Lee's Summit Transit Service Assessment

Prepared For

City of Lee's Summit, Missouri

and

Kanas City Area Transportation Authority

January 2016

Olsson Associates Project No. 013-2967

OLSSON ASSOCIATES

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Executive Summary

The *Lee's Summit Transit Service Assessment,* commissioned by the City of Lee's Summit, Missouri and the Kansas City Area Transportation Authority (KCATA), examines the existing public transportation options available to Lee's Summit residents and how transit can better serve the public's needs of today as well as how it can be improved for future years to come. Other elements include the results of a household survey, analysis of inter-city and intra-city movements, recommended amenity improvements and a funding plan for future transit services.

The existing transit options in and around Lee's Summit consist of two fixed-route services and two demand-response services. Routes 152 and 251 operate in and around the city limits of Lee's Summit, but each route's alignment does not support movement inside the city as much as it connects residents to areas outside of Lee's Summit. As for existing intra-city transit, the demand-response services are offered by KCATA and OATS, Inc. While KCATA operates demand-response bus service to the central area of the city, OATS operates within the entire city of Lee's Summit. Because of the redundancies created by the two demand-response services, a separate analysis evaluated multiple service alternatives. After identifying how each service compared in relation to service efficiency, service performance and service costs, initial analysis suggests that OATS could provide a more cost-effective citywide demand-response service than KCATA. This recommendation is part of the first transit strategy developed in the report.

This study also examined when Lee's Summit commuters travel to work, where they commute and where they live within Lee's Summit. In order to reach areas of the metro where the majority of commuters work, commuters must take the existing commuter route north towards downtown and connect to a departing southbound route towards the Plaza or south Johnson County, Kansas. While this analysis identified where transit connections for Lee's Summit commuters are lacking, further discussions must be made before recommending any future regional connections.

The City of Independence, Missouri was examined as a peer city to Lee's Summit primarily due to its similar size of population and geographical proximity. By using a peer city rider per revenue hour ratio and applying a revenue hour per capita ratio, broad ridership projections were created by comparing similar cities where one city has a transit network and the other has limited transit options. The gap between current internal-transit trips in Lee's Summit and projected internal-transit trips was found to be approximately 154,177 trips. This is based on a fairly basic route structure similar to Independence's that provides relatively low-frequency fixed-route transit service across the city. In addition to the effort of forecasting future transit demand, population forecasts were reviewed to estimate how many additional transit-dependent people could be expected in Lee's Summit's future, and how that would affect the demand for transit. From the current potential demand of 171,289 annual one-way trips, the population growth by 2040 of over 28,000 people increases the projected ridership to 220,871 annual one-way trips within Lee's Summit alone.

Gaps in existing transportation services may be addressed through several different strategies. The strategies are not intended as necessarily incremental in nature, although they could be implemented in progressive steps. Rather, the strategies are intended to provide a snapshot of how various alternatives would address the current gap in transit need. Generally, the

strategies, as described, require additional amounts of investment in programs and capital costs, but would achieve progressively lower costs per rider while expanding the availability of transportation options to additional Lee's Summit residents. Prior to making any recommendations for significant changes to existing service, such as Strategies 2 through 4+, additional analysis of potential services and citywide consensus building should be undertaken.

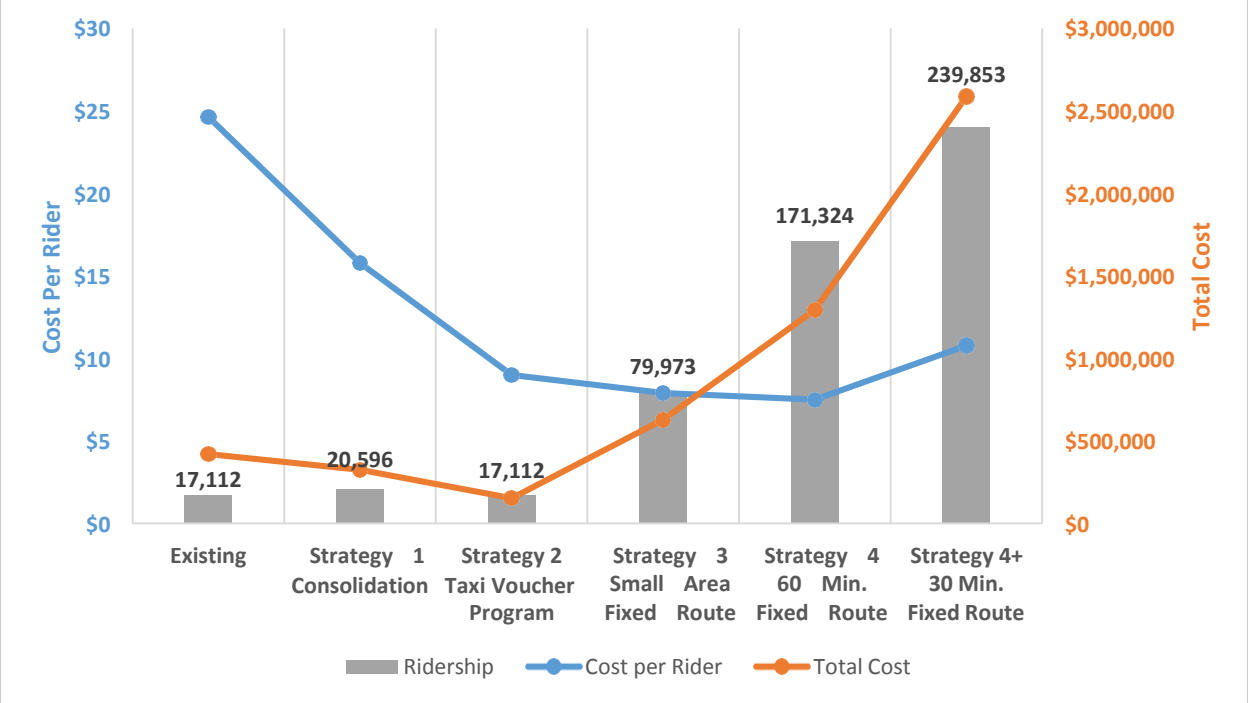
Strategy 1 recommends OATS to operate a consolidated demand-response service and increase that service to also operate on Saturdays. Strategy 2 details a taxi service alternative if the city desires to scale back the commitment to transit. Strategy 3 calls for citywide demand-response with a fixed-route service operating at a one-hour frequency within the highest potential area for transit ridership. Strategy 4 and 4+ replace the demand-response service with a citywide fixed-route service operating at either a 60 or 30-minute frequency. The table and graph below summarize the costs, ridership, and cost per rider of the various strategies.

Table 1: Summary of Costs and Ridership by Mode and Strategy

		Existing	Strategy 1	Strategy 2	Strategy 3	Strategy 4	Strategy 4+
Demand-Response	**Ridership** **Cost**	17,112 **$420,773**	20,596 **$325,011**	17,112 **$154,008**	2,954 **$51,023**	-/-	-/-
Fixed-Route	**Ridership** **Cost**	-/-	-/-	-/-	72,973 **$441,426**	163,166 **$987,016**	228,432 **$1,974,031**
Complementary Paratransit	**Ridership** **Cost**	-/-	-/-	-/-	3,648 **$136,842**	8,158 **$296,104**	11,422 **$592,209**
Total	**Ridership** **Cost**	17,112 **$420,773**	20,596 **$325,011**	17,112 **$154,008**	79,973 **$629,292**	171,324 **$1,292,991**	239,853 **$2,585,981**
	Cost / Rider	**$24.63**	**$15.78**	**$9.00**	**$7.91**	**$7.50**	**$10.78**

Note: Strategies 1, 3 and 4 assume service operates six days per week.

Figure 1: Summary of Costs and Ridership by Strategy



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Introduction

The purpose of this document is to review existing public transportation services in Lee's Summit and examine the opportunities and strategies for providing alternative modes of public transportation and enhancements to meet the current and projected demand. Other elements include the results of a household survey, analysis of inter-city and intra-city movements, recommended amenity improvements and a funding plan for future transit services. Appendix A evaluates existing demand-response services offered in Lee's Summit and an examination of consolidation alternatives for those services. Appendix B is the 2015 City of Lee's Summit Transit Survey Final Report, submitted by the ETC Institute.

This following section details the current general public transportation and targeted transportation services available to residents in Lee's Summit. These services are operated by the KCATA, OATS, Jackson County and other private/volunteer organizations.

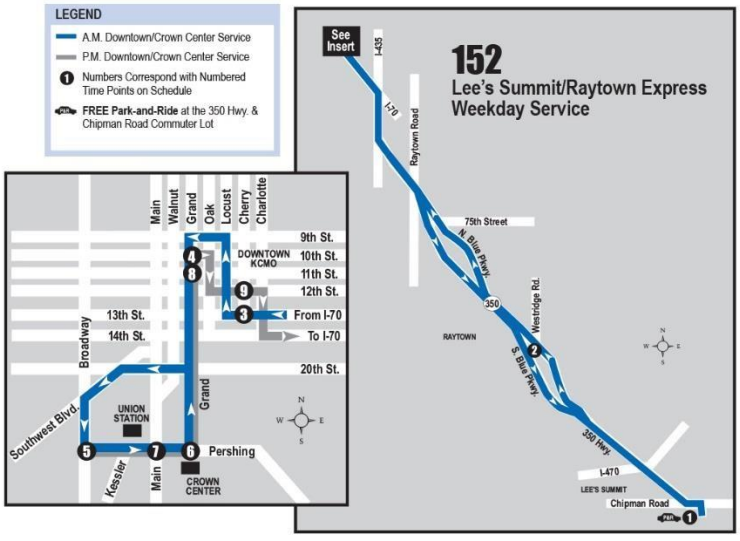
General Public Transportation Services

Services available to the general public in Lee's Summit include two KCATA fixed-routes and demand-response services in the form of a MetroFlex route in the city's core and a citywide service contracted by OATS, Inc.

Fixed-Route

KCATA Route 152 – Lee's Summit/Raytown Express

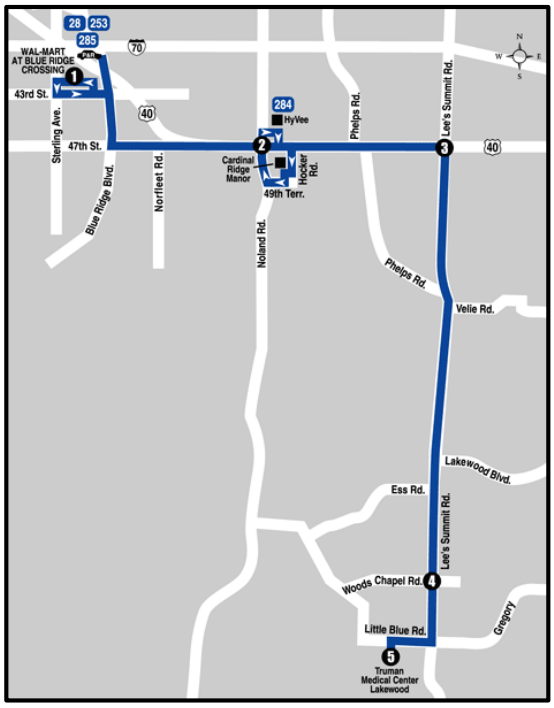
Figure 2: Route 152 Alignment



Route 152 transports commuters to multiple high employment areas in downtown Kansas City, Missouri and along the 350 Highway corridor. Unlike many fixed-routes, Route 152 is considered a commuter route, with a $3.00 one-way fare. However, most commuter route riders purchase 31-day passes for $95, which lowers the fare by nearly 30 percent. Route 152 is available Monday through Friday, during the peak traffic periods. Average daily ridership for this route amounts to around 204 passengers from Lee's Summit. Four northbound trips and one southbound trip operate in the morning. The evening rush hour provides four southbound trips and one northbound trip. The southernmost origin is located at the Park & Ride near 350 Highway and Chipman Road. The route continues along 350 Highway before exiting onto US 71 Highway, en route to downtown. After entering the downtown loop, the bus travels south along Grand Boulevard towards Union Station and Crown Center. The route's complete alignment is shown in Figure 2.

KCATA Route 251 – TMC Lakewood Connector

Figure 3: Route 251 Alignment



Although Route 251's alignment is adjacent to Lee's Summit's city limits, the route operates within Kansas City, Missouri. Thus, the local funding responsibility is with Kansas City and not Lee's Summit. Route 251 offers weekday service between Truman Medical Center at Lakewood and the Blue Ridge Crossing shopping center. Other routes accessible at Blue Ridge Crossing include routes 47, 28 and 31.

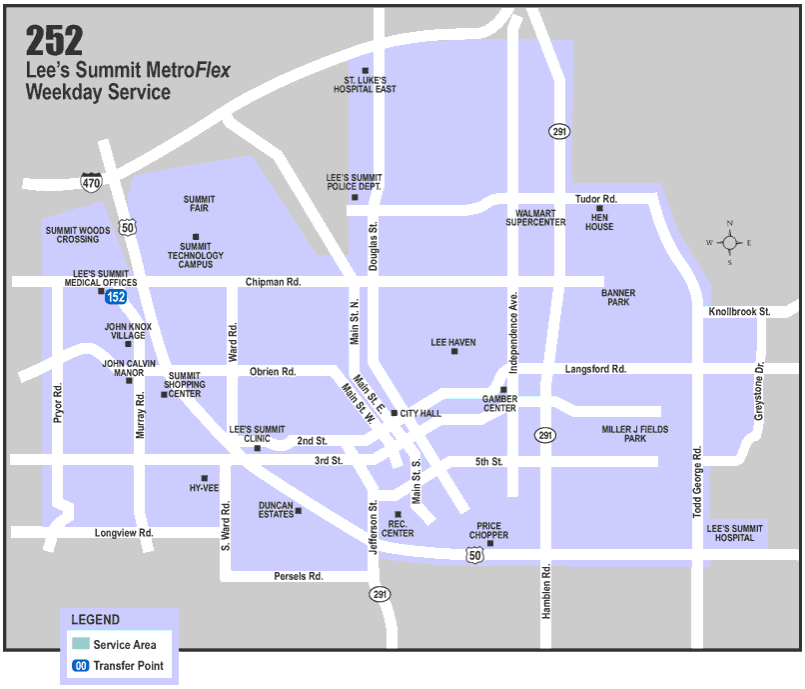
- Route 47 connects downtown, the Country Club Plaza, and the Truman Sports Complex operating mostly along 47th Street, Broadway Boulevard and Main Street.
- Route 28 operates mostly along Blue Ridge Boulevard and US 40 Highway through parts of Raytown and Kansas City before terminating downtown.
- Route 31 links Penn Valley Community College on the west end and Blue Ridge Crossing on the east end of the route by travelling mostly along US 40 Highway and 31st Street.

While Route 251 gives riders the ability to transfer to other routes at Blue Ridge Crossing, as described above, ridership is focused towards accessing the regional resources at both ends of the route and around the Noland Road intersection. Beginning from the southern terminus at Truman Medical Center at Lakewood, Route 251 travels north along Lee's Summit Road before continuing west along US 40 Highway / 47th Street. The northbound route ends its trip along Blue Ridge Boulevard as it makes a final loop around the Blue Ridge Crossing shopping center. The route, shown in Figure 3, averages 26 daily riders as it operates six northbound and southbound trips at an hourly frequency Monday through Friday. Unlike the Lee's Summit/Raytown Express standard fare price of $3.00, the Truman Medical Center Lakewood Connector charges a one-way regular fare of $1.50 or a reduced fare of $0.75 for eligible riders.

Demand-Response

KCATA Route 252 – Lee's Summit MetroFlex

Figure 4: Route 252 MetroFlex Alignment

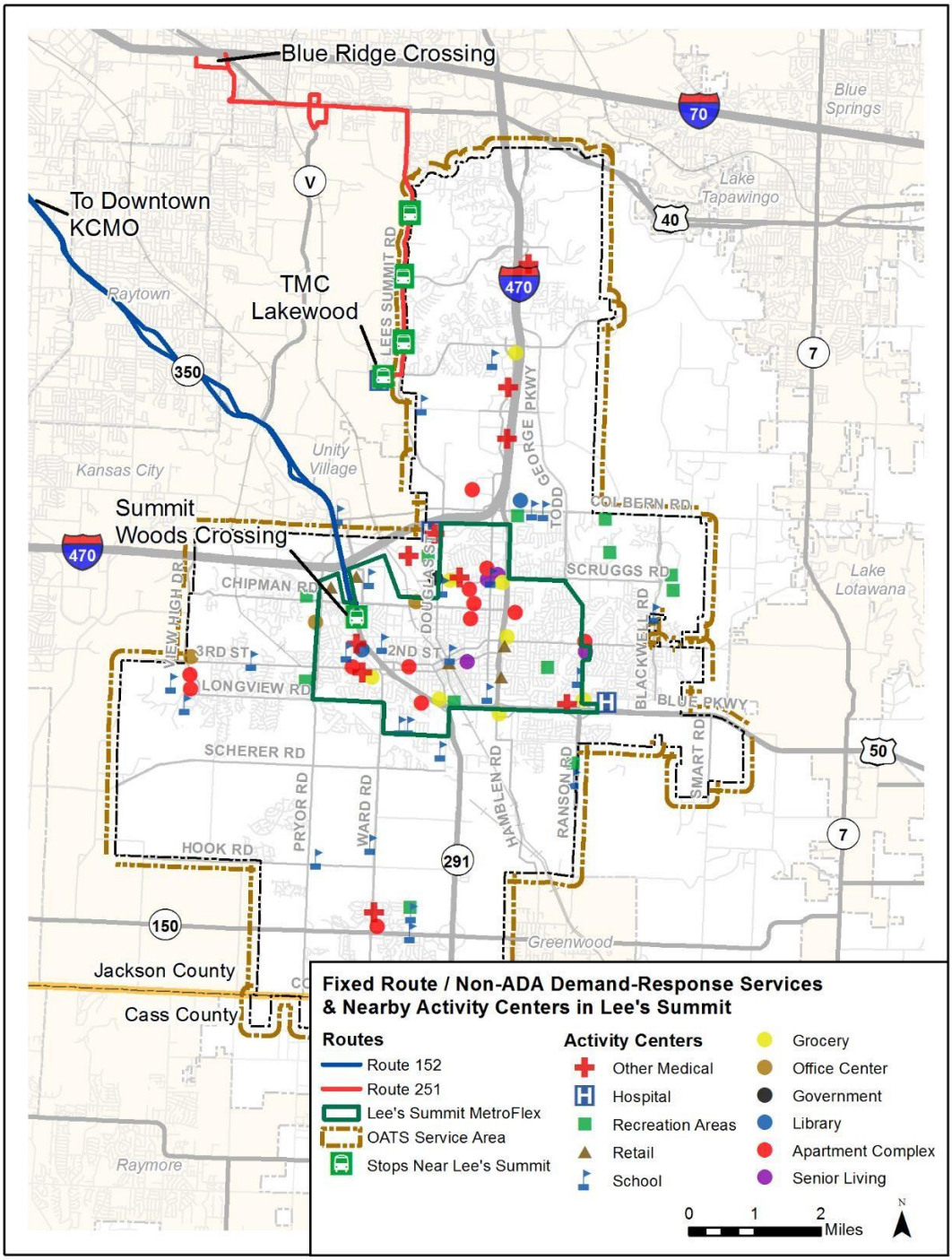


The Route 252 MetroFlex service is an on-demand curb-to-curb bus service offered weekdays, 8:00 a.m. to 5:30 p.m., or 9.5 service hours per day. While the previously described fixed-routes offer Lee's Summit residents the ability to travel to destinations mostly outside the city, the Lee's Summit MetroFlex gives riders the ability to travel to destinations within the city limits. The service area is roughly a three-mile long by four-mile wide area between Pryor Road and just east of Todd George Road. The north/south boundaries are south of I-470 and north of US 50 Highway, Persels Road and Longview Road. Fares are $1.50 for each one-way trip or $0.75 for reduced fares including eligible youth, elderly or disabled riders. Both trip origins and destinations must occur within the service area and trip reservations must be 24 hours prior to either a departure or arrival time. Subscription reservations can be made for regularly scheduled trips. The Lee's Summit MetroFlex service has an average daily ridership of 34 riders.

OATS, Inc. Services

In addition to a contract with Lee's Summit, OATS contracts with several other local communities and agencies in the Kansas City metro area to provide transportation services. OATS is responsible for operating transit services in 87 of the 114 counties in Missouri, totaling over 1.5 million annual one-way trips with a staff of 700 and several other volunteers. As part of the contract with Lee's Summit, OATS provides general public demand-response door-to-door service for all trip purposes, within the city limits, on weekdays from 7:00 a.m. to 6:30 p.m. While anyone is able to use the citywide service, elderly riders make up the majority of the 8,442 annual trips, or 33 daily trips. Reservations must be made 24 hours in advance. The current fare is $2 per one-way trip. Both the fixed-route and demand-response general public transportation services are presented in Figure 5, along with Lee's Summit activity centers.

Figure 5: General Public Transportation and Activity Centers in Lee's Summit



Targeted Transportation Services

Share-a-Fare ADA Service

In addition to the fixed-route services available to Lee's Summit residents, KCATA's Share-a-Fare provides complementary paratransit trips as required by the Americans with Disabilities Act (ADA). Eligibility is based on the rider's inability to use the fixed-route bus system due to a disability. Riders can reserve trips from any origin to any destination within three-quarters of a mile of a KCATA fixed-route bus during the same days and hours of operation as a fixed-route, not including express, commuter, or MetroFlex routes. This guideline explains why the area around Route 251 is included, but the areas around express Route 152 and the MetroFlex are not. Users are also required to recertify their eligibility for the program every three years. As a result of ADA regulations, ADA fares can be twice the fare of a comparable fixed-route bus trip, so one-way fares are $3 for ADA trips.

Developmental Disability Services of Jackson County (EITAS)

Under the EITAS (Empowering Individuals Through Advocacy and Support) program, transportation from home to work, other day services and other types of trips within Jackson County are offered to citizens with developmental disabilities. While trips to and from work or other day activities do not require a fare, other demand-response trips cost the rider $5 per trip. This demand-response service is available weekdays from 6:00 a.m. to 6:00 p.m. and serves nearly 450 users per day, totaling over 230,000 trips annually. Since Lee's Summit is located in Jackson County, city residents living in Jackson County with a developmental disability would be eligible to apply for the service.

Jewish Family Services (JET Express)

Provided by Jewish Family Services, JET Express is a volunteer driver program offering transportation to people 65 years and older in southern Jackson County, Missouri and Johnson County, Kansas. Availability of service relies mostly on volunteer drivers. Other than the minivan used for the JET Express Plus, operated by Jewish Family Services employees for $10.00 per one-way trip, each volunteer's personal vehicle is used for JET Express trips. JET Express is available Sunday through Thursday from 8:00 a.m. to 9:00 p.m. and Friday to Saturday from 8:00 a.m. to 10:00 p.m. for $5.00 per one-way trip. Eligible riders are limited to only two round trips per week, and restricted to no more than 30-miles per round trip. In 2013, annual ridership reached nearly 2,000 with a total user base of 200 participants.

Private Elderly Home Services

Apart from services like JET Express, there are multiple privately owned and operated senior centers and senior housing entities in Lee's Summit that offer transportation services. While some senior centers offer transportation to qualifying riders in a defined area, others require membership to be eligible. There are senior centers in Lee's Summit that would benefit from improved transportation connections, including John Knox Village, Home Instead Senior Care, Comfort Keepers, Benton House and Senior Helpers. Figure 6 shows the senior facilities located in Lee's Summit.

Youth Oriented Transportation Options

With the exception of bus transportation to school, there are no alternative transit options directly targeted to Lee's Summit residents under 18 years old. All the previously mentioned general public transportation options are available to youth riders. While there are no special fares for OATS riders, eligible riders of the MetroFlex can submit an application for a Youth Reduced Farecard. This allows riders, age 12 to 18-years old, to use the service for only 75 cents, or half the normal fare. Although transit options are cheaper for youth riders, their schedules may not always coincide with what services are available. Because school is in session till at least the late afternoon period, youth riders are limited to using transit only after school and on weekends. While neither service offers evening or weekend service, youth riders may use the MetroFlex up until 5:30 p.m. and OATS until 6:30 p.m.

According to the U.S. Census, 8 percent of families with children in Lee's Summit lived below the poverty level in 2013. For these families in particular, transporting children to activities in the community can be difficult when access to a personal vehicle is limited. Figure 7 shows where existing intra-city transit options are in relation to areas with an above average rate of low-income children and where the youth related activity centers are found in Lee's Summit. Future transportation efforts could better connect these identified families with the broad range of youth activities and youth jobs available in the city. Potential strategies for improving these intra-city connections may not only include improved transit options, but also ways of connecting the bicycle and pedestrian network with those same transit options.

Figure 6: Senior Facilities in Lee's Summit

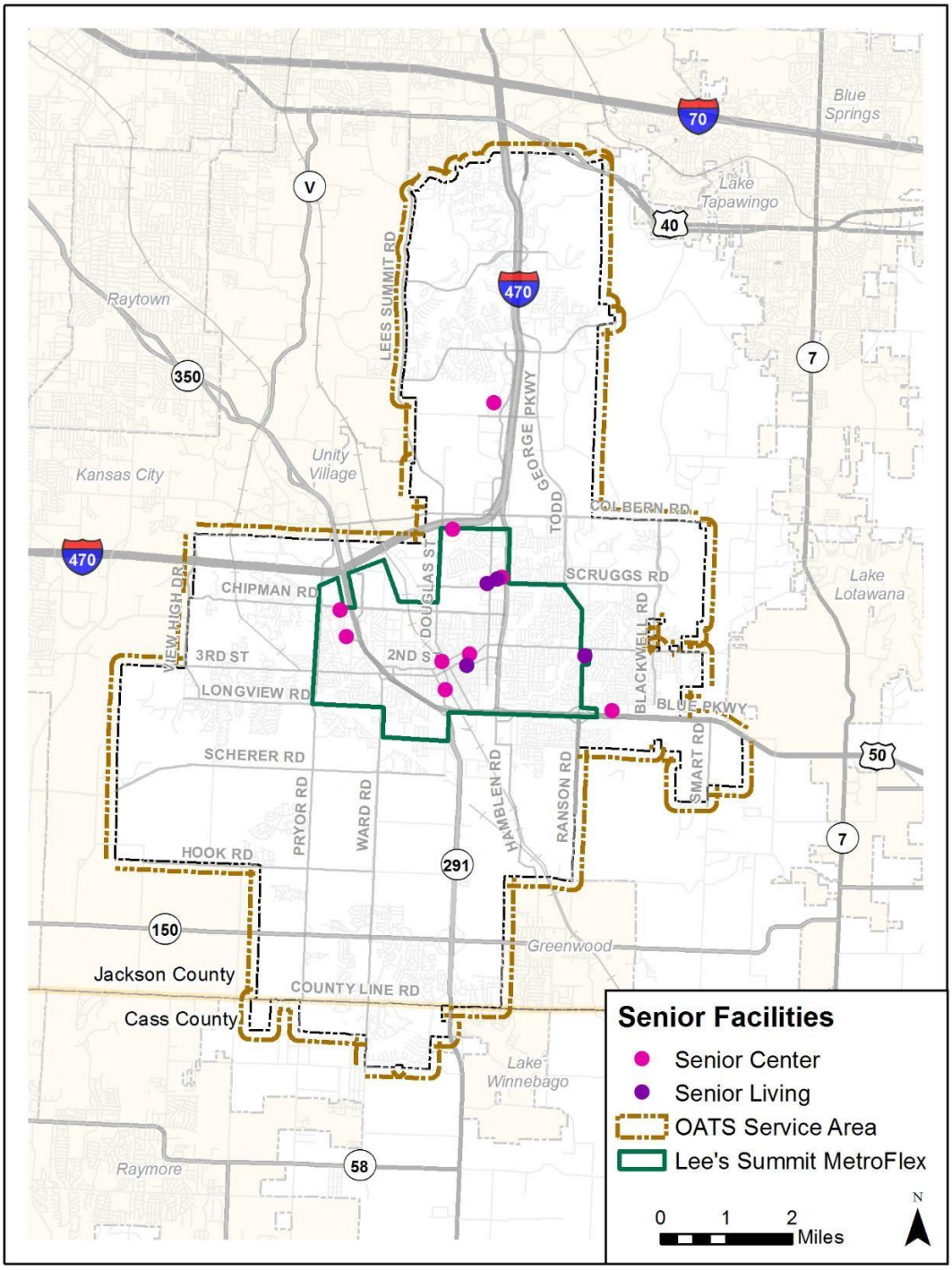
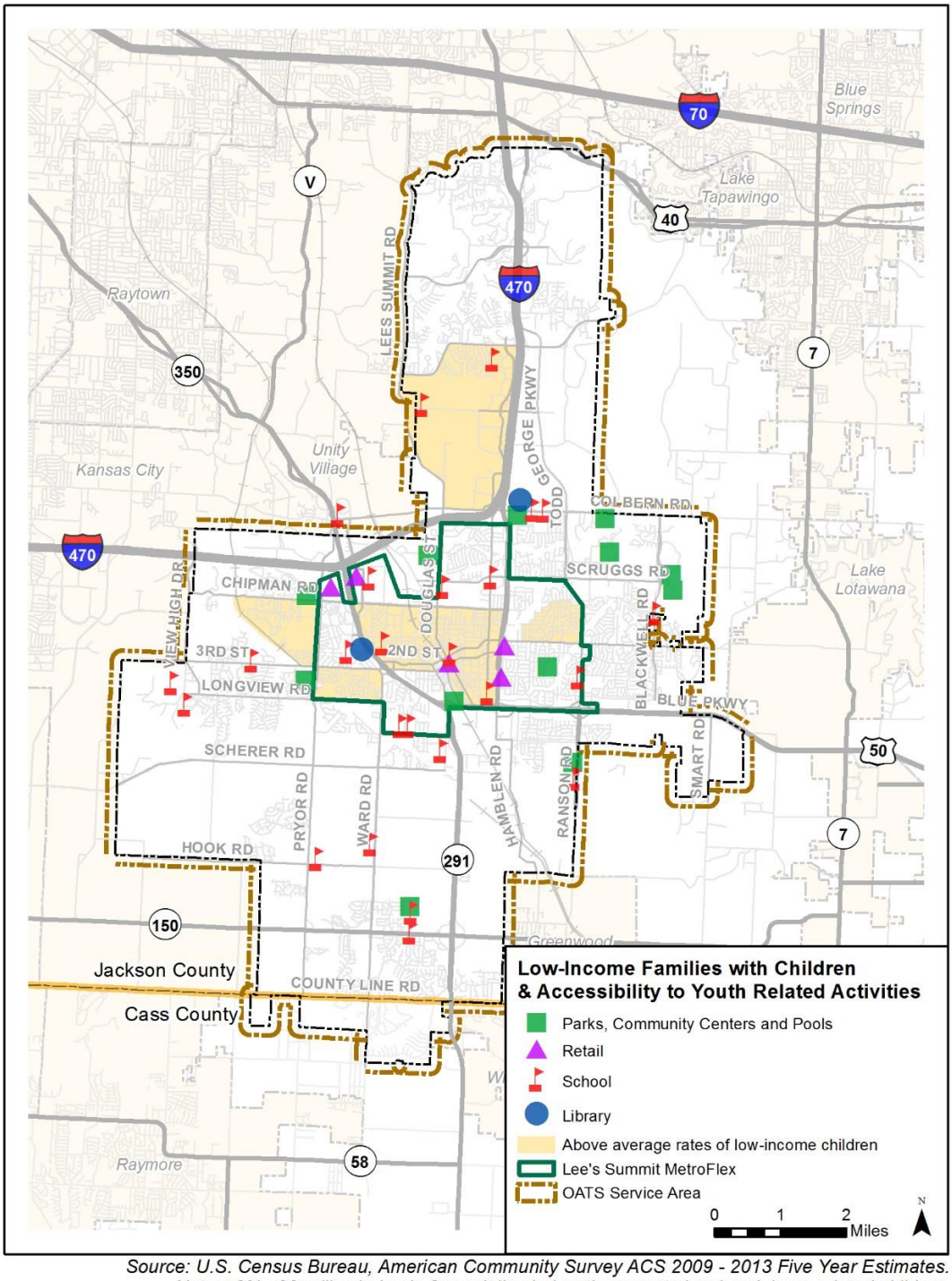


Figure 7: Low-Income Families with Children & Accessibility to Youth Related Activities



Source: U.S. Census Bureau, American Community Survey ACS 2009 - 2013 Five Year Estimates.
Notes: 8% of families in Lee's Summit live below the poverty level and have related children.

Past Studies

RideKC Coordination of ADA Paratransit and other Demand Responsive Services (2015)

This study examined strategies for coordination of ADA paratransit services and other demand-responsive services in the Kansas City region. With the help of stakeholders from the Mobility Advisory Committee including transportation providers, underserved populations, philanthropic organizations, and local government authorities, the study team proposed coordination plans that were developed for three priorities:

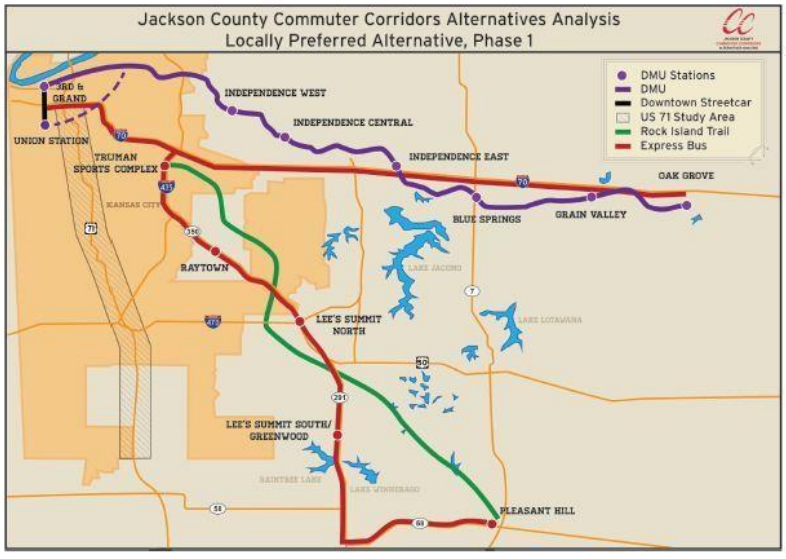
1. ***Coordination of ADA Paratransit Services*** between KCATA, City of Independence, Unified Government Transit, Johnson County Transit and the formation of a regional call and control center.
2. ***Regional Eligibility*** for all major transit providers by using a common eligibility application and implementing tools like a regional identification fare card.
3. ***Expanded Information and Referral Services*** with upgrades to Link for Care, a one-click service affiliated with K.U. Medical Center, and integration with a similar style service called Care Connection. Additional marketing and outreach efforts were recommended, including the establishment of a transportation resource center.

These priorities are intended to be ongoing and could all be fully implemented by 2017. While the coordination efforts of the major transit agencies will greatly benefit their riders, the expansion of information and referral services will most affect Lee's Summit residents by providing a more coordinated experience when accessing information about different transit options.

Jackson County Commuter Corridors Alternatives Analysis (2013)

The purpose of the alternatives analysis was to help refine and determine implementation strategies for two of the corridors identified in the Smart Moves Conceptual Map. Through this study, Jackson County wanted to improve their transit system performance and usage, thereby addressing the identified transportation needs in two study corridors and decreasing problems caused by congestion. The two corridors referenced are the I-70 Corridor, beginning in Kansas City and extending eastward on I-70, and the Rock Island Corridor, which starts in Kansas City and extends southeast along Highway 350 towards Lee's Summit, seen in Figure 8. Improvements on the Rock Island Corridor could have major impacts on congestion, commute time, and the overall

Figure 8: Phase One - Locally Preferred Alternative



experience for Lee's Summit commuters. Final projections were made recommending the East Corridor was best supported by railcar and the Southeast (Rock Island) Corridor would be best served by express bus and eventually connected to railcar.

In the fall of 2015 a 17.7 mile section of railroad right-of-way along the Rock Island Corridor was purchased by Jackson County, Missouri and the KCATA. This section stretches from the Truman Sports Complex through Kansas City, Raytown and Lee's Summit. While initial plans are to create a walking and biking trail, future transportation and development opportunities are still to be determined. Not only will the corridor allow for connections from downtown Kansas City to outlying suburbs, but will also eventually connect with the Katy Trail – which currently runs nearly 240 miles from St. Louis to Clinton, Missouri.

Smart Moves Regional Transit Implementation Plan Phase I: Urban Corridors (2011)

The Regional Transit Implementation Plan provided an implementation strategy to guide the development of a Bus Rapid Transit (BRT) system capable of delivering area residents and employees across the metro region. Through the study of socio-economic data and ridership reports, conclusions were reached on how the corridors could be best served by BRT. Five urban corridors were suggested, including: Main Street MAX, Troost Avenue, State Avenue, Metcalf Avenue/ Shawnee Mission Parkway, and North Oak, along with two eastern Jackson County corridors. As it stands, none of the five urban corridors would provide service to the Lee's Summit area. However, the project concluded opportunities existed to implement additional routes to eastern Jackson County in the future.

The study's purpose was to provide further definition of a regional bus rapid transit service along the urban corridors, as defined in Smart Moves. This phase of the plan outlined the next steps that could be taken for all the above mentioned corridors. Many of these corridors are already actively being used, but lacked essential infrastructure to truly serve as urban corridors with BRT service.

Smart Moves Regional Transit Implementation Plan Phase II: Commuter Corridors (2011)

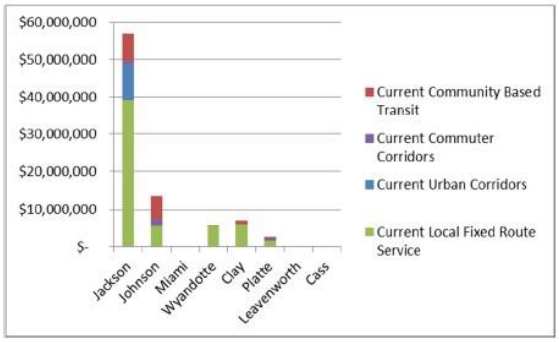
The Phase II: Commuter Corridors report revisited the idea of commuter rail by producing a comprehensive analysis of dormant rail lines along multiple corridors that would potentially benefit from funding by the Federal Transit Administration (FTA) that otherwise would not have been available. There are several dormant and underused rail lines running parallel to some of the most heavily congested highways in surrounding areas of Kansas City. Using Union Station as a transportation hub would allow rail lines to connect from outlying areas like the Kansas City International Airport (MCI), Village West, Grandview, Liberty, Independence, Blue Springs, and Lee's Summit and bring commuters into downtown Kansas City, Missouri via rail lines.

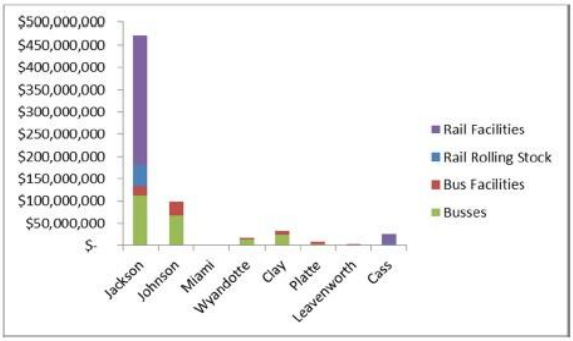
Figure 9: Commuter Rail Lines

Smart Moves Regional Transit Implementation Plan Phase III: Urban Corridors/Commuter Rail Integration (2011)

This study integrated the findings from phase I and phase II studies, identified redundancies in service strategies between the corridors and created strategic connections from the urban corridors to the commuter corridors. Through the use of BRT, rail based services, and standard bus routes, integration of the corridors would serve a large portion of the Kansas City Metro Area. An important component of a regional transit plan is creating connections between both the multiple corridors and the different transit modes and fostering the distribution of passengers between those different modes. Figure 10 illustrates the scale of investment needed for each alternative and how the responsibility of funding could be shared among the Kansas City area counties.

Figure 10: Cost & Funding Estimates





U.S. 71 Corridor Transit Study (2013)

This study identified a preferred transit alternative showing where and how transit could be developed to meet current and future needs along the U.S. 71 Corridor in Jackson County, Missouri.

Lee's Summit Transit Demand Assessment (2009)

The Lee's Summit Transit Demand Assessment concluded a significant number of Lee's Summit households have at least one resident needing access to alternative transportation modes. This translates into as many as 5,000 residents. Expanding the MetroFlex service area was regarded by stakeholders as a high priority, as well as consolidating similar services to increase the convenience for riders.

Final recommendations from the demand assessment included increasing capacity of Route 152 due to increasing demand, increased parking capacity at commuter passenger facilities, proposing further evaluation of intra-community transit connections as well as reverse commutes coming from Kansas City.

The four main modifications to transit recommended in this plan included: expanding the service schedule for OATS service, the addition of one morning and one afternoon trip to Route 152, increasing fares on Route 152, expanding the MetroFlex area to include St. Luke's East

Hospital and Lee's Summit Medical Center, and the commercial area along Highway 291, north of Chipman Road. All of these recommendations have since been put into action.

Through surveys and public engagement, results showed people would drive three to five miles to a Park & Ride lot if it is in the general direction of the destination, but would only drive one mile to a Park & Ride lot that is not in their general direction. This information supported the effort to expand the existing lot at Chipman Road.

Several options were considered to improve the MetroFlex service as well. Option One allowed trips to and from Lee's Summit Medical Center without expanding the service area. Option Two expanded the service hours to serve employment-related trips both within Lee's Summit and between Lee's Summit and Kansas City. Option Three expanded the Metro Flex service area to include the entire city, but requires an additional vehicle. Option Four expanded the hours and service area. The costs for each option are displayed in the table below.

Table 2: Financial Summary (Lee's Summit Transit Demand Assessment 2009)

	Current	Option 1	Option 2	Option 3	Option 4
Annual Cost	$107,000	$107,000	$235,000	$235,000	$353,000
Passenger Revenue	$3,500	$3,500	$9,100	$7,000	$12,400
Required Subsidy	$103,500	$103,500	$225,900	$228,000	$340,600
Federal and State Funding	$79,000	$79,000	$172,000	$174,000	$258,000
City Funding	$24,500	$24,500	$53,900	$54,000	$82,600
Average Cost per Trip	$15.59	$15.59	$15.65	$17.22	$17.22

Notes: Costs are from FY 2008 KCATA budget.
Federal funding is estimated based on the current use and distribution of federal funds.

Lee's Summit Strategic Plan (2009)

In the citizen-driven Lee's Summit Strategic Plan (LS360), three goals were laid out to help achieve the vision outlined in the plan. Their third goal is outlined below, identifying the needs for future public transportation.

"Provide the citizens of Lee's Summit a safe, cost-effective, accessible, environmentally responsible regional mass transit system that connects people to work, educational institutions, medical institutions, and entertainment destinations within Lee's Summit and with connections to other transit routes within the Kansas City metropolitan areas."

This goal is to be accomplished as it's deemed feasible and fiscally sustainable for the city. The strategies below explain opportunities to achieving a more regionalized transit system.

Strategy 1: Expand access for Lee's Summit citizens to a local bus system either through expansion of the KCATA system and/or independently develop a fully interconnected Lee's Summit system. This strategy is a three-year concept, based on the fact that the city is currently reviewing an internal proposal to expand KCATA MetroFlex Route 252.

Strategy 2: Determine the fiscal impact and commitment required to develop a commuter rail system linking Lee's Summit to Kansas City and appropriate points in between and implement a system upon recommendation of approved study. This is a major regional concept for Lee's

Summit to consider in conjunction with surrounding communities for long-range implementation following positive results of a feasibility study.

Strategy 3: Determine the fiscal impact, commitment required and community-wide support to join efforts to develop a light rail system within the major metropolitan area while extending to Lee's Summit and connecting with the surrounding area. Upon recommendation of approved study, implementation will be pursued. This is a major regional concept for Lee's Summit to consider in conjunction with surrounding communities for long-range implementation following positive results of a feasibility study.

The strategic plan states that because of the population growth that is expected in Lee's Summit in the area southwest of Route 50 and I-470 and the eastern portion of the city, existing transit options could quickly become insufficient.

Household Survey Results and Citizen Comments

A household survey, conducted by ETC Institute in September 2015, asked Lee's Summit residents about their opinions and expectations of transit service in the city and their modes of transportation. The survey was administered by phone to a random sample of 400 households within the City of Lee's Summit; giving the survey a precision of at least +/- 5 percent at the 95 percent level of confidence.[1] The 2015 survey was similar to a survey conducted in Lee's Summit in both 2000 and 2008. The final report containing all findings from the survey can be found in Appendix B.

The major findings from the 2015 survey are:

- Nearly three-fourths (74 percent) of households indicate they are "very willing" or "somewhat willing" to ride a bus as a mode of transportation.
- 60 percent of households indicate they would use public transportation in Lee's Summit for non-work related trips including for shopping, doctor visits, etc.
- 36 percent of those surveyed said their one-way commute to work, school or other most frequent destination is longer than 20 minutes.
- More than half (54 percent) of households indicate they are willing to walk or ride a bike five to ten minutes to use a fixed-route bus system within Lee's summit
- 63 percent of households said they would be "very likely" or "somewhat likely" to drive or carpool to a Park & Ride location and use an express bus to get to their final destination.
- 21 percent of respondents indicate they walk to and from work, school, shopping, or for recreation on a daily basis.

[1] 2015 City of Lee's Summit Transit Survey Final Report, ETC Institute, September 2015.

The results of the 2015 survey were compared to the 2008 survey.

- When asked how higher gas prices have affected their household's interest in using public transit over the past two years, 28 percent indicated they were "much more" or "somewhat more" interested in 2015. According to the 2008 survey, more than two thirds of the respondents, answered the same way.

- 52 percent of respondents in 2008 supported an increase in city taxes for transit, compared to 43 percent in 2015.

- When respondents were asked if they knew that public transportation services are currently available in the City of Lee's Summit, 63 percent said yes in 2008. That rate dropped to 56 percent in 2015.

- There was an increase from 10 percent of households in 2008 to over 14 percent in 2015 indicating at least one member of their household (age 16 or older) being dependent on public transportation or rides from friends or relatives because they did not have a car or did not drive.

In the seven years since the April 2008 survey was distributed, the impacts of the great recession have been felt at both a national and local scale. Now that gasoline is closer to $2 per gallon than the $4 in 2008, driving a personal automobile has become more affordable, thus, impacting the attractiveness of using transit. Survey respondents' awareness of existing transit services in Lee's Summit also fell in 2015 as compared to 2008. With that being said, there is not only a clear majority of respondents willing to use public transportation, but also a growing number of people dependent on someone else for transportation, whether that is provided by a bus, a friend or a family member. Considering the level of interest and need for transit, as well as the willingness to walk or bike to future fixed-routes, an increased effort to publicize existing services and efficiently expand transportation options could address some of the mobility needs expressed by Lee's Summit residents in this survey.

Separate from the surveys, the city has also collected comments received from residents over the past few years about transit service in the city. The following themes were mentioned in comments by multiple residents.

- Advertise more for the existing transit services. Many survey respondents expressed a lack of knowledge of the available transit services in Lee's Summit.

- Desired improvements to existing services included expanding hours of operation to evenings and days of service to weekends.

- Needed infrastructure investments for transit riders, bicyclists and pedestrians were often identified. Suggested amenities included bus shelters and signage, bike lanes and trails, and improving the sidewalk network for pedestrians.

- The ability of the transit-dependent population to access transit services should be addressed first, before going forward with any significant transit investment.

- New transit connections should be made to areas within the city limits, as well as outside Lee's Summit, such as downtown Kansas City, Missouri and other cities in the metro, and activity centers including Kansas City International Airport and Truman Sports Complex. An emphasis on rail-based transit connections was made for both intra-city and inter-city movement.

Demand-Response Analysis

Service Descriptions and Ridership

The City of Lee's Summit currently contracts with both the KCATA and OATS for demand-response transit services. While each contractor provides a similar type of transit service, each service has slight differences. Table 3 describes the operating characteristics of both services.

Table 3: KCATA & OATS Operations Comparison

	KCATA (MetroFlex)	OATS (Lee's Summit)
Days of Service	Weekdays	Weekdays
Service Span	8:00 a.m. - 5:30 p.m. (9.5 hours)	7:00 a.m. – 6:30 p.m. (11.5 hours)
Service Area	Central area of Lee's Summit	Within Lee's Summit city limits
Peak Vehicles	2	3*
Wheelchair User Rate	Not Available	8%
Daily Platform Hours	17.7	22.0
Average Daily Ridership	34	33
Annual Ridership	8,670	8,415
Advanced Reservation	24 hours	24 hours
Fare	$1.50	$2.00
Reduced Fare	$0.75	n/a
Driver Assistance	Curb-to-curb	Door-to-door
On-time window	10 minutes	Driver communicates with passenger day before trip
Vehicle wait time	5 minutes	5 minutes
Package limits	6	No bulk items
Late cancel policy	As soon as possible	As soon as possible, rider contacts driver

Note: (*) OATS can assign additional vehicles to serve Lee's Summit when needed.

The main differences between the two transit services are the eligible service areas, availability of additional vehicles and the assistance provided by drivers. OATS provides transportation for riders anywhere within the city limits of Lee's Summit while KCATA's MetroFlex only travels within the central region of the city. The MetroFlex service area can generally be described as bounded by Pryor Road and Todd George Parkway on the east and west, and I-470 and US-50 on the north and south. The southern boundary extends to portions of Persels Road and Longview Road. OATS also offers greater assistance to riders by designating their service as

door-to-door, while the MetroFlex offers curb-to-curb style service. This distinction is relevant for those with disabilities and elderly persons. Finally, OATS has the ability to add capacity by assigning additional vehicles during times of peak demand, whereas, the MetroFlex is limited to only two vehicles at any given time. This ability to meet capacity is a function of contract terms; OATS charges Lee's Summit by the rider, whereas Lee's Summit's contract with the KCATA is determined by hours of service. KCATA and OATS both utilize vehicles with similar passenger capacity.

The figures on the following pages were used to demonstrate the availability of OATS versus the MetroFlex and how Lee's Summit residents can be best served. Figure 11 shows 2013 population density within Lee's Summit. Examining the population shed within and outside the MetroFlex service area plays an important role in analyzing whether the transit options are serving the population in the most effective and efficient manner. The MetroFlex route is available to 31.5 percent of the city's total population, based on its service area. The OATS service is offered to anyone within the city limits, whereas the MetroFlex is only available within the area symbolized by the green boundary. The areas where transit is accessible only by OATS services include sections of the city north of Colbern Road, south of Scherer Road and east of Todd George Parkway.

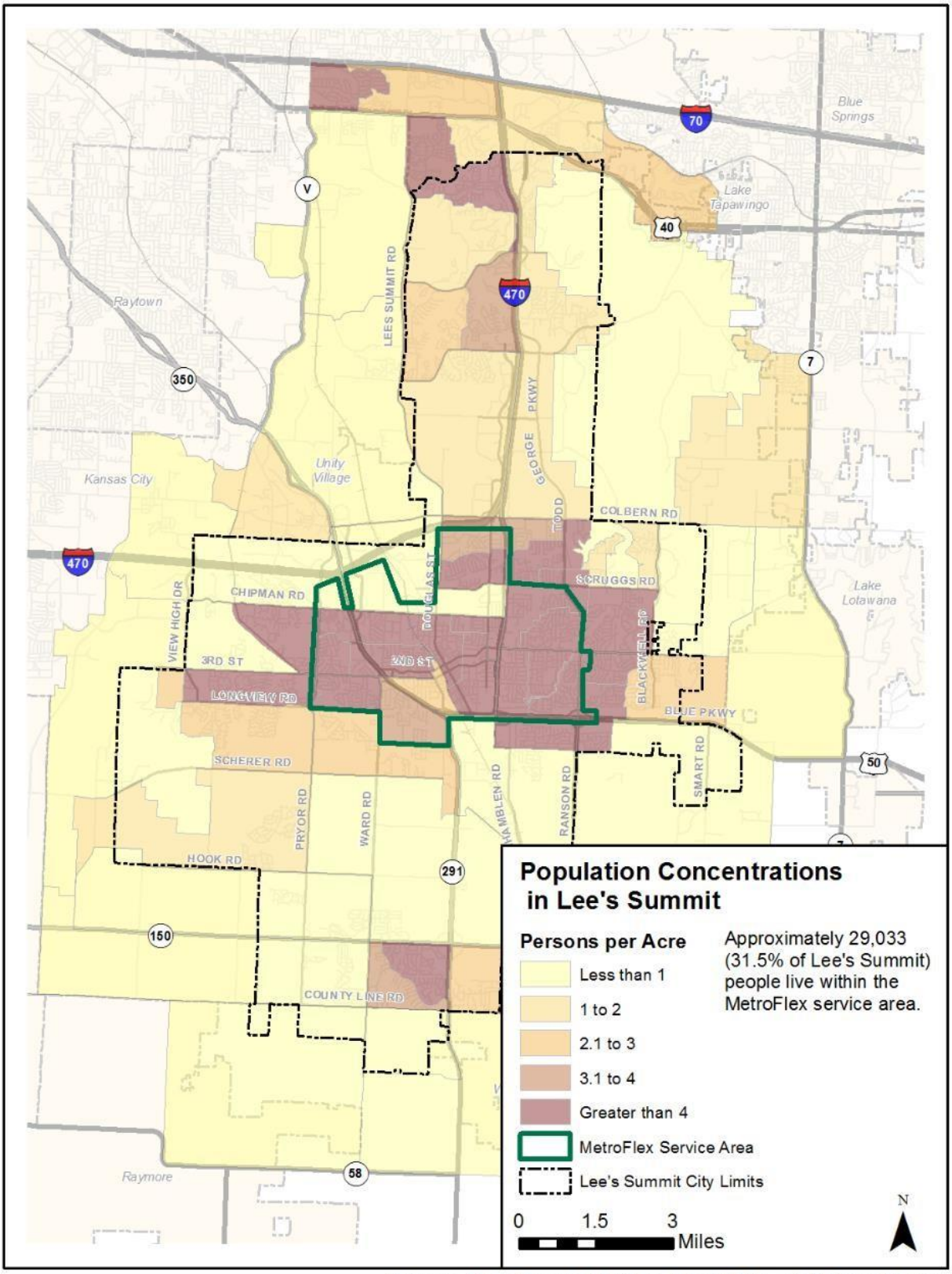
Figure 12 displays the job concentrations in Lee's Summit (2011) and local transit's ability to serve those places of employment. 55 percent of the jobs in Lee's Summit are located in the MetroFlex service area. The jobs outside the MetroFlex area would be accessible using only the OATS service.

During the month of April 2015, a total of 764 one-way trips were provided by OATS. OATS passenger trip origins were mapped in Figure 13. Considering a majority of origins occurred in the MetroFlex service area, there is a noticeable overlap of services provided. While there are some popular origins outside of the MetroFlex service area, 64 percent are within the MetroFlex boundary. These trips, however, do not necessarily end within the MetroFlex boundary.

Further analysis of the origin residence locations identified 104 addresses (users) during the month of April. Of the 104 residential addresses, 30 originated from multi-family residential addresses, accounting for 75 of the 406 recorded residential origin trips. While only nine users took more than ten trips during the entire month of April, the remaining users included 45 percent taking one trip and 44 percent taking anywhere between two and nine trips in April 2015.

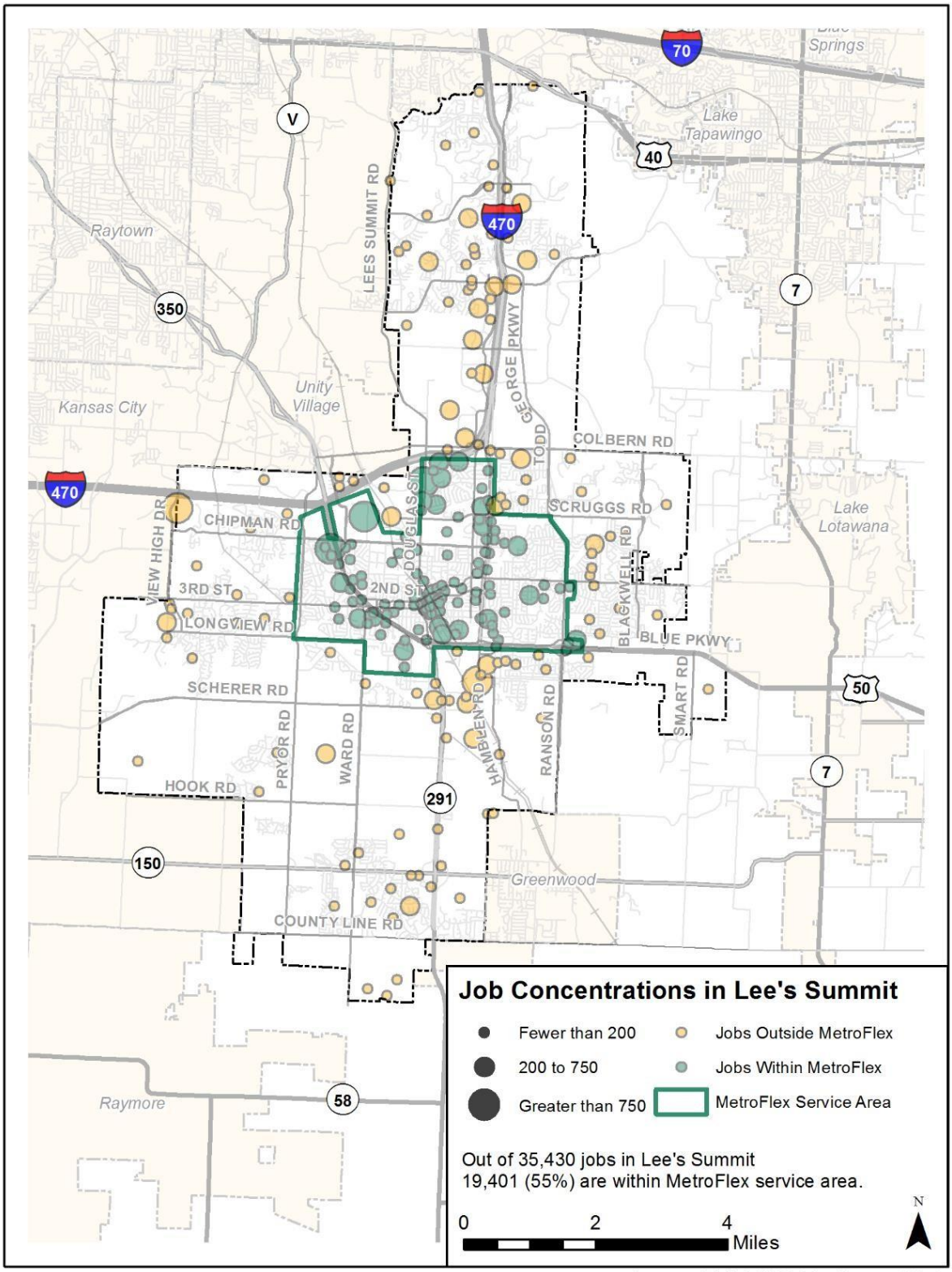
Figure 14 displays the OATS passenger destinations from April 2015. Of the total trips made in that month, 70 percent of the OATS destinations were also located within the MetroFlex service area. These destination findings show an even larger rate of trips located within the MetroFlex service area than the origin locations previously displayed in Figure 13. When considering both these maps together, there is a clear majority of productions and attractions located in the central part of the city, currently serviced by both the MetroFlex service and the OATS service. This demonstrates the appeal and benefit of city residents having access to one transportation provider that would meet their citywide transportation needs.

Figure 11: Access to Transit



Source: U.S. Census Bureau, ACS 2009 - 2013 5-year data.

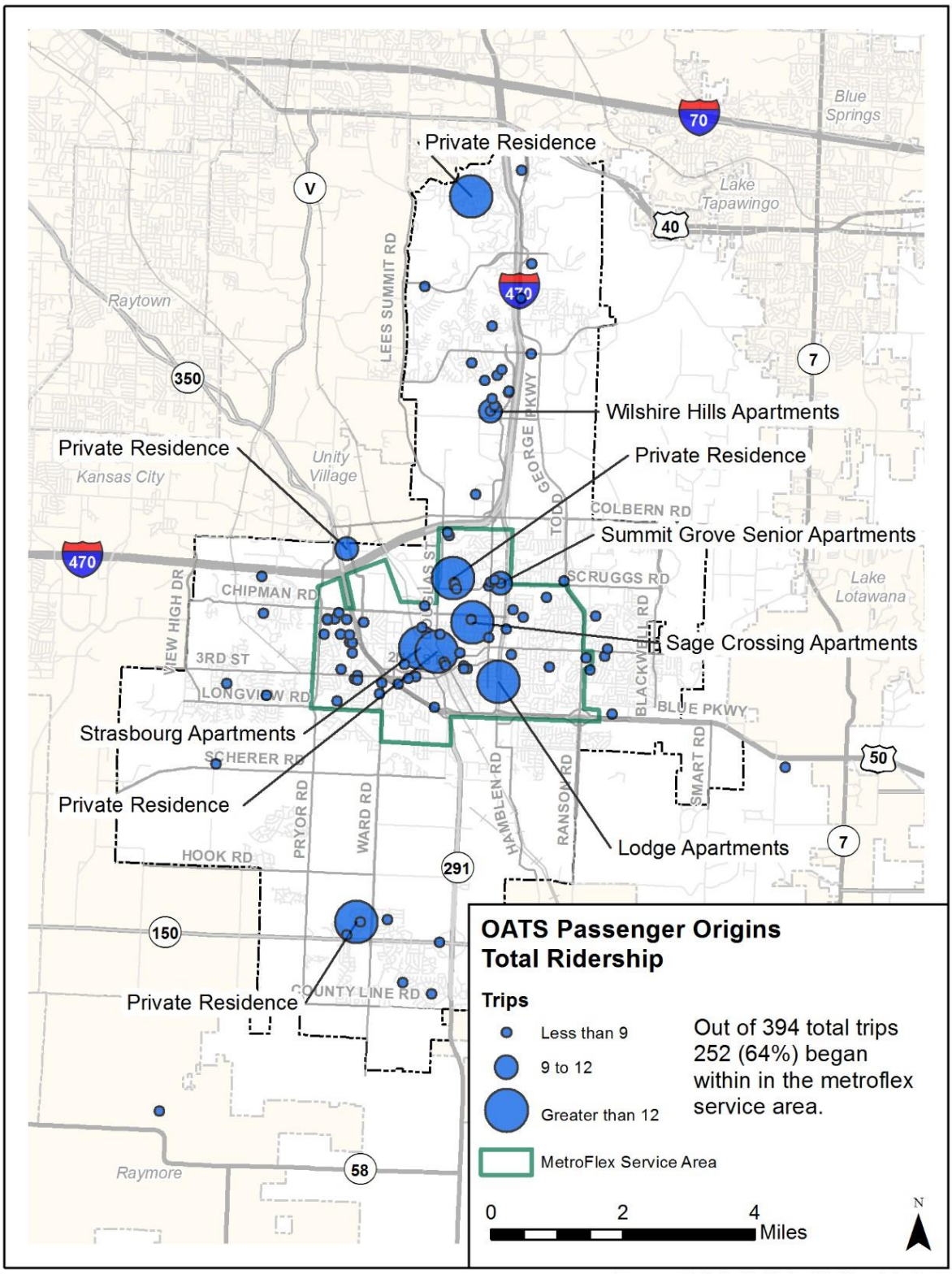
Figure 12: Job Concentrations in Lee's Summit



Source: 2011 LEHD Employment Data

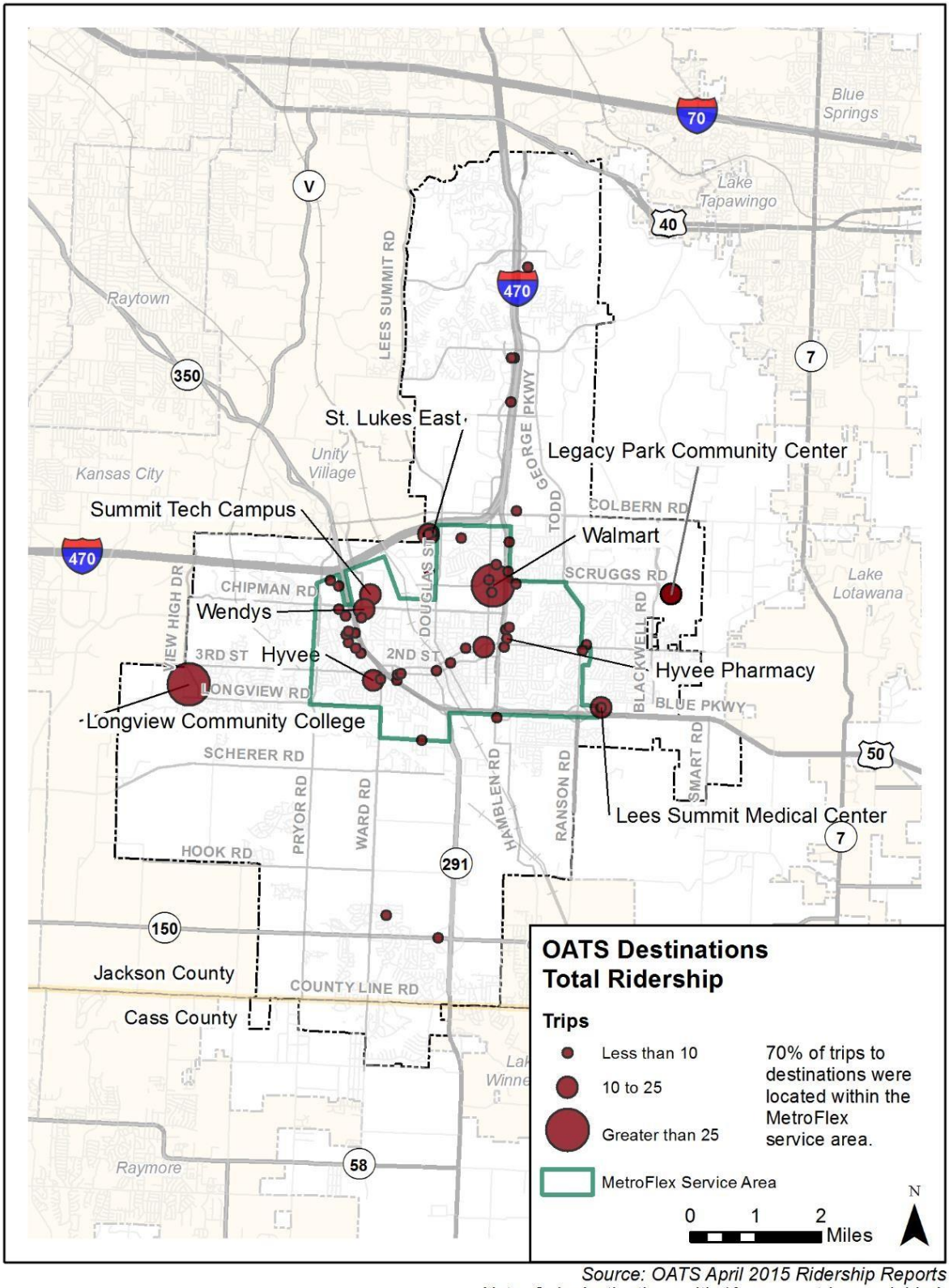
Note: Points represent multiple employers (10 or more employees) in a given census block.

Figure 13: OATS Passenger Origins (April 2015)



Source: OATS 2015 April Ridership Data
Note: Only origins with 10 or more trips are labeled.

Figure 14: OATS Passenger Destinations (April 2015)



Source: OATS April 2015 Ridership Reports
Note: Only destinations with 10 or more trips are labled.

Service Cost

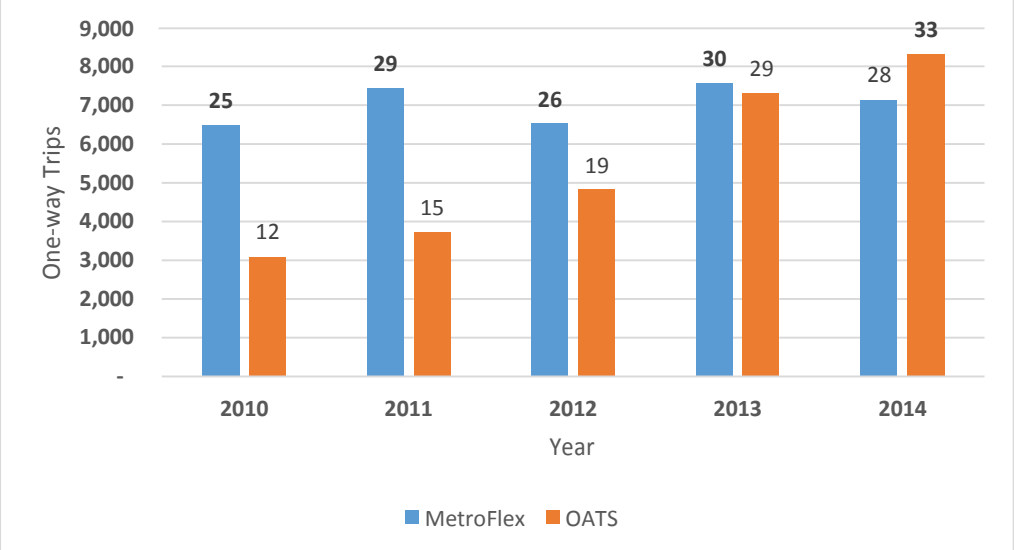
The cost of providing transit service is a fundamental consideration in the decision making process. An evaluation of the cost associated with the provision of transit service by the KCATA and OATS in Lee's Summit was conducted. This evaluation determined that the KCATA's total annual cost of providing the current MetroFlex service in Lee's Summit is approximately $260,000 while the annual cost of providing the current OATS service in Lee's Summit is approximately $152,000.

Differences between the two services can be attributed to different operating procedures of each service. KCATA service is governed by a contract with Lee's Summit that specifies the amount of service hours provided, regardless of demand, whereas, the OATS contract with Lee's Summit is based on a per rider served, which allows OATS to vary the amount of drivers and vehicles supplied. In addition, KCATA MetroFlex drivers operate under a union contract, which results in a higher base pay and benefits than received by OATS drivers. OATS drivers by contrast receive no benefits, and several operate part-time. Higher KCATA cost can also be attributed to a higher number of deadhead miles resulting from KCATA housing their vehicles near downtown Kansas City, Missouri. This results in an additional 40 miles per day per vehicle before the driver can enter revenue service. OATS drivers store their vehicle at their residence, located within or near Lee's Summit.

Service Efficiency

Figure 15 displays the level of ridership for the two services from 2010 to 2014. While the MetroFlex has experienced steady ridership since 2010, OATS had nearly three times as many riders in 2014 as they did four years before. The MetroFlex has averaged around 25 to 30 one-way trips per day, but in 2014 OATS surpassed the MetroFlex's ridership for the first time averaging 33 trips per day, for a total of 8,316 annual one-way trips, compared with MetroFlex's 7,146 trips.

Figure 15: MetroFlex & OATS Annual Ridership (2010 - 2014)



Note: Data labels represent average daily ridership for each transit provider in a given year.

The efficiency of transit service can be described in terms of boardings per revenue hour, and average operating costs per passenger. Boardings per revenue hour is a measure of how many passengers utilize the fixed-route system per hour of service provided, a higher figure signifies higher efficiency. Average operating cost per passenger describes the required cost to provide the service to each passenger and is derived by dividing the total annual cost of the service, as described in the previous section, by the total annual ridership served. A lower number signifies higher efficiency.

Table 4 displays system efficiency for the MetroFlex and the OATS services. The average boardings per revenue hour for OATS is 1.62, and the average operating cost per passenger is $18.27. The MetroFlex averages 2.21 boardings per revenue hour, at an average operating cost per passenger of $36.38.

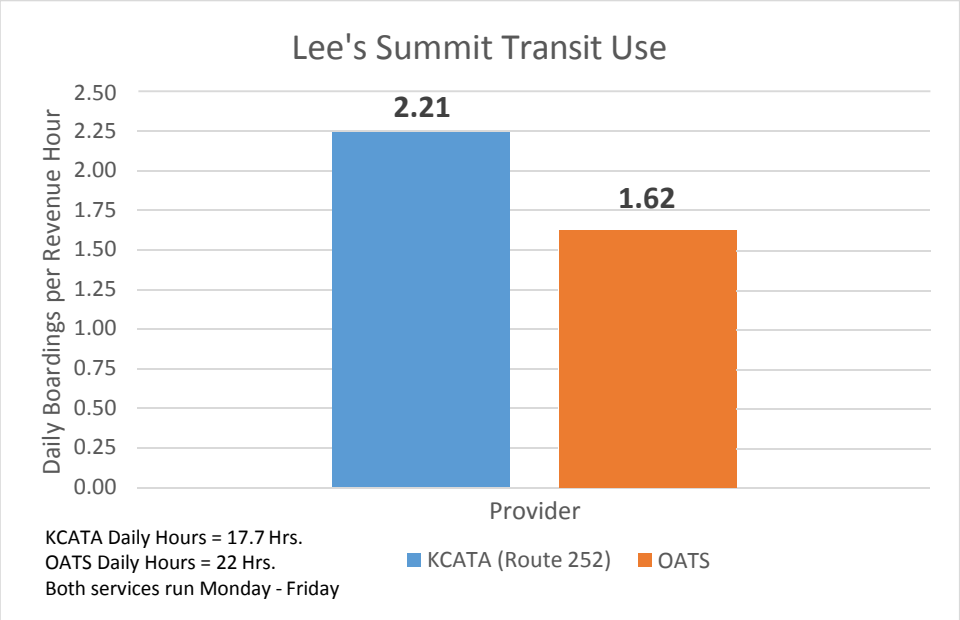
Figure 16 also illustrates the difference in efficiency for both the MetroFlex and OATS.

Table 4: System Efficiency by Transit Service

	KCATA (MetroFlex)	OATS (Lee's Summit)
Boardings per Revenue Hour	2.21	1.62
Operating Cost per Rider	$36.38	$18.27

Notes: Revenue hours for OATS were estimated by dividing the platform hours (5,607) by (1.075).

Figure 16: Lee's Summit Transit Users per Revenue Hour



Service Performance

Peer City Comparisons

Table 5 compares the MetroFlex, OATS transit services and other demand-response services operated in peer cities. This information was gathered from the National Transit Database, which presents operating statistics in a uniform format from transit agencies receiving federal funding. Operating cost per revenue mile, operating cost per revenue hour, annual trips, population and the fare recovery ratio (a percentage of operating costs recovered through collected fares), were all compared.

Table 5: Lee's Summit Transit Services and Peer Cities' Cost and Revenue Statistics (Demand-Response Services only)

	Operating Cost per Revenue Mile	Operating Cost per Revenue Hour	Annual Unlinked Trips	Fare Recovery Ratio	Population
Lawrence, KS	$5.76	$61.74	60,418	5.4%	87,965
Topeka, KS	$5.48	$77.85	49,603	9.6%	127,473
Columbia, MO	$7.59	$64.97	45,413	12.2%	124,748
Springfield, MO	$6.56	$109.27	19,815	3.7%	166,451
KCATA (System Wide)	$3.31	$57.87	400,843	12.2%	748,415
Peer Cities Average	**$5.74**	**$74.34**	**115,218**	**8.6%**	**251,010**
KCATA MetroFlex (Route 252)	$7.15	$70.29*	9,435	2.4%	28,990 (2011)
OATS (Lee's Summit)	$2.51*	$27.95*	8,442	11.6%	88,929 (2011)

Notes: (*) Revenue hours for Route 252 were estimated by dividing the routes' platform hours by a factor of (1.1). Revenue miles for OATS was estimated by assuming 13 miles per revenue hour were traveled. Revenue hours for OATS were estimated by dividing the platform hours (5,607) by (1.075).

The peer cities have an average operating cost per revenue mile of $5.74, and an average operating cost per revenue hour of $74.34. The Lee's Summit MetroFlex service comes out cheaper than both peer city averages. While the MetroFlex has a respectable operating cost per revenue hour, the OATS operating cost per revenue hour, $27.95, is far lower than any of the peer cities or the MetroFlex. In comparison with the peer cities, the MetroFlex's fare recovery ratio is lower than average, and OATS has one of the higher ratios. It should also be noted that OATS charges 50 cents more per one-way trip than the standard MetroFlex fare. Eligible MetroFlex users can also pay as little as $0.75 per one-way trip if they fit the disability, elderly or youth eligibility requirements.

Peer Route Comparisons within the Kansas City metropolitan area

Table 6 compares the performance of the two Lee's Summit transit services with similar demand-response services offered in the KCATA system. In the passengers per hour and operating cost recovery measurements, both the Lee's Summit MetroFlex and OATS services perform similarly. The main difference is the operating cost per passenger for OATS is $14.50 lower than the cost of operating the MetroFlex in Lee's Summit.

Table 6: KCATA MetroFlex Route Operating and Cost Statistics April 2015

Route Name	ADR	Daily Hours	Daily Miles	Passengers /Hour	Passengers /Mile	Operating Cost /Passenger	Operating Cost Recovery
237 Gladstone Circulator	15	9.4	93	1.64	0.17	$30.98	3.17%
244 NKC Circulator	53	18.4	136	2.88	0.39	$15.45	1.76%
252 Lee's Summit Circulator	34	17.7	231	1.92	0.15	$31.77	2.42%
253 Raytown Circulator	55	10.7	164	5.15	0.34	$13.03	5.39%
296 Bannister/ Hillcrest	176	42	591	4.19	0.3	$17.15	4.07%
298 SKC Wornall	83	28	332	2.96	0.25	$20.26	3.10%
KCATA Standard				**4.0**	**0.3**	$20.58	3.45%
OATS	33	22	287	1.51	0.12	$17.27	11.58%

Note: Platform miles for OATS was estimated by assuming 13 miles per revenue hour were traveled.

After identifying how each service compared in relation to their service efficiency, service performance and service costs, initial analysis suggests that OATS could provide a more cost-effective citywide demand-response service than KCATA. Further analysis and discussion is developed in Strategy 1 and the entire analysis can be found in Appendix A.

Commuter Transit Analysis

Commuting patterns of residents and employees were analyzed to better understand how well existing transit is meeting the demand of commuters.

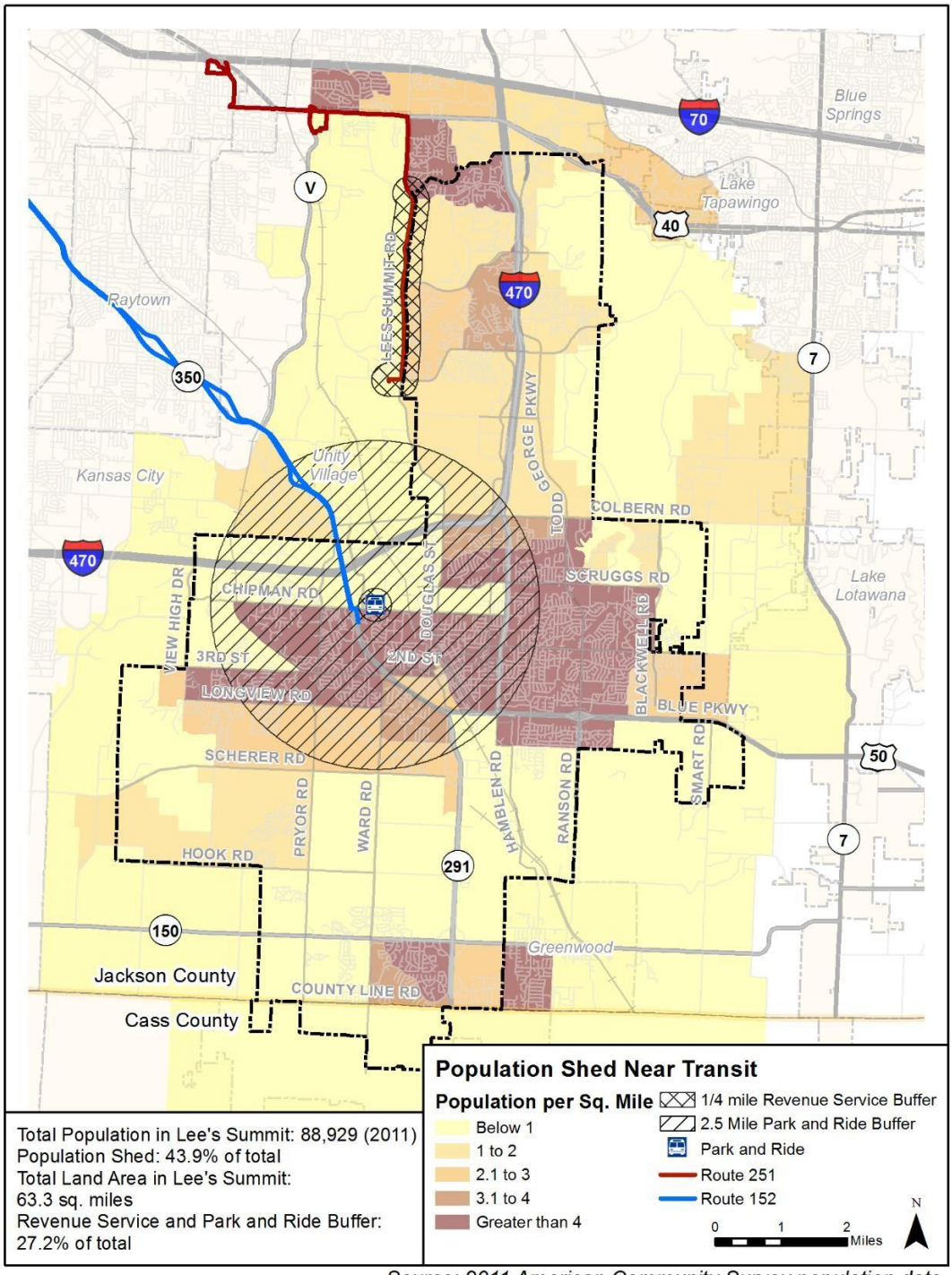
According to the 2013 American Community Survey, out of the 47,017 commuters from Lee's Summit, only 0.4 percent use a form of public transportation. This compares to 2.4 percent for all of Jackson County, Missouri.

Figure 17 shows the population shed in Lee's Summit within a quarter mile buffer around the two KCATA fixed-routes and a 2.5 mile buffer[2] surrounding the Park & Ride lot at the southern terminus of Route 152. The two buffers around the revenue service portion of the KCATA routes and the Park & Ride lot encompass nearly 44 percent of the city's total population and over 27 percent of the city's total land area. Areas of the city with dense population clusters, but without accessible fixed-route transit options, include locations near the northern city limits along I-470, near the southern-most city limits and at the junction of Highways 291 and 150, as well as in the central region of the city, east of Highway 291.

Employment concentrations within Lee's Summit are presented in Figure 18 by using the U.S. Census Longitudinal Employer Household Dynamics (LEHD) data. This data uses various sources including the Census, Unemployment Insurance earnings data and the Quarterly Census of Employment and Wages (QCEW) to gather employment information for a given area. Only 1.4 percent of the 35,000 jobs in Lee's Summit were within the quarter-mile transit buffers surrounding the portion of Route 251 operating near Lee's Summit and the Park & Ride lot. While this rate of accessible jobs may seem low, just outside the quarter-mile buffer is upwards of 5,000 jobs located at Summit Technology Campus, SummitWoods Crossing and Summit Fair Shopping Center. Commuter Route 152 only has one southbound trip in the morning and does not continue further into the city, making it difficult for Lee's Summit residents to use the service to get to work within the city limits. Route 251 to Lakewood follows Lee's Summit Road, which has a relatively small amount of employment within Lee's Summit. If the Route 251 alignment travelled closer to I-470, there would be a greater opportunity for additional employment connections within the city limits.

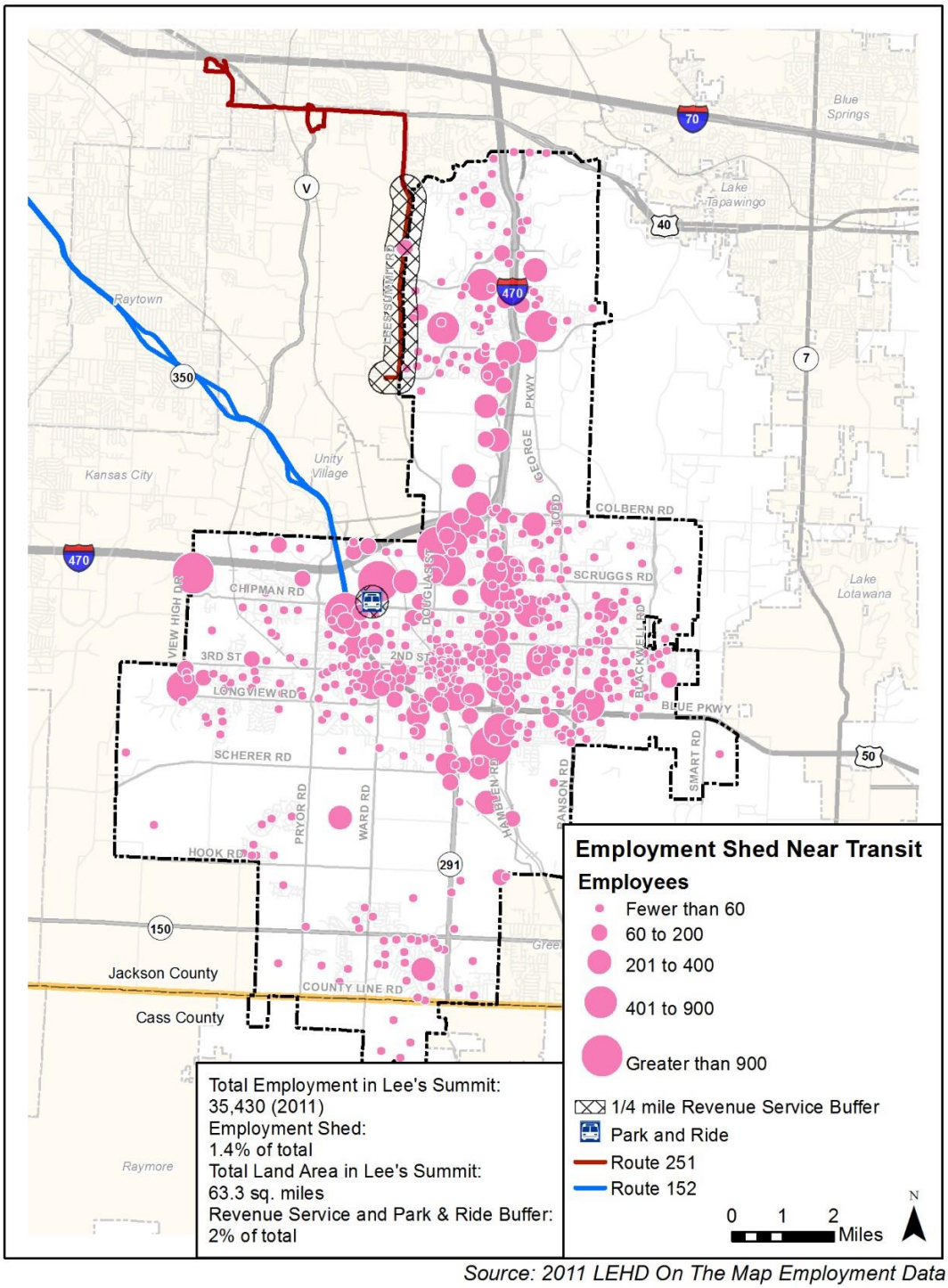
[2] 50 percent of a Park & Ride's demand is generated with a 2.5 mile radius of the facility. Spillar, R.J., "Park-and-Ride Planning and Design Guidelines." Monograph 11. Parsons Brinckerhoff Quade and Douglas Inc., New York (1997). Pg. 35

Figure 17: Lee's Summit Population Shed near Fixed-Route Transit



Source: 2011 American Community Survey population data.

Figure 18: Lee's Summit Employment Shed near Fixed-Route Transit



Source: 2011 LEHD On The Map Employment Data

Table 7 displays the times that Lee's Summit residents leave home, and the times that employees in Lee's Summit arrive at work. The largest group of Lee's Summit residents, 17 percent, leave home during the time period of 7:00 a.m. to 7:29 a.m. The largest group of workers in Lee's Summit, 14 percent, arrive at work between 7:30 a.m. and 8:00 a.m.,

Table 7: Lee's Summit Residents Leaving Home and Total Workers Arriving at Work in Lee's Summit

	Time Leaving Home (Lee's Summit Residents)		Time Arriving at Work (Lee's Summit Workers)	
Morning Commute Time (a.m.)	**Estimate**	**% of Total**	**Estimate**	**% of Total**
6:00 to 6:29	4,155	9%	1,583	4%
6:30 to 6:59	4,980	11%	3,729	10%
7:00 to 7:29	7,825	17%	4,200	12%
7:30 to 7:59	6,245	14%	4,970	14%
8:00 to 8:29	4,980	11%	3,959	11%
8:30 to 8:59	2,570	6%	2,424	7%

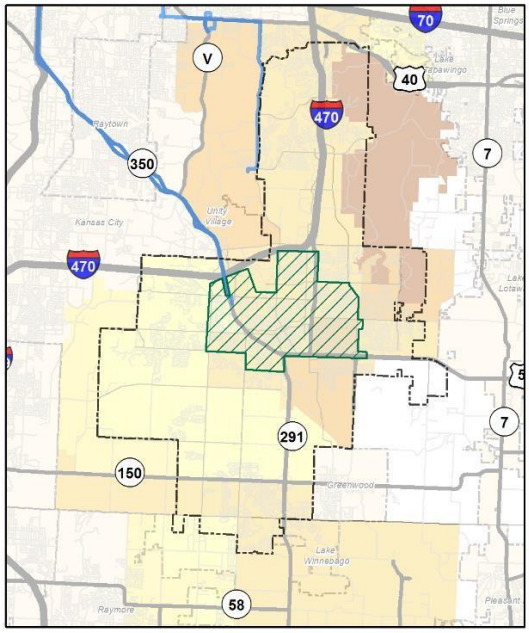
Source: 2010 American Community Survey, Five-year Estimates
Notes: Time leaving home includes only Lee's Summit residents, whereas, the time arriving to work is based on where workers work and not where they live.

Figure 19 shows the geographical distribution of employees in Lee's Summit arriving at work by time, against the existing fixed-routes and MetroFlex service area. In the areas where transit is available, 20 percent to over 40 percent of workers arrive between 7:00 a.m. and 8:00 a.m.

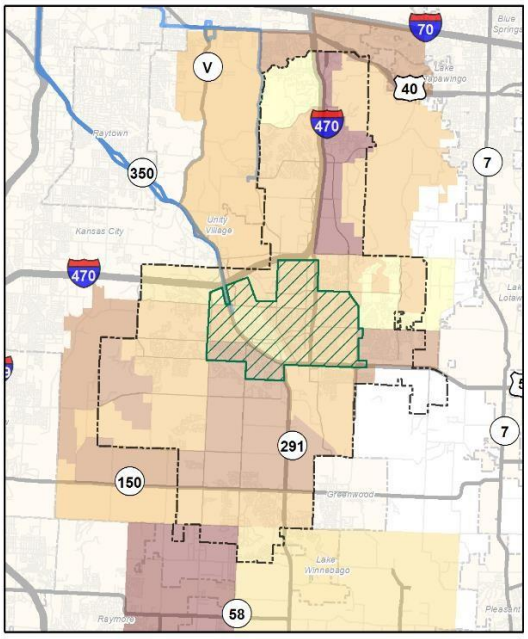
The findings in this section will help guide future decisions for implementing fixed-route operations within the city. Current fixed-routes operating near the city are focused more on transporting riders away from Lee's Summit to other employment concentrations outside the city.

Figure 19: Arrival Time to Work for Lee's Summit Workers

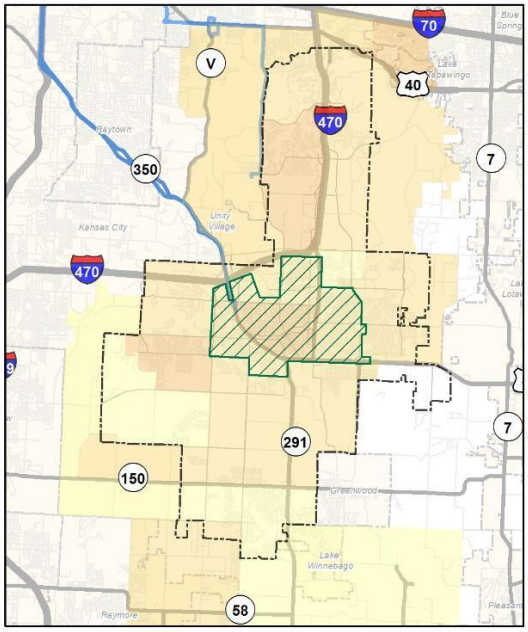
Arriving at Work Between 6:00 - 7:00 am



Arriving at Work Between 7:00 - 8:00 am



Arriving at Work Between 8:00 - 9:00 am



Time Employees Arrive at Work

Percent of Employees by Census Tract

- Under 10%
- 10.1% to 20%
- 20.1% to 30%
- 30.1% to 40%
- Over 40%
- MetroFlex
- KCATA transit routes

0 3 6 Miles

N

Source: U.S. Census Bureau,
American Community Survey ACS
2006 - 2010 Five Year Estimates,
Census Transportation Planning Products CTTP.

Numbers of Employees Arriving at Work:
6:00 am - 6:59 am: 6,423
7:00 am - 7:59 am: 11,830
8:00 am - 8:59 am: 7,647

As of 2013, the U.S. Census reported nearly 25 percent of working Lee's Summit residents were employed within the city limits. While this group of the population could potentially use the existing demand-response services to commute to work, the remaining 30,000 residents working outside the city limits must either drive to work or use alternative commuting options such as walking, biking, carpooling, and vanpooling or use either of the two fixed-route options. In comparison to the 93,184 residents in Lee's Summit, a total of 39,852 are employed, or roughly 43 percent of the total population. This section will look at how well the fixed-route system supports commuter movements with destinations outside the City of Lee's Summit.

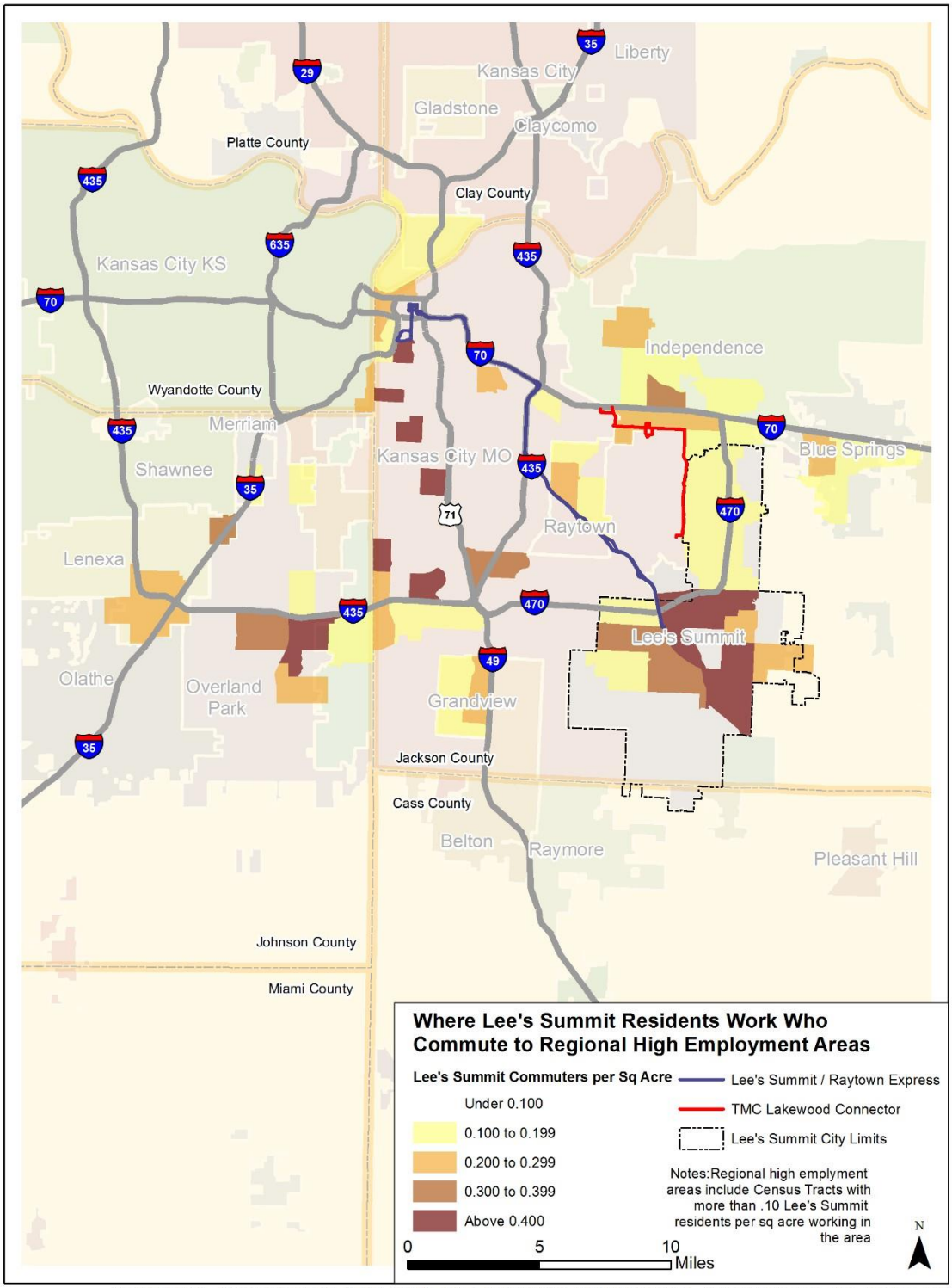
According to ridership data obtained from the KCATA, approximately 100 daily riders, with an average vehicle load of 20 persons, use Route 152 from the Park & Ride lot near Chipman Road and 50 Highway to downtown Kansas City, Missouri. Route 251does not take commuters to the downtown Kansas City area. Instead, commuters on that route have to transfer at the Walmart at Blue Ridge Crossing in order to continue downtown.

After further analyzing data from the LEHD program, Figure 20 was created to show where Lee's Summit residents work in high employment areas across the region, overlaid with routes 152 and 251. This map only includes the geographic coverage of the two accessible routes, and does not encompass route travel direction, route schedules, or the ability and ease of transfers for Lee's Summit residents commuting via fixed-route transit. As exhibited in Figure 20, some areas of the region have employment concentrations for Lee's Summit commuters, but are not directly served by the two KCATA routes that serve Lee's Summit. In Kansas City, Missouri, these concentrations of Lee's Summit commuters include areas near Crown Center, Westport, UMKC and Rockhurst University, Research Medical Center, Ward Parkway Center and the Cerner Complex near I-435 and I-49.

In Kansas, locations of high employment concentrations for Lee's Summit commuters include areas near University of Kansas Medical Center, warehouse and office parks near the I-435 and I-35 interchange in Lenexa, and offices located in the I-435 corridor between I-35 and State Line Road, as well as along College Boulevard. The only way to access some of these areas via fixed-route transit is to travel to downtown Kansas City, Missouri first, then transfer onto either another KCATA route or one of the Johnson County Transit (JCT) routes. Much of the JCT system's morning trips serve Johnson County commuters travelling northbound into downtown Kansas City, Missouri, thus, lessening the ability for Lee's Summit commuters to access morning southbound trips out of downtown.

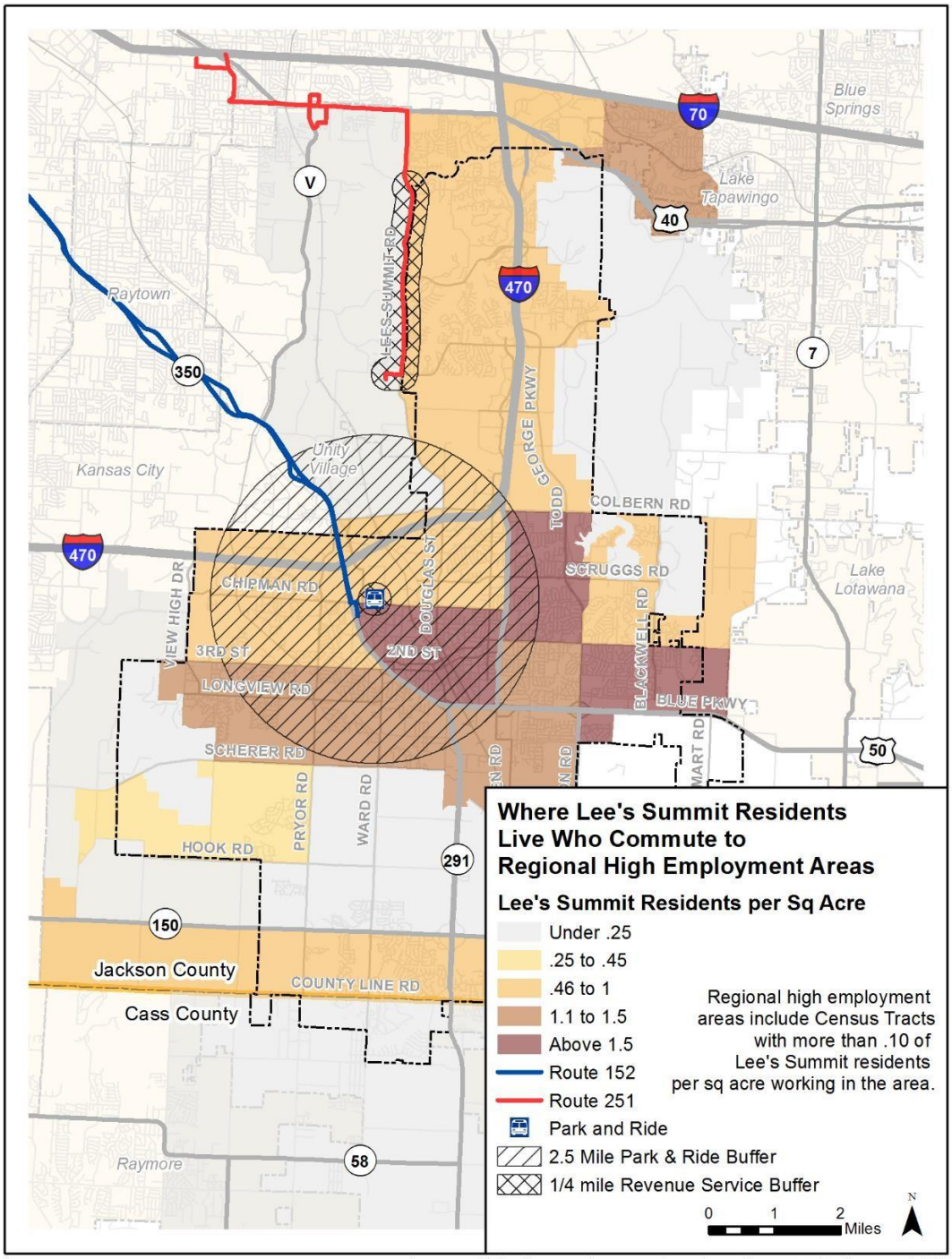
Figure 21 displays where Lee's Summit commuters live who work in the concentrated employment areas in the region, according to data gathered from Census Transportation Planning Products – which uses data sources from the Census' American Community Survey. A 2.5 mile buffer was applied around the Chipman Road Park & Ride lot in order to see how accessible commuter options are for Lee's Summit residents. While the 2.5 mile buffer does include some areas of higher density residential areas, there are still populated areas east and south of the defined buffer. Extending the commuter route to these areas would give more residents the opportunity to use the service, the additional travel time, however, may require additional buses to maintain existing frequencies.

Figure 20: Where Lee's Summit Residents Work Who Commute to Regional High Employment Areas



Source: U.S. Census bureau. 2011, OnTheMap Application. LEHD Program. http://onthemap.ces.census.gov/

Figure 21: Where Lee's Summit Commuters Live Who Work in Regional High Employment Areas



Source: U.S. Census bureau, American Community Survey ACS 2006 - 2010 Five Year Estimates, Census Transportation Planning Products

The schedules of KCATA buses operating near Lee's Summit were examined for their ability to serve the commuting population of Lee's Summit. Figure 22 and Figure 23 provide a snapshot of how the commuting characteristics match up with the existing transit options in Lee's Summit. The dots on the graphs represent the times each bus arrives at its final stop location at Pershing Road and Grand Boulevard, on Route 152, or the Walmart at Blue Ridge Crossing, on Route 251. The bars on the graph represent the work arrival time for workers commuting to areas near the northern terminus of either route, as explained above. In the case of commuter Route 152, the four scheduled bus stops do correlate with the work arrival times for the downtown Crown Center area. As for Route 251, the six trips to Blue Ridge Crossing do not correlate well with the majority of the area's work arrival times. While Route 152 is a commuter centered route, Route 251 is intended more to provide access to those with doctor's appointments at the medical center and riders needing to shop at the retail centers near Blue Ridge Crossing and along 40 Highway. Unlike Route 152, where evening southbound trips are offered, Route 251's last evening southbound trip is offered at 2:00 p.m., further limiting the likelihood of Lee's Summit residents using the route for commuting purposes.

Figure 22: Route 152 Trips Serving Downtown and Time Arriving to Work

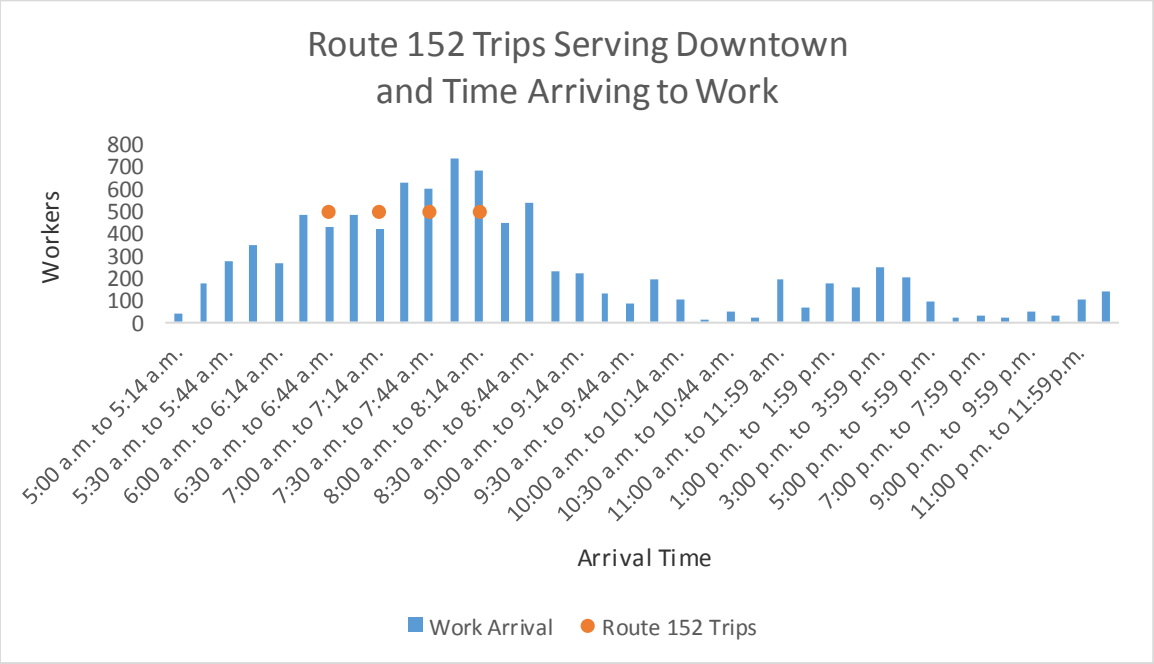
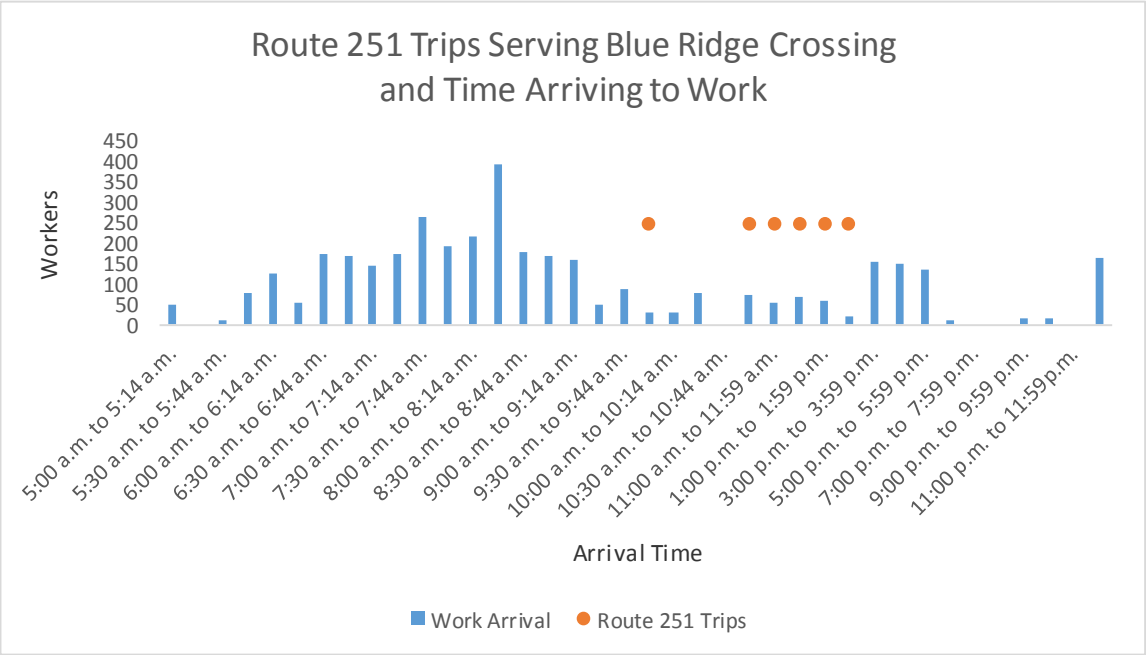


Figure 23: Route 251 Trips Serving Downtown and Time Arriving to Work



After examining commuting patterns of Lee's Summit residents, this analysis exposed the gaps in service limiting commuters' ability to use transit to get to work. For the nearly 10,000 commuters travelling to work within Lee's Summit, demand-response services are available, but capacity constraints would restrict a large portion of commuters from using the service. The fixed-route alignments in and around Lee's Summit limit commuter movement to mostly outside the city and towards downtown Kansas City, Missouri. In addition, a small portion of both the population and employment in Lee's Summit are within a walkable distance to either of the two fixed-routes currently. As for the remaining 30,000 commuters travelling outside the city boundaries of Lee's Summit, fixed-route connections to major areas of employment are limited to downtown Kansas City, Missouri, via Route 152, or the Blue Ridge Crossing shopping center, via Route 251. While large concentrations of commuters travel to areas of the metro such as midtown Kansas City or the south loop of I-435, anyone needing to travel via transit must first travel north towards downtown and then transfer to a southbound bus route thereafter. Of those commuters travelling to high employment areas, a substantial number of them live outside of the preferred distance to travel to a Park & Ride lot.

While this analysis exposed where transit connections for Lee's Summit commuters are lacking, further discussions must be made before recommending any future regional connections. Following this analysis of existing intra-city and inter-city movements for Lee's Summit commuters, the next section uses a peer city comparison in determining the current and future demand for transit within Lee's Summit.

Current and Future Intra-City Transit Demand

An analysis was performed estimating the amount of potential transit ridership within Lee's Summit. By using a peer city rider per revenue hour ratio and applying a revenue hour per capita ratio, broad ridership projections can be created comparing similar cities where one city has a transit network and the other has limited transit options. The City of Independence, Missouri was examined as a peer city to Lee's Summit primarily due to its similar size of population and geographical proximity. Table 8 compares several socio-economic categories between the two Missouri cities. While the two cities have a similar minority rate, rate of local workers and multi-family housing rate, Lee's Summit generally has higher home values and household incomes.

Table 8: Socio-Economic Comparison

	Lee's Summit, MO	Independence, MO
Population (2013 estimate)	93,184	117,240
Persons Under 18	21%	23%
Persons 65 and Over	11.5%	16.1%
Minority Population	16.3%	14.3%
Median Household Income	$77,285	$44,261
Persons below poverty level	6.7%	17.4%
Median value of owner-occupied homes	$186,700	$101,400
Percent of Houses that are multi-family	16.7%	20.5%
Persons per square mile	1,442.3	1,506.2
Percent of local workers living within city	24.7%	24.1%

Source: U.S. Census QuickFacts Last Revised: Friday, 29-May-2015 14:16:20 EDT

The IndeBus local transit system is funded by the City of Independence, managed by KCATA and operated under contract by First Transit. The service offers six fixed-routes that operate radially from a downtown transit center. Four routes operate at one hour frequencies; two routes operate at two hour frequencies. Routes generally start between 6:30 or 7:30 in the morning and are in service to between 5:00 and 6:00 in the evening. No Sunday or evening service is available. Complementary ADA (American's with Disabilities Act) demand-response service is provided during the same hours as IndeBus, and provides disabled riders a curb-to-curb shared ride service if they are unable to use the fixed-route service. An elderly transportation service is also available for persons age 60 or older. In addition, Independence is served by commuter routes operated by KCATA. While not captured in separate ridership numbers, these commuter routes also serve some number of internal trips within Independence.

In 2013, IndeBus used 26,949 revenue hours to serve 204,570 fixed-route one-way trips, and 12,334 demand-response one-way trips, for a service area population of 117,240. Combining the fixed-route and demand-response trips, this resulted in an annual one-way trips per revenue hour of 8.0. These trips do not include the KCATA's inter-community commuter services that serve Independence.

Table 9 displays the 2013 one-way trip per revenue hour ratio, and revenue hour per capita ratio for three other cities in the region in addition to Independence. Similar to Independence, Topeka has a relatively high one-way trip per revenue hour ratio, and a low revenue hour per capita ratio. Both of these measures viewed together are likely reflective of a low-service system that's unable to fully address demand.

Table 9: Rider Projections

City	Service Area Population (2013)	Total Transit Ridership (2013)	Total Revenue Hours (2013)	Ratio: One-way Trip/ Revenue Hours	Ratio: Revenue Hour / Capita
Topeka, KS	127,473	1,202,646	78,011	15.4	0.61
St. Joseph, MO	78,004	421,945	70,479	6.0	0.90
Independence, MO	116,830	216,904	26,949	8.0	0.23
Salina, KS*	47,846	221,264	38,697	5.7	0.81

*Source: National Transit Database 2013. Total transit ridership and total revenue hours includes fixed-route, demand-response, and for Topeka, city-subsidized taxi services. *Salina data – population from 2013 U.S. Census. Ridership is from Rural NTD data, and includes fixed-route service, and demand-response. Demand-response includes service to outlying rural areas and adjacent counties.*

Utilizing a one-way trip per revenue hour from a peer city is an imperfect technique to gauge potential ridership for a city with limited transit. This technique requires assuming the city that the ratio is being applied to, will have a transit system with similar characteristics as the peer city, covers the same percentage of population and employment, has similar land use characteristics, and a population that would react a similar way to the availability of transit. With its one to two hour frequencies and radial coverage, IndeBus' transit system could be described as a fairly basic transit system that prioritizes making some transit service available to many people, rather than a lot of transit service available to a few people.

Independence's revenue hour per capita ratio of 0.23 could be applied to Lee's Summit to approximate a system with a level of service similar to Independence's. From this, applying a one-way trip per revenue hour can be applied to project what type of ridership could reasonably be expected with a specific level of service. Applying the revenue hour per capita ratio of 0.23 from Independence to Lee's Summit's population of 93,092 results in 21,411 annual revenue hours. Applying Independence's one-way trip per revenue hour of 8.0 to this number results in a projected annual one-way trips for Lee's Summit figure of 171,289.

As of 2014, annual demand-response ridership within Lee's Summit was 17,112 after combining the 8,670 MetroFlex and 8,415 OATS riders. The gap between current internal-transit trips in Lee's Summit and projected internal-transit trips is approximately 154,177. This would be for a fairly basic route structure similar to Independence's that prioritizes relatively low-frequency across the city.

In addition to the effort of forecasting future transit demand, population forecasts were reviewed to estimate how many additional transit-dependent people could be expected in Lee's Summit's future and how that would affect the demand for transit.

Base year socio-economic data was collected from the U.S. Census Bureau's American Community Survey five-year estimates for 2009 to 2013. The population groups collected from

the Census were representative of the transit-dependent population in Lee's Summit including the disabled, youth, elderly, minority and low-income populations. Generally, these groups of people have a higher propensity to use transit because of either a mobility impairment or they are unable to afford the cost of owning and maintaining a personal automobile.

After collecting the current year rates of transit dependent population, future population forecasts were analyzed to establish the expected number of future transit dependent people in Lee's Summit. Two existing population forecasts for the area include the 2015 update to the Kansas City region's long range transportation plan, *Transportation Outlook 2040*, and the *2013 Lee's Summit Development Report*.

The Mid-America Regional Council (MARC) recently updated the metropolitan transportation plan for Greater Kansas City. Part of that plan included forecasting population growth to understand future demand when planning transportation infrastructure investments. Population forecasts were developed on a city- and county-wide basis for eight counties including Cass, Clay, Jackson and Platte on the Missouri side and Johnson, Leavenworth, Miami and Wyandotte on the Kansas side. By 2040, MARC estimated that Lee's Summit would reach a total population of 131,614, with a compound average annual growth rate of 1.34 percent. The City of Lee's Summit also produced population forecasts in their 2013 development report. In this report, the city noted they have experienced steady growth in the past decades, but a recent slowdown in growth has caused them to re-evaluate their original expectations. Their expected growth is lower than the rate forecasted by MARC. The 2013 development report forecasted the city would reach a total population of 111,934 by 2039, with an average annual growth rate of 0.77 percent.

After reviewing both the MARC and Lee's Summit population forecasts, an average annual growth rate of 1.0 percent was determined as realistic estimate for future growth in Lee's Summit. This same growth rate was then applied to the current year transit dependent populations in order to forecast what level of transit demand may be expected in the future. The table below summarizes the forecasted transit dependent population for 2025 and 2040.

With this forecasted growth in population, an even larger demand for transit follows. From the current potential demand of 171,289, the population growth in 2040 increases the projected ridership to 220,871 annual one-way trips within Lee's Summit alone. These projections do not include those regional commuter trips reviewed in the previous section. National demographic trends have rates of elderly people growing as well as families still recovering from the recent great recession. These patterns would support an even larger demand for local transportation alternatives in the future. The next section looks at ways to address the growing local demand for transit.

Table 10: Transit Dependent Population Forecasts

	2013* (% total)	2013* (total)	2025	(+/-) 2013	2040	(+/-) 2013
Under 18 years	21%	18,994	21,403	2,409	24,848	5,854
65 years & over	12%	10,736	12,097	1,362	14,045	3,309
Disabled	9%	7,886	8,892	1,006	10,323	2,437
Minority	16%	16,883	19,025	2,142	22,087	5,204
Low-Income	7%	6,113	6,927	814	8,043	1,930
1 or less vehicles	15%	13,490	15,199	1,710	17,646	4,156
Total Projected Population	-/-	**91,758**	**103,395**	**11,637**	**120,039**	**16,644**

Note: (*) U.S. Census Bureau, 2009-2013 American Community Survey five-year estimates.

Potential Transit Service Strategies

This section will examine strategies to address the current and future service gaps identified in the previous sections above. As well as examining opportunities to improve and optimize the existing demand-response services, strategies to provide additional modes such as fixed-route services are also discussed.

Gaps in existing transportation services may be addressed through several different strategies. These strategies are not intended as necessarily incremental in nature, although they could be implemented in progressive steps. Rather, the different strategies are intended to provide a snapshot of how various alternatives would address the current gap in transit need. Generally, the strategies as described require additional amounts of investment in programs and capital costs, but would achieve progressively lower costs per rider while expanding the availability of transportation options to additional Lee's Summit residents. These strategies range from consolidating the existing MetroFlex and OATS services to implementing a fixed-route service that provides regularly scheduled local bus service throughout Lee's Summit. The different levels of proposed transit service, and corresponding levels of transit investment, generally correlate with an increasing amount of ridership, thus resulting in a more efficient service and a lower overall cost per rider.

Strategy 1 – Consolidation of Existing Demand-Response Operations

In reference to the evaluation of the Lee's Summit-based KCATA MetroFlex and OATS services, the full analysis, located in the Appendix A, compares each of the current services provided and examines the cost-effectiveness of consolidating service to a single provider operating citywide demand-response service in Lee's Summit. After identifying how each service compared in relation to their service efficiency, service performance and service costs, initial analysis suggests that OATS could provide a more cost-effective citywide demand-response service than KCATA.

While the existing OATS operated demand-response service is already a citywide service, it does not offer service on Saturdays. This strategy would recommend Saturday service with at least a 12 hour service span for an extra $55,000 annually, compared with the $270,000 for only

the weekday service. Table 11 displays the cost and projected ridership for Strategy One, assuming either weekday service or including Saturday service. The increased service would not only make it easier for adults to ride who are unable to take advantage of the service during the weekdays, but also for youth to be transported to weekend activities or part-time jobs.

Table 11: Strategy One - Estimated Costs and Ridership

	Cost	Ridership
Demand-Response	$270,033	17,112
Fixed-Route	-/-	-/-
Complementary Paratransit	-/-	-/-
Total	**$270,033**	**17,112**
Cost per rider	$15.78	-/-
Including Saturday Service	**$325,011**	**20,596**

The nature of demand-response operations limits the ability of a single vehicle to serve large numbers of passengers. Typically, one demand-response vehicle can provide up to three or four trips per hour. Trip requests exceeding that number are either denied or require an additional vehicle. As ridership trends upward, the need for additional vehicles will grow in order to fill an increasing amount of reservations. Eventually, growing demand for the service may outstrip the ability for a demand-response service to economically address the demand. At that point, other modes to deliver transit service may be more efficient.

Unlike Strategy 1 where a recommendation is made for the consolidation of local transit services in Lee's Summit, the other strategies in this section provide snapshots of how transit could evolve. The strategies present various ways that transit can evolve in Lee's Summit, but only until subsequent discussion and consensus building within the city and community can be made. While Strategy 3 and 4 constitute a higher investment that would also provide additional service to residents as population and, consequently transit demand grows, Strategy 2 represents an alternative that scales back funding while still providing a minimum level of service.

Strategy 2 – Implement Taxi Voucher Program in Place of Demand-Response

In this strategy, the two demand response services, operated by KCATA and OATS, would be replaced by a citywide taxi voucher program. This strategy would only be recommended if there is a desire to scale back the city's provision of transit, but still offer some service. Because of capacity restrictions among taxi contractors and/or the ability of the city to subsidize a growing number of trips, eligibility restrictions may be needed to regulate taxi demand, thus, further limiting transit service to only residents with the greatest need. Details for a potential taxi voucher service are explained below.

In the Kansas City metro area the cities of Olathe and Shawnee, Kansas administer similar taxi voucher programs. Olathe's Taxi Coupon/Voucher Program is managed by the City of Olathe Parks and Recreation Department and Housing and Transportation Services Office. The taxi service is offered anywhere within the city limits of Olathe for disabled, elderly, and eligible low-income residents to make trips for work, medical, shopping, banking and other personal reasons. The program subsidizes transportation services through three separate coupon programs depending on the rider's trip purpose. Those programs include the personal taxi,

medical taxi and work taxi program. Each program has their own eligibility, documentation and trip purpose requirements.

The contracted taxi company provides rides under the three taxi programs at a reduced cost through an agreement with the City of Olathe. The coupons "pay for" a one-way door-to-door trip in a taxi or city-owned wheelchair lift-equipped vehicle. The cost of each coupon is $3.50, sold in books of ten coupons for $35.00. The taxi contractor is required to accept coupons and provide service from Monday through Saturday, 6:00 a.m. to 7:00 p.m., as well as operational hours that exceed the required service periods and days. The program requires participants to reserve a ride with a participating cab company at least one hour prior to being picked up.

The total cost for each contracted one-way taxi trip is $12.50, and is paid to the contractor by the city. Subtracting the subsidized user fare of $3.50, the net cost for each one-way trip is $9.00. In 2013, Olathe's taxi coupon/voucher program provided 42,000 trips, resulting in an annual net cost to Olathe of $380,000. The program has been funded through the Federal Transit Administration (FTA) Section 5310, Job Access Reverse Commute (JARC) and New Freedoms Programs and a 50 percent local match by the City of Olathe General Funds and the Health Care Foundation of Greater Kansas City. In Lee's Summit 17,112 demand-response trips were provided in 2014 using the KCATA MetroFlex and OATS at a cost of $9.30 per trip after accounting for the collected fares.

While the cost per rider for Olathe's taxi coupon/voucher program is somewhat lower than what is being spent for service in Lee's Summit, there are some caveats to consider.

- 5307 funds used for current demand-response service in Lee's Summit would no longer be eligible, given the eligibility restrictions would no longer make it general public transportation.
- Additional staff support may be needed for administration of the city sponsored taxi voucher program.
- Capacity and mode of taxis would limit scope to make service more efficient through grouping trips
- There is limited access to accessible vehicles in taxi voucher program unless the city purchases their own.
- Contracted rates for taxi programs are subject to change based on expected ridership and service area. An independent quote would be required before an official rate could be determined for the Lee's Summit area.
- Olathe city staff has expressed difficulty attracting multiple taxi operators to bid on contract.

With these factors in mind, switching to a taxi voucher program may be less expensive than what the city currently pays on a cost per rider basis, however, capacity, on-time performance, city staffing requirements and budget concerns may limit the ability for the city to address demand growth. At the rate of $9 per one-way trip, the budget required for the taxi program to serve the city's potential demand of 171,289 annual one-way trips, estimated earlier in this report, would be near $1.5 million.

In addition to the taxi voucher programs on the municipality level, KCATA is in the process of implementing a regional taxi voucher pilot program. This project would provide accessible taxi trips to elderly and disabled persons throughout a five county region including Clay, Jackson

and Platte Counties on the Missouri side, as well as Johnson and Wyandotte Counties on the Kansas side. The program's main purpose is to fill potential gaps in the region where accessible transit is not provided currently. Existing gaps in service not only correspond with geographic boundaries, but also gaps in service related to certain days and times. The regional taxi voucher pilot program will address some of these gaps experienced by elderly and disabled persons needing assistance accessing resources across the region. The results of this pilot program should be followed closely prior to making a switch to a taxi voucher program.

The subsequent strategies expand transit services or increase the level of service from what is currently offered in Lee's Summit. Strategy 3 introduces a hybrid of fixed-route type services in areas of Lee's Summit where there is a large amount of potential transit ridership and demand-response services where ridership is comparably lower.

Strategy 3 – Include Small-Area Fixed-Route with Citywide Demand-Response

The third strategy provides citywide demand-response service, but also introduces fixed-route service with one-hour frequency into an area of Lee's Summit with the highest potential for transit ridership. One-hour regularly scheduled fixed-route service is offered in other areas of the region including the cities of Independence, Kansas City, Missouri, and Kansas City, Kansas. The fixed-route area was defined by using demographic and employment data, key attractions and existing transit data that identified where a high number of trips from OATS and MetroFlex services were generated. Developing fixed-route service could focus on a broad geographical area or on particular corridors that have higher levels of population and/or employment density, and have residents with a higher need or propensity to use transit. It should be noted that this strategy includes a route that extends past the designated area to provide service to Longview Community College, which is the most popular destination for OATS riders. General public demand-response service would also be available outside of the fixed-route area. This strategy would provide general public transportation service for the entire city, while allowing those residents and employees living within the fixed-route zone—over 44 percent of the city's total population—the flexibility of using a regularly scheduled, local bus service. This would provide general public transportation access to a greater number of Lee's Summit residents at a generally lower cost per rider. Different parts of Lee's Summit may be served by different demand-response routes, and the various demand-response and fixed-route vehicles could meet at one location to allow passengers to transfer between routes. This would represent an increase in overall transit service over previous strategies. Portions of the city may still be underserved when covered solely by demand-response vehicles.

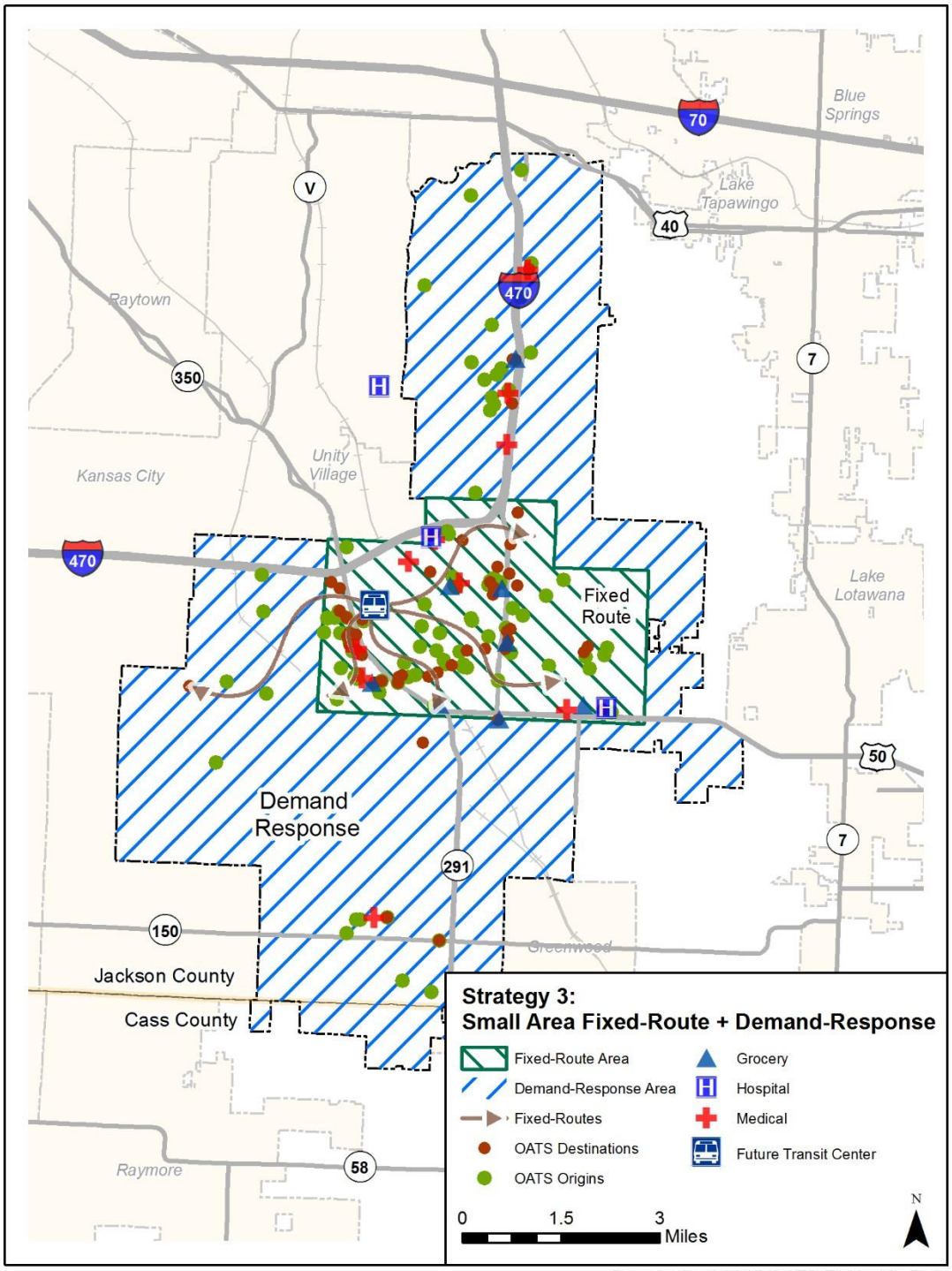
Should the city decide to later expand the fixed-route system to more areas of the city, this strategy could be used as a transition and allow the city to identify those areas and alignments best served by a fixed-route. Figure 24 illustrates how fixed-routes may operate in a defined service area in Lee's Summit. The map also refers to a transit center located near the Chipman Road Park & Ride lot.

Table 12 lists the costs and projected ridership for Strategy Three. The cost per rider decreases from Strategies 1 and 2, and ridership nears 80,000 in this strategy.

Table 12: Strategy Three - Estimated Costs and Ridership

	Cost	Ridership
Demand-Response	$51,023	2,954
Fixed-Route	$441,426	72,973
Complementary Paratransit	$136,842	3,648
Total	**$629,292**	**79,575**
Cost per rider	$7.91	-/-

Figure 24: Strategy Three - Citywide Demand-Response, Small Area Fixed-Route



Source: April 2015 OATS Ridership Data

Strategy 4 – Expand Fixed-Route Service Citywide

The fourth strategy to meet projected transit demand in Lee's Summit would implement a robust fixed-route system throughout the city. As an enhancement over the previous strategy, this fixed-route system would cover most of the city at a half-hour frequency. One-hour regularly scheduled fixed-route service is offered in other areas of the region including the City of Independence. Regularly scheduled fixed-route service with a frequency of half hour or less is offered in portions of Kansas City and St. Joseph in Missouri, and Kansas City, Lawrence, and Topeka in Kansas. A complementary paratransit service would provide transit service for residents within the service area of the fixed-route system who, because of mobility impairment issues, are unable to access the fixed-route system. This also means the demand-response system operated by OATS would duplicate service and may no longer be necessary in Lee's Summit.

The fixed-route system would operate six days a week, at an all-day service span. Defining the specific route structure or layout of the system can be performed at a later point, but it should be noted that the route system could be one of several types, such as the following:

- A radial system would have several linear routes originating from a central point. This could be structured to provide relatively direct trips between the central point and points along the routes or at the terminus. This type of system structure may require more routes to cover a given area, and in many cases would require passengers to first travel to the central point and transfer to another route in order to travel to another location in the system.

- A loop system would cover the city in a series of loop-shaped routes. Similar to a radial system, these loop routes could converge from a central point. A loop system can cover large amounts of area, but may require additional travel time for passengers since routes to major destinations may take circuitous paths. A loop route could operate as uni-directional or bi-directional. A uni-directional route would be less expensive to operate, but it may be less attractive in situations where passengers face a potentially long trip in the opposite direction to reach a destination.

- A grid system would place routes on major- and minor-arterial streets in a grid-like fashion. Travel along these corridors would be easy and straightforward, but travel through different sections of the city could require transferring among multiple routes. Grid systems operate well with multiple high-frequency routes, because timed transfers are difficult to achieve at different locations across multiple routes. Grid systems operate less efficiently where routes are lower in frequency, as the amount of time required to move across the system makes it less attractive to potential passengers.

Both radial and loop systems can be structured to operate as a "pulse" system, where multiple routes could converge at the same location at the same time and allow passengers to easily transfer from one route to another without excess amounts of waiting. A grid system is likely not feasible at this time in Lee's Summit. Additional analysis would be needed to determine the most appropriate system structure prior to implementing a new fixed-route system in Lee's Summit.

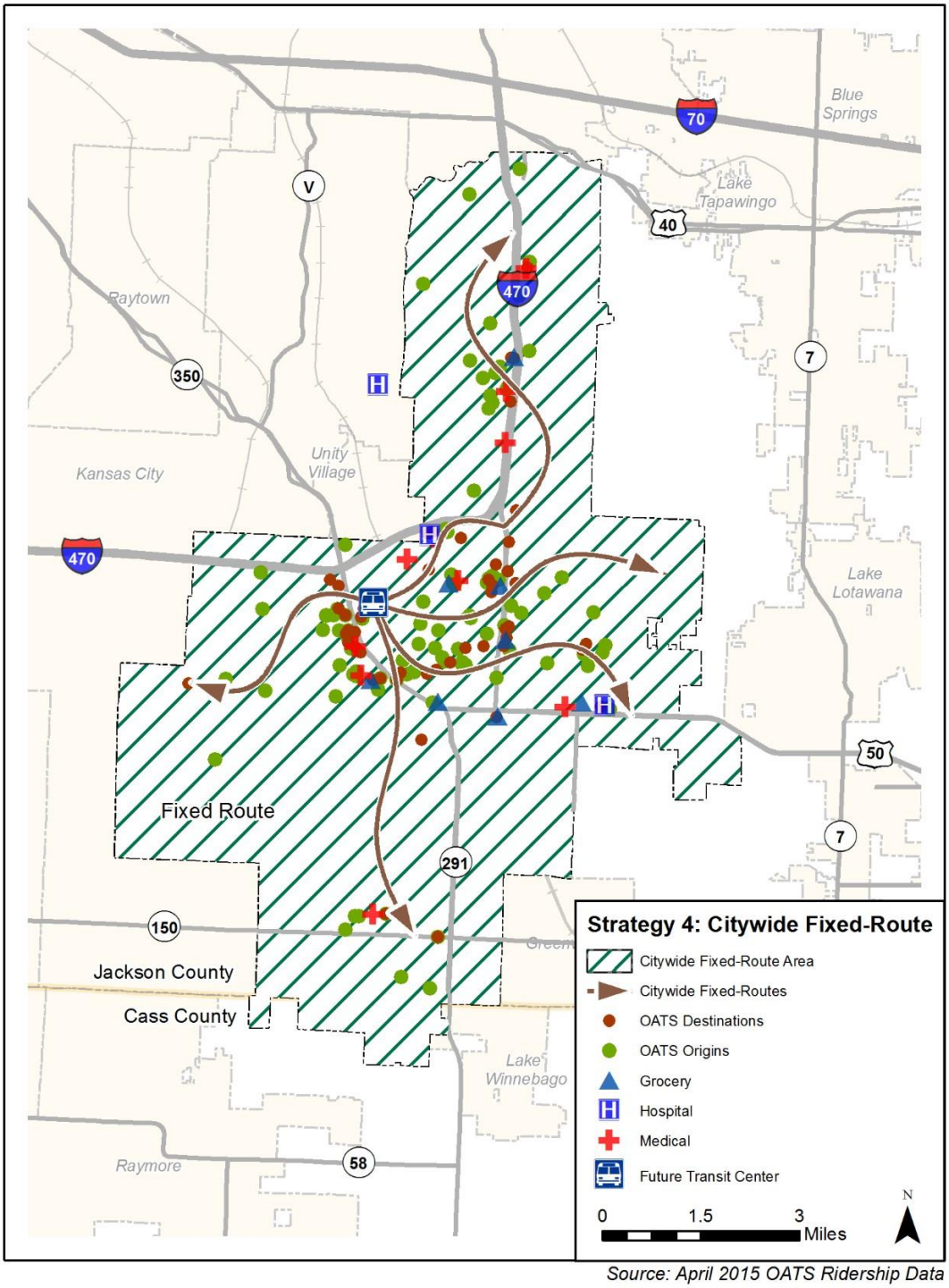
An illustrative radial example is shown in Figure 25.

Table 13 displays the costs and projected ridership for Strategy Four. The cost per rider is below that of Strategy Three, and offers citywide transit service. Strategy Four was examined under both a 60-minute and 30-minute frequency. A system with a 30-minute frequency would attract an additional 65,266 fixed-route transit trips; the cost per rider would increase from $7.50 to $10.78.

Table 13: Strategy Four - Estimated Costs and Ridership

	Cost		Ridership	
	60-Minute Frequency	30-Minute Frequency	60-Minute Frequency	30-Minute Frequency
Demand-Response	-/-	-/-	-/-	-/-
Fixed-Route	$987,016	$1,974,031	163,166	228,432
Complementary Paratransit	$296,104	$592,209	8,158	11,422
Total	$1,292,991	$2,585,981	171,324	239,853
Cost per rider	$7.50	$10.78	-/-	-/-

Figure 25: Strategy Four - Citywide Fixed-Route Service Area



Source: April 2015 OATS Ridership Data

Discussion of Strategies

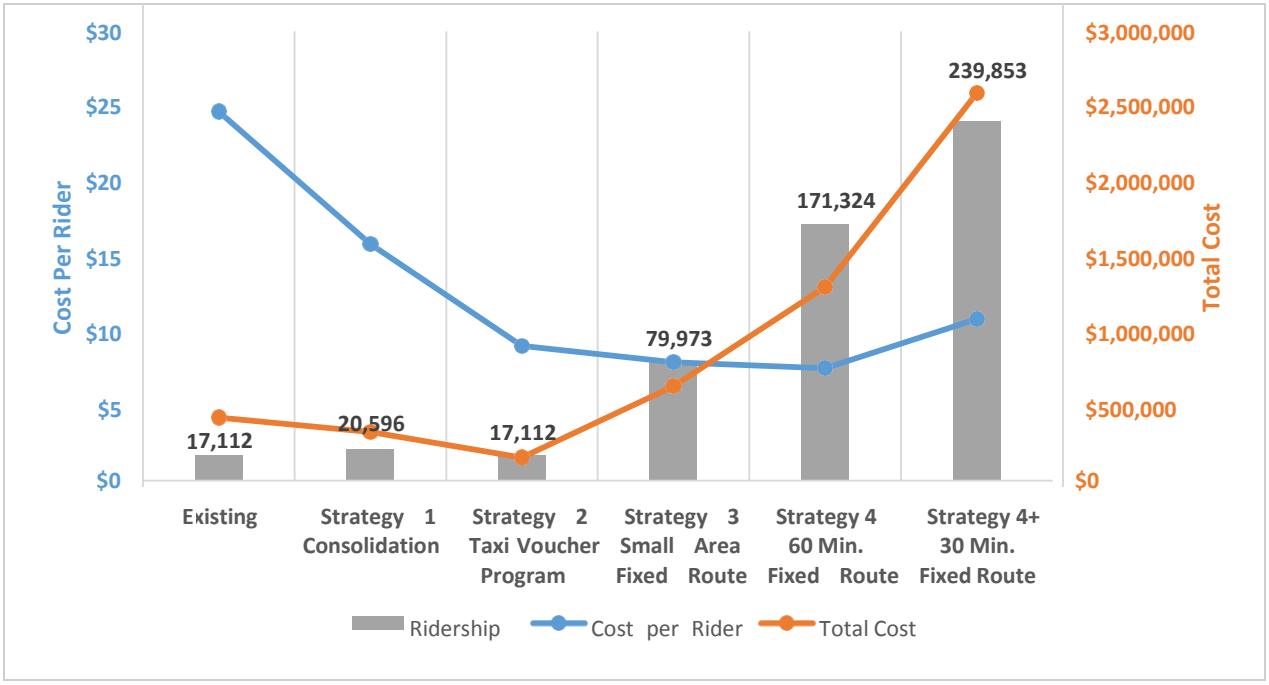
The strategies described above move across a spectrum that utilizes additional investment in local transit to serve increasing numbers of Lee's Summit residents, at a lower cost per rider. Table 14 and Figure 26summarize the costs, ridership, and cost per rider of the various strategies. The cost per rider reaches its lowest during Strategy 4, which provides citywide fixed-route service.

Table 14: Summary of Costs and Ridership by Mode and Strategy

		Existing	Strategy 1	Strategy 2	Strategy 3	Strategy 4	Strategy 4+
Demand-Response	**Ridership Cost**	17,112 **$420,773**	20,596 **$325,011**	17,112 **$154,008**	2,954 **$51,023**	-/-	-/-
Fixed-Route	**Ridership Cost**	-/-	-/-	-/-	72,973 **$441,426**	163,166 **$987,016**	228,432 **$1,974,031**
Complementary Paratransit	**Ridership Cost**	-/-	-/-	-/-	3,648 **$136,842**	8,158 **$296,104**	11,422 **$592,209**
Total	**Ridership Cost**	17,112 **$420,773**	20,596 **$325,011**	17,112 **$154,008**	79,973 **$629,292**	171,324 **$1,292,991**	239,853 **$2,585,981**
	Cost / Rider	**$24.63**	**$15.78**	**$9.00**	**$7.91**	**$7.50**	**$10.78**

Notes: Strategy 4+ represents Strategy 4's frequency increased from 60-minutes to 30-minutes. Strategies 1, 3 and 4 assume service operates six days per week.

Figure 26: Summary of Costs and Ridership by Strategy



Recommended Transit Amenity Improvements

The transit environment in Lee's Summit can be supported by other elements in addition to modifying the type of transit service within the city. These other elements include improving the bus stop infrastructure to increase comfort and usability for transit users, ensuring that the environment surrounding bus stops are ADA accessible, and increasing the ability of Park & Rides to serve Lee's Summit residents.

Bus Stop Improvements

The presence of well-developed bus stop infrastructure, along with a supportive pedestrian network, can make transit more attractive to existing and potential users. The physical infrastructure that supports transit ridership is composed of both micro-level site improvements at the bus stop and in its immediate vicinity and the broader pedestrian and bicycle network and infrastructure that connects the user's point of origin with the bus stop. This section will focus on the micro-level site improvements that could make passenger experience at the bus stop safer and more enjoyable.

Additional elements can provide a higher level of comfort for passengers and may increase the attraction of transit for potential users. These additional elements can be appropriate at stops or locations that experience higher numbers of passengers or are necessitated by safety or traffic conditions. These additional elements can include:

- Protection from elements
- Benches for users' comfort
- Additional information, including route timetable with destinations and broader system information
- Bus pull-out where appropriate and necessitated by traffic conditions
- Cross walk elements at mid-block stops across the street from major destinations

The specific characteristics of transit infrastructure can vary depending on the adjacent land use that transit is intended to serve. Oftentimes, these specific characteristics can be summarized as making the pedestrian connection more direct, defined, and safe between the passenger point of origin and the curb where passengers would alight or board a transit vehicle. Ideally, improvements for site infrastructure to become more amenable with transit usage (and pedestrian or bike usage in general) should be planned for in the site development process; however, relatively inexpensive modifications may be done even after the site is fully developed.

Commercial or business development

Features typical in commercial or business development often place emphasis on those users arriving and parking in a car, rather than users arriving via transit or as pedestrian. As such, dominant parking lots are often situated between the street and the actual building entrance, with limited or non-existent designated pedestrian connections between the street and the building entrance. Enhancing the connection between the land use and bus stop could occur through coordinating the development with the location of the bus stop. Specifically, this coordination could take the form of:

- Defining walkways through parking lots or gates
- Locating and orienting buildings to place parking at rear and side of building and building adjacent to street and existing pedestrian network

Residential development

Typical suburban residential development often presents particular challenges in being served by transit. Much of this challenge is created by particular elements of suburban residential design. Curvilinear sidewalks separated from the roadway by wide swaths of landscaping may require transit users to walk through grass / snow to access a transit stop. Walled communities may restrict access to a limited number of entry and exit points. Even multi-family housing may use elevated berms or landscaping to direct and limit pedestrian access. For residential development near transit stops, site development modifications may include:

- Beginning curvilinear sidewalks after bus stop
- Providing gated connection near the bus stop into adjacent gated communities
- Installing direct sidewalks to bus stops

Public Infrastructure

The built environment, such as streets that are controlled by municipalities and counties, presents challenges in delivering transit to the adjacent commercial or residential developments. Many of the major activity centers or residential concentrations in Lee's Summit are on or near streets that can generally be described as wide, high-speed arterials traveling at speeds excess of 40 miles per hour. Crosswalks across many of these facilities occur only every half mile. The limited crossing opportunities and the environment of walking along and across these major arterials creates a more challenging experience for transit users and pedestrians in general. Many of the elements that would make a street friendlier for pedestrians and transit users (as well as bicyclists) are captured in the term Complete Streets that are designed to accommodate these users, as well as automobile traffic. Some of the modifications to better accommodate pedestrians and transit users may include:

- Designing intersections with pedestrian bulb-outs to narrow crossing distances
- Including pedestrian refuge areas
- Installing planting strips between the sidewalk and traffic lanes
- Using pedestrian-scale design, with street lights scaled to pedestrians, street furniture, and landmarks to make the walking experience more interesting
- Implementing road diets, where feasible and within the context of the functional classification system, to improve safety and accommodate additional pedestrian or bicycle components.

ADA – Accessibility Guidelines

Bus stops are subject to the Americans with Disabilities Act (ADA). Title II and Title III of the ADA affect bus stop planning, design, and construction. Specifically, the federal Department of Transportation ADA Standards for Transportation Facilities (2006) "apply to facilities used by state and local governments to provide designated public transportation services, including bus

stops and stations."[3] While addressing physical dimensions, the ADA also involves accessibility between the origin point and the final destination, including a path that is free of obstacles. Below are some general guidelines for ADA conformance. For more specific information, refer to the additional resources.[4]

- Examine for obstacles between where passenger would alight from bus stop to the surrounding destinations. Protrusions that are higher than 27 inches and lower than 80 inches may be difficult for a person with a visual impairment to detect with either a cane or a dog.
- Ensure surfaces are stable and slip resistant, with beveling on edges that can't be eliminated. Drops greater than one-half inch or a surface grade steeper than 1:20 requires a ramp. Perpendicular to the roadway, the slope of the bus stop boarding and alighting area shall not be steeper than 1:48.
- Include signs at the bus stop that provide route designations, bus numbers, destinations, and access information must be usable by transit riders with visual impairments.

Figure 27 displays an example of a shelter design that meets ADA requirements.

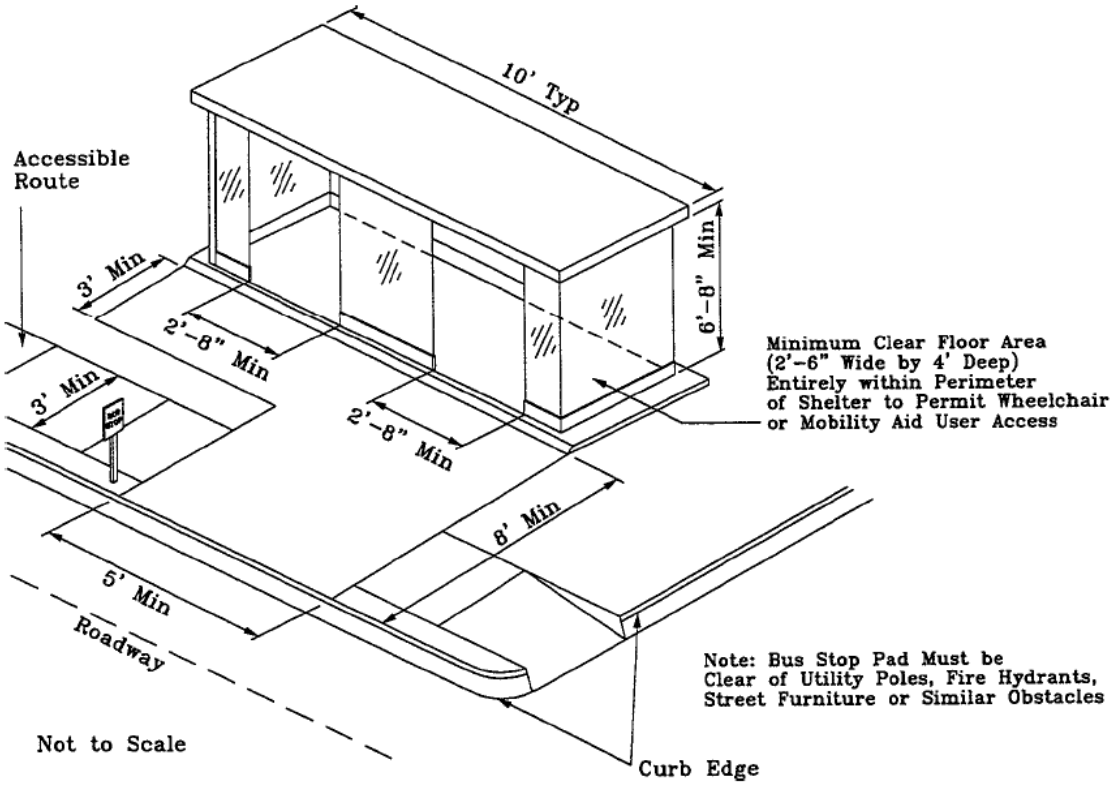
[3] http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/ada-standards

[4] Additional Resources:

Americans with Disabilities Act: Accessibility Guidelines for Buildings and Facilities, Transportation Facilities, and Transportation Vehicles. U.S. Architectural and Transportation Barriers Compliance Board, Washington, D.C., 1994.

Accessibility Handbook for Transit Facilities. Federal Transit Administration, Report No. FTA-MA-06-0200-92-1, July 1992.

Figure 27: Shelter Design Example to Meet ADA Requirements



Source: Texas Transportation Institute. 1996. TCRP Report 19. Guidelines for the Location and Design of Bus Stops. Washington, D.C: National Academy Press. Note: While this graphic is from 1996, the access measurements still comply with the Department of Transportation's 2006 ADA standards.

Park & Rides

Only one Park & Ride is located in Lee's Summit, but those amenities serve an important function of transit serving Lee's Summit residents. In the near future, there may be a need for development of additional Park & Rides to serve the commuter market, and to examine ways to increase the sense of presence exhibited by Park & Ride facilities.

The following strategies may allow Park & Rides to better serve Lee's Summit residents.

Greater sense of presence: Larger, elevated monument signs visible from adjacent major streets and highways would advertise the presence of Park & Ride services to potential users and affirm that existing users can leave their cars without fear of towing.

Site location conducive to freeway access: Developing Park & Rides that are directly adjacent to the major arterial streets with highway access may allow one route to easily serve multiple park & rides.

Funding

Lee's Summit is an Urbanized Area (UZA) that is distinguished as a separate area of the Kansas City Metropolitan Area. Much like other cities across the nation, Lee's Summit receives UZA funding from the FTA. Lee's Summit is designated as a UZA "50,000 to 199,999" in population, falling in the same category as cities like Lawrence, Kansas and Columbia, Missouri. Each year Lee's Summit is appointed Section 5307 funding, which leaders strategically use to further transit service in the area. The complete use of these funds is not required and funds awarded must be spent within 3 years or they are re-allocated

As of 2015, Lee's Summit had been awarded $1,000,086 in UZA 5307 funding. Table 15 represents the 5307 Funding that has been awarded to Lee's Summit for the last 5 years.

Table 15: Lee's Summit 5307 Funding (2010 - 2015)

Year	Allocation	Year to Year (+/-)
2010	$822,775	-/-
2011	$824,974	$2,199
2012	$826,787	$1,813
2013	$565,220	($261,567)
2014	$1,203,430	$638,210
2015	$1,000,086	($203,344)

Due to the large fluctuation in allocations, it is difficult to project future budgets. In the 2009 Lee's Summit Transit Demand Assessment Study, a 3.5 percent increase was assumed and used to project future budget increases. Seeing as this was nearly a decade ago, many things have changed, so using the same methodology may not be appropriate. Another problem with forecasting allocation levels is the current situation of MAP-21, which was extended only to July 31st, 2015. One of the only factors Olsson can assume will stay the same is Lee's Summit being classified as a UZA with a population between 50,000 and 199,999, keeping Lee's Summit in the same level of funding with other similarly sized cities. Even the "Annual Report on Funding Recommendations (Fiscal Year 2016)" is unclear on the state of 5307 funding.

The flexibility of 5307 funds allows for many different opportunities with operating and capital projects. 5307 funds can be used to cover 80 percent of the total project cost. A local match is also required with use of the funding. For example, the City of Lee's Summit allocated $103,926 to OATS for citywide demand-response service. In the 2009 Final Transit Demand Assessment, Lee's Summit's first priority was to use this money for Lee's Summit projects, but their next objective was to ensure that all the funds are at least used within the metropolitan area. The secondary objective allows for the possibility of these funds being used to support KCATA services, Route 152, or underfunded services or projects in surrounding areas like Blue Springs, Independence, or Raytown.

Conclusion

The transit service alternatives described in this document represent incremental development of a local public transit system within the City of Lee's Summit. Each progressive strategy would allow more people access to public transit while the unit cost of providing the service decreases. Prior to making any recommendations for significant changes to existing service, such as Strategies 2 through 4+, additional analysis of potential services and citywide consensus building should be undertaken. The table below summarizes the costs, ridership, and cost per rider of the various strategies. The cost per rider reaches its lowest during Strategy 4, which provides citywide fixed-route bus service.

Table 16: Summary of Costs and Ridership by Mode and Strategy

		Existing	Strategy 1	Strategy 2	Strategy 3	Strategy 4	Strategy 4+
Demand-Response	**Ridership Cost**	17,112 **$420,773**	20,596 **$325,011**	17,112 **$154,008**	2,954 **$51,023**	-/-	-/-
Fixed-Route	**Ridership Cost**	-/-	-/-	-/-	72,973 **$441,426**	163,166 **$987,016**	228,432 **$1,974,031**
Complementary Paratransit	**Ridership Cost**	-/-	-/-	-/-	3,648 **$136,842**	8,158 **$296,104**	11,422 **$592,209**
Total	**Ridership Cost**	17,112 **$420,773**	20,596 **$325,011**	17,112 **$154,008**	79,973 **$629,292**	171,324 **$1,292,991**	239,853 **$2,585,981**
	Cost / Rider	**$24.63**	**$15.78**	**$9.00**	**$7.91**	**$7.50**	**$10.78**

Notes: Strategy 4+ represents Strategy 4's frequency increased from 60-minutes to 30-minutes. Strategies 1, 3 and 4 assume service operates six days per week.

An increase in transit investment would yield progressively higher transit usage, which would result in improved cost efficiency and effectiveness. An example of this progression can be illustrated by comparing the costs to serve the projected level of transit demand through the existing demand-response services with the costs of a fully developed fixed route alternative serving that same level of projected demand.

Lee's Summit's current services cost approximately $420,773 to operate annually. This level of service provided over 17,112 one-way trips in 2014, at a rate of nearly $25 per trip. Earlier in the document, Lee's Summit's calculated annual need for internal one-way transit trips was estimated to reach 171,289, or 154,177 more than what is currently being served. If the City of Lee's Summit was to serve this level of demand with the existing demand-response services, total annual costs could climb to as much as $4.2 million. However, if a fixed route transit system served that same level of demand, total costs are expected to be closer to $1.29 million, or $7.50 per trip. While these levels of investment are much larger than what is currently made for transit, an improved quality of service and an increased number of Lee's Summit residents served would follow. The existing demand-response services are limited with their capacity and are far less efficient than a fixed-route system serving the same area. Implementing a fully developed fixed-route system in Lee's Summit would provide a regularly scheduled service and be available for all Lee's Summit residents. Benefits could also be achieved by increasing the amount of existing KCATA fixed-route services as they travel near Lee's Summit. Particularly,

adding frequency and midday service to Route 152 – Lee's Summit Express and adding frequency and commuter peak service to Route 251 – TMC Lakewood Connector, increasing the usability of the service for Lee's Summit residents.

In addition to the local transit alternatives to consider, there are also several ways the city can enhance accessibility in Lee's Summit, including: improving the existing transit infrastructure, considering walkability in future development and better aligning regional services with local needs.

These local improvements include identifying ways that bus stop infrastructure can make transit more attractive to existing and potential users by offering protection from the elements, route and system information, and comfort and safety amenities such as benches, bus pull-outs, and crosswalk improvements. In addition, commercial and residential site development standards can be improved to provide more direct, comfortable pedestrian access to transit. Park & Rides could be improved to provide a greater sense of presence and locations chosen that are more conducive to freeway access.

Appendix A:

Evaluation of KCATA MetroFlex and OATS in Lee's Summit

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MEMO

	Overnight
	Regular Mail
	Hand Delivery
	Other: Email

TO:	Michael Park, City of Lee's Summit
CC:	Chuck Ferguson (KCATA), Shawn Strate (KCATA), Sara Davis (OATS)
FROM:	Mark Swope, Olsson Associates
RE:	Evaluation of KCATA MetroFlex and OATS for service provision in Lee's Summit.
DATE:	October 27th, 2015
OA PROJECT #:	013-2967,6,1

This memo compares the existing service characteristics, efficiency, performance and costs of both the KCATA MetroFlex service and the OATS demand-response service in Lee's Summit. Conclusions from this analysis can be used to inform decision makers when deciding how demand-response transit service should be provisioned in Lee's Summit. In this evaluation, demand-response transit service is assumed to remain a viable and preferred method of transit service to meet the transit needs in Lee's Summit, as opposed to other intra-city transit alternatives. While the purpose of this memo is to compare aspects of the two existing transit services, subsequent documents will identify unmet demand, projected demands, and transit alternatives including recommendations for the continuance or discontinuance of the demand-responsive services evaluated herein.

Service Descriptions and Ridership

The city of Lee's Summit currently contracts with both the KCATA and OATS for demand-response transit services. While each contractor provides a similar type of transit service, each service has slight differences. Table 1 describes the operating characteristics of both services.

1801 McGee St, Ste 101
Kansas City, MO 64108

TEL 913.381.1170
FAX 816.842.9988

www.olssonassociates.com

Table 1: KCATA & OATS Operations Comparison

	KCATA (MetroFlex)	OATS (Lee's Summit)
Days of Service	Weekdays	Weekdays
Service Span	8:00 a.m. - 5:30 p.m. (9.5 hours)	7:00 a.m. – 6:30 p.m. (11.5 hours)
Service Area	Central area of Lee's Summit	Within Lee's Summit city limits
Peak Vehicles	2	3*
Wheelchair User Rate	Not Available	8%
Daily Platform Hours	17.7	22.0
Average Daily Ridership	34	33
Annual Ridership	8,670	8,415
Advanced Reservation	24 hours	24 hours
Fare	$1.50	$2.00
Reduced Fare	$0.75	n/a
Driver Assistance	Curb-to-curb	Door-to-door
On-time window	10 minutes	Driver communicates with passenger day before trip
Vehicle wait time	5 minutes	5 minutes
Package limits	6	No bulk items
Late cancel policy	As soon as possible	As soon as possible, rider contacts driver

Notes: (*) OATS can assign additional vehicles to serve Lee's Summit when needed.

The main differences between the two transit services are the eligible service areas, availability of additional vehicles and the assistance provided by drivers. OATS provides transportation for riders anywhere within the city limits of Lee's Summit while KCATA's MetroFlex only travels within the central region of the city. The MetroFlex service area can generally be described as bounded by Pryor Road and Todd George Parkway on the east and west, and I-470 and US-50 on the north and south. The southern boundary extends to portions of Persels Road and Longview Road. OATS also offers greater assistance to riders by designating their service as door-to-door, while the MetroFlex offers curb-to-curb style service. This distinction is relevant for those with disabilities and the elderly. Finally, OATS has the ability to add capacity by assigning additional vehicles during times of peak demand, whereas, the MetroFlex is limited to only two vehicles at any given time. This ability to meet capacity is a function of contract terms; OATS charges Lee's Summit by the rider; whereas Lee's Summit's contract with the KCATA is determined by hours of service. KCATA and OATS both utilize vehicles with similar passenger capacity.

The figures on the following pages were used to demonstrate the availability of OATS versus the MetroFlex and how Lee's Summit residents can be best served. Figure 1 shows 2013 population density within Lee's Summit. Examining the population shed within and outside the MetroFlex service area plays an important role in analyzing whether the transit options are

serving the population in the most effective and efficient manner. The MetroFlex route is available to 31.5 percent of the city's total population, based on its service area. The OATS service is offered to anyone within the city limits, whereas, the MetroFlex is only available within the area symbolized by the green boundary in Figure 1. The areas where transit is accessible only by OATS services include sections of the city north of Colbern Road, south of Scherer Road and east of Todd George Parkway.

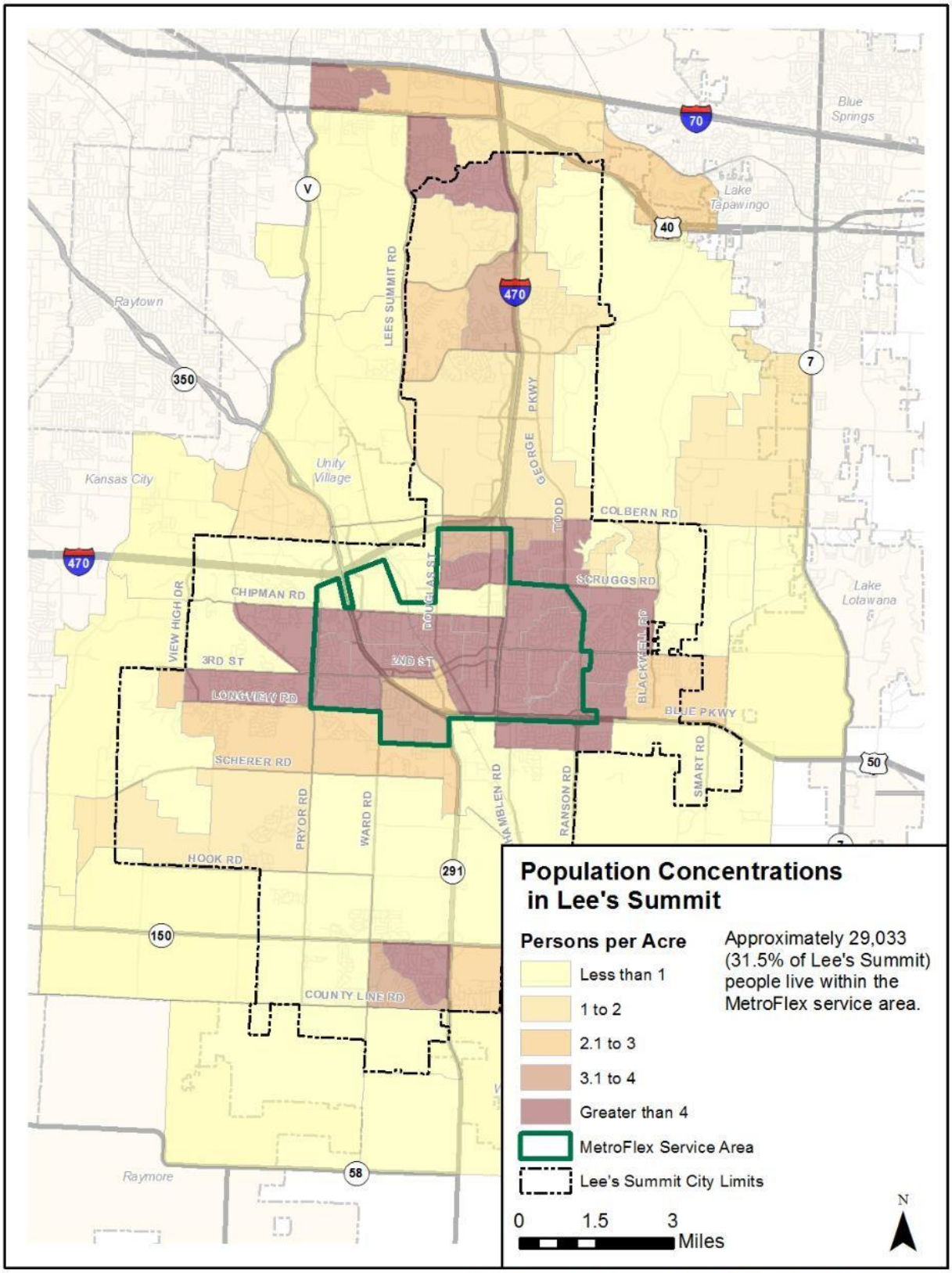
Figure 2 displays the job concentrations in Lee's Summit, (2011), and local transit's ability to serve those places of employment. 55 percent of the jobs in the Lee's Summit are located in the MetroFlex service area. The jobs outside the MetroFlex area would be accessible using the OATS service.

During the month of April 2015, a total of 764 one-way trips were provided by OATS. OATS passenger trip origins were mapped in Figure 3. Considering a majority of origins occurred in the MetroFlex service area, there is a noticeable overlap of services provided. While there are some popular origins outside of the MetroFlex service area, 64 percent are within the MetroFlex boundary. These trips, however, do not necessarily end within the MetroFlex boundary.

Further analysis of the origin residence locations identified 104 addresses (users) during the month of April. Of the 104 residential addresses, 30 originated from multi-family residential addresses, accounting for 75 of the 406 recorded residential origin trips. While only nine users took more than ten trips during the entire month of April, the remaining users included 45 percent taking one trip and 44 percent taking anywhere between two and nine trips in April 2015.

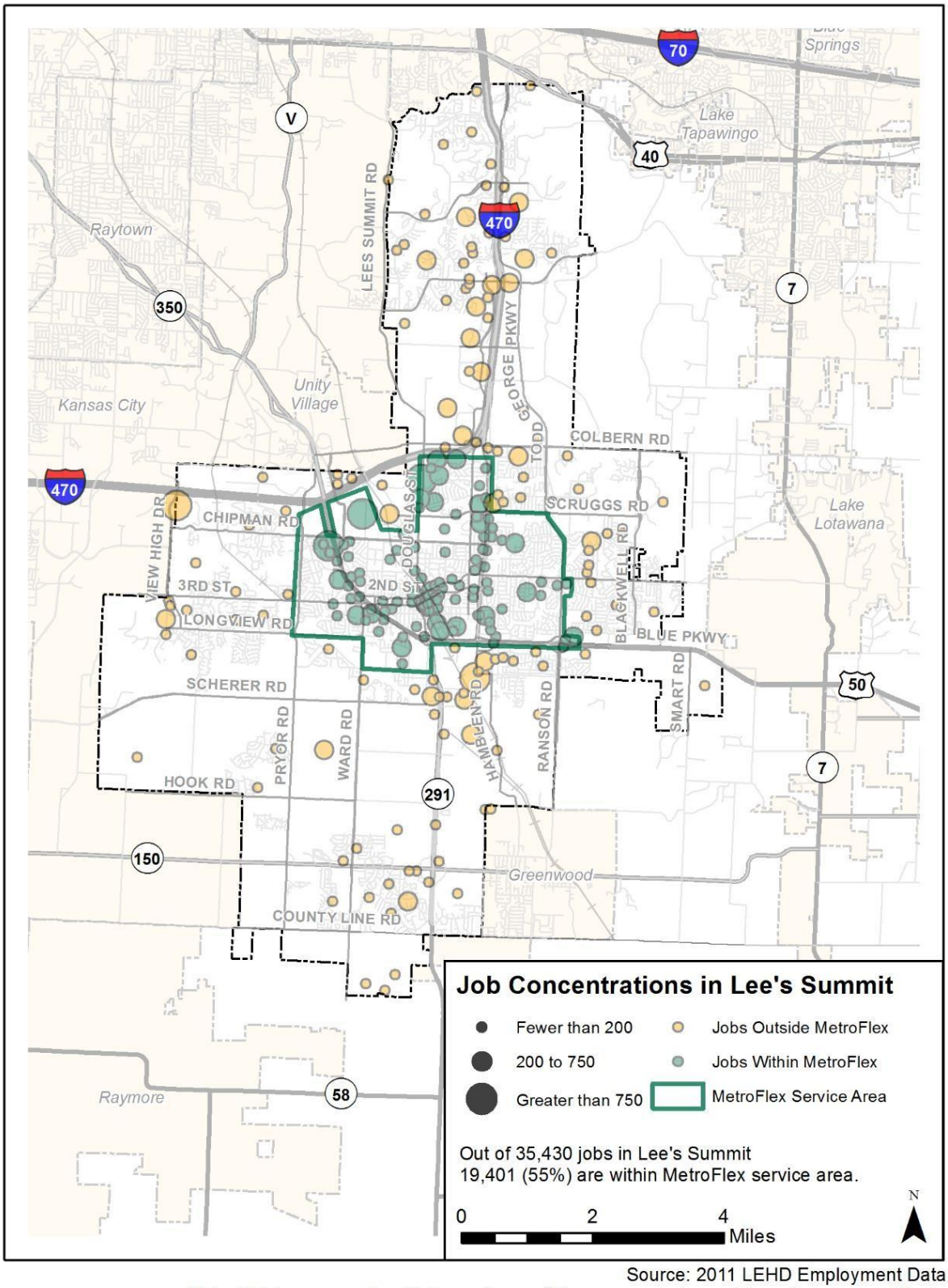
Figure 4 displays the OATS passenger destinations from April 2015. Of the total trips made in that month, 70 percent of the OATS destinations were also located within the MetroFlex service area. These destination findings show an even larger rate of trips located within the MetroFlex service area than the origin locations previously displayed in Figure 3. When considering both these maps together, there is a clear majority of productions and attractions located in the central part of the city, currently serviced by both the MetroFlex service and the OATS service. This demonstrates the appeal and benefit of city residents having access to one transportation provider that would meet their city-wide transportation needs.

Figure 1: Access to Transit



Source: U.S. Census Bureau, ACS 2009 - 2013 5-year data.

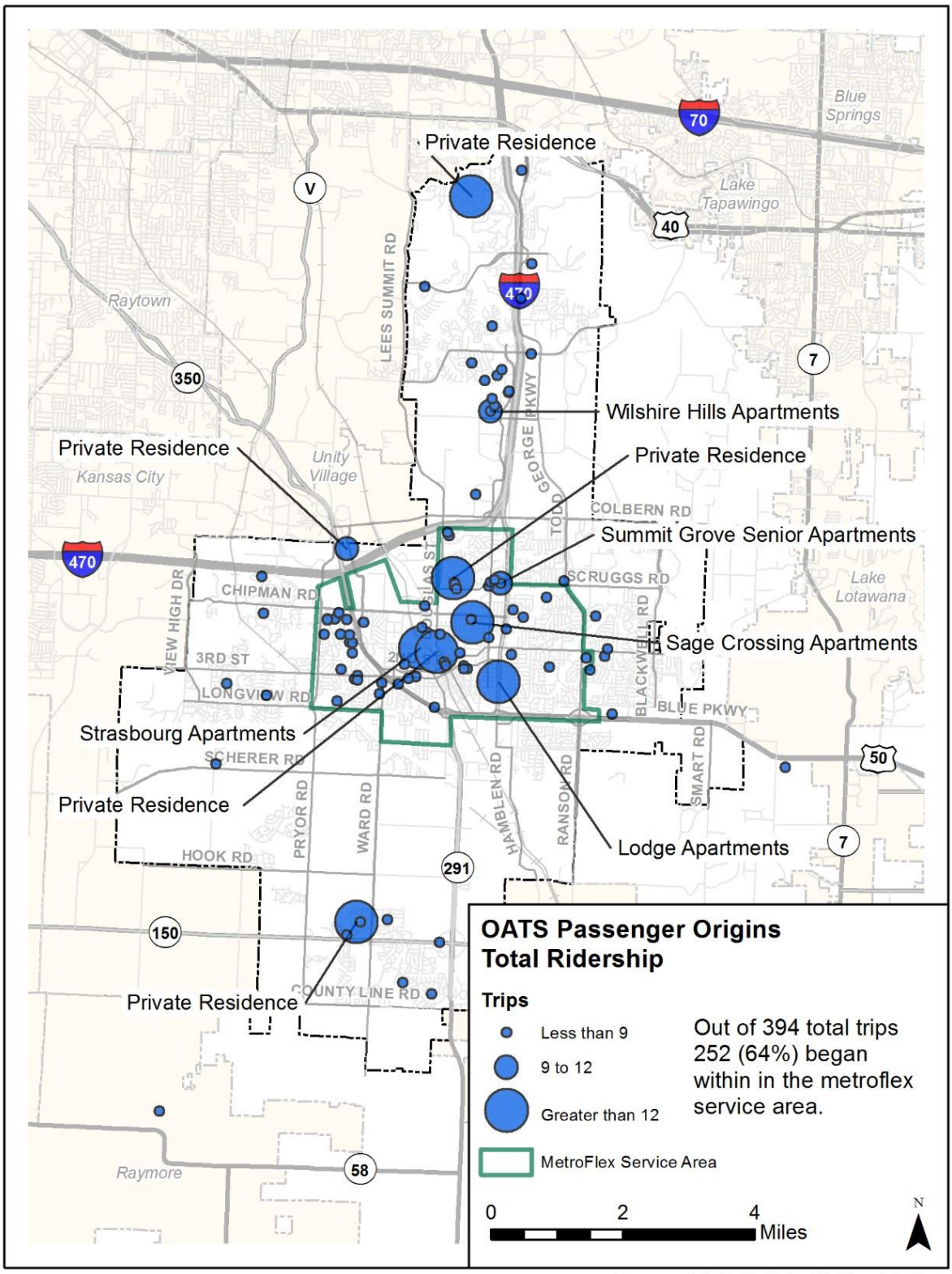
Figure 2: Job Concentrations in Lee's Summit



Source: 2011 LEHD Employment Data

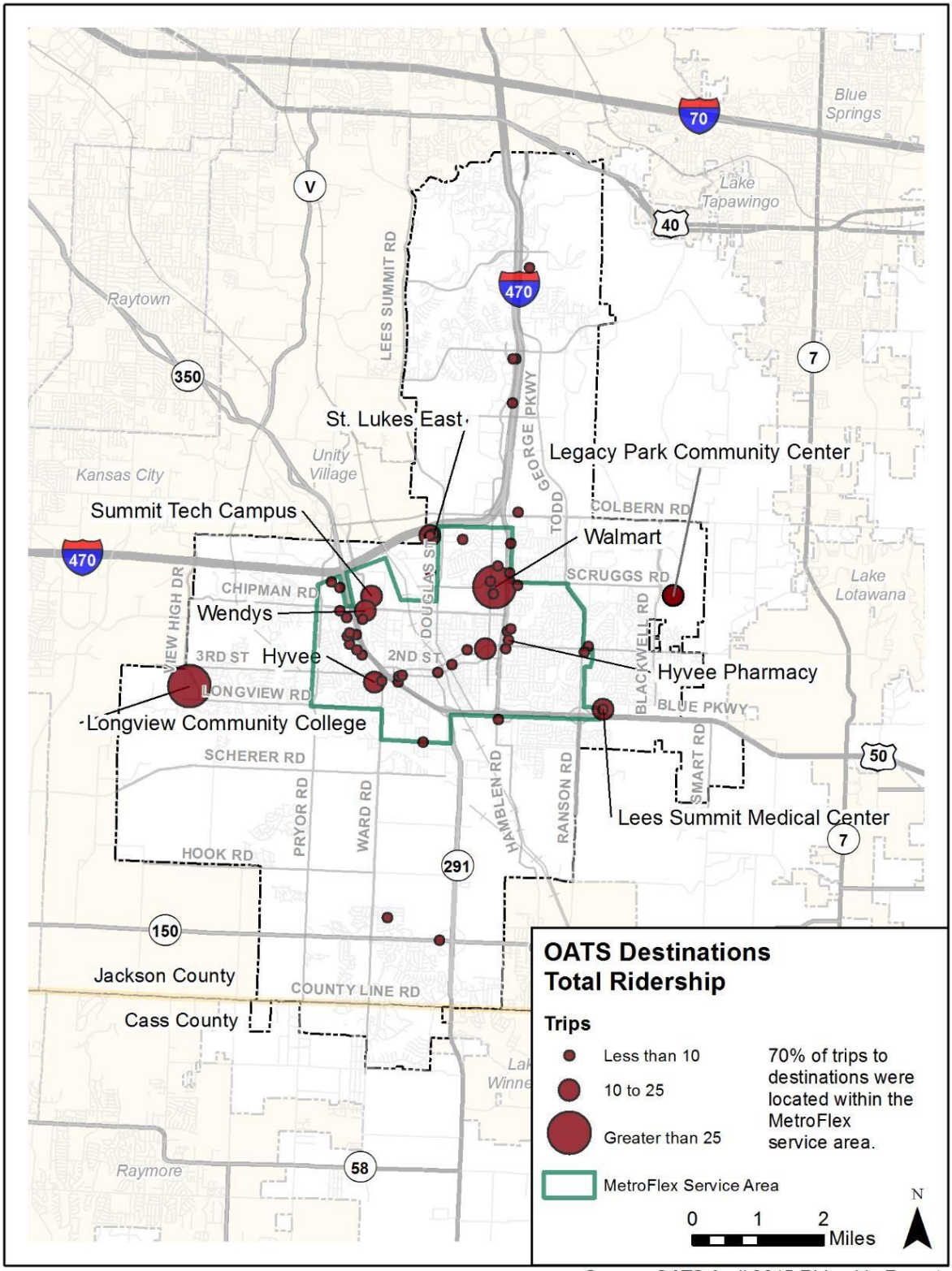
Note: Points represent multiple employers (10 or more employees) in a given census block.

Figure 3: OATS Passenger Origins (April 2015)



Source: OATS 2015 April Ridership Data
Note: Only origins with 10 or more trips are labeled.

Figure 4: OATS Passenger Destinations (April 2015)



Source: OATS April 2015 Ridership Reports
Note: Only destinations with 10 or more trips are labled.

Service Cost

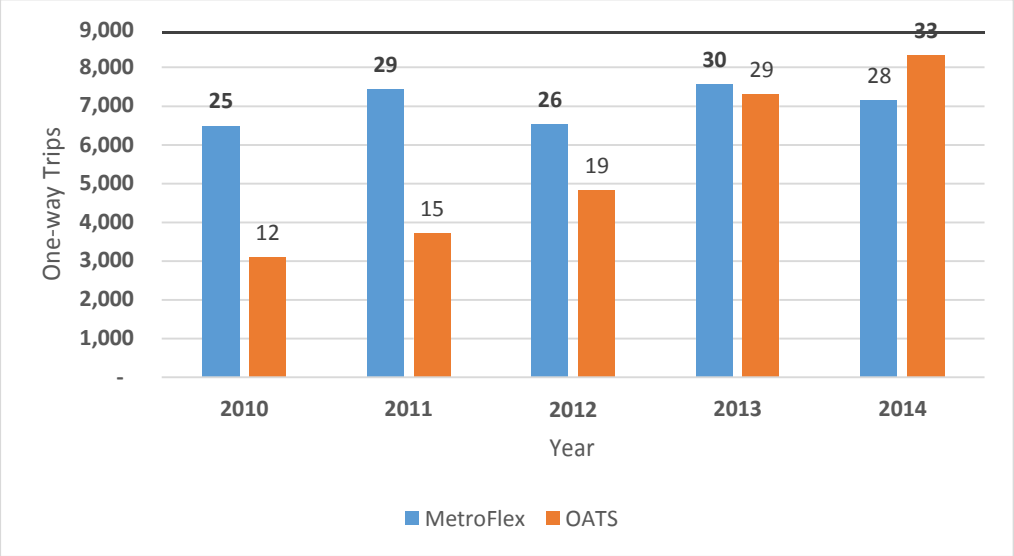
The cost of providing transit service is a fundamental consideration in the decision making process. An evaluation of the cost associated with the provision of transit service by the KCATA and OATS in Lee's Summit was conducted. This evaluation determined that the KCATA's total annual cost of providing the current MetroFlex service in Lee's Summit is approximately $260,000 while the annual cost of providing the current OATS service in Lee's Summit is approximately $152,000.

Differences between the two services can be attributed to different operating procedures of each service. KCATA service is governed by a contract with Lee's Summit that specifies the amount of service hours provided, regardless of demand, whereas, the OATS contract with Lee's Summit is based on a per rider served, which allows OATS to vary the amount of drivers and vehicles supplied. In addition, KCATA MetroFlex drivers operate under a union contract, which results in a higher base pay and benefits than received by OATS drivers. OATS drivers by contrast receive no benefits, and several operate part-time. Higher KCATA cost can also be attributed to a higher number of deadhead miles resulting from KCATA housing their vehicles near downtown Kansas City, Missouri. This results in an additional 40 miles per day per vehicle before the driver can enter revenue service. OATS drivers store their vehicle at their residence, located within or near Lee's Summit.

Service Efficiency

Figure 5 displays the level of ridership for the two services from 2010 to 2014. While the MetroFlex has experienced steady ridership since 2010, OATS had nearly three times as many riders in 2014 as they did four years before. The MetroFlex has averaged around 25 to 30 one-way trips per day, but in 2014 OATS surpassed the MetroFlex's ridership for the first time averaging 33 trips per day, for a total of 8,316 annual one-way trips, compared with MetroFlex's 7,146 trips.

Figure 5: MetroFlex & OATS Annual Ridership (2010 - 2014)



Notes: Data labels represent average daily ridership for each transit provider in a given year.

The efficiency of transit service can be described in terms of boardings per revenue hour, and average operating costs per passenger. Boardings per revenue hour is a measure of how many passengers utilize the fixed-route system per hour of service provided, a higher figure signifies higher efficiency. Average operating cost per passenger describes the required cost to provide the service to each passenger and is derived by dividing the total annual cost of the service, as described in the previous section, by the total annual ridership served. A lower number signifies higher efficiency.

Table 2 displays system efficiency for the MetroFlex and the OATS services. The average boardings per revenue hour for OATS is 1.62, and the average operating cost per passenger is $18.27. The MetroFlex averages 2.21 boardings per revenue hour, at an average operating cost per passenger of $34.98.

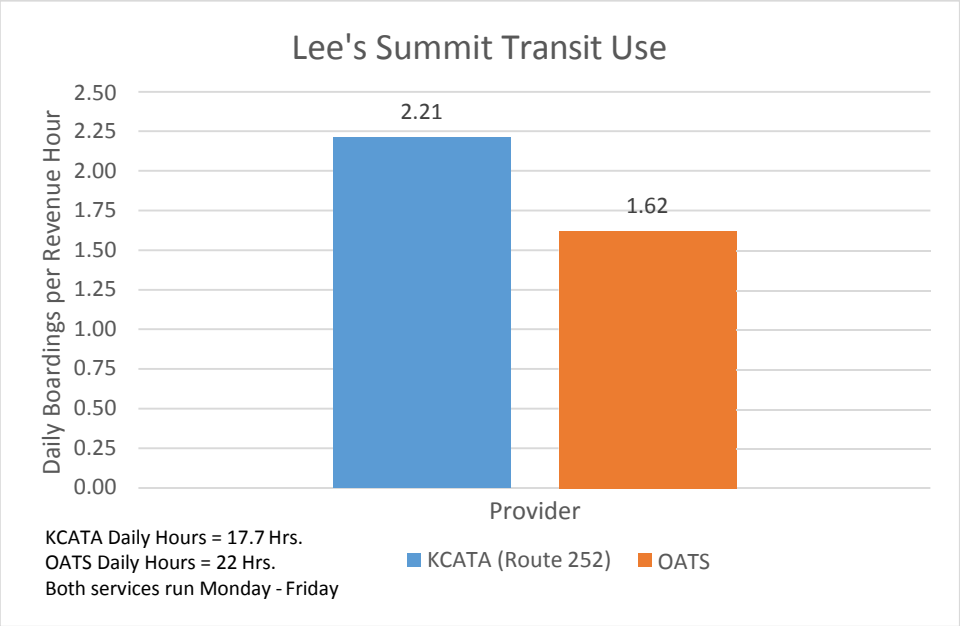
Figure 6 also illustrates the difference in efficiency for both the MetroFlex and OATS.

Table 2: System Efficiency by Transit Service

	KCATA (MetroFlex)	OATS (Lee's Summit)
Boardings per Revenue Hour	2.21	1.62
Operating Cost per Rider	$36.38	$18.27

Notes: Revenue hours for OATS were estimated by dividing the platform hours (5,607) by (1.075).

Figure 6: Lee's Summit Transit Users per Revenue Hour



Service Performance

Peer City Comparisons

Table 3 compares the MetroFlex, OATS transit services and other demand-response services operated in peer cities. This information was gathered from the National Transit Database, which presents operating statistics in a uniform format from transit agencies receiving federal funding. Operating cost per revenue mile, operating cost per revenue hour, annual trips, population and the fare recovery ratio (a percentage of operating costs recovered through collected fares), were all compared.

Table 3: Lee's Summit Transit Services and Peer Cities' Cost and Revenue Statistics (Demand-Response Services only)

	Operating Cost per Revenue Mile	Operating Cost per Revenue Hour	Annual Unlinked Trips	Fare Recovery Ratio	Population
Lawrence, KS	$5.76	$61.74	60,418	5.4%	87,965
Topeka, KS	$5.48	$77.85	49,603	9.6%	127,473
Columbia, MO	$7.59	$64.97	45,413	12.2%	124,748
Springfield, MO	$6.56	$109.27	19,815	3.7%	166,451
KCATA (System Wide)	$3.31	$57.87	400,843	12.2%	748,415
Peer Cities Average	**$5.74**	**$74.34**	**115,218**	**8.6%**	**251,010**
KCATA MetroFlex (Route 252)	$7.15	$70.29*	9,435	2.4%	28,990 (2011)
OATS (Lee's Summit)	$2.51*	$27.95*	8,442	11.6%	88,929 (2011)

Notes: (*) Revenue hours for Route 252 were estimated by dividing the routes' platform hours by a factor of (1.1). Revenue miles for OATS was estimated by assuming 13 miles per revenue hour were traveled. Revenue hours for OATS were estimated by dividing the platform hours (5,607) by (1.075).

The peer cities have an average operating cost per revenue mile of $5.74, and an average operating cost per revenue hour of $74.34. The Lee's Summit MetroFlex service comes out cheaper than both peer city averages. While the MetroFlex has a respectable operating cost per revenue hour, the OATS operating cost per revenue hour, $27.95, is far lower than either of the peer cities or the MetroFlex. In comparison with the peer cities, the MetroFlex's fare recovery ratio is lower than average, and OATS has one of the higher ratios. It should also be noted that OATS charges 50 cents more per one-way trip than the standard MetroFlex fare. Eligible MetroFlex users can also pay as little as $0.75 per one-way trip if they fit the disability, senior citizen or youth eligibility requirements.

Peer Route Comparisons within the Kansas City metropolitan area

Table 4 compares the performance of the two Lee's Summit transit services with similar demand-response services offered in the KCATA system. In the passengers per hour and operating cost recovery measurements, both the Lee's Summit MetroFlex and OATS services perform similarly. The main difference is the operating cost per passenger for OATS is $14.50 lower than the cost of operating the MetroFlex in Lee's Summit. Cost of service is used in the following section to determine which operator could provide the most efficient service for Lee's Summit residents.

Table 4: KCATA MetroFlex Route Operating and Cost Statistics April 2015

Route Name	ADR	Daily Hours	Daily Miles	Passengers /Hour	Passengers /Mile	Operating Cost /Passenger	Operating Cost Recovery
237 Gladstone Circulator	15	9.4	93	1.64	0.17	$30.98	3.17%
244 NKC Circulator	53	18.4	136	2.88	0.39	$15.45	1.76%
252 Lee's Summit Circulator	34	17.7	231	1.92	0.15	$31.77	2.42%
253 Raytown Circulator	55	10.7	164	5.15	0.34	$13.03	5.39%
296 Bannister/ Hillcrest	176	42	591	4.19	0.3	$17.15	4.07%
298 SKC Wornall	83	28	332	2.96	0.25	$20.26	3.10%
KCATA Standard				**4.0**	**0.3**	$20.58	3.45%
OATS	33	22	287	1.51	0.12	$17.27	11.58%

Notes: Platform miles for OATS was estimated by assuming 13 miles per revenue hour were traveled.

Discussion

In an effort to determine the most efficient strategy of demand-response service provision in Lee's Summit, costs and efficiency were examined on the basis that the MetroFlex and OATS service areas would be combined and served by one provider. Costing formulas were then used to determine and compare costs for MetroFlex or OATS to provide demand-response service in the combined service area. This analysis focused on the impact of operating costs on service provision.

Strategy: KCATA Operating Single Service Area

The KCATA's costing model was used to estimate the cost of KCATA's MetroFlex service area expanding to cover the entirety of the city of Lee's Summit; replacing OATS service. This model takes into account average daily miles and hours, and includes vehicle replacement costs, as well as other direct and indirect costs. While the average daily platform miles and hours were available for the MetroFlex service, only the platform hours were available for the OATS service. OATS total platform miles were estimated by multiplying the number of platform hours by the Lee's Summit MetroFlex mile per hour ratio of (13.0). Because of the difference in deadhead travel between KCATA and OATS, a lower deadhead multiplier was used to establish the OATS revenue hours and miles. Once the revenue hours and miles were established for the OATS service, each total was multiplied by the MetroFlex deadhead rate in order to account for the increased deadhead if KCATA were to operate the OATS service.

Assuming both service areas combined would garner 649 platform miles and 41 platform hours daily, the KCATA would expect annual operating expenses to reach $716,044 . The increase in operating costs to serve the large area is estimated at $440,604. Metroflex currently serves

Lee's Summit with two vehicles. More vehicles would be needed KCATA were to absorb the OATS service area and riders. The number of extra vehicles needed would most likely be between one and three in order to accommodate the expanded service area.

Strategy: OATS Operating Single Service Area

OATS operated the 2014 Lee's Summit contracted transit service at an hourly cost of $26. Expanding their services to absorb the additional Lee's Summit riders currently served by KCATA's MetroFlex would require OATS to increase that rate to $27.50 per hour. After multiplying this hourly rate by the annual platform hours provided by both providers, a total annual cost was estimated at $270,033. OATS expects that absorbing additional riders would require OATS to purchase at least two additional vehicles, hire two to three new drivers and assign a dispatcher dedicated to Lee's Summit. All of these new investments would be absorbed by the hourly rate for operations.

Table 5 compares existing operating costs with the estimated costs for either KCATA or OATS to assume operation of all transit services within Lee's Summit.

Table 5: Single-Operator Strategy Cost Summary

	Cost per Rider	Cost per Platform Hour	Total Annual Operating Cost
Existing (KCATA & OATS)	$24.63	$41.57	$420,773
KCATA Single Operator	$41.84	$68.05	$716,044
OATS Single Operator	$15.78	$27.50	$270,033

Lee's Summit Local Investment in Current Transit Services

While the previous sections have discussed and described the comparable efficiencies of the two transit service providers based on performance versus total cost, it is important to note that, from the Lee's Summit perspective, the more relevant financial measure of effectiveness between the two providers is based on the amount Lee's Summit pays each provider for the service.

In 2015, Lee's Summit agreed to a contract with the KCATA for $81,056. The discrepancy between the total annual cost of service provided and the cost of the service to Lee's Summit can be explained by the amount of "other" funding applied to offset the cost. As noted earlier, the total annual cost of the service provided by KCATA during the 2015 contract period is approximately $260,000. Yet, the contract requires Lee's Summit to pay only $81,000. The remaining balance of the total cost is covered by approximately $6,000 in fare revenue and $173,000 in Federal grant funding derived from Lee's Summits annual allocation from the FTA Section 5307 Formula funding program. This funding is used to offset a portion of both the operating costs and the preventive maintenance costs for the vehicles used to provide the service. The result is that the 5307 Formula funding allocation covers approximately seventy

percent of the total service cost and the Lee's Summit's financial contribution covers approximately twenty seven percent of the total cost. Fare revenue covers the remaining three percent of cost. It is important to note that FTA funding is subject to change on a decennial basis based on census data.

In the case of OATS, the total annual operating cost of the service provided in Lee's Summit is approximately $152,000. The Lee's Summit contract with OATS obligates the city to pay an approximate annual amount of only $78,000. In this case the difference is covered by approximately $17,000 in fare revenue and a variety of other funding derived from sources such as the Mid-America Regional Council's Area Agency on Aging, Medicaid, special contracts, and other Federal funding. All together, these "other" funding sources amount to approximately $74,000. Lee's Summit's financial contribution to the OATS service covers approximately 51% of the total cost.

The difference in fare pricing between the two current operators would need to be addressed. The current base fare offered by the KCATA in Lee's Summit and throughout the KCATA system is $1.50. In addition, the KCATA offers discounts to the base fare in the form of 50% senior and youth discounts and discounted monthly passes. This results in a net fare per passenger of approximately seventy-five cents. OATS offers a base fare of $2.00 and there are no discount opportunities available. If one of the operators is chosen to become the sole service provider in Lee's Summit a decision regarding fare pricing will need to be made and this will have an impact on the net cost to Lee's Summit.

Finally, the method by which the providers determine Lee's Summits cost of the service will need to be evaluated. The KCATA's costing methodology involves identifying all costs associated with providing the service and allocating those costs on the basis of the amount of service being provided. This can be reflected in terms of a cost per hour. The number of riders served has no bearing on the cost aside from the amount of fare revenue that might be collected to offset the cost for Lee's Summit.

OATS prices its service to Lee's Summit on the basis of passengers serviced. The cost is derived by estimating the number of riders to be served during the contract period and dividing the ridership estimate into the net cost of the service to Lee's Summit, which yields a cost per trip. Lee's Summit is then charged that per trip unit cost for each trip actually provided during the contract period. The risk associated with this approach is that if the ridership estimate on which the unit rate is determined is inaccurate an adverse financial impact could occur for Lee's Summit or OATS depending on whether the estimate was low or high.

Conclusion

The primary purpose of this study effort was to evaluate the current transit service management and delivery methods employed in Lee's Summit and identify the most cost effective approach of delivering service going forward based on the findings of the evaluation.

As described previously, the city currently maintains contracts for transit service with both the KCATA and OATS, Inc. Both service providers offer similar intra-community services within Lee's Summit in the form of on-demand paratransit available to the general public. The respective services are targeted to different geographic areas within the community. The KCATA also

provides peak period commuter express bus service between Lee's Summit and downtown Kansas City, Missouri.

The reviewed management/service delivery models considered for this study included 1) maintaining the current approach of having two providers operating under separate contracts with the city, 2) KCATA assuming operations for all transit service within the city with service operating for a full twelve hour service span, and 3) OATS assuming operations of all intra-community service within the city while KCATA continues to provide the commuter express service.

The evaluation is summarized in Table 6.

Table 6 Single-Operator Strategy Cost Summary

	Cost per Rider	Cost per Platform Hour	Total Annual Operating Cost
Existing (KCATA & OATS)	$24.63	$41.57	$420,773
KCATA Single Operator	$41.84	$68.05	$716,044
OATS Single Operator	$15.78	$27.50	$270,033

Based on these evaluation results, the OATS operated local service alternative would appear to be the most cost effective option for transit service in Lee's Summit, while the least cost effective would be the KCATA fully operated service alternative. These results can be better understood when considering the following:

- KCATA's labor costs are higher than OATS' labor costs
- KCATA buses are dispatched daily from the KCATA's facility near downtown KCMO to Lee's Summit resulting in significant "deadhead" or non-revenue service miles and hours, while OATS buses are kept in Lee's Summit, thus greatly minimizing "deadhead miles and "hours".

From the perspective of how much Lee's Summit would pay for the service the choice of local service delivery alternative is somewhat less certain. As described previously, both KCATA and OATS local transit service contract amounts with the City of Lee's Summit are approximately $80,000 annually, or roughly the same. In the case of the OATS service contract with Lee's Summit, the city's financial obligation of $78,000 annually represents approximately fifty-one percent of the total service cost. In the case of the KCATA service contract with Lee's Summit, the city's financial obligation of $81,000 annually includes $67,366 applied to the service cost and $13,690 applied as local match for Federal capital funding. This local contribution covers approximately twenty-seven percent of the total service cost.

For any of the three service delivery alternatives that have been evaluated, the city's funding obligation would be predicated on the amount of fare revenue collected and "other" funding that might be used to offset the total cost of the service. The primary question would be the use and application of the City's 5307 formula funding allocation. Below are funding scenarios based on assumptions regarding the use of 5307 funding, ridership (fare revenue), and fare pricing for each of the local service delivery alternatives.

KCATA Operated Service

Assumptions:

- Percent of operating costs covered by 5307 funding – 70%
- Base fare - $1.50, reduced fare for seniors, monthly passes available
- Annual ridership - 16,000

Total Cost:	$716,044
Fare Revenue:	($12,000)
Net Cost:	$704,044
5307 Funding:	($492,830)
Local Contribution:	($211,214)
Local Capital Share:	($39,800)
Total Local Contribution:	($251,014)
Additional Local Contribution over Current Level:	(+ $92,014)

OATS Operated Service ("Other" funding equal to current amount)

Assumptions:

- "Other" funding equal to current amount – $74,000
- Base fare - $1.50, reduced fare for seniors, monthly passes available
- Annual ridership - 16,000

Total Cost:	$270,033
Fare Revenue :	($12,000)
Net Cost :	$258,033
"Other" Funding:	($74,000)
Total Local Contribution:	($184,033)
Additional Local Contribution over Current Level:	(+ $25,033)

OATS Operated Service (5307 funding applied)

Assumptions:

- Percent of net operating costs covered by 5307 funding – 50%
- Base fare - $1.50, reduced fare for seniors, monthly passes available
- Annual ridership - 16,000

Total Cost:	$270,033
Fare Revenue:	($12,000)
Net Cost:	$258,033
5307 Funding:	($129,016)
Total Local Contribution:	($129,017)
Additional Local Contribution over Current Level:	(- $29,983)

These funding scenarios are intended to be illustrative. There are a myriad of additional funding scenarios that may be reasonable and possible. The conclusion that can be drawn from this information, however, is that for any given funding scenario the City's local contribution to the service cost is likely to be lower under any alternative involving OATS operated service.

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Appendix B: 2015 City of Lee's Summit Transit Survey

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2015 City of Lee's Summit Transit Survey

...helping organizations make better decisions since 1982

Final Report

Submitted to The City of Lee's Summit, Missouri
by:
ETC Institute
725 W. Frontier Circle
Olathe, Kansas
66061

September 2015

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2015 City of Lee's Summit Transit Survey
Executive Summary

Overview

Purpose. ETC Institute conducted a survey of residents in the City of Lee's Summit during the summer of 2015. The purpose of the survey was to identify issues that are important to transportation planning and improvements.

Some of the specific topics that were addressed in the survey included:

- Methods of transportation used
- Reasons for using public transit
- Level of importance of public transit
- Level of interest in park-and-ride options
- Destinations where potential riders would be interested in using public transit
- Support for funding public transit

Methodology. The survey was administered by phone to a random sample of 400 households within the City of Lee's Summit. The overall results for 400 completed surveys have a precision of at least +/-5% at the 95% level of confidence.

Contents of the Report. This report contains:

- an executive summary of the major findings
- charts depicting the overall results of the survey
- tables that show the results of the survey
- a copy of the survey instrument

Major Findings

- **Importance of Various Purposes in the Design of Transit Services in Lee's Summit.** Ninety-five percent (95%) of households surveyed believe it is "very important" or "somewhat important" to provide door-to-door service for the disabled and persons with special needs. Other purposes that respondents feel are important include: helping people get to and from work during the day (89%), helping people get to destinations during the evening (84%), and helping people get to non-work destinations (82%).

- **Primary Reasons for Using Public Transit.** Of the households that would consider using public transit, the top reasons for using it include: going to and from medical and dental appointments, going to and from meals, social activities, and daycare, and running errands/going shopping.

- **Willingness to Use Various Modes of Transportation.** Nearly three-fourths (74%) of households indicated they are "very willing" or "somewhat willing" to ride a bus as a mode of transportation. Other transportation options that respondents were willing to use include: walking (67%), carpooling (57%), vanpooling (51%), and bicycling (41%).

- **How Often Households Walk or Bike.** Twenty-one percent (21%) of respondents indicated they walk to and from work, school, shopping, or for recreation on a daily basis; 23% do so weekly, and 10% walk monthly. When the same question was asked about bicycling, only 1% indicated they do so on a daily basis; 13% bicycle weekly, and 9% bicycle monthly to their destination or for recreation.

- **Willingness to Walk/Ride to Bus Stop and Use Fixed Route Bus System.** More than half (54%) of households indicated they are willing to walk or ride a bike 5 to 10 minutes to use a fixed route bus system within Lee's Summit. Twenty-percent (20%) are willing to walk/bike 11 to 15 minutes, 5% are willing to walk/bike more than 15 minutes, and 22% indicated they aren't willing to walk or bike to a bus stop to use a fixed route bus system within Lee's Summit.

- **Likelihood of Using Public Transportation for Non-Work Related Trips.** Sixty percent (60%) of households indicated they are "very likely" or "somewhat likely" to use public transportation in the Lee's Summit area to go shopping, visit the doctor, or make other non-work related trips. Thirty-eight percent (38%) indicated they are not likely to use public transportation for these purposes, and 2% were not sure.

- **Willingness to Drive or Carpool to Park-and-Ride Location and Use Express Bus Service.** Sixty-three percent (63%) of respondents indicated they are "very willing" or "somewhat willing" to drive or carpool to a park-and-ride location and use an express bus to get to their final destination. Thirty-five percent (35%) indicated they are not willing to do this, and 1% were not sure.

- **How Much Respondents Would Pay for a One-Way Bus Trip to Get To and From Their Most Frequent Destination.** Twenty-nine percent (29%) of households would pay $2.00 or more for a one-way bus trip to get to/from work, school, or their most frequent destination. Twenty-seven percent (27%) would spend between $1.50 and $2.00 for a one-way bus trip, 40% would pay $1.50 or less, and 3% were not sure.

- **How Often Households Would Use Public Transit.** When asked how many days per week they would use public transit if it were available near their home in the next few years, more than one-third (34%) indicated they would use transit at least 3 days per week. Twenty-eight percent (28%) would use public transit 1 or 2 days per week, and 28% indicated they would not use transit. The remaining 10% of households were not sure how often they would use public transit.

- **Where Respondents Would Travel When Using Public Transit.** Of the respondents who indicated they would use public transit, the locations where they are most interested in visiting include: downtown Kansas City, Missouri and Crown Center, areas within Lee's Summit, and Country Club Plaza/UMKC/Midtown Kansas City.

- **Times of Day That Respondents Are Most Interested in Using Public Transit.** The times of day during the week that households were most interested in using public transit included: 4:00 p.m. to 6:00 p.m., 6:00 a.m. to 9:00 a.m., and 9:00 a.m. to 11:00 a.m. When asked about their possible weekend use of transit, the times that respondents were most interested in included: 11:00 a.m. to 1:00 p.m., 4:00 p.m. to 6:00 p.m., and 9:00 a.m. to 11:00 a.m.

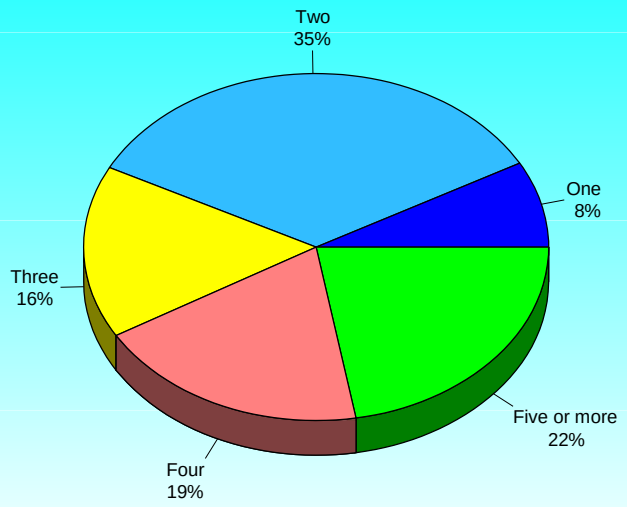
- **How Higher Gas Prices Have Affected Interest in Using Public Transit.** When asked how higher gas prices have affected their household's interest in using public transit over the past 2 years, 28% indicated they were "much more" or "somewhat more" interested. More than half (56%) indicated they had the same level of interest as they did before; 12% were less interested, and 4% were not sure.

- **Support for Increasing the Amount of City Tax Dollars Used for Public Transportation.** Forty-three percent (43%) of respondents are either "very supportive" or "somewhat supportive" of increasing the amount of their city tax dollars that are used for public transportation. Twenty-four percent (24%) were not sure about an increase, and 32% were not supportive.

Section 1:
Charts & Graphs

Q1. Counting yourself, how many people regularly live in your household?

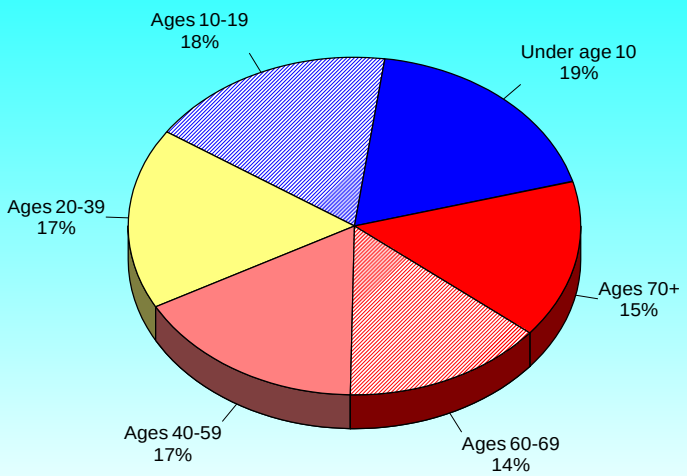
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q2. How many persons in your household (counting yourself) are:

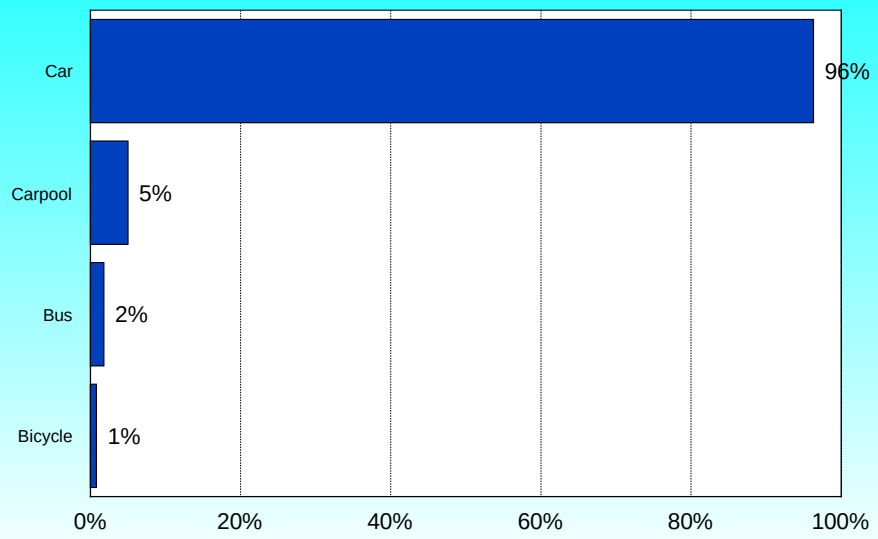
by percentage of persons in the household



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q3. Which of the following methods of transportation do you usually use to get to and from work and other frequent destinations?

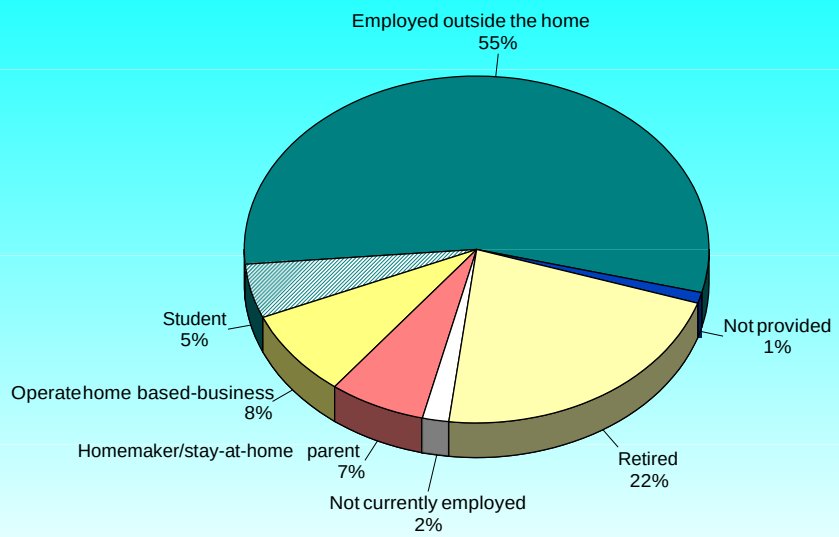
by percentage of respondents (multiple selections could be made)



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q4. What is your current employment status?

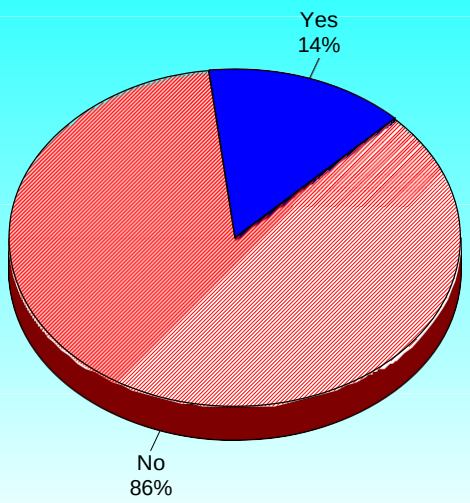
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q5. Are any persons in your household, ages 16 and older, dependent on public transit or rides from friends or relatives because they do not have a car or do not drive?

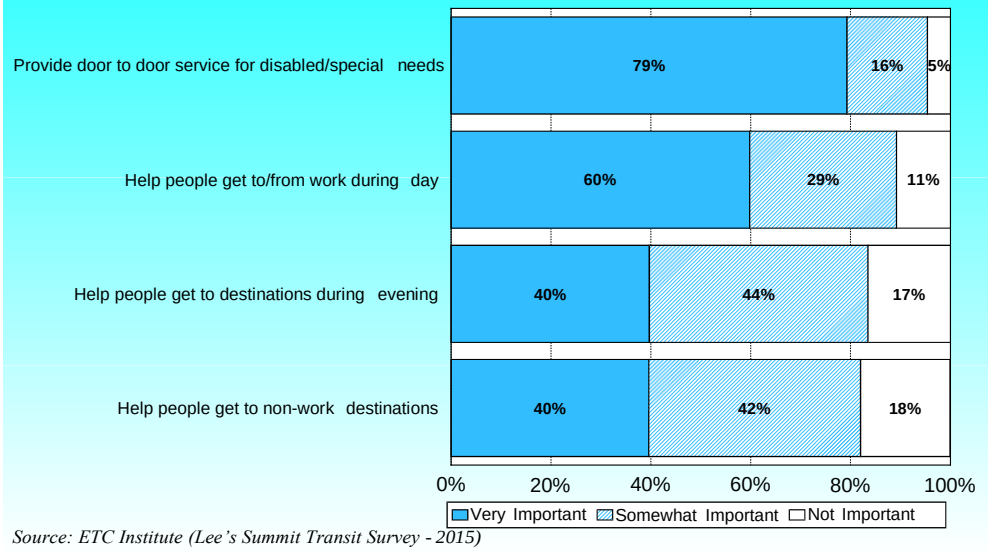
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q6. For each of the following, please indicate whether you think the purpose should be very important, somewhat important, or not important in the design of transit services in Lee's Summit

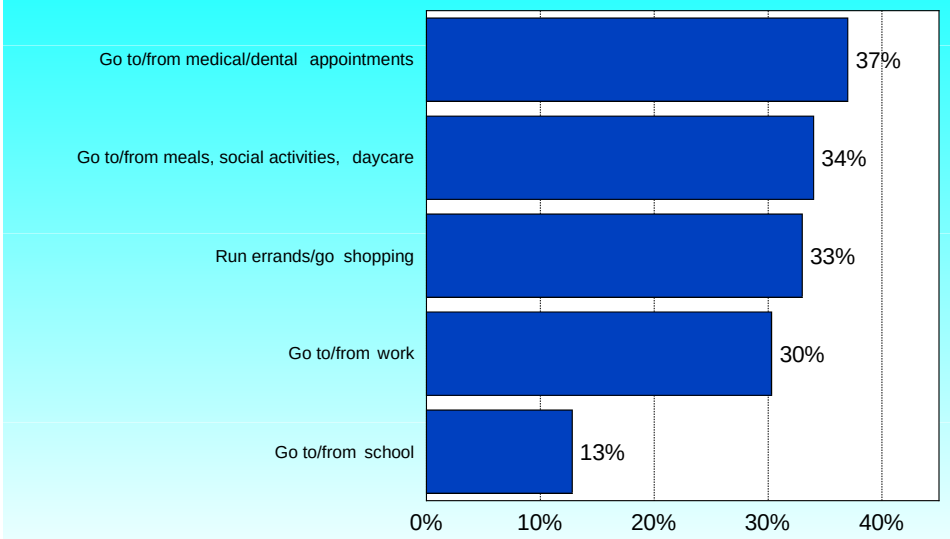
by percentage of respondents (excluding "don't know")



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q7. If you were going to use public transit, which of the following would be the primary reason you would use it?

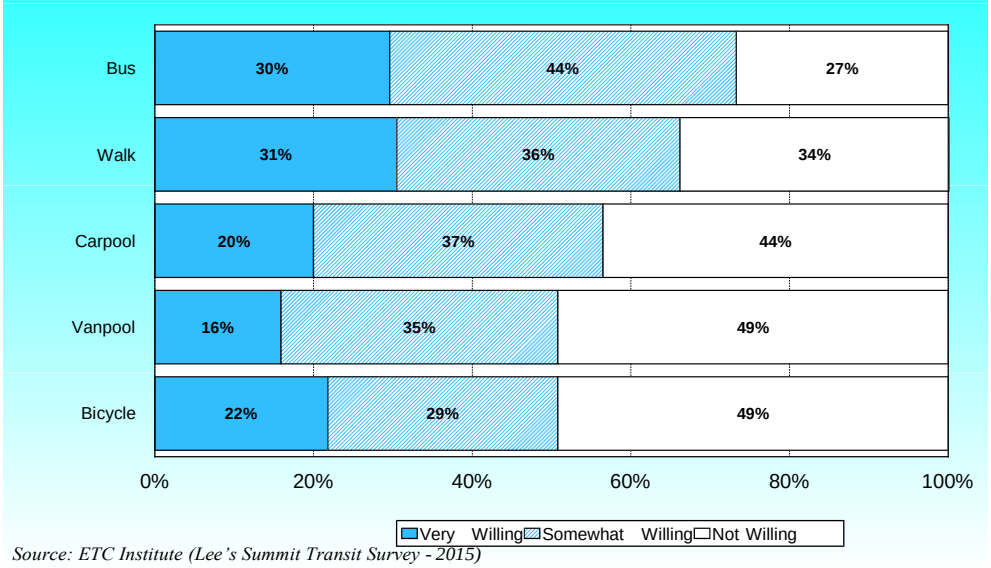
by percentage of respondents who would use public transit (multiple selections could be made)



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q8. For each of the following, please indicate if you would be very willing, somewhat willing, or not willing to use that mode of transportation:

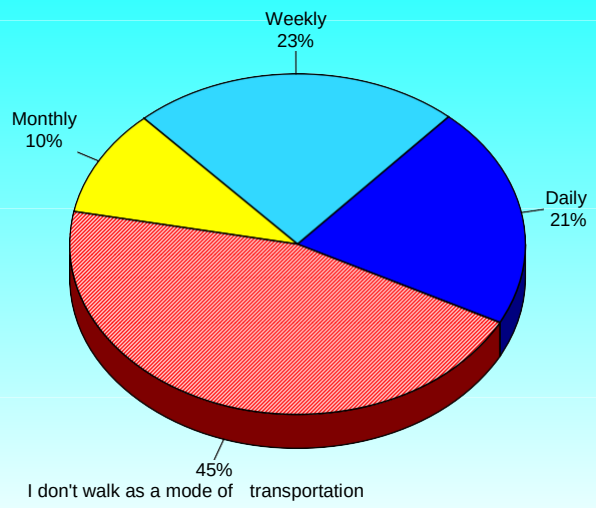
by percentage of respondents (excluding "not sure")



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q9. How often do you walk to/from work, school, shopping or for recreation?

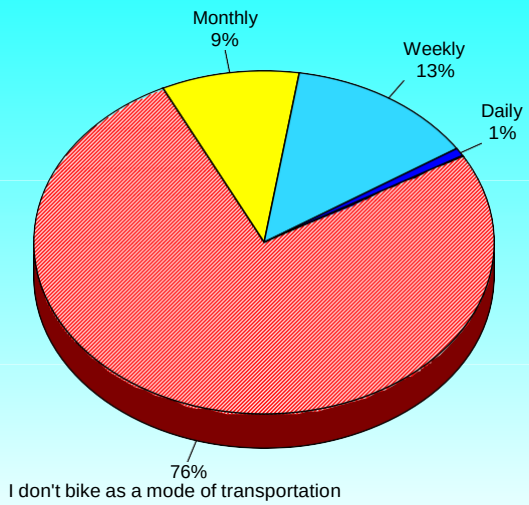
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q10. How often do you bike to/from work, school, shopping or for recreation?

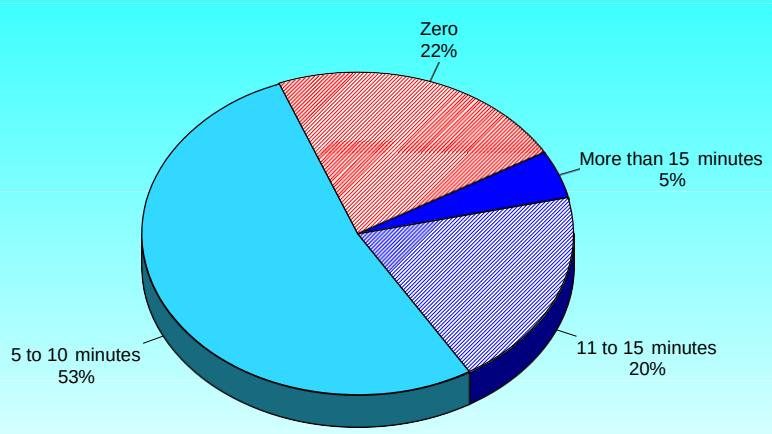
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q11. How long in minutes would you be willing to walk or ride a bike to a bus stop, then use a fixed route bus system within Lee's Summit?

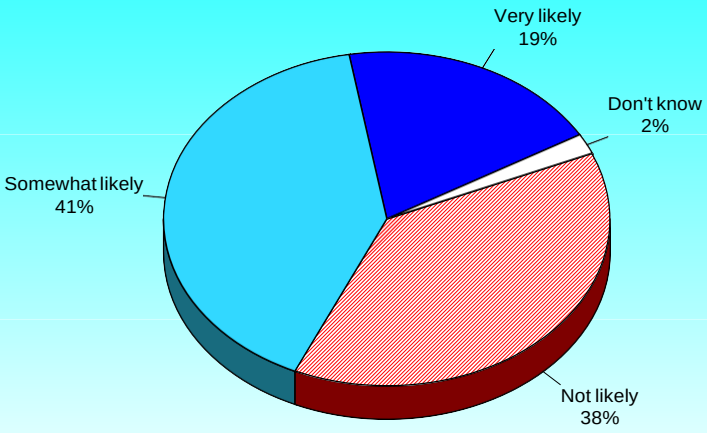
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q12. How likely would you be to use public transportation in the Lee's Summit area to go shopping, visit the doctor, or make other non-work related trips?

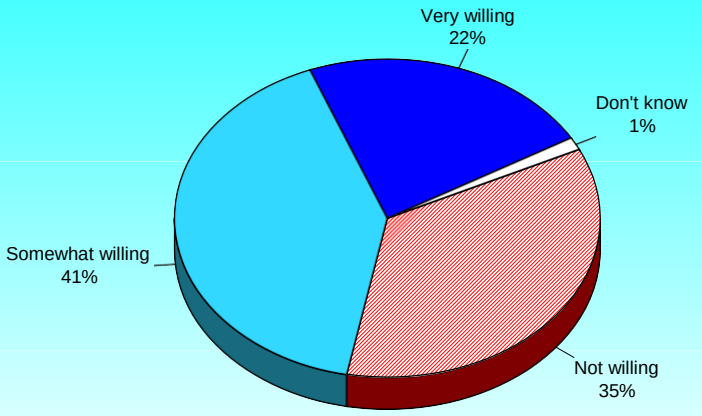
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q13. How willing would you be to drive your car (or carpool) to a location where you park your car and then use an express bus to get to your final destination?

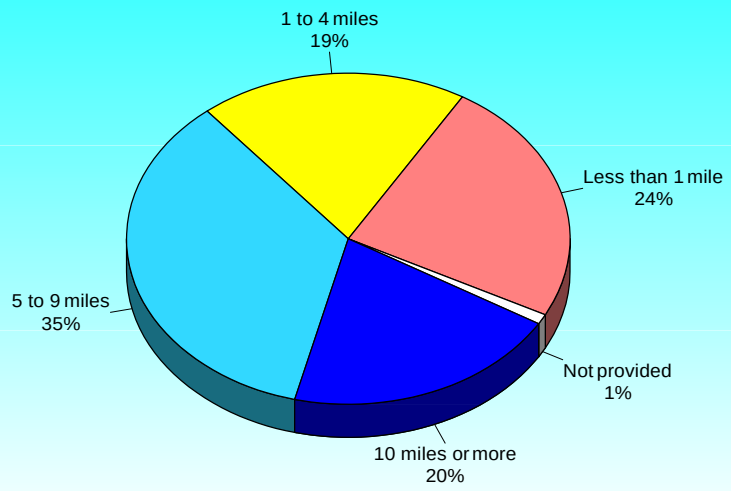
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q14. How many miles from your home would you be willing to drive so you could park your car at a park-and-ride lot and use an express bus as your primary method of transportation to and from your most frequent destination?

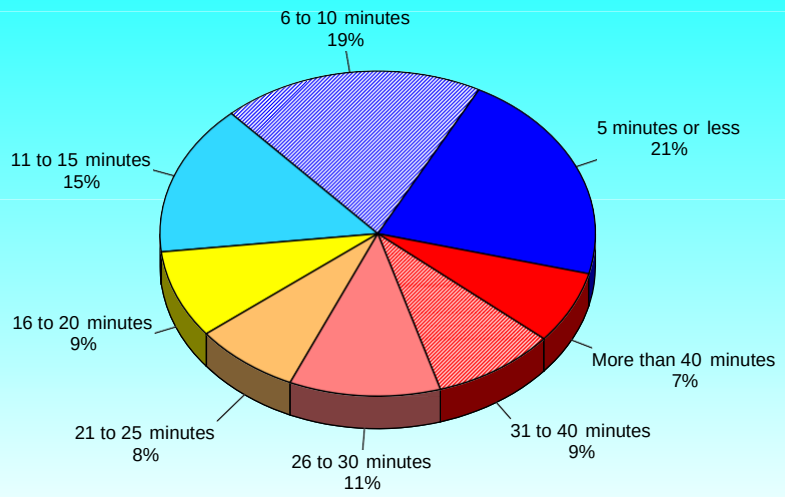
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q15. On average, how many minutes does it currently take you to travel one way to/from work, school, or your most frequent destination?

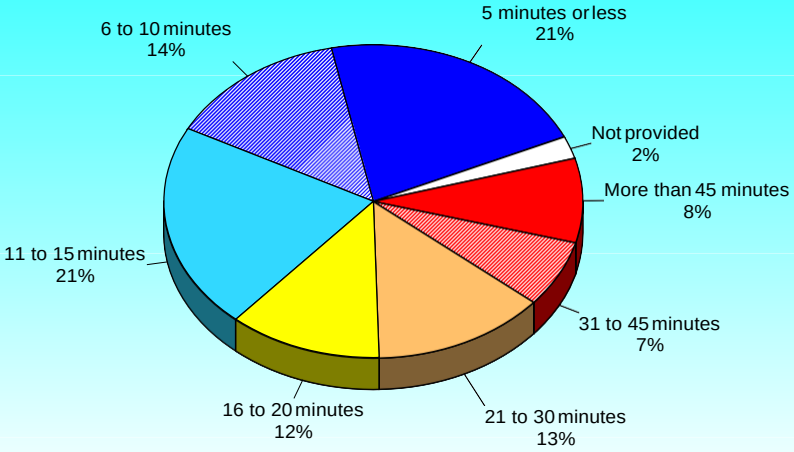
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q16. If you were able to use public transit to get to/from work, school or your most frequent destination, what is the additional maximum time in minutes that a one-way trip to your most frequent destination could take, compared with driving?

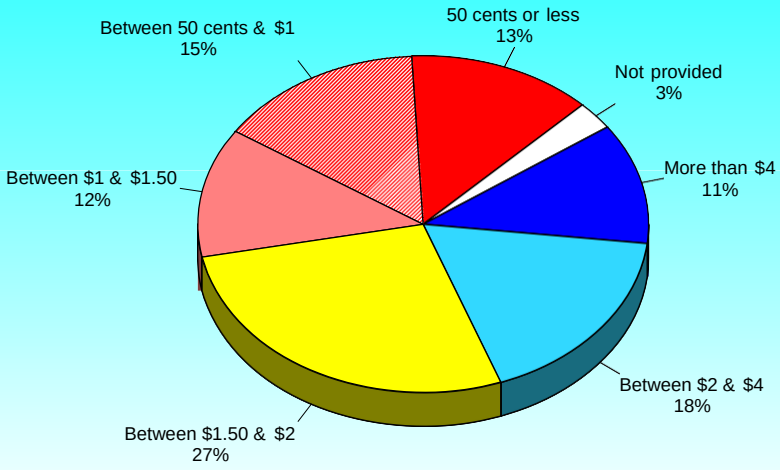
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q17. What is the most you would pay for a one-way bus trip to get to/from work, school or your most frequent destination?

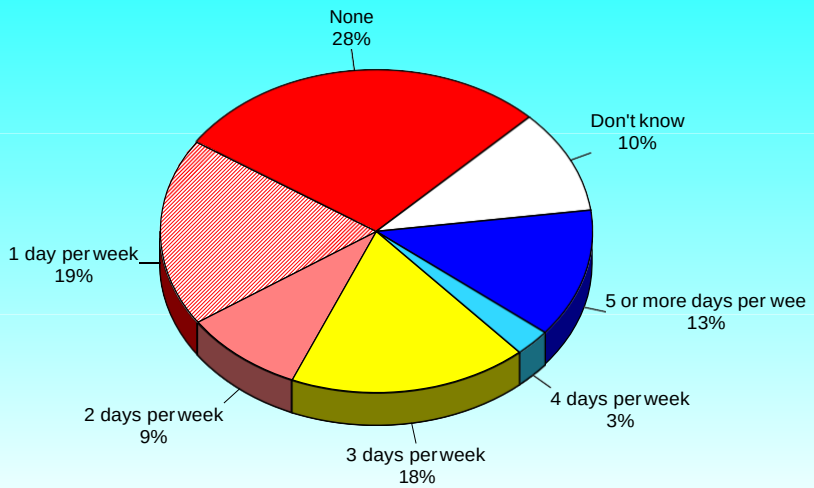
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q18. If convenient public transit were available near your home in the next few years, how many days per week would you use public transit?

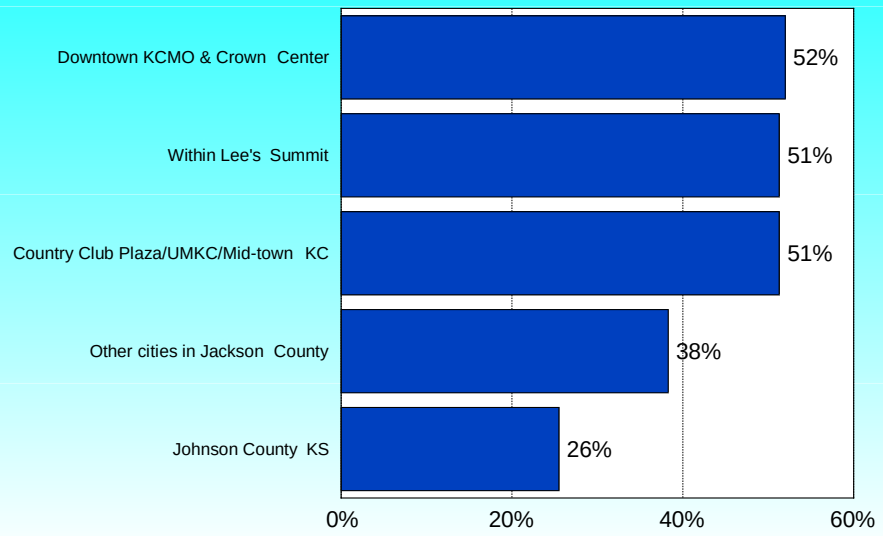
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q19. If you were going to use public transit, which of the following destinations would you be interested in using it to travel to?

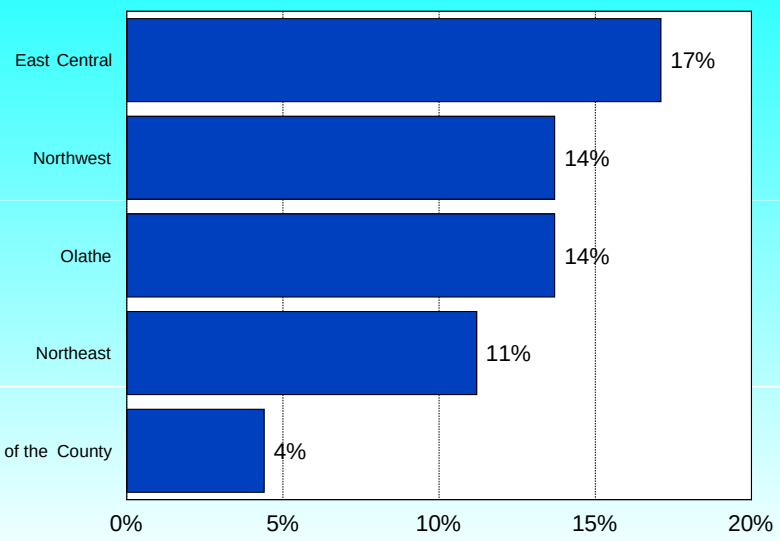
by percentage of respondents who would use public transit (multiple selections could be made)



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q19a. Where in Johnson County?

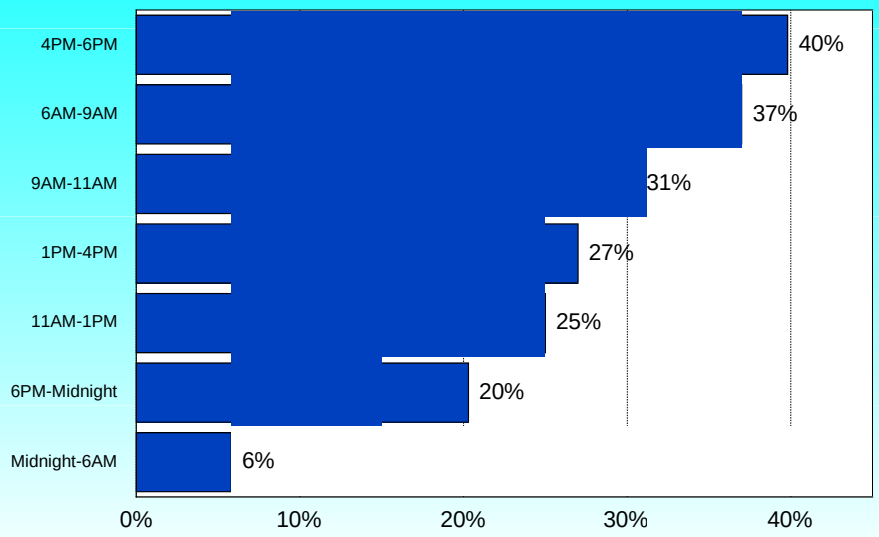
by percentage of respondents who selected "Johnson County" in Question 19 (multiple selections could be made)



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q20. What weekday time(s) would you be most interested in using public transit?

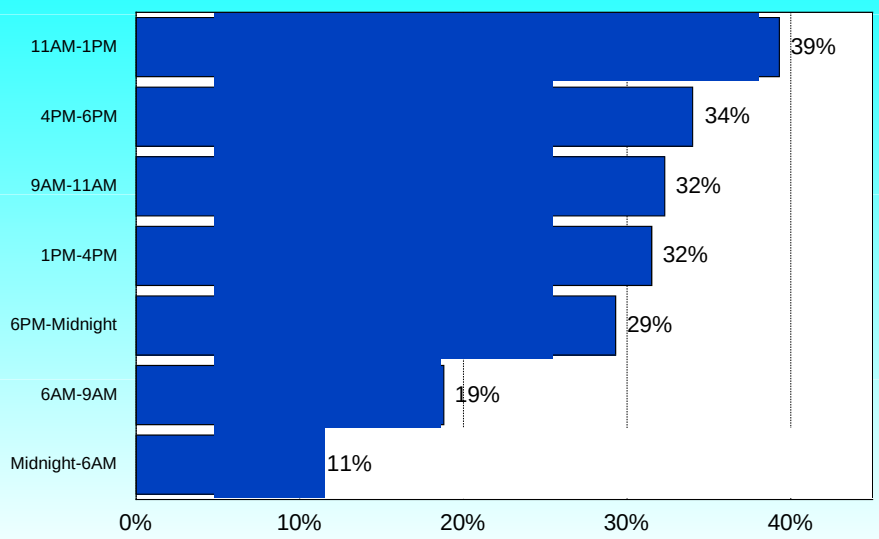
by percentage of respondents (multiple selections could be made)



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q20a. When or would you be interested in weekend public transit use?

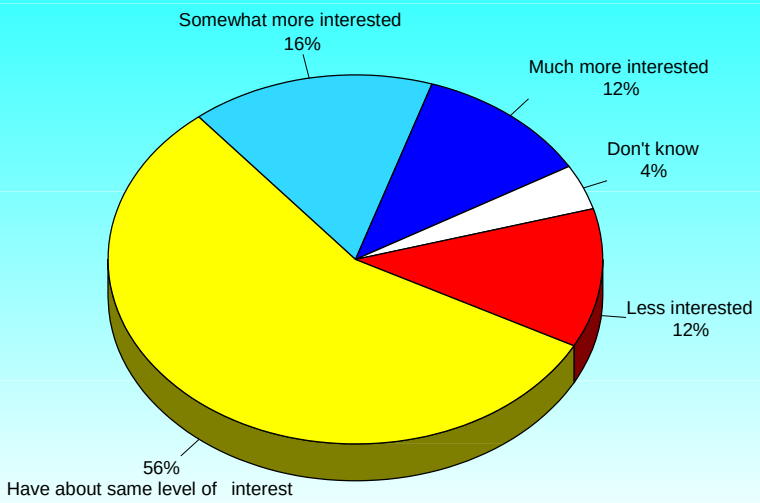
by percentage of respondents (multiple selections could be made)



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q21. How have higher gas prices affected your interest in using public transportation during the past two years?

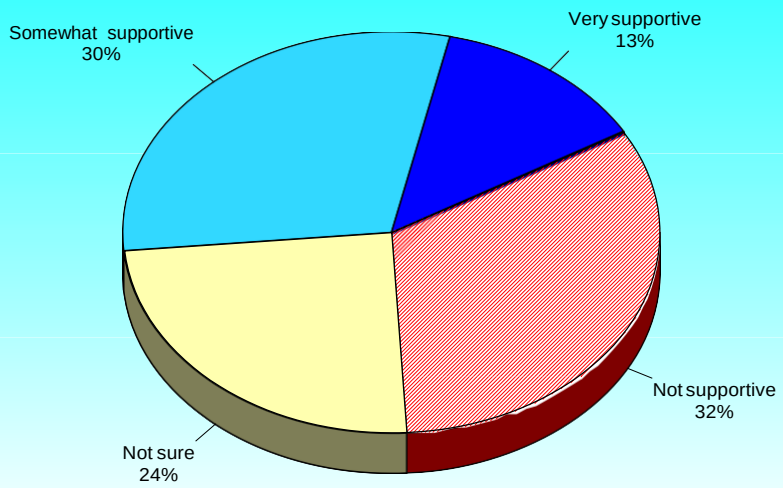
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q22. How supportive would you be of increasing the amount of your current city tax dollars that are used for public transportation?

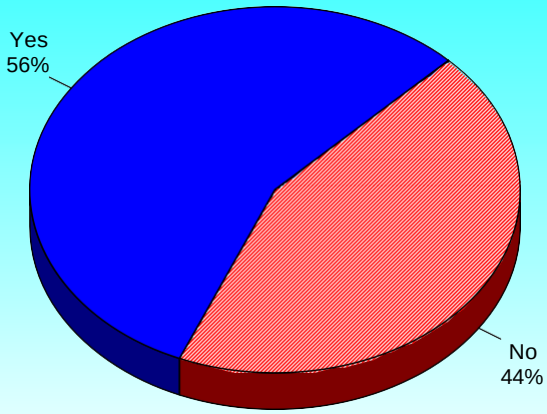
by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)

Q23. Prior to this survey, did you know that public transportation services are currently available in the City of Lee's Summit?

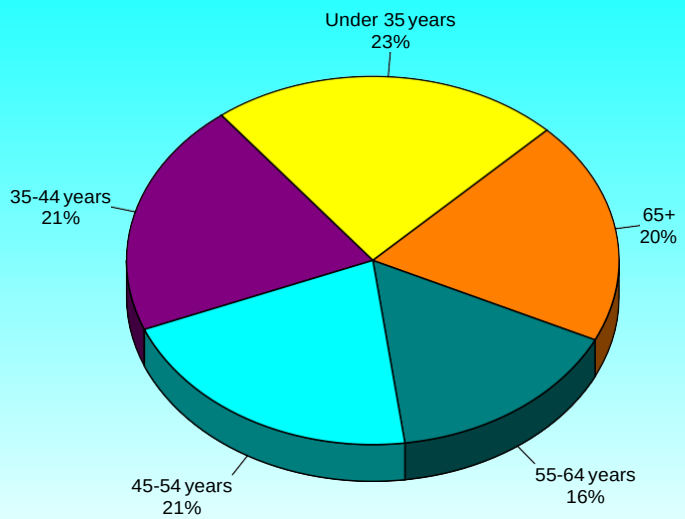
by percentage of respondents



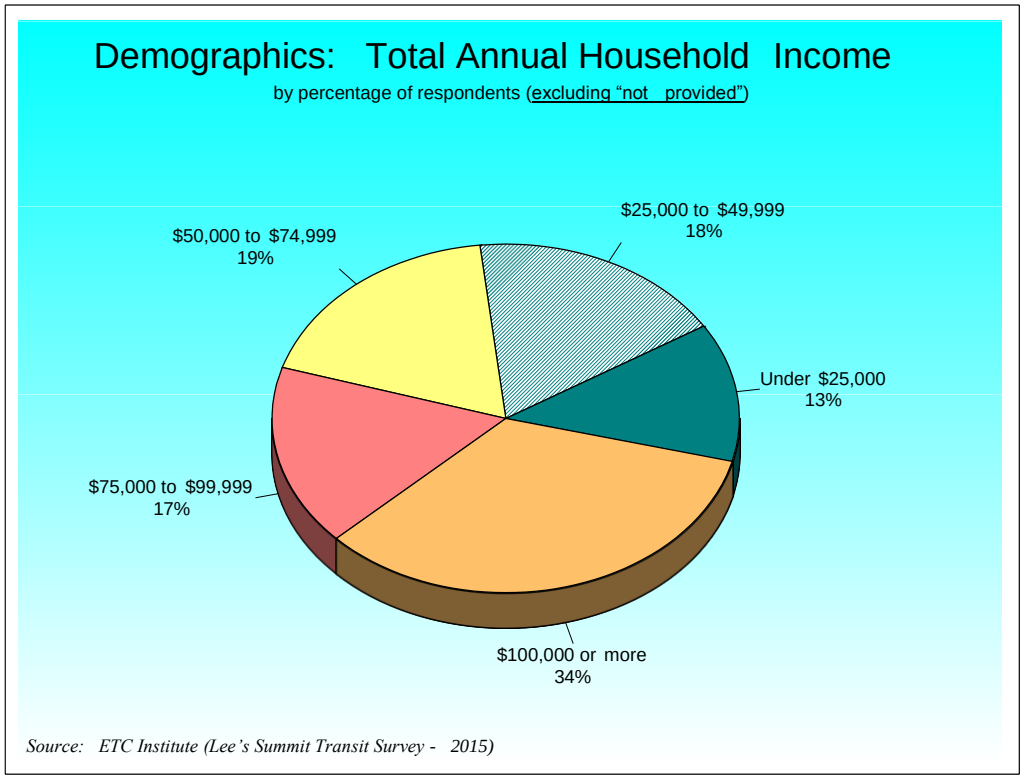
Source: ETC Institute (Lee's Summit Transit Survey - 2015)

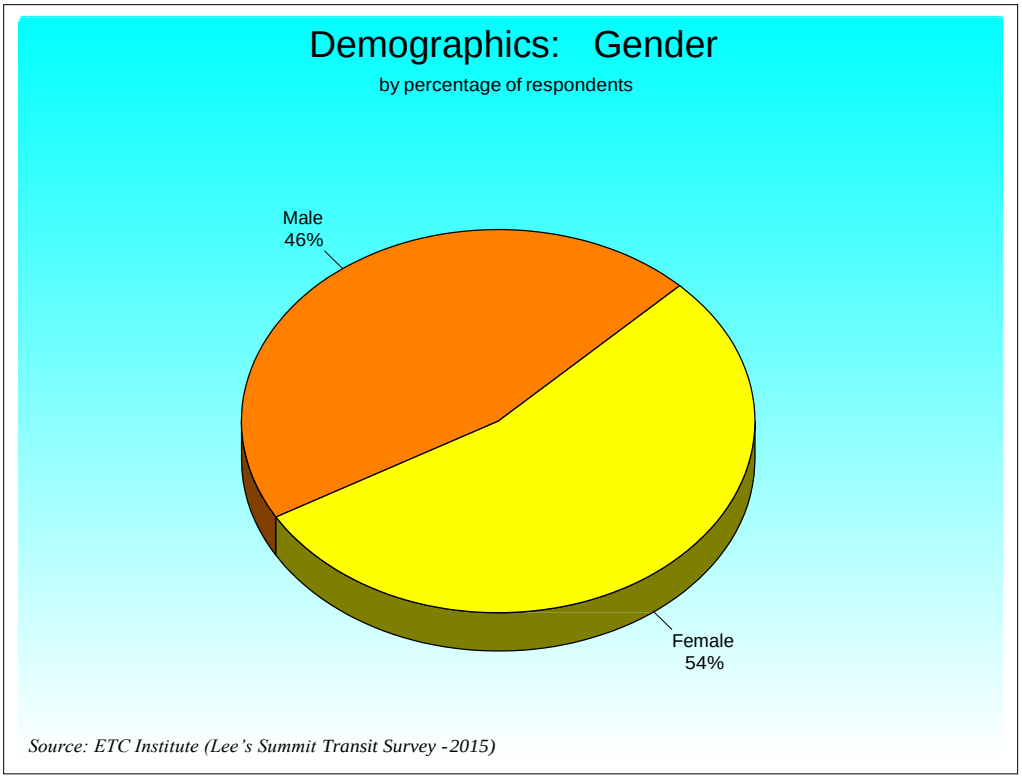
Demographics: What is your age?

by percentage of respondents



Source: ETC Institute (Lee's Summit Transit Survey - 2015)


Demographics: Total Annual Household Income
by percentage of respondents (excluding "not provided")
$25,000 to $49,999
18%
$50,000 to $74,999
19%
Under $25,000
13%
$75,000 to $99,999
17%
$100,000 or more
34%
Source: ETC Institute (Lee's Summit Transit Survey - 2015)


Demographics: Gender
by percentage of respondents
Male
46%
Female
54%
Source: ETC Institute (Lee's Summit Transit Survey -2015)

Section 2:
Tabular Data

Q1. Counting yourself, how many people regularly live in your household?

Q1 How many people live in household	Number	Percent
1	32	8.0 %
2	139	34.8 %
3	62	15.5 %
4	77	19.3 %
5 or more	90	22.5 %
Total	400	100.0 %

Q2. How many people in your household (counting yourself) are?

	Mean	Total	Sum
Q1 How many people live in household	3.22	400	1289
Q2 Under age 10	1.89	85	161
Q2 Ages 10 19	1.78	143	254
Q2 Ages 20-39	1.73	163	282
Q2 Ages 40-59	1.70	236	401
Q2 Ages 60-69	1.45	69	100
Q2 Ages 70+	1.51	65	98

Q3. Which of the following methods of transportation do you usually use to get to and from work and other frequent destinations?

Q3 Methods of transportation use	Number	Percent
Bicycle	3	0.8 %
Bus	7	1.8 %
Carpool	20	5.0 %
Car	385	96.3 %
Total	415	

Q3. Other:

Q3 Other	Number	Percent
GETS RIDES	4	12.9 %
MOTOR CYCLE	6	19.4 %
MOTORCYCLE	3	9.7 %
OATS	1	3.2 %
PUBLIC TRANSIT	1	3.2 %
VAN	5	16.1 %
WALK	11	35.5 %
Total	31	100.0 %

Q4. What is your current employment status?

Q4 Current employment status	Number	Percent
Employed outside the home	221	55.3 %
Student	20	5.0 %
Operate home based-business	33	8.3 %
Homemaker/stay-at-home parent	27	6.8 %
Not currently employed	7	1.8 %
Retired	88	22.0 %
Not provided	4	1.0 %
Total	400	100.0 %

Q5. Are any persons in your household, ages 16 and older, dependent on public transit or rides from friends or relatives because they do not have a car or do not drive?

Q5 Persons dependent on public transit	Number	Percent
Yes	57	14.3 %
No	343	85.8 %
Total	400	100.0 %

Q6. I am going to read you several purposes for a public transit system. For each one, please indicate whether you think the purpose should be very important, somewhat important, or not important in the design of transit services in Lee's Summit?

(N=400)

	Very important	Somewhat	Not important	Don't know
Q6a Help people get to & from work during the day	57.0%	28.0%	10.3%	4.8%
Q6b Help people get to non-work destinations during the day	39.3%	42.0%	17.8%	1.0%
Q6c Help people get to destinations during the evening	39.1%	43.1%	16.3%	1.5%
Q6d Provide door to door service for disabled & special needs	77.5%	15.8%	4.5%	2.3%

EXCLUDING DON'T KNOW

Q6. I am going to read you several purposes for a public transit system. For each one, please indicate whether you think the purpose should be very important, somewhat important, or not important in the design of transit services in Lee's Summit? (excluding don't know)

(N=400)

	Very important	Somewhat	Not important
Q6a Help people get to & from work during the day	59.8%	29.4%	10.8%
Q6b Help people get to non-work destinations during the day	39.6%	42.4%	17.9%
Q6c Help people get to destinations during the evening	39.7%	43.8%	16.5%
Q6d Provide door to door service for disabled & special needs	79.3%	16.1%	4.6%

Q7. If you were going to use public transit, which of the following would be the primary reason you would use it?

Q7 Primary reason to use public transit	Number	Percent
Go to/from work	121	30.3 %
Go to/from school	51	12.8 %
Go to/from medical/dental appointments	148	37.0 %
Go to/from meals, social activities, daycare	136	34.0 %
Run errands/go shopping	132	33.0 %
Would never use public transit	112	28.0 %
Don't know	4	1.0 %
Total	704	

Q8. I am going to read you some alternative modes of transportation to a single passenger vehicle. For each one, please tell me if you would be very willing, somewhat willing, or not willing to use that mode of transportation:

(N=400)

	Very willing	Somewhat	Not sure	Not willing
Q8a Bus	27.5%	40.5%	7.3%	24.8%
Q8b Carpool	18.5%	33.8%	7.5%	40.3%
Q8c Vanpool	14.8%	32.3%	7.5%	45.5%
Q8d Walk	29.5%	34.5%	3.3%	32.8%
Q8e Bicycle	21.3%	28.3%	2.5%	48.0%

EXCLUDING NOT SURE

Q8. I am going to read you some alternative modes of transportation to a single passenger vehicle. For each one, please tell me if you would be very willing, somewhat willing, or not willing to use that mode of transportation: (excluding not sure)

(N=400)

	Very willing	Somewhat	Not willing
Q8a Bus	29.6%	43.7%	26.7%
Q8b Carpool	20.0%	36.5%	43.5%
Q8c Vanpool	15.9%	34.9%	49.2%
Q8d Walk	30.5%	35.7%	33.9%
Q8e Bicycle	21.8%	29.0%	49.2%

Q9. How often do you walk to/from work, school, shopping or for recreation?

Q9 How often do you walk to/from work, school, shopping or for recreation?	Number	Percent
Daily	84	21.0 %
Weekly	93	23.3 %
Monthly	41	10.3 %
I don't walk as a mode of transportation	182	45.5 %
Total	400	100.0 %

Q10. How often do you bike to/from work, school, shopping or for recreation?

Q10 How often do you bike to/from work, school, shopping or for recreation?	Number	Percent
Daily	3	0.8 %
Weekly	54	13.5 %
Monthly	38	9.5 %
I don't bike as a mode of transportation	305	76.3 %
Total	400	100.0 %

Q11. How long in minutes would you be willing to walk or ride a bike to a bus stop, then use a fixed route bus system within Lee's Summit?

Q11 How long in minutes would you be willing to walk or ride a bike to a bus stop, then use a fixed route bus system within Lee's Summit?	Number	Percent
Zero	90	22.5 %
5 to 10 minutes	211	52.8 %
11 to 15 minutes	80	20.0 %
Over 15 minutes	19	4.8 %
Total	400	100.0 %

Q12. How likely would you be to use public transportation in the Lee's Summit area to go shopping, visit the doctor, or make other non-work related trips?

Q12 How likely would you be to use public transportation in the Lee's Summit area to go shopping, visit the doctor, or make other non-work related trips?	Number	Percent
Very likely	77	19.3 %
Somewhat	163	40.8 %
Not likely	152	38.0 %
Don't know	8	2.0 %
Total	400	100.0 %

Q13. How willing would you be to drive your car (or carpool) to a location where you park your car and then use an express bus to get to your final destination?

Q13 How willing would you be to drive your car (or carpool) to a location where you park your car and then use an express bus to get to your final destination?	Number	Percent
Very willing	90	22.5 %
Somewhat willing	165	41.3 %
Not willing	140	35.0 %
Don't know	5	1.3 %
Total	400	100.0 %

Q14. How many miles from your home would you be willing to drive so you could park your car at a park-and-ride lot and use an express bus as your primary method of transportation to and from your most frequent destination?

Q14 How many miles from your home would you be willing to drive so you could park your car at a park-and-ride lot and use an express bus as your primary method of transportation to and from your most frequent destination?	Number	Percent
Less than 1 mile	96	24.0 %
1 to 4 miles	78	19.5 %
5 to 9 miles	141	35.3 %
10 miles or more	81	20.3 %
Not provided	4	1.0 %
Total	400	100.0 %

Q15. On average, how many minutes does it currently take you to travel one way to/from work, school, or your most frequent destination?

Q15 On average, how many minutes does it currently take you to travel one one to/from work, school, or your most frequent destination?	Number	Percent
5 minutes or less	85	21.3 %
6 to 10 minutes	77	19.3 %
11 to 15 minutes	60	15.0 %
16 to 20 minutes	35	8.8 %
21 to 25 minutes	32	8.0 %
26 to 30 minutes	44	11.0 %
31 to 40 minutes	37	9.3 %
More than 40 minutes	29	7.3 %
Not provided	1	0.3 %
Total	400	100.0 %

Q16. If you were able to use public transit to get to/from work, school or your most frequent destination, what is the additional maximum time in minutes that a one-way trip to your most frequent destination could take, compared with driving?

Q16 What is the additional maximum time in minutes that a one-way trip to your most frequent destination could take, compared with driving?	Number	Percent
5 minutes or less	86	21.5 %
6 to 10 minutes	57	14.3 %
11 to 15 minutes	85	21.3 %
16 to 20 minutes	47	11.8 %
21 to 30 minutes	54	13.5 %
31 to 45 minutes	28	7.0 %
More than 45 minutes	34	8.5 %
Not provided	9	2.3 %
Total	400	100.0 %

Q17. What is the most you would pay for a one-way bus trip to get to/from work, school or your most frequent destination?

Q17 What is the most you would pay for a ONE-WAY bus trip to get to/from work, school or your most frequent destination?	Number	Percent
50 cents or less	53	13.3 %
Between 50 cents and $1	60	15.0 %
Between $1 and $1.50	49	12.3 %
Between $1.50 and $2	110	27.5 %
Between $2 and $4	71	17.8 %
More than $4	46	11.5 %
Not provided	11	2.8 %
Total	400	100.0 %

Q18. If convenient public transit were available near your home in the next few years, how many days per week would you use public transit?

Q18 If convenient public transit were available near your home in the next few years, how many days per week would you use public transit?	Number	Percent
None	113	28.3 %
1 day per week	75	18.8 %
2 days per week	37	9.3 %
3 days per week	71	17.8 %
4 days per week	11	2.8 %
5 or more days per week	51	12.8 %
Don't know	42	10.5 %
Total	400	100.0 %

Q19. If you were going to use public transit, which of the following destinations would you be interested in using it to travel to?

Q19 Destinations interested in	Number	Percent
Within Lee's Summit	205	51.3 %
Other cities in Jackson County	153	38.3 %
Country Club Plaza/UMKC/Mid-town KC	205	51.3 %
Downtown KCMO & Crown Center	208	52.0 %
Johnson County KS	102	25.5 %
Other	91	22.8 %
Total	964	

Q19. Other

Q19 Other	Number	Percent
AIRPORT	1	2.6 %
ALL	3	7.9 %
CERNER	1	2.6 %
CORPORATE WOODS	2	5.3 %
CORPORATE WOODS	2	5.3 %
FIRST FRIDAY DOWNTOWN	1	2.6 %
NORTH KC	2	5.3 %
SPORTS COMPLEX	6	15.8 %
SPRINT CAMPUS	2	5.3 %
SPRINT CENTER AND TRUMAN	1	2.6 %
SPRINT CENTER, LEGENDS	2	5.3 %
TRUMAN COMPLEX	1	2.6 %
TRUMAN SPORTS	2	5.3 %
TRUMAN SPORTS COMPLEX	12	31.6 %
Total	38	100.0 %

Q19a. Where in Johnson County?

Q19a Where in Johnson County	Number	Percent
Northeast	23	11.2 %
Northwest	28	13.7 %
East Central	35	17.1 %
Olathe	28	13.7 %
Other parts of the County	9	4.4 %
Total	123	

Q20. What weekday time(s) would you be most interested in using public transit?

Q20 Time of day most interested	Number	Percent
6AM-9AM	148	37.0 %
9AM-11AM	122	30.5 %
11AM-1PM	100	25.0 %
1PM-4PM	108	27.0 %
4PM-6PM	159	39.8 %
6PM-Midnight	81	20.3 %
Midnight-6AM	23	5.8 %
None	77	19.3 %
Total	818	

Q20a. When or would you be interested in weekend public transit use?

Q20a Time of day most interested weekend transit use	Number	Percent
6AM-9AM	75	18.8 %
9AM-11AM	129	32.3 %
11AM-1PM	157	39.3 %
1PM-4PM	126	31.5 %
4PM-6PM	136	34.0 %
6PM-Midnight	117	29.3 %
Midnight-6AM	44	11.0 %
None	109	27.3 %
Total	893	

Q21. How have higher gas prices affected your interest in using public transportation during the past two years? Would you say you are:

Q21 How have gas prices affected interest	Number	Percent
Much more interested	47	11.8 %
Somewhat more interested	63	15.8 %
Have about same level of interest	226	56.5 %
Are less interested	48	12.0 %
Don't know	16	4.0 %
Total	400	100.0 %

Q22. How supportive would you be of increasing the amount of your current city tax dollars that are used for public transportation?

Q22 Support increasing city tax for public transportation	Number	Percent
Very supportive	53	13.3 %
Somewhat supportive	119	29.8 %
Not sure	98	24.5 %
Not supportive	130	32.5 %
Total	400	100.0 %

Q23. Prior to receiving this call, did you know that public transportation services are currently available in the City of Lee's Summit?

Q23 Know public transportation services available	Number	Percent
Yes	225	56.3 %
No	175	43.8 %
Total	400	100.0 %

Q24. Do you have any additional feedback regarding transit and desired transit services in Lee's Summit that were not discussed in the survey?

- Need to reallocate funds not raise tax dollars.
- More information needs to provide.
- CITY PLANNING HAS TO ALLOW FOR PEOPLE TO ACCESS SHOPPING, ETC, WITHIN WALKING DISTANCE, CITY PLANNING NEEDS TO IMPROVE FOR LONG TERM PUBLIC TRANSPORTATION. IT'S ALL ABOUT SUSTAINABLE LIVING.
- Sidewalks to get to the bus stop would be safer.
- Need to improve walking in Lee's Summit.
- Build shelters for the bus stops.
- Support for those who have to get to work and have no other means to get there and for disabled.
- Depends on destinations and easy to get to. Treat it where it is convenient to get where you need to go.
- Hurry up and get it further out. And better times for pickups, and cheaper prices.
- Focus should be on transit dependent customers.

Q24. Do you have any additional feedback regarding transit and desired transit services in Lee's Summit that were not discussed in the survey? (cont.)

- Very difficult to walk safely in Lee's Summit. Need to improve pedestrian's ability to walk to grocery stores.
- Weekends (Friday, Saturday) express buses in evenings, going to Major entertainment Districts. Would be willing to pay $10.00 round trip.
- Improve pedestrian network within Lee's Summit.
- I think it's very important particularly for people getting to and from work.
- Better advertising of the bus.
- More advertising!!!! I know nothing about it and I don't think my neighbors do either!
- Would like to see trolley go to downtown, shopping areas, Longview to Legacy Park and to John Knox Village.
- The Lee's Summit circulator needs to expand its coverage area, and cutoff times need to be expanded, as well.
- More taxis.
- Get more information out about public transit services that are currently available.
- Should be better sidewalks and bike lanes.
- Not one has ever paid off. Buses are run empty very often.
- Good thing to study.
- Light rail service to and from Lee's Summit bus to the train service and trolley service in Lee's Summit.
- Take a preference towards connectivity with other regions outside of Lee's Summit.
- Need to have more visibility, more advertising and more routes.
- Would like an express to Warrensburg.
- Would be more interested in a convenient train system to get to/from downtown.
- More information.
- Think of services should be self-supporting and government not pay for it.
- WOULD LIKE MORE ADVERTISING THEIR SERVICES A LITTLE MORE AND HAVE MORE INFORMATION OF OATS.
- Would like airport transit.
- Would like bus service all over the city 7 days a week & have round the clock service

Q24. Do you have any additional feedback regarding transit and desired transit services in Lee's Summit that were not discussed in the survey? (cont.)

- Lee's Summit is too small for a large amount of public transportation.
- Please no bus line in Lee's Summit.
- Do more advertising.
- WOULD LOVE TO HAVE A TROLLEY OR PUBLIC RAIL SYSTEM.
- Commuter bus should have longer hours.
- More biking trails and lanes.
- Make it more available for seniors.
- Interested in commuter rail line.
- Send public more info. I did not know we even had transit here.
- If there was reliable and convenient to the new trolley then I would consider it. Especially for work purposes.
- Need public transportation in Lee's Summit.
- More of tax services.
- I would like to see bicycles encouraged more.
- No interest at all. Strongly opposed.
- Better bus stop signage.
- It be good to have public transit.
- I would be interested in seeing public transit closer to retirement communities.
- Would like easier access to the transit system, travel to airport & to Royals & Chiefs games
- Privatization of Transit services.
- It would be very nice if we could have it around the clock.
- Very important to have public transportation.
- Would like to have more hours on weekends.
- They cross into Independence and Blue Springs, and I would like to see that happen.
- I would like to see rail cars put in.

Q24. Do you have any additional feedback regarding transit and desired transit services in Lee's Summit that were not discussed in the survey? (cont.)

- OATS needs to be more available to the elderly and handicapped other than taking others where they need to go.
- I would like to see the city pursue it.
- Make better connections to other cities in Metro area.
- We do not need in our area.
- Light rail into KC.
- Would like to have transportation spread out more in lee summit.
- Street car project.
- Public transit is something that is necessary to look into.
- I feel like my town does not need to expand on public transit in the Lee Summit area. I feel like the tax payers are already subsidizing more than enough things in the area and we don't need more public transit at this time.
- Don't need it.
- Have a light rail- that goes to downtown, KCI, and North Kansas City- like small rail system.
- We don't need it.
- Would like to see service that would connect with major areas in the KC metropolitan area.
- I had proposed a system to the city- to have a commuter service or a train- that runs on a grid- and it has stops in between say Oak Grove and Kansas City- and when people needs to get off on their stop they are able to get off the train- and once off the train there are buses, or vans there to take the passengers somewhere else.
- Needs to become more available
- Downtown independence as well.
- Need to have buses available all day long.
- No tax, not to miss trash.
- Light Rail.
- Rail line, I would like see it.
- More lines.
- No need for public transportation in Lee's Summit.
- Rail Line to the airport.

Q24. Do you have any additional feedback regarding transit and desired transit services in Lee's Summit that were not discussed in the survey? (cont.)

- Does not want publicly funded public transportation system.
- Way to connect to the KC metro system.
- Critical that other transits connect with the lee summit transit. Trolley to Airport.
- If they had bus goes to airport.
- Necessary for the people who need it.
- Amtrak stop in area.
- Need to go to more area's in Lee's Summit.
- Getting the rail system too come out in Lee's Summit.
- More advertising.
- Monorail or a train, rickshaw.
- Add a trolley.
- Public transportation is needed but doubt if it takes hold to go anywhere.
- Do not use taxes for public transit. It should be self-sufficient.
- Airport Express chain and light rail.
- Would be interested if work downtown.
- Did not know where there was any form of public transportation in Lee's Summit and the only form of public transportation was in the Truman Lakewood area but that's part of Kansas City.
- Too far out in city.
- Never thought about public transportation.
- LIGHT RAIL TO ST. LOUIS FROM OTHER AREAS OF KC OR LEE'S SUMMIT.
- SAFETY IS A CONCERN.
- Important for any system to be efficient.
- SPORTS COMPLEXES ARE GOOD AND DOWN TOWN FOR BUSINESS ARE GOOD - SECURITY ALSO LIKE TO SEE MORE MY EARNING TAX DEVOTED TO LEE'S SUMMIT TRANSIT
- VERY IMPORTANT FOR SENIORS AND LOW INCOME.

Q24. Do you have any additional feedback regarding transit and desired transit services in Lee's Summit that were not discussed in the survey? (cont.)

- Don't think public transit is necessary for Lee's Summit.
- Everybody needs to go to Europe to get an idea how to do this.
- Good idea.
- A drunk cab or something similar for the community to prevent drunk driving.
- OATS IS VERY HELPFUL. VERY SATISFIED.
- We have perfect rail line; we need to get it going.

Q25. What is your zip code?

Q25 Zip code	Number	Percent
64063	86	21.5 %
64064	56	14.0 %
64081	124	31.0 %
64082	49	12.3 %
64086	84	21.0 %
69081	1	0.3 %
Total	400	100.0 %

Q26. In which city do you work, go to school, or generally travel to the most frequently outside your home?

Name of City	Number
Bates City	4
Blue Springs	17
Gilman City	1
Gladstone	1
Grandview	3
Greenwood	1
Harrisonville	2
Independence	20
Johnson County	1
Kansas City, KS	6
Kansas City MO	68
Leawood	6
Lee's Summit	191
Lenexa	4
Merriam	1
Mission	1
North Kansas City	2
Olathe	5
Overland Park	26
Plaza	1
Raymore	4
Raytown	2
Sedalia	3
Shawnee	1
Warrensburg	6
Whiteman Air Force Base	3
Not provided	20
Total	400

Q26-1. What is the zip code for that destination?

Q26 Zip code	Number	Percent
60207	5	1.7 %
64011	4	1.4 %
64012	1	0.3 %
64014	5	1.7 %
64015	8	2.7 %
64030	4	1.4 %
64034	1	0.3 %
64050	4	1.4 %
64051	3	1.0 %
64055	2	0.7 %
64057	2	0.7 %
64063	35	12.0 %
64064	9	3.1 %
64081	56	19.2 %
64082	18	6.2 %
64083	2	0.7 %
64084	1	0.3 %
64085	1	0.3 %
64086	45	15.5 %
64093	5	1.7 %
64105	1	0.3 %
64106	6	2.1 %
64108	2	0.7 %
64109	1	0.3 %
64110	3	1.0 %
64111	4	1.4 %
64112	2	0.7 %
64113	1	0.3 %
64114	8	2.7 %
64119	1	0.3 %
64120	1	0.3 %
64125	1	0.3 %
64128	1	0.3 %
64129	2	0.7 %
64130	4	1.4 %
64133	2	0.7 %
64134	4	1.4 %
64137	1	0.3 %
64147	1	0.3 %
64151	2	0.7 %
64412	1	0.3 %
64642	1	0.3 %
64701	1	0.3 %
65305	3	1.0 %
66061	3	1.0 %
66102	1	0.3 %
66105	1	0.3 %
66160	2	0.7 %
66210	7	2.4 %
66211	2	0.7 %
66212	1	0.3 %
66214	1	0.3 %
66218	1	0.3 %
66219	2	0.7 %
66251	4	1.4 %
66612	1	0.3 %
Total	291	100.0 %

Q27. What is your age?

Q27 What is your age?	Number	Percent
Under 35 years	92	23.0 %
35 to 44 years	82	20.5 %
45 to 54 years	84	21.0 %
55 to 64 years	64	16.0 %
65+	78	19.5 %
Total	400	100.0 %

Q28. Would you say your total annual household income is:

Q28 Would you say your total annual household income is:	Number	Percent
Under $25,000	32	8.0 %
$25,000 to $49,999	45	11.3 %
$50,000 to $74,999	47	11.8 %
$75,000 to $99,999	42	10.5 %
$100,000 or more	86	21.5 %
Not provided	148	37.0 %
Total	400	100.0 %

EXCLUDING NOT PROVIDED

Q28. Would you say your total annual household income is: (without "not provided")

Q28 Would you say your total annual household income is:	Number	Percent
Under $25,000	32	12.7 %
$25,000 to $49,999	45	17.9 %
$50,000 to $74,999	47	18.7 %
$75,000 to $99,999	42	16.7 %
$100,000 or more	86	34.1 %
Total	252	100.0 %

Q29. Respondent's gender:

Q29 Gender	Number	Percent
Male	183	45.8 %
Female	217	54.3 %
Total	400	100.0 %

Section 3:
Survey Instrument

2015 Lee's Summit Transit Survey

date:_____ interviewer:_____ phone: _____

This is_____and I'm calling from ETC Institute on behalf of the City of Lee's Summit. The reason I am calling is that the City is studying improvements to public transportation services. Your help is needed to assess how public transportation should be designed to best serve the needs of residents. Would you be willing to answer a few questions, which should take about 10-mintues?

Do you live inside the city limits of Lee's Summit?
If YES – continue
If NO – end the interview

---

1. **Counting yourself, how many people regularly live in your household? _____**

2. **How many people in your household (counting yourself) are?**

____ Under age 10	____ Ages 40-59
____ Ages 10-19	____ Ages 60-69
____ Ages 20-39	____ Ages 70+

3. **Which of the following methods of transportation do you usually use to get to and from work and other frequent destinations?** (Check all that are mentioned)
   - ___(1) Bicycle
   - ___(2) Bus
   - ___(3) Van pool
   - ___(4) Carpool
   - ___(5) Car
   - ___(6) Other: _____ _____

4. **What is your current employment status?**
   - ___(1) Employed outside the home
   - ___(2) Student
   - ___(3) Operate home-based business
   - ___(4) Homemaker/Stay-at-home parent
   - ___(5) Not currently employed
   - ___(6) Retired

5. **Are any persons in your household, ages 16 and older, dependent on public transit or rides from friends or relatives because they do not have a car or do not drive?**
   - ___(1) Yes
   - ___(2) No

6. I am going to read you several purposes for a public transit system. For each one, please indicate whether you think the purpose should be very important, somewhat important, or not important in the design of transit services in Lee's Summit?

Purpose	Very Important	Somewhat Important	Not Important
(A) Help people get to and from work during the day ..	1	2	3
(B) Help people get to non-work destinations during the day	1	2	3
(C) Help people get to work and non-work destinations during the evening	1	2	3
(D) Provide "door to door" service for persons with disabilities and special needs .	1	2	3

7. If you were going to use public transit, which of the following would be the primary reason you would use it? If they currently use transit, ask: what is your primary reason for using public transit? [Check all that apply]

___(1) Go to/from work
___(2) Go to/from school
___(3) Go to/from medical/dental appointments
___(4) Go to/from meals, social activities, daycare
___(5) Run errands/go shopping, etc.
___(6) Would never use public transit

8. I am going to read you some alternative modes of transportation to a single passenger vehicle. For each one, please tell me if you would be very willing, somewhat willing, or not willing to use that mode of transportation:

	Very Willing	Somewhat Willing	Not Sure	Not Willing
(A) Bus	1	2	3	4
(B) Carpool	1	2	3	4
(C) Vanpool	1	2	3	4
(D) Walk	1	2	3	4
(E) Bicycle	1	2	3	4

9. How often do you walk to/from work, school, shopping or for recreation?

___ (1) Daily
___ (2) Weekly
___ (3) Monthly
___ (4) I don't walk as a mode of transportation

10. How often do you bike to/from work, school, shopping or for recreation?

___ (1) Daily
___ (2) Weekly
___ (3) Monthly
___ (4) I don't bike as a mode of transportation

11. How long in minutes would you be willing to walk or ride a bike to a bus stop, then use a fixed route bus system within Lee's Summit?

____(1) Zero
____(2) Five to ten minutes
____(3) Eleven to fifteen minutes
____ (9) Over fifteen

12. How likely would you be to use public transportation in the Lee's Summit area to go shopping, visit the doctor, or make other non-work related trips?

____(1) Very likely
____(2) Somewhat likely
____(3) Not likely
____(9) Don't know

13. How willing would you be to drive your car (or carpool) to a location where you park your car and then use an express bus to get to your final destination?

____(1) Very willing
____(2) Somewhat willing
____(3) Not willing
____(9) Don't know

14. How many miles from your home would you be willing to drive so you could park your car at a park-and-ride lot and use an express bus as your primary method of transportation to and from your most frequent destination?

_____miles

15. On average, how many minutes does it currently take you to travel one way to/from work, school, or your most frequent destination?

_____minutes each way to travel to the destination

16. If you were to use public transit to get to/from work, school or your most frequent destination, what is the additional maximum time in minutes that a one-way trip to your most frequent destination could take, compared with driving? (tell the respondent to include the time it takes to get on a bus or other form of transit from their home)

_____additional minutes each way on transit

17. What is the most you would pay for a ONE-WAY bus trip to get to/from work, school or your most frequent destination?

Would pay $_____for a ONE WAY trip

18. If convenient public transit were available near your home in the next few years, how many days per week would you use public transit?

____(0) None
____(1) 1 day per week
____(2) 2 days per week
____(3) 3 clays per week
____(4) 4 days per week
____(5) 5 or more days per week

19. If you were going to use public transit, which of the following destinations would you be interested in using it to travel to? (READ LIST and CHECK ALL THAT APPLY)

_____(1) To travel within Lee's Summit
_____(2) To go to/from other cities in Jackson County
_____(3) To go to/from the Country Club Plaza/UMKC/Mid-town Kansas City
_____(4) To go to/from downtown Kansas City, MO and Crown Center
_____(5) To go to/from Johnson County, Kansas – ask 19a
_____(6) Other: (e.g. Cerner, Corporate Woods, Sprint Campus, Truman Sports Complex)

_____

19a. where in Johnson County?

___(1) Northeast JOCO (North of 1-435 and East of 1-35)
___(2) Northwest JOCO (West of 1-35 and North of K-10)
___(3) East Central JOCO (Between 1-435 and 135th Street and East of 1-35
___(4) Olathe
___(5) Other parts of the County (Gardner, Spring Hill, Stanley, etc.)

20. What <u>weekday</u> time(s) would you be most interested in using public transit? [Check all that are mentioned]

___(1) 6:00 am-9:00 am
___(2) 9:00 am-11:00 am
___(3) 11:00 am-1:00 pm
___(4) 1:00 pm- 4:00 pm
___(5) 4:00 pm-6:00 pm
___(6) 6:00 pm-midnight
___(7) midnight-6:00 am
___(9) None

20a. when or would you be interested in <u>weekend</u> public transit use? [Check all that are mentioned]

___(1) 6:00 am-9:00 am
___(2) 9:00 am-11:00 am
___(3) 11:00 am-1:00 pm
___(4) 1:00 pm- 4:00 pm
___(5) 4:00 pm-6:00 pm
___(6) 6:00 pm-midnight
___(7) midnight-6:00 am
___(9) None

21. How have changes in gas prices affected your interest in using public transportation during the past two years? Would you say you are:

_____(1) Much more interested in using public transportation
_____(2) Somewhat more interested
_____(3) Have about the same level of interest
_____(4) Are less interested
_____(9) Don't know

22. How supportive would you be of increasing the amount of your current city tax dollars that are used for public transportation? [if asked, current funding is used for Route 152 Lee's Summit Express and Lee's summit MetroFlex, along with OATS (not limited to elderly or disabled persons)]

___(1) Very supportive
___(2) Somewhat supportive
___(3) Not sure
___(4) Not supportive

23. Prior to receiving this call, did you know that public transportation services are currently available in the City of Lee's Summit?

___(1) Yes
___(2) No

24. Could you provide any feedback regarding transit and desired transit services in Lee's Summit that were not discussed in the Survey?

_____

_____

DEMOGRAPHICS

25. What is your zip code? _____

26. In which city do you work, go to school, or generally travel to the most frequently outside your home?

Name of City: _____

What is the zip code for that destination? _____

27. What is your age?

___(1) Under 20
___(2) 20 to 24
___(3) 25 to 34
___(4) 35 to 44
___(5) 45 to 54
___(6) 55 to 64
___(7) 65 to 74
___(8) 75+

28. Would you say your total annual household income is:

___(1) Under $25,000
___(2) $25,000 to $49,999
___(3) $50,000 to $74,999
___(4) $75,000 to $99,999
___(5) $100,000 to $124,999
___(6) $125,000 or more

29. Respondent's gender:

____(1) Male
____(2) Female

THANKS FOR YOUR TIME - THIS CONCLUDES THE SURVEY.