that display the name and number of the RCT fixed route. RCT’s buses and shuttles each have a head sign located above the operator compartment and side signage adjacent to the passenger entry door. Variable displays are located on the interior of each fixed route vehicle to illustrate information about the route and upcoming stops. Communications (messages) are pre-recorded with in-route information announced automatically when prompted by GPS vehicle location.

Mobile Data Terminal (MDT)

MDTs are in-vehicle hardware and software with which fixed route operators can log in and input passenger boarding information, communicate with dispatch, and interact with the Computer-Aided Dispatch (CAD). The MDT serves as the data processing and transporting technology that feeds information to the other systems. Tablets, operating on the Doublemap platform, are connected to the vehicle console and serve as both the driver’s screen and operating system for fixed route buses and shuttles. Operators log into the tablet to engage the AVAS and interior signage, track schedule adherence of their vehicle/route, and communicate with dispatch (central office). Passenger counts can also be captured through the MDT; however, presently, passenger boardings (ridership) are captured in manual counts hand written on paper by the drivers due to complications with the current technology.

Video Surveillance

RCT buses and shuttles are equipped with surveillance systems that capture footage onboard the vehicle (inside and outside). Data captured can be reviewed and stored through support software.

Demand Response Technology

A matrix of demand response technology solutions is presented in Table 8.

Table 8: Inventory of Demand Response Technology

Onboard Equipment		
Type	Manufacturer	Date Employed
Mobile Data Terminal (MDT)	Samsung Tablet	November 2015
Farebox	Diamond - Manual Drop-box	Installation occurred post-delivery before each vehicle was placed into revenue service
Two-Way Radio	Kenwood	New equipment installed March 2023
Video Surveillance System	247 Surveillance	Each vehicle is equipped with 6 camera units; equipment upgraded 2017
In-Office / Software		
Type	Manufacturer	Date Employed
Dispatch and Scheduling Software	Ecolane	November 2015
Video Surveillance Viewing Software	247 Surveillance Live	Software update occurred 2017 in consultation with the equipment upgrade

Further elaboration and function of each demand response technology solution currently employed by RCT is detailed below.

Dispatch and Scheduling Software

Transportation reservations and operator schedules for RCT’s Dial-a-Ride and contracted demand response services, are managed through the Ecolane Evolution scheduling and dispatching platform. This solution allows for trip planning with schedule optimization, allowing trips to be rescheduled between drivers in real-time depending on unexpected delays, traffic conditions, trip changes and other situations. The software supports scheduling in advance, subscription trips (standing reservations), and hosts a suite of management reports for monitoring service performance and utilization. Additional features including same-day scheduling and an interactive voice response (IVR) system are available through the Ecolane platform. This web-based, hosted solution alleviates RCT of the burden and cost for IT support. Tablets, operating on the Ecolane platform, are connected to the vehicle console and serves as both the driver monitor and operating system for vehicles utilized for paratransit service.

Transit Technology Solutions

Matrices of market technology solutions covering all service modes considered as part of this study are illustrated in Table 9 and Table 10. An implementation plan and planning-level cost estimates will be detailed later in the TDP process. Solutions will be prioritized and classified based on need. Interim needs are defined as one to two years; mid-term, two to five years; and long-term, five to ten years.

Table 9: Recommended Technology Solutions for Operations

Operations		
Technology	Description	Benefit
Automatic Passenger Counter (APC)	Systems that track the boardings and alightings of customers at each stop. Data collected includes route, time, and location.	Eliminates the need for the operator to conduct manual counts at time of boarding. Increases operational and administrative efficiency and reliability of data
On-demand Booking and Scheduling	Enables dynamic booking and scheduling of demand responsive (e.g., Dial A Ride) transportation services through real-time optimization of operator manifests to accommodate same-day trip requests	Offers greater level of convenience; enhances the customer experience
Fixed Route Scheduling Software	Enables the development of fixed-route transit schedules	Increases operational efficiency

Table 10: Recommended Technology Solutions for Customer Experience

Customer Experience		
Technology	Description	Benefit
Electronic Fareboxes	Enables the collection of various fare payment media (e.g., cash, bus passes) upon boarding	Improves data reliability and access to reporting. Enhances the customer experience
Smart Cards and Automated Fare Collection Systems	Enhances fare payment through card-based and account-based systems	
Mobile Ticketing	Allows customers (or their designees, through an online portal) to purchase and manage fare payments electronically through a web- browser or mobile phone application.	
Smartphone App	An alternative platform for customers to access information and system alerts, plan	Increases access to information. Improves the

Customer Experience		
Technology	Description	Benefit
	trips, and educate themselves about RCT services and programs	customer experience and is an attractive feature for prospective transit users
Trip/Itinerary Planners	Provides customers with the ability to plan trips through transit operator websites by showing schedule time, fare and route to destination(s)	
Mobility-As-A-Service (MaaS)	Provides a seamless travel experience through tools and technology that enable customers to plan and pay for multi-modal trips involving one or more transportation providers	
Interactive Voice Response (IVR) System	Provides automatic trip notifications to demand response customers the night before their scheduled trip and when their vehicle/driver is in route	Increases operational and administrative efficiencies. Reduces no-shows. Enhances the customer experience through increased access to information

Technology upgrades will enhance RCT’s existing operations and allow for increased efficiency in business practices through reduction and potential elimination of manual practices, particularly bus pass sales and passenger counts. The need for integration of enhanced technology solutions within the transit industry and under the current Federal administration is of significant importance. Reporting requirements set forth by the FTA is/will be reliant on more efficient and reliable methods of data collection and reporting. A clear plan and firm foundation for technology systems (hardware and software) will support the agency in their compliance with changing Federal and state requirements. Additionally, these solutions are essential for analyzing performance at the system, mode, route, and stop level. A performance-based reporting system increases agency accountability to funding partners, the RCT Board, customers, and the public. Sound and reliable data is required for leadership to evaluate current conditions and make informed decisions to address inefficiencies in operations and prioritize investments in both service and capital.

Recommendations for short-term technology solutions are listed as follows. These options will offer the greatest return for RCT, community partners, and transit customers and provide a solid foundation to (pursue) implement mid-term and long-term technology improvements in accordance with this planning effort.

- Adopt revised procedure for procurement and distribution of transit passes.
- Adopt electronic and touchless fare payment solution for fixed route and Dial A Ride services.

- Offer rider tools including real-time tracker and trip planner on the RCT website.
- Identify a MaaS solution (implementation might be feasible in the near-term or early mid-term).

RECOMMENDATIONS SUMMARY, COST ESTIMATES AND POTENTIAL REVENUE SOURCES

Summary information about the draft service recommendations and estimated operating costs are provided in the following sections on Alternatives 1 through 4. The planning-level operating cost estimates assume that new services, such as the on-demand services, would start small, then build in scale over a period of 1-2 years as awareness of the services increased and ridership grew, depending on available funding.

Alternatives Summary

As shown previously in Table 6, the first two alternatives retain the existing fixed route network, the Ontario Circulator, and the demand response services implemented in the near- and mid-term periods.

- Alternative 1 offers services that are closest to RCT’s existing services. Fixed routes are maintained close to how they operate in 2023, with the Shelby route reinstated in 2027 with rural transit funding.
- Alternative 2 features increased frequency on most fixed routes. Frequency on Routes 1, 2, 5, 8, 9, and Ontario Circulator would increase from 60-minute to 30-minute headways. Due to adding an additional driver and vehicles to most routes, Alternative 2 is the costliest of the four alternatives.

The second two alternatives involve transitioning RCT away from a fixed route model to a system that primarily operates in the demand response mode.

- Under Alternative 3, RCT would retain some fixed routes, but transition much of its service to an on-demand model. A limited network of fixed routes would act as a “spine,” with on-demand service for rides in areas unserved by fixed routes.
- Alternative 4 would involve eliminating all fixed routes and moving to a fully on-demand/demand response model.

The cost estimates in the alternatives tables that follow are based on assumed per-hour costs of \$112.05 for fixed route and \$109.81 for demand response. To account for growth in expenses due to current economic conditions, these figures are higher than the 2021 and 2022 fully allocated costs for fixed route service (\$90.05 and \$91.27, respectively). RCT’s fully allocated costs for demand response service in 2021 (\$99.26) and 2022 (\$147.28) were higher than fixed route; however, Dial A Ride service ridership is still rebounding from the pandemic. In 2023, the demand response per-hour costs are likely to decrease as RCT runs more hours of service to meet increased demand for rides.

Capital and planning expenses for costs like additional vehicles, technology, bus stop enhancements, or one-time branding and marketing efforts are not included in the operating cost estimates. These items are listed in Table 20. It is noted that FTA Section 5310 funds are eligible for use by public transit systems to expand transportation for older adults and people with disabilities; nationwide, Section 5310 grants are commonly used for paratransit vehicles and bus stop infrastructure that improves accessibility for the target populations. Also, FTA Section 5311 grants are potentially available for Ohio urban transit systems to add service for surrounding rural areas. Section 5311 would be appropriate for funding services outside of the Mansfield Urban Area, including Bellville, Shelby, and rural towns/townships.

A discussion of potential revenue sources for service expansions follows the capital and planning expenses information.

STATUS QUO

To provide a baseline for comparison between the present RCT system and the alternatives, projections are provided for the “status quo” option, which is to retain the fixed routes and ADA paratransit service offered under Alternative 1, but offer no new on-demand or demand response services.

Status Quo	<ul style="list-style-type: none"> • Existing Fixed Route Network, including Shelby Fixed Route • No New On-Demand or Demand Response Services
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Table 11 provides the daily revenue hours per route, total annual revenue hours, and costs associated with fixed route, ADA paratransit, and existing contract service for the Area Agency on Aging. All of the following hours/costs tables are structured as follows:

- Daily revenue hours of service are provided for each fixed route by year through 2033.
- The daily and annual total revenue hours of fixed route service area provided.
- The total cost for fixed route service by year is calculated by multiplying the annual total fixed route hours by the estimated cost per fixed route hour.
- Paratransit/demand response hours are provided for each demand response service.
- The total cost for demand response service by year is calculated by multiplying the annual total demand response hours by the estimated cost per demand hour.
- Total costs represent the combined total (fixed route and demand response).
- Revenue growth represents the estimated annual increase in total revenue, from all sources, necessary to cover costs.

Table 11: Status Quo Scenario Fixed Route and Demand Response Costs, 10-Year Projection

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Route 1 – Park Ave.	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
Route 2 – Lexington Ave.	11	11	11	11	11	11	11	11	11	11
Route 3 – South Main/Southside	11	11	11	11	11	11	11	11	11	11
Route 5 – Springmill/Bowman	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Route 7 – Wayne/East Mansfield	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Route 8 – Glessner/Marion	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Route 9 – West Fourth	11	11	11	11	11	11	11	11	11	11
Route 15 – Airport Industrial Park	2	2	2	2	2	2	2	2	2	2
Route 13 - Shelby	6	6	6	6	6	6	6	6	6	6
Total Fixed Route Hours (Daily)	69	69	69	69	69	69	69	69	69	69
Total Fixed Route Hours (Annual)	17,595	17,595	17,595	17,595	17,595	17,595	17,595	17,595	17,595	17,595
Estimated Cost per Fixed Route Hour	\$112.05	\$115.41	\$118.87	\$122.44	\$126.11	\$129.90	\$133.79	\$137.81	\$141.94	\$146.20
Fixed Route Cost	\$1,971,520	\$2,030,665	\$2,091,585	\$2,154,333	\$2,218,963	\$2,285,532	\$2,354,098	\$2,424,721	\$2,497,462	\$2,572,386
ADA Paratransit Hours	3,957	3,957	3,957	3,957	3,957	3,957	3,957	3,957	3,957	3,957
Existing Contract Service Hours (AAA)	263	263	263	263	263	263	263	263	263	263
Total Demand Response Hours	4,220	4,220	4,220	4,220	4,220	4,220	4,220	4,220	4,220	4,220
Estimated Cost per Paratransit/Demand Response Hour	\$109.81	\$113.10	\$116.50	\$119.99	\$123.59	\$127.30	\$131.12	\$135.05	\$139.10	\$143.28

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Paratransit/Demand Response Cost	\$463,398	\$477,300	\$491,619	\$506,368	\$521,559	\$537,206	\$553,322	\$569,921	\$587,019	\$604,630
Total Cost	2,434,918	\$2,507,965	\$2,583,204	\$2,660,701	\$2,740,522	\$2,822,737	\$2,907,419	\$2,994,642	\$3,084,481	\$3,177,016
Revenue Growth <i>Estimated increase in total revenue (Federal and local) needed for fixed route & paratransit</i>	N/A (Baseline)	\$73,048	\$75,239	\$77,496	\$79,821	\$82,216	\$84,682	\$87,223	\$89,839	\$92,534

ALTERNATIVE 1: EXISTING NETWORK WITH NEW ON-DEMAND SERVICES

Under Alternative 1, RCT would retain its existing route network, including the Ontario Circulator and, beginning in 2027 with rural transit funding, restored Shelby route. On-demand/demand response services would be phased in over time, depending on available funding. All fixed routes would operate on 60-minute headways, as they do today (except for Routes 13 and 15, which have irregular frequencies).

**Alternative 1:
Existing Network with
New On-Demand
Services**

- Preserves Existing Fixed Route Network
- Ontario Circulator
- Shelby Fixed Route
- Final Fridays
- Morning/Evening On-Demand
- Saturday On-Demand
- East Mansfield/Madison Township On-Demand
- Lexington On-Demand
- Bellville On-Demand
- Rural Demand Response

Table 12 provides the daily revenue hours per route, total annual revenue hours, and costs associated with fixed route and ADA paratransit. Table 13 provides the estimated annual revenue hours and costs for new demand response and on-demand services.

Table 12: Alternative 1 Fixed Route Costs, 10-Year Projection

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Route 1 – Park Ave.	12	12	12	12	12	12	12	12	12	12
Route 2 – Lexington Ave.	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Route 3 – South Main/Southside	11	11	11	11	11	11	11	11	11	11
Route 5 – Springmill/Bowman	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Route 7 – Wayne/East Mansfield	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Route 8 – Glessner/Marion	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Route 9 – West Fourth	11	11	11	11	11	11	11	11	11	11
Route 15 – Airport Industrial Park	4	6	6	6	6	6	6	6	6	6
Ontario Circulator	11	11	11	11	11	11	11	11	11	11
Route 13 – Shelby	0	0	0	8	8	8	8	8	8	8
Total Fixed Route Hours (Daily)	71	73	73	81	81	81	81	81	81	81
Total Fixed Route Hours (Annual)	18,105	18,615	18,615	20,655	20,655	20,655	20,655	20,655	20,655	20,655
Estimated Cost per Fixed Route Hour	\$112.05	\$115.41	\$118.87	\$122.44	\$126.11	\$129.90	\$133.79	\$137.81	\$141.94	\$146.20
Fixed Route Cost	\$2,028,665	\$2,148,385	\$2,212,837	\$2,528,999	\$2,604,869	\$2,683,016	\$2,763,506	\$2,846,411	\$2,931,803	\$3,019,758
ADA Paratransit Hours	4,072	4,186	4,186	4,186	4,186	4,186	4,186	4,186	4,186	4,186
Estimated Cost per Paratransit Hour	\$109.81	\$113.10	\$116.50	\$119.99	\$123.59	\$127.30	\$131.12	\$135.05	\$139.10	\$143.28
ADA Paratransit Cost	\$447,113	\$473,499	\$487,704	\$502,335	\$517,405	\$532,927	\$548,915	\$565,382	\$582,344	\$599,814
Total Cost	\$2,475,778	\$2,621,884	\$2,700,540	\$3,031,334	\$3,122,274	\$3,215,943	\$3,312,421	\$3,411,794	\$3,514,147	\$3,619,572
Revenue Growth	N/A (Baseline)	\$146,106	\$78,657	\$330,794 (addition	\$90,940	\$93,668	\$96,478	\$99,373	\$102,354	\$105,424

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<i>Estimated increase in total revenue (Federal and local) needed for fixed route & paratransit</i>		(addition of evening Route 15 – Airport schedules)		of Route 13 – Shelby)						

Table 13: Alternative 1 Demand Response Costs, 10-Year Projection

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Estimated Cost per Demand Response Hour for All Services Listed Below	\$109.81	\$113.10	\$116.50	\$119.99	\$123.59	\$127.30	\$131.12	\$135.05	\$139.10	\$143.28
Existing Contract Service Hours (AAA)	263	263	263	263	263	263	263	263	263	263
Cost	\$28,880	\$29,746	\$30,639	\$31,558	\$32,505	\$33,480	\$34,484	\$35,519	\$36,584	\$37,682
New Service - Mansfield/Ontario On-Demand										
Final Fridays	100	100	100	100	100	100	100	100	100	100
Morning On-Demand (4:30a-7a)	0	1,275	1,913	2,550	2,550	2,550	2,550	2,550	2,550	2,550
Evening On-Demand (6p-10p)	0	2,295	4,080	5,100	5,100	5,100	5,100	5,100	5,100	5,100
Saturday Service	0	0	0	0	832	1,248	1,248	1,248	1,248	1,248
Total Cost	\$10,981	\$415,093	\$709,761	\$929,941	\$1,060,668	\$1,145,444	\$1,179,808	\$1,215,202	\$1,251,658	\$1,289,208
New Service - E. Mansf./Madison Twp. On-Demand										
E. Mansf./Madison	0	0	0	2,040	3,060	3,060	3,060	3,060	3,060	3,060
Cost	\$ -	\$ -	\$ -	\$244,784	\$378,192	\$389,538	\$401,224	\$413,260	\$425,658	\$438,428
New Service – Lexington On-Demand										
Lexington	0	0	0	0	2,040	3,060	3,060	3,060	3,060	3,060
Cost	\$ -	\$ -	\$ -	\$ -	\$252,128	\$389,538	\$401,224	\$413,260	\$425,658	\$438,428

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
New Service – Belville On-Demand										
Bellville	0	0	0	0	1,530	2,040	2,040	2,040	2,040	2,040
Cost	\$ -	\$ -	\$ -	\$ -	\$189,096	\$259,692	\$267,483	\$275,507	\$283,772	\$292,285
New Service - Rural Richland County Demand Response										
Rural Richland County	0	0	0	0	4,080	6,120	6,120	6,120	6,120	6,120
Cost	\$ -	\$ -	\$ -	\$ -	\$504,256	\$779,075	\$802,448	\$826,521	\$851,317	\$876,856

ALTERNATIVE 2: INCREASED FREQUENCY WITH NEW ON-DEMAND SERVICES

Alternative 2 preserves the existing fixed route network and doubles frequency on Routes 1, 2, 5, 8, 9, and Ontario Circulator to 30-minute headways. This alternative retains Final Fridays, Morning/Evening On-Demand, and the suburban and rural demand response and on-demand services. Alternative 2 eliminates Route 7, replacing it with an expansion of the E. Mansfield/Madison Township On-Demand zone to cover the area served by Route 7 (inner northeast Mansfield and Ashland Road).

Alternative 2: Increased Frequency with New On-Demand Services

- Preserves Existing Fixed Route Network, with Exception of Route 7
- Increases Frequency from 60 minutes to 30 minutes on Most Routes
- Ontario Circulator
- Shelby Fixed Route
- Final Fridays
- Morning/Evening On-Demand
- Saturday On-Demand
- Expands East Mansfield/Madison Township On-Demand to Include Area Served by Route 7
- Lexington On-Demand
- Bellville On-Demand
- Rural Demand Response

Table 14 provides the daily revenue hours per route, total annual revenue hours, and costs associated with fixed route and ADA paratransit. Table 15 provides the estimated annual revenue hours and costs for new demand response and on-demand services.

Table 14: Alternative 2 Fixed Route Costs, 10-Year Projection

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Route 1 – Park Ave.	12	12	12	12	12	12	24	24	24	24
Route 2 – Lexington Ave.	5.5	5.5	5.5	5.5	5.5	5.5	11	11	11	11
Route 3 – South Main/Southside	11	11	11	11	11	11	11	11	11	11
Route 5 – Springmill/Bowman	5.5	5.5	5.5	5.5	5.5	5.5	11	11	11	11
Route 7 – Wayne/East Mansfield	5.5	5.5	5.5	5.5	5.5	5.5	0	0	0	0
Route 8 – Glessner/Marion	5.5	5.5	5.5	5.5	5.5	5.5	11	11	11	11
Route 9 – West Fourth	11	11	11	11	11	11	22	22	22	22
Route 15 – Airport Industrial Park	4	6	6	6	6	6	6	6	6	6
Ontario Circulator	11	11	11	11	11	11	22	22	22	22
Route 13 – Shelby	0	0	0	8	8	8	8	8	8	8
Total Fixed Route Hours (Daily)	71	73	73	81	81	81	126	126	126	126
Total Fixed Route Hours (Annual)	18,105	18,615	18,615	20,655	20,655	20,655	32,130	32,130	32,130	32,130
Estimated Cost per Fixed Route Hour	\$112.05	\$115.41	\$118.87	\$122.44	\$126.11	\$129.90	\$133.79	\$137.81	\$141.94	\$146.20
Fixed Route Cost	\$2,028,665	\$2,148,385	\$2,212,837	\$2,528,999	\$2,604,869	\$2,683,016	\$4,298,787	\$4,427,751	\$4,560,583	\$4,697,401
ADA Paratransit Hours	4,072	4,186	4,186	4,186	4,186	4,186	6,767	6,767	6,767	6,767
Estimated Cost per Paratransit Hour	\$109.81	\$113.10	\$116.50	\$119.99	\$123.59	\$127.30	\$131.12	\$135.05	\$139.10	\$143.28
ADA Paratransit Cost	\$447,113	\$473,499	\$487,704	\$502,335	\$517,405	\$532,927	\$887,287	\$913,906	\$941,323	\$969,563
Total Cost	\$2,475,778	\$2,621,884	\$2,700,540	\$3,031,334	\$3,122,274	\$3,215,943	\$5,186,074	\$5,341,656	\$5,501,906	\$5,666,963
Revenue Growth <i>Estimated increase in</i>	N/A (Baseline)	\$146,106 (addition)	\$78,657	\$330,794 (addition)	\$90,940	\$93,668	\$1,970,132	\$155,582	\$160,250	\$165,057

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<i>total revenue (Federal and local) needed for fixed route & paratransit</i>		of evening Route 15 – Airport schedules)		of Route 13 – Shelby)						

Table 15: Alternative 2 Demand Response Costs, 10-Year Projection

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Estimated Cost per Demand Response Hour for All Services Listed Below	\$109.81	\$113.10	\$116.50	\$119.99	\$123.59	\$127.30	\$131.12	\$135.05	\$139.10	\$143.28
Existing Contract Service Hours (AAA)	263	263	263	263	263	263	263	263	263	263
Cost	\$28,880	\$29,746	\$30,639	\$31,558	\$32,505	\$33,480	\$34,484	\$35,519	\$36,584	\$37,682
New Service - Mansfield/Ontario On-Demand										
Final Fridays	100	100	100	100	100	100	100	100	100	100
Morning On-Demand (4:30a-7a)	0	1,275	1,913	2,550	2,550	2,550	2,550	2,550	2,550	2,550
Evening On-Demand (6p-10p)	0	2,295	4,080	5,100	5,100	5,100	5,100	5,100	5,100	5,100
Saturday Service	0	0	0	0	832	1,248	1,248	1,248	1,248	1,248
Total Cost	\$10,981	\$415,093	\$709,761	\$929,941	\$1,060,668	\$1,145,444	\$1,179,808	\$1,215,202	\$1,251,658	\$1,289,208
New Service - E. Mansf./Madison Twp. On-Demand										
E. Mansf./Madison	0	0	0	2,040	3,060	4,590	4,590	4,590	4,590	4,590
Cost	\$ -	\$ -	\$ -	\$244,784	\$378,192	\$584,306	\$601,836	\$619,891	\$638,487	\$657,642
New Service – Lexington On-Demand										
Lexington	0	0	0	0	2,040	3,060	3,060	3,060	3,060	3,060
Cost	\$ -	\$ -	\$ -	\$ -	\$252,128	\$389,538	\$401,224	\$413,260	\$425,658	\$438,428
New Service – Belville On-Demand										

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Bellville	0	0	0	0	1,530	2,040	2,040	2,040	2,040	2,040
Cost	\$ -	\$ -	\$ -	\$ -	\$189,096	\$259,692	\$267,483	\$275,507	\$283,772	\$292,285
New Service - Rural Richland County Demand Response										
Rural Richland County	0	0	0	0	4,080	6,120	6,120	6,120	6,120	6,120
Cost	\$ -	\$ -	\$ -	\$ -	\$504,256	\$779,075	\$802,448	\$826,521	\$851,317	\$876,856

ALTERNATIVE 3: “SPINE” NETWORK WITH INCREASED ON-DEMAND SERVICES

Alternative 3 retains only Routes 1, 15, and Ontario Circulator, and restores the Shelby route. The other routes would be eliminated in 2030, as shown in Table 16. Under this alternative, fixed routes would operate only in areas of high demand – places where ridership has been strong in the past, and where there are high concentrations of employment destinations. The retained routes would become the backbone or “spine” routes that would be fed by on-demand services. This alternative adds daytime on-demand to areas formerly served by fixed routes, while retaining all of the previous new on-demand and demand response services.

RCT would implement this option if the agency found, after evaluating of the first five years of the TDP during a 2029 interim update, that on-demand service provided enough value to warrant a transition to this significantly changed service model. This evaluation would include an examination of the performance of the on-demand services, including ridership, productivity, and cost-efficiency. Suggested performance metrics will be provided in the final TDP.

While the cost for each of the on-demand services is listed separately in Table 17, RCT could integrate all of the adjacent on-demand services so that they provide a seamless customer experience (i.e., the Mansfield, Ontario and Lexington on-demand services would be promoted as one larger-scale service). The daytime on-demand service in the areas served by the discontinued fixed routes is termed “Citywide On-Demand” for the purposes of the TDP.

Alternative 3: “Spine” Network with Increased On-Demand Services

- Retains Routes 1 and 15
- Ontario Circulator
- Shelby Fixed Route
- Adds Daytime On-Demand to Areas Formerly Served by Fixed Routes
- Final Fridays
- Morning/Evening On-Demand
- Saturday On-Demand
- East Mansfield/Madison Township On-Demand
- Lexington On-Demand
- Bellville On-Demand
- Rural Demand Response

Table 16: Alternative 3 Fixed Route Costs, 10-Year Projection

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Route 1 – Park Ave.	12	12	12	12	12	12	12	12	12	12
Route 2 – Lexington Ave.	5.5	5.5	5.5	5.5	5.5	5.5	0	0	0	0
Route 3 – South Main/Southside	11	11	11	11	11	11	0	0	0	0
Route 5 – Springmill/Bowman	5.5	5.5	5.5	5.5	5.5	5.5	0	0	0	0
Route 7 – Wayne/East Mansfield	5.5	5.5	5.5	5.5	5.5	5.5	0	0	0	0
Route 8 – Glessner/Marion	5.5	5.5	5.5	5.5	5.5	5.5	0	0	0	0
Route 9 – West Fourth	11	11	11	11	11	11	0	0	0	0
Route 15 – Airport Industrial Park	4	6	6	6	6	6	6	6	6	6
Ontario Circulator	11	11	11	11	11	11	11	11	11	11
Route 13 – Shelby	0	0	0	8	8	8	8	8	8	8
Total Fixed Route Hours (Daily)	71	73	73	81	81	81	37	37	37	37
Total Fixed Route Hours (Annual)	18,105	18,615	18,615	20,655	20,655	20,655	9,435	9,435	9,435	9,435
Estimated Cost per Fixed Route Hour	\$112.05	\$115.41	\$118.87	\$122.44	\$126.11	\$129.90	\$133.79	\$137.81	\$141.94	\$146.20
Fixed Route Cost	\$2,028,665	\$2,148,385	\$2,212,837	\$2,528,999	\$2,604,869	\$2,683,016	\$1,262,342	\$1,300,213	\$1,339,219	\$1,379,395
ADA Paratransit Hours	4,072	4,186	4,186	4,186	4,186	4,186	1,663	1,663	1,663	1,663
Estimated Cost per Paratransit Hour	\$109.81	\$113.10	\$116.50	\$119.99	\$123.59	\$127.30	\$131.12	\$135.05	\$139.10	\$143.28
ADA Paratransit Cost	\$447,113	\$473,499	\$487,704	\$502,335	\$517,405	\$532,927	\$218,062	\$224,604	\$231,342	\$238,282
Total Cost	\$2,475,778	\$2,621,884	\$2,700,540	\$3,031,334	\$3,122,274	\$3,215,943	\$1,480,404	\$1,524,816	\$1,570,561	\$1,617,678
Revenue Growth <i>Estimated increase in</i>	N/A (Baseline)	\$146,106 (addition	\$78,657	\$330,794	\$90,940	\$93,668	\$(1,735,538)	\$44,412	\$45,744	\$47,117

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<i>total revenue (Federal and local) needed for fixed route & paratransit</i>		of evening Route 15 – Airport schedules)								

Table 17: Alternative 3 Demand Response Costs, 10-Year Projection

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Estimated Cost per Demand Response Hour for All Services Listed Below	\$109.81	\$113.10	\$116.50	\$119.99	\$123.59	\$127.30	\$131.12	\$135.05	\$139.10	\$143.28
Existing Contract Service Hours (AAA)	263	263	263	263	263	263	263	263	263	263
Cost	\$28,880	\$29,746	\$30,639	\$31,558	\$32,505	\$33,480	\$34,484	\$35,519	\$36,584	\$37,682
New Service - Mansfield/Ontario On-Demand										
Final Fridays	100	100	100	100	100	100	100	100	100	100
Morning On-Demand (4:30a-7a)	0	1,275	1,913	2,550	2,550	2,550	2,550	2,550	2,550	2,550
Evening On-Demand (6p-10p)	0	2,295	4,080	5,100	5,100	5,100	5,100	5,100	5,100	5,100
Citywide On-Demand	0	0	0	0	0	0	11,220	11,220	11,220	11,220
Saturday Service	0	0	0	0	832	1,248	1,248	1,248	1,248	1,248
Total Cost	\$10,981	\$415,093	\$709,761	\$929,941	\$1,060,668	\$1,145,444	\$2,650,962	\$2,730,490	\$2,812,405	\$2,896,777
New Service - E. Mansf./Madison Twp. On-Demand										
E. Mansf./Madison	0	0	0	2,040	3,060	4,590	4,590	4,590	4,590	4,590
Cost	\$ -	\$ -	\$ -	\$244,784	\$378,192	\$584,306	\$601,836	\$619,891	\$638,487	\$657,642
New Service – Lexington On-Demand										
Lexington	0	0	0	0	2,040	3,060	3,060	3,060	3,060	3,060
Cost	\$ -	\$ -	\$ -	\$ -	\$252,128	\$389,538	\$401,224	\$413,260	\$425,658	\$438,428

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
New Service – Belville On-Demand										
Bellville	0	0	0	0	1,530	2,040	2,040	2,040	2,040	2,040
Cost	\$ -	\$ -	\$ -	\$ -	\$189,096	\$259,692	\$267,483	\$275,507	\$283,772	\$292,285
New Service - Rural Richland County Demand Response										
Rural Richland County	0	0	0	0	4,080	6,120	6,120	6,120	6,120	6,120
Cost	\$ -	\$ -	\$ -	\$ -	\$504,256	\$779,075	\$802,448	\$826,521	\$851,317	\$876,856

ALTERNATIVE 4: 100% ON-DEMAND/DEMAND RESPONSE

Alternative 4 eliminates all fixed routes in 2030 in favor of on-demand service, as shown in Table 18. As with Alternative 3, RCT would implement this option if the agency found, after the formal evaluation of the first five years of the TDP, that on-demand service provided enough value to warrant a transition to this significantly changed service model.

Alternative 4: 100% On-Demand and Demand Response

- Adds Daytime On-Demand to Areas Formerly Served by Fixed Routes
- Final Fridays
- Morning/Evening On-Demand
- Saturday On-Demand
- East Mansfield/Madison Township On-Demand
- Lexington On-Demand
- Bellville On-Demand
- Rural Demand Response

Table 18: Alternative 4 Fixed Route Costs, 10-Year Projection

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Route 1 – Park Ave.	12	12	12	12	12	12	0	0	0	0
Route 2 – Lexington Ave.	5.5	5.5	5.5	5.5	5.5	5.5	0	0	0	0
Route 3 – South Main/Southside	11	11	11	11	11	11	0	0	0	0
Route 5 – Springmill/Bowman	5.5	5.5	5.5	5.5	5.5	5.5	0	0	0	0
Route 7 – Wayne/East Mansfield	5.5	5.5	5.5	5.5	5.5	5.5	0	0	0	0
Route 8 – Glessner/Marion	5.5	5.5	5.5	5.5	5.5	5.5	0	0	0	0
Route 9 – West Fourth	11	11	11	11	11	11	0	0	0	0
Route 15 – Airport Industrial Park	4	4	4	4	4	4	0	0	0	0
Ontario Circulator	0	0	0	0	0	0	0	0	0	0
Route 13 – Shelby	0	0	0	8	8	8	0	0	0	0
Total Fixed Route Hours (Daily)	60	60	60	68	68	68	0	0	0	0
Total Fixed Route Hours (Annual)	15,300	15,300	15,300	17,340	17,340	17,340	0	0	0	0
Estimated Cost per Fixed Route Hour	\$112.05	\$115.41	\$118.87	\$122.44	\$126.11	\$129.90	0	0	0	0
Fixed Route Cost	\$1,714,365	\$1,765,796	\$1,818,770	\$2,123,111	\$2,186,804	\$2,252,408	\$-	\$-	\$-	\$-
ADA Paratransit Hours	3,441	3,441	3,441	3,441	3,441	3,441	0	0	0	0
Estimated Cost per Paratransit Hour	\$109.81	\$113.10	\$116.50	\$119.99	\$123.59	\$127.30	0	0	0	0
ADA Paratransit Cost	\$377,842	\$389,177	\$400,852	\$412,878	\$425,264	\$438,022	\$-	\$-	\$-	\$-
Total Cost	\$2,092,207	\$2,154,973	\$2,219,622	\$2,535,989	\$2,612,068	\$2,690,430	\$-	\$-	\$-	\$-
Revenue Growth <i>Estimated increase in</i>	N/A (Baseline)	\$62,766	\$64,649	\$316,366 (addition	\$76,080	\$78,362	\$(2,690,430)	\$-	\$-	\$-

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<i>total revenue (Federal and local) needed for fixed route & paratransit</i>				of Route 13 – Shelby)						

Table 19: Alternative 4 Demand Response Costs, 10-Year Projection

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Estimated Cost per Demand Response Hour for All Services Listed Below	\$109.81	\$113.10	\$116.50	\$119.99	\$123.59	\$127.30	\$131.12	\$135.05	\$139.10	\$143.28
Existing Contract Service Hours (AAA)	263	263	263	263	263	263	263	263	263	263
Cost	\$28,880	\$29,746	\$30,639	\$31,558	\$32,505	\$33,480	\$34,484	\$35,519	\$36,584	\$37,682
New Service - Mansfield/Ontario On-Demand										
Final Fridays	100	100	100	100	100	100	100	100	100	100
Morning On-Demand (4:30a-7a)	0	1,275	1,913	2,550	2,550	2,550	2,550	2,550	2,550	2,550
Evening On-Demand (6p-10p)	0	2,295	4,080	5,100	5,100	5,100	5,100	5,100	5,100	5,100
Citywide On-Demand	0	0	0	0	0	0	18,105	18,105	18,105	18,105
Saturday Service	0	0	0	0	832	1,248	1,248	1,248	1,248	1,248
Total Cost	\$10,981	\$415,093	\$709,761	\$929,941	\$1,060,668	\$1,145,444	\$3,553,715	\$3,660,327	\$3,770,136	\$3,883,240
New Service - E. Mansf./Madison Twp. On-Demand										
E. Mansf./Madison	0	0	0	2,040	3,060	4,590	4,590	4,590	4,590	4,590
Cost	\$ -	\$ -	\$ -	\$244,784	\$378,192	\$584,306	\$601,836	\$619,891	\$638,487	\$657,642
New Service – Lexington On-Demand										
Lexington	0	0	0	0	2,040	3,060	3,060	3,060	3,060	3,060
Cost	\$ -	\$ -	\$ -	\$ -	\$252,128	\$389,538	\$401,224	\$413,260	\$425,658	\$438,428
New Service – Belville On-Demand										

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Bellville	0	0	0	0	1,530	2,040	2,040	2,040	2,040	2,040
Cost	\$ -	\$ -	\$ -	\$ -	\$189,096	\$259,692	\$267,483	\$275,507	\$283,772	\$292,285
New Service - Rural Richland County Demand Response										
Rural Richland County	0	0	0	0	4,080	6,120	6,120	6,120	6,120	6,120
Cost	\$ -	\$ -	\$ -	\$ -	\$504,256	\$779,075	\$802,448	\$826,521	\$851,317	\$876,856

COMPARISON OF ALTERNATIVES

Table 20 provides a comparison of the four alternatives and the status quo option, based on data projected for 2033, Year 10 of the TDP. Following the table, charts are provided for each projection. Cost per fixed route trip is higher under Alternative 3 due to a greater share of hours allocated to the lower-productivity Shelby route. Cost per demand response trip is lower under Alternatives 3 and 4 because the larger amount of service would permit more ride-sharing between customers and reduced deadhead time, increasing service productivity (measured in trips per hour).

Table 20: Comparison of Alternatives, 2033 Projected Estimates

2033 Estimated Annual Hours, Costs and Ridership	Status Quo: Existing Network (No New On-Demand/Demand Response)	Alternative 1: Existing Network with New On-Demand Services	Alternative 2: Increased Frequency with New On-Demand Services	Alternative 3: "Spine" Network with New On-Demand Services	Alternative 4: 100% On-Demand and Demand Response
Fixed Route Projections					
Fixed Route Hours	17,595	20,655	32,130	9,435	0
Fixed Route Cost	\$2,572,386	\$3,019,758	\$4,697,401	\$1,379,395	\$0
Fixed Route Ridership	129,897	151,317	240,822	63,801	0
Fixed Route Cost per Trip	\$19.80	\$19.96	\$19.51	\$21.62	N/A
On-Demand and Demand Response Projections					
On-Demand and Demand Response Hours	4,220	27,727	31,838	37,954	43,176
On-Demand and Demand Response Cost	\$604,630	\$3,972,701	\$4,561,664	\$5,437,953	\$6,186,134
On-Demand and Demand Response Ridership	10,550	69,318	79,595	113,862	129,528
On-Demand and Demand Response Cost per Trip	\$57.31	\$57.31	\$57.31	\$47.76	\$47.76
Projections for Total System (Both Modes)					
Total Hours	21,815	48,382	63,968	47,389	43,176
Total Cost	\$3,177,016	\$6,992,459	\$9,259,065	\$6,817,349	\$6,186,134
Total Ridership	140,447	220,635	320,417	177,663	129,528
Average Cost per Trip	\$22.62	\$31.69	\$28.90	\$38.37	\$47.76

Figure 15: 2033 Projected Annual Hours for All Alternatives

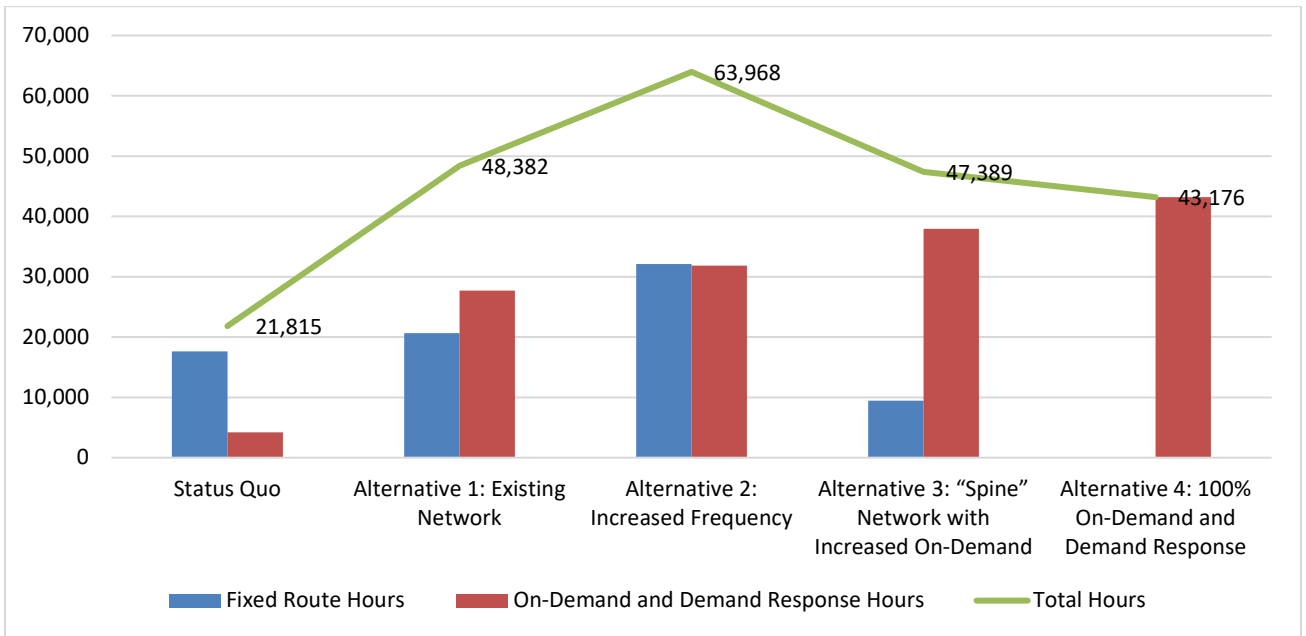


Figure 16: 2033 Projected Annual Ridership for All Alternatives

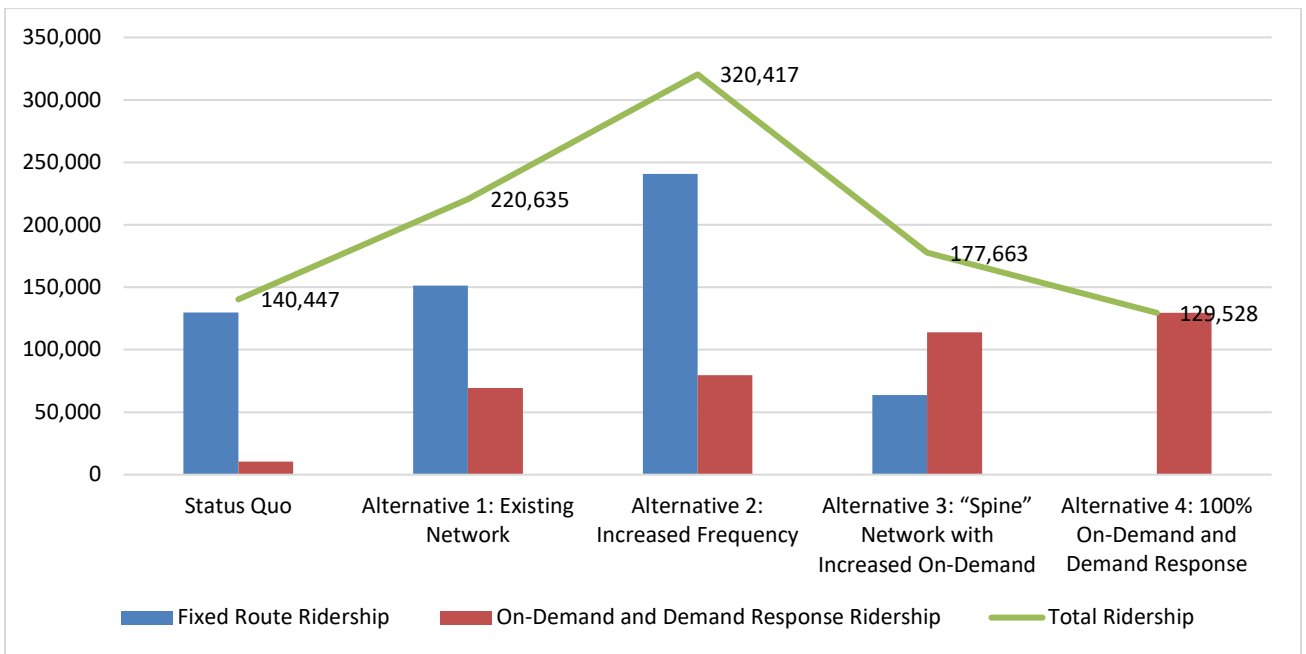


Figure 17: 2033 Projected Annual Costs for All Alternatives

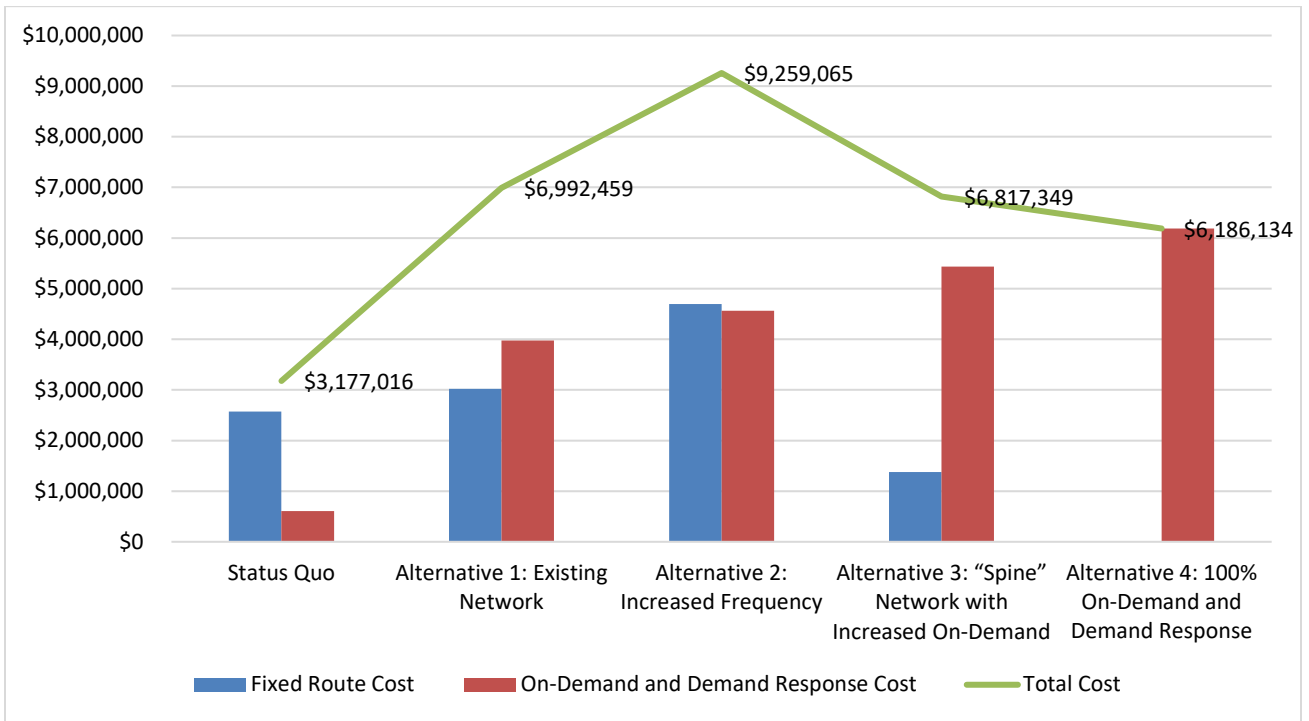


Figure 18: 2033 Projected Cost per Trip for All Alternatives

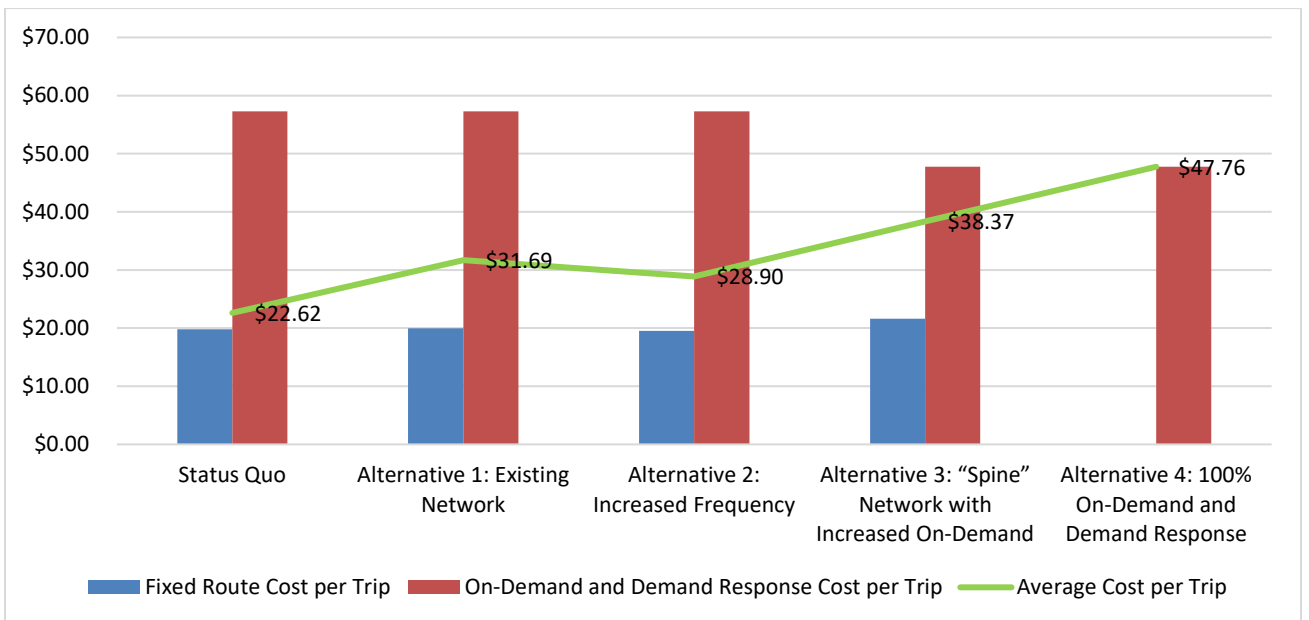


Table 21: TDP Capital and Planning Expenses for Service Expansions

Capital or Planning Expense	Timeframe	Cost Information	Potential Funding Sources
<p>Vehicles for On-Demand/Demand Response</p> <ul style="list-style-type: none"> Approximately 5 to 8 accessible vans or small cutaway buses for On-Demand/Demand Response Services Additional vans/small buses would be necessary under Alternatives 3 and 4. 	<p>Vans/small cutaway buses should be purchased as soon as is feasible, as funding levels permit.</p>	<p>Small vehicles currently range from \$60,000 (accessible minivan) to \$120,000 (accessible 12-seat cutaway bus). Pricing may increase following the delivery of this report.*</p>	<p>FTA capital funding: formula funding (Section 5307/5311/5339/5310) or discretionary/competitive grants as available; ODOT discretionary funds; Local match from state/local sources</p>
<p>Vehicles for Fixed Routes</p> <ul style="list-style-type: none"> The current RCT fleet of standard transit buses and large cutaways would meet the vehicle needs of Alternative 1. Additional vehicles would be necessary for Alternative 2. Fewer would be needed under Alternatives 3 and 4. 	<ul style="list-style-type: none"> RCT would continue its current replacement schedule for buses under Alternative 1. An order for multiple new/replacement buses would be necessary in 2027 for the implementation of Alternative 2 in 2030. Under Alternative 3, RCT would slow its bus replacement schedule beginning in 2030. Fewer fixed route buses would be necessary for this alternative. Under Alternative 4, RCT would refocus all capital funding on 	<p>Medium/large cutaway buses currently cost approximately \$200,000. Standard 30-foot transit buses currently cost approximately \$550,000. Pricing may increase following the delivery of this report.*</p>	<p>FTA capital funding: formula funding (Section 5307/5311/5339) or discretionary/competitive grants as available; ODOT discretionary funds; Local match from state/local sources</p>

Capital or Planning Expense	Timeframe	Cost Information	Potential Funding Sources
	vans/small buses for on-demand/demand response. RCT would identify the appropriate time to cease ordering replacement fixed route buses, to allow time to transition the fleet mix toward smaller vehicles.		
<p>Bus stop enhancements</p> <ul style="list-style-type: none"> The first expense will be a planning study on bus stop locations and amenities/infrastructure needs. Funds will be necessary for new signage, sign installation and relocation, and bus stop amenities following the completion of the planning study. 	Near-term (1-3 years)	A planning study would likely range in cost from \$30,000 to \$60,000. Installation, relocation and potential construction expenses would be estimated during the planning study.	FTA planning funds for study; FTA capital funds for implementation (Section 5307/5311/5339/5310 or discretionary/competitive grants as available); ODOT discretionary funds; Local match from state/local sources; Potential one-time charitable/foundation grants
Transit Technology	Near-term (1-3 years)	Transit technology investments and cost estimates will be identified in the TDP implementation plan.	FTA capital funding: formula funding (Section 5307/5311/5339/5310) or discretionary/competitive grants as available; ODOT discretionary funds; Local match from state/local sources; Potential one-time charitable/foundation grants

Capital or Planning Expense	Timeframe	Cost Information	Potential Funding Sources
Marketing and Advertising	Near-term (1-2 years)	A marketing firm should be engaged to provide services for re-branding, new vehicle markings, bus stop signage design, website design, and printed materials design and printing. Costs will depend on the scope of services, but may range between \$20,000 and \$40,000.	FTA operating funding (Section 5307/5311) or discretionary/competitive grants as available; ODOT discretionary funds; Local match from the state/local sources; Potential one-time charitable/foundation grants
Planning and Change Management Support	Near-term (1-2) years or Mid-term (3-6 years)	Implementation of the TDP recommendations may require support in the areas of planning and change management, above and beyond the existing capacity of RCRPC and RCT staffing. Costs of consulting support in these areas will depend on the scope of services, but may range between \$20,000 and \$40,000.	FTA operating funding (Section 5307/5311) or discretionary/competitive grants as available; ODOT discretionary funds; Local match from the state/local sources; Potential one-time charitable/foundation grants

* Pricing is for standard diesel- and gasoline-fueled vehicles. Low-/no-emissions vehicles have higher costs; the first step in acquiring these vehicles is to prepare a Zero-Emission Fleet Transition Plan (see <https://www.transit.dot.gov/funding/grants/zero-emission-fleet-transition-plan>).

POTENTIAL REVENUE SOURCES FOR SERVICE EXPANSIONS

Any expansion of RCT service will require the system to raise additional funds to match FTA grants for operating and capital expenses. RCT currently receives local match revenue from a variety of state and local sources. Increased commitments from these sources, along with new sources, will be necessary for RCT to pilot new service models or permanently expand service.

The mid-term service recommendations consist primarily of localized service expansions. RCT would approach the local government units associated with the services to request local matching funds. There is the potential that ODOT or FTA would make discretionary grants available that could support these pilot expansions. FTA discretionary grants may not be used as local match, but may be available to cover the majority of operating costs for a pilot. It should be noted that the pursuit of new funding requires significant staff time for planning, research, and funding applications. The RCT Transit Development Manager’s capacity for this work is a concern that could potentially be addressed by increased staffing for grants administration at RCRPC.

In the long term, if any new services are to be sustained, it would be advisable for RCT to seek a tax levy to raise ongoing dedicated local funding. Potentially, revenue mechanisms like New Community Authority, Joint Economic Development District (JEDD), or Special Improvement Districts could support specific services at the local level (for example, within a municipality, downtown area, or an industrial park).

It is recommended that RCT pursue a seven percent passenger fare recovery ratio, meaning that RCT would recover about \$7 in passenger fares for every \$100 of costs. This was RCT’s fare recovery ratio in the years preceding the COVID-19 pandemic (2017 through 2019). It is recommended that fares for new services be structured to help the system attain this ratio.

Table 22 lists potential funding sources for the expansions. Table 23 provides descriptions of potential new funding sources.

Table 22: Potential Funding Sources for Service Expansions

Recommendation	Potential Local Funding Source(s) for Expansions/New Services
Night/Early Morning On-Demand Service	City of Mansfield; City of Ontario; New Community Authority, JEDD or Special Improvement District; ODOT or FTA* Discretionary Funding for Pilot Expansions
Ontario Circulator	City of Ontario; New Community Authority, JEDD or Special Improvement District; ODOT Discretionary Funding for Pilot Expansions

Recommendation	Potential Local Funding Source(s) for Expansions/New Services
Lexington On-Demand Zone	City of Lexington; New Community Authority, JEDD or Special Improvement District; ODOT or FTA Discretionary Funding for Pilot Expansions
E. Mansfield/Madison Township On-Demand Zone	City of Mansfield/Madison Township; New Community Authority, JEDD or Special Improvement District; ODOT or FTA Discretionary Funding for Pilot Expansions
Bellville On-Demand Zone	City of Bellville; New Community Authority, JEDD or Special Improvement District; ODOT or FTA Discretionary Funding for Pilot Expansions
Rural Richland County Demand Response	Richland County; ODOT or FTA Discretionary Funding for Pilot Expansions
Saturday Service	City of Mansfield; City of Ontario; New Community Authority, JEDD or Special Improvement District; ODOT or FTA Discretionary Funding for Pilot Expansions
Increased Route Frequency (Alternative 2)	City or County Tax Levy
Increased or 100% On-Demand Service (Alternatives 3 and 4)	City or County Tax Levy

*FTA funding may not be used as local match, but discretionary FTA grants may be available to cover the full costs of a pilot project that incorporates a technology component.

Table 23: Potential Funding Sources for RCT Expansion

Funding Source	Description
FTA Section 5307	FTA Formula Funds for Operating, Capital and Planning Expenses in Mansfield Urban Area
FTA Section 5339	FTA Formula Funds for Bus and Bus Facilities (competitive application through ODOT)
FTA Section 5311	FTA Formula Funds for Operating, Capital and Planning Expenses in non-urban areas (e.g., Bellville, Shelby, smaller towns, rural townships) (competitive application through ODOT)
FTA Section 5310	FTA Formula Funds to Enhance Mobility of Older Adults and People with Disabilities (Capital and Operating) (competitive application through ODOT)
FTA Discretionary Grants	FTA releases discretionary grant opportunities that target specific types of transit projects. These have included opportunities to support innovative projects, such as on-demand services, technology or enhanced infrastructure in disadvantaged communities. Recent examples include Areas of Persistent Poverty (2022), Enhancing Mobility Innovation (2022), Innovative Coordinated Mobility and Access (2021), Integrated Mobility and Innovation (2020), Accelerating

Funding Source	Description
	<p>Innovative Mobility (2020), and Mobility On-Demand Sandbox (2016). For descriptions of all FTA grants, visit https://www.transit.dot.gov/grants.</p>
<p>ODOT Discretionary Funding</p>	<p>The Ohio legislature increased state funding for transit in the previous biennial budget; this funding may continue in the upcoming biennium. These funds are made available through the OTP2 program, although much of the funding is Federal FHWA (https://www.transportation.ohio.gov/programs/transit/transit-funding-resources/ohio-transit-partnership-program).</p>
<p>Local governments</p>	<p>Local governments (Richland County, cities, towns, and townships) should be approached to contribute general funds to support RCT services for residents and businesses.</p>
<p>Private business and local social services agencies</p>	<p>Private business, including groups of businesses, and local social services may be willing to make contributions to offset the local match burden of Federal grants.</p>
<p>New Community Authority, Joint Economic Development District (JEDD), or Special Improvement Districts</p>	<p>These are special designated zones authorized under Ohio Revised Code that tax property, income, sales, or lodging to support projects to benefit the area, including transit.</p>
<p>City or County Tax Levy</p>	<p>An ongoing, dedicated source of local funding for RCT would be necessary for any significant expansion, such as the expansions of hours and frequency recommended in the long-term recommendations. Ohio Revised Code provides options for transit systems to levy sales or property taxes, depending on the type of jurisdiction. An example of a small urban system with a levy is Allen County RTA in Lima. Its levy is 1/10th of 1% of county sales tax, and generates approximately \$1.8 million in annual revenue.</p>
<p>Charitable/Foundation Grants</p>	<p>Charitable and foundation grants are typically appropriate for one-time projects because they are generally not available for ongoing operational expenses. It is recommended that RCT explore these types of grants to support pilot services, technology, marketing/outreach, new vehicles, or bus stop installation.</p> <p>Hospitals are a potential source of funds for services that benefit their patients with transportation needs. Potentially, local hospital systems would be willing to contribute a portion of the increased local match burden out of their profits as a community benefit contribution. According to the National Center on Healthy Housing, “Nonprofit hospital organizations are required by federal tax law to spend some of their surplus on community benefits, which are goods and services that address a community need. They must report this spending to the</p>

Funding Source	Description
	Internal Revenue Service (IRS) each year in order to stay exempt from paying federal income taxes.” ² It is not uncommon for hospitals to contribute funding to community transit systems and other types of human service transportation providers.
Contracted Human Service Transportation Revenue	RCT currently offers contracted transportation service for clients of local human service agencies. Prior to the end of the TDP process, RLS will work with RCT to develop a new policy and cost structure for contracted service. Additional vehicles (vans/small cutaways) will be necessary for any expansion of contracted service.
Advertising	RCT may be able to increase its advertising revenue through a more formal advertising program, as described below.
Facility/Ancillary Services Revenue	RCT currently sells bus washes to a local human service agency, which generates a small amount of revenue. RCT could expand this service, and potentially offer vehicle wheelchair lift maintenance services to other local agencies. It is also recommended that RCT explore potential partnerships that would generate rental income for the Stanton Transit Center. The Transit Center offers a convenient downtown location with offices, retail space, restrooms and nearby parking. Potentially, a local non-profit organization would benefit from the use of this space for programming.

Advertising Program

A formal advertising program is an effective revenue stream providing agencies with unincumbered funds. RCT has the potential to generate revenue beyond the income provided through current advertising efforts. Increased advertising revenue could be used to leverage Federal and state funds. The FTA requires that revenue contracts be competitively awarded to give all businesses an opportunity to participate when a Federally-funded asset is being used to generate revenue for the grantee.

RCT should pursue a comparative procurement to permit interested parties an equal opportunity to obtain access to prospective advertising space in accordance with FTA guidance concerning revenue contracts. Guidance is included in Chapter II, Subparagraph 2.b(4)(a) of FTA Circular 4220.1F, “Third Party Contracting Guidance.” Under a traditional contract for management of an agency’s Advertising Program, the contracted firm is responsible for the sale, print, installation, and removal of advertising content. Ads are sold in accordance with the agency’s adopted *Advertising Policy*. Revenues received are divided between the firm and agency at an agreed-upon ratio, specified in the agreement. Recommended next steps are:

- 1. Board of Trustees Adopts RCT Advertising Policy**

² National Center for Healthy Housing. “Hospital Community Benefits.” Retrieved on April 4, 2023 from <https://nchh.org/tools-and-data/financing-and-funding/healthcare-financing/hospital-community-benefits/>

2. RCT Management Establishes Parameters for Advertising Program

- a. Identify Available Platforms (Ex. interior and exterior of the vehicles, print materials including brochures and passes).
- b. Establish Ad Types (Ex. standard format, giant format, partial vehicle wraps, or full vehicle wraps).

3. RCT Conducts Competitive Procurement

The procurement process may take three to five months from publication to notice of award.