

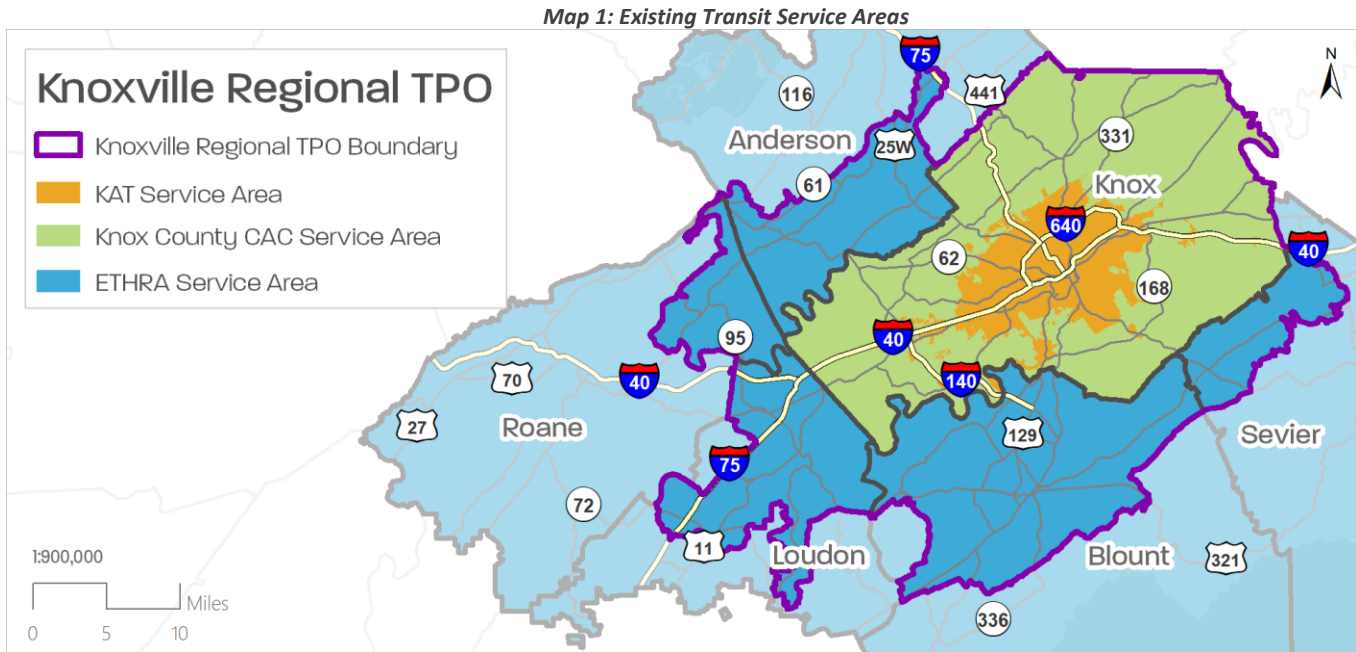


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## Public Transit Services – Knoxville Region

Within the TPO planning area there are a variety of public transportation services. The following agencies are the primary providers of these services: (1) Knoxville Area Transit (KAT), (2) Knox County Community Action Committee (CAC) Transit, and (3) the East Tennessee Human Resource Agency (ETHRA). **Map 1** shows the service areas of these providers in the TPO area.



### Knoxville Area Transit

KAT is the largest provider of public transit in the TPO planning area, primarily serving the City of Knoxville. KAT provides fixed-route bus service and door-to-door paratransit service. KAT provided over 2.3 million riders in 2023.

2023	2,312,188
2022	2,062,007
2021	2,203,222
2020	2,531,312
2019	2,752,602

### East Tennessee Human Resource Agency

ETHRA provides transit services for sixteen counties in the region, including the six counties that are part of the TPO’s planning area. ETHRA also provides the City of Oak Ridge transit services. ETHRA provides demand response services, where vehicles typically pick up and drop off passengers in locations according to passenger needs. ETHRA provided 244,937 trips in the 16-county service area for 2023.

<b>Table 2</b> <b>ETHRA Annual Ridership</b> <i>Source: National Transit Database</i>	
2023	244,937
2022	236,818
2021	196,822
2020	247,644
2019	285,197

**Knox County Community Action Committee (CAC) Transit**

The Knox County CAC Transit is a demand-response transit service that provides transportation services to those in Knox County outside the Knoxville city limits, as well as those in Knoxville who are outside of the KAT service area. Knox County CAC Transit provided 114,573 trips in 2023.

<b>Table 3</b> <b>Knox County CAC Transit Annual Ridership</b> <i>Source: National Transit Database</i>	
2023	114,573
2022	110,961
2021	90,902
2020	125,659
2019	142,714

**Other Options**

The University of Tennessee, located in Knoxville, also has an on-campus fixed route system but does not utilize FTA funding. While parking is limited on campus the “T” bus system covers most of the campus, saving students time from having to circle for parking spots. The T serves campus seven days a week with a fleet of thirty-one buses, ten fixed routes, and on-demand accessible transportation. The T is free to ride, making it an affordable and efficient option for students, faculty, staff, and visitors moving around campus. In August of 2024, KAT and the University of Tennessee began a partnership that provides free rides for UT students, faculty, and staff on KAT.

The Knoxville Regional TPO Human Services Transportation Coordination Plan outlines how the FTA Section 5310 funds are to be spent in the urban area. The plan takes a comprehensive look at the existing transit services provided in the urban area with the goal of prioritizing projects to help meet the missing mobility needs of residents, specifically people with disabilities, seniors, and low-income households. Primarily the funds go to two different types of programs: (1) to Volunteer Assisted Transportation Programs and (2) to help provide funding to non-profits and human service providers to assist in buying vans.

Knox County CAC Volunteer Assisted Transportation (VAT), Blount County Smiles, and the Sevier County Live-It offer volunteer-driver programs that provide accessible services to seniors and people with disabilities who require assistance to travel safely. The volunteer driver stays with the passenger throughout the entire trip and can provide assistance if needed (carrying groceries, etc.). The TPO Section 5310 program offers non-profits and human service agencies that focus on seniors or people who are disabled the opportunity to obtain FTA funding to buy vans or mini-buses to provide transportation for their clients. The specialized transportation services provided by the non-profits and human service agencies helps take pressure off the urban transit providers and increases capacity on the core services.

The urban area has programs that focus on carpooling, vanpooling, and travel demand management strategies. The SmartTrips program, housed within the TPO, helps reduce peak-hour traffic and improve air quality by reducing the number of trips made in single occupant vehicles. Getting businesses involved in promoting transportation choices is an important goal. An online ride-matching service is provided for free. The University of Tennessee houses the Knoxville Commuter Pool and Tennessee Vans. Both efforts assist in arranging carpools and vanpools. The SmartTrips program works closely with KAT and promotes transit as one of the menu of alternative transportation options available in the region.

**FUNDING**

Federal programs and local revenues are the two most significant sources of funding for the three urban area transit agencies. A number of State and system generated revenues are also used to fund the daily operational and capital needs. Like the fiscal constraint analysis for roadway expenditures, the transit analysis began with an estimation of projected revenues. Table Four shows the historic revenues and expenditures for KAT, Knox County CAC Transit, and ETHRA combined for the urban area for the period of 2020 through 2024.

<b>Table 4</b>					
<b>Historic Transit Revenues/Expenditures</b>					
<b>Operating Revenues</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
<b>Total</b>	<b>40,030,822</b>	<b>37,960,857</b>	<b>75,384,507</b>	<b>42,729,834</b>	<b>46,500,886</b>
Federal	\$14,099,286	\$11,789,943	\$40,128,648	\$13,871,023	\$11,260,117
State	\$9,800,248	\$5,634,079	\$7,727,610	\$6,346,872	\$6,303,416
Local	\$10,908,766	\$12,782,118	\$5,522,361	\$12,524,420	\$20,395,907
System/Fares	\$1,771,191	\$5,150,034	\$6,069,108	\$7,103,798	\$6,679,822
Other Revenues	\$3,451,331	\$2,604,683	\$15,936,780	\$2,883,721	\$1,861,624
Total for the urban area services = KAT, Knox Co. CAC Transit, and ETHRA					

**Different Types of Funding Available**

As with highways, funding for transit comes from multiple federal, state, and local sources as described below.

**Federal**

Federal grant programs are one of the largest sources of funding for transit investments. Federal funds are allocated through each federal reauthorization of the surface transportation bill, with the most recent being the Infrastructure Investment and Jobs Act (IIJA). In the Knoxville area, Federal Transit Administration (FTA) Section 5307, 5310, and 5339 funds are used to support transit and are described below.

**5307 Urbanized Area**

FTA provides funding to urbanized areas across the country through its 5307 – Urbanized Area Formula Grant program. Any incorporated area with more than 50,000 in population is eligible to receive these funds. For areas over 200,000 in population, such as Knoxville, a local authority is the designated recipient of these funds, which are distributed from the federal level based on a combination of factors including revenue vehicle miles, passenger miles, population, and population density. The City of Knoxville/KAT is the designated direct recipient of 5307 funds, portions of which are sub-allocated to Knox County CAC Transit and ETHRA. KAT utilizes a majority of its Section 5307 on capital items. Knox County CAC Transit and ETHRA use 5307 funding for operations.

### **5310 Enhanced Mobility**

The FTA 5310 – Enhanced Mobility of Seniors and Individuals with Disabilities formula funding program provides funds for improving the mobility of seniors and disabled people where existing transportation services may be insufficient, unavailable, or incapable of meeting their specific needs. The TPO is the designated recipient of the 5310 funds and is responsible for administering the funds to appropriate agencies, including non-profit organizations and human service agencies. Funds from the 5310 program can be used for capital and operating assistance.

### **5339 Bus and Bus Facilities**

The FTA 5339 – Bus and Bus Facilities program is a combination of two formula allocations and a single competitive grant program that can be used to improve an agency’s fleet of transit vehicles through rehabilitation, retrofitting, or replacement and to improve bus related transit facilities. To be eligible for the fund you must be a fixed route provider. The competitive portion of the program allocates funds based on the age and conditions of vehicles in a fleet as well as the plan for integrating low-or-no-emissions vehicles. In Knoxville, the designated recipient for these funds is the City of Knoxville/KAT. Currently, only KAT provides fixed-route transit services.

### **State**

The State provides transit funding through the Tennessee Department of Transportation (TDOT), which covers a portion of the required match for transit projects using FTA funding programs. Historically, this amount has equated to half of the non-federal share. TDOT also provides the Urban Operating Program (UROP) and the Critical Trip funding to the Knoxville urban area. UROP goes to fixed-route providers and can be used for matching capital funds as well as transit operations. KAT, as the only fixed-route service in the TPO urban area, is the only recipient of the UROP funds. Critical Trip funding is designated for transit services outside the fixed-route provider's service area. Knox County CAC Transit, ETHRA, and the City of Oak Ridge receive Critical Trip funding from TDOT, which can be used for both matching funds and transit operations.

### **Local**

Both the City of Knoxville and Knox County contribute local funding to match state and federal funding sources. The City of Knoxville contributes funding to transit services and improvements, underwriting the KAT budget and making-up any unforeseen short-term deficits. Knox County also provides funding for transit matches and in-kind services that contribute to the day-to-day operations of Knox County CAC Transit, such as property for storing fleet vehicles, fueling services, and purchasing assistance.

### **Other Funding Sources**

Discretionary grants are another source of revenue for the urban area’s transit agencies. These grants are unreliable sources of revenue as they are often competitive in nature. However, the Knoxville urban area’s transit providers have been successful over the past decade in securing such funding through programs such as the TPO’s and TDOT’s Congestion Mitigation and Air Quality (CMAQ) programs. Knox County CAC Transit and ETHRA both utilize human service contracts, such as TennCare, that help provide additional transit revenues.

### **Revenue Projection**

Future expenses and revenues were projected in consultation with representatives of KAT, Knox County CAC Transit, and ETHRA. Typically, historical financial data is used as part of this exercise. However, when analyzing the last five years of financial data, several issues caused the inability to use historical trends. First, over the last five years, millions of federal dollars of COVID relief funding were utilized by all three transit agencies. This infusion of, one-time, federal funds was used across several fiscal years to help aid during the pandemic and therefore causes an over-projection of revenues. Second, all three agencies during the pandemic often had to pay lots of overtime due to a shortage of drivers. The amount of overtime also caused the past years’ expenses to be abnormally high. Finally, KAT changed the way they have historically reported fiscal data. This reporting change impacts the ability to analyze longer term trend data.

Therefore, the projection of the transit expenses and revenues is based on consultation with the three transit agencies (see Table 5). As a starting point, the financial assumptions for the Mobility Plan 2045 were revisited. Working from those assumptions, the inflation rates for Federal and Local funds and fares were slightly adjusted. A federal funding rate adjustment from 2.0% (2045 Plan) to 2.7% (2050 Plan) was based on historical federal funding levels received over the last few years. Though not calculated in the federal funding analysis, it is anticipated that these funds will continue to increase because it is projected the population of the TPO’s urban area will continue to grow over the life of the Mobility Plan 2050. Population is a key factor in the federal funding formula. In theory, if the population goes up, federal funding should also increase. Fares were slightly increased from 1.0% (2045 Plan) to 2.0% (2050 Plan) and this was based on KAT’s total overhaul of the fixed-route system. By adding more direct and frequent routes, it is projected that ridership will increase over time and therefore there should be a corresponding increase in fare revenue. Finally, the local funding rate was increased from 3.0% (2045 Plan) to 5.0% (2050 Plan). Local funds have historically made up the difference in any revenue shortfalls and as such the local revenue rate was increased to account for the higher inflation rate used to project expenses.

<b>Table 5 Transit Financial Revenue/Expenses Projection Inflation Factor Rates</b>		
<b>Revenue Source</b>	<b>Mobility Plan 2045</b>	<b>Mobility Plan 2050</b>
Federal Revenues	2.0%	2.7%
State Revenues	3.0%	3.0%
Local Revenues	3.0%	5.0%
Fares Revenues	1.0%	2.0%
Other Revenue	1.0%	1.0%
Transit Expenses Inflation Rate	3.0%	3.8%

In consultation with the transit providers, it was determined a 3.8% inflation rate for expenses should be used over the life expectancy of the plan. The 3.8% rate is the same inflation rate used for projecting capital expenses in the Mobility Plan 2050 for the highway, greenway, and bike projects. Table 6 summarizes the available transit revenues and expenses across the three agencies in the urban area in each plan horizon year period. As shown, the anticipated funding needed to maintain current services provided by the three transit operators is expected to be within acceptable range. Examining the three horizon year periods, the difference in projected expenses to revenue never exceeds a 3.0 percent difference. In fact, over the life of the Mobility Plan 2050 the difference in project expense to revenue is less than 1.0 percent.

<b>Table 6 Mobility Plan 2025-2050 Transit Expenses &amp; Revenue Projections</b>				
<b>Horizon Year</b>	<b>Projected Expenses</b>	<b>Projected Revenue</b>	<b>Difference</b>	<b>% Difference</b>
2025-2030	\$318,554,557	\$327,974,565	\$9,420,008	2.96%
2031-2040	\$718,157,634	\$734,909,207	\$16,751,574	2.33%
2041-2050	\$1,042,781,497	\$1,034,212,265	<b>-\$8,569,232</b>	<b>-0.82%</b>
<b>Total</b>	<b>\$2,079,493,687</b>	<b>\$2,097,096,037</b>	<b>\$17,602,350</b>	<b>0.85%</b>

Expense/Revenue Projects for the urban area transit services which include KAT, Knox Co CAC Transit, ETHRA

To determine the capital needs for transit, the TPO reviewed each agency’s Transit Asset Management (TAM) Plan (see Table 7). The TAM Plans document the number and type of transit vehicles owned by each agency as well as their age and condition. Based on this information, we can determine approximately when each vehicle should be replaced. As shown,

the urban area is slightly behind in meeting the 10% target set for number of vehicles being in the State of Good Repair (SGR) backlog (meaning needing to be replaced). The reason for this is several-fold. First, over the last five years there has been a challenge for transit agencies to procure vehicles. This was due to the pandemic and the world-wide computer chip shortage. Therefore, transit agencies, with FTA approval, have kept more vehicles as spares for needed backup. Second, the urban area TAM targets include non-profits and human service agencies that receive vans through the TPO's FTA Section 5310 van program. Non-profits and human service agencies tend to keep their vans way longer than the SGR Useful Life Benchmark. The vans are maintained in excellent condition, however many of the non-profits do not put on the day-to-day mileage that public transit agencies do and therefore can keep their vans longer. These factors tend to skew the Backlog statistics.

<b>Table 7</b> <b>Transit Asset Management (TAM) Plan</b> <b>FFY 2025 Targets</b>							
Asset Class	Useful Life Benchmark (Years)	Agency	Total Assets	2025 # of Assets in Good Repair	2025 # of Assets in SGR Backlog	2025 % of Assets in SGR Backlog	2025 Target
Rolling Stock – All Revenue Vehicles – Percent of revenue vehicles that have met or exceeded their Useful Life Benchmark							
Bus	14	KAT	75	57	18	24.00%	<10.0%
Cutaway	5	KAT, CAC, ETHRA, NP	121	74	47	38.84%	<10.0%
Ford Transit Van	7	KAT, CAC, NP	34	26	8	23.53%	<10.0%
Minivan	8	CAC, CACVAT, NP	31	24	7	22.58%	<10.0%
Automobile	8	CAC, CACVAT, NP	4	0	4	100.0%	<10.0%
Equipment – Non-Revenue Vehicles – Percent of non-revenue vehicles that have met or exceeded their Useful Life Benchmark							
Support Vehicle	8	KAT, CAC	21	15	6	28.57%	<10.0%
Equipment – Over \$50,000 – Percent of equipment with a condition rating below 3.0 on the FTA's Transit Economic Requirements Model (TERM) scale							
Equipment	N/A	KAT	30	29	1	3.33%	<10.0%
Facilities – All Buildings or Structures – Percent of facilities or structures with a condition rating below 3.0 on FTA's Transit Economic Requirements Model (TERM) scale							
Facilities	N/A	KAT	2	2	0	0.00	0.00%
KAT = Knoxville Area Transit, CAC = Knox County CAC Transit, CACVAT = CAC Volunteer Assisted Transportation Program, ETHRA = East Tennessee Human Resource Agency, NP = Non-Profit Organizations (5310 Funding). Only includes ETHRA vehicles that operate in the TPO's urban area.							

To project capital funding needs, each agency's existing vehicle ages, life expectancies, and replacement schedules were examined. Additionally, the cost of retrofitting existing vehicles was considered for KAT buses. KAT has a successful retrofit program that helps them keep buses running longer. Average unit costs by vehicle type were provided by the respective transit agencies and were increased by 2.5% annually to determine a Year of Expenditure (YOE) cost for vehicle replacements. The resulting vehicle needs, shown in Table 8, are the urban area will need over the 25-year life of the Mobility Plan 2050, 647 vehicles at a cost of approximately \$264 million. Currently, KAT, Knox County CAC Transit, and ETHRA have received federal and state funding for several large vehicle procurements. When these vehicles are delivered and entered into service, they should help drastically reduce the SGR backlog.

Table 8 Projected Vehicle Replacement Needs (Units=Vehicles) - YOE Cost						
Agency	Units	2025-2030	Units	2031-2040	Units	2041-2050
<b>KAT</b>						
Buses	29	\$27,390,026	58	\$68,833,459	55	\$84,579,993
Cutaways	18	\$2,373,806	34	\$5,389,611	35	\$7,095,332
Vans	8	\$515,236	24	\$1,889,424	16	\$1,609,145
<b>CAC</b>						
Cutaways	26	\$3,624,017	48	\$8,246,391	49	\$10,895,818
Minivans	1	\$36,913	1	\$44,975	2	\$121,564
Vans	6	\$589,297	34	\$4,029,156	20	\$3,090,566
<b>ETHRA</b>						
Cutaways	55	\$7,990,132	55	\$9,735,200	67	\$14,871,459
Vans	2	\$284,299	2	\$346,390	2	\$422,043
<b>Total</b>	<b>145</b>	<b>\$42,803,728</b>	<b>256</b>	<b>\$98,514,610</b>	<b>246</b>	<b>\$122,685,922</b>
Only includes ETHRA Vehicle Needs for the TPO's urban area						

Operators of public transportation that receive FTA Section 5307 Urbanized Area Formula funds are required to produce Public Transportation Agency Safety Plans (PTASP). In the Knoxville urban area, KAT, Knox County CAC Transit, and ETHRA are all obligated to meet this requirement. Federal regulations require transit agencies to develop Safety Plans that include the processes and procedures to implement a Safety Management System (SMS). SMS is a comprehensive, collaborative, and systematic approach to managing safety. Transit agencies in an urban area are required to share their PTSAP and safety targets with the TPO. While each transit agency must have its own oversight board adopt their PTASP and safety targets, the TPO is not required to do so. However, the TPO is required to set a variety of highway and transit safety targets for the overall urban area. As the transit providers in the region, provide dramatically different services and serve different types of geographic areas and use different types of vehicles, it is impractical to set any type of common transit safety target for the urban area that all three agencies can strive to meet. Therefore, the TPO chose not to set a specific urban area transit target for all three transit providers, but to endorse each agencies own unique transit safety targets developed as part of their own PTASP. **Table 9** shows the 2024 Transit Safety Performance Targets for KAT, Knox County CAC Transit, and ETHRA.

Table 9 2024 Transit Safety Performance Measure Targets				
Performance Measure	KAT MB	KAT DR	Knox Co. CAC Transit	ETHRA
Number of Fatalities	0	0	0	0
Rate of Fatalities per 100K VRM	0	0	0	0
Number of Injuries	5	5	1	1
Number of Injuries per 100K VRM	0.20	0.88	0.10	0.03
Number of Safety Events	10	10	1	9
Number of Safety Events per 100K VRM	0.40	1.77	0.10	0.28
Total Major Mechanical Failures	252	126	8	22
Miles Between Major Mechanical Failures	9,856	4,486	122,995	145,455
Source: KAT, Knox Co. CAC Transit, and ETHRA's PTASP (2024)				
MB=Motor Bus, DR=Demand Response, VRM=Vehicle Revenue Mile				



## **The Future of Transit**

One of the top issues raised in the Mobility Plan public engagement efforts was a call for more transit and more transportation options to the automobile. But transit means different things to different people. Some want to see the existing bus service improved, others want more services for the elderly and people who are disabled, some want express bus services, vanpools, and more commuter incentives to improve the options to travel to work, and others want the ability to travel regionally with connectors to different cities. The Mobility Plan, as required by the FHWA and FTA, must be financially constrained. This means that the plan should only include those transportation projects or services that the urban area can pay for based on existing revenue sources. For the near future, the fiscal analysis shows the transit services that exist today are affordable over the life of the Mobility Plan 2050 and should continue to operate and serve in a similar fashion as they do today. But that does not mean there should not be discussion of the possibility of future expansion.

Of most importance is how future expansion of transit services will be afforded. Federal and state funding sources are limited. There are additional federal and state funding for capital projects, such as the purchase of more buses. However, federal and state funding for operations, especially for possible future transit services will be hard to obtain. Even with passenger fares included in the operating revenues, the federal and state funding available does not come close to paying for even existing transit services. Therefore, another funding source must be committed, which most likely will have to be local governmental funding.

Another key factor needed for greater transit options to successfully operate, in the future, is development patterns in the urban area must change. The term mass transit means it needs a mass to be successful. This mass could be a higher density of residents, workers, students, or tourists. The Knoxville urban area has pockets of density, but more is needed. The greater the density, the more likely transit operations will be successful. There are densities within the City of Knoxville that make running transit successful. There are concentrations of highly dense neighborhoods, there is the downtown, and there is the University of Tennessee all prime transit service areas. As one moves outward, from the City of Knoxville, density becomes more of a challenge. There are pockets of residential and employment density in certain cities on the outer area of the TPO planning area. Examples include Oak Ridge and downtown Maryville and Alcoa. There are also transit generators such as the airport, industrial parks, and certain shopping areas, such as Turkey Creek area, but these locations also spread out and come with challenges for transit.

Knox County has long been a place that attracts new residents and employers. In late 2021, the county launched a process called Advance Knox to define a vision and create a plan that will guide land use, transportation, economic prosperity, and quality of life in the unincorporated county for years to come. This plan was adopted in 2024 and becomes Knox County's first comprehensive land use and transportation plan. Over the past 20 years, the county and region have experienced many changes such as significant growth and demographic and market shifts. Countywide growth is expected to continue over the next two decades. One aspect of the Plan focuses on nodal development supported by strong corridors targeted for reinvestment and intensification. These nodes/corridor types can then support investment in high-quality, high-capacity transit services.

Another component of improved density that can help transit be successful is the development of Transit Oriented Development (TOD) opportunities. Strategies to implement TOD concepts could include changes to land use regulations that make developments more transit friendly (closer to the roadways/transit stops), adding amenities along thoroughfares (shelters, sidewalks). Infill along the corridors can focus on higher density housing and businesses (employment). KAT, TPO, and Knoxville Knox County Planning are working together to explore TOD opportunities along key corridors in the City of Knoxville

Coordination between services is another recommended strategy to help create more service availability. Through more efficient use of resources, additional capacity could be realized. It is recommended that new technology be incorporated to help the transit services operate and coordinate more efficiently. The coordination between service providers should

allow passengers to transfer from one service to another. KAT, Knox County CAC Transit, and ETHRA have a history of working together on smaller type coordinated projects. Efforts to expand these types of coordinated services should be pursued.

The KAT Reimagined Study was completed in 2023 and implemented in August of 2024. KAT Reimagined was a study to rethink and reconsider Knoxville's entire bus network and consider how its transit system was meeting the City of Knoxville's mobility needs. The study included extensive public engagement and design workshops to produce a new network that aligns better with the community's goals. The study looked at the balance of services designed with the goal to get high ridership vs services designed with the goal of providing geographic coverage. Informed by public input, the Knoxville Transportation Authority (KTA) board decided to shift that balance towards the goal of getting higher ridership. A shift towards high ridership means allocating more resources to increase the frequency of core services and thus increase people's access to opportunity throughout the city.

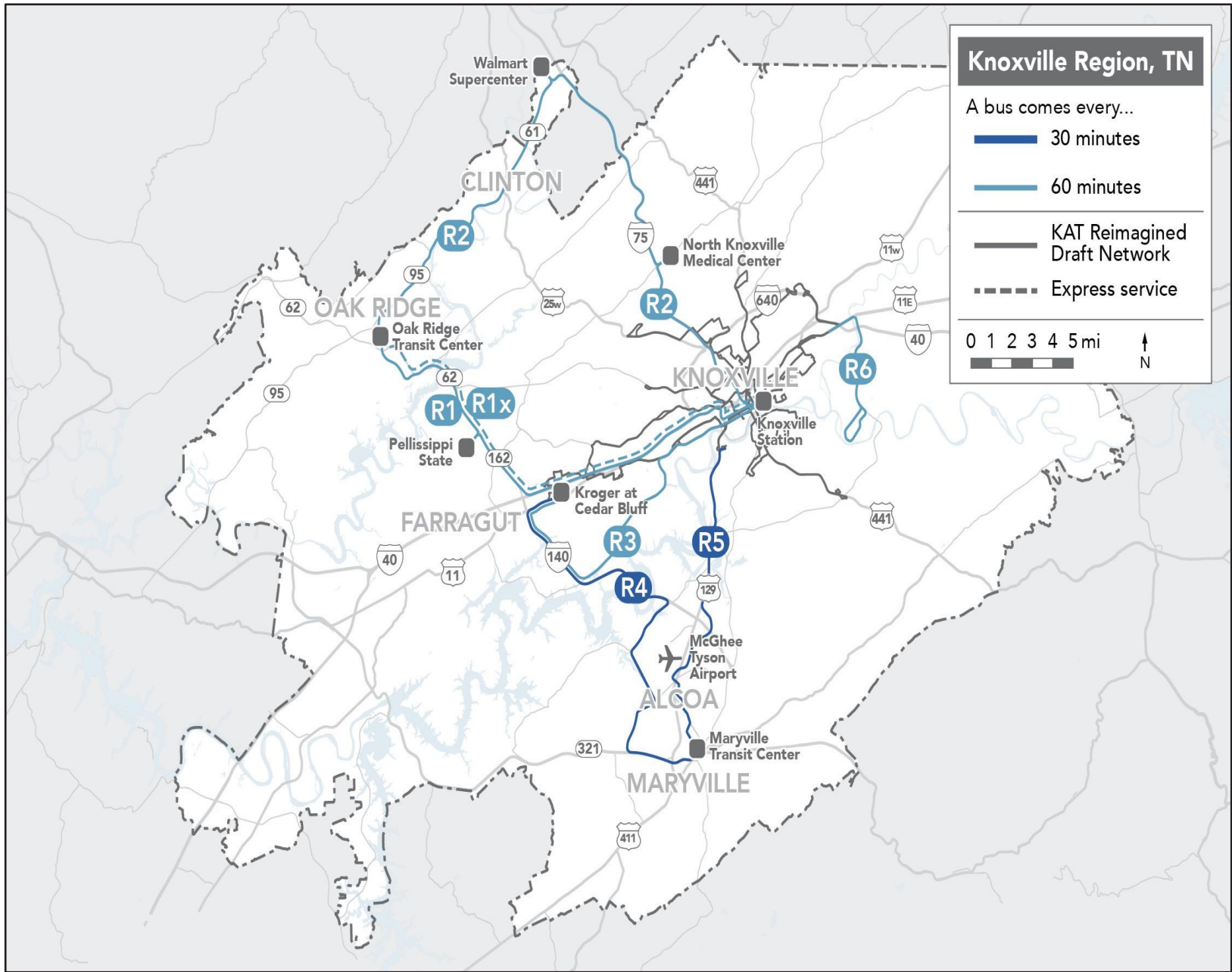
KAT Reimagined looked at what could be done with Knoxville's existing resources. However, a Long-Term Plan did provide a list of priorities for potential future expansion if more funding becomes available. KAT's first priority for increasing service is the Accelerated Bus Corridor (ABC) Project. This project involves infrastructure improvements on Broadway to increase the speed and reliability of Route 22. The improvements include better pedestrian access, new bus stop amenities, and Advanced Traffic Management System (ATMS) that will give Route 22 priority at signaled intersections. The bus service should be improved from coming every 30 minutes to every 15 minutes. Broadway is a strong market for transit with high density and a walkable street pattern following a linear corridor. The KAT Reimagined study showed that Broadway is one of the densest corridors in the city, but it was not planned as a 15-minute service because the ABC Project was already underway.

Knoxville has several corridors that are quite dense and are good candidates for more frequent service. Some of the current routes should be improved from buses arriving every 60-minutes to 30-minutes and some should be improved from buses arriving every 30-minutes to 15-minutes. The following route should be considered for more frequent services – Route 11 (further out and expanded frequency all day and all week), Route 13 (outer area) Route 20, Route 31 (expanded frequency all day and all week), Route 36, and Route 41.

### **Regional Transit Services**

Parallel to KAT Reimagined, a study, called the Urban Area Transit Study, was done to review and evaluate transit expansion opportunities throughout the region. Following development patterns in the region, particularly density, the study drew several interurban route ideas. The purpose of these routes is to connect the densest nodes to each other along the busiest corridors. This effort included trying to connect Knoxville, Farragut, Alcoa, Maryville, Oak Ridge, and Clinton along with other key destinations in between. At key nodes where several routes or services connect transit hubs or transfer stations can exist. Some of these might be large centers and others might be smaller "Super Stops." Also, in key areas park-and-ride lots can be built to help foster express route services. Unfortunately, there is no funding identified that can provide these services. If communities are interested in these expanded services, funding will need to be provided. With additional investment, these routes could connect the region beyond the area that KAT serves today. Map 2 and the list below shows all the routes the study recommended to connect to Knoxville.

- Route R1: Oak Ridge–Knoxville via Farragut
- Route R1x: Oak Ridge–Knoxville Express
- Route R2: Oak Ridge–Clinton–Knoxville
- Route R3: Farragut–Knoxville via Northshore
- Route R4: Maryville–Farragut
- Route R5: Maryville–Knoxville
- Route R6: Forks of the River



Map 2: Regional Transit Services Recommendations

## Passenger Rail Considerations for the Future

While even more in the future, citizens occasionally advocate for passenger rail within the region and the larger US Southeast. There are several types of passenger rail options. Some would like to see passenger trains that connect Knoxville to the broader eastern United States. These trains, for example, would serve Washington D.C., Roanoke, Knoxville, Chattanooga, and then Atlanta. Others would like more local passenger train service that would connect downtown Knoxville to the Airport or to the City of Alcoa/Maryville (south) or to the City of Oak Ridge (north) or to West Knoxville. Still others are advocating for very localized passenger trains that would connect downtown Knoxville to the University of Tennessee/Fort Sanders or to the South Waterfront or to the Old City.

The relatively low population density (i.e., potential ridership) and the lack of funding for the safety upgrades required to bring existing rail up to current standards are significant impediments to functional passenger rail service in the Knoxville region. As conditions change, the TPO will continue to monitor potential transit expansion and help inform and advocate for rail service (in coordination with enhanced transit service) when appropriate.

The Tennessee Advisory Commission on Intergovernmental Relations provided an evaluation of potential rail corridors in 2023, and identified the Chattanooga-Nashville corridor as the most likely (Tier 1) opportunity for passenger rail. A secondary corridor (Tier 2) may involve the Chattanooga-Knoxville-Bristol corridor in subsequent phases.



For more information on passenger rail potential within TN, see the 2023 TACIR report: [2023 Back on Track? Intercity Passenger Rail Options for Tennessee](https://www.tn.gov/tacir/2023-Back-on-Track-Intercity-Passenger-Rail-Options-for-Tennessee)