PUBLIC TRANSPORTATION FEASIBILITY STUDY

Final Report

July 2024

Approved by the Moore City Council on September 16, 2024.

Mark Hamm, Mayor

Vanessa Kemp, City Clerk

Contents

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1 Community Context

Introduction

The *Public Transportation Feasibility Study* is a process initiated by the City of Moore in response to community requests to evaluate public transportation needs. While several transit services currently exist, these services are not open to all populations or are not widely available throughout the city.

The Public Transportation Feasibility Study began in summer 2023. The goal of the study is to determine the viability of public transportation in Moore, and if feasible, developing recommendations to implement new services. In broad terms, the process has included:

- Public and stakeholder participation including public open house meetings, a statistically-valid resident survey, stakeholder interviews, and stakeholder group meetings.
- Creation and evaluation of multiple alternatives for transit service, based on industry standard metrics and locally-specified criteria.
- Viable alternatives, development of organizational and operations plans, a financial plan, and recommendations for regional connectivity.

Transportation issues, ideas, and challenges identified by Moore residents and key stakeholders formed the basis for the analysis included in this study. Recommended services are designed to best meet the needs of those living, working, or visiting the city who may lack transportation options, or who may desire safe and affordable alternatives to driving.

While the study focuses on needs with the City of Moore, the city's location within the Oklahoma City metropolitan area is a key consideration for evaluating transportation needs and regional connectivity. Opportunities to improve these connections, particularly to immediate neighbors of Oklahoma City to the north and Norman to the south, are considered as part of the study.

Community Overview

Moore is a growing suburban community in central Oklahoma, located in northern Cleveland County and sandwiched between Oklahoma City and Norman. According to the city's comprehensive plan, Envision Moore 2040, "Moore is ideally situated for additional growth. Families and retirees are drawn to this city that offers low cost of living, a family-friendly environment, great schools, and easy access to employment and the OKC region."

The study area for this project is the City of Moore, as shown in Figure 1. However, because local transportation needs often cross jurisdictional boundaries, nearby services and connections are evaluated as well.

Moore has a total official population of 62,793 as of the 2020 Census, and an estimated 2022 population of 63,223. This represents a growth of 14.8% since 2010 and 53.7% since 2000. This growth is remarkable, a demonstration of the city's resiliency after experiencing devastating tornadoes in 1999, 2003, and 2013. This rapid growth mirrors much of the Oklahoma City region, which as a whole (based on the Census metropolitan statistical area designation) has grown by 18.0% since 2010 and 36.4% since 2000.

Moore is nearly 22 square miles and has a population of 2,862 per square mile. The city was incorporated in 1893, but until the 1960s consisted primarily of its historic center (Old Town) bound roughly by Telephone Road, NW/NE 3rd Street, Turner Avenue, and SW/SE 4th Street. Rapid suburbanization in subsequent decades, fueled by the construction of I-35 in the 1950s, has vastly expanded the city to its current extents with a diversified land use mix and economy. While many neighborhoods date back to the 1960s, a supply of undeveloped land allowed the city to experience significant growth in every decade since. Figure 2 shows population growth trends over time.

However, this undeveloped area is shrinking, and the city cannot continue to grow outward due to being "landlocked" by Oklahoma City to the west, north, and east, and by Norman to the south. Because of this, while the city is expected to continue to grow, this rate of growth may slow.

This *Public Transportation Feasibility Study* evaluates the potential for transit service in Moore, which currently has no service available to the general population. Yet, this growing population and continued development is increasingly in need additional transportation options.

Figure 1: Study Area (City of Moore)

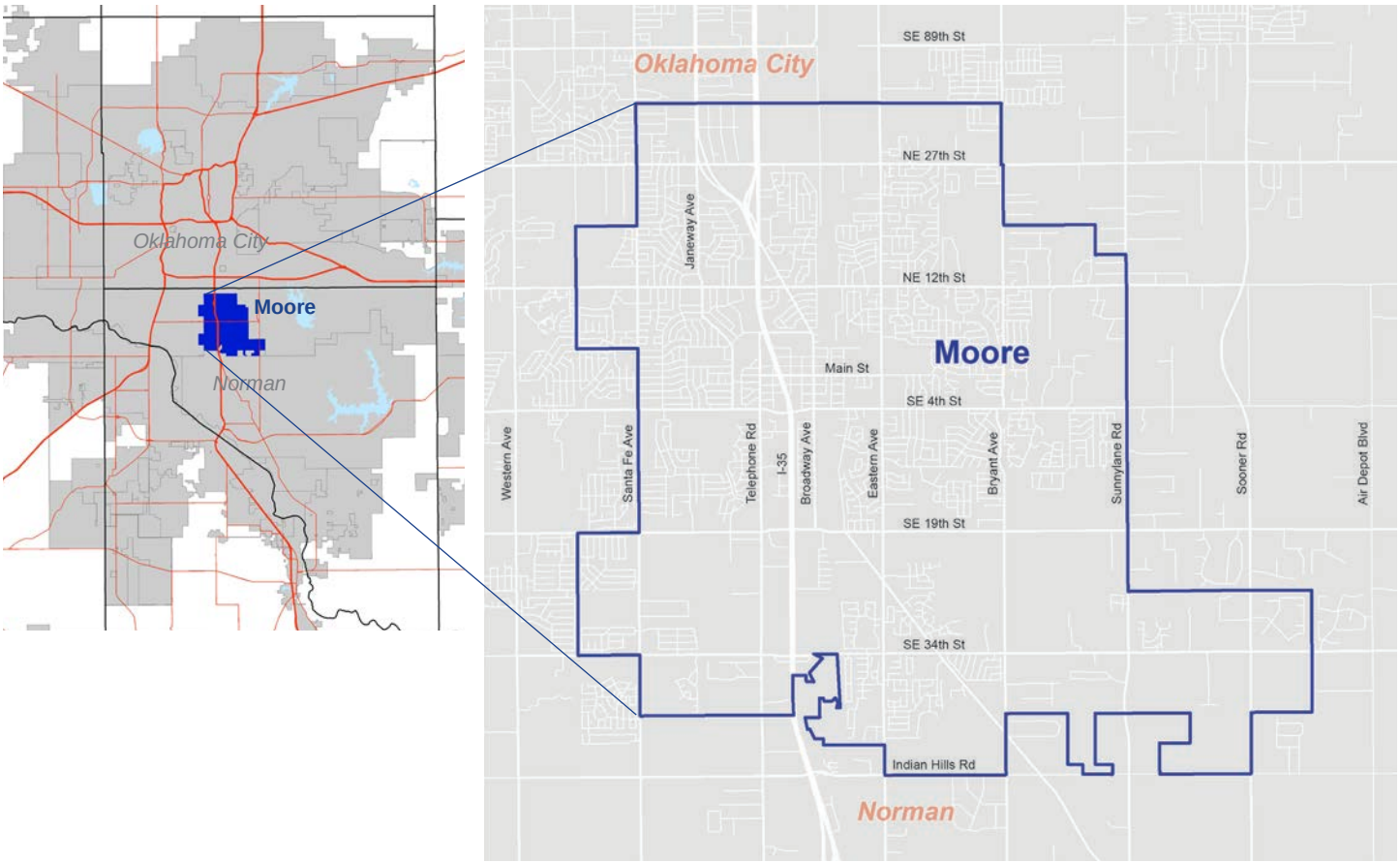
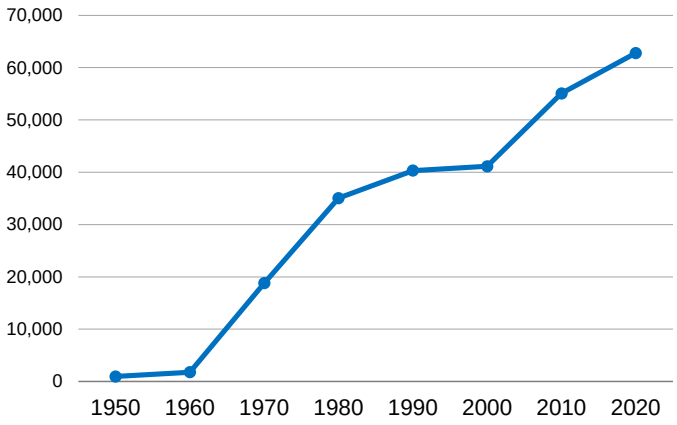


Figure 2: Moore Population Trends



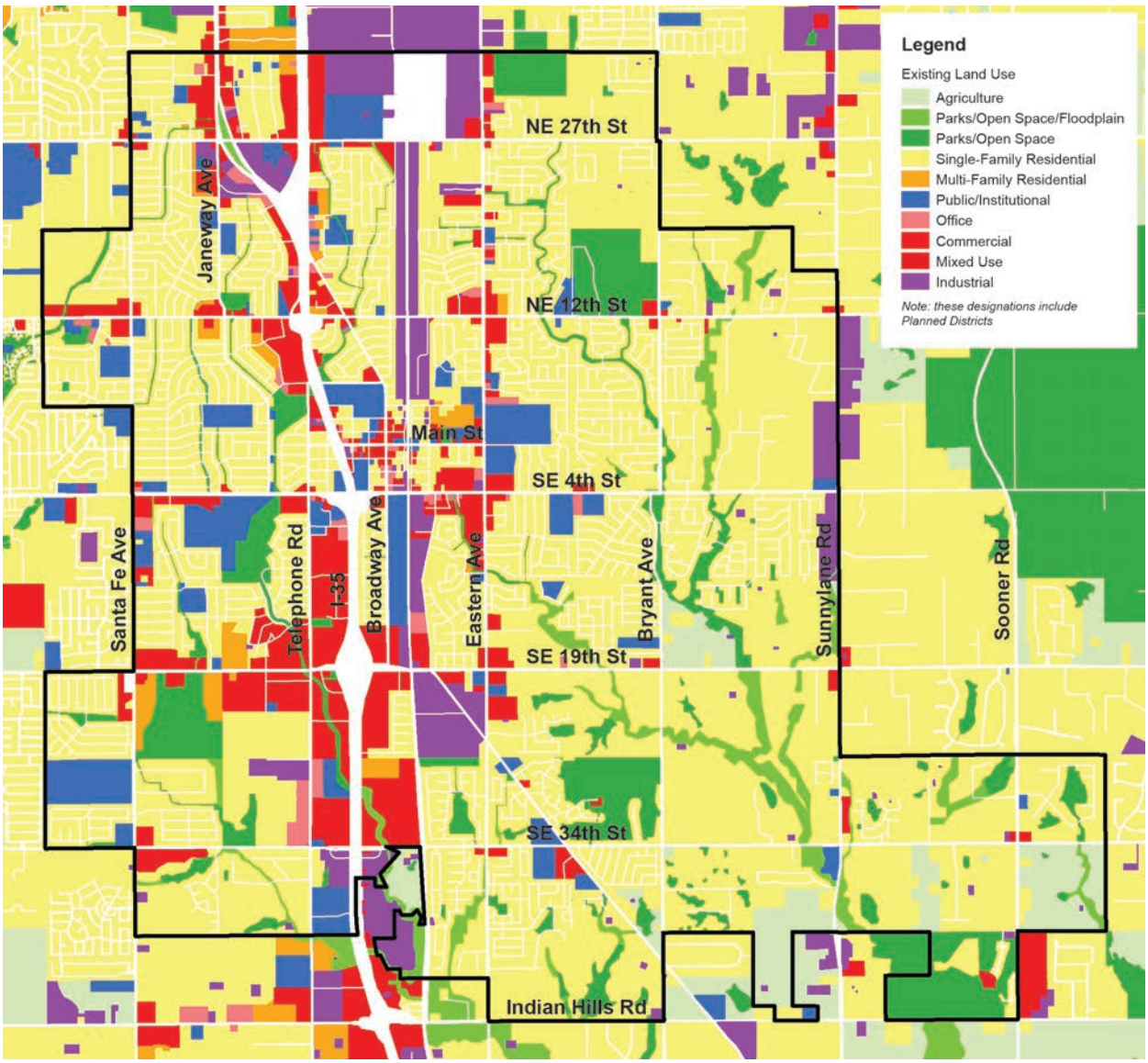
Source: U.S. Census Bureau

Land Use Context

Transportation is influenced by land use, and vice versa. People travel not for the sake of traveling, but to get between specific origins and destinations. The distribution of these locations drives transportation demand. The efficiency of transit service is also driven by land use. Development that is dense and connected can be served with a high level of transit service, while low density and disconnected development patterns are very difficult to efficiently serve with transit.

Figure 3 shows existing land uses in Moore. As in most suburban communities, single-family residential is the predominant land use. There are pockets of multi-family residential uses, generally confined within the western half of the city. Large commercial uses are concentrated along the I-35 corridor, with smaller commercial uses along most arterial streets. Industrial uses are primarily located on a north-south axis along Pole Rd and S Broadway Ave.

Figure 3: Existing Land use Map



Source: City of Moore, Envision Moore 2040 Comprehensive Plan

Transportation Context

Multimodal Transportation

Future transit services should enhance connectivity to other transportation modes existing, under development, or planned.

Moore is well-connected to Oklahoma City region for those with the access and ability to drive a car, primarily via I-35 which travels north/south through the city and divides the city's population roughly in half. A grid of arterial streets provides additional connectivity in each direction. Connector and neighborhood streets provide local access throughout the city.

A key aspect of transit accessibility is having infrastructure for those riding bicycles or walking. In Moore, the existing infrastructure for these modes is much less developed, but has been growing in number and quality in recent years, through city investment. New shared-use trails have been built or are under development, primarily alongside parks improvements. These include trails in Little River Park, Central Park, Veterans Memorial Park, and the Moore Riverwalk. These trails are not yet connected to create a citywide network, but this need has been identified and prioritized in the city's comprehensive plan and master trails plan. Additionally, the city's comprehensive plan envisions bike lanes on certain streets in the city as well, including sections of NE 12th, Main, Broadway, and several corridors in the city's northwest quadrant.

The availability and condition of sidewalks varies widely throughout Moore. Several primary arterial streets are lacking sidewalks for long stretches, others—such as N Broadway and SW 19th—feature newer sidewalks on both sides of the street.

The provision of sidewalks within neighborhoods, as in many suburban communities, is a reflection of when the neighborhoods were developed. Some neighborhoods have no sidewalks at all, while some feature sidewalks on both sides of each street. In areas developed without sidewalks, the City is making progress toward adding sidewalks as resources allow, especially near key destinations, such as along S Norman Avenue in the vicinity of Southgate Elementary School.

Existing Transit Services

The City of Moore does not have general public transit, but there are some existing options that are limited in population eligibility or geographic availability, including:

- The **Moore Council on Aging**, in coordination with the Brand Senior Center provides a service for senior populations (age 55 and older) by scheduled appointment, within the City of Moore. The service primarily provides rides to and from the senior center, as well as to other appointments or shopping in the city.
- A partnership of EMBARK and Areawide Aging Agency provides **Senior Transportation Services** to seniors (age 60 and older) by scheduled appointment.
- **SoonerRide** provides non-emergency transportation for SoonerCare and SoonerCare Choice program recipients, with trips scheduled three days in advance.
- EMBARK's **Share-A-Fare** program provides door-to-door transportation and offers 52 trip subsidies of $4 toward the cost of each trip, within Moore and four other cities.
- The nearest fixed-route service is EMBARK routes **13N S Western/SW 104** and **040 S Walker** touching the northwestern edge of Moore at NW 27th Street and Santa Fe Avenue. Three bus stops on northbound Santa Fe Ave—at NW 27th St/SW 104th St, SW 102nd St, and NW 32nd St—are within Moore and likely used by some Moore residents. These routes are open to the general public.
- EMBARK also operates **Route 144 Social Security** between Norman and the Social Security office in Moore on NE 27th St. Unlike all other EMBARK services which operate at least five days per week, this route only operates on Tuesdays and Fridays, and with only two midday trips in each direction.
- **EMBARK Plus**, an ADA complimentary paratransit service, is provided within ¾-mile of EMBARK fixed routes, and therefore covers a section of northwest Moore extending ¾-mile east and south of NW 27th & Santa Fe Ave. This program provides transportation to people who are unable to use fixed route bus service due to a documented disability.

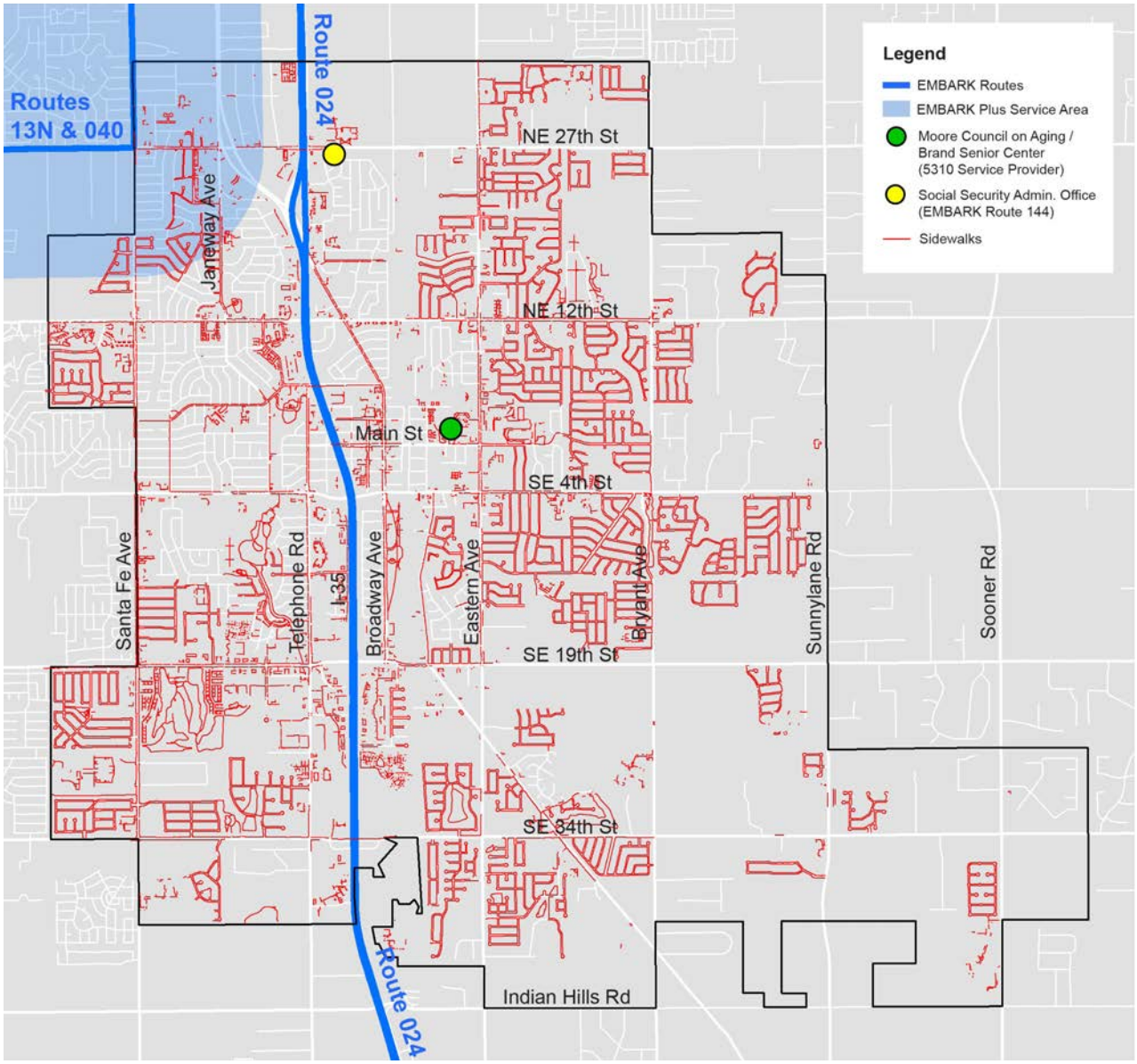
Figure 4 shows the existing services within Moore.

Future Transit Services

Significant planning is occurring to expand transit services in the Oklahoma City region. Initiatives potentially impacting Moore include:

- EMBARK's OKC Moves process documented a desire and support for providing service to new areas, and specifically to Moore. Service to Moore is included in the study's long-term recommendations, in the form of extending Route 040 south to serve Moore. According to OKC Moves, "the route would operate further south along Santa Fe Ave, NW 27th St, Shields Blvd, Broadway St, SW 19th St, and Fritts Blvd, providing service to downtown Moore and the shopping centers along SW 19th St near I-35." The plan specifies that discussions with Moore, among other cities in the region, will be needed to reach an agreement on funding new and expanded services.
- The Regional Transit Authority (RTA) of Central Oklahoma is working to develop commuter rail on a north-south corridor from Edmond to Norman. While Moore is no longer a part of the RTA, the corridor is planned to travel through Moore and there may be a long-term opportunity to add a station within Moore. Locally-based services in Moore could connect to this station to facilitate transfers between local and regional travel. This north/south commuter corridor is envisioned to be part of a broader regional network that includes East, West, and Airport rapid transit corridors.

Figure 4: Transportation Context Map



Planning Background

The process for evaluating the feasibility of transit in Moore includes building upon and referencing past planning efforts that have evaluated transportation and land use at both the local and regional levels. These efforts include Moore's comprehensive plan that guides the development of the community and regional transportation plans that frame potential transit services within a multi-modal transportation network throughout the Oklahoma City region. Plans reviewed and incorporated into the process are summarized below.

Comprehensive Plan

The **Envision Moore 2040** comprehensive plan sets the course for the sustainable development and growth of Moore over the next two decades. This comprehensive plan focuses on creating a vibrant, inclusive, and resilient community by integrating smart land use, transportation, and environmental strategies. With an emphasis on promoting economic vitality, preserving natural resources, and enhancing quality of life for residents, the Envision Moore 2040 plan aims to guide responsible growth, foster innovative development, and ensure equitable access to essential services and amenities.

Envision Moore 2040 includes goals for public transit in the city. The plan states that "Investment in on-demand bus transit and other rubber to street transportation is a viable option for Moore during the life of the Plan." Specific goals and strategies include:

- Incorporating transit as a part of revitalizing Old Town, including a transit station on a future commuter corridor envisioned by ACOG's Central Ok!go plan, as well as studying and implementing transit-oriented development in the station area.
- Providing sidewalks, benches, and shelters for future transit stops.
- As part of the strategy to increase mobility for all users, Strategy 2.1 specifies increasing mobility options via public transit, both through considering existing EMBARK and EMBARK Norman bus services, and by supporting Locally Preferred Alternatives for regional corridors with a Moore commuter rail transit station.
- Importantly, other strategies focus on expanding opportunities for those walking or biking, which is a critical component of transit accessibility. This includes prioritizing routes by providing sidewalks and multi-use trails, minimizing bicycle and pedestrian barriers, and considering reducing speed limits on roadways designated as a bike route.

Figures 5 and 6 from the Envision Moore 2040 Plan show the Old Town vision and recommended transportation improvements for the city.

Figure 5: Old Town Land Use Concept Map
from Envision Moore 2040

FIGURE 3.3: OLD TOWN LAND USE CONCEPT MAP

Figure 6: Recommended Transportation Improvements
from Envision Moore 2040

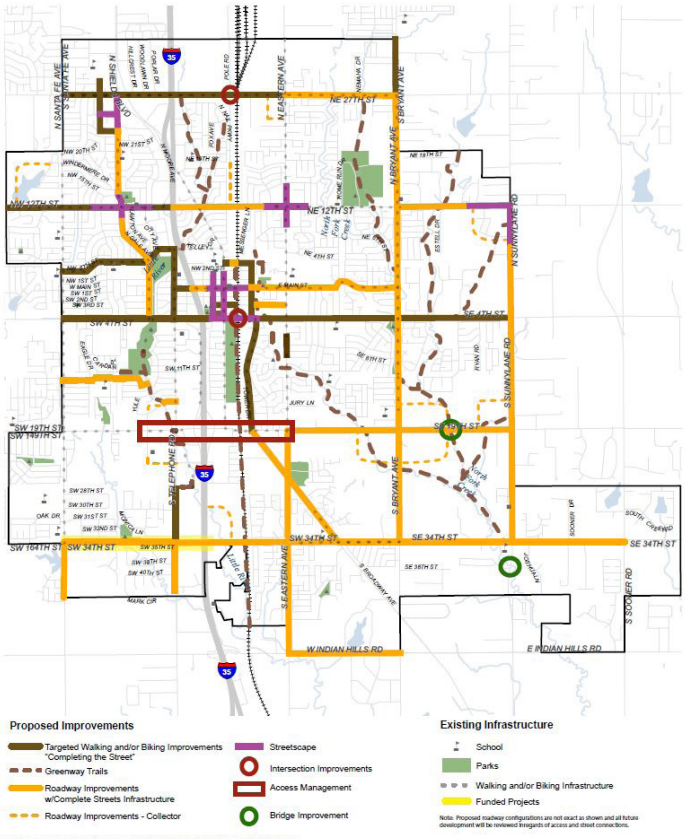


FIGURE 4.20: RECOMMENDED TRANSPORTATION IMPROVEMENTS

Regional Transportation Plans

EMBARK's 2022 **OKC Moves Bus Study** is a comprehensive analysis of the bus transit system operated by EMBARK. This study evaluates the existing bus network, services, and operations to identify opportunities for improvement and advancement. By examining ridership data, demographic trends, and community input, the study provides valuable insights for optimizing routes, frequencies, and service coverage.

The study documents a significant amount of public input in support of new transit services in Moore. The short-term recommendations are cost-neutral and therefore do not include new services in Moore. However, the plan also includes long-term recommendations. The 10-year vision addresses regional growth, supports economic development, and responds to public priorities. New service to Moore is included in these recommendations, in the form of an extension of existing Route 040 further to the south. This long-term vision is not cost-constrained and will require additional resources to implement and operate.

The Oklahoma Department of Transportation's (ODOT) **Coordinated Human Services Transportation Plan - Region 1** assists transit providers and local stakeholders with coordinating efforts in providing transportation services to seniors and people with disabilities (providers utilizing Section 5310 funds). It documents gaps and unmet needs, and provides recommendations to address barriers to access. Region 1 includes 11 counties in Central Oklahoma, including Cleveland County.

The Moore Council on Aging is the only 5310 provider within Moore. While there are no recommendations specific to Moore, the plan developed short- and long-term strategies to address service gaps and unmet needs in the region, of which Moore is a part. Key strategies most relevant to improving or expanding options in Moore include:

- Form a Regional Advisory Committee to implement strategies and to update the document. (short-term)
- Enhance public education activities and efforts to raise transit awareness opportunities within the region. (short-term)
- Identify transportation funding opportunities for ADA vehicles, capital improvements, service expansion, and technology systems to improve operations and customer service. (short-term)
- Review and expand service to key activity centers currently underserved or not served by transit, paratransit, or service agencies. (long-term)
- Expand service hours to include weekday early morning and evening service, as well as weekends and holidays. (long-term)
- Explore funding options to convert the transit system to green technology. (long-term)

The Association of Central Oklahoma Governments (ACOG) **Envision 2045** is a comprehensive long-range transportation plan that outlines a vision for the future of transportation in the ACOG region. This plan focuses on addressing the transportation challenges and opportunities over the next several decades, encompassing aspects such as infrastructure, mobility, safety, and sustainability.

Expanding transit is a key objective in multiple goals identified in the plan. These include:

- Equity & Options Goal: Provide transportation options and access for the movement of all people and goods.
- Objective: Expand and maintain a safe, secure, and accessible public transportation system.
- Healthy Communities Goal: Improve the connection between land use and transportation to enable residents to live healthier lives and reduce environmental impact from vehicle travel.
- Objective: Improve, enhance, and expand the ability for residents to walk, bike, or use public transportation.

Figure 7: 2045 Transit Vision (Moore detail)
from ACOG's Encompass 2045

The 2045 Transit Vision includes recommended future services in Moore, including segments of 27th St, 12th St, 4th St, 19th St, 34th St, Eastern Ave, and Santa Fe Ave, as well as commuter rail on the BNSF rail corridor. Specific projects plan include new multi-use trails on segments of Telephone Rd and Eastern Ave, two potential future transit corridors where such improvements can enhance transit access once services are implemented.

The Central Oklahoma Transportation and Parking Authority (COTPA, also known as EMBARK) **Fixed Guideway Study** is a comprehensive examination of transit options and potential fixed guideway systems within the region. The study identifies and evaluates the feasibility, benefits, and costs associated with fixed guideway modes such as light rail, streetcar, or bus rapid transit. The study considers factors such as population density, travel patterns, and community input to determine the most suitable transit solutions. The plan ultimately develops a vision for the Oklahoma City region that includes 670 miles of Enhanced Bus, 40 miles of BRT, 42 miles of Commuter Rail, and five miles of streetcar. Figure 8 shows the 2030 system vision.

Among other rail and BRT corridor recommendations, this study created the groundwork for ongoing efforts to establish a commuter rail corridor between Edmond and Norman, potentially with a station in Moore. In addition to this regional corridor, the plan's 2030 System Plan Vision includes a recommendation for Enhanced Bus Service in Moore, looping through the city and connecting to Oklahoma City via SW 4th St and S Pennsylvania Ave.

The Regional Transportation Authority of Central Oklahoma (RTA) is a regional independent governmental agency established in 2019 that has initiated the development of a high-capacity transit system for the rapidly-growing Central Oklahoma region. In the **Transit System Plan: Regional Corridors (2021)**, the RTA established a vision for high-capacity transit to regional activity centers, to build upon the existing fixed-route bus and streetcar systems. Four corridors were identified: North/South, East, Airport, and West. The North/South corridor would connect Edmond in the north and Moore and Norman in the south.

RTA then conducted an **Alternatives Analysis (2023)** process in accordance with Federal Transit Administration guidance and funding processes. The Alternatives Analysis ultimately identified a Locally Preferred Alternative for "Commuter Rail connecting Santa Fe Depot with North Edmond and South Norman via the Burlington Northern Santa Fe (BNSF) Corridor." As of May 2024, work continues to advance the corridor for further planning, preliminary engineering, and coordination with BNSF on needed infrastructure and service plans. Figure 9 shows the planned north-south corridor.

Figure 8: 2030 System Vision Plan (Moore area)
from COTPA Fixed Guideway Study

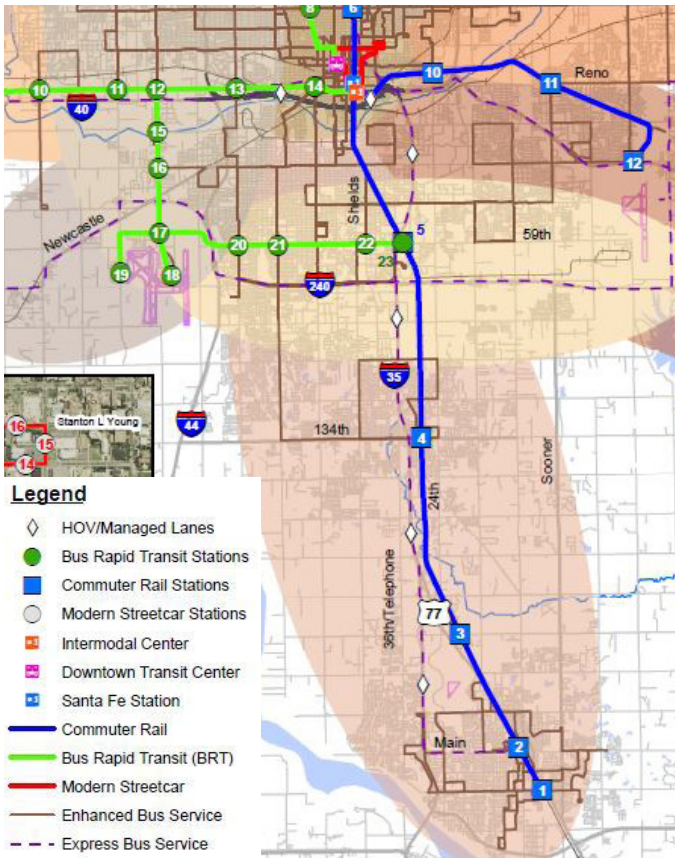
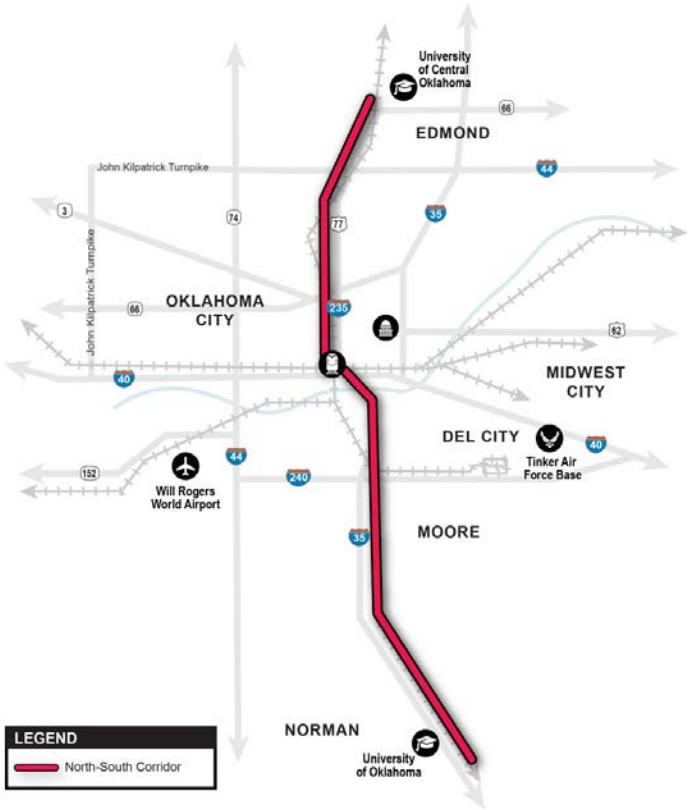


Figure 9: North–South Locally–Preferred Alternative
from RTA North–South Corridor Alternatives Analysis



Plan Process Overview

The transit feasibility study begins with building an understanding of transportation needs, opportunities, and ideas as expressed directly by Moore residents and by key stakeholders that serve or represent populations in need of affordable transportation options. This resulting documentation of need, as expressed in a Purpose & Need statement, is a critical initial step that guides the remainder of the process, builds support for recommendation, and positions the project for funding in the future through competitive grant programs.

To supplement community engagement, this feasibility study utilizes data on population, demographics, socioeconomics, and employment to identify needs not already expressed, or to add context or magnitude to already-known needs. Information on existing and future land uses, local policy priorities, and multimodal transportation connectivity are also reviewed.

Concurrently, an initial phase of public outreach included understanding needs and services. This information, obtained through public meetings, a resident survey, and stakeholder interviews, built the foundation for the development of service concepts later in the process. The market analysis and public engagement processes are detailed in Section 2 (Analysis & Engagement) of this report.

Input received through the public participation and market analysis processes form the basis of defining a set of alternatives for implementing public transportation in Moore. Several models were reviewed for applicability. Each required a unique analysis with estimated costs and ridership to determine the relative benefit to the city. These potential options included on-demand curb-to-curb services, extension of nearby EMBARK fixed-route services in Oklahoma City, modification of nearby express routes to serve Moore, and new local fixed-route circulator or flex-route service. These alternatives are detailed in Section 3 (Alternatives).

The alternatives are reviewed according to criteria established to determine which best meet the needs as determined earlier in the process. These criteria include both transit industry and locally-specific metrics, including service quality, effectiveness, connectivity, equity, accessibility, and flexibility. The most promising alternatives were shortlisted, with estimated costs and ridership, and presented for public review and input. Section 4 (Recommendations) details the selected recommendations developed from this process.

Service recommendations are discussed for phased implementation based on the estimation of near-term needs and resource availability. Plans for organization and management, operations, and financing are developed. Additionally, guidance is provided for integrating recommended services into the larger regional network, and facilitating multimodal connectivity. These plans and action steps are detailed in Section 5 (Implementation).

Purpose & Need

A primary goal of the Moore Public Transit Feasibility Study is to determine and document the need for transit services, and state the purpose of future transit service for the citizens of Moore. This need is expressed as demand for certain types of services, destinations to access, and other factors.

Based on community input through multiple channels and through technical analysis, this study identified a need for general public transportation. The needs are both local (within Moore) and regional (connecting to other locations in the Central Oklahoma region, most notably Oklahoma City and Norman). The needs are expressed by multiple populations: low-income households, elderly residents, residents with impaired mobility, employees working lower-wage jobs, and others seeking an affordable and safe transportation option when they might need it.

General public transit service open to all Moore residents with quality access within the city is the most acute need. These services currently do not exist for the general population. By providing access, the city would offer transportation options and provide new opportunities for residents, employees, and visitors. While needs for regional connectivity certainly exist, and can be provided to limited extent by an intra-city service, these are secondary and recommended for longer-term implementation due to anticipated resources available and needed for new transit services.

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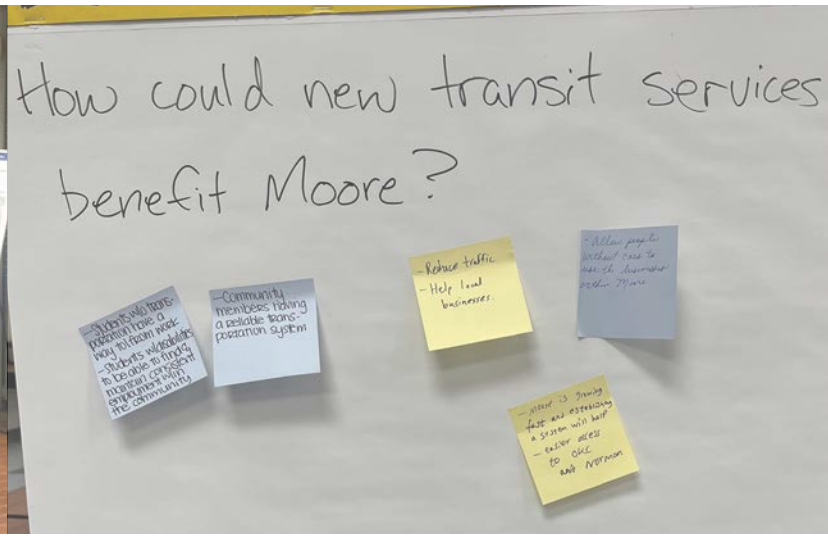
2 Analysis & Engagement



Introduction

Section 2 reviews areas of need or opportunity for public transportation services. This process involves reviewing the community both as a whole, and how residents, land uses, employers, and other aspects of the community are distributed within the city. This review provides critical understanding of populations more likely to need and use transportation services, as well as the geography of the city, and of key destinations, that determine the optimal type(s) of services to best meet these needs. Understanding the community is the first step to evaluate and find ways to implement transit services. This section defines the study area and provides an analysis of the local market for transit services, the needs and opportunities.

This understanding is supplemented by public input that provides on-the-ground knowledge of the community, and adds flavor and context to trends observed in data, and provided new information that broad community data may not capture.

Community Profile

Population

The city's population of 63,223 is not evenly distributed throughout the city. Figure 10 shows the population density (persons per square mile) of all census blocks in the city as of the 2020 Census.

The city's highest population density is generally located in areas north of SW/SE 19th Street and west of Bryant Avenue. There are pockets within this area undeveloped (north of NE 27th Street and east of I-35) or comprised of large commercial or industrial uses, with less or no population. Conversely, there are pockets of residential density in the south and east portions of the city as well, most notably near SW 19th & Santa Fe Avenue and near SE 34th & Eastern Avenue. Additionally, some areas in less-dense populated areas are developed neighborhoods, but built as large-lot housing at low densities.

While this study is focused on transit services for near-term implementation, reviewing anticipated long-term trends such as population projections help determine the future need and viability of services, and how such services may need to be planned to expand over time. ACOG has forecasted (in 2018) a population of nearly 71,000 in Moore by 2040, a growth of 12.3% over existing levels.

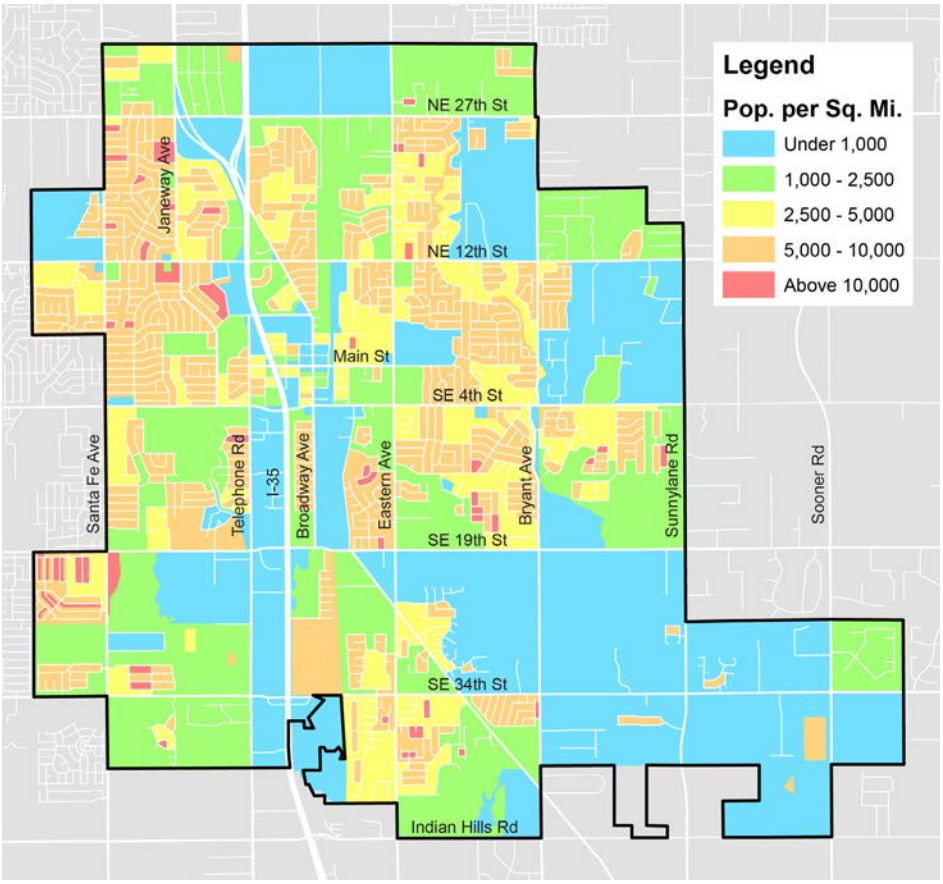


Figure 10: Population Density Map

Key Destinations
(Identified by project stakeholders and public meeting attendees)
Moore City Hall
Brand Senior Center
Walmart
Integris Hospital
Moore Public Library
Moore High School
Central Park/The Station
Continental Apartments
Nottingham Square Apartments
Costco
Sam's Club
Norman Regional Moore
Regional Food Bank
Social Security Office
Movie Theater
Buck Thomas Park
Sharing Tree
The Curve Apartments
Sky Ranch Elementary
Tinker Air Force Base
Platt College
First United Methodist Church

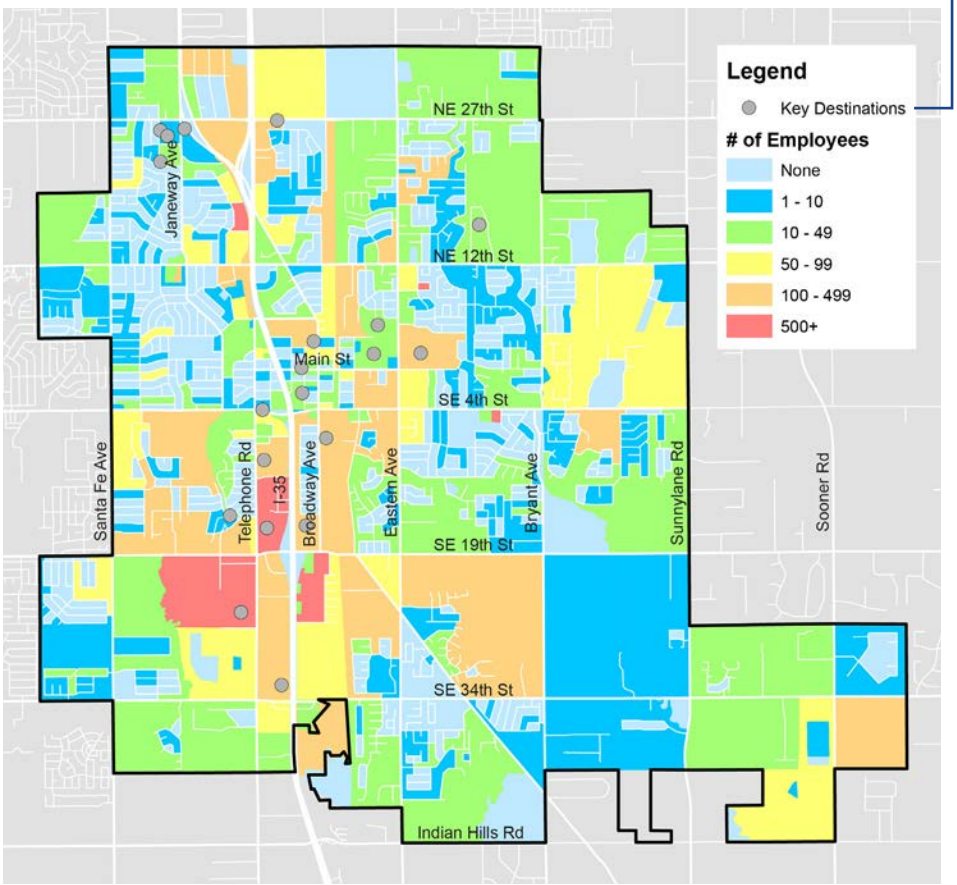
Figure 11: Employment Map

Employment

Figure 11 shows employment locations distributed throughout the city. The city's largest employment centers are primarily clustered near SW 19th St on both the west and east side of I-35. & Telephone Rd. This includes Walmart, Target, Home Depot, and numerous other stores and restaurants.

Significant public-sector employers include Moore Public Schools (note on Figure 11 this employment is shown as the Moore Public Schools Administration building and not as individual schools) and the City of Moore.

These employment nodes and corridors are key markets for transit service, especially locations with shift times that are predictable and consistent. Employers in certain sectors, such as retail and services, also represent destinations for customers needing to access goods and services, and are destinations for more than just employees.



Overall, Moore has a net "outflow" of jobs, meaning a larger number of Moore residents who are employed than jobs in the city. As shown in Table 1, there is a net outflow of 6,651 jobs. However, Moore is far from being a "bedroom community" as there are several major job centers and many minor job centers in the community, as shown in Figure 11.

Due to adjacency to other cities and a supply of highways and arterial streets, Moore is fully integrated into the Central Oklahoma economy from the perspective of employment. The vast majority of working Moore residents (87.7 percent) work outside of Moore. Similarly, 83.5 percent of people working within Moore live outside of Moore.

These data show a clear need for inter-jurisdictional commuting. Moore's labor market (both in terms of working residents and employees working in the city) is limited based on transportation availability. Employees who lack reliable private transportation options may struggle to get to a job, and will be limited in the location and/or type of work available to them.

As shown in Table 2, the most prevalent job sectors in Moore consist of two sectors with generally consistent daytime working hours (Educational Services and Public Administration) and two that are highly variable and include substantial night and weekend working hours (Accommodation and Food Services, and Retail Trade).

Transportation

As is the case throughout most of Oklahoma and surrounding states, the majority of people in the City of Moore travel to and from their destinations by private automobile. Table 3 provides data from the American Community Survey (ACS) on commuting patterns by mode, comparing the City of Moore to the State of Oklahoma.

According to the ACS, nearly 82 percent of Moore residents commute by driving alone and another eight percent by carpooling. Use of other modes is fairly limited, and led by "taxicab, motorcycle, or other means," walking, and bicycle. Unsurprisingly, due to most residents not having the option, the ACS data show zero percent of Moore residents using public transportation.

Table 1: Inflow/Outflow Job Counts (All Jobs, 2021)

Moore Labor Market Size	Count	Share
Employed in Moore	19,316	100.0%
Living in Moore	25,967	134.4%
Net Job Inflow (+) or Outflow (-)	-6,651	-
In-Area Labor Force Efficiency	**Count**	**Share**
Living in Moore	25,967	100.0%
Living and Employed in Moore	3,193	12.3%
Living in Moore but Employed Outside	22,774	87.7%
In-Area Employment Efficiency	**Count**	**Share**
Employed in Moore	19,316	100.0%
Employed and Living in Moore	3,193	16.5%
Employed in Moore but Living Outside	16,123	83.5%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2020-2021)

Table 2: Jobs by NAICS Industry Sector

NAICS Industry Sector	Jobs	Share
Educational Services	3,609	18.7%
Accommodation and Food Services	3,232	16.7%
Retail Trade	2,808	14.5%
Public Administration	2,113	10.9%
Construction	1,832	9.5%
Administration & Support, Waste Mgmt.	1,422	7.4%
Health Care and Social Assistance	1,148	5.9%
Wholesale Trade	723	3.7%
Professional, Scientific, and Technical Serv.	605	3.1%
Other NAICS Sectors (10)	1,824	9.4%
Total	**19,316**	

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2020-2021)

Table 3: Means of Transportation to Work

Means of Transportation to Work	City of Moore	State of Oklahoma
Drove alone	81.5%	79.7%
Carpooled	7.6%	9.4%
Worked from home	7.1%	7.4%
Taxicab, motorcycle, or other means	1.9%	1.2%
Walked	1.6%	1.7%
Bicycle	0.4%	0.2%
Public transportation (excluding taxi)	0.0%	0.3%

U.S. Census Bureau. "Commuting Characteristics by Sex." American Community Survey, ACS 5-Year Estimates Subject Tables, Table S0801, 2022

Transit Propensity Analysis

Based on peer agency and industry research (*Transit Cooperative Research Program Report #28: Transit Markets of the Future*), certain population groups exhibit a greater likelihood to utilize transit services. The two primary factors are income levels and access to private vehicles. Populations that live in lower-income households and/or do not have access to a car (or may only have access to one car) have a greater need for transit services, and it is critical any transit service planning effort place a high emphasis on maintaining and growing transit access to these transit-dependent populations.

Additional factors also influence transit ridership. Transit dependent populations who depend upon transit for mobility and access to work, school, and shopping include the following:

- Low Income Population
- Zero and One Vehicle Households
- Elderly Population
- Disabled Population
- Youth Population (under 18)
- College Age Population (18-24)
- Minority Population
- Limited English Proficiency Population

Identifying the location of these populations in the following density maps shows the areas of the community that most need the transit services now.

Each of these demographic characteristics is a component of an analysis to determine overall transit need or propensity. When combined, the demographic data characteristics provide a composite snapshot and transit propensity, can be used to identify areas in need of service.

Low-Income Population

Approximately 10 percent of Moore's population is classified as living below the federal poverty line. While lower than county, state, and national averages, this still represents more than 6,000 people living in the city that would greatly benefit from an affordable transportation option.

Figures 12 and 13 illustrate the density of population living below the federal poverty line and household income, respectively. The northwest quadrant of the city has the highest percentages of lower-income households, primarily west of I-35 and north of SW 19th Street, plus the Old Town area east of I-35.

Figure 12: Median Household Income

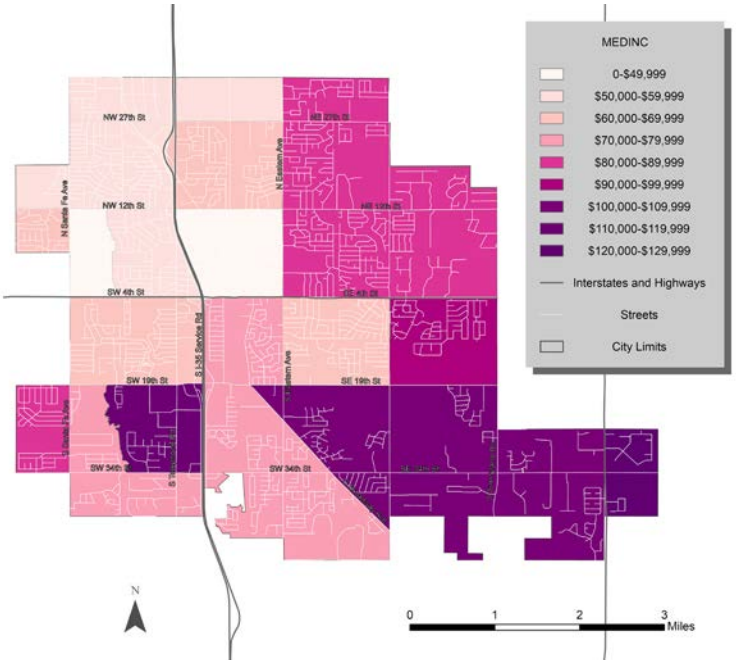
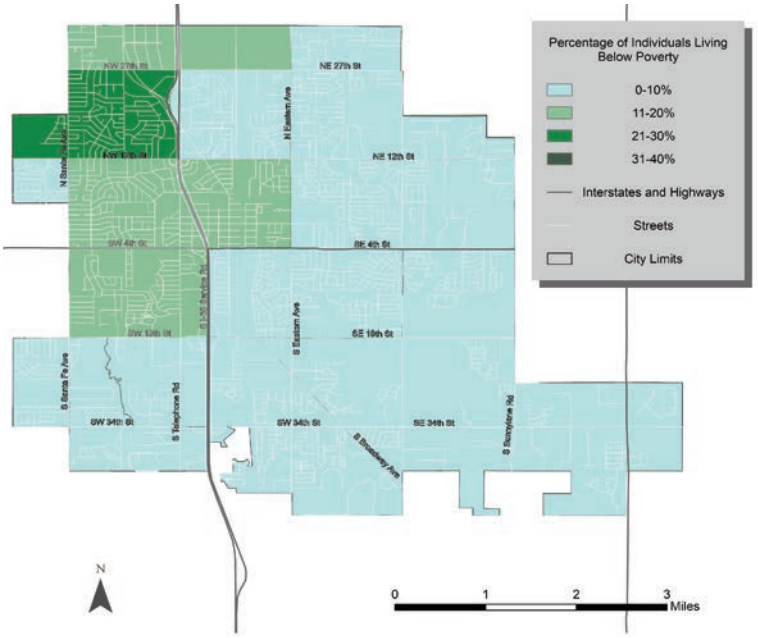


Figure 13: Population Living Below Poverty



Zero and One-Vehicle Households

Households with limited access to a vehicle may be in need of public transportation to help them get to work, school, essential shopping, or other services. Limited vehicle access often overlaps with lower income households. The percentage of households with zero or one vehicle in Moore is slightly lower than county, state, and national averages. These populations are dispersed throughout the city, but are highest at the northwestern edge of the city and in the Old Town area.

Figure 15: Zero and One-Vehicle Households

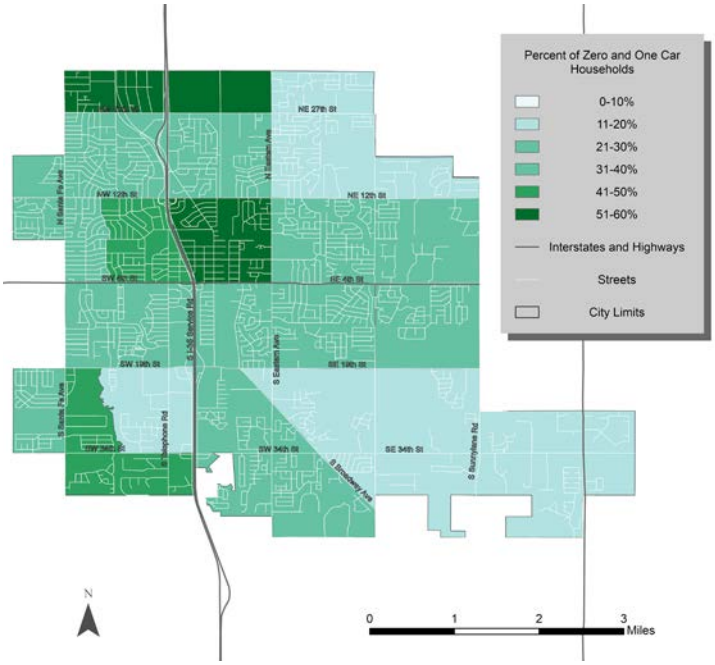
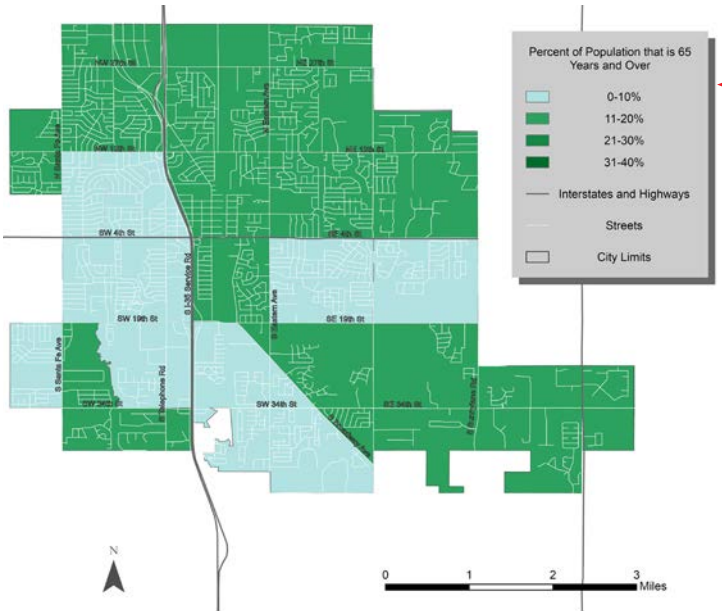


Figure 14: Population 65 Years and Over



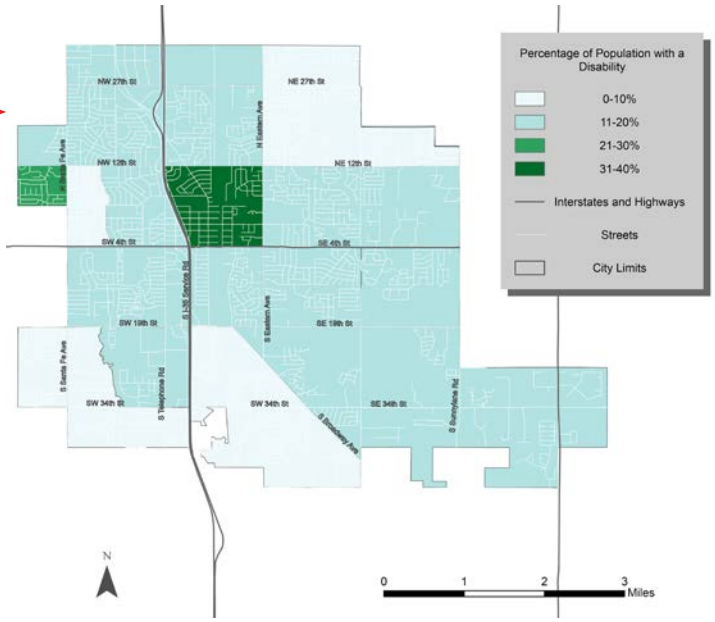
Elderly Population

Seniors are generally more dependent on transit for mobility, due to declining abilities related to vision, coordination, reaction times, and the cost of maintaining a personal vehicle. Senior populations should have the opportunity to "age in place" if they choose to do so. Mobility closely relates to a person's sense of independence and well-being. The percent of elderly population living in Moore is consistent with county averages but lower than the state and nation. Within the city, elderly populations are fairly evenly dispersed across the city, as compared to other propensity factors.

Population with a Disability

An estimated 13 percent of the city's population is considered disabled. This figure is comparable to the county as a whole and lower than state and national averages. The US Census Bureau acknowledges six disability types: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and identify living difficulty. The data used for this study identifies all individuals regardless of disability or age. In Moore, areas with higher concentrations of disabled populations correspond to senior housing developments. This includes just east of Old Town, and near NW 12th Street and Santa Fe on the west edge of the city.

Figure 16: Population with a Disability



Public Engagement Overview

While the data-based review of the local market is important for identifying transit needs, creating a plan also requires an understanding of goals and objectives as stated directly by members of the community. This section is focused on documenting and interpreting public input received as part of moving toward service alternatives and recommendations. The *Moore Public Transportation Feasibility Study* is built upon community feedback obtained in the following ways:

- Creating and engaging a Stakeholder Steering Committee, one-on-one interviews with each stakeholder and stakeholder group meetings.
- Public Open House Meetings – Phase 1: August 29, 2023 at Moore City Hall and October 17, 2023 at Kelley Elementary School
- Moore Resident Survey: A statistically-valid survey of a sample of Moore's population, completed by 316 respondents
- Public Open House Meetings – Phase 2: March 28, 2024 at Moore City Hall and March 28, 2024 at Kelley Elementary School

The process and input received from each of these efforts are summarized below.

Stakeholder Steering Committee

A successful feasibility study leading to implementable transit services require buy-in and participation of local governments, key institutions, neighborhood leaders, advocacy groups, and the business community. A Stakeholder Steering Committee (SSC) was formed to provide guidance to the project team throughout the duration of the project. This committee is comprised of community members who represent or serve populations that may benefit from transit services, as well as key community leaders to help determine the future of transit in Moore. This committee was comprised of members of the following organizations:

- City of Moore City Council
- City of Moore Planning Commission
- City of Moore Police Department
- City of Moore Economic Development
- Social Services Coalition
- Moore Public Schools
- Emmaus Baptist Church
- First United Methodist Church
- Moore Youth & Family Services
- Chamber of Commerce Members

The project team conducted one-on-one interviews with each stakeholder in July 2023 to understand community needs and opportunities. The committee met as a group in February 2024 to review the service alternatives process and draft recommendations. SSC members were instrumental in promoting the project and informing their networks of public meetings and opportunities to provide comment.

Summary of Feedback

Each stakeholder provided a unique perspective of the need for transit services in Moore. Several common themes emerged:

- The study must document the level of need and demand in order to move forward with any type of service.
- There is a desire to make sure we are meeting the transportation needs of people that need it the most, including senior, disabled, and low-income populations.
- Transportation needs are both local (within Moore) and regional (primarily to Oklahoma City and Norman), but in general the local needs should be addressed first. People who need services should be able to access local shopping, employment, medical and other needs. Providing these trips will benefit the local economy as well.
- Moore Public Schools provides a program for adult students with disabilities, teaching job skills and independence including entering the workforce. These students need affordable transportation, as existing options through private rideshare companies require a large percentage of wages just for transportation access.
- While the City's recent investments in sidewalks and other pedestrian and bicycle infrastructure have helped, there are still many places with safety challenges for pedestrians. Transit options could help improve transportation safety. Specifically, on-demand transit is an attractive option due to the curb-to-curb service it could provide.

In addition to this feedback at the beginning of the planning process, this stakeholder group reviewed and provided guidance on the development of alternatives detailed in Section 3.

Public Meetings

The *Public Transportation Feasibility Study* project team provided four opportunities for public comment at in-person public meetings. These meetings occurred in two phases, each with two meetings. The first phase was focused on identifying issues, challenges, and opportunities, and providing an initial opinion of potential service types for the study to evaluate. The second phase was focused on reviewing specific alternatives tailored to Moore, with information on operating parameters, potential costs, and route alignments and service zone details.

Meetings were held at two different locations to maximize turnout. Each meeting was an "open house" format, enabling attendees to come and go as their schedules allow. Materials were presented on boards, with City and consultant staff describing the materials, facilitating exercises to obtain feedback, and answering questions.

Phase 1 Public Meetings Summary

Public open house meetings in August and October 2023 focused on identifying challenges, opportunities, and ideas from the community. Feedback was received by meeting attendees completing comment cards, voting on preferred service types by placing dots, and writing comments in response to prompting questions. These questions, and a summary of responses, included:

What is the biggest transportation issue in Moore?

- There is no option available for all socioeconomic groups and ages, including people with a disability and/or no car.
- Residents with no access to transportation are less able to contribute to the city's economy.
- There are safety challenges with walking, due to traffic volumes and speeds, railroad crossings, and lack of sidewalks.
- Congestion due to traffic, particularly on 19th Street, and few alternative options.

How could new transit services benefit Moore?

- Provide access to more employment opportunities.
- Help people become independent and be able to access social services and daily needs.
- Provide a safe option for transportation, especially for low-income, disabled, and younger people.
- Contribute to walkability improvements in the city.
- Provide students with transportation to/from work.
- Benefit the economy and help local businesses, for employees and customers.
- Provide connections to Oklahoma City and Norman.

What is the biggest concern with implementing transit in Moore?

- Getting buy-in from the community as a whole. In particular, selling people on the need for it even if they don't personally use it.
- Making transportation services affordable for users.
- The timeline for implementation may take too long.

- Funding, including for operations and maintenance for buses.
- The service effectively meeting the needs of those who need it the most.

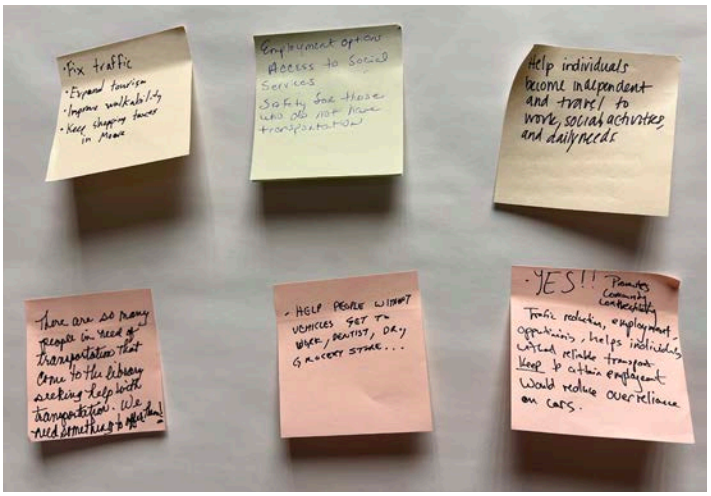
In addition to these comments, attendees expressed the most support for on-demand service options due to the potential citywide coverage and service flexibility. Flexroute options also received significant, but notably less, support.

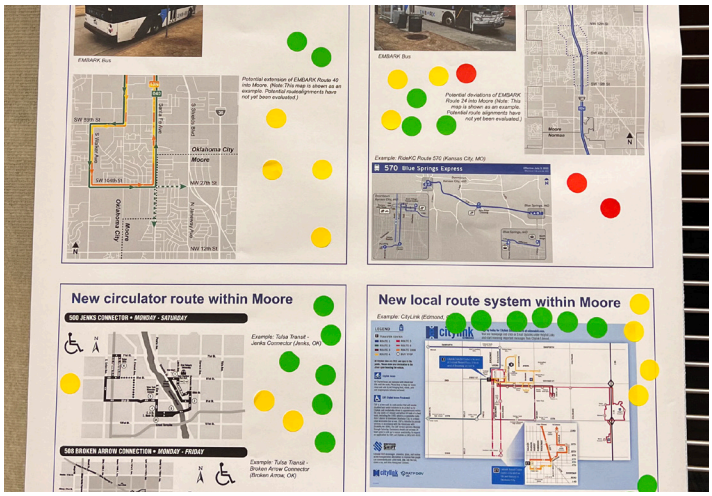
Phase 2 Public Meetings Summary

In the March 2024 meetings, attendees were asked to review and comment on the alternatives review process and draft recommendations. Information was provided on the process of developing and evaluating the alternatives, and how this led to the development of draft recommendations, with detail and operating parameters specific to Moore.

Public comments at this meeting affirmed the strongest desire for an on-demand micro transit service in the near term, with options for a flex route and/or regional connections in the longer term (these options are detailed in Section 3). Attendees were asked to note any final concerns or considerations. Responses included:

- Desire to extend hours of service into the evening, to 8 p.m. or (preferably) 10 p.m.
- Make sure the service ties into EMBARK somehow, for connections to OKC or Norman destinations.
- Concern about potential new or increased taxes to pay for services, and how this impacts the affordability of future services.
- Need to make service useful for minors; consideration of policy and how to minimize risk.
- Flexibility of service is key, as people may not have consistent work hours or appointment times.





Transit Destinations

Input from residents and stakeholders provide insight to how transit service would be utilized in Moore. This input indicates need for a wide variety of trips, rather than a focus on one specific market (e.g. employment). Examples of key destinations that are expected to have significant travel demand for transit users are detailed below.

Essential Shopping

Transit may provide a lifeline to important shopping destinations for items such as groceries and personal care items. Key destinations in Moore include Walmart Supercenter, Walmart Neighborhood Market, Target, Aldi, WinCo Foods, Crest Foods, and Supermercados Morelos, Sam's Club, and dollar stores. These stores can generate a high amount of transit ridership on a variety of service types.

Walmart at SW 19th & S Telephone Rd.

Social Services

Senior, disabled, and low-income populations have a greater need for accessing a range of social services that help people meet their needs, such as education, housing, medical care, counseling, and other services. Access to these destinations can be critical in helping individuals live independently and access important resources.

Organizations in Moore include (but are not limited to):

- Moore Youth and Family Services,
- Regional Food Bank of Oklahoma / Moore Food & Resource Center
- Cleveland County Health Department
- Central Oklahoma Community Action Agency
- Brand Senior Center
- Crossroads Youth and Family Services / Head Start

Regional Food Bank of Oklahoma Food and Resource Center

Employment

Employment is a primary use of transit for most peer providers, and has been identified specifically as a need in Moore. Residents working lower-wage jobs may spend a large percentage of their income on transportation, whether through the cost of owning and operating a car or using taxi and rideshare services. An affordable transportation option would allow these residents to spend more of their income on meeting other needs.

The primary job center in need of transit services is the SW 19th corridor, with numerous restaurant, retail, and service industry jobs. Additionally, improving access for workers, and for customers, is an economic development opportunity for the city. With reliable transportation, businesses can have access to a larger labor pool and be able to draw customers from a larger area.

SW 19th St is a critical retail end employment corridor in Moore.

Medical

Accessing medical services can be the most acute need for transit, and can be a critical component of public health efforts for populations that may have limited mobility or otherwise have difficulty with transportation to medical appointments. Integris Health Community Hospital near SW 34th & Telephone Rd and Norman Regional Moore are the largest hospitals in the city, both with emergency services and inpatient and outpatient care. Other primary

Integris Health Community Hospital at SW 34th & Telephone Rd.

care medical providers and pharmacies are located throughout the city as well.

Government Services

Moore residents should be able to access local government functions in order to stay involved, knowledgeable, and able to attend community events and participate in the government decision-making process. In addition to this community involvement, residents occasionally need to go to local government offices for critical services. These locations include Moore City Hall, Moore Police Department/Municipal Court and the Social Security Administration Office on NE 27th Street.

Moore Municipal Court & Police Department

Social Security Administration office on NW 27th Street

High Schools

High Schools have been identified as a key destination, in particular providing transportation for students after school to other activities (not replacing or overlapping with school bus services). In addition, Moore Public Schools provides services for job skills and finding employment. Transportation has been identified as a barrier for many of these students, with transportation being prohibitively unaffordable or unreliable.

Moore High School

Social & Recreation

Transit can provide access to many critical personal and family needs as discussed above. However, access to social, entertainment, and recreation activities should not be ignored. Use of parks, social interactions, and outdoor activities contribute to the health and happiness of residents. Access to social activities can also be a key factor in a senior resident's ability to age in place. Transit service is an economic development opportunity. People want to live, and businesses want to locate, in places with vibrant recreation and entertainment options.

The City's Brand Senior Center is an important social service and recreation destination for senior residents.

Resident Survey

In the Fall of 2023, the City of Moore conducted a transportation survey to collect public opinion on transportation and funding issues in the community. The goal was to collect a minimum of 200 completed surveys from residents. The goal was met with 316 completed surveys collected. The overall results for the sample of 316 households have a precision of at least +/- 5.5 at the 95% level of confidence. The main purpose of the survey was to identify the interest in public transportation, preferred funding methods, and typical transportation habits of community members to develop a roadmap for the future to meet the community's needs.

Methodology

The survey was administered by ETC Institute through mail to a random selection of households within the city. Surveys were sent with a cover letter explaining the purpose of the survey and a return/reply envelope to mail the survey back. Respondents also had the option of completing the survey online at www.mooreoktransportationsurvey.org. Results were monitored to ensure survey distribution was closely proportionate to the region's population demographics.

The following sections contain a summary of the major findings from the survey.

Respondent Characteristics

Demographics of Respondents. Fifty percent of respondents (50%) were male, and fifty percent (50%) were female. Twenty-eight percent of respondents (28%) were between 50 and 64 years old. Twenty-seven percent (27%) were between 35 and 49 years old, twenty-one percent (21%) were 65 or older, and twenty-four percent (24%) were under 35 years old. Seventy-three percent of respondents (73%) described their race/ethnicity as White or Caucasian, and ten percent (10%) identified as Hispanic, Spanish, or Latino/a/x. Figures 17 and 18 show these survey responses.

Employment and Income. Sixty-nine percent of respondents (69%) said they were currently employed. One-third of respondents (33%) said their annual household income was between $60,000 and $99,999. Twenty-eight percent had an annual household income of $100,000 or more, twenty-five percent (25%) had an income between $30,000 and $59,999, and fourteen percent (14%) had an income of under $30,000. Figure 19 illustrates responses for household income.

Voting. Ninety-five percent of respondents (95%) are registered to vote at their current address. Seventy-five percent of respondents (75%) said they are very likely to vote in the next municipal election, and nineteen percent (19%) said they are somewhat likely.

Figure 17: Age (Resident Survey)

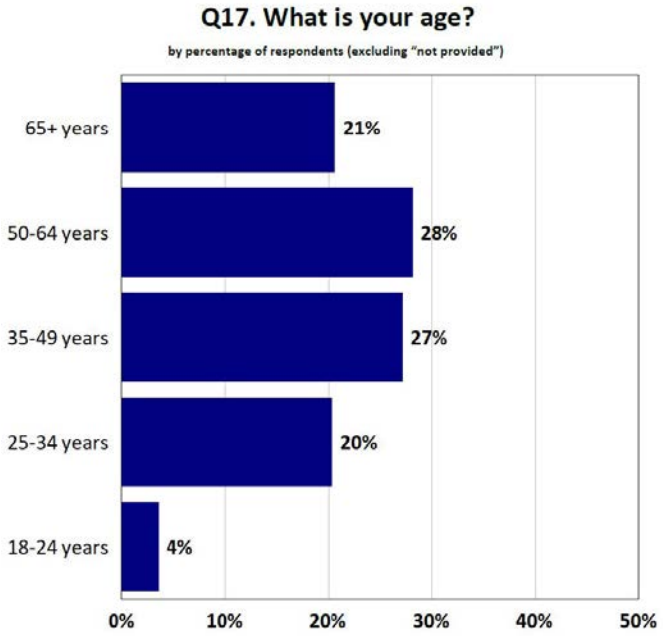


Figure 18: Race & Ethnicity (Resident Survey)

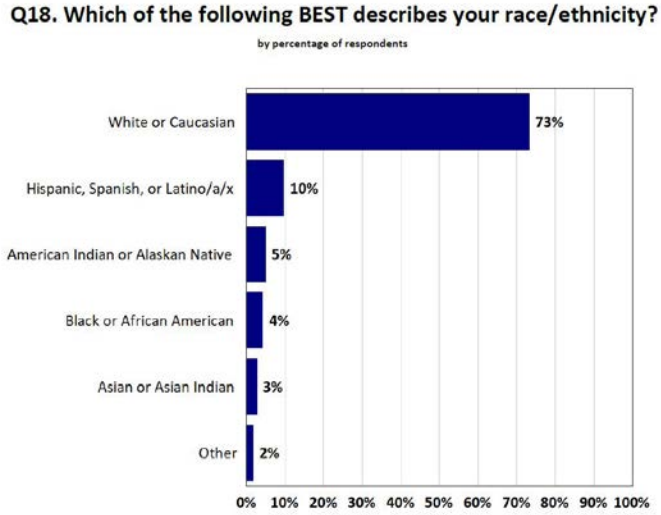
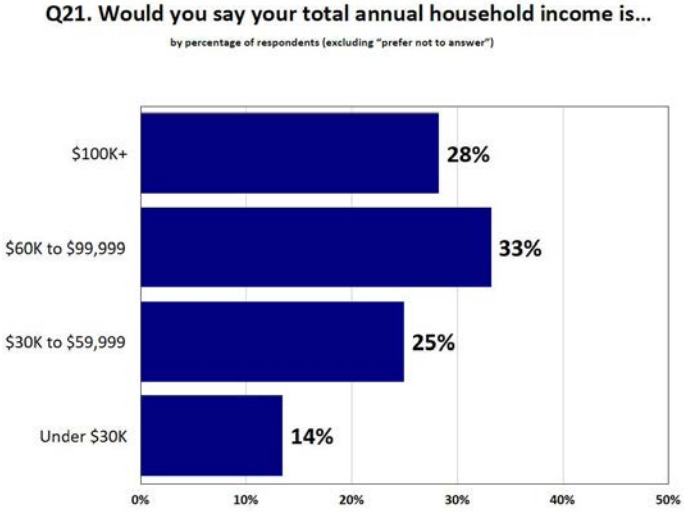
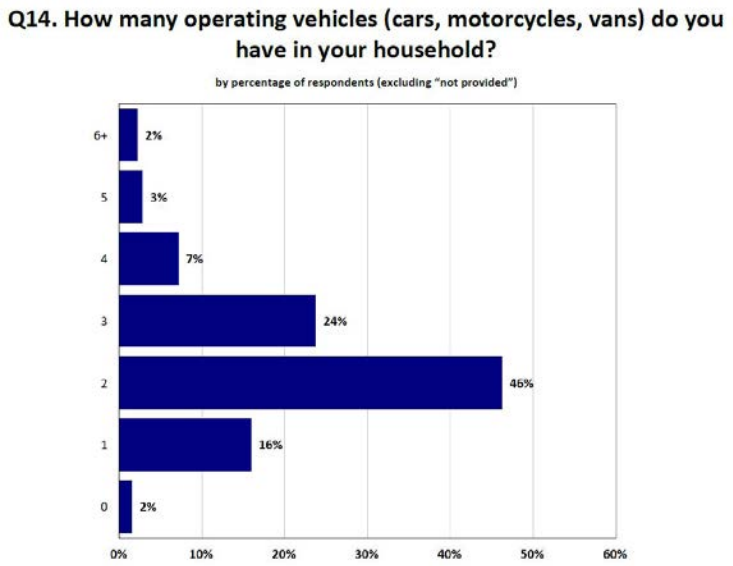


Figure 19: Household Income (Resident Survey)



Household Vehicles and Drivers. Ninety-seven percent of respondents (97%) said they have a valid driver's license. Sixty percent of respondents (60%) have two licensed drivers in their household, twenty-two percent (22%) have three or more licensed drivers in their household, and eighteen percent (18%) have only one licensed driver in their household. Forty-six percent of respondents (46%) have two operating vehicles at their household, and twenty-four percent (24%) have three operating vehicles. Sixteen percent of respondents (16%) have one operating vehicle, twelve percent (12%) have four or more, and two percent (2%) have none, as shown in figure 20.

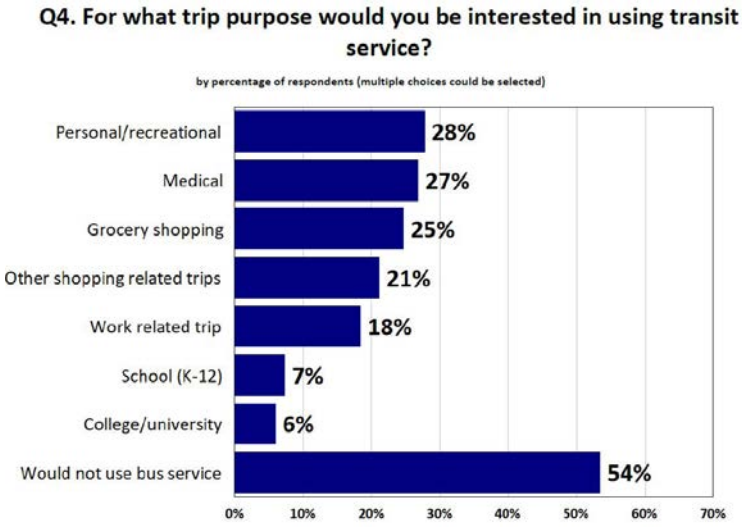
Figure 20: Household Vehicles (Resident Survey)



Interest in Transit Service

Potential Transit Usage. Figure 21 shows twenty-eight percent of respondents (28%) indicated they would be interested in using transit service for personal/recreational activities. Twenty-seven percent (27%) would use it for medical visits, and twenty-five percent (25%) would use it for grocery shopping. When asked which time periods respondents would most likely use transit, the highest selected option was between 3:00pm and 7:00pm (28%). The second highest selected option was 9:00am to 12:00pm (23%) followed by 5:00am to 9:00am (18%).

Figure 21: Trip Purpose (Resident Survey)



Services. As shown in Figure 22, respondents would be most likely to use "On-demand bus technology that operates in a similar manner to Uber & Lyft" (36% "very likely" or "likely"). The second highest rated potential service option was "door-to-door shuttle service for seniors or persons with disabilities" (32% "very likely" or "likely") followed by "a bus service that operates on fixed routes in the area where you live" (30% "very likely" or "likely").

Respondents were asked to rate the importance of different purposes for designing transit services in the region. These results are shown in Figure 23. The highest rated purpose was "serving low-income, disabled, or senior populations with few other transportation options" (88% "very important" or "somewhat important"). "Supporting economic development & access to other jobs" and "Connecting Moore to neighboring cities (e.g., Oklahoma City, Norman) were the next highest rated purposes (78% "very important" or "somewhat important" each).

Figure 22: Likely to Use Transit

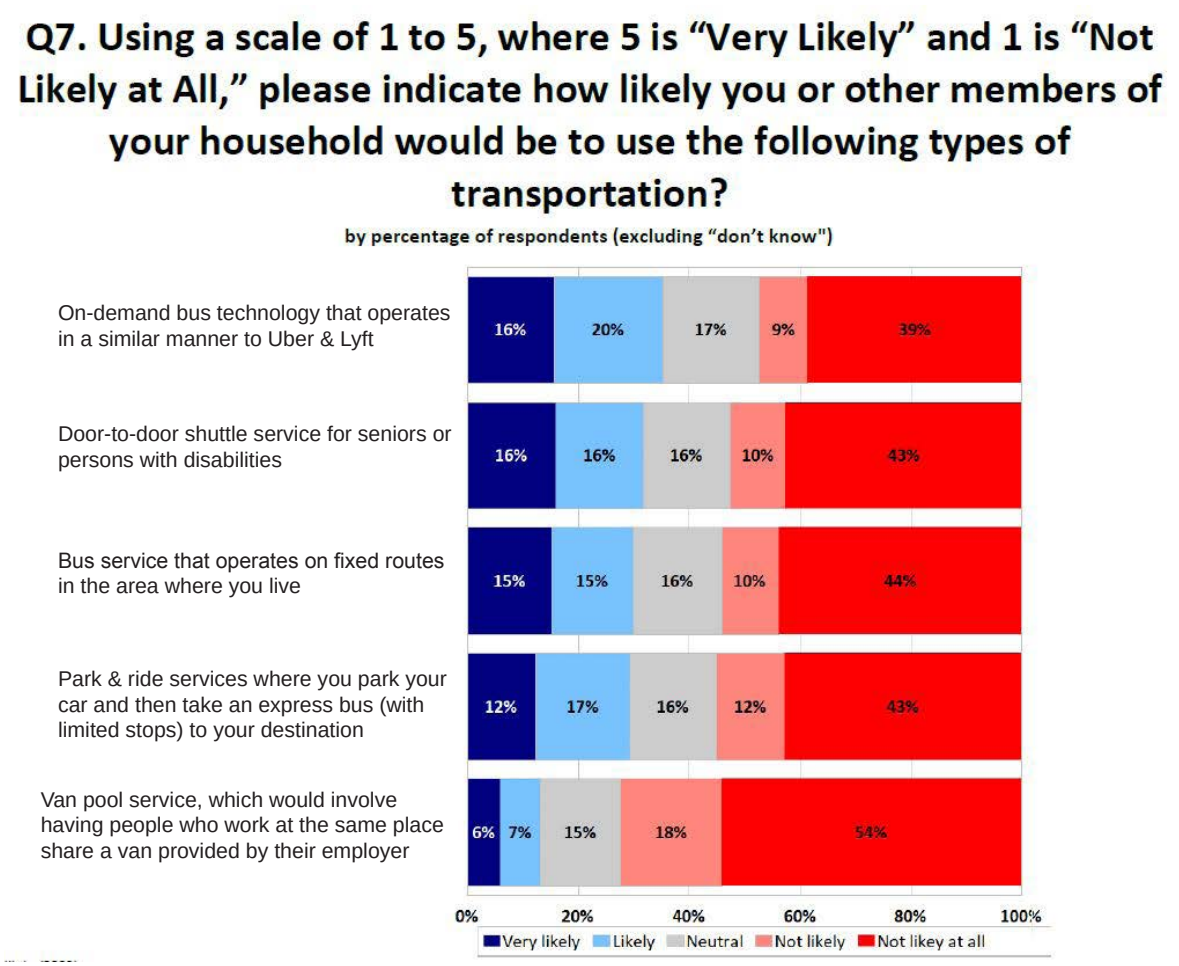
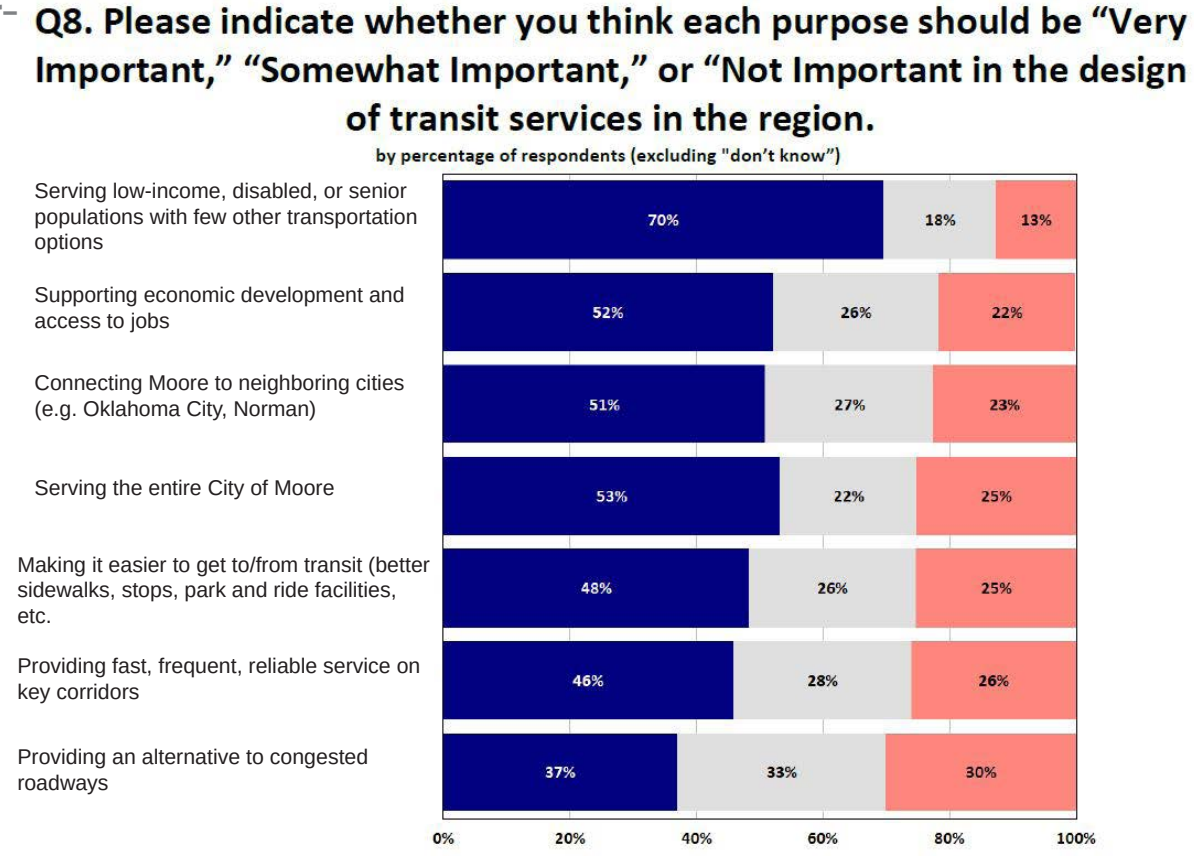


Figure 23: Importance of Transit Services



Funding

Importance of Funding. When asked how important it is for the City of Moore to support and fund public transportation, thirty-seven percent of respondents (37%) selected "very important," and twenty-five percent (25%) selected "somewhat important." Ten percent (10%) selected "not sure," and twenty-eight percent (28%) did not believe it was important. Figure 24 shows the responses.

Methods of Funding. Respondents were asked to rate how supportive they would be of three potential funding sources that could be used to add public transit and infrastructure. Figure 25 shows thirty-five percent of respondents (35%) would be supportive of a small sales tax increase in Moore. Twenty-six percent of respondents (26%) would be supportive of an annual fee added to each car's registration fee, and twelve percent (12%) would be supportive of an increase to taxable valuable of houses in Moore.

Figure 24: Support for Funding

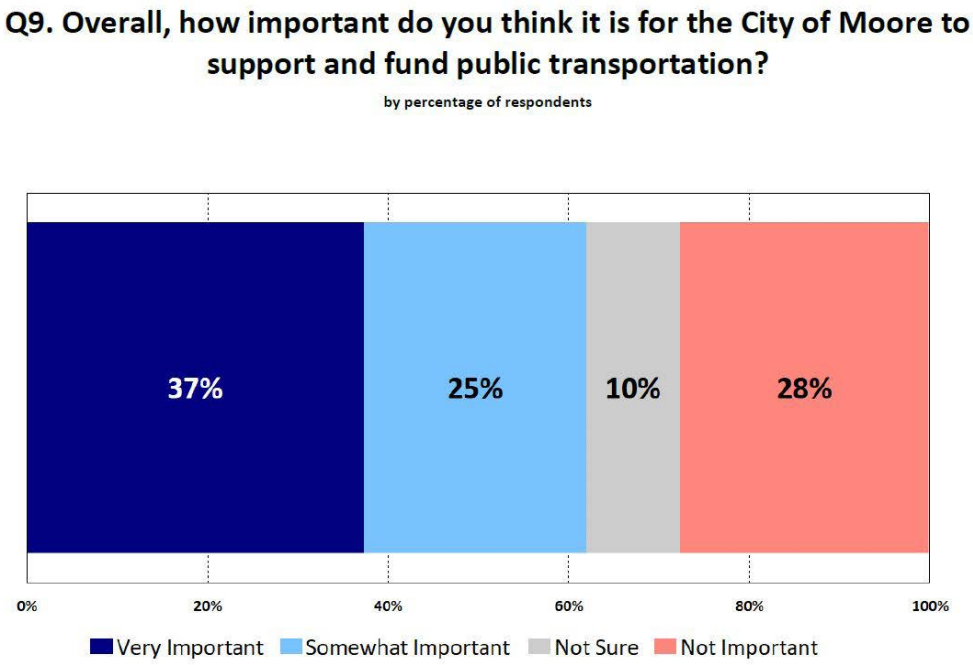
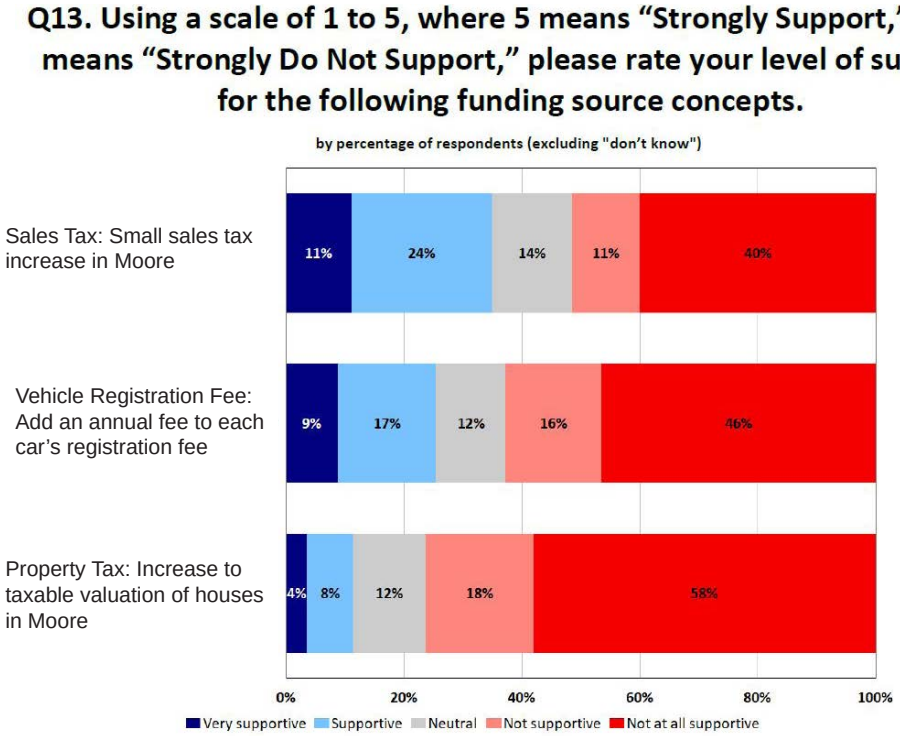


Figure 25: Funding Options



What Did We Learn?

This variety of inputs--market analysis, transit destination review, stakeholder feedback, and public input--combined provide a picture of the transportation needs in Moore, and potential strategies to meet these needs. The following sections summarize a key aspect of services desired by Moore residents.

General Public Transportation

Services operated by the Brand Senior Center are valuable to the community and should continue to be supported, and planned for growth as resources allow. However, the city is in need of an option open to everyone.

Transit-Dependent Populations

Future transit service should be geared toward meeting the needs for people that need it the most. This includes disabled populations, seniors not able to drive, and low-income populations not able to afford or maintain a personal vehicle. Transit should provide a way for these residents to participate in the local community and economy that may not otherwise be able to do so.

Affordability

Transit service needs to be affordable to Moore residents who would most benefit from the service. Fares should be reasonably priced and be significantly cheaper than utilizing private rideshare options or taxi providers.

Trip Variety

There is no single source of transit demand that will dominate ridership origins or destinations (such as a specific large employer or educational institution). Similarly, trips will occur at a variety of times throughout the day. Transit will be useful for a variety of trips for a variety of people, and at locations around the city. Transportation needs exist for essential shopping, employment, medical, educational, and social/recreational uses. Implemented service should have flexibility to provide trips to a variety of locations and with adequate service hours.

Safety

Public input noted transit as playing an important role in overall transportation safety. Transit can serve trips that may otherwise occur by walking or biking at locations with traffic-related safety concerns, or by residents driving that would be safer to be a passenger. Transit can help supplement walking and biking in locations with accessible infrastructure, and can also transport residents across barriers where safety issues are present.

Incremental Growth

Services should start small and be closely evaluated to determine the extent of future growth needed. This data-based approach will help inform decision-making and ensure that public resources are allocated to maximize public benefits.

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3 Alternatives

Transit Service Types – Overview

The goal of this study is to evaluate a wide range of reasonable transit possibilities in Moore. Feedback from community engagement activities indicate at least some level of interest in multiple options for the city. This section provides an overview of the process, presentation of ideas and examples from peer cities, and an evaluation of refined options for Moore.

Options developed for public comment and technical review in Moore include four broad categories of transit services:

On-Demand Alternatives

On-demand services typically provide curb-to-curb, transportation within a defined service area, but without a defined route or schedule. There are multiple options and considerations for trip reservations, dispatching, payment, and other processes. Historically, these services have required advance booking, such as 24-hours in advance, so the service can be planned for the next day. Technology advancements have led to a rapid increase of "micro transit" service which allows for riders, typically by using a mobile application, to reserve a trip in real-time and receive a trip with a short wait time, such as 10-15 minutes. The experience of riding micro transit services can be similar to privately-operated rideshare companies but involve a public subsidy to be more affordable to riders, as a transit alternative.

Fixed and Flex Route Alternatives

Fixed bus routes operate along a defined path with a defined schedule. While this allows transit service to operate most efficiently and with the highest capacity for a large number of riders, these riders must travel to and from designated stops, and at times in the route's published schedule. Variations of this service type add in a measure of flexibility and are known collectively as flex routes. A flex route typically has a defined route and schedule, like a fixed route, but with the ability for riders to reserve a "flex" trip where the route deviates to pick up or drop off a rider within a defined zone. Operating parameters, the number of "timepoints" on the route, the size of the zone, and other factors can vary depending on suitability for the service area and riders' needs.

Regional Connections

The Central Oklahoma Transportation and Parking Authority (COTPA, more commonly known as EMBARK) provides a variety of transportation services in the Oklahoma City region, including bus, streetcar, paratransit, bikeshare, ferry, and parking services. Most relevant to Moore, EMBARK operates three routes in proximity the city. Two routes in particular have the potential to be expanded to serve Moore: the 024 route providing express service between Oklahoma City and Moore and the 040 providing service in south Oklahoma City to the northwest edge of Moore. Both routes are reviewed for the potential to provide Moore residents a transit option.

Specialized Transportation

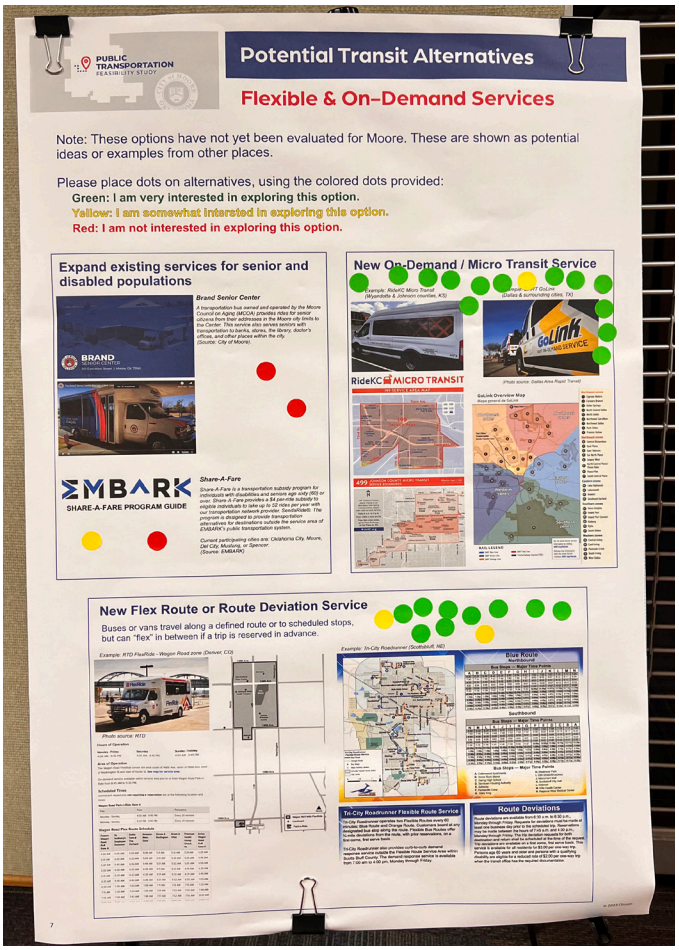
Expansion of existing specialized transportation options were also reviewed through the community engagement and technical review processes. This includes the Brand Senior Center's existing service for senior residents, as well as the EMBARK Share-A-Fare program and other programs under its "Mobility Management" umbrella. While these options are not open to the general public, and therefore not the primary aim of this study, they are critical services for the community and will be important to work in coordination with any future general public transportation service.

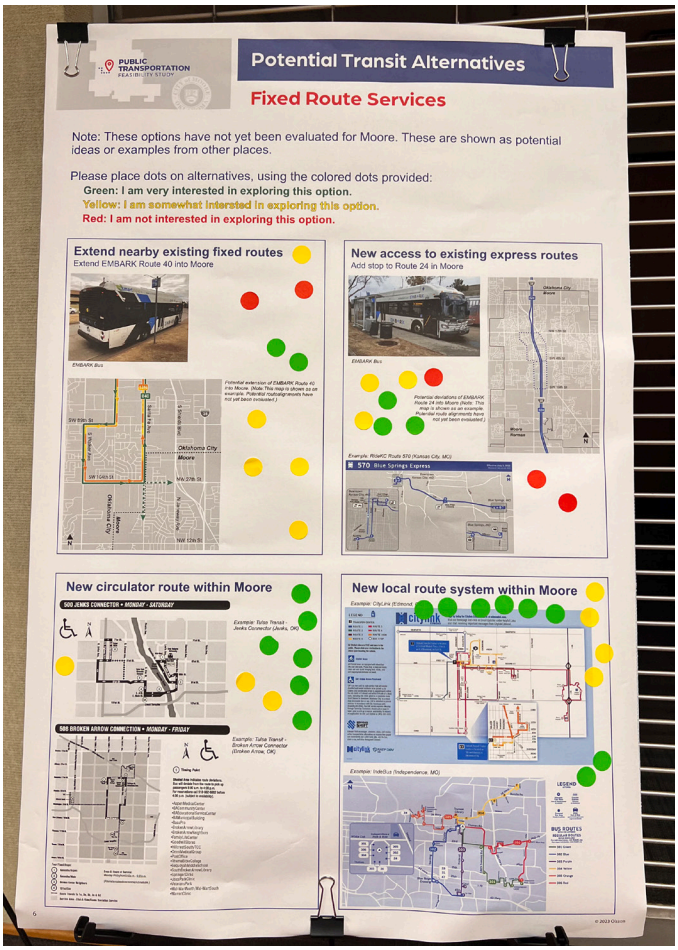
Alternatives Development

The potential alternatives were defined, with examples from peer cities, and presented for public review in open house meetings in August and October 2023. Additionally, the resident survey included a question focused on a preference for these service types. These options were not presented with specific details for operation in Moore. Rather, the aim was to determine preferred types of services at a conceptual level.

Public meeting attendees were asked to indicate which options they were very interested in, somewhat interested in, or not interested in. Comments were collected to gather more detail, input, and questions about each of the options. Additionally, the Stakeholder Steering Committee provided input and context for each concept option. Figure 26 provides the combined preferences of Open House Attendees. Figure 23, shown previously, provides the preferences from Resident Survey respondents.

Figure 26: Concept Alternatives – Community Feedback





The Open House attendees and the Resident Survey respondents both indicated a top preference for on-demand transit services. Comments provided reveal several primary reasons for this preference:

- Lack of an existing service in Moore, and needing to start somewhere
- Unknown levels of demand and the time and location of needed trips
- Coverage and availability for anyone in the city to use
- Flexibility in terms of booking and stop locations
- Familiarity for those already using rideshare services to get around for trips where they can't drive or otherwise get a ride
- Significant barriers and safety concerns for pedestrians; on-demand services require less walking to access bus stops

Community members also expressed interest in fixed and flex route service options. In the public meetings, support for new routes operating within Moore was stronger than an extension of existing fixed routes in Oklahoma City. Interest in express and vanpool options, especially among survey respondents, was noticeably lower.

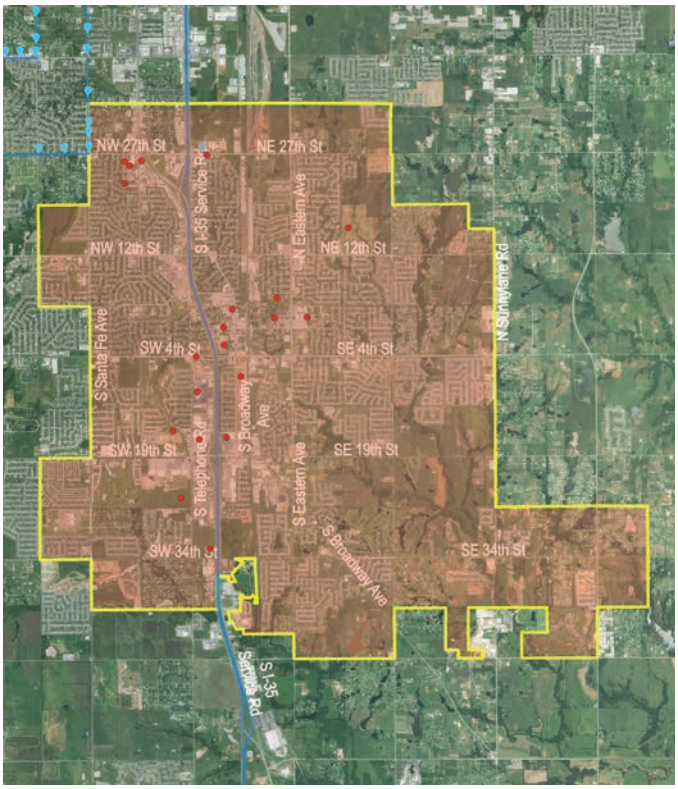
This input led to a refinement and consolidation of alternatives to go through a screening process. Alternatives were developed in more detail, with specific service concepts for Moore. A total of five refined concepts were brought forward for further review.

Micro Transit – Citywide

Residents and visitors to the city would book rides on-demand utilizing a mobile app, computer, or through a reservation line. All rides would be same-day and would not require advance reservation. Average wait times would be a maximum of 10-15 minutes, dependent primarily on the size of the zone(s) being served. The service area could encompass the entire city of Moore or be limited to smaller zones within the city based on propensity. Cost estimates would depend on factors such as projected vehicle hours, ridership, and selected operation vendors.

A citywide micro transit zone, shown in Figure 27, allows riders to book rides between any two locations within city limits. Wait times would be longer than with a smaller zone model but should not exceed 10-15 minutes in a city the size of Moore. Riders would have the benefit of accessing the widest range of city destinations, but a larger fleet may be required to effectively provide service to the entire area. Rider and trip data documented through this model could be used to identify potential candidate routes for a future flex or fixed-route conversion in the longer term.

Figure 27: Micro Transit (Citywide Zone)



Micro Transit – Smaller Zone(s)

A smaller, selected zone or zones could be utilized to focus micro transit service in areas with the highest demonstration of need or where service can provide connectivity to key destinations. With smaller coverage areas, the service would have shorter wait times than the citywide model. Service investments could be focused where transit propensity is highest, providing a targeted solution for those that need it most. Riders would only be able to book rides for pick-up and drop-off within the specified zone. This may limit connectivity to other key destinations outside of the zone(s).

A potential smaller service zone would operate primarily in the central and northwest portions of the city, approximately north of SW 34th Street and west of Bryant Avenue. This is the area where service demand is expected to be highest, based on the transit propensity factors reviewed, and based on public input. Figure 28 shows the Micro Transit smaller zone option.

Flex Route

A flex route offers the same benefits of a fixed-route circulator with the option of planned deviations up to ¾ mile from the route. The vehicles would flex off the route to pick-up passengers who call in to arrange for a ride off the route. The ¾-mile designation is based on the FTA requirement to provide ADA paratransit service within ¾-mile of a fixed route. This would not be a fixed route, nor constitute ADA paratransit service. Rather, the route would provide a service zone around a flex route, and can readily convert to ADA paratransit service in the future if needed. The City of Moore could also elect to provide a larger service area. However, this can have a significant impact on the route, and would not be recommended for Moore.

A potential flex route can be designed to provide a circulator loop that travels by many of the key destinations identified by stakeholders and public comments. This potential route, shown in Figure 29, would travel along portions of NW/NE 27th, Eastern, Main, S Broadway, SW 34th, S Telephone Road, NW 12th, and Santa Fe.

Figure 28: Micro Transit (Smaller Zone)

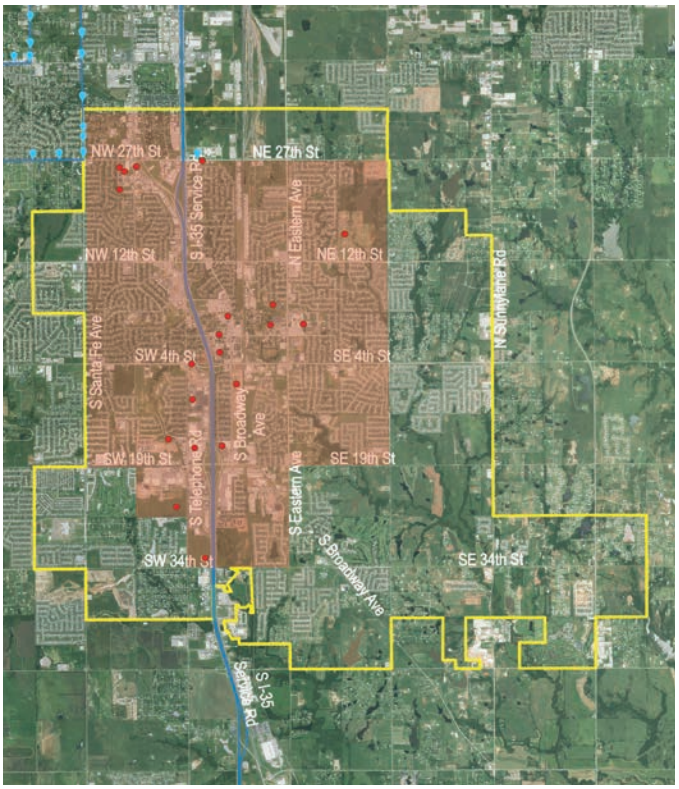
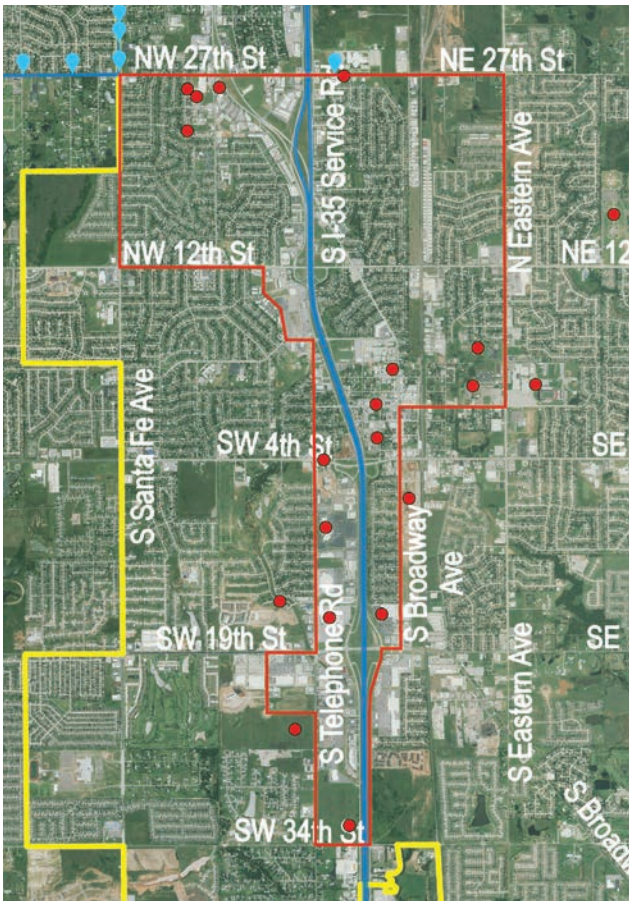


Figure 29: Flex Route Map



Expansion of EMBARK Route 040

The existing EMBARK route 040 into the City of Moore would be extended to allow for bus service at trip generators such as Nottingham Square Apartments on NW 27th Street, Moore Aquatic Center on Broadway, and the grocery stores along SW 19th Street. A potential route, from EMBARK's OKC Moves Bus Study, is shown in Figure 30. This option would operate at a 30-minute frequency from 5:30 AM to 7:30 PM M-F and 1 hour frequency on weekends from 6:30 AM to 6:30 PM. Bus stops would be placed every ¼ mile along the route.

This service would operate as a true fixed route, with no flex option. However, based on FTA regulations, EMBARK Plus, an ADA paratransit service, would provide coverage for populations with a documented disability within ¾-mile of the route.

Expansion of EMBARK Route 024

The existing EMBARK route 024 (express route between Oklahoma City and Norman) would deviate for pick-up in a Park and Ride Lot (not currently in existence) in Moore off I-35. An extra vehicle would be added to improve frequency and maintain the integrity and service quality of the route. A bus would come every two hours Monday through Friday. This would provide an opportunity for Moore residents to connect directly, and quickly, to downtown Oklahoma City and to Norman. However, it would only provide one stop in Moore, and with a limited number of trips. Figure 31 shows the existing 024 route map.

Figure 30: EMBARK Route 040 Proposed Long–Term Map (from OKC Moves Bus Study)

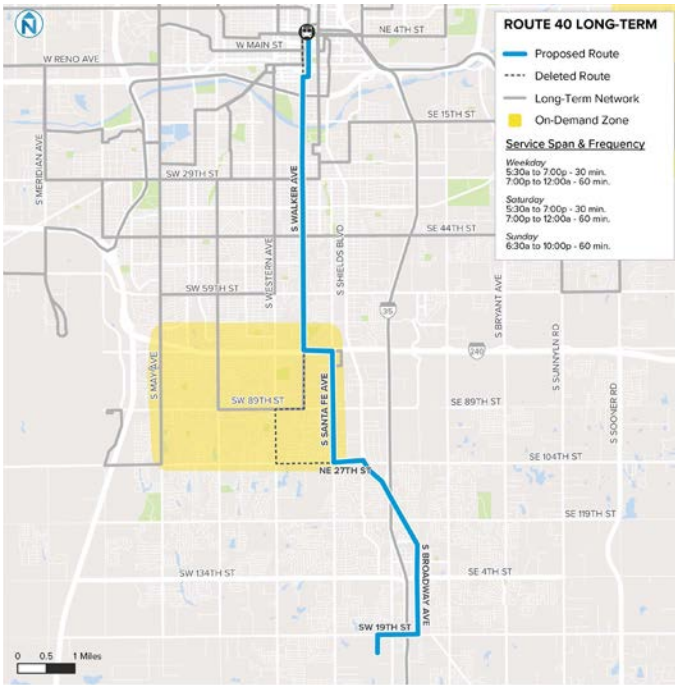


Figure 31: EMBARK Route 024 Map

Evaluation Matrix

These five distinct alternatives were evaluated using criteria established based on a mix of transit industry matrix and locally-specified considerations. These evaluation criteria were developed in concert with the Stakeholder Steering Committee and based on public input. These criteria included:

- **Service Quality.** What is the anticipated frequency or wait time? How reliable is the schedule?
- **Effectiveness.** What is the ridership potential?
- **Service Connectivity.** Does it connect to other routes or services?
- **Destination Connectivity.** Does it directly connect to, or come within ¼-mile, of key destinations?
- **Equity.** Percent of route or zone with areas of high propensity (areas of need)
- **Accessibility.** Percent of city served within zone or ¼-mile of route.
- **Flexibility.** For the rider (meeting a variety of changing needs) and for the City (ability to modify and scale)

Methodology

The evaluation process scores the five alternatives using each of these criteria: service quality, effectiveness, connectivity to other services, connectivity to key destinations, equity, accessibility, and flexibility. Definitions for each of the criteria are discussed below.

Service Quality

For the purposes of this evaluation, service quality is evaluated by the anticipated frequency of service for each alternative. The scale has five levels and ranges from 15-minute frequency to more than one hour. Alternatives expected to have an estimated 15-minute frequency receive the highest score (5) and less frequent service receives lower scores.

What is the anticipated frequency or wait time?

5 - 15 minutes or less
4 - 30 minutes
3 - 45 minutes
2 - 60 minutes
1 - more than 1 hour

Frequency was estimated for the micro transit zone alternatives based on the size of the respective zones being proposed and estimated drive times. Real time frequency will vary depending on vehicle/driver availability and traffic demands at the time of the requested ride. Micro transit zone design should be mindful of these considerations. Frequency for the flex route option was determined by route length and estimated drive time for that prescribed route. Any deviations to the prescribed route would impact the estimated frequency. Finally, estimated frequencies for the proposed expansions of EMBARK Route 40 or Route 24 were derived from expansion proposal materials provided by EMBARK staff to the City of Moore.

Effectiveness

For the purposes of this evaluation, effectiveness is defined as the estimated ridership potential for each alternative. Ridership estimates were developed based on a combination of sources: peer city services, industry-standard elasticity models, or projections based on existing local services (such as the existing EMBARK routes).

Service Connectivity

Connectivity to other services was defined by the proposed alternative's connection with any other service available to or within the city. This could include connections to limited service such as The Brand Senior Center vehicle, or connections to existing EMBARK services. All proposed alternatives have the possibility of connecting with at least one other service. The scale for this evaluation was 3 at the highest and 1 at the lowest:

Does it connect with other routes or services?

3 - Yes, multiple
2 - Yes, one
1 – No

Each of the proposed alternatives were mapped and overlaid with any existing services. Any observed connections were then used to score each alternative.

Destination Connectivity

For the purposes of this evaluation, connectivity to key destinations is defined by the number of key destinations directly connected to the proposed alternative or within the alternative's ¼-mile buffer zone. These key destinations were collected through input from stakeholders and the public over several meetings. The ¼-mile buffer size was chosen because most people are willing to walk ¼-mile to ½-mile to access a transit stop (Federal Highway Administration Office of Safety, 2008). In this case, the more conservative buffer was chosen due to the fact that transit usage is currently low to non-existent for most of Moore. Alternatives are scored by how many key destinations come within the ¼-mile buffer of the proposed route or zone:

Does it directly connect to or come within 1/4-mile of key destinations?

3 - Yes, multiple
2 - Yes, one
1 – No

Each of the proposed alternatives and their corresponding ¼-mile buffers were mapped and overlaid with points for each of the key destinations. The number of key destinations that intersected with the alternative feature or its corresponding buffer were counted and used to score the alternative.

Equity

For the purposes of this evaluation, the equity criterion is defined as the percentage of the route or zone within areas of high transit propensity. Alternatives were scored by the percentage of the route or zone that intersects with high transit propensity areas. A transit propensity map was previously developed based on key demographic indicators indexed for each census tract throughout the city. There are five levels of transit propensity, with the two higher levels identified as “high transit propensity areas” for this evaluation.

What percentage of the route or zone intersects with areas of high transit propensity?

5 - 80-100%
4 - 60-79%
3 - 40-59%
2 - 20-39%
1 - 0-19%

Each of the proposed alternatives were mapped and overlaid with the transit propensity layer. The geometry tool was used to calculate the percentage of the routes or zones that intersected with the two highest level of transit propensity, and those percentages were then utilized to assign each alternative a score.

Accessibility

For the purposes of this evaluation, accessibility is defined as the percentage of the city served. The area served also includes the ¼-mile buffer around the route or zone. The geometry tool was utilized to calculate the area of the proposed alternative and it’s ¼-mile buffer. That area was then divided by the area for the entire city to calculate the percentage of the city served. Alternatives with higher calculated percentages of service were assigned higher scores.

What percentage of the city is served (square footage within 1/4-mile of route or zone)?

5 - 80-100%
4 - 60-79%
3 - 40-59%
2 - 20-39%
1 - 0-19%

Flexibility

The intent of this metric is to gauge the flexibility of the service, both for the City of Moore and for riders of the service.

For the City of Moore, maximizing flexibility means maintaining management and control of the service and having the ability to make modifications to the service along the way. Such changes may be based on changing needs, new travel patterns, or changes to existing funding or future funding expectations.

For transit users, maximizing flexibility means being able to access the service at a variety of locations at each end of the trip, and being able to book trips at a variety of times for a variety of purposes.

This metric is primarily a qualitative measure, based on similar services or expectations for each service type based on the alternatives development and review process. A from 1-5 scale is included based on the level of flexibility anticipated for each of the service types.

Summary Score Matrix

Scores for each criteria were assigned and noted in the corresponding column of the alternatives matrix. The matrix was then used to total the scores for each alternative and ranked based on those scores. Table 4 shows the scoring matrix for all the alternatives. The top three scores moved to the next level of evaluation, including Micro Transit - Citywide, Micro Transit - Selected Area, and Flex Route.

Table 4: Service Evaluation Matrix

Alternatives	Rating Criteria: Service Quality	Effectiveness	Connect. to other services	Connect. to key dest.	Equity	Accessibility	Flexibility	**Total**
1A - Microtransit - Citywide Zone	4	2	3	3	4	5	5	**26**
1B - Microtransit - Smaller Zone	5	2	3	3	4	4	5	**26**
2 - Flex Route	2	3	3	3	4	5	4	**24**
3 - Expansion of EMBARK Route 40	4	4	3	3	5	2	2	**23**
4 - Expansion of EMBARK Route 24	1	3	3	3	5	1	1	**17**

Based on technical review and public input, these options proceed for further review and phased implementation.

Cost Estimates

Cost estimates were developed for alternatives, with one addition: flex route numbers were provided for a one-bus and for a two-bus operating scenario (Note: a one-vehicle micro transit service option is not seen as feasible due to service area size and reliability concerns.)

Operating Costs

One primary cost of operating transit service is labor. The amount of time a driver, as well as administrative and support staff (and including benefits) are needed to operate the service is the driving factor of costs. Therefore, if the number of vehicles and service hours is held constant—e.g. 2 buses each operating 12 hours per day—the costs are not dramatically different.

Ridership estimates were also generated as part of this process, based on similar services in operation in peer cities, including in Oklahoma City, Tulsa and Kansas City (and in suburbs of each city).

Costs on a per-hour basis are lower for micro transit services, typically relating to lower fuel and maintenance costs. However, a flex route offers a reasonable one-bus operating scenario, at a cheaper overall cost than a two-bus micro transit service. However, a two-bus flex route would be more expensive. Costs for the EMBARK service options are based on information provided by EMBARK to the city in 2022 (adjusted to 2024 dollars).

Methodology Note: Cost estimates in Table 5 are built on "cost per hour" information for similar services based on industry research and experience.

Table 5: Estimated Annual Operating Costs

Option	Buses	Pass. Trips per Rev Hr	Avg Wkd Rev Hr	Avg Wkd Pass. Trips	Annual Rev Hr	Annual Pass. Trips	**Annual Cost**
Micro Transit - Citywide	2	2.2	24	53	6,120	13,464	**$391,680**
Micro Transit - Selected Area	2	2.5	24	60	6,120	15,300	**$391,680**
Flex Route (one bus)	1	6.0	12	72	3,060	18,360	**$229,500**
Flex Route (two buses)	2	6.0	24	144	6,120	36,720	**$459,000**
Expansion of EMBARK Route 40	N/A	13.0	25	331*	6,486	84,318*	**$442,854^**
Expansion of EMBARK Route 24	1	8.0	6	48*	1,524	12,192*	**$124,084^**

** Ridership estimates for EMBARK routes attempt to only capture ridership on service within Moore.*

^ Costs determined from prior information provided by EMBARK and includes a blended hour/mile rate. Adjusted 3%/year.

Capital Costs

The capital costs of vehicles and facilities play a part in calculating overall transit costs. For Moore, the capital costs will be a small factor primarily due to:

- The less significant difference in life-cycle costs of ADA-compliant vehicles between the micro transit and flex route service types, and
- There are more options for capital expenses to be primarily funded (typically 80%) by federal grants. (Conversely, local communities are generally responsible for a larger share of operating costs.)

Additionally, should the City pursue a solution with "turn-key" service provided by a private contractor, capital costs including vehicles and facility costs are typically included in the annual cost of providing the service.

Capital costs would be incurred if the City directly operated service, or in the case of City ownership of vehicles, an operations/maintenance facility, or other capital items.

Primary capital costs for transit services are vehicles, facilities, and software and hardware depending on the service type. Other items may include fareboxes or bus stop infrastructure (in the case of a flex route with marked bus stops, or occasionally in an on-demand service scenario where a specific location may need to be marked as a stop and need improvements for accessibility.)

Table 6 provides cost estimates of certain capital costs, if the City did not pursue a turn-key service model with contractor ownership of capital items.

Table 6: Estimated Capital Costs

Option	Vehicle Type	Vehicle Cost	Software	Bus Stop Infra.	**Total Cost**
Microtransit - Citywide	2 large passenger vans	$160,000	$30,000	$0	**$190,000**
Microtransit - Selected Area	2 large passenger vans	$160,000	$30,000	$0	**$190,000**
Flex Route (one bus)	1 Cutaway	$120,000	$0	$400,000	**$520,000**
Flex Route (two buses)	2 Cutaways	$240,000	$0	$400,000	**$640,000**
Expansion of EMBARK Route 40*	No vehicle cost to Moore	$0	$0	$0	**$0**
Expansion of EMBARK Route 24*	No vehicle cost to Moore	$0	$0	$0	**$0**

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4 Recommendations

A Phased Approach

The study process as documented in prior sections led to the development of recommended services for implementation. Due to limited resources, the need for flexibility in implementation and operations, and the desire to grow service incrementally, multiple phases of implementation are recommended. These phases are intended to build upon each other, modifying and growing services based on observed performance and periodic monitoring of whether services are meeting the needs of residents.

Phase 1 recommendations initiate the first steps taken to implement transit services in Moore, to have services operating within two years of beginning the implementation process. This initial phase is recommended as a pilot program, to gauge interest, fine-tune services, and develop baseline data for transportation demand in the city.

Phase 2 recommendations are focused on what can be done to adjust Phase 1 services based on observed ridership patterns, operational efficiency improvements, or changing community needs. This may include growing services to meet increasing demand, or making adjustments to fares or service procedures to best meet community needs.

Phase 3 recommendations represent a vision for transit in Moore in the longer term, after initial phases of services have built a base of ridership and recognition in the community. This longer-term vision is less tied to near-term expectations of funding and resource availability, and is intended to show a range of desired services as the city continues to grow.

Phase 1 Recommendations

Phase 1 recommendations are focused on addressing the city's most immediate and pressing public transportation needs, as expressed through public and stakeholder engagement and supported by technical review.

Key considerations for near-term services that best meet the needs and desires of Moore residents include:

- Implement a service accessible to the general public, without limitations with regard to age, disability status, or other factors.
- Offer widespread coverage throughout Moore, covering all of the city, or all portions of the city where public transportation needs are anticipated.
- Focus on meeting the needs of people that need the service the most. This includes senior and disabled populations, as well as low-income individuals not eligible for existing services.
- For senior residents, provide additional service through the Brand Senior Center/Council on Aging transportation program, allowing seniors to travel for a greater variety of trips.
- Meet a wide variety of transportation needs, including different types of trips and at different times of the day. Transportation services are desired not only for trips to and from work, but for essential shopping, medical appointments, education, and social engagements.
- Provide an affordable alternative to driving, or using a rideshare provider at market rates. Costs to the rider should be subsidized to allow for rates that do not require a low-wage worker to spend a large percentage of their income on transportation.

Senior Service Expansion

The Moore Council on Aging provides an existing transportation service for senior populations within Moore, operating out of the Brand Senior Center. The service has one vehicle and relies on donations for ongoing operations. Currently, approximately 10 to 15 riders per day use the service. Providing more trips is currently not feasible due to limited vehicle and driver availability.

As part of Phase 1 implementation, this service should be supplemented with an additional vehicle and available driver to be able to provide more trips. This could provide flexibility for seniors to travel to a wider range of appointments, and to serve additional seniors who may not already use the service. Additional resources would allow the service to travel to destinations outside of Moore. Specifically, seniors frequenting the Brand Senior Center have expressed a need for trips outside of Moore for medical appointments, such as to the Norman Regional HealthPlex.

EMBARK Mobility Management

EMBARK's Mobility Management program fills gaps in transportation needs across the Oklahoma City region. Services include:

- Senior Services programs funded through an Older Americans Act grant partnership with Areawide Agency on Aging. This program includes trips to daily meal sites (ten locations), weekly shopping trips (21 routes), and medical and other trips.
- Community Development Programs funded through a Community Development Block Grant that provide bus passes, emergency taxi rides, and Share-A-Fare trips for low-income populations.
- EMBARK Well provides transportation to the nearest wellness center for qualifying adults age 60 or older.
- Climb Ride Program is a partnership with the Department of Human Service Child Welfare and removes transportation as a barrier for reuniting families.
- A partnership with Palomar to provide transportation services for victims of domestic violence, elder abuse, and human trafficking.

Many of these programs receive funding from the federal 5310 program which provides funding for capital and operating costs for services for seniors and individuals with disabilities. EMBARK is assuming management of this program for the Oklahoma City urbanized area in the near future. During the *Public Transportation Feasibility Study* process, EMBARK has expressed interest and desire to expand some of these options into Moore. These programs can supplement the increased Council on Aging service to meet a greater variety of needs in the city and region.

New On-Demand Citywide Micro Transit Service

To meet transportation needs in the community, a new on-demand "micro transit" service should be provided, with citywide coverage. This recommendation fulfills the goal of providing a transportation service available to all residents of Moore. The service area, with key destinations, is shown in Figure 32 on the next page.

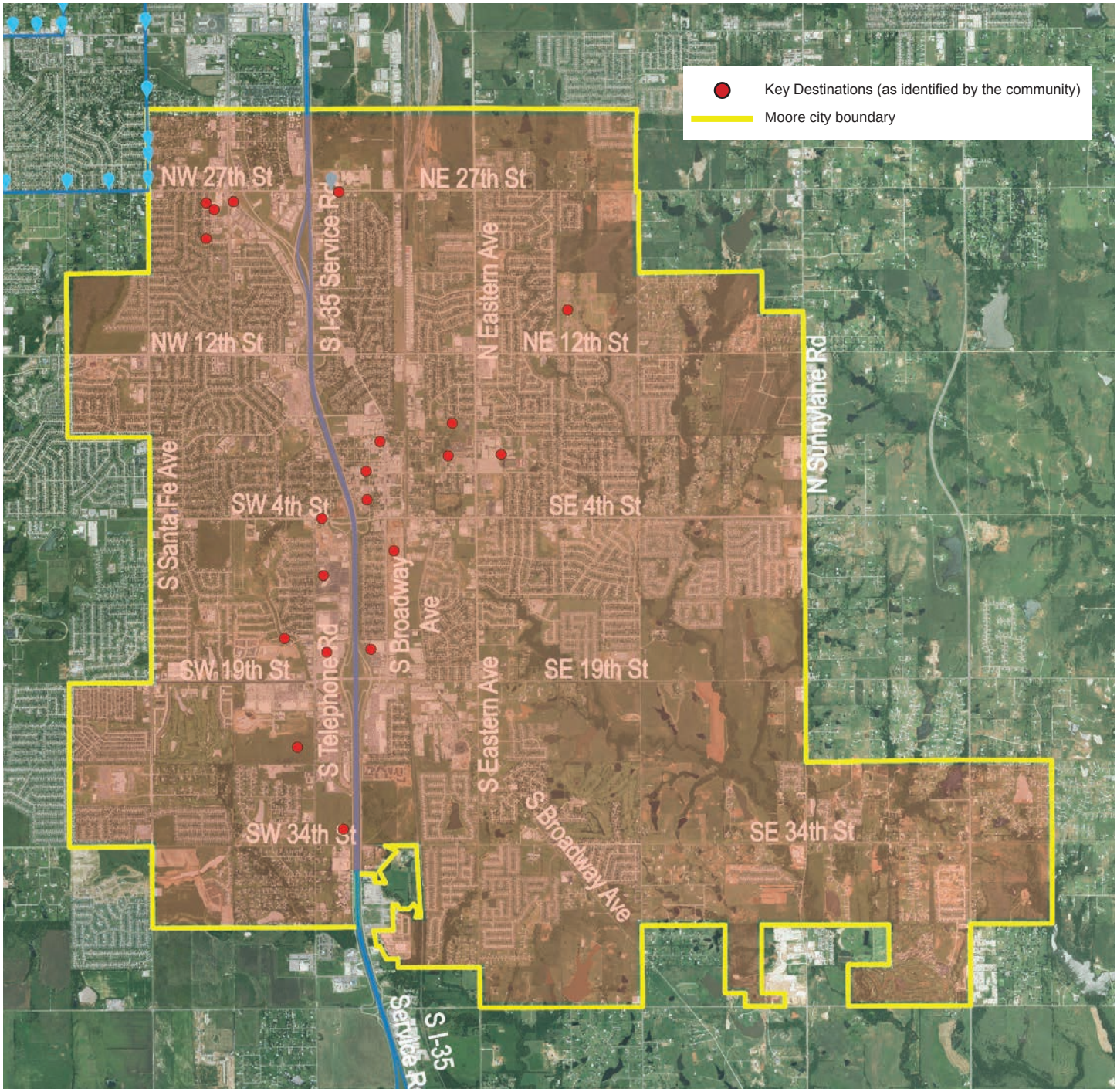
The City of Moore is approximately 22 square miles in size which will be the service area for the Micro Transit service. A minimum of two vehicles are needed to provide adequate coverage for this proposed service area. The provision of only one vehicle would risk creating capacity issues for the service, resulting in denied trips or undesirable wait times. The cost for this new service is dependent on service hours. At a minimum, services should operate at least 12 hours per day, from 6 a.m. to

6 p.m., on weekdays. Ideal service levels would provide service later into the evening, such as until 11 p.m., and operate seven days per week.

This Plan recommends beginning on-demand service from 6 a.m. to 6 p.m. on weekdays with two vehicles, as an initial pilot. The service could be expanded or modified after data collection and monitoring of the initial service.

Section 5 (Implementation) provide more detail on the organizational, operations, and funding plans for this proposed service.

Figure 32: Micro Transit (Citywide Zone)



Phase 2 Recommendations

Mid-term recommendations are focused on making adjustments to programs started or expanded in Phase 1. A primary benefit of an on-demand micro transit service is the data collected for trip origins and destinations. These data can be used to optimize the service area, hours, and other operating parameters to focus on areas of highest utilization. This may improve service for users, in the form of lower wait times, or hours of operation more tailored to trip needs. Specific items to evaluate include:

Service Area

Data from Phase 1 implementation may indicate portions of the city that have few or no trips booked. Trips in these area may be sporadic in nature and may indicate a lower level of need in these areas. While such areas, due to having few trips, do not have a major day-to-day impact on services, an occasional trip to these areas may lead to increased wait times for other trips. Additionally, the potential of trips to these areas has to be accounted for in the provision of service.

A reduction in service area will limit the distance vehicles have to travel, thereby improving availability to serve more trips overall, and to reduce the amount of time between booking a trip and getting on the vehicle. While unlikely to be cost-neutral, a reduction in service area could be coupled with increased service hours, discussed in more detail below.

Conversely, the City may determine, through rider requests or other feedback, a need to expand the area outside of the City of Moore. While the primary purpose of the service is to enhance access for Moore residents to locations within Moore, it may benefit residents to have access to other nearby locations beyond city boundaries. To offset costs of such a change, the City of Moore should pursue partnerships with other jurisdictions, or employers or other organizations, for such an expansion to occur.

Service Hours

Phase 1 services will provide data not only for the origin and destination locations of trips, but also the time the trip was taken. Information collected from the community in the *Transit Feasibility Study* process indicates demand for a variety of needs and times of day. Therefore, it is anticipated ridership could be fairly consistent across service hours.

However, data may indicate services are rarely used at certain hours. In this case, hours could shift (to add service hours at other times) or be reduced in total to better match travel patterns. Increasing service hours without reducing the number of vehicles will have a higher cost. However, data may indicate the number of vehicles could be reduced during certain hours, allowing for the total change to be cost-neutral.

Number of Vehicles

A change in the number of vehicles may occur in tandem with a change in service hours. Significant “peaking” of the service is not anticipated. However, there could be some peak activity occurring depending on the mix of trips. Such times may warrant an increase in the number of vehicles operating at specific times of day.

Alternatively, Phase 1 operations may uncover a high level of demand warranting additional vehicles across most or all operating hours. Such a need would be evident by reviewing trip denials, or by longer wait times impacting service reliability. At this point, the cost of adding vehicles to the service will need to be evaluated, and potential partnerships pursued.

Zone Structure

A review of origins and destinations may reveal trips are clustered in certain areas, with a lower-than-expected number of long trips across the city. This may suggest splitting one citywide zone into two or more smaller zones may better serve riders. While a "transfer point" could be established between zones, such a change would make it more difficult for riders to travel across the city. However, by reducing the length of trips, more trips could be served overall.

Data collected and evaluation conducted in this study indicates a need for trips that would crisscross the city regularly, and not necessarily be localized within specific sections or neighborhoods of the city. Accordingly, splitting the city into smaller zones is not anticipated to be a need at this time. However, this option should be considered while reviewing Phase 1 data, along with other factors.

Fare Structure

The fare riders pay to use a service has a significant impact on the utilization of a service, in terms of total ridership and the nature of use. Accordingly, fare policy can be used to manage demand. A high-demand service where some trips are not able to be served, or served with unreasonable wait times, may benefit from a higher fare to moderate demand, if funding cannot be obtained to increase services such as providing more vehicles. Alternatively, low demand may indicate fares should be lowered. Fares can be adjusted based on the length of a trip, or the time a trip is taken. Mileage-based rate structures, or off-peak discounts, are common for on-demand services.

Fare changes should not be taken lightly, or be conducted without regard to other impacts. A primary goal of new general public transportation in Moore is to be affordable to riders. Fare increases should be limited in nature, and be focused on managing demand to provide more reliable service to riders, rather than on attaining a significantly higher fare recovery ratio. Such an attempt may result in ridership losses that offset a higher fare per rider, and is detrimental to the goal of meeting transportation needs for residents that need it the most.

Flex Route Consideration

The implementation of a flex route service in Moore is recommended for Phase 3, and is detailed below. However, service monitoring of Phase 1 services may indicate trips are aligned to where a flex route service may better meet needs as part of Phase 2. The primary indicator of the suitability of flex route service would be if trips align geographically to where a route could be drawn to serve a large majority of these origins and destinations.

The merits and drawbacks of a flex route service are detailed in Section 3, and specific flex route recommendations for Moore are detailed in the Phase 3 recommendations below.

Phase 3 Recommendations

The final phase recommended is focused on developing a longer-term attainable vision for transit service in Moore, based on observed and projected demand. These services will require additional resources to implement. However, creating a vision is important for pursuing opportunities to create or expand new services, such as grants or other opportunities that may arise to provide resources for implementation and/or operations.

This longer-term vision has three primary elements:

New Flex Route Service

The first element would implement "flex route" service in Moore to serve areas with the highest levels of demand and ridership potential. This recommendation acknowledges the limitations of on-demand services, where each vehicle can only serve two to three riders per hour at peak operation, depending on trip length. As the city grows, with a diversifying population and economy, a higher-capacity service will likely be needed to meet demand. Additionally, such a service has the opportunity to be coordinated with land-use planning efforts to match transportation services with areas of higher residential or employment densities.

A flex route is effectively a hybrid between a fixed route and an on-demand service. A defined route and schedule allow the service to operate more efficiently, and serve a larger number of trips by flexing to curb-to-curb service to those that may still need it. However, there are drawbacks. A flex route cannot be as efficient as a fixed route, and cannot be as flexible as an on-demand service. For example, a flex route schedule needs to have a significant amount of "recovery" time to accommodate flex trips, therefore making the route slower for those not needing to flex off route. Therefore, a flex route can be a useful interim step toward, but not a replacement of, fixed route service. This route would provide service to primary destinations identified in the study, as well as to portions of the city exhibiting a higher transit propensity.

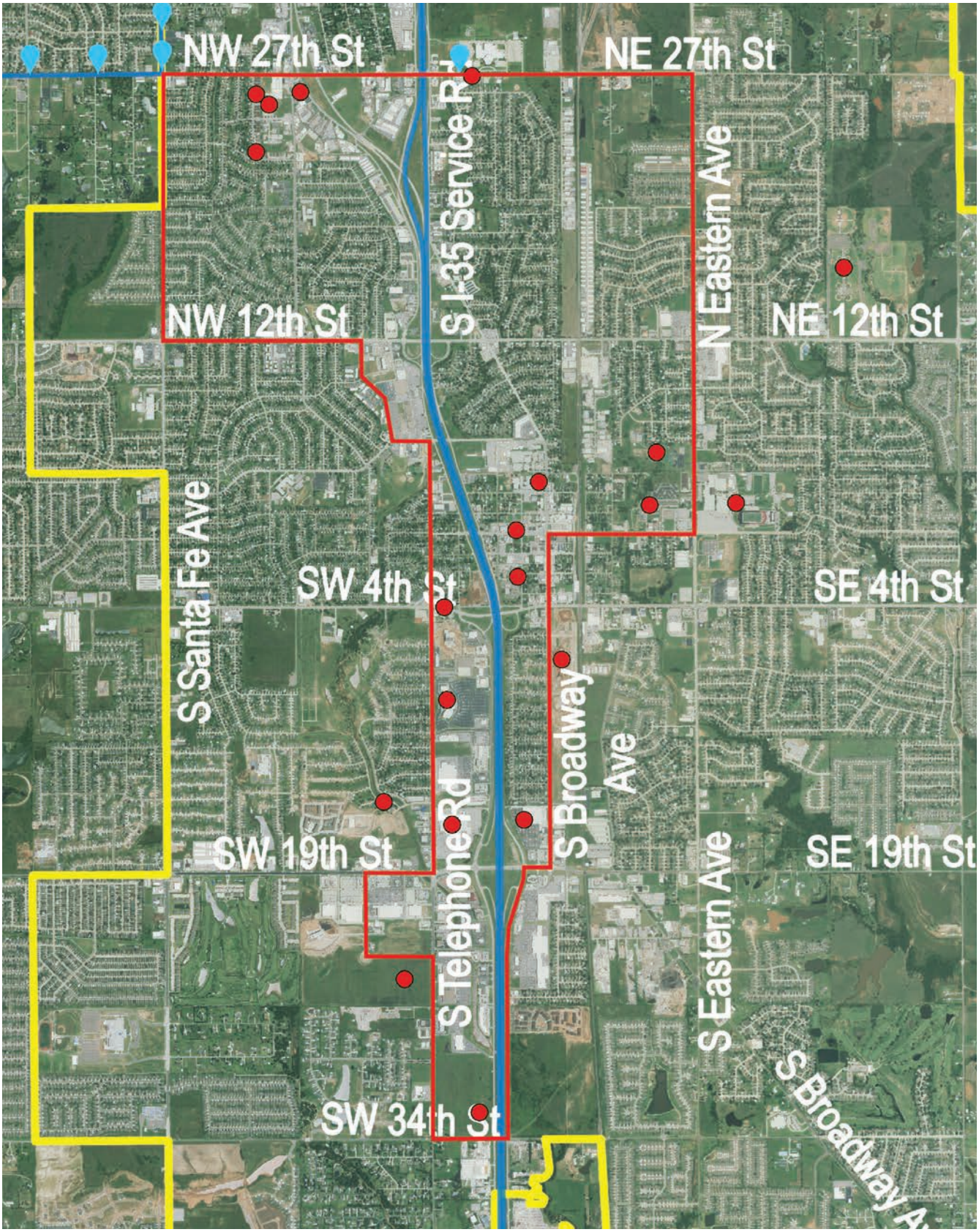
This potential flex route, shown in Figure 33, is designed to be able to be completed by a bus in less than an hour, including recovery time needed at the end of the trip, to confidently be able to accommodate flex trips and provide for a break for the driver. A potential schedule for the route is shown in Table 7. Unlike a micro transit service, riders would not need to book a trip, as long as they are getting on or off the bus at a designated stop along the route. This removes a step in the process of a resident accessing a transit service. Only trips that require the bus to flex off of the route would need to be reserved in advance.

Table 7: Example Moore Flex Route Schedule (12–hour service span, operated by one bus)

Main & Broadway	Shops at Moore (I-35 Service Rd)	Integris (SW 34th)	19th & Fritts	Salvation Army (NW 5th & City)	Santa Fe & NW 27th	Social Security (NW 27th)	Moore High School	Main & Broadway
7:00 AM	7:06 AM	7:10 AM	7:14 AM	7:20 AM	7:27 AM	7:31 AM	7:38 AM	7:41 AM
8:00 AM	8:06 AM	8:10 AM	8:14 AM	8:20 AM	8:27 AM	8:31 AM	8:38 AM	8:41 AM
9:00 AM	9:06 AM	9:10 AM	9:14 AM	9:20 AM	9:27 AM	9:31 AM	9:38 AM	9:41 AM
10:00 AM	10:06 AM	10:10 AM	10:14 AM	10:20 AM	10:27 AM	10:31 AM	10:38 AM	10:41 AM
11:00 AM	11:06 AM	11:10 AM	11:14 AM	11:20 AM	11:27 AM	11:31 AM	11:38 AM	11:41 AM
12:00 PM	12:06 PM	12:10 PM	12:14 PM	12:20 PM	12:27 PM	12:31 PM	12:38 PM	12:41 PM
1:00 PM	1:06 PM	1:10 PM	1:14 PM	1:20 PM	1:27 PM	1:31 PM	1:38 PM	1:41 PM
2:00 PM	2:06 PM	2:10 PM	2:14 PM	2:20 PM	2:27 PM	2:31 PM	2:38 PM	2:41 PM
3:00 PM	3:06 PM	3:10 PM	3:14 PM	3:20 PM	3:27 PM	3:31 PM	3:38 PM	3:41 PM
4:00 PM	4:06 PM	4:10 PM	4:14 PM	4:20 PM	4:27 PM	4:31 PM	4:38 PM	4:41 PM
5:00 PM	5:06 PM	5:10 PM	5:14 PM	5:20 PM	5:27 PM	5:31 PM	5:38 PM	5:41 PM
6:00 PM	6:06 PM	6:10 PM	6:14 PM	6:20 PM	6:27 PM	6:31 PM	6:38 PM	6:41 PM

Note: This schedule allows for 19 minutes of layover and recovery time at the end of each trip. This time is used to accommodate additional time needed for flex trips, to help keep the route on schedule, and to provide a break for the driver.

Figure 33: Flex Route Map



Micro Transit Modification

Moore's micro transit service will have a revised role if and when a flex route is implemented. Rather than being the only general public transportation in the city, it will have a function of supplementing, and feeding into, a higher-capacity (flex route) service. One drawback of a flex route is its coverage limitations. While the ¾-mile flex area allows for more coverage than a fixed route can provide on its own, it cannot realistically cover the entire city. In a Phase 3 operating scenario, there are two primary considerations for how Moore's micro transit service could evolve:

1. Micro transit service could be deployed as a way to fill gaps not served by the flex route. For residents not living in close proximity to the flex route, micro transit can still meet their flexible travel needs, either as a fully curb-to-curb service, or connecting them to the flex route to complete their trip. A fare structure that provides an incentive for connecting to the flex route, may also be enacted.
2. Micro transit service could continue operating on a citywide basis (or with a modified zone depending on Phase 2 changes), as a premium service, with higher fares for riders wanting a more flexible option. While less efficient in terms of service coverage, providing residents with multiple overlapping options can produce higher ridership and meet a greater variety of needs.

EMBARK Service Connections

In Phase 3, a re-evaluation of EMBARK service options should be conducted. As Moore continues to grow and transportation needs increase, particularly to locations outside of Moore, enhanced regional connections may be needed. As reviewed in this plan, EMBARK provides transit services in both Oklahoma City to the north and Norman to the south.

Based on current routes, and on EMBARK's *OKC Moves Bus Study* recommended services, routes 024 and 040 are the most logical for service in Moore.

1. Route 024 provides express service between downtown Oklahoma City and Norman, via I-35. This route could be modified to where certain trips exit from I-35 and serve a stop in Moore along the way. Such a change has already been evaluated by EMBARK and discussed with the City of Moore in the past. Due to the added time to the schedule, and the need to retain service levels to existing stops, an additional bus would be needed to operate this service.
2. Route 040 is a local fixed route serving south Oklahoma City, primarily along S Walker Ave, reaching as far south as NW 27th & Santa Fe at the edge of Moore, before heading back north. EMBARK has reviewed the potential to extend this route in Moore, and has been included as part of long-term recommendations in the *OKC Moves Bus Study*.

As observed in the *Feasibility Study* process, Moore residents often need to travel outside of the city. Similarly, many people that work in Moore come from outside of the city. While local intra-city transportation was seen as a more pressing need for Phase 1 implementation, the desire for inter-city services was noted throughout the process. One or both of the above EMBARK service options will provide an important regional connection for those needing affordable transportation and to travel around the region.

Additionally, these services will benefit Moore's micro transit and/or flex route services. Regional connections cannot provide a lot of coverage within Moore, due to needs for those services in other jurisdictions. Moore's local system expands the reach and utility of these routes, and vice versa. Regional routes enable people to use Moore's service to connect to a regional route. More people are able to live without needing to drive a car.

Additional Recommendations

The following sections are provided as additional considerations for Moore along with the implementation of transit services. The following elements could further enhance transportation access and opportunity in the city.

Multimodal Connectivity

Transit services exist within a transportation network where people often use multiple modes to complete trips, or use different modes for different trips. Safe and accessible facilities for people walking or using a wheelchair are an essential part of transit, as most people access transit by walking to the stop location, even if it is a relatively short walk. This is especially true for flex or fixed route services, where riders may have to walk a longer distance to reach a stop. Even if a stop is near a destination, the safety and quality of sidewalks, crosswalks, and other accessibility features are important for riders to be able to get to a nearby store.

Cycling is an increasing part of the transportation mix in Moore, whether for recreational or transportation purposes. The city has invested in new trails alongside parks improvements. Cyclists are more likely to be transit users, as transit helps them reach places more difficult to access by bike, due to long distances, access barriers, or safety concerns.

Expanding options for people to walk or bike through the community also expands opportunities for transit, by enabling people to live, or at least to fulfill a variety of needs, without a car. Even people that rely on walking and biking as primary transportation will likely still need to make occasional longer trips that require a vehicle. For such trips, transit provides an affordable option to owning and driving a car.

To maximize the impact of transit, and the ability for residents to travel with multiple options available, the City of Moore should continue its efforts to build new sidewalks, trails, bicycle lanes, and other active transportation features.

Land Use Planning & Development

Transit succeeds, and can provide the most benefit to communities, in places built with transit in mind. For high-capacity transit services (e.g. light rail or bus rapid transit) in major urban centers, this means dense development patterns that maximize the number of people that live, work, or otherwise travel to, a short distance of a major transit corridor. Development policy and decision-making, known as transit-oriented development, can have an express goal of being accessible to and from a major transit investment.

This is more difficult in suburban communities developed primarily after the prevalence of cars, and therefore have development patterns more spread out, with the much larger space requirement needed for driving and storing cars. However, suburban communities can link land use and transportation planning to make transportation, and transit more accessible to residents. The City's *Envision Moore 2040* comprehensive plan provides several examples of this, including:

- Reinvestment and revitalization of Old Town, encouraging mixed-use development, higher-density housing types, streetscaping, and walkability improvements.
- Guidance for revising parking requirements to allow for shared parking and on-street parking.
- Allowing for small-lot homes, attached, and multi-family housing types near commercial and regional center uses.
- Identify barriers to affordable housing and support the incorporation of affordable units in new development.
- Encourage Crime Prevention Through Environmental Design (CPTED) for greater safety in public spaces, such as lighting, windows facing the street, and mix of uses.

Transit-oriented development principles may have longer-term applicability with future commuter rail service, or other high-capacity transit such as bus rapid transit, as the city continues to grow.

Commuter Rail

The Regional Transportation Authority (RTA) of Central Oklahoma has been working to plan a future commuter rail service from Edmond to Norman, along the BNSF rail corridor through Moore. While Moore is not currently a member city of the RTA, the long-term opportunity and impact of this future transit corridor should be considered and planned for.

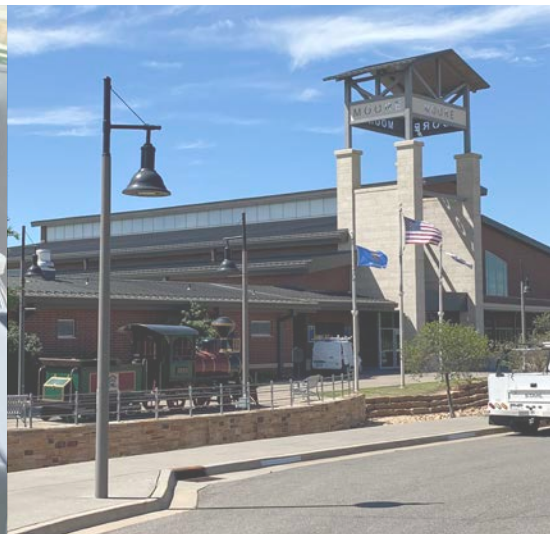
The opportunity may exist in the future for the City of Moore to re-engage with the RTA commuter rail planning and engineering process and advocate for a station to be located in Moore. The City's comprehensive plan, *Envision Moore 2040*, advocates for the inclusion of a commuter rail station located in Old Town Moore. According to the plan, "A planned commuter rail line could present opportunities for Transit Oriented Development (TOD) in the future. This type of development has a vertical mix of uses and is typically located within a half mile of public transportation."

If such a process is initiated, the City should develop a Transit-Oriented Development plan for the area, to maximize population, employment, and other activities in close proximity to the regional transit corridor.

In addition to providing adjacent development opportunities and population growth, a commuter rail station could serve as an asset for Moore by giving residents access to the broader region, and regional residents greater access to Moore. Residents relying on transit, either by need or by choice, would have the option of living in Moore while still being able to access employment elsewhere.

Additionally, a regional commuter rail station in Moore would benefit local intra-city transit service, either micro transit or flex route options. Many residents and employees seeking to use commuter rail would utilize Moore's micro transit or flex route services to make this connection. This connectivity, is critical to the long-term success of a transit service and can multiply benefits to the community.

5 Implementation



Services Summary

This final section of the plan focuses on implementation of transit services, focusing on the first phase of implementation. As a summary, recommended Phase 1 services include:

- Expansion of demand response service for seniors through the Moore Council on Aging program
- Coordination with EMBARK on expansion of Mobility Management program options in Moore.
- New on-demand citywide micro transit service.

This process involves implementing targeted improvements to existing specialized services and expanded participation in regional mobility management offerings. These steps should proceed in tandem with initiating general public transportation in the city, a service open to everyone. This is recommended as an on-demand micro transit service, which allows for real-time trip booking and curb-to-curb service anywhere within Moore.

This "Implementation" section focuses on this new on-demand micro transit service, as the primary aim of this study is to evaluate the feasibility and implementation of a service that is open to the general public. Additionally, due to a lack of local experience with such a service, more detailed guidance is needed compared to an expansion of existing senior transportation programs.

While the City of Moore is recommended to procure a vendor to provide this on-demand service, city staff will be responsible for management of this contract and ensure the service is adequately provided and meeting the needs of the community.

This section provides guidance for each of the following:

- A **Financial Plan** to pursue funding through a mix of federal, state, and local sources, with an example of potential revenues to meet estimated expenses.
- An **Organizational Plan** for the City to ensure appropriate management and administrative oversight of services.
- An **Operations Plan** that outlines the parameters, policies, and standards of the transit service.
- A review of **Local and Regional Partners** who may be involved in allocating funding, providing marketing or outreach support, assisting with riders' needs, or otherwise are key stakeholders in public transportation in Moore.
- Guidance for developing a **Comprehensive Transit System** to meet a variety of community transportation needs in the near and long-term.
- A summary of specific **Implementation Steps** needed to begin providing new transit service.

Table 8 provides a summary of the recommended transit program across all phases.

Table 8: Program Summary Table

Program Item	Summary
Goal: Moore general public transportation	Provide a new, affordable, transportation option that is available to all Moore residents. Collect and evaluate trip data to guide incremental growth of service in future phases.
City Role	Oversight, management, quality assurance, planning, and marketing activities to ensure service meets community needs.
Operator	Contract operator via City of Moore procurement process.
Financing	Federal, state, local funding, and fare revenues.
Services	Phase 1: on-demand micro transit serving the full city, available on weekdays for 12 hours per day. Dynamic booking for real-time service. Phase 2: Use data to evaluate and improve on-demand service. Phase 3: Add or convert service to flex-route model, reconsider EMBARK regional connection options.
Technology	Software and hardware for real-time booking, scheduling, real-time arrival/departure information, service notifications, and online payment integration.
Proposed Fare Structure	To be determined at a later stage when potential funding is more clear. Recommend a per-trip cost in the range of $2-$5, and potentially a small "per-mile" fee for longer trips.
Earliest Go-Live Date	The timeline is based primarily on provision of funds, especially local funds needed for ongoing operations. If funding is secured by the end of 2024, services could begin in mid to late 2025, at the earliest.
Bus Amenities	Phase 1: Wheelchair-accessibile, real-time travel data, charging ports, may include Wi-Fi depending on vendor contract.
Service Name	To be determined through future marketing efforts.
Target Markets	Seniors (as a supplement to existing Senior Center service), low-income populations, and other residents traveling to shopping, jobs, medical appointments, education, and recreation.
Area Characteristics	The service area is the City of Moore, with a population of 62,793 and an area of approximately 22 square miles.
Proposed # of Vehicles	Two vehicles are anticipated to be needed for the Phase 1 service, with one spare vehicle. These vehicles will be owned or leased by the service contractor.

Financial Plan

New public transportation service in Moore will require funding for start-up and ongoing operations. As this would be a new service provided, the City will need to evaluate and establish mechanisms, and work with local partners, to obtain new revenue to support this growth.

Several federal and state sources are available to assist with funding transit services in Moore. In general, there are more grant opportunities available for capital expenses such as buses, facilities, and related expenses. Most programs involve a local match of at least 20%. Operating funds are most difficult to obtain, as there are fewer programs available, and local entities are generally expected to provide the minimum local match.

Federal Funding

The Federal Transit Administration (FTA) provides multiple programs to fund capital and operating expenses for transit services.

The **Urbanized Area Program Funds (5307)** formula program is utilized both for transit capital and operating assistance. While there are numerous programs available for capital projects, 5307 is the primary federal source for operating assistance in urbanized areas. A 50 percent match is required for operating assistance, while a 20 percent match is required for capital assistance. Funds are distributed to urbanized areas based on a complex formula involving population, population density, and vehicle revenue miles, and ridership.

The **Seniors and Individuals with Disabilities Formula Program (5310)** formula program provides funding for designated recipients to meet the transportation needs of older adults and people with disabilities. These funds are currently allocated by the Oklahoma Department of Transportation (ODOT), but soon will transition to EMBARK as direct recipient for the Oklahoma City urbanized area.

Additionally, the **Buses and Bus Facilities Formula Program (5339)** is provided to recipients to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities, with a 20 percent local match. Funding is provided through formula allocations and competitive grants.

FTA, and the U.S. Department of Transportation as a whole, provide additional competitive grant opportunities

that often assist transit agencies, primarily for capital projects. These include:

- The Grants for Buses and Bus Facilities Program includes additional funding for competitive grants, for buses and bus related facilities.
- The Low or No Emission Vehicle Program (5339(c)) is a competitive grant program that provides funding for low or no emission buses and related facilities enhancements.
- The Areas of Persistent Poverty Program provides for planning, engineering, and development of plans to improve transit services or infrastructure within USDOT-designated "Areas of Persistent Poverty" and "Historically Disadvantaged Communities"
- The Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant program can provide funding for transit infrastructure projects, such as a new transit facility or bus stop improvements.

State Funding

The State of Oklahoma's **Public Transit Revolving Fund** provides funding for establishing, expanding, improving, and maintaining public transportation services. These funds may be used as a local match for federal capital or operating grants. Service utilizing these funds must be open to the public and a minimum of 50% of the funds must be used for services to the elderly and disabled. A set-aside is provided to assist with service start-up costs.

Local Funding

While federal and state sources are helpful for providing funding for transit services, local funding is necessary to match these funds, and to provide services beyond the funding amounts provided by non-local programs. This is true both for capital and operating funds. However, because fewer federal programs are available for operating assistance than for capital projects, local funding for operations is generally the greatest challenge for a jurisdiction seeking to fund a new or expanded service.

One potential alternative is a **dedicated tax to support transit services.** This has the benefit of providing a sustainable source of funds that can be consistently relied-upon. Many transit providers receive local funding from a dedicated sales tax or property tax levy. Based on results of the resident survey, a new local tax, if pursued, would be more feasible as a sales tax rather than as a property tax. Adopting a new tax would require voter approval.

Private funding could potentially provide operating or capital assistance for a specific service, location, or corridor. This could be in the form of funding provided by one entity, for example a large employer with employees in need of transit service, or by a group of businesses pooling resources within a specific geographic boundary in the form of a Transportation Management Association (TMA). Specific funding mechanisms can be customized based on specific needs and resources.

Table 9: Potential Transit Expenditures and Revenues

	Phase 1					Phase 2 (Annual)	Phase 3 (Annual)
Transit Expenses	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**		
Moore Council on Aging Service	$163,200	$168,096	$173,139	$178,333	$183,683	$189,194	$212,939
On-Demand Microtransit Service	$491,680	$403,430	$415,533	$427,999	$440,839	$908,129	$1,022,107
Flexroute Service	--	--	--	--	--	--	$299,445
Vehicle Purchase	--	--	--	--	--	--	$240,000
Other Capital Costs*	--	--	--	--	--	--	$450,000
Oversight/Marketing	$50,000	$51,500	$53,045	$54,636	$56,275	$57,964	$115,239
Total Transit Expenses	**$704,880**	**$623,026**	**$641,717**	**$660,969**	**$680,798**	**$1,155,286**	**$2,339,730**

	Phase 1					Phase 2 (Annual)	Phase 3 (Annual)
Transit Revenues	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**		
Farebox	$53,453	$55,397	$57,059	$58,770	$60,534	$102,723	$208,039
City of Moore	$166,306	$172,355	$177,525	$182,851	$188,337	$319,599	$647,265
State Funding^	$125,276	$22,340	$23,011	$23,701	$24,412	$41,426	$83,898
Federal Funding	$359,846	$372,935	$384,123	$395,646	$407,516	$691,537	$1,400,528
Total Transit Revenues	**$704,880**	**$623,026**	**$641,717**	**$660,969**	**$680,798**	**$1,155,286**	**$2,339,730**

** Other Capital Costs include improved bus stops, bus wraps, potential hardware/software*
^ Reflects STRF for startup costs in first year
Note: City, State, Federal, and Farebox revenue % are based on other Oklahoma transit providers (large and small urban, non-tribal).

Organizational Plan

For recommended services, the City of Moore will be responsible for procuring, managing, and monitoring on-demand public transportation services operated by a private contractor. **A turn-key approach is recommended, whereby a contractor provides all staff, vehicles, software, hardware, and other components necessary to operate the service.**

City Tasks

City staff will not be directly involved in transit operations; however, the City's responsibilities include:

1. Arranging for funding for the service, anticipated to be a mix of federal, state, and local sources. (See Financial Plan section for more detail.) This includes taking appropriate steps to ensure funding is appropriately allocated, including working with ACOG to amend the region's Transportation Improvement Program to include the project and funding sources.
2. Conducting a procurement process in accordance with all applicable federal, state, and local regulations, to select a vendor most qualified and capable of providing quality on-demand service in Moore for the available budget.
3. In partnership with the selected contractor, taking steps to get the service up and running. This includes establishing operating procedures and policies not specifically covered in the vendor contract. While the contractor is responsible for ramping up operations, the City will need to provide marketing and promotion of the service, and engage appropriate stakeholders to ensure groups most in need of services are aware of how to use it, and potentially provide travel training assistance as needed.
4. Monitoring contractor performance to ensure services are being performed as agreed to in the contract, and meeting customer needs. This should include regular meetings (monthly or bi-weekly) with contractor staff and monthly reports that summarize service statistics such as miles and hours, ridership, information on wait times, customer service response information, and any relevant issues the City should be aware of.
5. Review of data for purposes of documenting compliance with federal and state regulations, as well as for purposes of planning future changes or improvements to the service. Data provided by the contractor should include detailed information on trip origins and destinations, customer wait time, trip duration, date and time of day, and other information to allow City staff to have knowledge of travel patterns and how the community is using and benefiting from the service.
6. After one year of operation, City staff should determine whether to renew the contract for additional (option) years, and if any changes to the service are needed. Potential changes could include shifting hours of service, area served, or to specific operating procedures. As soon as possible, and led by data observations, planning should commence for Phase 2 and 3 service additions needed to better meet community needs, whether through changes to on-demand service, new flex route service, or contracting with EMBARK for regional connections.

Staffing

The selected operating contractor will be responsible for proving staffing of the service, including operations, maintenance, customer service, and management staff.

The City will need to designate a manager for the service who is the responsible for contractor oversight, communications concerning the service, and maintenance of records for reporting and compliance. This person will be the primary point of contact between the contractor and the City, working with the contractor to address service issues, and providing information on the service to other City staff, relevant committees and stakeholders, and the city council as needed.

Ultimately, this manager will ensure services are providing the intended benefits to the community. Additionally, the manager will lead efforts to determine future phases of implementation of modified, expanded, or new services that may be needed.

It is important this manager is supported by other staff, and other City departments are engaged in the new service and can help it succeed. For example, the Community Planning department should keep transit services in mind when conducting current and long-range planning activities, especially when considering future flex or fixed-route services. Transportation needs are a response to land use patterns, and development decisions can dramatically impact the need and usefulness of a transit service. Additionally, planning staff should assists with planning future phases of service based on their knowledge of community needs. Staff from the Finance, Economic Development, and Public Works departments should be engaged with grant management, economic development, and infrastructure planning activities impacting transit.

Operations Plan

Micro transit services can be provided in multiple ways. The three primary methods include:

1. A local government, transit agency, or other public entity directly operating services. This involves opening a facility, purchasing vehicles and related equipment, hiring staff, and directly administering and operating the service.
2. The city could hire a vendor to provide micro transit services. While there are a variety of options for the contractual relationship between the city and vendor, this option usually involves a "turn-key" service model where vendor staff operate and provide administrative support for the service, for a negotiated fee. Within this option, some micro transit vendors may work with existing rideshare providers to serve some or all of the trips.
3. In a hybrid approach, a local government or transit agency may own a facility and vehicles used for the service, but hire a vendor to operate the service, maintain vehicles, and other tasks as negotiated.

This *Feasibility Study* recommends pursuing the second option to implement on-demand service in Moore. This turn-key option is generally quickest to implement, as there are multiple vendors that can ramp up and provide services relatively quickly. The City would not need to spend time or resources purchasing vehicles, hiring operations staff, developing relationships and entering contracts with fuel and parts providers, and numerous other tasks. The City will also determine if an existing staff position will be the transit oversight staff or if additional staff should be hired to fill this role.

Procurement Process

Once funding is identified and committed to this project, the City should issue a request for proposals (RFP) for qualified vendors to provide on-demand services. This RFP should specify the parameters of the service and what is expected to be provided by the vendor. The RFP should specify the anticipated contract length, amount, and options for the city to renew the contract.

Operating parameters should be outlined, including (but not limited to:

- Days and hours of service,
- Desired start date,
- Area to be served,
- Desired fare structure,
- Maximum wait times,
- Availability of customer service,
- Use and ownership of data,
- Service monitoring and reporting procedures, and
- Marketing and promotions expectations.

Scope of Services

On-demand service should be open to the general public, within the city limits of Moore. Service should operate for 12 hours per day (assumed to be from 6 a.m. to 6 p.m. but may be adjusted based on data trends) Monday through Friday. (Note: longer service hours are desired, and may be able to be negotiated with the vendor after the first year of operation.) Curb-to-curb service should be provided, allowing passengers to be picked up and dropped off at a specific address. Dynamic same-day booking should be provided, to allow for riders to book a trip utilizing a smartphone application or by calling a phone number to book. A rider should be picked up within 20 minutes of booking a trip.

The vendor should be responsible for providing:

- Vehicles
- Drivers
- Maintenance and storage of vehicles
- Drug and alcohol testing, pursuant to FTA regulations
- Software platform for scheduling, dispatch, data collection, and reporting
- Installation and technical assistance of all hardware and software required to deploy and manage services
- Operations of on-demand service
- Customer service during operating hours
- Ability to provide an ADA/accessible vehicle on-demand
- Monitoring and reporting of service statistics and performance, with regular briefings to City staff
- Data must be provided to City of Moore for service monitoring and planning purposes

The City should select the most qualified vendor that demonstrates the ability to meet these criteria and provide service within the specified budget. It is expected service should begin operation within 3-4 months of entering into an agreement with a vendor. This time allows for a kickoff meeting between City and vendor staff to ensure agreement on service parameters and a go-live plan, for needed vehicles to be acquired, for drivers and other staff to be hired and trained, for marketing of services to generate public interest in the service, and for testing of software and hardware. A "mock" go-live is recommended to iron out any potential issues before the public start date of the service.

Local & Regional Partners

While the City of Moore will monitor and manage transit services, a variety of local and regional partners will be needed to ensure its success. These partners may serve multiple roles, such as funding, marketing, referring riders to the service, or travel training.

First, the **Stakeholder Committee** that participated in and supported this *Feasibility Study* should continue to be engaged in the implementation process. In particular, community groups such as the Social Services Coalition, Moore Youth and Family Services, and local churches have a pulse on transportation needs in the community and can be a valuable resource. Additionally, Moore Public Schools and the Moore Chamber of Commerce should remain engaged in the process. The Committee can assist with providing direction and guidance during the process of procuring, initiating, and operating services. This group, moving forward, may change in terms of membership depending on specific needs or to include other groups.

The **Federal Transit Administration (FTA)** provides financial and technical assistance to local public transit agencies. FTA Region VI staff are a valuable resource to local providers to help with compliance and grants requirements and processes. At the state level, the **Oklahoma Department of Transportation (ODOT)** allocates federal transit funding for the state of Oklahoma and administers the state's Public Transit Revolving Fund. ODOT also provides resources and conducts triennial review of transit providers to ensure compliance with federal and state regulations.

The **Association of Central Oklahoma Governments (ACOG)** conducts regional transportation planning, including developing and managing the region's Long-Range Transportation Plan (Encompass 2045), Transportation Improvement Program (which outlines transportation improvements, and funding sources, to be implemented in the region over the next four years), and the Unified Planning Work Program, a tool for managing, budgeting, and monitoring planning activities.

The **Central Oklahoma Transportation and Parking Authority** (COTPA, dba EMBARK, a City of Oklahoma City Trust) is the primary operator of fixed-route and paratransit service in the Central Oklahoma region, including in Oklahoma City and Norman. EMBARK is the direct recipient of federal 5307 and 5310 funds and therefore will have a role in funding transit activities in Moore. Additionally, Moore may elect (as recommended in Phase 3 of implementing this plan) to contract with EMBARK to provide services within Moore, by extending or adding stops to existing routes. The **City of Norman** and **Cleveland County** can also be a useful resource, and potential partner, with Moore. The City of Norman contracts with EMBARK to provide bus services but also provides a new Norman On-Demand service though a private contractor.

Finally, the **Oklahoma Transit Association (OTA)** provides resources and conducts advocacy on behalf of its members. Annual conferences provide an opportunity for transit providers to connect, share resources, learn about new technology, and network. This would also put Moore in regular contact with other transit providers across Oklahoma, who can share their knowledge and experience of operating transit services. Other similar national resources of note include the American Public Transit Association (APTA) and the Community Transportation Association of America (CTAA).

Comprehensive Transit System

The vast majority of Moore's labor force commutes across city boundaries for their jobs. Inter-jurisdictional travel occurs for many other reasons as well, for Moore residents to access educational, medical, and recreational opportunities across the Central Oklahoma region, as well as for residents of other cities to travel into Moore, such as to shop along the SW 19th Street corridor.

Recommended Phase 1 services are focused on establishing general public transportation service within Moore, an option that does not currently exist for residents. While this service will be internally-focused, connectivity to surrounding areas should not be ignored.

One way new on-demand service in Moore can connect to other services in the region is by providing a connection to EMBARK routes 13N and 040 at bus stops along Santa Fe Avenue and NW 27th Street. Three of these stops are within Moore and therefore would be in the on-demand service area. While not recommended for Phase 1, a potential service enhancement for Phase 2 could include establishing a timepoint at the S Santa Fe @ SW 104th St stop, whereby on-demand buses could serve this location at a specific time, coordinated with EMBARK schedules.

Similarly, this approach could also be used for EMBARK's Route 144 stop (Tue & Thur only) at the Social Security Administration.

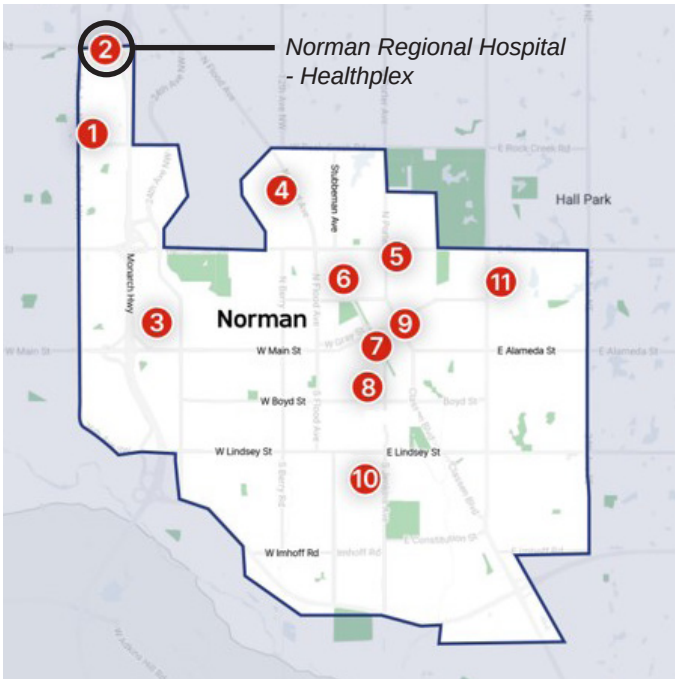
Moore's future on-demand service could also potentially connect to the Norman On-Demand service area and/or an EMBARK Norman fixed route. This would require establishing a point of service outside of Moore. The northern-most location served by Norman On-Demand, and by EMBARK Norman (Route 110) is the Norman Regional Hospital - Healthplex, two miles south of Moore.

(Note: these potential additions would have an operational impact on on-demand services, potentially requiring an additional vehicle. Data and public feedback collected during Phase 1 operations should guide this decision.)

Additional regional connections are longer-term in nature. Phase 3 recommendations include re-evaluating EMBARK route extensions for routes 024 or 040, either of which would provide an additional connection point between services. Additionally, future commuter rail with a station in Moore could provide a strong connection between local on-demand and/or flex-route service and a high-capacity regional transit corridor.

Finally, the inclusion of Moore within one of EMBARK's Mobility Management services would provide additional opportunities for specific populations--seniors and/or individuals with disabilities to connect to locations outside of the city.

EMBARK's "S Santa Fe @ SW 104th St" stop, serving routes 13N and 040.



Norman On-Demand Service Area (Source: City of Norman, Via Transportation). Norman Regional Hospital - Healthplex is highlighted, as the closest stop to Moore.

Implementation Steps

Figure 34 below summarizes the near-term action steps needed to make recommended Phase 1 transit services become a reality. An anticipated timeline is provided for each step. This timeline could change significantly depending on the commitments of funding, and the date funds would be available.

Note: This matrix assumes local funding will need to be pursued, beyond existing resources. The time needed for such a process is estimated, and is a driving factor in the implementation timeline.

Figure 34: Phase 1 Implementation Matrix

	2024		2025				2026				2027			
Steps	**3Q**	**4Q**	**1Q**	**2Q**	**3Q**	**4Q**	**1Q**	**2Q**	**3Q**	**4Q**	**1Q**	**2Q**	**3Q**	**4Q**
1. Finalize and adopt Study														
2. Communicate study results with local partners														
3. Pursue funding commitments & TIP amend.														
4. Stakeholder outreach to craft RFP and scope														
5. Marketing Plan (name, logo, etc.)														
6. RFP out for bid, award, and contract negotiation														
7. Final Operational Plan														
8. Final Organizational & Oversight Plan														
9. Marketing and outreach														
10. Service Testing (mock Go-Live)														
11. Grand Opening / Go-Live														
12. Service Monitoring														
13. Service Renewal														
14. Phase 2 Planning														

Expanded Council on Aging Senior Transportation – Implementation Steps

In addition to the new on-demand general public transportation service, an expansion of the Moore Council on Aging's senior transportation program is also desired. As an entity that already operates services, action steps are summarized below:

1. Pursue Section 5310 funding to assist with operating expenses (with 50% local match) and to purchase a second vehicle (with 20% local match), through coordination with EMBARK as the region's 5310 program manager.
2. Secure local matching funds. Additional annual operating costs are estimated at $163,200 across all revenue sources. As the existing program utilizes donations to assist with operating costs, additional budgeting discussion will be needed to determine the local funding commitment.
3. Review Senior Center staffing needs, program oversight processes, and hire or train additional drivers to operate transportation service.
4. Coordinate with partner organizations to inform and advertise the service, and provide travel training assistance to riders. This includes new destinations such as medical facilities not currently served.