Laredo Microtransit Feasibility Study Report

Submitted to:

Submitted by:

THE GOODMAN CORPORATION
(Prime Consultant)

RouteSprout
(Subconsultant)

April 2025

Contents

Executive Summary

Executive Summary

The **Laredo Microtransit Feasibility Study** examines the role of microtransit as an option to provide additional transit service to the City of Laredo. Microtransit is a technology-based, on-demand shared transportation service that operates within defined zones.

This study considers how microtransit can be utilized in the City of Laredo through a peer review, feasibility assessment to include market and service analyses, development of proposed zones and an implementation plan with recommendations. As part of this effort, a public outreach effort was conducted to hear from riders and El Metro staff and to educate the public and stakeholders.

Existing Services and Peer Comparison

Currently, El Metro provides two types of service: fixed route and paratransit. There are 21 fixed routes and three circulator routes. El Lift offers paratransit service within ¾ of a mile of El Metro's fixed route service. The addition of microtransit in Laredo would complement those two services. Microtransit can assist with providing an alternative transportation option for people who are currently not well-served by the existing services and to expand mobility offerings for existing riders already using the system.

This study explores seven microtransit case studies from communities with characteristics or mobility challenges similar to Laredo: Austin (TX), Calexico (CA), Chula Vista (CA), Denton County (TX), McAllen (TX), San Antonio (TX), and Tulsa (OK). The peers were selected to ensure representation from border communities, other Texas cities, and agencies using microtransit to address fixed-route service inefficiencies. The case studies document relevant lessons learned by other communities and which can be strategically applied to the development of an effective microtransit program for the City of Laredo.

Potential Microtransit Zones

A review of prior planning efforts conducted in Laredo and the region validates the need for additional multimodal mobility options, which support the need for microtransit. Particularly, the 2021 Comprehensive Operational Analysis (COA) recommends strategically implementing microtransit. Based on a market analysis, inputs from stakeholders and the public, and understanding of the El Metro fixed route system, five microtransit zones are proposed. The general location of each zone was influenced by the service areas of El Metro's lowest performing routes – C1, C2, C3, and 8B. Zones were designed to complement, rather than compete, with fixed-route service. In other words, each zone includes transfer opportunities to El Metro's fixed route network. The zones also included a diversity of land uses, including at least one superstore or large grocery store, to ensure access to basic necessities. The zones are shown in **Figure ES-1**.

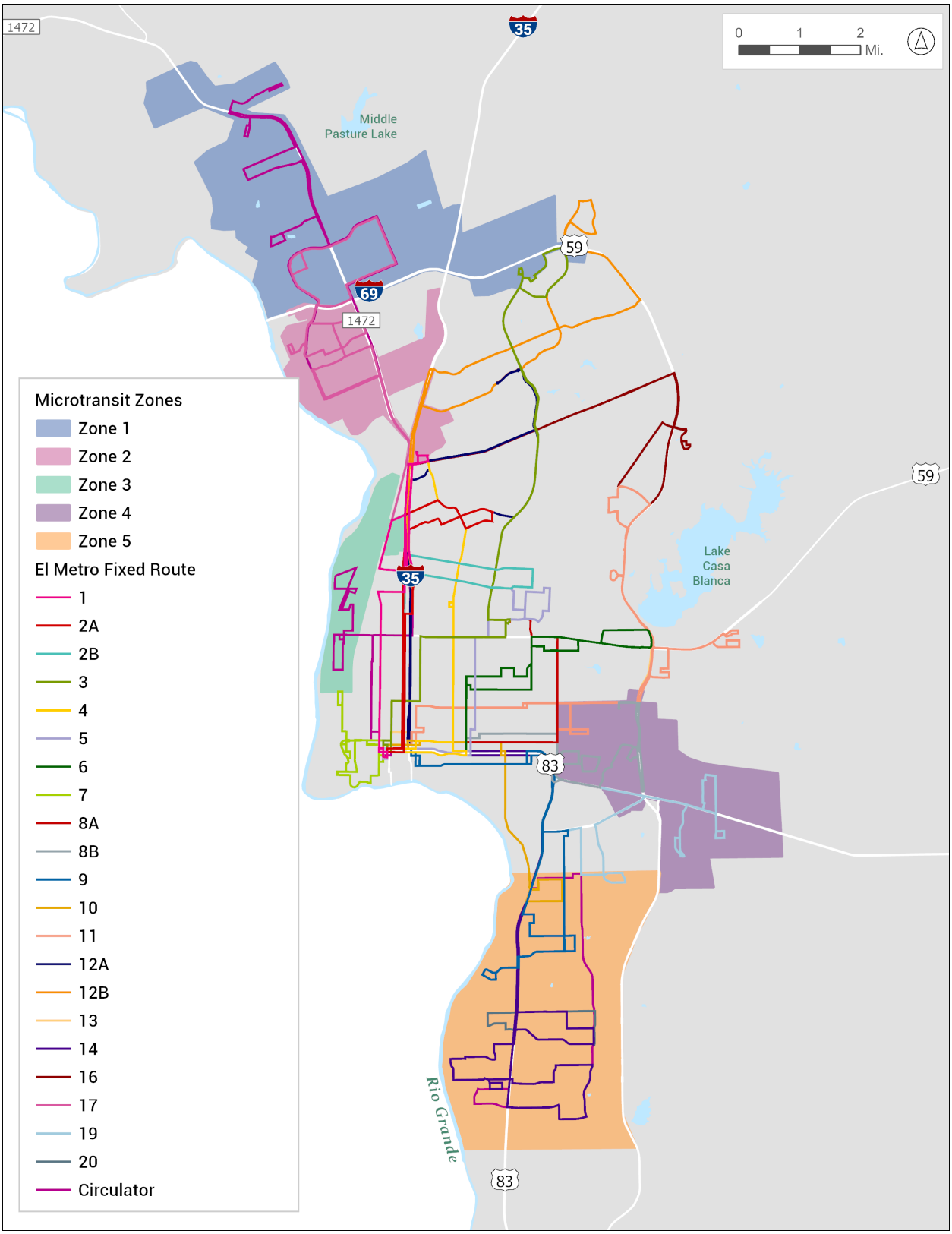


Figure ES-1. Microtransit Zones and Existing El Metro Fixed Routes

Microtransit's Cost and Potential Ridership

Using El Metro's 2023 bus operating expense per revenue hour ($109.19), the approximate cost of microtransit in each zone is calculated. The analysis considers varying wait times of 10, 20, and 30 minutes, which influence the cost estimates of providing microtransit. For the first three years of operation, the range of annual ridership and cost of each zone are shown in **Table ES-1** below:

Table ES-1. Zonal estimates of ridership and cost (years 1-3)

Zone	Ridership	Cost
1: North	40,000 to 60,000	$1,600,000 to $3,070,000
2: North	23,000 to 35,000	$930,000 to $1,460,000
3: West	8,000 to 12,000	$530,000
4: East	33,000 to 49,000	$1,070,000 to $2,000,000
5: South	117,000 to 176,000	$3,460,000 to $7,460,000

The possibility of late-night service is also considered. This microtransit service would run after the fixed route service ends, until 11p.m. The city is divided into two zones, with an overlapping area in downtown to allow for zonal transfers.

One interesting use case unique to Laredo is for tractor-trailer drivers to utilize microtransit service. Laredo is the number one inland port in the nation, resulting in copious amounts of truck traffic, particularly near the commercial border crossings and industrial warehouses. Given the existing and projected truck traffic and industrial growth, there is a need to alleviate some of the congestion caused by the freight traffic. Based on conversations with stakeholders, microtransit may assist with helping a subset of truck drivers who need to access non-warehouse and industrial destinations, such as grocery stores and general supercenter stores. The proposed zones in the north would be able to best serve these needs. Parking locations and marketing of the service are key aspects to successfully enable this population to utilize microtransit.

Engagement Findings

As part of this planning effort, public involvement engaged existing riders, El Metro operations staff, members of the public, and various stakeholders. All engagement activities provided educational information about microtransit and solicited ideas and comments to understand how microtransit can be implemented in Laredo. A 14-question survey was developed to better understand the public's desire for microtransit, asking about level of interest and potential locations for microtransit usage. Based on the 130 survey responses, there is a high level of interest in microtransit for Laredo. Some of the locations the public specified for a potential microtransit zone were used to develop zones for consideration. Based on the comments, many respondents are either satisfied or very satisfied with El Metro's existing service, although they did suggest some areas for improvement for El Metro. A public meeting was held at the transit center in February 2025; at this time, the proposed zones were presented in an open-house style format. This meeting reinforced the support for microtransit as a modal option in Laredo; some people suggested

additional zones or areas that could be covered, and others were in favor of the concept, even if they personally would not utilize the service. Various other stakeholders were consulted through the planning process to obtain feedback on the concept of microtransit and the proposed zones.

Recommendations and Implementation Framework

The study recommends implementing a pilot program of least 12 months with two daytime zones:

- Zone 1 North Laredo
- Zone 3 West Laredo

The initial zones are recommended based on stakeholder feedback, a test case for tractor-trailer truck usages, the size and variety of land uses in these zones, and ability to replace low-performing circulator routes. Starting with two zones will allow El Metro to learn about ridership demand and become acquainted with providing microtransit service. Lessons learned from this pilot program will inform the implementation of a second phase with additional microtransit service.

The implementation section of this report delves into technology requirements, operations and maintenance requirements, insurance, driver training, marketing and funding as well as other considerations to pilot this service. El Metro has expressed a desire to operate the microtransit zones directly and to only use a private sector partnership for the technology solution (for trip booking and management). The recommendations for implementation are focused on directly operating microtransit while procuring a technology partner for service administration (i.e., trip bookings, trip operation, reporting). To track the effectiveness of microtransit, El Metro can utilize typical key performance indicators as well as specific ones for microtransit. These include average wait time, on-time performance, percent shared trips, percent of time the mobile app is up and functioning. In addition, each zone should be reviewed periodically to maintain high quality while balancing operational requirements.

Overall, microtransit can provide an alternative modal option, which would complement the existing El Metro fixed route and paratransit service, while also creating an improved rider experience and increased coverage in certain parts of Laredo.

1. Introduction & Existing Conditions

1. Introduction & Existing Conditions

This chapter provides an overview of the Laredo Microtransit Feasibility and the overall objectives. An introduction to study area is also provided, covering demographics and existing transit service in Laredo to include El Metro's fixed route and paratransit services.

Study Scope

The Laredo Microtransit Feasibility Study examines the role of microtransit as an option to provide additional transit service to the City of Laredo. This study was commissioned by the Laredo Webb County Metropolitan Planning Organization (LWCAMPO), in conjunction with El Metro, the transit agency in Laredo. Hereby referenced as the consultant team, The Goodman Corporation (TGC) served as the prime consultant for this effort, in association with RouteSprout as a subconsultant.

This study considers how microtransit can be utilized in the City of Laredo through a peer review, feasibility assessment to include market and service analyses, development of proposed zones and an implementation plan with recommendations. As part of this effort, a robust public outreach effort was conducted to include conversations with several stakeholders, a public survey, and in-person outreach to existing El Metro riders through an open house public meeting and individual discussions.

Introduction to Microtransit

Microtransit is a technology-based, on-demand shared transportation service that operates within defined zones (see **Figure 1-1**). Microtransit offers riders flexibility of origin to destination service, given that they are within the established service area zones. Microtransit can allow for improved accessibility and coverage in certain areas and allow for same day travel.

There are two variations of microtransit service: curb-to-curb and point-to-point.

- In curb-to-curb, the microtransit vehicle picks up passengers at the front door of their origin and drops them off at the front door of their destination.
- In the point-to-point model, passengers are picked up and dropped off at a nearby intersection to their origin/destination.

Figure 1-1. Typical trip within a zone

Microtransit services can also serve the mobility-impaired population due to the use of on-demand wheelchair accessible vehicles. Microtransit systems using any federal funds must provide transportation to individuals with a disability. Typically, the accommodation is made by ensuring a portion of the microtransit vehicles are wheelchair accessible. Examples of vehicles for microtransit systems are shown in **Figure 1-2**.

Figure 1-2. Example microtransit vehicles

Existing Transit Service Overview

Currently, El Metro provides two types of service: fixed route and paratransit. There are 21 fixed routes and three circulator routes. El Lift offers paratransit service within ¾ of a mile of El Metro's fixed route service.

Fixed Route

The existing fixed route system is shown in **Figure 1-3**. El Metro operates fixed route buses from approximately 6 a.m. to 10 p.m. Monday through Saturday and 7 a.m. to 7 p.m. on Sundays. The circulators operate Monday through Friday, with the exception of C3, which operates on Saturdays. Most of the routes traverse through the transit center, located in Downtown Laredo, at 1301 Farragut Street.

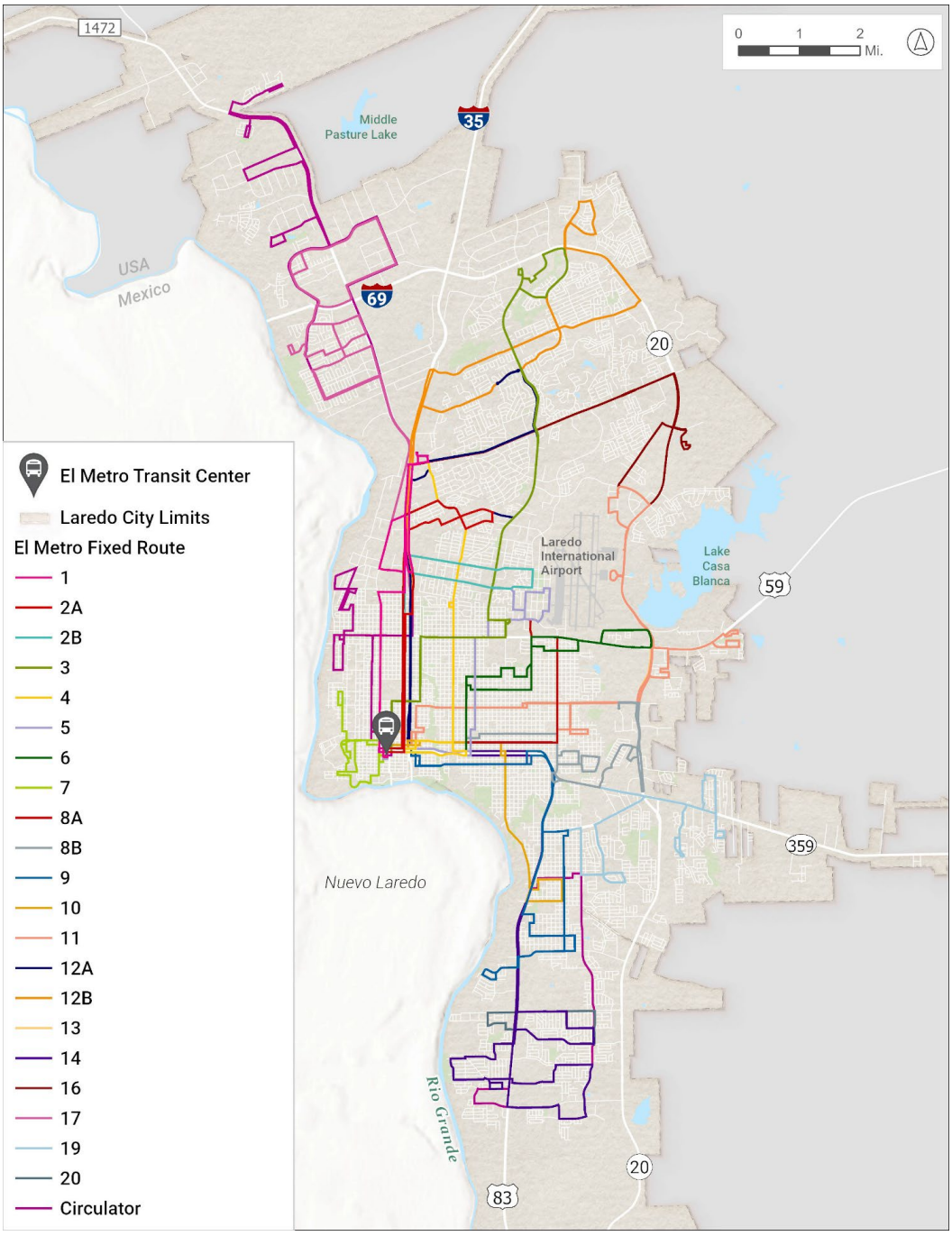


Figure 1-3. El Metro Service Map

The adult fare for El Metro is $2.00. El Metro offers a number of discounted fares, which are shown in **Table 1-1**.

Table 1-1. El Metro Bus Fares

Fare Type	Cost
Adult	$2.00
Student	$1.50
Child (5-11 years)	$0.75
Child (Under 5 years)	Free
Senior/Disability	$0.75
Circulator	$1.00

Source: El Metro

El Metro's service area covers 59 square miles and serves a population of approximately 254,000. According to the National Transit Database (NTD) in 2023, El Metro fixed route service directly operated 37 vehicles in maximum service. In 2023, El Metro fixed route service reported total annual trips of 1,769,700. [1] **Figure 1-4** shows the fixed route annual trips from 2018 to 2023.

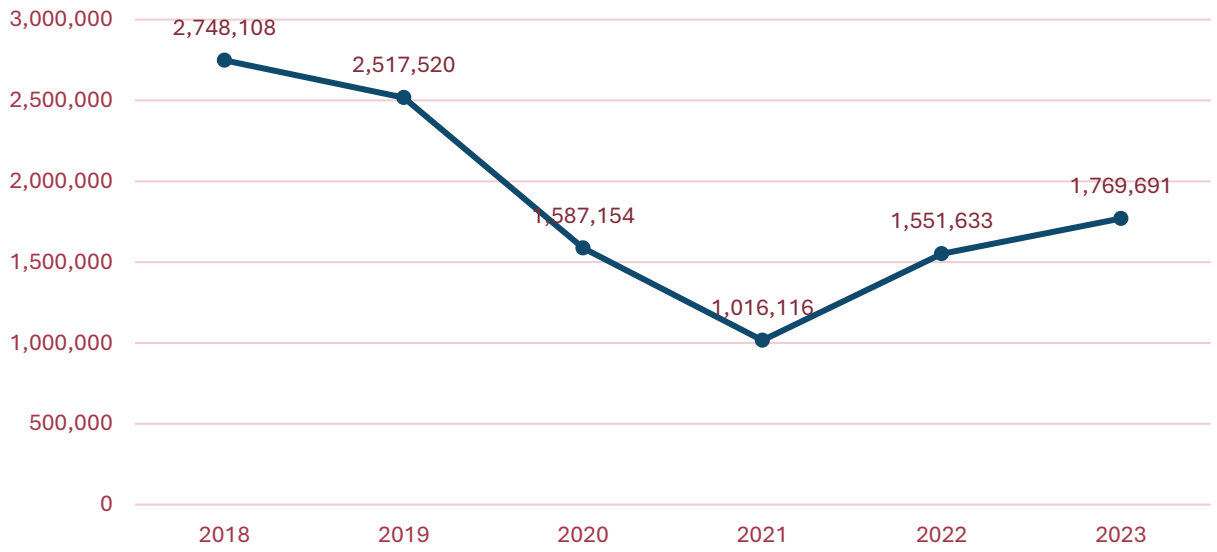


Figure 1-4. El Metro Annual Trips 2018-2023
Source: NTD Agency Profile 2018-2023

Route level ridership from September 2024 shows the most productive bus routes to be Route 1, Route 2A, Route 2B, and Route 3, with over 12,000 monthly boardings (see **Table 1-2**). The circulator routes, which are the newest routes in El Metro's system, have the lowest ridership (C3, C1, and C2). El Metro does not collect stop level ridership.

[1] *Urban Integrated National Transit Database - FTIS: Florida Transit Information System*. (n.d.). https://ftis.org/iNTD-Urban/Profiles.aspx?ret=1

Table 1-2. Ridership and Productivity Report by Route (September 2024)

Ranking Report by Boardings by Route per Hour
For the Month of September 2024

RANKING	ROUTES	Rt No.	BOARDINGS PER HOUR	TOTAL BOARDINGS	TOTAL HOURS
1	SANTA MARIA	1	19	21,959	1,160
2	SAN BERNARDO/SOCIAL SECURITY	2A	19	14,310	764
3	SAN BERNARDO/MAIN LIBRARY	2B	19	14,133	760
4	CONVENT/MCPHERSON	3	15	12,189	798
5	SPRINGFIELD	4	13	9,387	745
6	CASA VERDE/DEL MAR	16	23	9,047	393
7	CORPUS CHRISTI	10	11	8,672	788
8	MINES ROAD/INDUSTRIAL PARK	17	12	7,084	607
9	MARKET/NEW YORK	9	10	6,872	711
10	LADRILLERA/EL CUATRO	7	16	6,080	390
11	SANTA RITA	14	13	6,053	451
12	SHILOH EXPRESS	12B	18	5,659	321
13	LOS ANGELES/SIERRA VISTA	20	12	5,390	435
14	MEDICAL CENTER	8A	12	4,574	382
15	GUSTAVUS/AIRPORT	11	11	4,533	405
16	SANTO NIÑO/LARGA VISTA	19	11	4,266	389
17	CEDAR/HEALTH CLINIC	6	12	4,129	340
18	DEL MAR EXPRESS	12A	10	3,559	348
19	TILDEN/MUNICIPAL COURT	5	9	3,519	384
20	HERITAGE PARK	13	11	3,209	300
21	VILLA DEL SOL/CHEYENNE	8B	5	1,215	261
22	Circulator C3-Riverside	23	4	1,010	279
23	Circulator C1-Killam	21	2	409	240
24	Circulator C2-Green Ranch	22	1	265	194
	TOTALS=			157,523	11,844
	AVERAGE BOARDINGS PER HOUR=		13		
	66% OF SYSTEM WIDE AVERAGE=		9		

Source: El Metro

Paratransit

El Metro operates El Lift paratransit service, which is public transportation for people with disabilities who are unable to use the fixed route system. This system is curb-to-curb with assistance to the door, in shared accessible vehicles. The service operates within ¾ of a mile of the El Metro fixed route system.

The Americans with Disabilities Act (ADA) and subsequent federal policy require agencies operating federally funded fixed route transit services to also operate complimentary paratransit for individuals unable to utilize the fixed route. Paratransit has eligibility requirements based on three categories based on the ADA.

El Lift operates on weekdays from 5:00/5:30 a.m. to 10:00/10:30 p.m. On Saturdays, it operates from 6:00 a.m. to 10:30 p.m. and Sundays from 7:30 a.m. to 8:30 p.m. El Lift trips are able to be schedule via phone from Monday-Saturday from 6:00 a.m. to 10:00 p.m. and Sundays from 7:30 a.m. to 7:30 p.m.

The fares for El Lift are generally distance based, ranging from $1.75 to $2.25. The fares are shown in **Table 1-3**. Books can be purchased with 10 tickets each.

Table 1-3. El Lift fare structure

Fare Type	Cost
El Lift Regular (Orange Ticket)	$1.75 (rides up to 7 miles)
El Lift Plus (Yellow Ticket)	$2.00 (rides from 7.1 to 14 miles)
El Lift Premium (Red Ticket)	$2.25 (rides greater than 14.1 miles)
Guest	Same fare as El Lift customer
Personal Care Attendant (PCAs)	No charge to travel with eligible passenger

Source: El Metro

According to NTD in 2023, El Lift service directly operated eight vehicles in maximum service. In 2023, El Lift reported annual trips of 26,000. **Figure 1-5** shows El Lift's annual trips from 2018 to 2023.

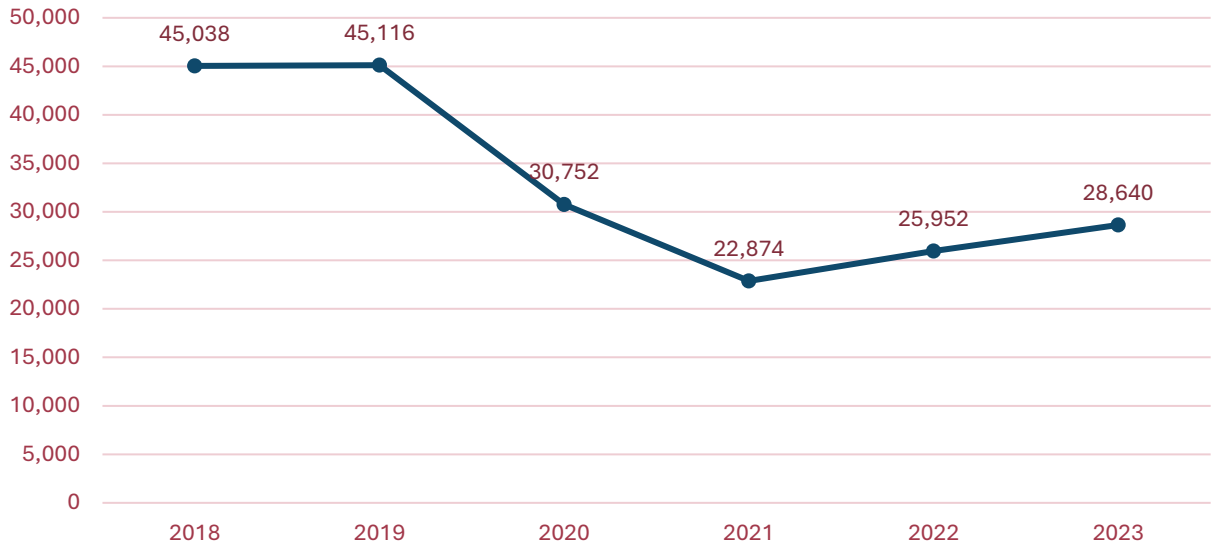


Figure 1-5. El Lift Annual Trips 2018-2023
Source: NTD Agency Profile 2018-2023

Overall System

Figure 1-6 shows the area of Laredo that is covered by both the fixed route and the paratransit services. The fixed route walkshed is ¼ of a mile from the route; most of central Laredo is within this walkshed. These underserved areas by transit would be a candidate for microtransit service. The ¾ mile boundary is the area that is served by the El Lift complementary service. **Table 1-4** displays system-wide statistics from El Metro from 2023 NTD data.

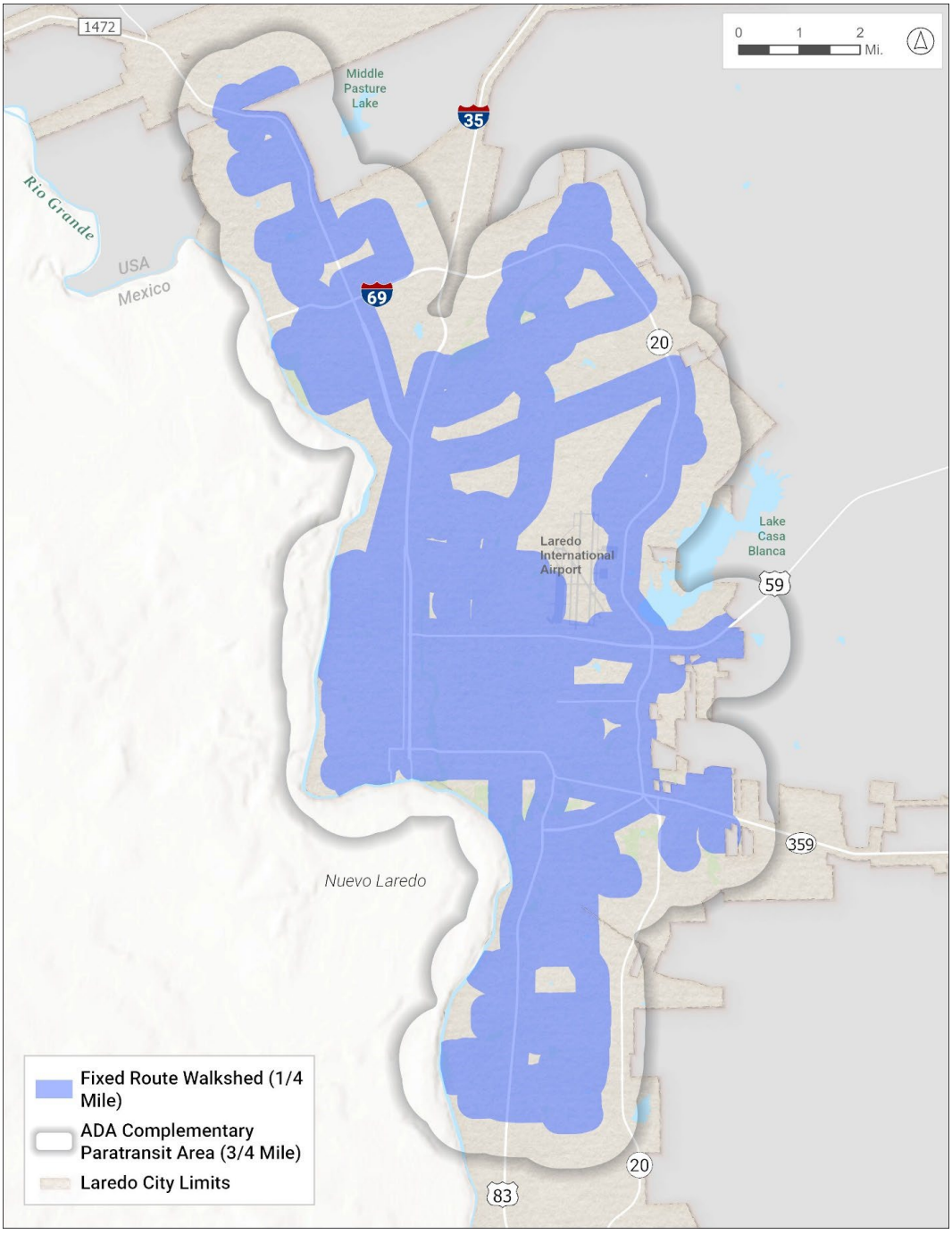


Figure 1-6. El Metro service area

Table 1-4. El Metro statistics

Transit Mode	Vehicles Operated in Maximum Service	Spare Vehicles Available	Annual Unlinked Passenger Trips	Vehicle Revenue Miles	Operating Expense	Cost per Trip
Fixed Route	37	7	1,769,691	1,602,404	$15.46 million	$8.74
El Lift	8	14	28,640	199,647	$2.52 million	$87.84
Agency Total	**45**	**21**	**1,798,331**	**1,802,051**	**$17.98 million**	**$10.00**

Source: NTD Agency Profile 2018-2023

Demographics

This section discusses the demographics of the City of Laredo, as compared to the LWCAMPO area and Texas as a whole. The focus on the demographics is to indicate how microtransit could support certain populations and demographics of the study area. All data in this section is from the American Community Survey (ACS) 2023 5-Year Estimates.

Age

As shown in **Figure 1-7**, the City and LWCAMPO have a higher percentage of population under the age of 30 than Texas. Approximately half of the population in Laredo and LWCAMPO are below 30 years of age, whereas over half of the population of Texas is over 30 years of age. There is a sufficient portion of Laredo's population within age groups that would benefit from microtransit service. Those that can work would benefit from additional transit options to connect to employment centers, while those that are retired would have additional mobility options to reach essential destinations.

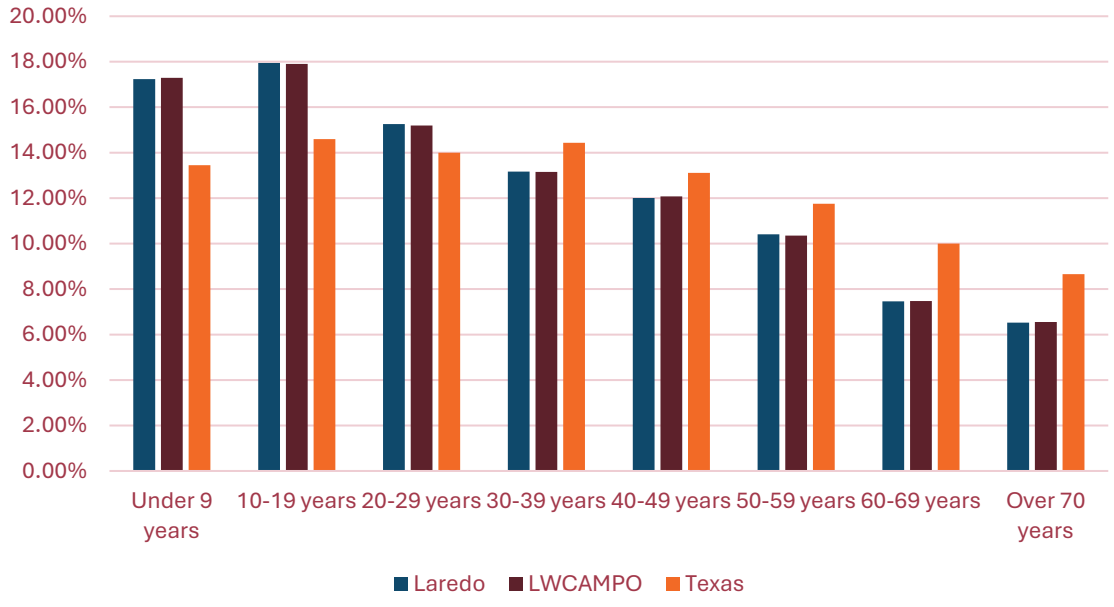


Figure 1-7. Age brackets
Source: ACS 2023 5-year estimate

Poverty & Income

The City and LWCAMPO have a higher percentage of population below poverty than Texas. Approximately 20 percent of the population in Laredo and LWCAMPO are below the poverty line, compared to 14 percent in Texas. The median household income for the City of Laredo is $63,264 and $62,506 for Webb County. The median household income for Laredo is approximately 20 percent lower than the median household income of $76,292 for Texas.

Among individuals with lower incomes, transportation options often diminish. Microtransit services would provide additional affordable transportation options to lower income individuals trying to access areas that may not be served efficiently by the current fixed route.

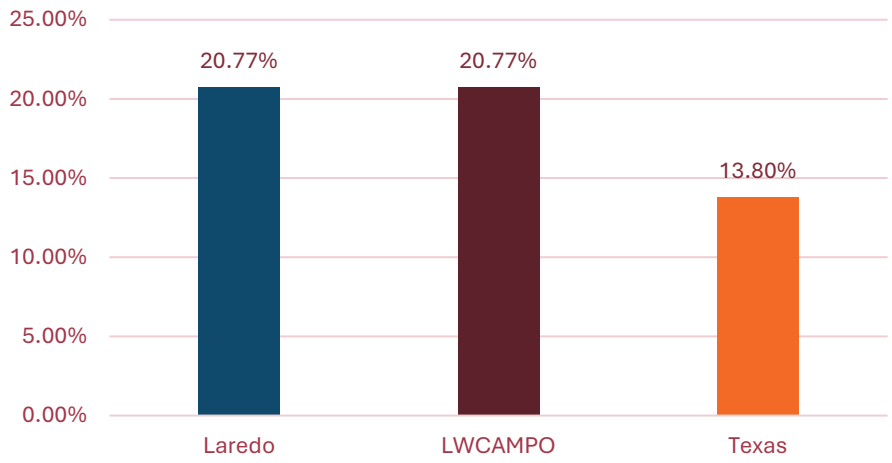


Figure 1-8. Percentage of population below the poverty line
Source: ACS 2023 5-year estimate

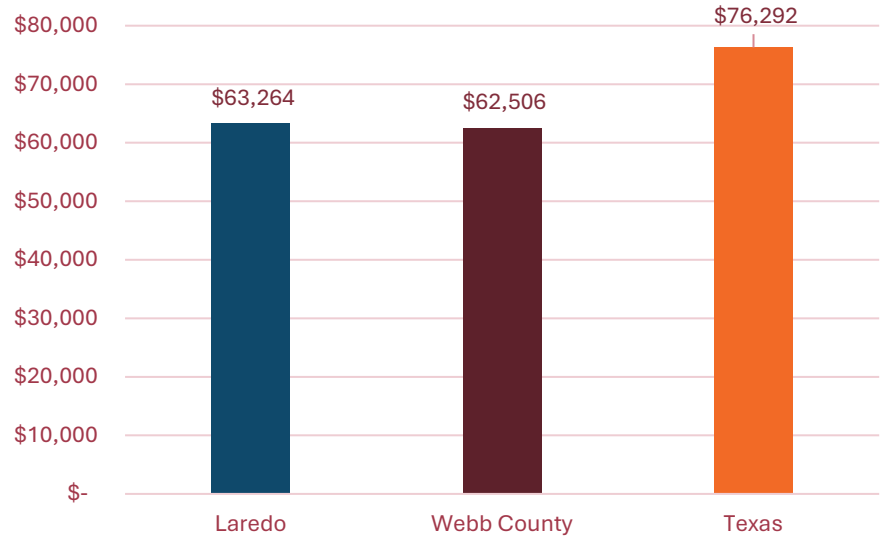


Figure 1-9. Median Household Income
Source: ACS 2023 5-year estimate

Zero Car Households

The percentage of households without access to a vehicle in Laredo and LWCAMPO is approximately 6 percent, which is higher than the average in the state of Texas. Microtransit can provide a viable option for individuals in these households without access to a car.

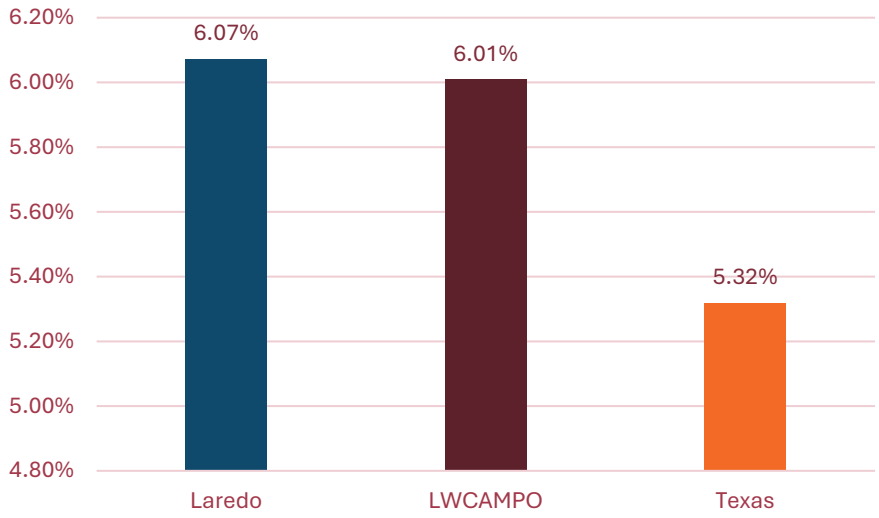


Figure 1-10. Zero Car Households
Source: ACS 2023 5-year estimate

Employment/Occupation

The largest occupational category for workers in Laredo is in management, business, science and arts. There is a greater percentage of people in service occupations in Laredo and the LWCAMPO area, as compared to the state of Texas, as seen in **Figure 1-11**. Microtransit services can improve access to jobs, although workers in the service industry might work outside of a traditional schedule.

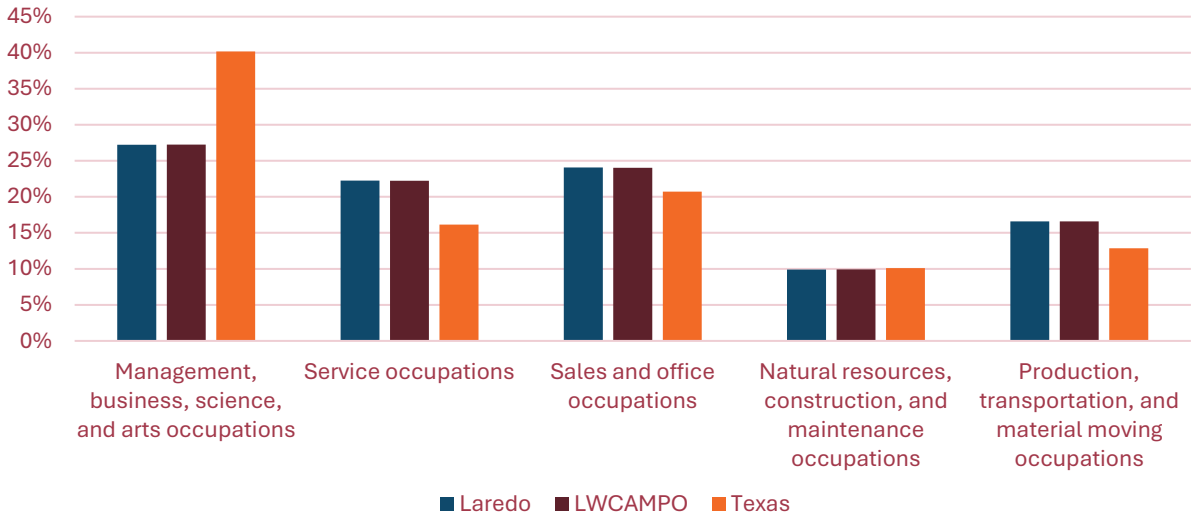


Figure 1-11. Employment by Occupation
Source: ACS 2023 5-yr estimate

Chapter Conclusion

This chapter presented the current transit service available in Laredo, through El Metro's fixed route system as well as the El Lift paratransit service. The addition of microtransit in Laredo would complement these two services and can assist with providing an alternative transportation option for those who are currently not served by the existing services or expand the mobility offerings for those who already use the system. The demographics of Laredo show that there is a population that needs additional mobility options and would be well-served by non-automobile options, such as transit and microtransit.

2. Case Studies

2. Case Studies

This chapter provides information about seven peer agencies who have all implemented microtransit in recent years. Lessons learned from these agencies can be applied to Laredo.

Introduction

Historically, transit operators have felt compelled to provide broad service coverage in the communities they serve, to ensure equitable access to all stakeholders. However, traditional fixed-route transit service requires specific market characteristics such as suitable densities and supportive infrastructure to operate most effectively. As these characteristics do not exist in every community, or uniformly throughout any community, most transit systems in the United States have typically included a mix of high- and low-performing routes.

In recent years, there has been a rapid emergence of innovative mobility technologies that have allowed transit operators to consider new approaches to transit service in lower-density and automobile-oriented environments that are difficult to serve effectively with traditional fixed route service. Throughout Texas and the United States, transit operators have been implementing app-based microtransit services to replace poorly performing fixed-route services or to expand coverage to previously underserved areas.

This chapter presents seven microtransit case studies from communities with similar characteristics or mobility challenges to Laredo. The peers were selected to ensure representation from border communities, other Texas cities, and agencies that have used microtransit to address fixed-route service inefficiencies. The aim of the case studies is to document relevant lessons learned from other communities in order to apply the best practices to the development of an effective microtransit plan for the City of Laredo.

Table 2-1 below shows key metrics for each city, county, or region represented in the case studies, with Laredo shown at the bottom for comparison purposes. The different types of geographies reflect the jurisdictional service area of each peer.

Table 2-1. Microtransit Case Studies – Peer Communities

Service Area Location	Primary City Population	In Texas	Border Community
Austin Region, TX	974,400	Yes	No
Calexico, CA	38,600	No	Yes
Chula Vista, CA	275,500	No	Yes
Denton County, TX	139,900	Yes	No
McAllen, TX	142,200	Yes	Yes
San Antonio Region, TX	1,434,600	Yes	No
Tulsa Region, OK	413,100	No	No
Laredo, TX	**255,200**	**Yes**	**Yes**

Figure 2-1. Case Study Locations

As shown in **Table 2-2**, several microtransit platforms, or technology providers, are represented in the peer set. In addition, the case studies include both turnkey services, in which a contractor is responsible for all elements of the service including vehicles, drivers, call center operators, and the microtransit technology; and technology overlays, where the microtransit platform is installed on an operator's existing fleet of vehicles.

Table 2-2. Microtransit Case Studies – Operators and Platforms

Service Area Location	Service Name	Operator	Microtransit Platform	Service Model
Austin Region, TX	Pickup	CapMetro	Via	Technology Overlay
Calexico, CA	Calexico On Demand	City of Calexico	Via	Turnkey
Chula Vista, CA	CV Community Shuttle	City of Chula Vista	Circuit	Turnkey
Denton County, TX	GoZone	Denton County Transportation Authority	Via	Turnkey
McAllen, TX	Micro McAllen	Metro McAllen	RideCo	Turnkey
San Antonio Region, TX	VIA Link	VIA Metropolitan Transit	RideCo	Turnkey
Tulsa Region, OK	MicroLink	MetroLink Tulsa	RideCo	Technology Overlay

The information presented in each case study was collected through a series of phone interviews with agency staff overseeing the seven microtransit services. Follow-up emails were sent after each interview to request or confirm specific data items, related to costs and productivity, that many of the interview participants did not have readily available at the time of their interview. While most interview participants responded to the follow-up emails with the requested data items, some did not. **Table 2-3** shows key metrics for each of the seven microtransit services. Data items that were requested but not received are shown in the table as "No Data."

The seven case studies highlight a broad range of microtransit investment levels – from systems consisting of one microtransit zone to a system with 11 zones; and from fleets of two microtransit vehicles to an 83-vehicle fleet. However, when viewed in terms of service productivity and cost-effectiveness, the range of differences narrows. Of the systems that provided data, cost-effectiveness ranges from $10.26 to $30.00 per microtransit passenger trip. The productivity of the services that reported this metric ranges from 2.6 to 5.5 passengers per revenue hour. These last two metrics are useful references for Laredo as it considers establishing its own microtransit service.

Table 2-3. Microtransit Case Studies – Key Metrics

Service Area Location	Number of Zones	Fleet Size	Average Wait Time (Minutes)	Base Fare	Annual Operating Cost	Cost per Revenue Hour	Cost per Passenger	Passengers per Revenue Hour
Austin Region, TX	11	83	18	$1.25	$11.9 million	$82.00	$21.48	3.5
Calexico, CA	1	4	40	$2.00	$725,480	$80.64	$16.37	5.5
Chula Vista, CA	1	7	10	$2.00	$892,000	$95.30	$20.00	4.5
Denton County, TX	2	68	21	$1.50	$11.7 million	$42.95	$10.26	4.2
McAllen, TX	1	2	5	$1.00	$200,000	No Data	No Data	No Data
San Antonio Region, TX	5	58	15	$1.30	No Data	No Data	$13.15	No Data
Tulsa Region, OK	5 Day / 4 Night	61	35	$2.00	$3.1 million	$30.00	$30.00	2.6

The case studies presented in this document show that each peer community has taken a different approach to microtransit service planning and operations, based on their unique priorities and mobility needs. **Table 2-4** shows the notable features associated with each of the seven microtransit systems. This list is also a useful reference guide for Laredo as it considers the design features of its own potential microtransit service.

Table 2-4. Microtransit Case Studies – Notable Features

Service Area Location	Notable Features
Austin Region, TX	Strong focus on design guidelines, including maximum zone size and minimum requirements for activity centers per zone
Calexico, CA	Supplements regional fixed-route network that doesn't provide sufficient local circulation
Chula Vista, CA	All-electric fleet; service initially targeted at seniors only
Denton County, TX	Aggressive implementation that replaced most fixed-route service; taking measures to minimize cannibalization of ridership between microtransit and remaining fixed routes
McAllen, TX	Conservative implementation with one zone only; partnering with Uber to flex microtransit capacity before committing to more dedicated microtransit vehicles
San Antonio Region, TX	Uses a system of virtual stops rather than curb-to-curb service
Tulsa Region, OK	Initially focused on late-night service only; share fleet with paratransit service

Austin Region, Texas (Pickup)

Quick Facts

Operator:
Capital Metropolitan Transportation Authority (CapMetro)
Primary Service City Population: 974,400

Border Community: No
Platform Provider: Via

Service Model: Technology Overlay
Average Wait Time: 18 minutes

Service Overview

CapMetro's Pickup service includes 11 microtransit zones throughout Austin and the three neighboring cities of Manor, Lago Vista, and Leander (see **Figure 2-2**). Most of the zones operate from 7:00 a.m. to 7:00 p.m. on weekdays, with the exception of the Leander Zone, which begins one hour earlier to allow riders to connect to a commuter rail line into Austin. Six of the zones also offer Saturday service from 10:00 a.m. until 6:00 p.m.

Pickup fares align with CapMetro's fixed-route service at $1.25 per ride or $2.50 for an unlimited day pass. Even without a day pass, free transfers are in effect provided as passengers are not charged a fare when booking a Pickup trip that begins within 100 feet of a fixed-route bus stop. Children under 18 ride Pickup and other CapMetro services free of charge. Reduced fares of $0.60 per ride are available for qualified individuals with a Reduced Fare ID.

Service History

Pickup service was originally launched as a one-zone pilot program. The aim of the program was to replace low-performing fixed-route and Dial-a-Ride service in Manor and to improve the efficiency of near-by fixed-route service by straightening the bus lines and reducing deviations into neighborhoods. Between 2019 and 2024, the Pickup service expanded from one to 11 zones, adding one or two zones per year, with a 12th zone set to launch in January of 2025.

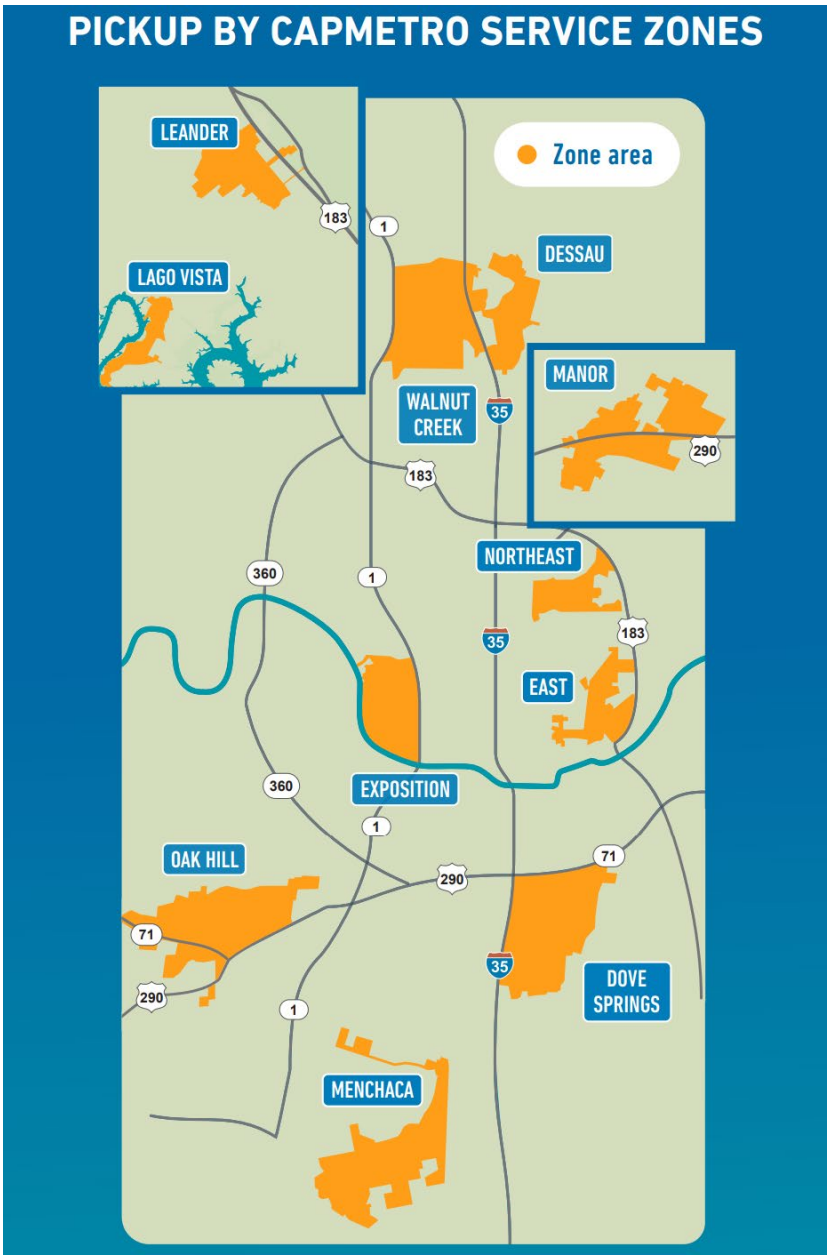


Figure 2-2. Pickup service zones (c. 2021)
Source: CapMetro

Service Model and Technology

CapMetro's Pickup service is powered by the Via microtransit platform, which is installed on vehicles owned by CapMetro and operated by an operations contractor called MTM Transit. MTM drivers are covered by the Amalgamated Transit Union (ATU) union, similar to fixed-route drivers, but have a slightly lower pay scale and are not required to have a commercial driver's license (CDL).

The Pickup fleet consists of 83 vans and cut-aways buses with an approximate maximum pull-out of 30 vehicles and a 20 percent spare ratio. Cash fares are accepted on vehicles, although most riders book trips and pay fares through the Pickup app developed by Via. The app allows users to upload credit or debit card information for fare payment at time of booking, or to book a trip only and select the option of on-board cash payment. Passengers without smartphones can also book trips by phone.

Service Design and Monitoring

CapMetro has established fairly strict guidelines regarding the size of Pickup zones. Current zones range from two to seven square miles, with smaller zones in denser areas. Geographically, zones are set up to avoid crossing freeways, in order to avoid areas of major traffic congestion. CapMetro policy requires that at a minimum, each zone must include a supermarket and fixed-route connection opportunities. Zones boundaries are occasionally adjusted or expanded based on demand, but CapMetro staff is cautious not to make zones too large, as oversized zones can negatively impact service time and efficiency.

The number of vehicles assigned to each zone varies based on demand. CapMetro aims to serve three and a half to four passengers per vehicle revenue hour. As a result, there are typically between two and eleven vehicles operating per zone.

Pickup service is monitored monthly, with board reports generated every six months. Zones that are underperforming are put on probation before being considered for elimination. Pickup metrics including ridership, wait time, and cost per passenger are reported on a public-facing real-time dashboard. Pickup previously had a maximum wait time of 15 minutes, but that is currently being re-evaluated as the target is only being met about 70 percent of the time. The current average wait time for Pickup service is 18 minutes.

The annual operating cost for Pickup service is $11.9 million, or approximately $82.00 per revenue hour and $21.48 per passenger trip. The agency's general fund is the primary source of funding.

Challenges and Lessons Learned

The Pickup service has become very popular with students in part because students ride free and because Austin's school-choice program means that many students do not attend the school closest to their home. Heavy student ridership puts strains on the service at certain times of the day, resulting in longer wait times and more passenger complaints due to student behavior. Other challenges noted by CapMetro staff include limited vehicle availability and rising vehicle prices. As a result, CapMetro has un-retired some paratransit vehicles for use in Pickup service.

Calexico, California (Calexico On Demand)

Quick Facts

Operator: City of Calexico
Primary Service City Population: 38,600

Border Community: Yes
Platform Provider: Via

Service Model: Turnkey Service
Average Wait Time: 40 minutes

Service Overview

Calexico On Demand covers the entire city of Calexico with a single microtransit zone (see **Figure 2-3**). The service is available Mondays through Fridays from 6:00 a.m. to 6:00 p.m. Fares are $2.00 a trip, with half-fares available for seniors (55+) and riders with disabilities. Calexico On Demand complements the regional transit services provided by Imperial Valley Transit by providing comprehensive local coverage within Calexico. However, transfers between the two services require separate fares.

Service History

Calexico On Demand began as a fixed-route circulator to connect key destinations in the city, including the border entry point, Walmart, Calexico High School, and a local college. Declining ridership compelled Calexico to consider other service models, and the current microtransit service was launched as a pilot in February 2023. The pilot program was funded by a California Air Resources Board (CARB) grant, but future funding is expected to come from the FTA. In addition to poor ridership on the previous fixed-route circulator, a key factor in the decision to implement microtransit service was the fact that Uber and Lyft do not serve Calexico.

Calexico continues to operate a separate Dial-a-Ride service for seniors, but the City is working to merge this program with Calexico On Demand to increase capacity for the more popular microtransit service.

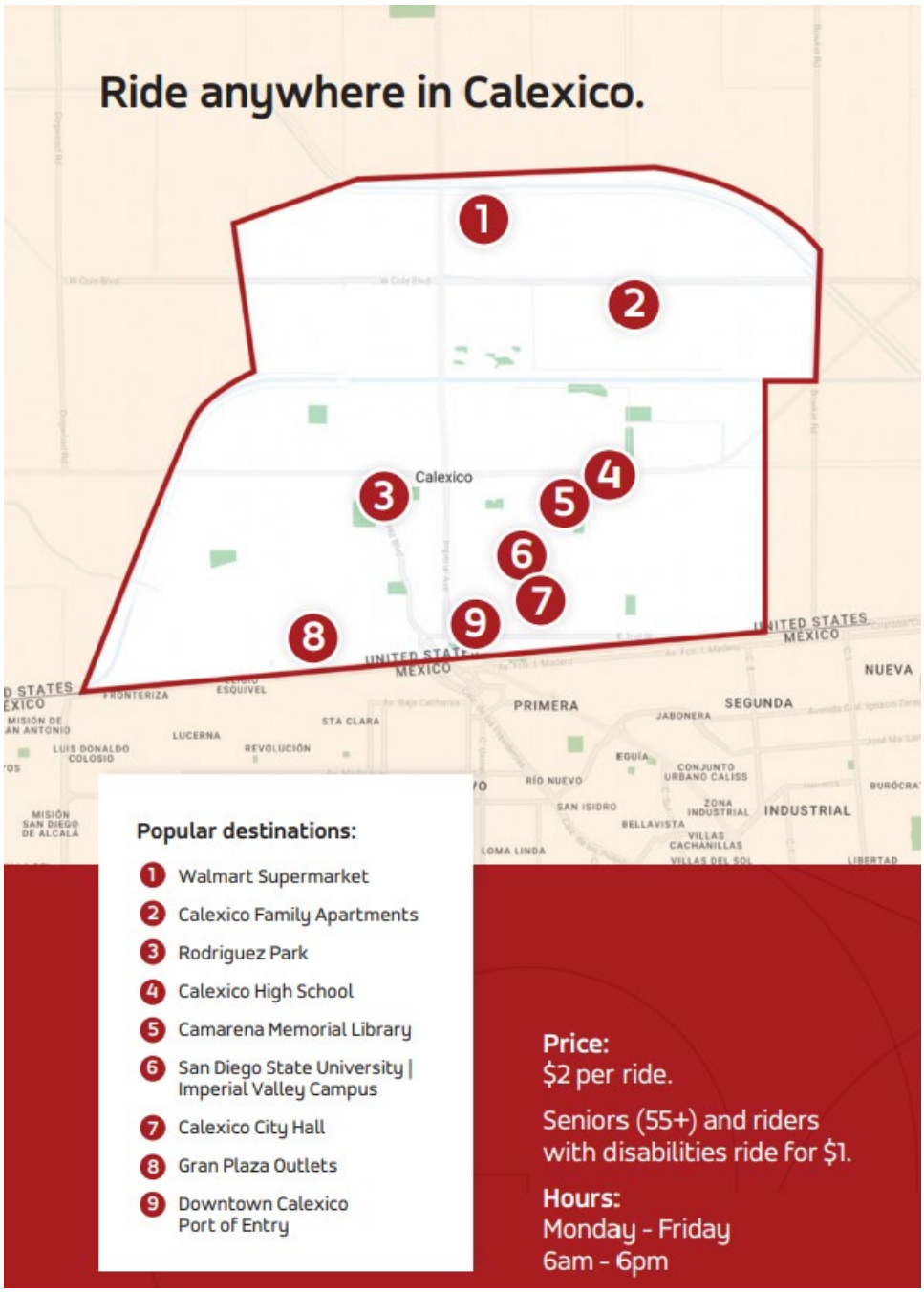


Figure 2-3. Calexico On Demand service zone
Source: City of Calexico

Service Model and Technology

Calexico On Demand service is provided by Via, as a turnkey operation, until the end of FY2024. Beginning in FY2025, Transdev will take over vehicle operations, while Via will continue to provide the microtransit platform and app maintenance.

The Calexico On Demand fleet consists of four minivans, with three vehicles operating concurrently throughout the service day. A commercial driver's license (CDL) is not required to operate the vans. Calexico On Demand drivers are non-unionized and have a different pay scale than regional fixed-route operators for Imperial Valley Transit.

Passengers can pay cash fares on-board Calexico On Demand vehicles, or can pay through the Calexico On Demand app, when booking their trip. Passengers without access to a smartphone can also reserve trips through a call-in number. Spanish-language information is available on the app and by phone.

Service Design and Monitoring

Calexico On Demand serves the entirety of the City of Calexico with three vehicles. Initial wait-time targets were 15-20 minutes, but those are no longer realistic due to growing demand. Current wait times are in the range of 35-40 minutes. Calexico is trying to address growing demand by merging the City's Dial-a-Ride program for seniors into the Calexico On Demand service. This is expected to add more vehicles into the program without overwhelming capacity because the Dial-a-Ride program is under-utilized. Calexico On Demand is currently carrying five and a half passengers per vehicle revenue hour. By comparison, the Dial-A-Ride program carries one and a half to two passengers per hour.

Calexico staff monitors the microtransit service daily through a Via dashboard application and meets with Via staff every two to three weeks to discuss key performance metrics such as average daily ridership, wait times, and incomplete trips. Driver shortages are also occasionally an issue.

The annual operating cost for Calexico On Demand service is $725,480, or $80.64 per revenue hour. The current cost per passenger trip is $16.37.

Challenges and Lessons Learned

High demand for Calexico On Demand service has impacted wait times, causing some passenger complaints. The anticipated integration of Dial-a-Ride service for seniors with Calexico On Demand may help alleviate capacity constraints.

Calexico staff have found that the need for travel training and app assistance has been less than anticipated. However, there are occasionally language barriers between some drivers and the large volume of cross-border visitors using the service.

Chula Vista, California (CV Community Shuttle)

Quick Facts

Operator: City of Chula Vista
Primary Service City Population: 275,500

Border Community: Yes
Platform Provider: Circuit

Service Model: Turnkey Service
Average Wait Time: 10 minutes

Service Overview

The Chula Vista (CV) Community Shuttle serves the City of Chula Vista's economically disadvantaged Northwest area (see **Figure 2-4**). The one-zone microtransit service complements regional transit service provided by the Metropolitan Transit System (MTS), which serves San Diago and surrounding communities.

CV Community Shuttle service is available on weekdays only, from 7:00 a.m. until 7:00 p.m. Fares are $2.00 a trip for the general public, and free for riders age 55 and over. Transfers to and from MTS service require separate fare payments.

Service History

CV Community Shuttle began as a pilot project in 2022 with two primary goals: providing better transportation options for seniors by facilitating access to essential services like grocery shopping and healthcare appointments; and to create a cleaner, more sustainable community. These two goals are reflective of the two funding partners for the pilot program, which are the nonprofit Community Congregational Development Corporation (CCDC) and the State of California's Clean Mobility Options (CMO) grant program. Similarly, the two primary goals are reflected in the decision to launch the service with an all-electric fleet, and to initially open the service to seniors (55+) only.

The CV Community Shuttle pilot project was funded for a period of three years, but with the stipulation that the service must operate for at least four years or return some of the initial funding.

In order to generate some revenue to help fund future service, the CV Community Shuttle was opened to the general public, for a $2.00 fare, in August 2024. Seniors continue to ride free.

Figure 2-4. Chula Vista Community Shuttle service zone
Source: City of Chula Vista

Service Model and Technology

Chula Vista's microtransit service is operated by Circuit under a turn-key model. The service utilizes a fleet of five sedans, one van, and one ADA-compliant van, with three vehicles typically in operation concurrently throughout the service day. A Commercial Driver's License (CDL) is not required for drivers, and all drivers are non-unionized with comparable pay scales to other regional transit drivers.

Passengers can book trips using the Circuit app, and those without smartphones can book trips by phone. Until recently, no fares were collected as the service was available to seniors only, free of charge. Fares are now required for riders under 55 years of age, who can pay through the Circuit app. No cash payments are accepted.

The CV Community Shuttle can be used by anyone within the designated service zone, including international visitors. However, the Circuit app is only available from the US Android Play Store and Apple App Store, so some international users must temporarily change the country in which their account is registered to download the app. Circuit provides guidance on how to do this on their website.

The majority of Circuit drivers are bilingual, which helps address rider questions in the border community.

Service Design and Monitoring

The pilot zone for CV Community Shuttle was in large part determined by the requirements of the grant programs funding the pilot program, including a requirement that 80% of the service area had to be economically disadvantaged.

A service performance dashboard is provided by Circuit to Chula Vista staff, to allow for daily service monitoring. Reporting requirements are currently determined by grant administrators and focus on metrics of importance to the respective funding partner, including ridership demographics and air quality indicators. While there are no current targets for wait time, the current wait time average is approximately 10 minutes.

The annual operating cost for the CV Community Shuttle is $892,000, or approximately $95.30 per revenue hour. The current cost per passenger trip is approximately $20.00. CV Community Shuttle has a productivity of 4.5 passengers per revenue hour.

Challenges and Lessons Learned

Funding is the primary challenge for the future of the CV Community Shuttle, as the pilot was generously funded but for a period of just three years. City staff have taken steps to generate new revenue, including through fares, and have explored more sustainable funding sources, including Federal funding, but are concerned about the City's ability to handle administrative requirements associates with Federal funding.

Another challenge for the CV Community Shuttle is the turnkey contract, which puts the program at risk if the provider were to withdraw for any reason, as the City does not own any of the assets.

Denton County, Texas (GoZone)

Quick Facts

Operator: DCTA
Primary Service City Population: 139,900

Border Community: No
Platform Provider: Via

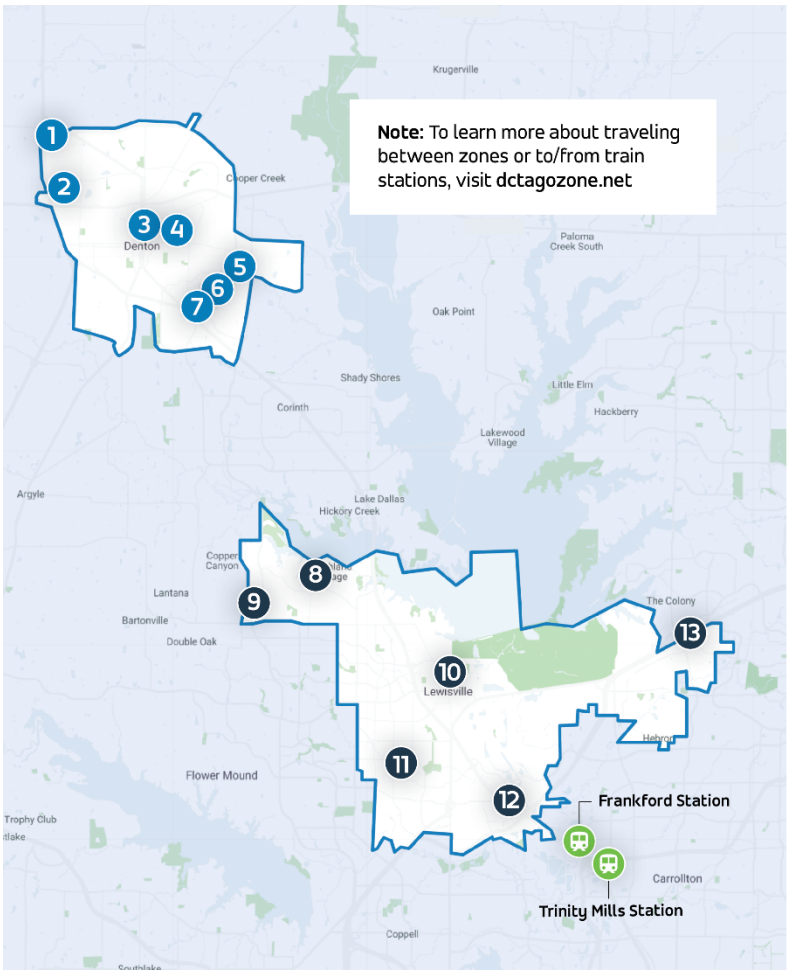
Service Model: Turnkey Service
Average Wait Time: 21 minutes

Service Overview

The GoZone microtransit service covers two zones: one in the City of Denton and another serving the Denton County cities of Lewisville and Highland Village (see **Figure 2-5**). While the Denton zone covers the entirety of the city, trip requests that begin and end within ¼ mile of the three fixed routes are not accepted. Travel between zones is restricted to a rail line connecting the zones, except on Sundays when the rail service does not operate and GoZone accepts direct trip requests between zones. Additionally, GoZone allows travel to two Dallas Area Rapid Transit (DART) rail stations in neighboring Dallas County to facilitate regional connections.

GoZone service operates 365 days a year. The service is available from 5:00 a.m. to 10:00 p.m., Mondays through Thursdays, extending to 11:00 p.m. on Fridays and Saturdays. On Sundays, the service operates from 8:00 a.m. to 6:00 p.m.

In Denton, GoZone fares are $1.50 for trips up to four miles, with an additional $0.50 per additional mile, up to a maximum of $5 per one-way trip. In Lewisville and Highland Village, a flat fare of $1.50 applies to all GoZone trips. Although regional passes are accepted, no free transfers are available, and passengers must pay separately if transferring between services due to Via's closed Application Programming Interface (API).



Popular destinations:

Denton:

1. Stonehill Center
2. Rayzor Ranch Marketplace
3. Denton County Courthouse Square
4. Downtown Denton Transit Center
5. Denton County Public Health
6. Denton Crossing West
7. Golden Triangle Mall

Lewisville/Highland Village:

8. Highland Village Municipal Complex
9. The Shops at Highland Village
10. Wayne Ferguson Plaza
11. Lewisville Thrive Recreation Center
12. Music City Mall Lewisville
13. Lewisville Towne Crossing

Figure 2-5. GoZone service map, including out-of-zone regional rail stations
Source: DCTA

Service History

GoZone was initially piloted in two smaller zones, serving the Lakeway Office Park in Lewisville and the Denton Airport Industrial Zone, respectively. In 2018 and 2019, declining fixed-route ridership and CDL operator shortages led DCTA to expand the microtransit service and reduce fixed routes from 12 to three (not counting university shuttle routes), completely eliminating fixed-route service in Lewisville and Highland Village. In 2022, GoZone service hours increased to 4,500 per week in response to growing demand.

The expansion of GoZone service and the replacement of most fixed routes was initially controversial but is very popular now. Ridership in Lewisville and Highland Village is now higher than it was before the fixed routes were eliminated. In Denton, 85 percent of GoZone trips were trips that could have been accommodated by the remaining fixed-route network, suggesting a preference for the microtransit service. To avoid cannibalism of ridership, policy changes were made to prohibit GoZone trips that begin and end within ¼ mile of a fixed-route line.

Service Model and Technology

GoZone service is provided by Via as a turnkey operation, including technology, vehicles, and drivers. GoZone drivers are non-unionized independent contractors, who do not qualify for DCTA employee benefits, and whose compensation differs from DCTA operators. GoZone drivers are not required to have CDLs, as they operate minivans with carrying capacities of fewer than 14 passengers.

The GoZone fleet consists of 68 vehicles, including 12 wheelchair accessible vehicles. Most GoZone vehicles are also equipped with bicycle racks. On a typical weekday, 30-40 GoZone vehicles are assigned to serve the Denton zone. Approximately 20 vehicles serve the City of Lewisville, with an additional two to three vehicles assigned to the City of Highland Village, although these two cities are considered one zone.

GoZone trips can be booked through the GoZone app, by phone, or in person at the Downtown Denton Transportation Center. Approximately five percent of trips are booked by phone, and routed through a Via call center, rather than the DCTA customer support line.

Fare payments can be made through the GoZone app or on the vehicle, by cash or by presenting a valid DCTA or regional pass to a GoZone driver. Transfers are not provided, so passengers must either present a pass or pay again when transferring between GoZone service and other DCTA or regional services. Due to Via's closed API, the GoZone app is not integrated with DCTA's other mobile app called GoBus. Thus, passengers must sometimes use two apps to pay for a multi-modal trip.

Service Design and Monitoring

GoZone service areas are defined by municipal boundaries rather than specific minimum or maximum zone sizes. Vehicle assignments vary throughout the service day, with the goal of ensuring a maximum wait time of 24 minutes. The current average wait time is 21.6 minutes. High-demand destinations include medical centers, libraries, and senior centers.

DCTA and Via track a range of performance metrics, including ridership and average wait time by zone, incidents per 100,000 miles, and seat unavailability rate – or the percent of trip requests that could not be accommodated within the maximum allowable wait time. The allowable seat unavailability rate is 18.5 percent, and the current actual rate is 8.5 percent. Service monitoring is continuous, with monthly reports presented to DCTA's Board.

The annual operating cost for GoZone service is $11.7 million, or $42.95 per revenue hour. The cost per passenger trip is $10.26, and the productivity of the service is 4.2 passengers per revenue hour.

Challenges and Lessons Learned

GoZone ridership and productivity fluctuates seasonally due to the major role of the University of North Texas in driving ridership in Denton. Demand for DCTA's Access paratransit service has not declined since the introduction of GoZone microtransit service. In fact, demand has grown as Access passengers generally prefer or require the additional individual assistance provided by Access drivers.

DCTA has experienced some challenges related to the turnkey service model. For example, the contractor may have a conflict of interest in promoting GoZone trips at the expense of fixed-route trips. In addition, GoZone drivers, who are independent contractors and must bid on shifts, sometimes bid on a shift but do not show up. DCTA has worked closely with Via to implement penalties and incentives that address both of these issues. A key lesson learned from DCTA's experience is that it is important to carefully consider the pros and cons of a turnkey model and then closely monitor the contractor if a turnkey model is selected.

McAllen, Texas (Micro McAllen)

Quick Facts

Operator: Metro McAllen
Primary Service City Population: 142,200

Border Community: Yes
Platform Provider: RideCo

Service Model: Turnkey Service
Average Wait Time: 5 minutes

Service Overview

Micro McAllen serves one 16 square mile zone in northwest McAllen (see **Figure 2-6**). The microtransit service is available Mondays through Saturdays between 6:30 a.m. and 8:30 p.m. Micro McAllen fares match those of Metro McAllen's fixed-route service. Adult fares are $1.00, while children under seven ride free. Half-price fares are available for seniors, students, and persons with disabilities. Free transfer passes are issued and accepted for passengers connecting to and from fixed-route service.

Figure 2-6. Micro McAllen service map (c. 2022); note that Saturday service was added in 2024
Source: Metro McAllen

Service History

Micro McAllen began as a pilot project aimed at replacing a poorly-performing fixed route in northwest McAllen that had been suspended during the COVID-19 pandemic. The initial 18-month non-competitive contract was awarded to the same team of RideCo and a local taxi operator that was already operating San Antonio's microtransit service. This team was selected because the taxi contractor already had a local presence in McAllen, as well as experience working with RideCo to provide microtransit service. In 2024, the same team was awarded a three-year contract following a competitive bid process.

Since the initial demonstration project, Micro McAllen has slightly expanded the boundaries of the service zone, in response to rider requests, and added Saturday service in 2024. Metro McAllen has received multiple requests to expand Micro McAllen service to other parts of the city but has no current plans for additional microtransit zones.

Service Model and Technology

Micro McAllen service is provided by RideCo as a turn-key operation, in partnership with a local fleet operator. Micro McAllen drivers are non-unionized independent contractors, who do not qualify for Metro McAllen employee benefits, and whose compensation differs from the city's fixed-route operators. Micro McAllen drivers are not required to have CDLs as they operate minivans with carrying capacities of fewer than 14 passengers. The service is provided with two specially branded vehicles, with one operating in the morning, and the other in the afternoon.

The majority of Micro McAllen trips are booked through the Micro McAllen app, developed by RideCo. Trips can also be booked by phone or through a Micro McAllen website also developed by RideCo. Fare payments can be made electronically through the RideCo app and website as well, or by cash on-board the vehicle.

Metro McAllen assigns paratransit trips to Micro McAllen when it is practical to do so, based on trip origin and destination. In addition, Metro McAllen is currently in talks with Uber to provide "overflow" service for both microtransit and paratransit riders who cannot be accommodated by the respective services in a reasonable time frame.

Service Design and Monitoring

The current microtransit service area in northwest McAllen is approximately 16 square miles, but there is no strict standard for the size of a Micro McAllen zone. Instead, Metro McAllen staff works closely with RideCo to evaluate and model different service configurations. The current zone and any future zones (if the system is ever expanded) must have at least one fixed-route connection and major destinations, such as the Texas A&M University Higher Education Center in the current Northwest Zone.

Metro McAllen aims to provide Micro McAllen service within ten minutes of a trip request. The current average wait time is just five minutes. Metro McAllen and RideCo staff monitor Micro McAllen service performance daily and meet monthly to discuss. Key metrics that are tracked include ridership, average trip times, average wait times, uncompleted trips, and passenger feedback. Service performance is reported to the Metro McAllen Board monthly, but Micro McAllen ridership is included in the overall Demand Response category which also includes paratransit service.

The annual operating cost for Micro McAllen service is between $150,000 and $200,000 per year, as the contract is based on service miles provided.

Challenges and Lessons Learned

In an effort to control costs, Metro McAllen staff is currently working with Uber to establish a system to help flex service capacity when needed, rather than committing to more full-time Micro McAllen vehicles and drivers. With time, additional dedicated capacity may be necessary, but Metro McAllen staff believe that a more flexible approach that relies on Uber vehicles may be a more cost effective solution until the point that monthly Uber trip costs match the projected cost of adding an additional dedicated Micro McAllen vehicle.

San Antonio Region, Texas (VIA Link)

Quick Facts

Operator: VIA Metropolitan Transit
Primary Service City Population: 1,434,600

Border Community: No
Platform Provider: RideCo

Service Model: Turnkey
Average Wait Time: 15 minutes

Service Overview

The VIA Link microtransit service currently serves five zones within the City of San Antonio, including four on the periphery of the VIA service area, and one covering downtown San Antonio (see **Figure 2-7**). Hours of operation vary by zone, taking into account schedules of connecting services. All zones operate seven days a week. The downtown zone operates between 7:00 a.m. and 11:00 p.m. Of the other four zones, three operate from 5:00 a.m. to 9:30 p.m., and one operates from 5:00 a.m. to 10:00 p.m.

VIA's target is for service to be available within 30 minutes of a trip request between 7:00 a.m. and 4:00 p.m., and within one hour at all other times. VIA Link fares are $1.30 per ride, matching VIA's fixed-route fares, with free transfers available between the two modes. VIA offers a number of reduced-rate fares and passes for riders who qualify.

Service History

VIA Link service was initially launched in one zone in May 2019 to replace underperforming fixed-route service in Northeast San Antonio. The service began as a pilot, focused on providing better frequency and coverage compared to the previous 60-minute headway of the poorly performing fixed-route. The service was later expanded to the Northwest Side in 2021, South Side in 2022, and finally to Downtown in 2024.

Although some pilot services, such as the Sandy Oaks express service[2], were discontinued due to low ridership, the successful zones have remained active with modifications to adapt to ridership needs.

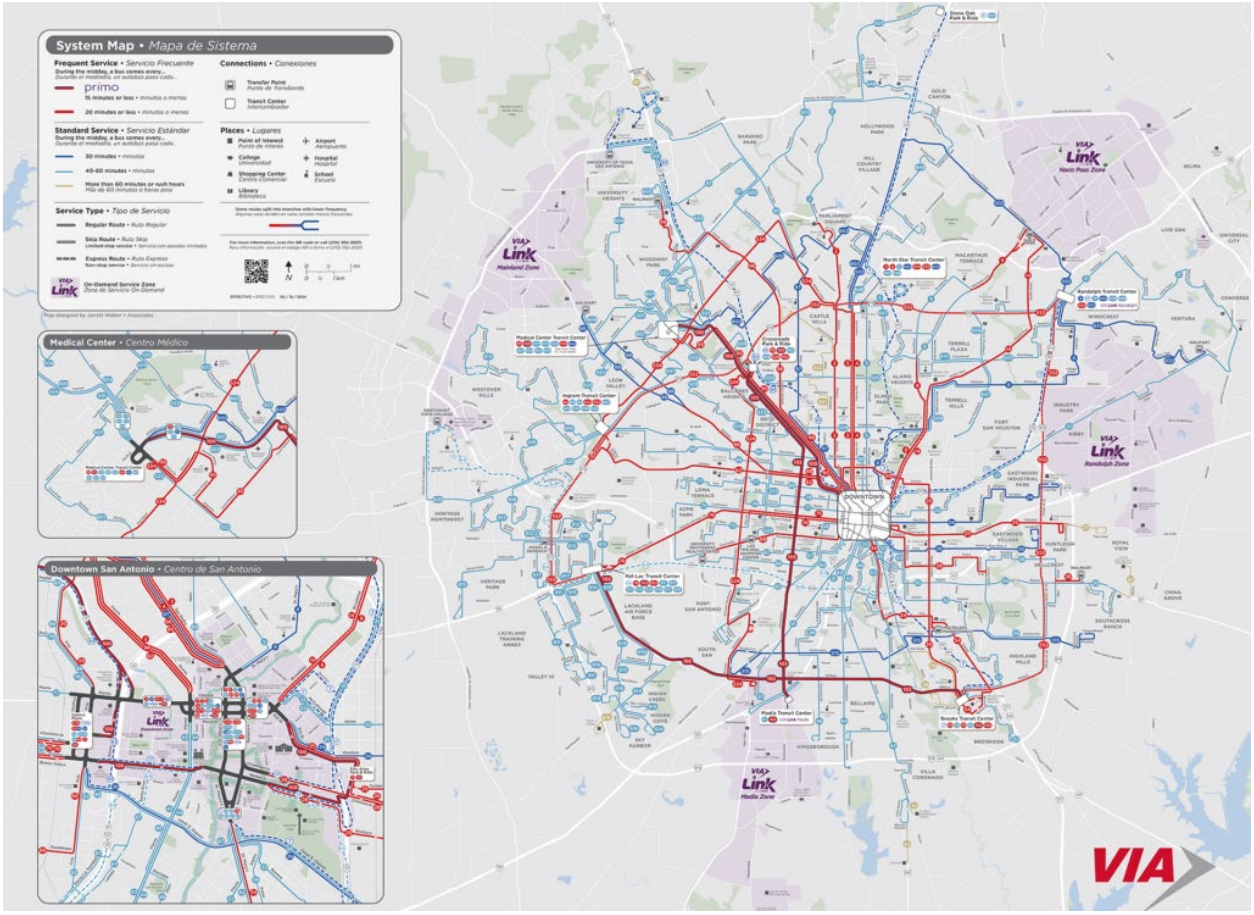


Figure 2-7. VIA system map, including VIA Link service zones
Source: VIA Metropolitan Transit

Service Model and Technology

VIA Link is a turnkey service operated by a team consisting of RideCo, the microtransit platform provider, and Z-Trip, the fleet operator. The service utilizes a fleet of 58 minivans. Drivers do not require a Commercial Driver's License (CDL) and are compensated based on rates determined by Z-Trip. The service allows passengers to book rides via the RideCo app, online, or by calling in, with payments made in cash, reloadable cards, or mobile passes.

VIA Link uses a system of virtual stops within each zone. When a rider books a trip, they are directed to a pre-set pickup location. These virtual stops are found throughout each zone and riders rarely have to walk more than one block to reach one. Operationally, VIA Link relies on

[2] This pilot service did not allow for trips within a zone. People could only request trips from anywhere within the zone to a transit center outside the zone.

dynamic scheduling, enabling vehicles to be dispatched based on demand, and to be shifted between zones as needed. VIA Link zones typically operate with 8-12 vehicles per zone. The Randolph Zone (located in the Northeast part of San Antonio), which is generally the most productive of the zones, sometimes requires 13 peak vehicles.

Service Design and Monitoring

The design of VIA Link zones does not adhere to strict minimum or maximum zone sizes. Instead, each zone is planned based on the geography of the region, including the distribution of population and ridership generators, and a review of the demographics – a process similar to fixed-route service planning. VIA staff rely on Remix and ArcGIS Business Analyst to analyze the demographics and key points of interest of a potential zone, respectively.

VIA Link zones range in size from 16 to 18 square miles, with an average trip length of about four miles, which is similar to fixed-route services. During peak periods, VIA guarantees passenger wait times of 30 minutes or less. Current average wait times are 12-15 minutes.

VIA's contract with RideCo requires daily, weekly, and monthly service performance dashboards through Tableau. Key metrics include ridership, passengers per vehicle hour, and average wait times. A comprehensive review of each zone's service performance is conducted quarterly.

The VIA Link service carries approximately 40,000 passengers per month, up nearly 80 percent from a year ago. As ridership has grown, the cost effectiveness of the VIA Link service has steadily improved. In 2022, the operating cost per passenger trips for the microtransit service was $23.76. That dropped to $15.92 in 2023 and is trending toward $13.15 per passenger trip in 2024.

Challenges and Lessons Learned

VIA Link's downtown zone has faced greater capacity challenges than other zones because larger groups of riders are more common. This has meant that multiple vehicles are needed to accommodate one group of riders traveling to and from the same place.

VIA Link's funding has been shored up by partnerships with universities and employers. For example, Toyota provided a grant to extend a zone to include a manufacturing plant. They have also been instrumental in marketing the service among their employees to help grow the ridership.

The turnkey service model has been successful overall for VIA, but has created some challenges including vehicle/driver shortages during peak periods and call centers outside of the service region. As VIA Link drivers are independent contractors who may drive for other services as well, there are sometimes not enough drivers available to facilitate a peak-period demand surge. In addition, VIA Link phone calls are routed to a call center that is not staffed by local operators, which sometimes creates frustration among callers as there is confusion about local place names, etc.

Tulsa Region, Oklahoma (MicroLink)

Quick Facts

Operator: MetroLink Tulsa
Primary Service City Population: 413,100

Border Community: No
Platform Provider: RideCo

Service Model: Technology Overlay
Average Wait Time: 35 minutes

Service Overview

MicroLink service is designed to complement fixed-route service during weekday and Saturday daytime hours and replace fixed-route service at night and on Sundays. The daytime service (see **Figure 2-8**) includes four zones within Tulsa and one external zone that covers and is fully funded by the City of Broken Arrow.

During nighttime hours and on Sundays, the service includes four zones that nearly encompass all of Tulsa, replacing the fixed-route network after 6:30 p.m. on weekdays and Saturdays, with the exception of a single BRT route that continues to operate alongside the microtransit services (see **Figure 2-9**). Daytime service is provided Monday through Saturday from 6:30 a.m. to 6:30 p.m. Nighttime service operates from 7:30 p.m. until midnight, and Sunday service runs from 8:00 a.m. to 6:30 p.m.

The standard fare for MicroLink service is $2.00 per trip, the same as for MetroLink fixed-route service. One dollar reduced fares are available for qualified individuals.

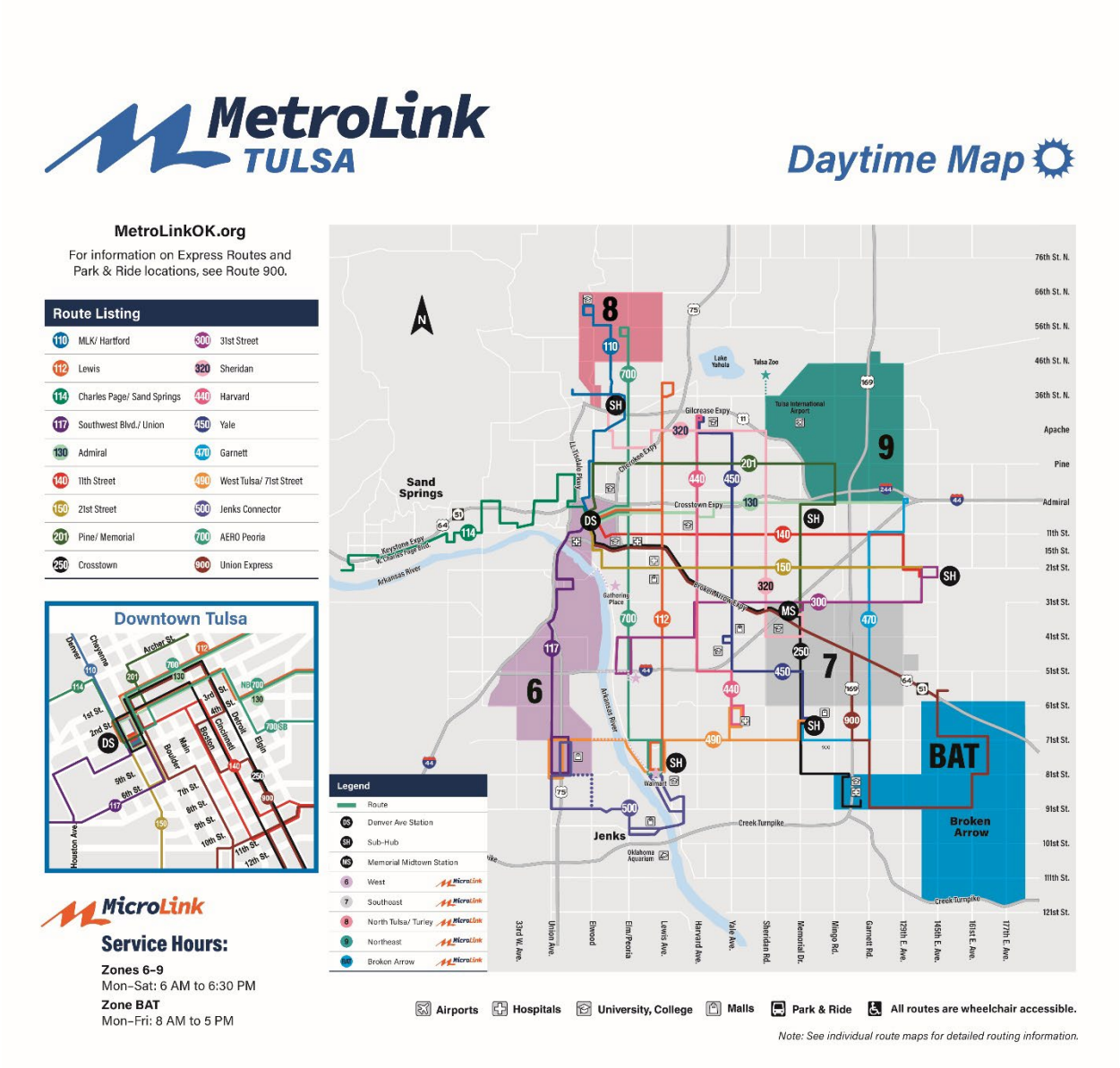


Figure 2-8. Daytime MetroLink service map, including MicroLink service zones
Source: MetroLink Tulsa

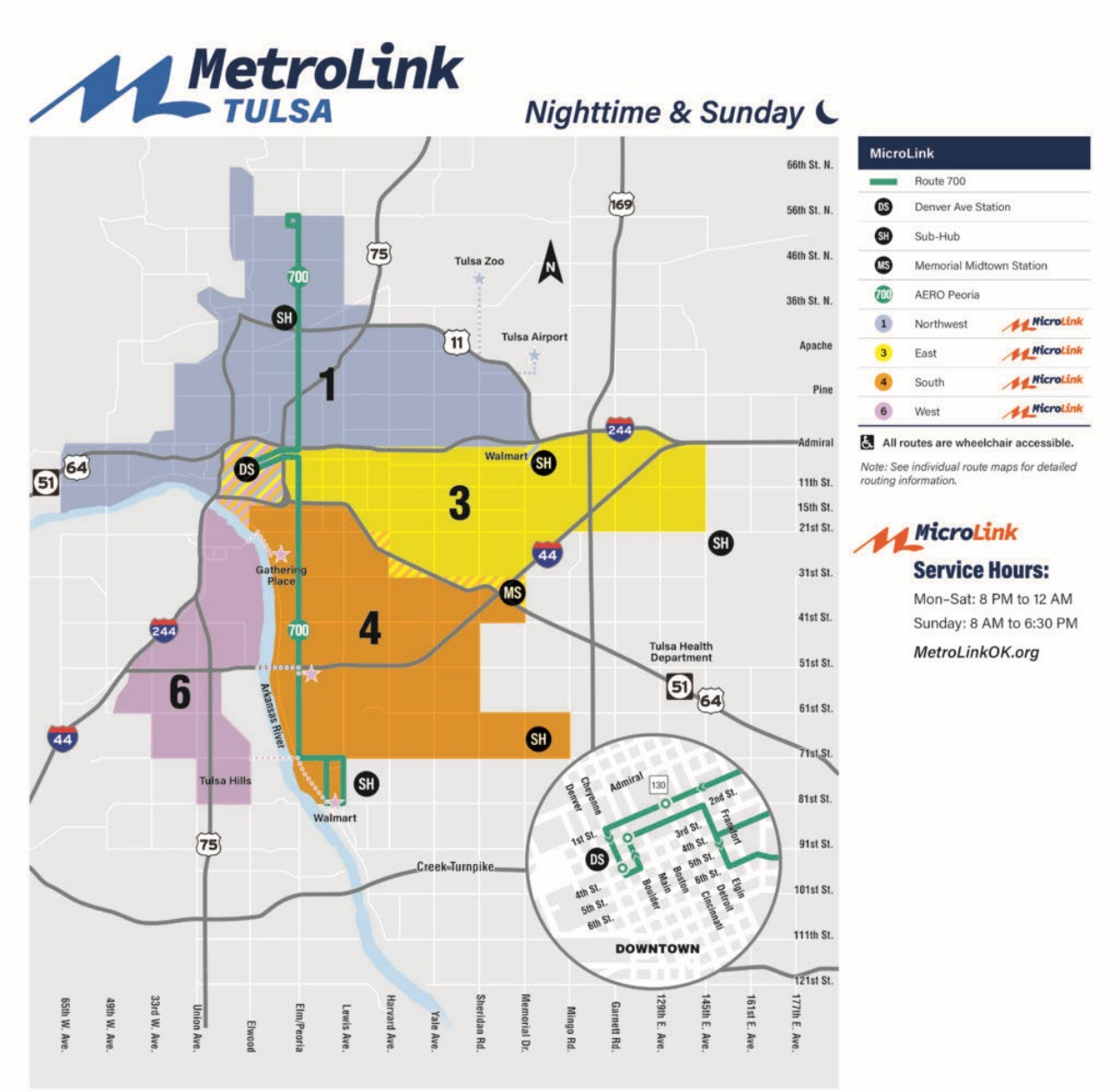


Figure 2-9. Nighttime and Sunday MetroLink service map, including MicroLink service zones
Source: MetroLink Tulsa

Service History

MicroLink was initially launched as a two-zone pilot program to replace poorly performing nighttime deviated-fixed-route service. The nighttime microtransit service was later expanded to cover nearly the entire City of Tulsa. Smaller daytime zones were also added to address gaps in fixed-route service coverage. MicroLink now carries approximately 8,500 passengers per month, compared to 3,500 monthly riders on the deviated-fixed-route service it replaced.

Service Model and Technology

MicroLink service is powered by the RideCo microtransit platform, which is installed on vehicles owned by MetroLink Tulsa. The vehicle fleet includes 46 cut-away buses, 12 voyager mini-vans, and four electric Mach-Es (Broken Arrow only). The cut-away buses are used interchangeably between MicroLink and MetroLink's LinkAssist paratransit service.

MicroLink trips can be booked using MetroLink's all-in-one GoPass transit app, which is supported on the back end by RideCo's microtransit platform. Passengers who do not have smartphones can reserve trips by phone. In addition, staff members at MetroLink transit centers are available to assist with booking trips in the case of smartphone issues. The GoPass app supports Spanish-language users based on phone language settings.

MicroLink fare payments can be made through the GoPass app at the time of booking. Cash fares are accepted on microtransit vehicles, enabling unbanked passengers to use the service as well. Passengers paying cash on either fixed-route or microtransit vehicles can receive free transfer passes to complete their journey on the other mode.

MicroLink drivers are unionized, but they are not required to hold a commercial driver's license (CDL). While microtransit drivers operate under a different pay scale than MetroLink's fixed-route operators, their compensation aligns with paratransit drivers.

Service Design and Monitoring

MicroLink zones are planned and modeled in collaboration with RideCo. While no strict minimum or maximum zone size requirements exist, the initial pilot zones included a 23.7 square-mile North Zone and an 8.7 square-mile Northwest Zone. The vehicle allocation is tailored to the time and demand for each zone, with nighttime zones typically using three vehicles each, while daytime zones generally operate with one vehicle, though plans are underway to add a second vehicle to at least one zone to better meet demand.

MetroLink Tulsa aims for a 15-minute average wait time for MicroLink service, though it allows customers to accept trips with longer projected wait times if they choose. Current average wait times are approximately 35 minutes. In designing zones, MetroLink Tulsa prioritizes connections to fixed-route transit service. If fixed-route connections are not available within a zone, service is provided to out-of-zone points of interest to facilitate fixed-route access. This is the case with the Broken Arrow zone, which has no fixed-route service, but allows passengers to travel outside of the zone to Tulsa Community College (TCC), where a fixed-route connection is available.

MetroLink Tulsa and RideCo staff monitor MicroLink service performance daily in order to optimize wait times and vehicle assignments. Service performance is reported to the MetroLink Tulsa Board monthly. Key performance metrics include monthly ridership, service productivity (passengers per

revenue hour), and wait times, although wait time data is reported internally rather than in Board reports.

The annual operating cost for MicroLink service is $3.1 million, or approximately $30.00 per revenue hour. This includes maintenance, operations, and technology costs. The agency's general fund is the primary source of funding. MicroLink has a productivity of 2.6 passengers per revenue hour.

Challenges and Lessons Learned

Some MicroLink passengers tend to "overbook" service by reserving multiple pick-up times to give themselves flexibility on their return trip. For example, a person going to a grocery store may book a pick-up both for 30 minutes and for one hour after their arrival. If they are not ready to go in 30 minutes, they cancel or don't show up for the trip and take the later one instead. However, the impact of this practice is longer wait times and reduced vehicle availability for other passengers, as vehicles are assigned to trips that are ultimately canceled. To address this issue, MetroLink Tulsa is considering policy adjustments that may require a one-hour wait before passengers can make another reservation.

Paratransit-eligible passengers have shown a strong preference for microtransit due to the availability of same-day service, which aligns with their need for flexible transportation options. While MetroLink Tulsa has continued to operate both MicroLink and paratransit service, the two services share common vehicles and the agency is exploring ways to more closely integrate the services.

Chapter Conclusion

The case studies presented in this chapter show that each peer community has taken a different approach to microtransit service planning and operations, based on their unique priorities and mobility needs. The notable features are represented in **Table 2-4**. The various characteristics of each peer system and lessons learned were considered while designing and considering service plans for Laredo. The proposed service for microtransit in Laredo can be found in the next chapter.

3. Feasibility Assessment

3. Feasibility Assessment

This chapter covers the development of the proposed microtransit zones for the service area. The first portion of the chapter reviews the relevant plans, studies and reports for transit in the region. Next, there is an assessment of the market for microtransit service in Laredo. Finally, there is the discussion of the development of the proposed zones. Each zone has a profile detailing the area, characteristics, and an analysis of the estimated ridership, cost, vehicles needed and riders per hour for the proposed microtransit service. At the end of the chapter, late night service is examined.

Document Review

Multiple documents guide transit service planning and policy in Laredo and Webb County. This document summarizes a compilation of relevant plans, studies, and reports – highlighting their objectives, key findings, and implications for transit in the region. The following documents were reviewed, and are listed in order of relevance to the Microtransit Feasibility Study:

1. **Comprehensive Operational Analysis of El Metro (2021)**: Evaluates El Metro's challenges and recommends improvements such as distributed hubs, microtransit, targeted data collection, and customer service enhancements to optimize transit performance.
2. **Viva Laredo Comprehensive Plan (2017)**: Envisions a transit-oriented, walkable, and economically vibrant city. The plan includes goals for transit expansion, amenities, and strategies for integrating transit-oriented development.
3. **Laredo Metropolitan Transportation Plan 2020-2045**: Provides a long-term vision for multimodal transportation improvements. It identifies increased transit demand with population growth and emphasizes service reliability, infrastructure maintenance, and marketing strategies.
4. **City of Laredo Downtown Parking Study (2019)**: Assesses parking management and recommends solutions to alleviate congestion, promote transit use, and improve pedestrian infrastructure.
5. **Congestion Management Process (2014)**: Proposes strategies to reduce congestion, including transit service enhancements, traffic signal optimization, and transportation demand management.
6. **FY 2025 Unified Planning Work Program (UPWP)**: Outlines coordinated planning initiatives for transit projects, including microtransit feasibility studies, reflecting regional priorities.

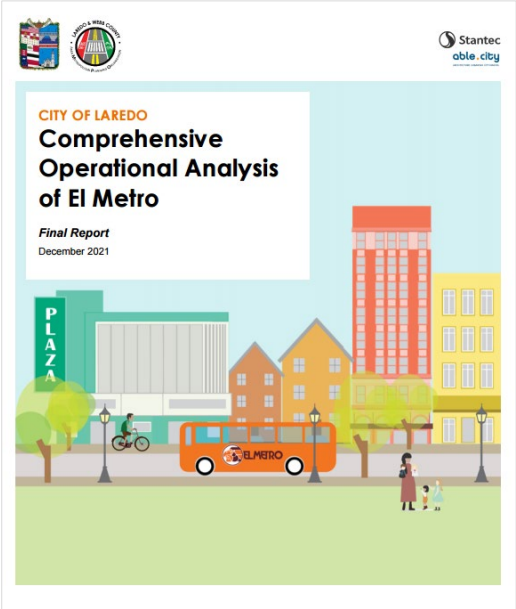
7. **Transportation Improvement Program FY 2025-2028**: Allocates $81 million for transit improvements, including operations, vehicle replacements, and mobility enhancements for vulnerable populations.
8. **Public Participation Plan (2022)**: Establishes a framework for inclusive community engagement in transportation planning, focusing on equitable access to decision-making.
9. **Active Transportation Plan (2020)**: Advocates for enhancing bicycle and pedestrian infrastructure to improve connectivity.
10. **Laredo Synchronization Traffic Report (2019)**: Demonstrates congestion reduction through traffic signal synchronization.

These documents collectively provide a strategic roadmap for addressing Laredo's transportation needs, emphasizing integrated solutions to create a more efficient and accessible transit system. They reflect the region's commitment to mobility, sustainability, and community-oriented planning.

Comprehensive Operational Analysis of El Metro

Author: Stantec / Able City
Sponsor: Laredo & Webb County Area MPO / El Metro
Date: December 2021

Summary



The Comprehensive Operational Analysis (COA) aimed to understand the challenges facing El Metro and develop recommendations to improve transit service, efficiency, and effectiveness. The COA consisted of the following tasks: Stakeholder Engagement, Background Data Analysis, System Efficiency and Effectiveness Review, Gap Analysis, El Metro Network Plan, Supporting Recommendations, Implementation Plan, Scheduling and Runcutting. However, the study was conducted without the benefit of detailed stop-level ridership data.

Key takeaways from the existing conditions portion of the study included low transit demand outside of the downtown area, a lack of funding to support transit growth, a strong farebox recovery ratio, relatively low-frequency service across all routes, high transit demand from students, services that do not reflect demand, service reliability impacted by rail crossings, high paratransit operating costs, and a decline in ridership due to COVID-19.

Recommendations of the COA included implementing distributed hubs so that not all routes go downtown, implementing select route adjustments, creating a targeted data collection and usage plan, piloting microtransit services, conducting a fare strategy and revenue study, improving customer service, implementing a marketing plan, and expanding El Metro's internal resources and capacity, among others.

Implications for Transit

The COA is the only document reviewed as part of the Microtransit Feasibility Study that is entirely about transit and improving transit performance. Many of the key takeaways and recommendations identified in the final report are still relevant today. Perhaps most importantly, the COA stresses two key points: the need to develop a robust data collection plan in order to inform all other service planning decisions; and the availability of new service models, such as microtransit, that can be leveraged to improve service coverage and productivity.

Several microtransit case studies are presented, including DART's GoLink service, VIA's Link service, and CapMetro's Pickup service. These examples highlight the use of app-based microtransit service to serve low-density areas that do not have enough demand to support regular fixed-route transit.

According to the COA, microtransit in Laredo should be strategically implemented in areas where routes are under-performing and/or in areas where land use and development makes it challenging to run productive fixed-route service. Microtransit can also be used in new neighborhoods to obtain a better understanding of potential transit demand in the area before implementing a fixed-route service.

Based on these parameters, five areas (shown in **Figure 3-1**) are identified as suitable candidates for microtransit service:

- Short-Term Pilot
  - Villa Del Sol/Cheyenne (Short-Term Pilot)
- Long-Term Consideration
  - Heritage Park, San Jose, Woodlands, Ponderosa Hills
  - Riverside/Canta Ranas/La Ladrillera
  - Mines Road north of Killam Industrial Blvd.
  - New auto-oriented developments east of Cuatros Vientos Blvd.

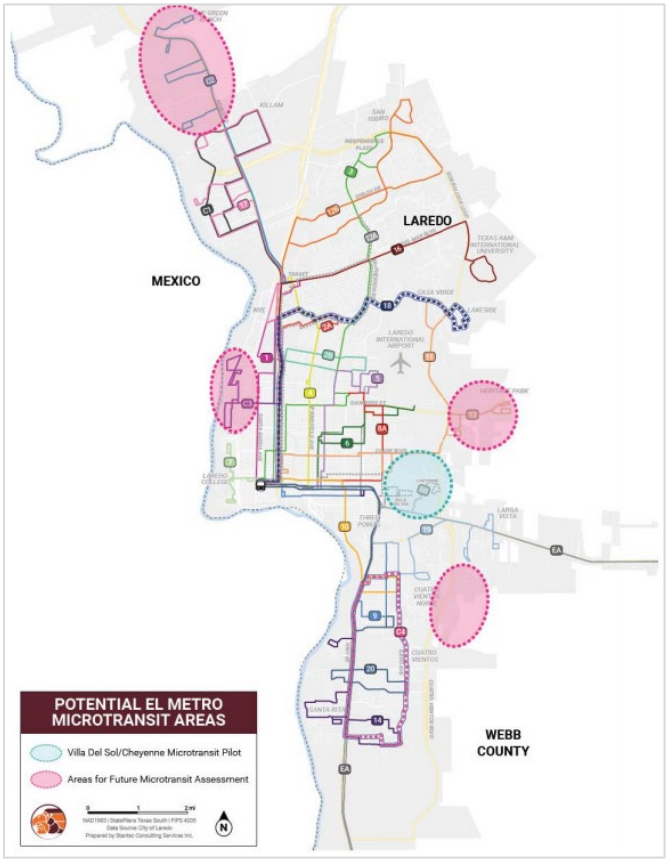


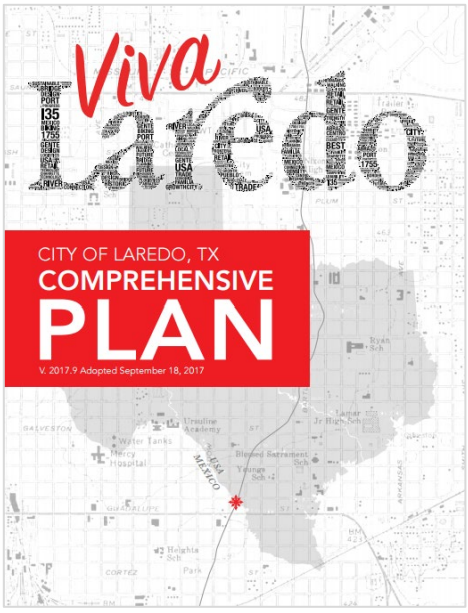
Figure 3-1. Potential Microtransit Areas from the COA

However, the COA acknowledges that these recommendations are based on limited data and recommends an improved data collection plan, including the procurement of automatic passenger counters, to facilitate decision-making. In addition, app-based microtransit service is itself a data-collection tool. Collecting and analyzing ridership and trip-request data can help optimize microtransit zones and trip booking parameters (e.g., maximum wait time, maximum travel time, etc.).

Viva Laredo: City of Laredo, TX Comprehensive Plan

Author: City of Laredo
Date: September 2017

Summary



Viva Laredo is the city's most recent comprehensive plan, adopted in September of 2017. The plan established priorities for Laredo's future, especially regarding physical and economic development. The vision laid out in the plan aims to accomplish the following: make the downtown great; create active, walkable destinations; complete the streets; plan new and improved public spaces; and have a prosperous but affordable city.

The comprehensive plan is divided into twelve sections, focused on the following topics: land use patterns; downtown and inner-city revitalization and historic preservation; urban design; mobility; housing; sustainability; health; parks; economic development; education, arts and culture; global initiatives; and implementation. Each topic is presented in four parts, including existing conditions; community concerns; strategies; and goals and policies.

Implications for Transit

The plan includes a wide variety of goals for land use and mobility in Laredo, many of which would affect transit in some way. The plan specifically calls out improvements for transit in Goal 4.14: "Make a Metro Transit Master Plan and turn it into the most used Citywide transit system in Texas." Recommended policies include reviewing routes; reserving right-of-way for future transit expansion; building passenger amenities like bus shelters, seating, and lighting; utilizing traffic signal priority, queue jumps, and exclusive transit lanes; encouraging transit-oriented development; and considering a downtown streetcar.

Laredo Metropolitan Transportation Plan (MTP) 2020-2045 Update

Author: Laredo Metropolitan Planning Organization with CDM Smith and Kleinman Consultants
Date: 2020-2045[3]

Summary

The MTP is a comprehensive, multimodal guide for making transportation improvements and investments for a 25-year period. It identifies policies, programs, and projects across each mode of travel. The vision statement for the 2020-2045 MTP update was to "Develop a transportation system that offers safe, efficient, affordable travel choices for people and goods, while supporting economic development and long-term quality of life."

MTP updates are part of a funding process that allows the region to receive federal transportation improvement money. A list of projects in need of funding are identified in the plan and evaluated based on the following criteria: congestion; safety and operations; project cost; and modal impact (whether the project promotes the use of or access to an alternative mode of transportation). In addition, projects are scored based on community and environmental impacts and public support.

Implications for Transit

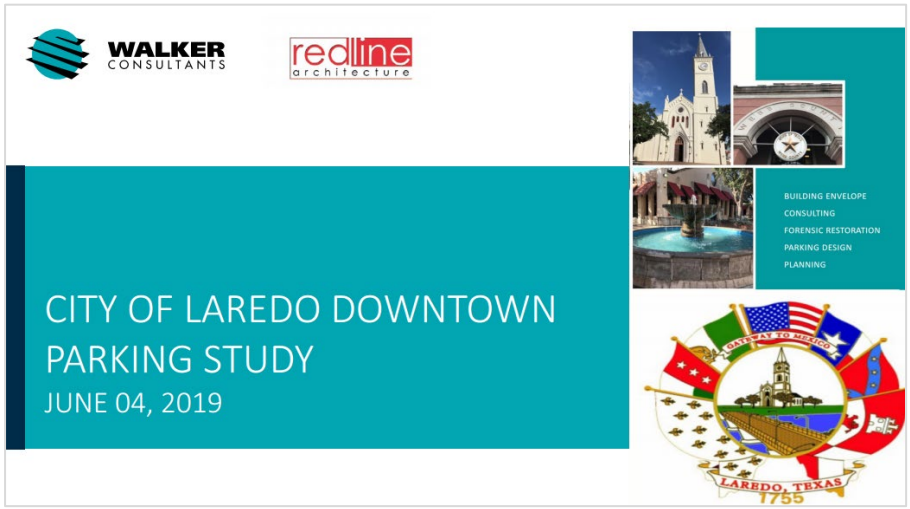
Chapter 5 of the 2024-2045 MTP update discusses regional transit issues and needs. It predicts that transit will face more customers as the region's population is expected to grow and age rapidly, resulting in greater service needs. At the same time, it is predicted that transit will face higher costs and less funding from federal and state sources, and new funding sources may be difficult to find. Chapter 5 also reviews best practices and strategies, including continually evaluating transit operations and improving service; performing maintenance to extend the useful life of vehicles, equipment, and facilities; focusing on pedestrian connections and pedestrian-friendly environments; improving transit amenities such as park-and-ride facilities, transit centers, passenger information, and vending machines; integrating transit considerations with designing roadway improvements; using Intelligent Transportation Systems (ITS) for transit; coordinating among transit entities; and enhancing marketing efforts. While microtransit is not specifically cited in the 2024-2045 MTP, it would help advance the vision and policy goals outlined in the plan.

[3] An updated 2025-2050 MTP was adopted in January 2025, after the initial completion of this document review. From a transit standpoint, the updated plan differs from the previous version primarily in its reference to the Comprehensive Operations Analysis, which is also reviewed in this document.

City of Laredo Downtown Parking Study

Authors: City of Laredo, Walker Consultants, redline architecture
Date: June 2019

Summary



The purpose of the Downtown Parking Study was to review existing parking options downtown and make recommendations for improvements. The findings of the study indicated that there was adequate parking in downtown Laredo, but "hotspot" blocks had parking capacity issues, while other areas remained underutilized. In addition, the study found that on-street parking was cheaper and more heavily utilized than off-street lots, and users did not know where to find longer-term parking due to a lack of wayfinding signage.

The recommendations of the Downtown Parking Study included creating a more rigorous parking management program. This would include adjusting parking prices, so that on-street parking in high-demand areas is more expensive; encouraging users to find parking outside of the "hotspots;" improving wayfinding signage, so that drivers can find available off-street parking; improving pedestrian amenities to encourage users to park once downtown and walk to any additional destinations; promoting public-private partnerships to make underutilized private lots available to the public; and exploring transportation demand management options downtown.

Implications for Transit

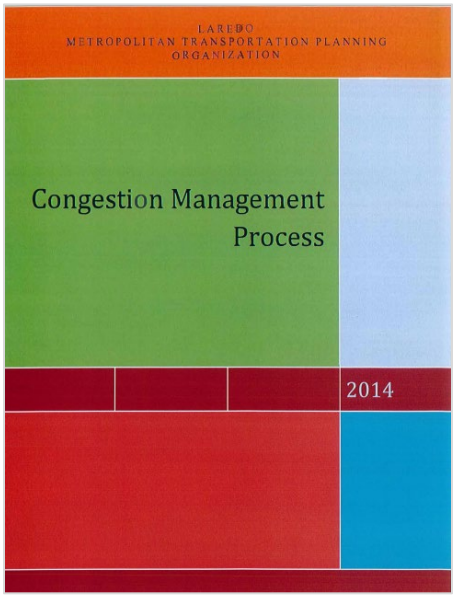
The most directly relevant portion of the study is its recommendation to explore transportation demand management (TDM) options downtown to encourage users to consider options other than driving. The study recommended partnering with El Metro to promote transit use, especially as an option for traveling downtown. The plan's focus on better pedestrian infrastructure would also benefit transit riders who are pedestrians as well. In addition, better parking management could reduce congestion downtown, which could improve bus performance in the area.

Congestion Management Process

Author: Laredo Metropolitan Transportation Planning Organization
Date: January 2014[4]

Summary

The Congestion Management Process (CMP), adopted by the MPO in January 2014, is intended to serve as an organized and transparent way for the region to identify and manage congestion, connect performance measures to support funding for projects, and evaluate recommended strategies to ensure that the region is effectively addressing congestion.



A CMP as an "on-going process, that is continually progressing and adjusting over time as (local) goals and objectives change, new congestion issues arise, new information sources become available, and new strategies are identified and evaluated. Congestion Mitigation Strategies described in the report include the following:

- *Transportation Demand Management (TDM)* strategies, such as promoting alternatives to driving; adjusting pricing of parking, lanes, or congestion; promoting changes to work patterns, such as flexible hours or telecommuting programs; and adjusting land use controls or zoning
- *Traffic Operational Improvements* include metering traffic onto freeways, having reversible commuter lanes, using automated toll collection, optimizing timing of traffic signals, among others.
- *Public transportation strategies* include realigning transit schedules and stop locations to better meet demand, providing real-time information, transit signal priority, bus rapid transit, right-of-way for transit operators such as shoulder use, more frequent transit, or expanded transit hours.

Implications for Transit

Transit service and transit service improvements are identified as a congestion mitigation strategy. Connecting transit service with an improvement in congestion is beneficial for transit and may help to unlock funding or support for transit service and related improvements.

[4] While the CMP is an on-going and continuous process, an updated version of the CMP document is expected to be adopted in 2025 by the Laredo & Webb County Area MPO.

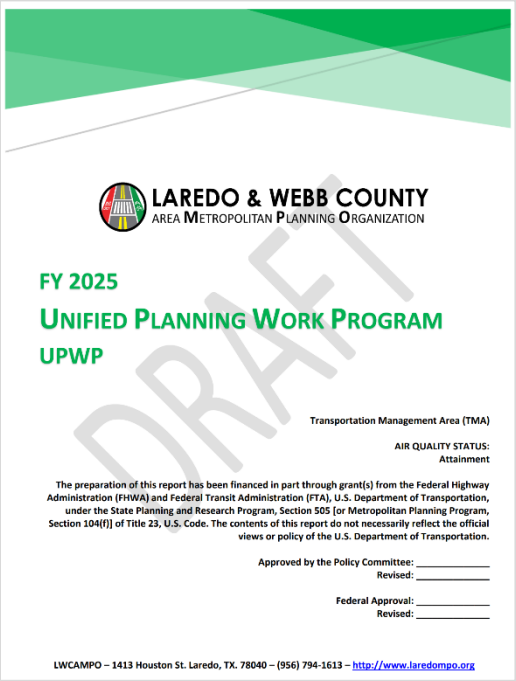
FY 2025 Unified Planning Work Program (UPWP)

Author: Laredo and Webb County Area Metropolitan Planning Organization (LWCAMPO)
Date: FY 2025

Summary

The UPWP serves as the instrument for coordinating and identifying ways to carry out the continuing, cooperative and comprehensive transportation planning process for Laredo and portions of Webb County. The LWCAMPO is tasked with overseeing this process, annually.

The UPWP is a one-year transportation planning work program which describes in detail transportation planning programs, and activities to be performed in the LWCAMPO study area for the FY 2025. However, some tasks require more than one year to complete and are carried forward from one UPWP to the next. To effectively identify all work tasks, the LWCAMPO prepares the annual UPWP with input from federal, state and local jurisdictions, and transportation providers in the region.



Implications for Transit

LWCAMPO oversees short- and long-term planning efforts in the region that are directly relevant to transit provision. This includes, for example, the current study on microtransit feasibility. Key issues identified for transit in this document include fleet replacement, more bus routes, more frequency and less ridership due to the pandemic. El Metro is a key stakeholder that has and will continue to work closely with the LWCAMPO to ensure that the UPWP reflects the region's transit projects and priorities.

Transportation Improvement Program FY 2025-2028

Author: Laredo & Webb County Area Metropolitan Planning Organization
Date: June 2024

Summary

MPOs, along with the State and transit operators, are required by federal law to develop Transportation Improvement Programs (TIPs), which list upcoming surface transportation projects. Performance goals include safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays. The Laredo & Webb County MPO's latest TIP includes project details for planned projects for FY 2025 through 2028, as well as financial information about each project.

Implications for Transit

The FY 2025-2028 TIP includes a total of $81 million in transit projects, including the following:

- $77.9 million to be used for El Metro Transit bus operations and maintenance.
- $1.9 million to be used for replacing heavy-duty buses and paratransit vans, and bus facility improvements.
- $1.2 million to be used for capital investments and operation assistance to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding mobility options.

Public Participation Plan (PPP)

Author: Laredo & Webb County Area Metropolitan Planning Organization
Date: September 2022

Summary

The stated goal of the PPP is to "foster fair & accessible opportunities for meaningful public involvement through public outreach strategies that make information relevant and easier to understand." The objectives include providing access to relevant information, raising awareness for public input, stimulating dialogue about transportation challenges, soliciting public participation, building public support, and developing/incorporating realistic solutions into the Metropolitan Transportation Plan and Transportation Improvement Program.

In order to achieve this goal and objectives, the MPO seeks to engage with the public, elected officials, the business community, and other organizations early on and throughout planning processes, seeking out traditionally underserved groups, including low-income and minority households, and using visualizations to engage the public with programs and plans.

The PPP provides measures to evaluate the effectiveness of public outreach, including quantitative and qualitative measures. Qualitative measures include surveys that gauge participants' satisfaction levels with the process and outcome as well as their interest and reason for attending. Quantitative measures include evaluating the number of events offered, the number of attendees, demographic or contact information of attendees, types of engagement strategies used, and number of surveys completed.

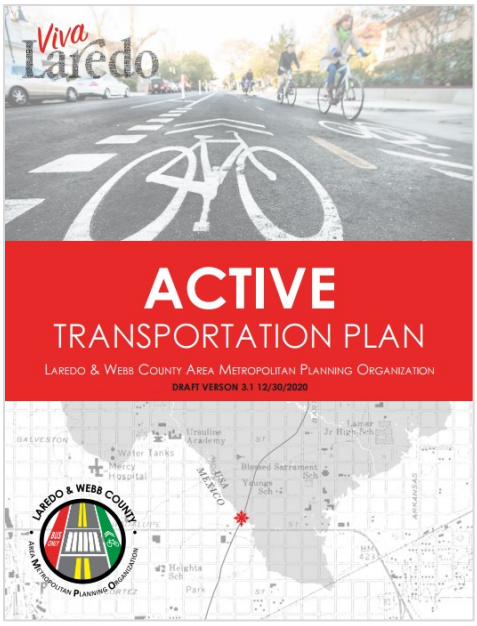
Implications for Transit

Public involvement is critical in the transportation planning process. Any changes to services or fares provide an opportunity to hear from the public. This document provides a framework for engaging with the public and strategies for doing so, as well as for evaluating the effectiveness of the public involvement process. Adherence to the goals and methodologies highlighted in the PPP will be particularly important when introducing microtransit service in Laredo, as this is a novel concept to the region, and will require understanding and buy-in from transit riders and other key stakeholders to be most successful.

Active Transportation Plan

Author: Laredo & Webb County Area Metropolitan Planning Organization (LWCAMPO)
Date: December 2020

Summary



The objective of the Active Transportation Plan is to enhance mobility in the region by providing safe, accessible, and alternate modes of transportation. The plan aims to develop connectivity between bicycle, pedestrian, and transit networks. Four themes drive this work: Safety, Connectivity, Equity, and Accessibility. Goals include creating a network of complete streets; enhancing and connecting bicycle and pedestrian networks; expanding bike facilities; and increasing El Metro efficiency and connectivity.

The study reviewed the existing active transportation network and found that the bicycle and pedestrian networks are disconnected, not well advertised, and not very accessible. While there are 52 miles of bikeways, only 35 are paved, and the longest connected stretch is 4 miles. The sidewalk network is inconsistent and in disrepair. Recommendations of the Active Transportation Plan include starting a bikeshare program, performing a sidewalk gap analysis, enhancing wayfinding, and securing funding for a 10-year network plan.

Implications for Transit

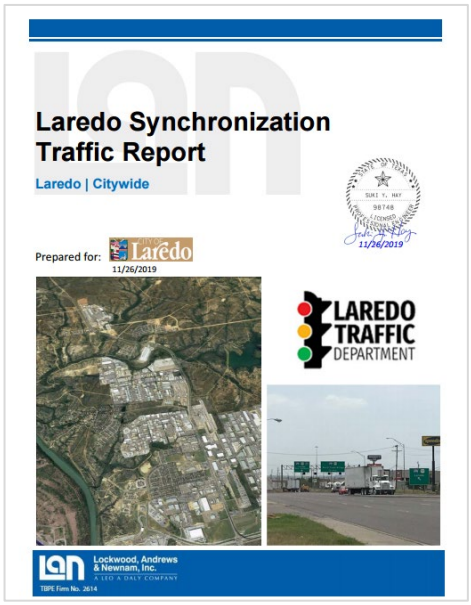
Bicycle and pedestrian infrastructure go hand-in-hand with transit access. Having more walkable places may mean that people can access transit more easily and that they might feel more comfortable and confident using the transit system. Both walking and biking can help solve the first- and last-mile problem that some riders may face.

Laredo Synchronization Traffic Report

Author: City of Laredo, Lockwood, Andrews & Newnam, Inc.
Date: November 2019

Summary

This project aimed to reduce congestion and subsequent travel time and emissions by synchronizing traffic signals city-wide. The study covered 80 signals along seven major corridors. The project team collected traffic data, analyzed the signal systems, developed signal synchronization plans, implemented signal timings, and observed resulting traffic progression, making changes as needed. The study focused on travel times and congestion during the AM and PM peaks. The project resulted in 144,000 fewer vehicle-hours driven annually during the AM and PM peaks, which also resulted in reductions in CO, NOx, and VOC emissions.



In addition, the report recommends additional actions that could be taken, beyond synchronization, to reduce congestion and improve travel flow. This includes turn lane improvements, upgrades to detection systems, a study to remove unwarranted signals, evaluating proximity of signals, and other roadway improvements.

Implications for Transit

This synchronization project occurred along major corridors that are likely to also impact transit operations. Decreasing congestion and improving traffic flow not only helps individual motorists travel more quickly, but also helps transit vehicles reduce overall travel time and have higher on-time performance. This is especially true during AM and PM peaks.

As signals are improved, there is also a possibility of adding Transit Signal Priority (TSP) to buses and select intersections to allow a green light to hold longer so that a bus can go through an intersection. This was not discussed in the plan, but could be a future consideration.

Market Analysis

Transit services can be provided in a variety of ways within a community. Every approach has its own ideal operating environment. For fixed-route transit service, density is key. The more people and/or jobs per acre, the greater the ridership potential for a service. However, transit use is also influenced by the built environment. If a prospective rider can easily walk to a bus stop, they are far more likely to use fixed-route service than a resident of a neighborhood with few sidewalks and difficult-to-cross streets. In areas with relatively low density, or challenging pedestrian environments, microtransit service has the ability to serve existing riders better and attract more new riders than traditional fixed-route service.

Ideally, microtransit service is designed to complement, rather than compete with, fixed-route service. Thus, microtransit use-cases range from providing coverage in areas that lack the density to support fixed-route service, to providing service in areas with transit-supportive densities but poorly performing fixed-route service.

This section presents an assessment of the market for microtransit service in Laredo, based on an examination of population and employment densities; socio-economic and demographic characteristics; and fixed-route service performance and availability.

Transit Potential and Transit Need

To identify opportunities for microtransit service in Laredo, the consultant team first examined the Transit Potential and Transit Need of the study area. Transit Potential is an analysis of population and employment density. Transit Need focuses on socio-economic characteristics such as income, automobile availability, age, and disability status, that are indicative of a higher propensity to use transit. These analyses are not prescriptive, rather they are steps in a process aimed at identifying microtransit candidate zones.

Transit Potential

Transit service is generally most effective and efficient in areas with high density, or high concentrations of residents and/or jobs. While in some parts of Laredo, density is driven primarily by housing (**Figure 3-2**) and in others it is driven by job (**Figure 3-3**), the overall Transit Potential of an area can be assessed by examining its combined population and employment density.

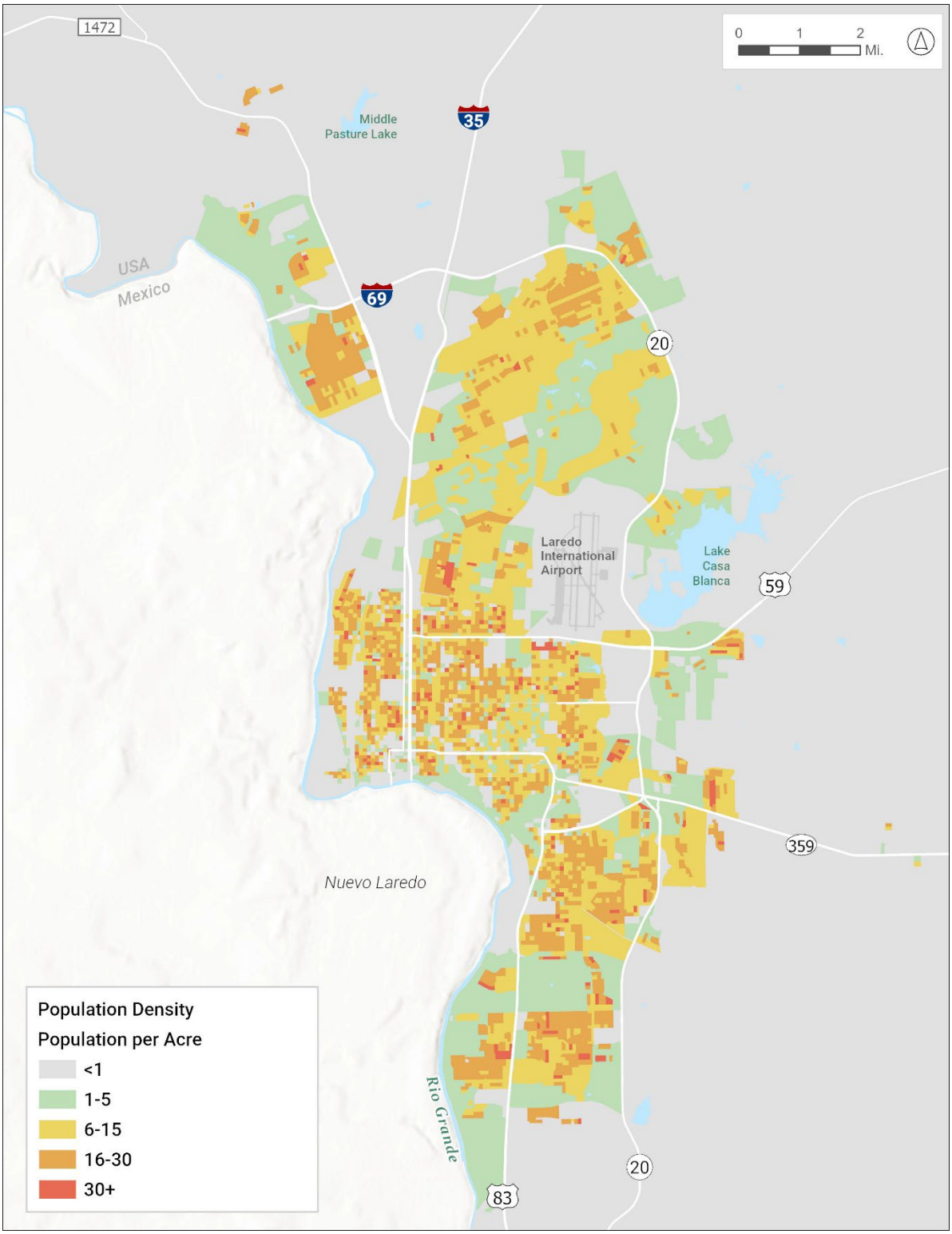


Figure 3-2. Population Density by Census Block

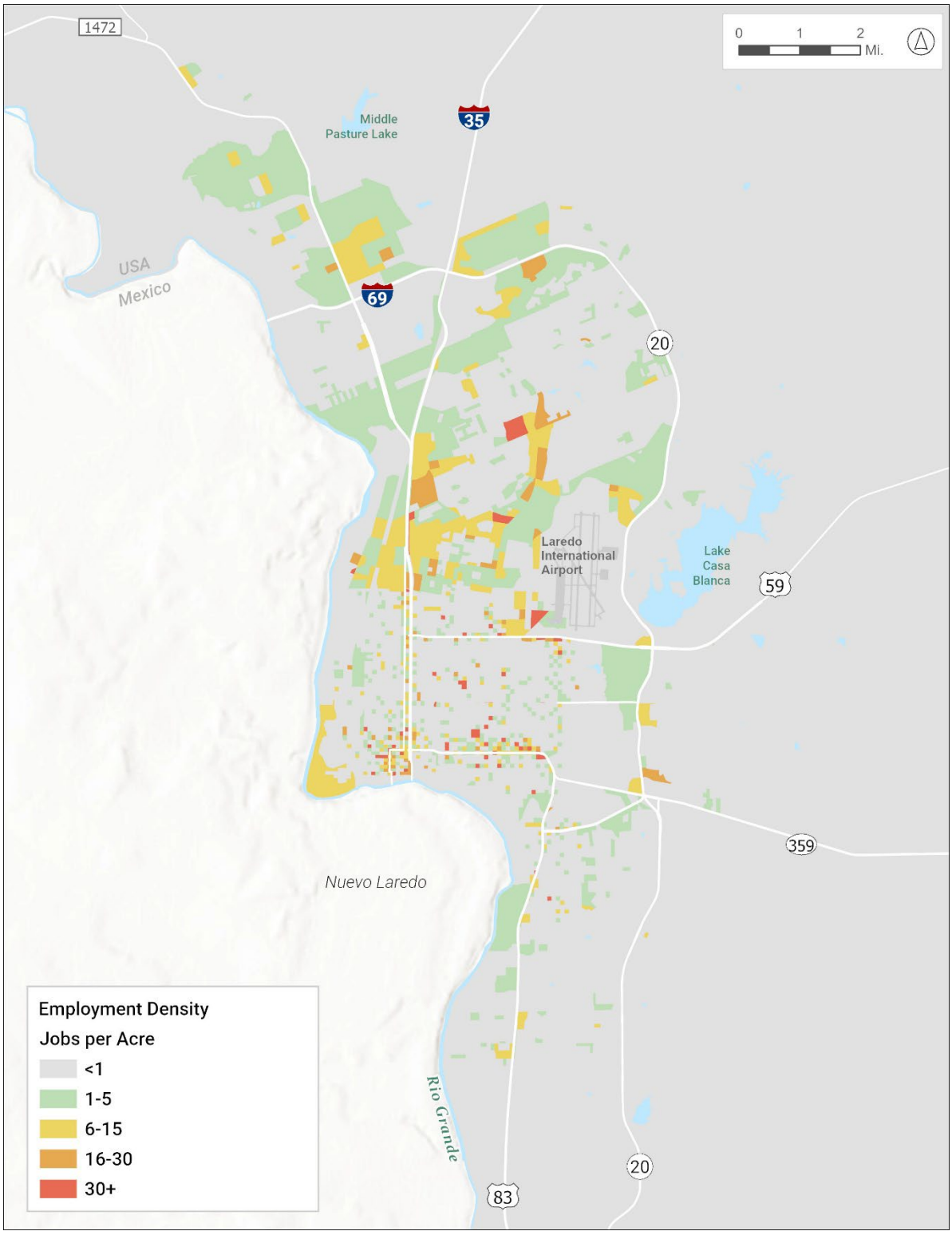


Figure 3-3. Employment Density by Census Block

Figure 3-5 shows that much of Laredo has a combined population and employment density of greater than five people and/or jobs per acre. This level of density indicates the potential to support fixed-route service, and indeed, the overall footprint of the El Metro network corresponds closely with the higher-density areas of the city. However, there are several notable areas of lower-density in Laredo – some of which have existing service coverage, and some that do not. These areas, shown in **Figure 3-4**, could be considered candidates for microtransit service. They include the following:

- Several industrial parks north of I-69W, including Millenium Park, Pan American Business Park, International Trade Center, InterAmerica Distribution Park, Laredo Distribution Center, Killam Industrial Park, El Portal Industrial Park, Milo Distribution Center, and San Isidro Business Park
- The Tejas Industrial Park, between I-35 and Mines Road
- The Paseo Del Norte Industrial Park, north of Calton Road

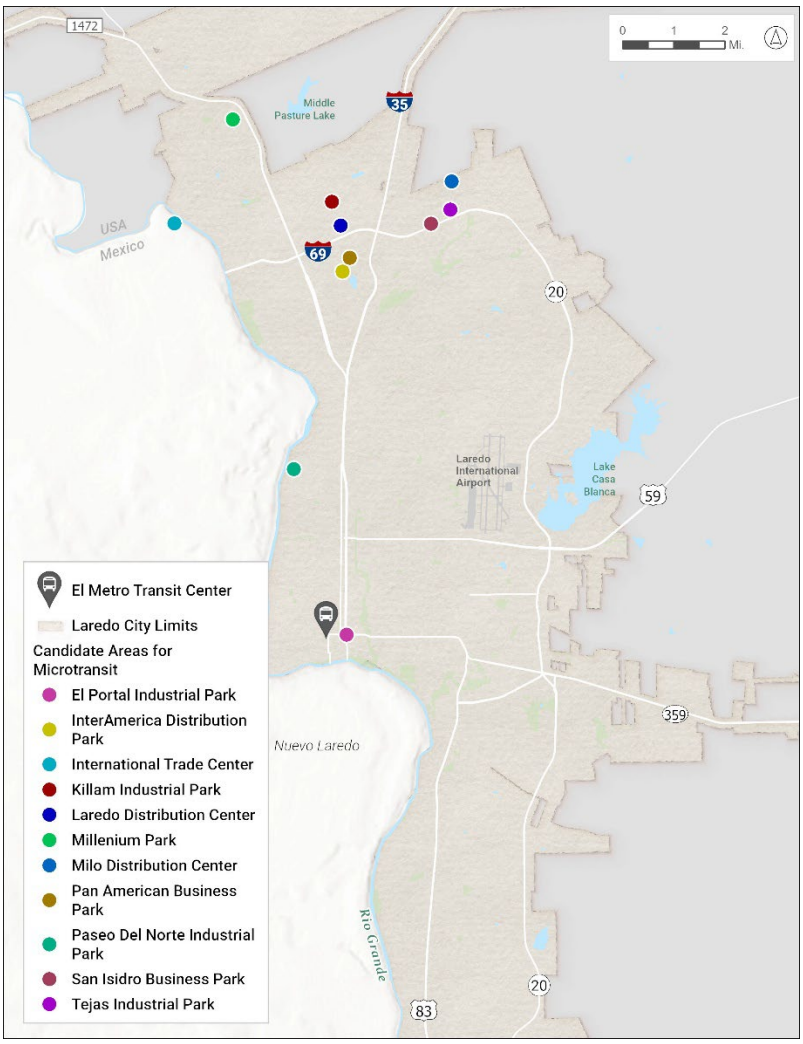


Figure 3-4. Candidate Areas for Microtransit

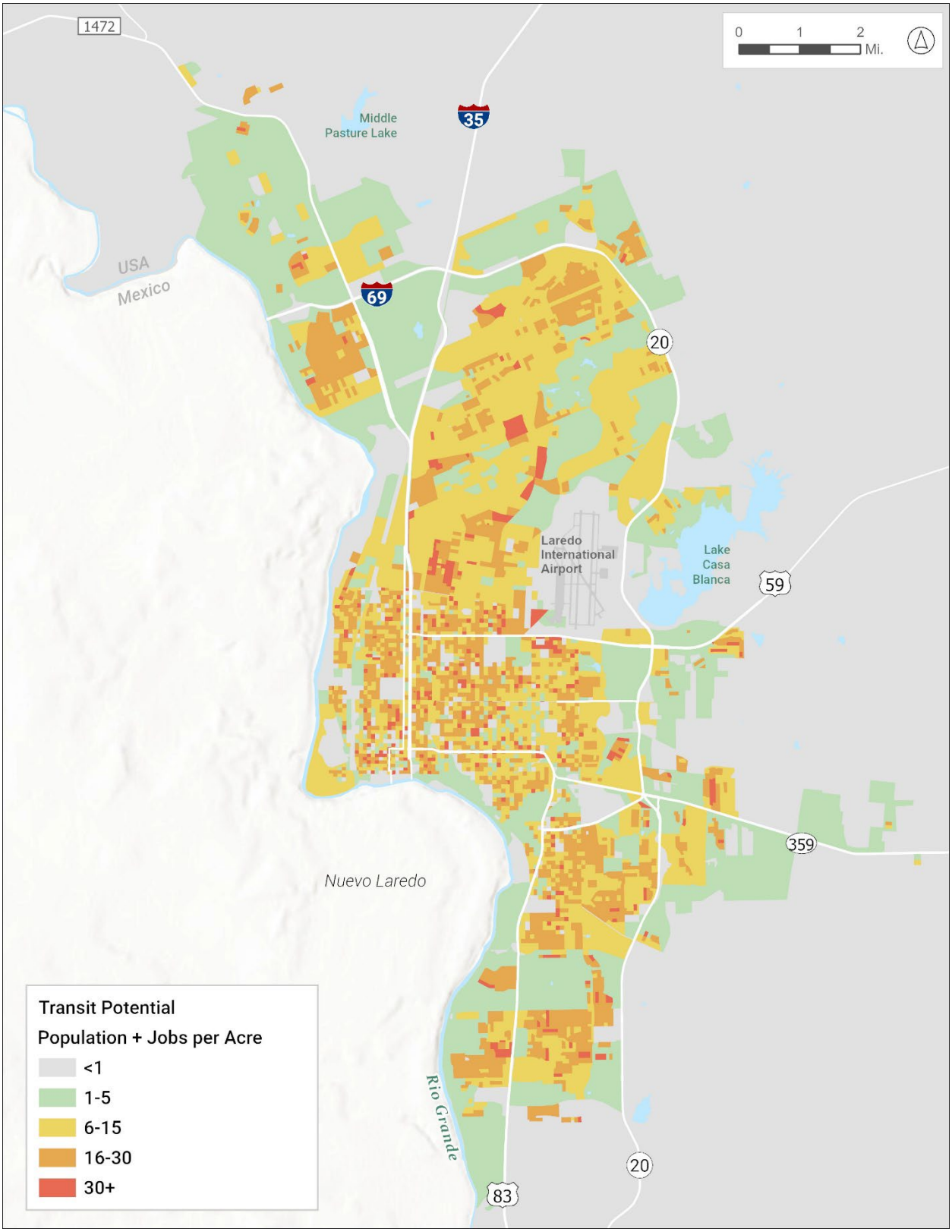


Figure 3-5. Composite Transit Potential

Transit Need

In addition to population and employment density overall, the likely demand for transit service can be assessed by examining the demographics of an area. Certain population subgroups have a relatively higher propensity to use transit as their primary means of transportation than the population as a whole. These groups include:

- **Households without access to a vehicle**. Families that lack access to a vehicle, either for financial or legal reasons, often have few mobility options other than public transportation (see **Figure 3-6**).
- **Persons with disabilities**. Individuals who are unable to or have difficulty operating a motor vehicle are especially likely to use public transportation services (see **Figure 3-7**).
- **Low-income individuals**. Because using transit is often less expensive than owning a car, individuals in low-income households are more likely to rely on transit (see **Figure 3-8**).
- **Young people (age 15-24)**. National trends have shown that the average age at which Americans are getting driver's licenses has steadily increased in recent decades (see **Figure 3-9**).
- **Older adults (age 65+)**. As individuals age, they may be less willing or able to operate a motor vehicle (see **Figure 3-10**).

Areas with higher concentrations of these populations are also likely to have a higher need for transit services. Using 2022 American Community Survey (ACS) data, the consultant team calculated the concentration of each demographic group by Census Block Group. While Transit Potential is an absolute measure of density, Transit Need is a relative measure that compares how each block group stacks up to other block groups in the study area in terms of concentration of population subgroups with a high propensity to use transit.

For each demographic analysis, a Jenks Natural Breaks Classification Method was used to assign each Block Group to one of five density categories. A point system was employed by which 1 point was awarded to Block Groups with the lowest concentrations of the population subgroup being examined, and five points were given to Block Groups with the highest concentration of that particular demographic category.

Figure 3-11 shows the composite Transit Need map based on the sum of scores for each demographic analysis. For example, if a Block Group falls in the highest density category for each of the five demographic analyses, it receives a Transit Need score of 25 (5+5+5+5+5). The lowest possible Transit Need score is 5 (1+1+1+1+1).

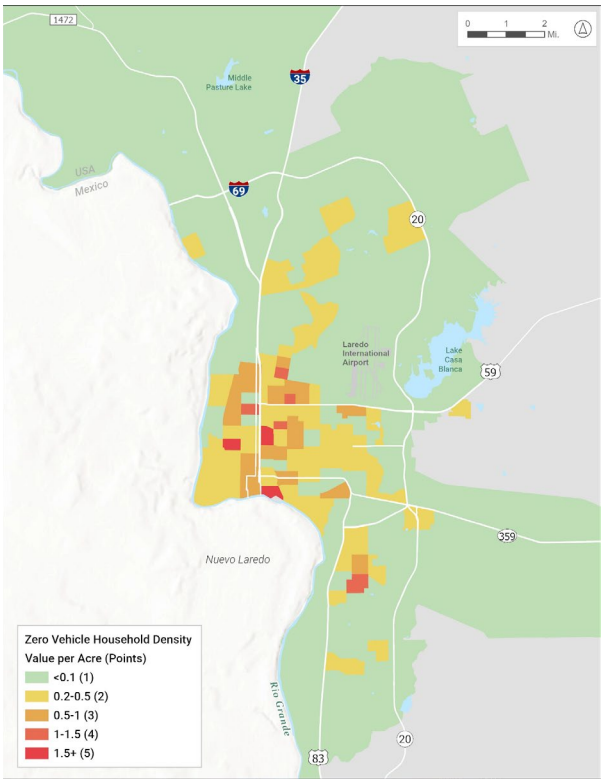


Figure 3-6. Density of Households without Access to an Automobile by Census Block Group

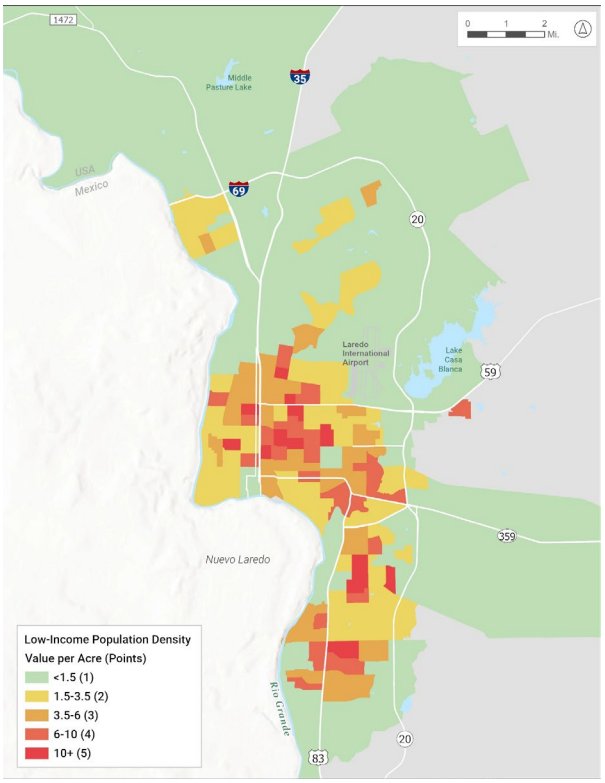


Figure 3-8. Density of Low-Income Individuals by Census Block Group

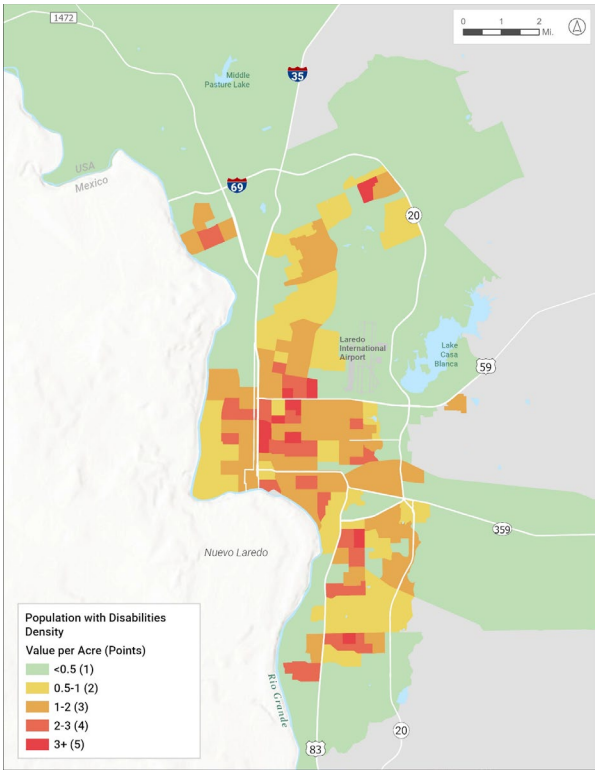


Figure 3-7. Density of Persons with Disabilities by Census Block Group

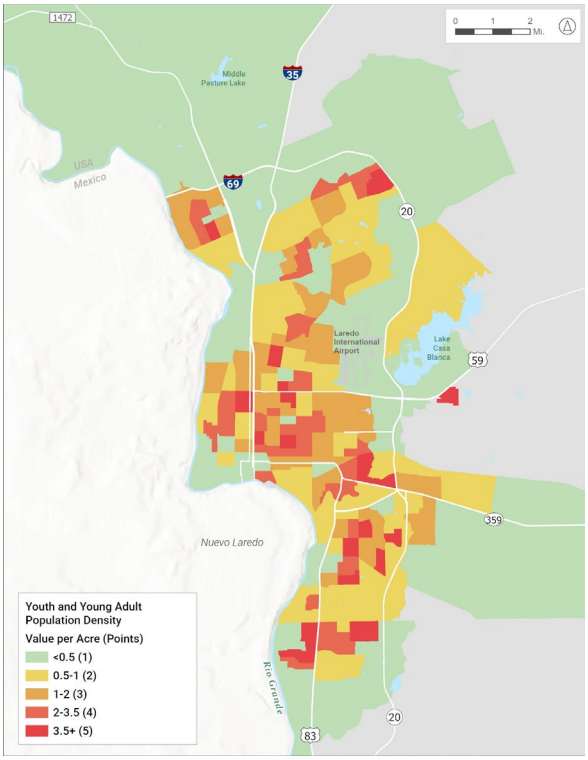


Figure 3-9. Density of Youth and Young Adult Population by Census Block Group

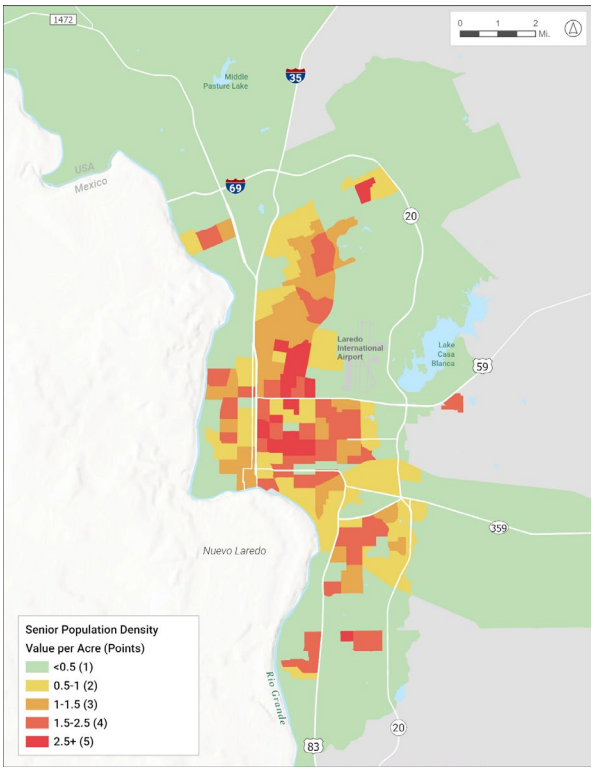


Figure 3-10. Density of Senior Population by Census Block Group

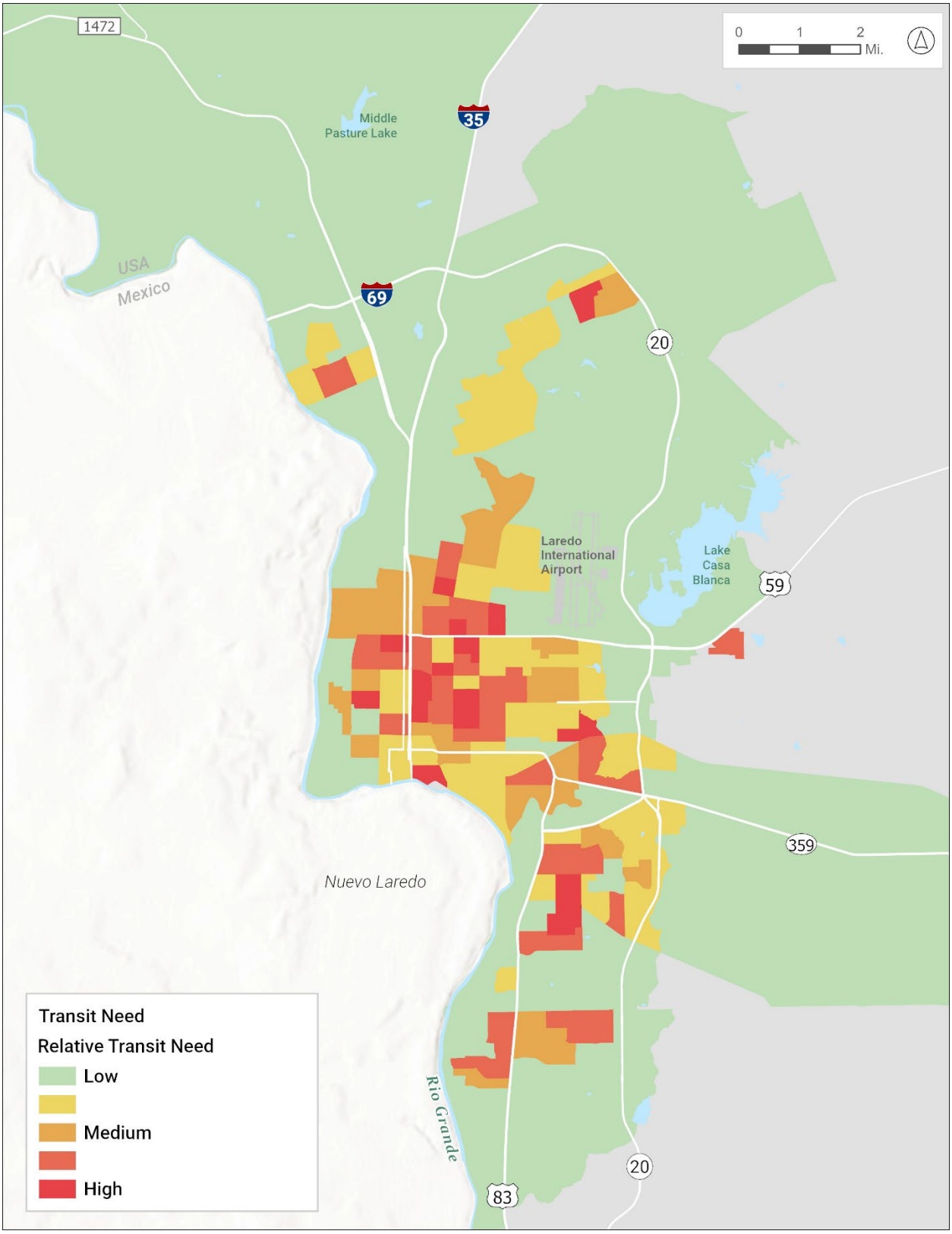


Figure 3-11. Composite Transit Need

The Transit Need analysis shows that areas of Laredo with the highest Transit Need also have moderate to high Transit Potential, meaning that they can theoretically support fixed-route transit. In fact, there are no parts of the study area that have elevated Transit Need that are not already within ¼ mile of an El Metro route. However, **Figure 3-12** shows that some El Metro routes are struggling to attract riders, despite operating in areas with moderate-to-high Transit Need and/or Transit Potential. Routes C1, C2, C3, and 8B all carry fewer than six passengers per hour.

Ranking Report by Boardings by Route per Hour
For the Month of September 2024

RANKING	ROUTES	Rt No.	BOARDINGS PER HOUR	TOTAL BOARDINGS	TOTAL HOURS
1	SANTA MARIA	1	19	21,959	1,160
2	SAN BERNARDO/SOCIAL SECURITY	2A	19	14,310	764
3	SAN BERNARDO/MAIN LIBRARY	2B	19	14,133	760
4	CONVENT/MCPHERSON	3	15	12,189	798
5	SPRINGFIELD	4	13	9,387	745
6	CASA VERDE/DEL MAR	16	23	9,047	393
7	CORPUS CHRISTI	10	11	8,672	788
8	MINES ROAD/INDUSTRIAL PARK	17	12	7,084	607
9	MARKET/NEW YORK	9	10	6,872	711
10	LADRILLERA/EL CUATRO	7	16	6,080	390
11	SANTA RITA	14	13	6,053	451
12	SHILOH EXPRESS	12B	18	5,659	321
13	LOS ANGELES/SIERRA VISTA	20	12	5,390	435
14	MEDICAL CENTER	8A	12	4,574	382
15	GUSTAVUS/AIRPORT	11	11	4,533	405
16	SANTO NIÑO/LARGA VISTA	19	11	4,266	389
17	CEDAR/HEALTH CLINIC	6	12	4,129	340
18	DEL MAR EXPRESS	12A	10	3,559	348
19	TILDEN/MUNICIPAL COURT	5	9	3,519	384
20	HERITAGE PARK	13	11	3,209	300
21	VILLA DEL SOL/CHEYENNE	8B	5	1,215	261
22	Circulator C3-Riverside	23	4	1,010	279
23	Circulator C1-Killam	21	2	409	240
24	Circulator C2-Green Ranch	22	1	265	194
	TOTALS=			157,523	11,844
	AVERAGE BOARDINGS PER HOUR=		13		
	66% OF SYSTEM WIDE AVERAGE=		9		

Figure 3-12. Ridership and Productivity Report by Route
Source: El Metro

There are many possible reasons for a fixed route to have low productivity, despite serving an area with transit-supportive density and demographics. These include redundancy with other routes, circuitous alignments, limit service frequency, or poor pedestrian connections that hamper accessibility. An assessment of the specific reasons that El Metro's poorest performing routes are underperforming requires a detailed analysis of ridership activity by stop and by trip. However, El

Metro does not currently track ridership at this level of detail. So, for the purpose of this study, any route with a productivity of fewer than six passengers per hour is considered a candidate for replacement with microtransit service.

Service Analysis and Improvement Scenario

This section discusses the development of the proposed microtransit service zones, characteristics of each zone as well as the analysis of potential ridership, cost and vehicles needed to operate microtransit.

Zone Development & Design Principles

Based on the findings of the Microtransit Market Analysis, and input provided by stakeholders throughout the study process, the consultant team developed a preliminary set of five microtransit zone recommendations (**Figure 3-13**). The general location of each zone was determined by the service areas of El Metro's lowest performing routes – C1, C2, C3, and 8B.

These routes have, for various reasons, failed to resonate with riders, and each carries fewer than six passengers per hour, on average. Despite their poor productivity, all four routes do serve destination-rich environments, making them good candidates for replacement with microtransit service to improve local mobility. **Table 3-1** below describes the five preliminary microtransit zones and the poorly performing fixed routes that serve as the catalyst for each.

Table 3-1. Catalysts for Proposed Microtransit Zones

Proposed Zone	Area	Fixed-Route Catalyst	Fixed-Route Productivity (Passengers/ Revenue Hour)[5]
Zone 1	Northwest Laredo (North)	C1 – Killam Green Ranch Circulator	2
Zone 2	Northwest Laredo (South)	C1 – Killam Green Ranch Circulator	2
Zone 3	West Laredo	C3 – Riverside	4
Zone 4	East Laredo	8B – Villa Del Sol / Cheyenne	5
Zone 5	South Laredo	C2 – South Laredo	1

[5] Source: El Metro Boardings Report - September 2024

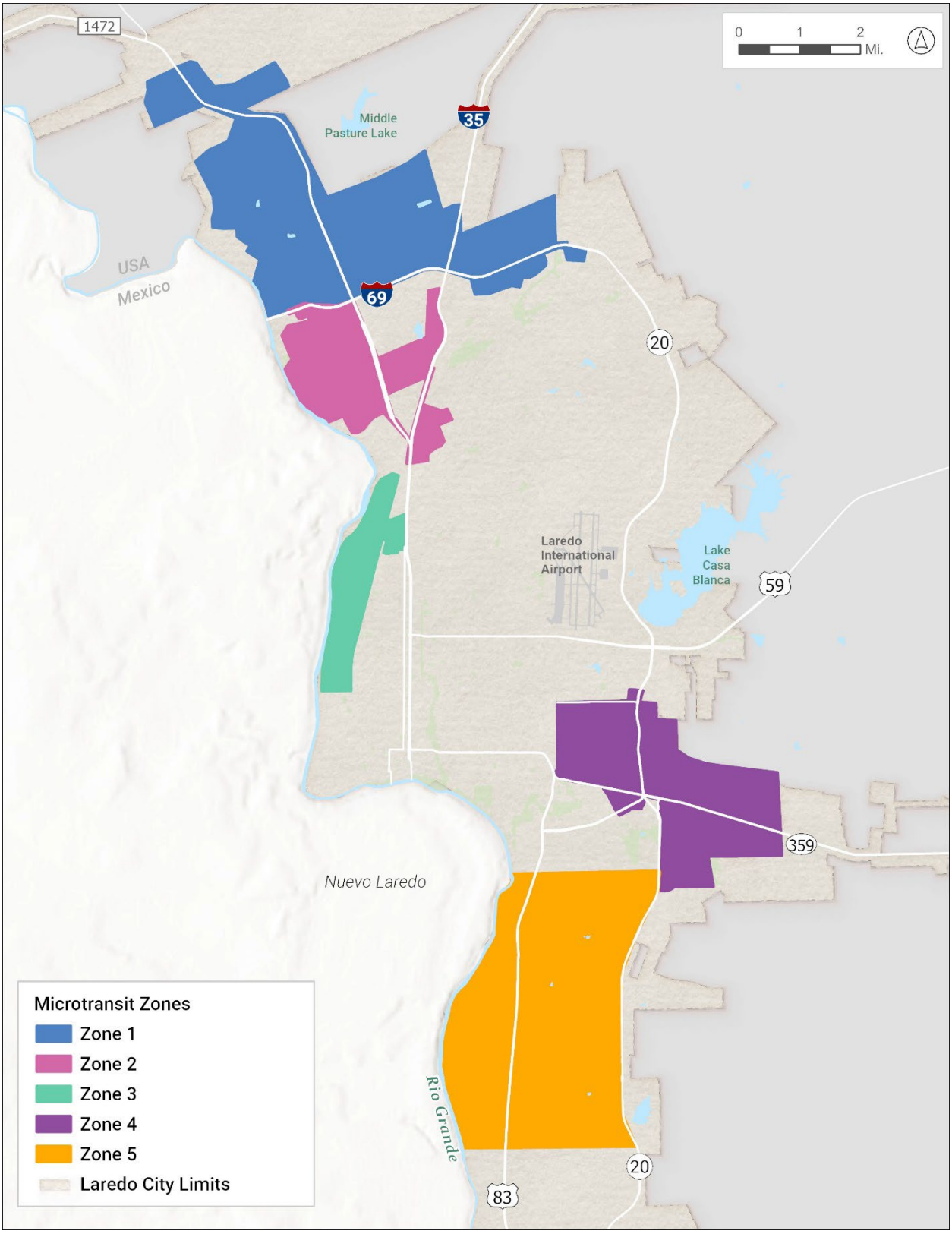


Figure 3-13. Microtransit Zones

The proposed zones are also similar to those proposed in the 2021 Comprehensive Operational Analysis.

Once the general areas for microtransit were identified, the zone boundaries were refined with a series of guidelines. These were based upon lessons learned from peer agencies, as detailed in Chapter 2 of this report. The guidelines for each zone are listed below:

- Zones should have an area of less than 10 square miles to ensure reasonable wait times.
- Zones should minimize highway crossings to avoid traffic chokepoints.
- Zones should include a diversity of land-uses to ensure ridership demand throughout the service day.
- Zones should include at least one full-service grocery store or superstore to allow for one-seat-ride access to basic necessities. These include Target, Walmart, or HEB.
- Zones should include transfer opportunities to El Metro's fixed-route network, to facilitate first/last-mile connections.
- Zones should be designed to complement, rather than compete with fixed-route service.

Each zone profile discusses the key attractions and destinations within each zone as well as opportunities for connection to the fixed-route system and other considerations for implementation of microtransit.

Analysis Assumptions

The analysis presented for each zone uses the following assumptions. The cost of service is based upon El Metro's bus operating expense per revenue hour in 2023, from NTD data. The analysis considers similar hours to existing fixed route service; the possibility of late-night service is detailed later in this chapter.

Table 3-2. Microtransit Analysis Parameters

Parameter	Description
Frequency/Wait Time	10, 20, and 30 minutes
Hours of Operation	Monday – Friday 6 a.m. to 8 p.m. & Saturday – Sunday 6 a.m. to 6 p.m.
Cost per Hour	$109.19[6]
Modal Shift	1% (Year 1), 1.25% (Year 2), 1.5% (Year 3)

To determine ridership, vehicles needed and riders per vehicle hour, a combination of cellphone based location data and the Remix software were used. The first step in estimating demand is to consider the total number of motorized trips that are over half mile within each proposed zone, as those would be eligible for conversion to transit/microtransit. Origin-destination data was used from LOCUS software for the fourth quarter of 2023, for the hours of operation in **Table 3-2**. A mode shift percentage was then applied to these trips to estimate the total number of microtransit trips.

[6] National Transit Database (NTD) 2023 Bus Operating Expense per Revenue Hour

Based upon regional peers, a mode shift of one to one and a half percent was applied for the first three years of service. Since this is a new service, it is assumed that the mode shift will gradually increase as people begin to use the service and become more comfortable with utilizing it.

The typical weekday, Saturday, and Sunday microtransit ridership was calculated by taking the total trips within the zone (greater than half a mile) and multiplying it by the mode share for each future year of operation. Then the typical weekday, Saturday, and Sunday ridership were multiplied by the number of services days in a week. Weekly ridership was then annualized.

Using the calculated ridership, Remix software was then utilized to determine the number of vehicles and vehicle hours per week required to operate microtransit service in each zone.

The number of vehicles is dependent on four factors:

- The composition of the microtransit zone (zone size and points of interest)
- The number of weekly riders
- The average wait time (10, 20 or 30 minutes)
- Average vehicle speed

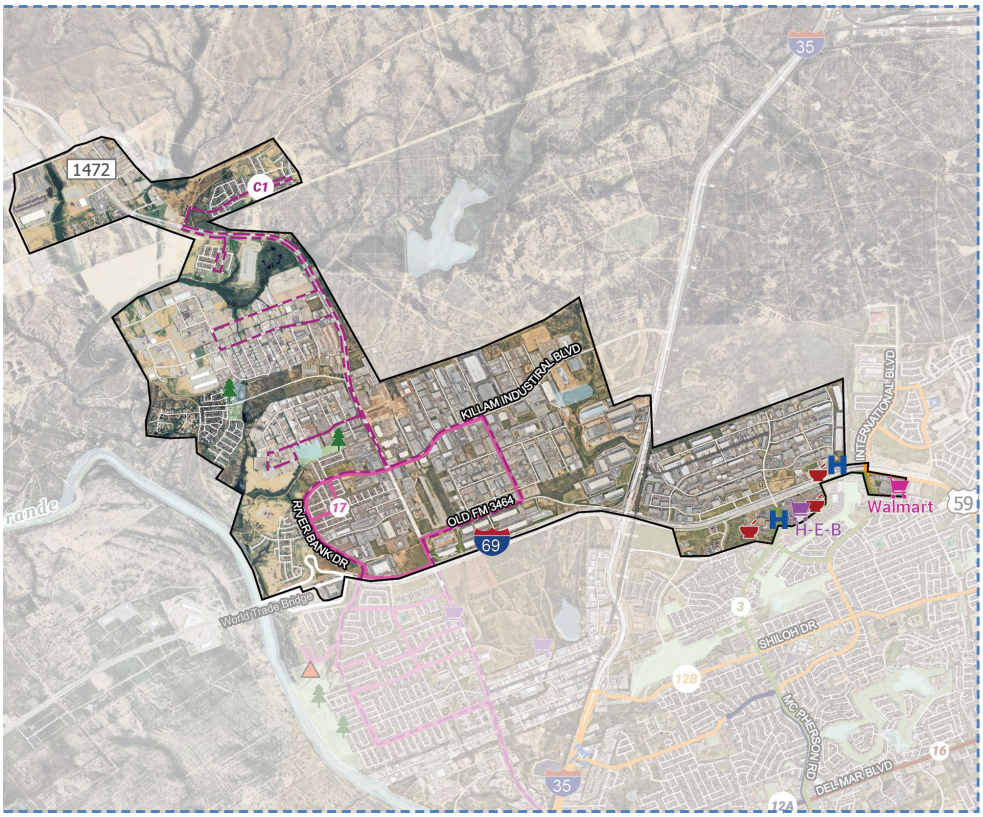
The riders per hour are calculated by dividing the ridership by vehicle hours per week, which is also an output from the Remix software.

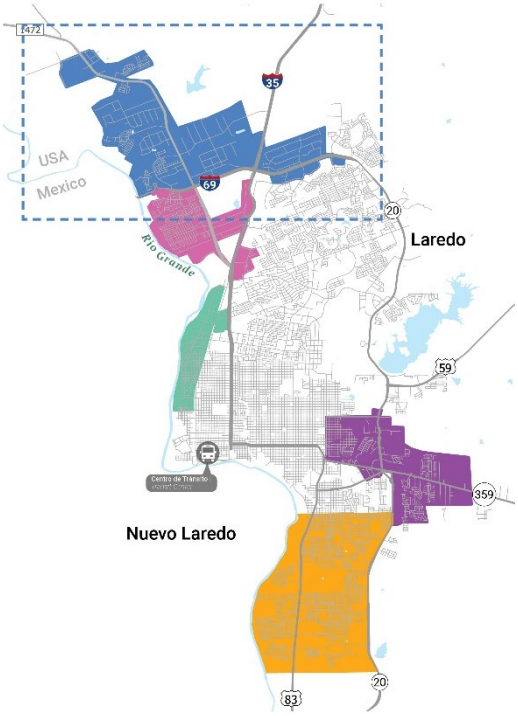
To calculate the average annual operating cost, the estimated average vehicle hours per week is multiplied by the cost per hour, which is $109.19, based upon El Metro data. Then, the average vehicle hours per week was annualized based on the projected number of vehicle revenue hours.

Each zone profile contains information regarding the ridership, cost, and number of vehicles needed for microtransit operation. The ridership is calculated based on the mode share and the number of total trips in each zone. While ridership remains constant regardless of wait time, the cost and number of vehicles differs depending on the average wait time. The cost and number of vehicles decreases with increased wait times, while the riders per hour increases as the wait time increases. Although the number of vehicles is presented in the profiles, the cost of service is not entirely dependent on the number of vehicles; it is driven by the vehicle hours per week.

The results are shown by year of operation. Due to the expected uptake and increase in mode shift, the ridership increases per year, resulting in higher costs, more vehicles needed, and additional riders per hour in each subsequent year of operation.

Zone 1





Zone 1 is a nine-square-mile zone that would serve a series of industrial parks in northwest Laredo, primarily north of I-69, including the following:

- Millenium Park
- Pan American Business Park
- International Trade Center
- InterAmerica Distribution Park
- Laredo Distribution Center
- Killam Industrial Park
- El Portal Industrial Park
- Milo Distribution Center
- San Isidro Business Park

Much of the proposed zone is north of I-69 and west of I-35. However, a segment of the zone also stretches east of I-35 and south of I-69 to serve key activity hubs including Walmart, HEB, and Doctors Hospital of Laredo.

In addition to several industrial parks, proposed Zone 1 would also serve both single-family and multi-family housing, including the Indian Sunset and La Bota Ranch subdivisions, and the River Bank Village and Park at 6818 apartment communities.

Zone 1 Photo

Fixed Route Impacts

The proposed zone could allow for the elimination of the poorly performing C1 (Killam Green Ranch Circulator) route. C1 service is limited to designated streets only, and the route's one-way service design forces out-of-direction travel for most passengers on either their outbound or return trip. By comparison, microtransit service would allow for broader coverage and more direct trips within the proposed zone boundaries.

The C1 Route does link industrial areas north of I-69 to residential areas south of the freeway and to Target and HEB at I-35 and W. Del Mar Boulevard. However, similar service is also provided by El Metro Route 17 (Mines/Industrial Park), which would continue to serve the propose microtransit zone. The proposed zone would also be served by Route 3 (Convent/McPherson), with connection opportunities near Walmart, HEB, and Doctors Hospital, south of I-69. In addition, connections to Route 12B could be made along International Boulevard, near Walmart.

Analysis

In Zone 1, there are approximately 13,000 trips within the zone during an average weekday that are over half a mile. The trips for weekdays and weekends are in **Table 3-3**. These trips would be candidates for microtransit service.

Table 3-3. Zone 1 Trips

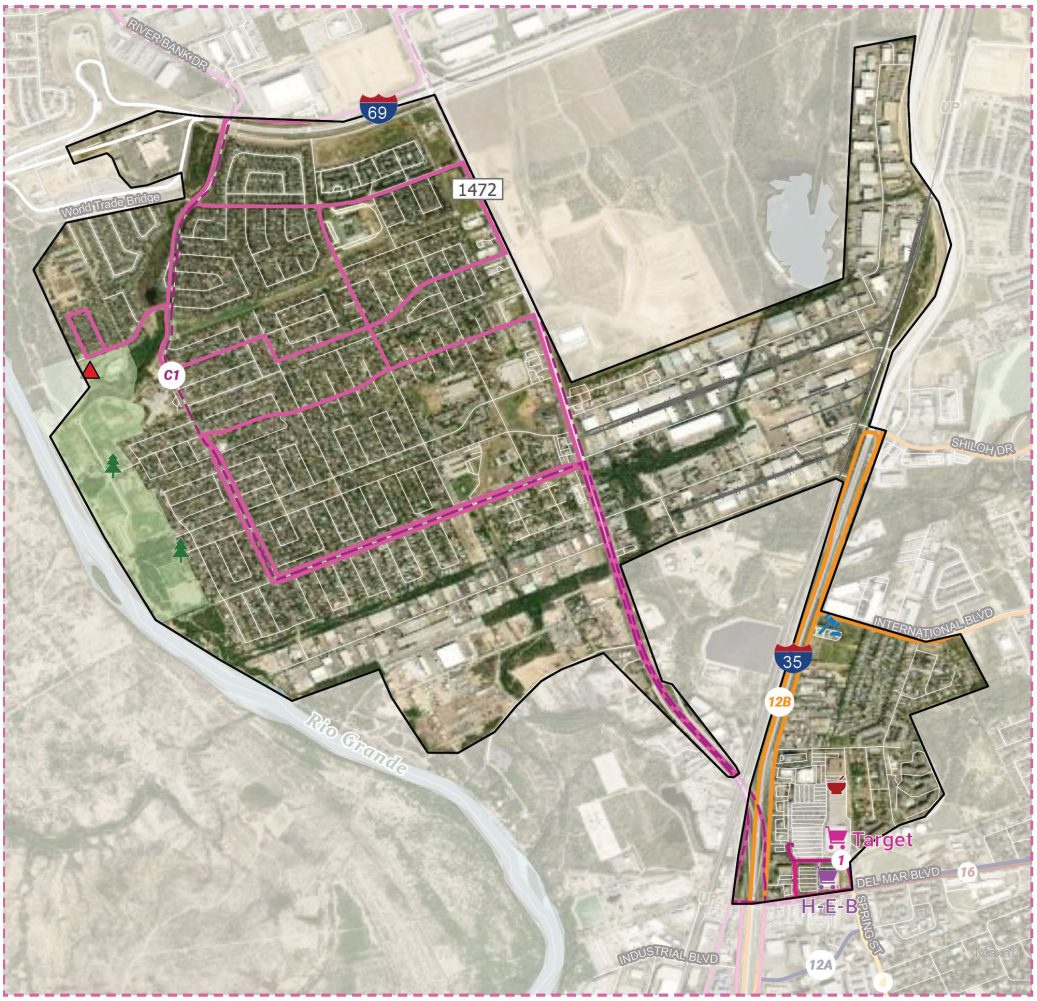
Typical Service Day	Trips >1/2 mile in Zone
Weekday	13,100
Saturday	7,100
Sunday	3,700

Table 3-4 shows the total ridership, annual cost, number of vehicles required, and riders per hour for the first three years of microtransit operation.

Table 3-4. Zone 1 Metrics

		10 Minute Wait Time			*20 Minute Wait Time*			*30 Minute Wait Time*		
Year	Ridership (Annual)	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour
1	39,700	$2,532,300	4	1.7	$1,998,600	4	2.2	$1,601,200	3	2.7
2	49,700	$2,929,800	6	1.9	$1,998,600	4	2.7	$1,998,600	4	2.7
3	59,600	$3,066,100	6	2.1	$2,532,300	5	2.6	$1,998,600	4	3.3

Zone 2

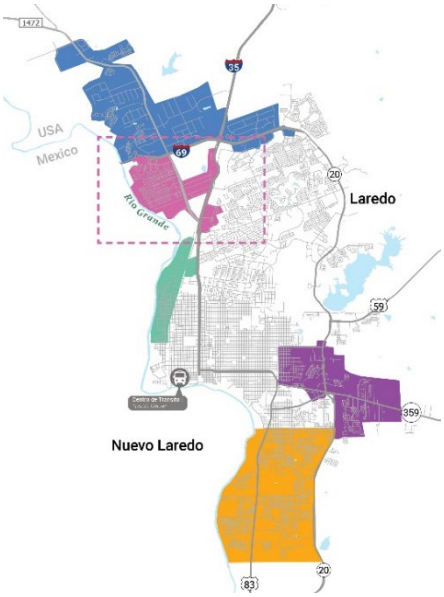


LEGEND

- Recreation Centers
- Supermarkets
- Pharmacies
- Parks
- Government
- Courts
- General Stores

Fixed Routes in Zone 2

- **1** Santa Maria
- **4** Springfield
- **12B** Shiloh Express
- **17** Mines/ Industrial Park
- **C1** Killam Green Ranch Circulator



Zone 2 is a three-square-mile zone that would serve a mix of industrial and residential areas along the Mines Road corridor, west of I-35, as well as nearby retail destinations on the east side of I-35, including Target and HEB. Industrial areas within the zone's proposed boundaries include the Tejas Industrial Park and a number of light industrial facilities between Mines Road and the Rio Grande River, south of Grenn Jay Trail.

Residential areas within the proposed zone include the Villas San Augustin, Quail Creek, Lorey Farm, and Dellwood Park subdivisions; as well as the Carmel, Quail Creek, and La Contessa apartment communities; and the Towne North Mobile Home and RV Park.

Fixed Route Impacts

The proposed zone could allow for the elimination of the poorly performing C1 (Killam Green Ranch Circulator) route, offering broader service coverage and more direct trips within the proposed zone boundaries. In addition to local circulation, the proposed zone would help facilitate first/last mile connections to and from the following El Metro routes linking downtown Laredo with the North Creek Plaza shopping center (including Target and HEB):

- Route 1 – Santa Maria
- Route 4 - Springfield
- Route 12B – Shiloh Express
- Route 17 – Mines/Industrial Park

Analysis

In Zone 2, there are approximately 7,000 trips within the zone during an average weekday that are over half a mile. The trips for weekdays and weekends are in **Table 3-5**. These trips would be candidates for microtransit service.

Zone 2 Photos

Table 3-5. Zone 2 Trips

Typical Service Day	Trips >1/2 mile in Zone
Weekday	6,900
Saturday	5,900
Sunday	4,700

Table 3-6 shows the total ridership, annual cost, number of vehicles required, and riders per hour for the first three years of microtransit operation.

Table 3-6. Zone 2 Metrics

		10 Minute Wait Time			*20 Minute Wait Time*			*30 Minute Wait Time*		
Year	Ridership (Annual)	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour
1	23,400	$1,067,400	2	2.4	$931,200	2	2.7	$931,200	2	2.7
2	29,200	$1,067,400	2	3.0	$1,067,400	2	3.0	$931,200	2	3.4
3	35,000	$1,464,900	3	2.6	$1,067,400	2	3.6	$1,067,400	2	3.6

Zones 1 & 2 Combined Analysis

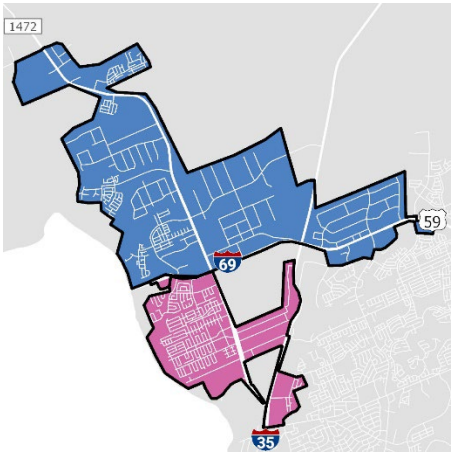


Figure 3-14. Microtransit Zones with Zone 1 and 2 combined

Analysis

These two zones were analyzed together, as another option for microtransit service. Given the similarities with land uses and proximate geographies, these two zones can possibly be combined as one larger zone. The size of these two zones together is 12 square miles, which is a large area. However, this analysis was conducted to determine the potential population that would use the microtransit service if combined.

In Zones 1 and 2 combined, there are approximately 31,000 trips within the combined zone during an average weekday that are over half a mile. The trips for weekdays and weekends are in **Table 3-7**. These trips would be candidates for microtransit service.

Table 3-7. Zones 1&2 Combined Trips

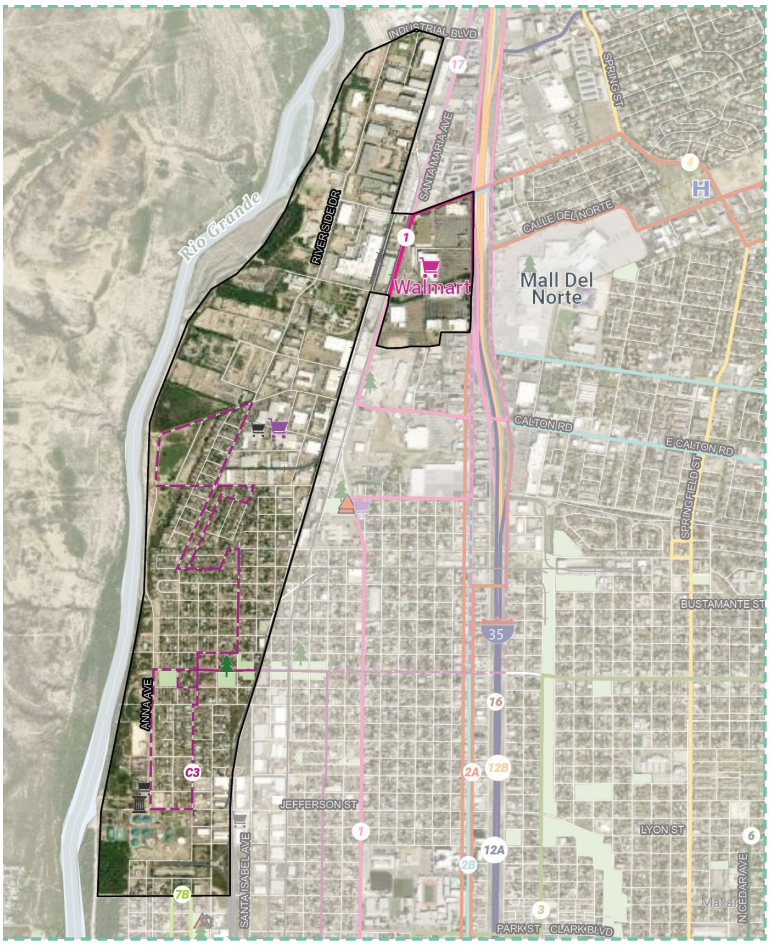
Typical Service Day	Trips >1/2 mile in Zone
Weekday	30,700
Saturday	21,200
Sunday	13,700

Table 3-8 shows the total ridership, annual cost, number of vehicles required, and riders per hour for the first three years of microtransit operation.

Table 3-8. Zones 1&2 Metrics

		10 Minute Wait Time			*20 Minute Wait Time*			*30 Minute Wait Time*		
Year	Ridership (Annual)	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour
1	98,100	$3,997,200	8	2.7	$3,066,100	6	3.5	$2,532,300	5	4.2
2	122,600	$5,064,700	10	2.6	$3,463,500	7	3.9	$3,066,100	6	4.4
3	147,100	$5,462,100	11	2.9	$3,997,200	8	4.0	$3,463,500	7	4.6

Zone 3

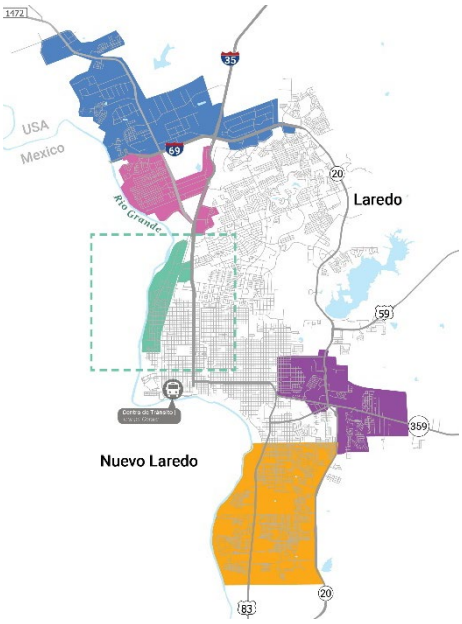


LEGEND

- **Recreation Centers**
- **Hospital**
- **Supermarkets**
- **Pharmacies**
- **Parks**
- **Government**
- **Community Food Services**
- **Museum**
- **General Stores**

Fixed Routes in Zone 3

- **1** Santa Maria
- **2A** San Bernardo/ Social Security
- **2B** San Bernardo/ Calton
- **17** Mines/ Industrial Park
- **C3** Riverside Circulator



Zone 3 is a 1.5-square-mile zone that would serve residential and industrial areas along the Riverside Drive and Lee Avenue corridors, primarily west of the Union Pacific Railroad. However, a segment of the zone also stretches east of the railroad to serve key activity hubs including Walmart and Kohl's, along Santa Maria Avenue.

Industrial areas are concentrated in the northern third of the proposed zone. These include the following:

- Mann Road Commercial Park
- Paso Del Norte Industrial Park
- Modern Industrial Park

South of Markley Lane, the proposed zone is primarily residential, including the Canta Ranas neighborhood and the Tomas Flores Apartments.

Fixed Route Impacts

The proposed zone could allow for the elimination of the poorly performing C3 (Riverside) route, which runs parallel to Route 1 (Santa Maria) for much of its alignment, with the exception of a circuitous deviation to serve the area within the proposed Zone 3 boundaries. Route 1 would also continue to provide first/last mile connections to and from the proposed zone via bus stops along Santa Maria Avenue and W. Mann Road, near Walmart.

Analysis

In Zone 3, there are approximately 2,300 trips within the zone during an average weekday that are over half a mile. The trips for weekdays and weekends are in **Table 3-9**. These trips would be candidates for microtransit service.

Zone 3 Photos

Source: Google

Table 3-9. Zone 3 Trips

Typical Service Day	Trips >1/2 mile in Zone
Weekday	2,300
Saturday	2,100
Sunday	1,600

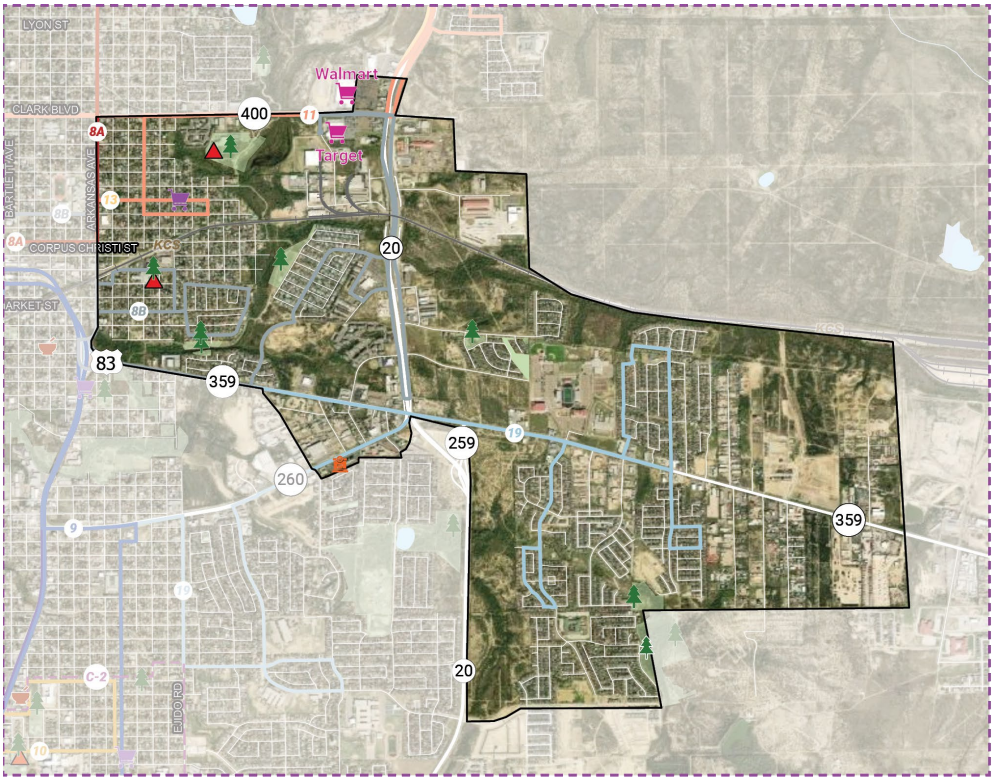
Table 3-10 shows the total ridership, annual cost, number of vehicles required, and riders per hour for the first three years of microtransit operation.

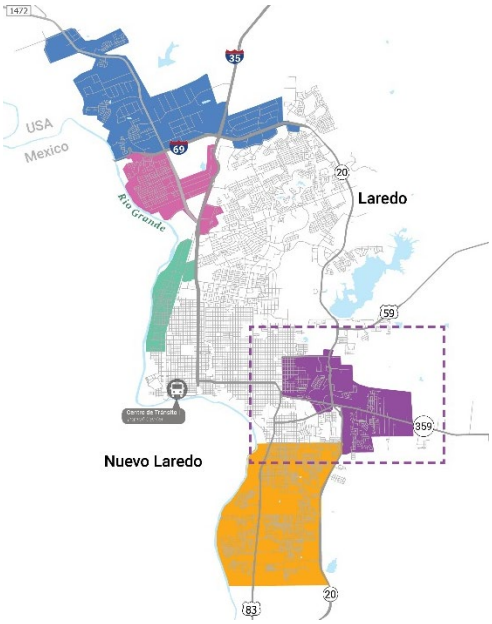
Table 3-10. Zone 3 Metrics

		10 Minute Wait Time			*20 Minute Wait Time*			*30 Minute Wait Time*		
Year	Ridership (Annual)	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour
1	7,800	$533,700	1	1.6	$533,700	1	1.6	$533,700	1	1.6
2	9,800	$533,700	1	2.0	$533,700	1	2.0	$533,700	1	2.0
3	11,800	$533,700	1	2.4	$533,700	1	2.4	$533,700	1	2.4

Zone 4

This zone's boundaries were expanded due to public feedback in February 2025. The zone was extended to include the Loop 20 medical facility along Jaime Zapata Memorial Highway (SH260). The zone extension also encompasses Mex-Mart, a grocery store. The profile and analysis reflect the updated zonal boundaries.





Zone 4 is a 4.9-square mile zone straddling both the SH-359 and Bob Bullock Loop corridors. The proposed zone is primarily residential, including the following neighborhoods and subdivisions:

- Villa Del Sol
- Loma Alta
- Chayenne
- Emerald Valley
- James Haynes
- Visa Nueva
- Larga Vista
- Las Misiones
- Concord Hills
- Lago Del Valle

Zone 4 also includes several large apartment communities within its proposed boundaries, such as the Clarks Crossing, Hilltop at Dorel, Dorel Laredo, and Emerald Valley apartments.

In addition to residential neighborhoods, the proposed zone would serve both a Walmart and a Target along Clark Boulevard, as well as the following industrial parks:

- Tex-Mex Industrial Park
- Fesco Business Park
- Southern Development Industrial Park

Zone 4 Photo

Fixed Route Impacts

The proposed zone could allow for the elimination of the poorly performing Route 8B (Villa Del Sol/Cheyenne), which parallels several other routes, except within the proposed boundaries of Zone 4. The proposed microtransit zone could also facilitate the streamlining of Route 11 (Gustavus/Airport), Route 13 (Heritage Park), and Route 19 (Santo Nino/Larga Vista), through the reduction of circuitous deviations within the zone. Instead, the proposed microtransit zone could provide first/last mile connections to the simplified and more direct fixed routes.

Analysis

In Zone 4, there are approximately 9,000 trips within the zone during an average weekday that are over half a mile. The trips for weekdays and weekends are in **Table 3-11**. These trips would be candidates for microtransit service.

Table 3-11. Zone 4 Trips

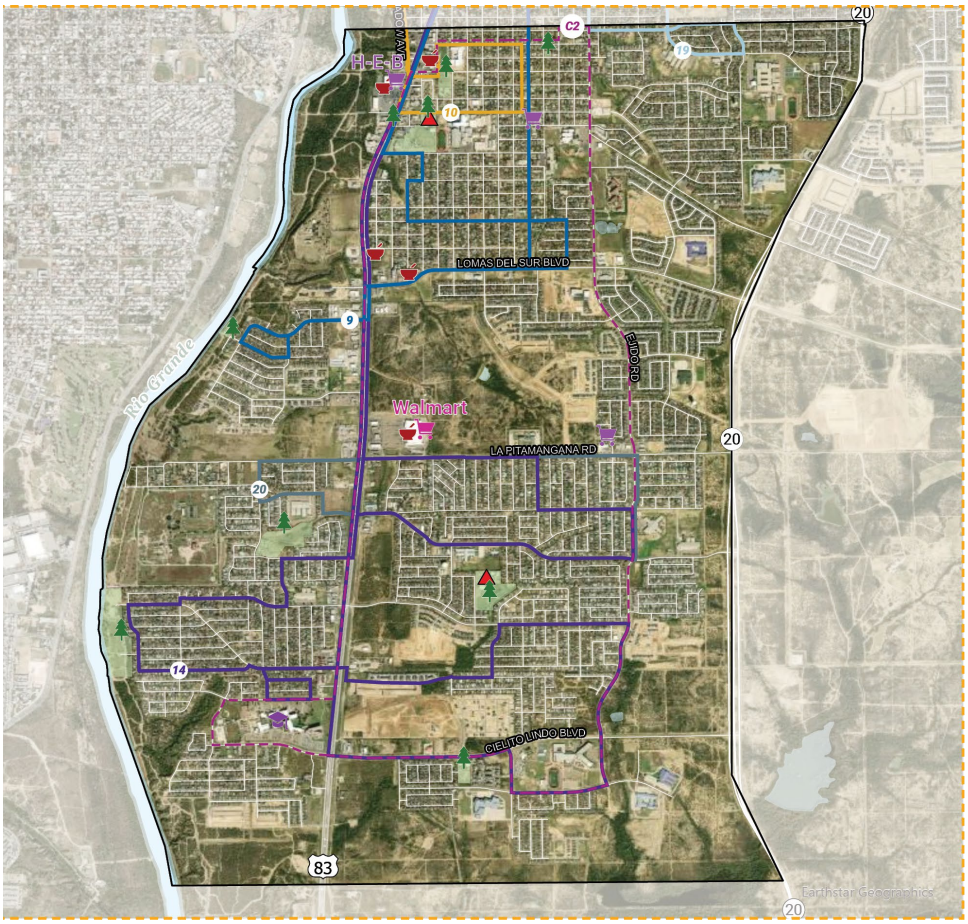
Typical Service Day	Trips >1/2 mile in Zone
Weekday	9,200
Saturday	9,800
Sunday	7,600

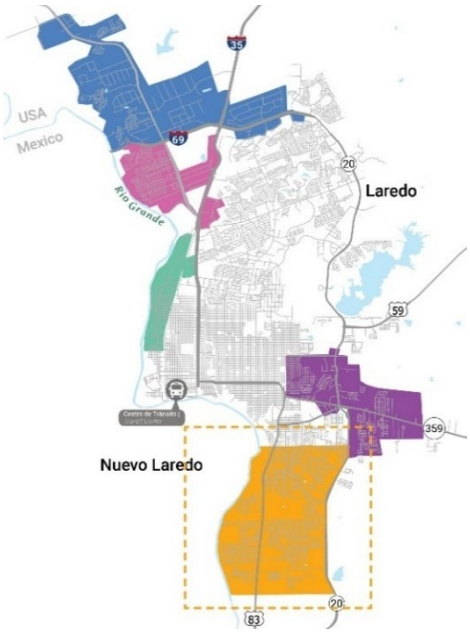
Table 3-12 shows the total ridership, annual cost, number of vehicles required, and riders per hour for the first three years of microtransit operation.

Table 3-12. Zone 4 Metrics

		10 Minute Wait Time			*20 Minute Wait Time*			*30 Minute Wait Time*		
Year	Ridership (Annual)	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour
1	32,900	$1,601,200	3	2.2	$1,464,900	3	2.5	$1,067,400	2	3.4
2	41,200	$1,601,200	3	2.8	$1,464,900	3	3.1	$1,067,400	2	4.2
3	49,400	$1,998,600	4	2.7	$1,601,200	3	3.4	$1,464,900	3	3.7

Zone 5





Zone 5 is a 9.6-square-mile zone extending from Pine Street in the north to the Garcia area in the south, and from the Rio Grande River in the west to Cuatro Vientos Boulevard in the east. The proposed zone is primarily residential, but also includes several key activity hubs including the following:

- HEB on Zapata Highway
- Walmart on Zapata Highway
- Laredo Community College South Campus
- LBJ High School
- United South High School

Fixed Route Impacts

The proposed Zone 5 has broad fixed-route service coverage, but with the exception of the C2 (South Laredo

Circulator) route, the current El Metro routes serving the proposed zone are designed primarily to link south Laredo with downtown, rather than to provide convenient local circulation.

As the C2 (South Laredo) route has failed to generate strong ridership, the proposed microtransit service could offer a more effective alternative with broader coverage and more direct service within the proposed microtransit zone boundaries. In addition, the proposed zone could facilitate first and last mile connection opportunities to and from the following fixed routes:

- Route 9 – Market/New York
- Route 10 – Corpus Christi
- Route 14 – Santa Rita
- Route 19 – Santo Nino/Larga Vista
- Route 20 – Los Angeles/Sierra Vista

Zone 5 Photo

Source: Google

Analysis

In Zone 5, there are approximately 33,000 trips within the zone during an average weekday that are over half a mile. The trips for weekdays and weekends are in **Table 3-13**. These trips would be candidates for microtransit service.

Table 3-13. Zone 5 Trips

Typical Service Day	Trips >1/2 mile in Zone
Weekday	33,200
Saturday	32,200
Sunday	27,600

Table 3-14 shows the total ridership, annual cost, number of vehicles required, and riders per hour for the first three years of microtransit operation.

Table 3-14. Zone 5 Metrics

		10 Minute Wait Time			20 Minute Wait Time			30 Minute Wait Time		
Year	Ridership (Annual)	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour	Annual Cost	Vehicles	Rides/ Hour
1	117,400	$5,462,100	11	2.3	$3,997,200	8	3.2	$3,463,500	7	3.7
2	146,700	$6,529,600	13	2.5	$4,530,900	9	3.5	$3,997,200	8	4.0
3	176,100	$7,460,700	15	2.6	$5,462,100	11	3.5	$4,530,900	9	4.2

Microtransit Summary

The following tables display the summary of metrics for all zones, based on the year of operation. The metrics for rides per hour and annual cost are displayed by wait time in each year's table.

Year 1

Table 3-15: Year 1 Metrics

Zone	Area (Sq. Miles)	Annual Ridership	Rides/Hour 10 Min	Rides/Hour 20 Min	Rides/Hour 30 Min	Annual Cost 10 Min	Annual Cost 20 Min	Annual Cost 30 Min
Zone 1 (North Laredo)	9	39,700	1.7	2.2	2.7	$2,532,300	$1,998,600	$1,601,200
Zone 2 (North Laredo)	3	23,400	2.4	2.7	2.7	$1,067,400	$931,200	$931,200
Zones 1 & 2 (North Laredo)	12	98,100	2.7	3.5	4.2	$3,997,200	$3,066,100	$2,532,300
Zone 3 (West Laredo)	1.5	7,800	1.6	1.6	1.6	$533,700	$533,700	$533,700
Zone 4 (East Laredo)	4.9	32,900	2.2	2.5	3.4	$1,601,200	$1,464,900	$1,067,400
Zone 5 (South Laredo)	9.6	117,400	2.3	3.2	3.7	$5,462,100	$3,997,200	$3,463,500

Year 2

Table 3-16: Year 2 Metrics

Zone	Area (Sq. Miles)	Annual Ridership	Rides/Hour 10 Min	Rides/Hour 20 Min	Rides/Hour 30 Min	Annual Cost 10 Min	Annual Cost 20 Min	Annual Cost 30 Min
Zone 1 (North Laredo)	9	49,700	1.9	2.7	2.7	$2,929,800	$1,998,600	$1,998,600
Zone 2 (North Laredo)	3	29,200	3.0	3.0	3.4	$1,067,400	$1,067,400	$931,200
Zones 1 & 2 (North Laredo)	12	122,600	2.6	3.9	4.4	$5,064,700	$3,463,500	$3,066,100
Zone 3 (West Laredo)	1.5	9,800	2.0	2.0	2.0	$533,700	$533,700	$533,700
Zone 4 (East Laredo)	4.9	41,200	2.8	3.1	4.2	$1,601,200	$1,464,900	$1,067,400
Zone 5 (South Laredo)	9.6	146,700	2.5	3.5	4.0	$6,529,600	$4,530,900	$3,997,200

Year 3

Table 3-17: Year 3 Metrics

Zone	Area (Sq. Miles)	Annual Ridership	Rides/Hour 10 Min	Rides/Hour 20 Min	Rides/Hour 30 Min	Annual Cost 10 Min	Annual Cost 20 Min	Annual Cost 30 Min
Zone 1 (North Laredo)	9	59,600	2.1	2.6	3.3	$3,066,100	$2,532,300	$1,998,600
Zone 2 (North Laredo)	3	35,000	2.6	3.6	3.6	$1,464,900	$1,067,400	$1,067,400
Zones 1 & 2 (North Laredo)	12	147,100	2.9	4.0	4.6	$5,462,100	$3,997,200	$3,463,500
Zone 3 (West Laredo)	1.5	11,800	2.4	2.4	2.4	$533,700	$533,700	$533,700
Zone 4 (East Laredo)	4.9	49,400	2.7	3.7	3.7	$1,998,600	$1,464,900	$1,464,900
Zone 5 (South Laredo)	9.6	176,100	2.6	3.5	4.2	$7,460,700	$5,462,100	$4,530,900

Vehicles

Table 3-18 displays the number of vehicles needed to operate the service by year and wait time.

Table 3-18: Vehicles Needed by Wait Time and Year of Operation

Zone	Area (Sq. Miles)	Vehicles 10 Min			Vehicles 20 Min			Vehicles 30 Min		
		(Year 1)	(Year 2)	(Year 3)	(Year 1)	(Year 2)	(Year 3)	(Year 1)	(Year 2)	(Year 3)
Zone 1 (North Laredo)	9	4	6	6	4	4	5	3	4	4
Zone 2 (North Laredo)	3	2	2	3	2	2	2	2	2	2
Zones 1 & 2 (North Laredo)	12	8	10	11	6	7	8	5	6	7
Zone 3 (West Laredo)	1.5	1	1	1	1	1	1	1	1	1
Zone 4 (East Laredo)	4.9	3	3	4	3	3	3	2	2	3
Zone 5 (South Laredo)	9.6	11	13	15	8	9	11	7	8	9

Late-Night Zones

This study also explores the possibility for late-night service in Laredo. The late-night service would cover the El Metro service area, approximately ¾ of a mile from the fixed route system and covering areas that are in the proposed daytime microtransit zones. As displayed in **Figure 3-15**, the area is divided into two primary zones: the north zone (47.4 square miles), and the south zone (22.7 square miles). The area shaded in yellow in the downtown area is common to both zones: this would provide a transfer opportunity between zones. This area was selected due to the proximity to border crossings. The common zone would allow for cross-border traffic to utilize the service for reaching all parts of Laredo.

The parameters utilized in this analysis are shown in **Table 3-19**.

Table 3-19. Late Night Service Parameters

Parameter	Description
Frequency/Wait Time	30 minutes
Hours of Operation	Monday – Friday 8 p.m. to 11 p.m. & Saturday – Sunday 6 p.m. to 11 p.m.
Cost per Hour	$109.19[7]
Modal Shift	0.15%

Although daytime service was analyzed with various wait times, the late-night service is only analyzed with a 30-minute wait time. The hours of operation are assumed to be after the fixed route service ends, until 11 p.m. each night. Similar to the daytime service, cost per hour is assumed to be $109.19. Based on professional judgement, the modal shift is assumed to be 0.15% of all trips that are greater than half a mile. This number is lower than the daytime service, given the time of day and new service mode. The analysis is only conducted for the first year of operation.

The methodology for late night service is similar to the daytime service.

[7] National Transit Database 2023 Bus Operating Expense per Revenue Hour

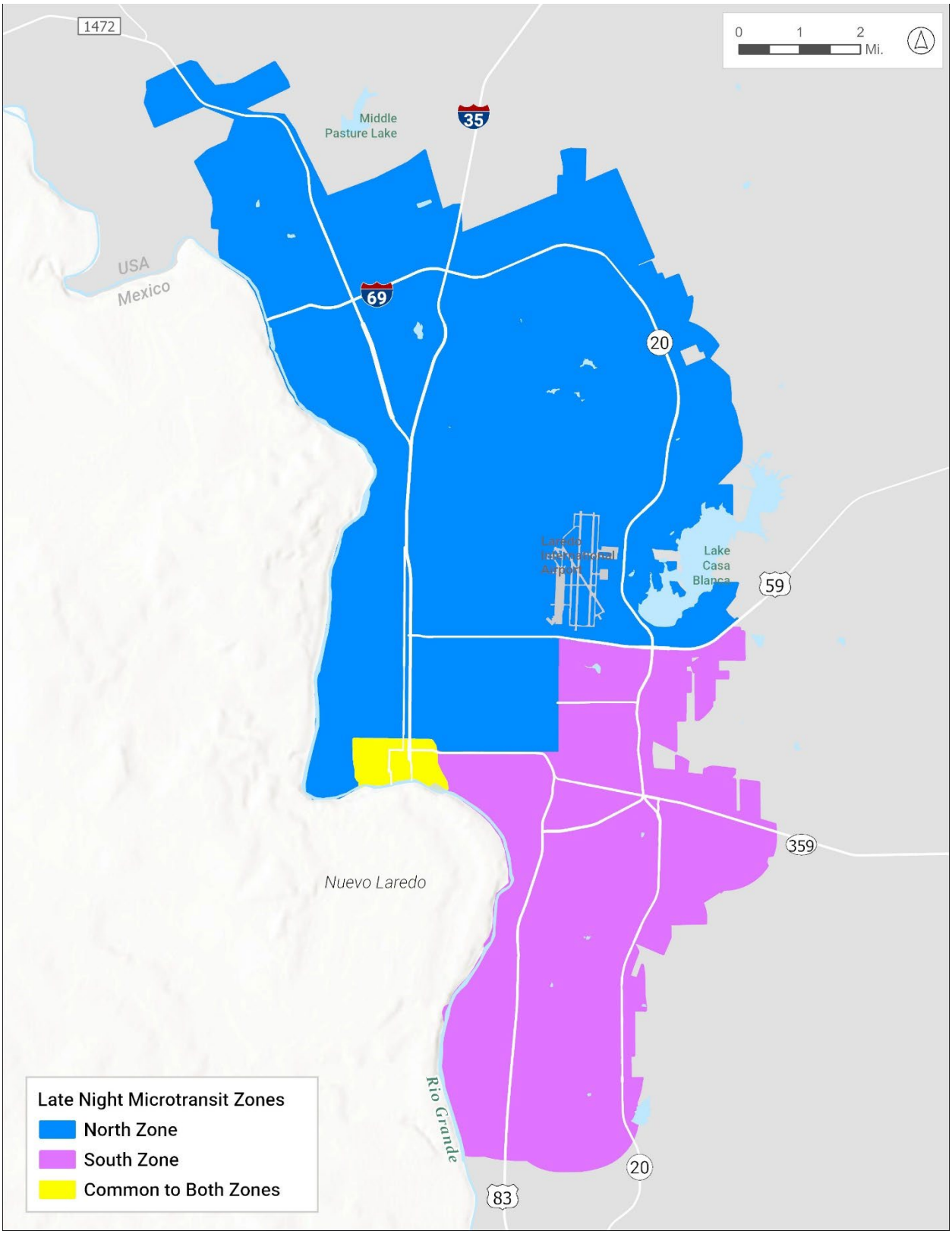


Figure 3-15. Late Night Zones

Analysis

The total trips that are greater than half a mile in the late-night zones is shown in **Table 3-20**. These trips would be candidates for microtransit service. The downtown area that is common to both zones has only 140-220 motorized daily trips that are greater than half a mile. Given the modal shift, this only equates to about 2 trips per week that would utilize the microtransit service. These are split amongst the North and South zones.

Table 3-20. Late Night Service Zone Trips

Late Night Zone	Typical Service Day	Trips >1/2 mile in Zone
North	Weekday	82,400
	Saturday	70,200
	Sunday	50,700
South	Weekday	33,300
	Saturday	30,800
	Sunday	25,000

Table 3-21 shows the total ridership, annual cost, number of vehicles required, and riders per hour for the first year of microtransit operation. The analysis is for a 30-minute wait time.

Table 3-21. Late Night Service Zone Trips

Zone	Ridership (Annual)	Annual Cost	Vehicles	Rides/Hour
North	41,500	$1,675,000	13	2.7
South	17,300	$653,000	5	2.9

Chapter Conclusion

The document review showed that the need for additional multimodal mobility options and improved transit service is rooted in several regional planning efforts. Particularly, the 2021 Comprehensive Operational Analysis (COA) recommends strategically implementing microtransit. The proposed zones from this study are comparable to what was recommended through that effort. Five zones are proposed for microtransit: two in the northern portion of Laredo, one in the west, one in the east and one in the south. These zones would have microtransit operating during the day, similar to the hours of operation for the fixed routes. Late night microtransit service is also presented as an option, with two zones that overlap in the downtown area. The recommendations for implementation can be found in Chapter 6 of this report.

4. Intersected Potential Benefits

4. Intersected Potential Benefits

Laredo is the number one inland port in the nation. Logistics and transportation are integral to the economy of Laredo. Given the amount of truck traffic and resulting congestion in the city, there is a need for alternative transportation solutions. This chapter discusses the need to consider microtransit as a use case for tractor-trailer drivers' local non-work trips, how the microtransit zones can serve this population, and insights gleaned from various stakeholder interviews.

Tractor-Trailer Considerations

Background Information

In 2024, the Port of Laredo was the number one port in the nation, with $339 billion in total trade. By value, the Port of Laredo was responsible for nearly six percent of all U.S. trade in January 2025, the first amongst all border crossings and fourth across all ports.[8]

There are currently four bridges for border crossings in Laredo: Bridge I (Gateway to the Americas), Bridge II (Juarez-Lincoln International), Bridge III (Colombia Solidarity) and Bridge IV (World Trade Bridge). These bridges connect Laredo to Nuevo Laredo and Colombia in Mexico. Bridges I and II are located in the downtown area and do not serve tractor-trailer and truck traffic. Bridges III and IV are located on the west side of Laredo and can accommodate commercial vehicles.

The World Trade Bridge is the primary commercial crossing; between October 2024 and March 2025, there were approximately 232,000 – 266,000 commercial crossings per month.[9] Some days, up to 21,000 trucks are circulating through the border.[10] The World Trade Bridge is open from 7 a.m. to midnight daily. Four Free and Secure Trade (FAST) lanes were installed at the bridge in 2023 to process commercial trucks heading northbound into the United States more expeditiously. The bridge is also in the process of being expanded, with construction slated to begin in summer 2026. The expansion would add eight additional lanes for northbound traffic and two lanes for

[8] *International Trade – Laredo Economic Development Corporation*. (n.d.). https://www.laredoedc.org/site-selection/international-trade/
[9] *Commercial - Crossings: Monthly Comparisons FY 2025*. (2025, March 31). City of Laredo. https://www.cityoflaredo.com/home/showpublisheddocument/19322
[10] Herr, M. (2025, March 10). How Laredo, Texas, manages high-volume trade as the No. 1 port of entry into the US. *FreightWaves*. https://www.freightwaves.com/news/how-laredo-texas-manages-high-volume-trade-as-the-number-one-port-of-entry-into-the-u-s

southbound traffic, making the total 18 lanes.[11] In addition, there are plans to construct two border bridges at the Colombia-Laredo Port, which would allow for additional capacity for north-south circulation between Laredo and Mexico.[12]

The majority of the industrial parks are located in the northern part of Laredo; near the World Trade Bridge and along and north of I-69W. Many industrial facilities are located along Mines Road (FM1472). **Figure 4-1** shows the industrial zoning in Laredo.

In 2022, the Texas A&M Transportation Institute ranked FM1472 (from Pan American Boulevard to Bob Bullock Loop) as the second most congested road segment for trucks in the entire state of Texas. The congestion on this roadway resulted in an annual truck delay of over 173,000 hours, with the congestion costing nearly $11 million.[13] TxDOT rerouted traffic from Mines Road to I-69W[14] and in 2023, this corridor fell to #11 statewide for truck congestion. In 2023, the average annual daily traffic (AADT) on this segment was about 42,000 vehicles, with 17 percent of them being trucks. In 2042, the estimated AADT is projected to be over 59,000.[15]

Given the existing and projected truck traffic and industrial growth, there is a need to alleviate some of the congestion caused by the freight traffic, particularly in the northern portion of Laredo.

[11] Texas Department of Transportation. (2024, March 28). *World Trade Bridge Expansion Project Fact Sheet*. https://ftp.txdot.gov/pub/txdot/get-involved/lrd/world-trade-bridge/040824-fact-sheet.pdf
[12] Charur, M. (2024, October 29). *Nuevo Leon unveils plans for additional bridge at Colombia-Laredo*. LMT Online. https://www.lmtonline.com/local/article/nuevo-leon-laredo-invest-new-colombia-laredo-19862639.php
[13] Mack, J. (2023, December 3). *Mines Rd. congestion ranks No. 2 in Texas, costs millions*. LMT Online. https://www.lmtonline.com/local/article/laredo-s-mines-rd-ranks-no-2-texas-congestion-18529085.php
[14] Texas Department of Transportation (2024, November 25). TxDOT projects save commuters $915 million. Retrieved April 1, 2025, from https://www.txdot.gov/about/newsroom/statewide/2024/txdot-projects-save-commuters-915-million.html
[15] Per the TxDOT Statewide Planning Map

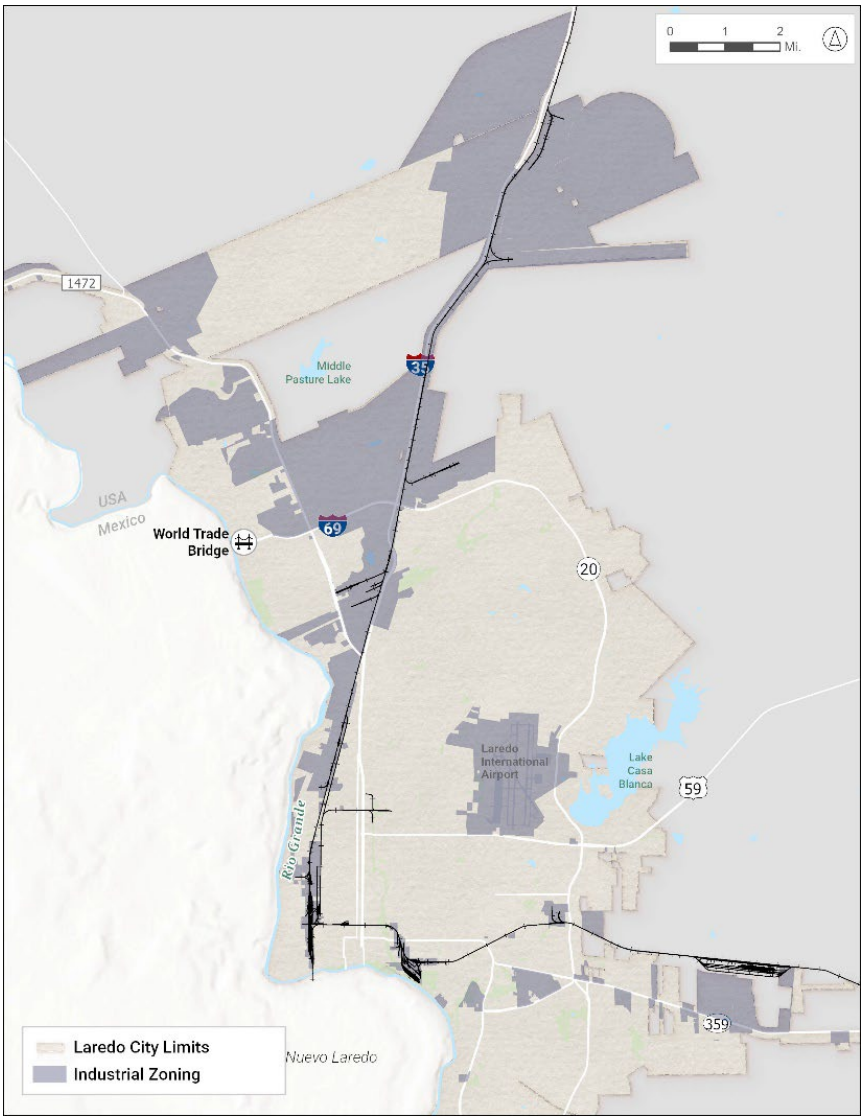


Figure 4-1. Industrial Land Uses

Microtransit Applicability

Truck traffic contributes significantly to congestion in Laredo. Microtransit may alleviate some of the local congestion by enabling a subset of truck drivers who need to access non-warehouse and industrial destinations to move about without moving their commercial vehicle. In Laredo, there are drayage drivers who drive back and forth across the border to transport goods; these drivers would not be candidates to utilize microtransit service, as they are on the move and are doing shorter trips. There are also over the road drivers, who drive the longer haul routes and are often waiting in Laredo. These drivers have time while waiting for their next load (up to 1-2 days) and use this downtime to visit other destinations in Laredo. They often access stores such as Walmart and HEB for food and supplies, as well as services including healthcare and entertainment. **Figure 4-2** shows the tractors parked at various local retailers, including HEB.

Based on conversations with stakeholders, proximity to the World Trade Bridge and industrial land uses, the proposed microtransit zones in the north would be the most relevant for this trucking population. Given the proximity to the warehouses, the truckers utilize superstores and retailers in these zones to obtain personal supplies. A challenge in these areas would be parking; the drivers would need a location to park their tractors while utilizing the microtransit service. Park and ride locations were suggested in the interviews with the stakeholders.

The current boundaries of the microtransit can be adjusted as the service is implemented, depending on the uptake by the tractor-trailer driver population and the projected expansions of industrial development. Additional development is projected along FM1472, particularly with the Pinnacle Development expansion. The boundary of Zone 1 is currently at Vidal Cantu Road/World Trade Center Loop to the north, which is just at the current edge of the Pinnacle Industry Center. Microtransit is able to be flexible and responsive, thus the zonal boundaries can be adjusted as needed to better serve riders and potential riders as needed.

Mile Marker 13

One area that has been discussed throughout this study is the growing industrial development at Mile Marker 13 along I-35. This area, in the northeast of Laredo, is located north of the Missouri Pacific Railyards (owned by UPRR). At this time, microtransit is not recommended to serve the trucking population in this area. The development is not currently served by any fixed route transit. There are only a couple of restaurants and travel centers/truck stops in this area. These characteristics are not conducive to implementing microtransit.

The transportation and mobility challenges in this area are beyond the scope of microtransit. From discussions with stakeholders, there is congestion along I-35 in this area and it can be difficult for workers to access, particularly those who live in southern Laredo. El Metro can explore the idea of an express route from downtown to reach this area. Vanpool would be another potential solution for worker access. In developing alternative mobility options and solutions for this area, the needs of truckers needing to access areas outside of the development should be considered.

Figure 4-2. Tractors parked at retail locations

Figure 4-3. No parking signs at strip mall

Stakeholder Interviews

As part of this study, LWCAMPO identified several stakeholders who could provide insight into the applicability of microtransit to tractor-trailers. They included:

- TxDOT Laredo District
- City of Laredo Economic Development Department
- Laredo International Bridge System
- Laredo Economic Development Corporation
- U.S. Customs Brokers Association / Daniel Hastings Inc.
- Crane Engineering
- Port of Entry Advisory Committee

The consultant team was able to speak with six of these stakeholders to discuss microtransit. In these discussions, the consultant team asked questions to better understand freight movement in Laredo, where truckers need to go, how to market microtransit service for this use case and obtain feedback on the proposed zones.

Overall, key takeaways from the stakeholders included the following:

- Microtransit can be utilized by truckers for accessing shopping destinations, such as HEB, Target, Walmart and other superstores to pick up provisions, as opposed to purchasing items at truck stops, which are more expensive. Microtransit can also be utilized to access medical care and other services, including entertainment.
- Parking areas need to be created in the microtransit zones for truckers to leave their vehicles and then use the microtransit service.
- Targeted marketing and outreach will be essential to getting truckers to utilize this new service.
- Employee access to industrial areas is a challenge; however, microtransit will not be the solution to this issue. The zones will not serve the workers who live in the southern portion of Laredo that are accessing the warehouses and industrial land uses in north Laredo.

The following subsections highlight information about each entity and summarize the information collected via an interview.

TxDOT Laredo District

The TxDOT Laredo District encompasses an area of over 15,000 square miles and approximately 415,000 people. Mr. Roberto Rodriguez and Mr. Luis Villarreal spoke with the consultant team regarding the potential for microtransit in Laredo. TxDOT had already been looking at El Metro's lower performing routes and considering the applicability of microtransit for senior citizens, university students, and industrial parks. Regarding truck traffic, they noted the limited options for truckers to access essential services, including groceries and medical care. The northern zones

would be the priority for serving the trucking population. One suggested parking location for trucks would be between Mile Markers 13 and 18 along I-35.

City of Laredo Economic Development

The City of Laredo's economic development department endeavors to foster economic and job growth, support business and engage in projects that improve quality of life in Laredo. Ms. Miriam Castillo, the Economic Development Director, spoke with the consultant team. Two challenges were discussed: the convenience of microtransit vs. taking their individual tractors to commercial areas as well as outreach to the industry and uptake of microtransit. During this interview, other use cases for microtransit were discussed, including for students, visitors, and entertainment. Potential locations for additional microtransit zones suggested were areas near the TAMIU campus and the entertainment complex with the baseball stadium and convention center near the Laredo airport. For visitors crossing the border, there are readily available taxis downtown. If microtransit expands to the downtown area there would be competition with other, existing travel providers.

Laredo International Bridge System

The mission of this department is "to serve as the most convenient and safe crossing points for all citizens and tourists of both U.S. and Mexico, as well as facilitate the crossing of all freight and import-export trade that utilizes the Port of Laredo." There are four bridges under the purview of this City department. The consultant team spoke with Ms. Elizabeth Estrada regarding the potential for microtransit in Laredo and applicability for the tractor-trailers. Trucks waiting around in the Mines Road area contribute to the congestion in the area. There have been discussions about developing a truck parking area for them to wait, but this is only a concept and nothing has materialized as of yet. The parking issue would be key to address in conjunction with rolling out microtransit service. Regarding the zones, she felt like the northern microtransit zones would serve the HEB and Walmart where tractor-trailers are found.

Laredo Economic Development Corporation

The Laredo Economic Development Corporation (EDC) is a non-profit organization that promotes and markets Laredo, Webb County, and Nuevo Laredo for economic and industrial development. Mr. Joseph Mendiola and Mr. Rey Reyes spoke with the consultant team on behalf of the organization to discuss microtransit. They believe truckers who are waiting for their next load could utilize microtransit to access shopping, healthcare, and entertainment. One challenge with the zones as proposed would be parking locations for them to leave their vehicles. A park and ride would be needed in each of the zones, perhaps along FM1472. Another suggested location would be the City-owned parcel between FM1472 and I-35. With regards to advertising, the EDC suggested that the word of mouth network amongst the truckers would be the most useful way to advertise the microtransit service and make them aware of this new modal option.

US Customs Brokers Association / Daniel Hastings Inc.

The consultant team spoke with Mr. Robert Norris Jr., a broker who works for Daniel Hastings, which is a brokerage firm. He explained trucking and freight patterns in Laredo. One concern he expressed was the workers who need to reach the industrial areas from southern Laredo, particularly near Mile Marker 13, which is not served by transit. With regards to the drivers themselves, he said that while waiting for a new load, truckers would go to superstores such as Walmart or Target to shop. In the past, there have been shuttles run by truck stops or private entertainment venues to pick up drivers.

Regarding the marketing component, the best way to promote microtransit for truckers would be to work with the carriers, commercial areas, and truck stops. He suggested that coordinating with the Laredo Motor Carriers Association would be a productive avenue to educate and advertise the microtransit service.

Crane Engineering

Crane Engineering is a consulting engineering firm based in Laredo. Mr. Edward Garza is a native Laredo resident who has been involved with planning and development efforts in the region, including involvement in the Regional Mobility Authority (RMA). Mr. Garza discussed the characteristics of various areas and proposed microtransit zones with the consultant team. He noted that the northern zones 1 and 2 are where the primary industrial uses are, and those zones would serve tractor-trailer drivers. However, there is the issue of parking for those truckers who would want to use the service. Zone 3 also has warehouses and businesses that are served by tractor-trailers, but these are older facilities. The Walmart in this zone is heavily utilized by truckers. Mr. Garza emphasized the need to market any microtransit service as a complement to existing El Metro service, and not a reduction in service or options.

Chapter Conclusion

Tractor-trailer traffic presents an interesting, and rather novel, use case for microtransit in Laredo. The proposed northern zones in particular serve many of the warehousing and industrial areas of Laredo where truck traffic for non-work local trips is common. Microtransit may be utilized as an alternative mode option for tractor-trailer drivers who have downtime in Laredo and need to access big-box retail destinations. Parking locations and proactive marketing of the service are key aspects to successfully enable this population to utilize microtransit.

5. Public Involvement

5. Public Involvement

As part of this planning effort, public involvement was designed to engage members of the public and stakeholders. All engagement activities provided educational information about microtransit and solicited ideas and comments to understand how microtransit can be implemented in Laredo. This chapter details the public engagement efforts, which involved a survey, discussions with riders and operators, an open house style public meeting, as well as interviews and presentations with stakeholders.

Microtransit Survey

As part of this study, a survey was developed to better understand the public's desire for microtransit, asking about level of interest and potential locations for microtransit usage. The 14-question survey was available in Spanish and English. The survey consisted of multiple choice and open-ended questions and was available in both paper and online formats. The online version was open in fall 2024 for approximately two months.

A QR code flyer with a link to the SurveyMonkey online platform was placed on El Metro buses, the customer service desk at the transit center, and distributed via social media platforms by LWCAMPO and El Metro. The consultant team also distributed survey flyers to riders at the transit center during a site visit in November 2024. Paper copies of the flyer were available at the transit center, and members of El Metro staff spoke with riders directly to fill out the survey questions. To incentivize completion of the survey, a $100 Visa gift card was offered to three people. A random drawing was held in early 2025.

A total of 130 survey responses were collected through three sources, detailed in **Table 5-1.** Most responses came from the flyer and paper survey option.

Table 5-1. Responses by Collector Type

Collector Type	Number of Responses Collected
Paper Survey	54
Flyer	56
Social Media	20
Total	**130**

Survey Responses

This section discusses the results for each of the 14 questions on the survey.

Which El Metro services do you ride?

The results of this question are summarized in **Figure 5-1**. Over 97 percent of the respondents indicated that they use local bus routes. This was followed by circulator routes at 12 percent and El Lift paratransit at four percent. Survey respondents were able to select multiple options.

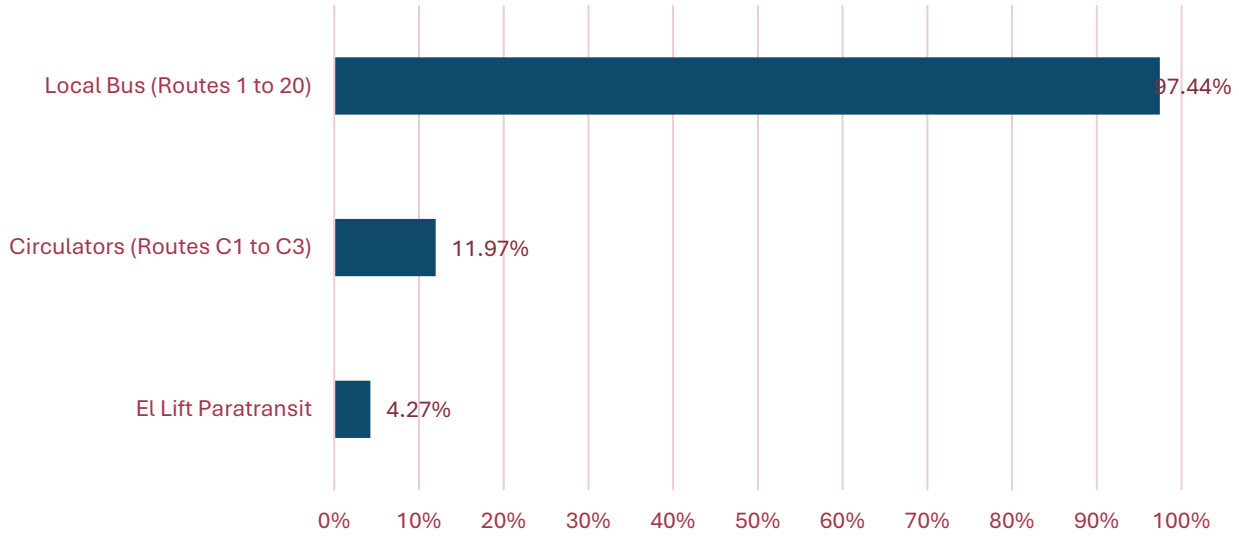


Figure 5-1. Question 1 Survey Results

Which route(s) do you ride?

The results of this question are summarized in **Figure 5-2**. The survey respondents were asked to select all the bus routes they use. Routes 2A, 16, 1 and 2B were the most popular routes used by those who took the survey, with over 25 percent of respondents riding at least one of these routes. The least utilized routes are C1, 8, C2, and C3, which are consistent with overall El Metro ridership trends. Less than six percent of survey respondents utilize those routes.

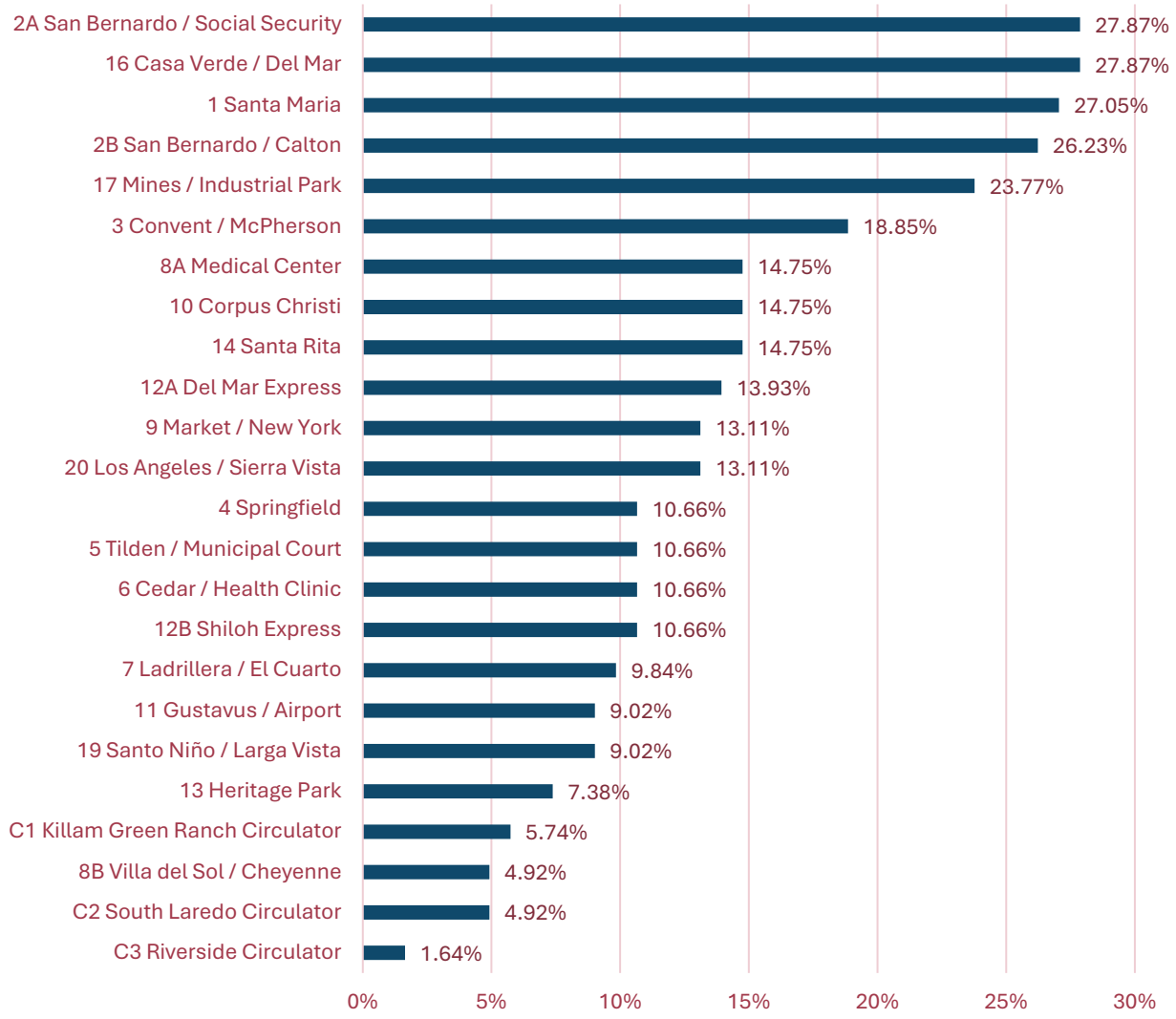


Figure 5-2. Question 2 Survey Results

How often do you use El Metro?

The results of this question are summarized in **Figure 5-3**. The majority of respondents, over 56 percent, indicated that they use El Metro five or more days per week. Nearly 90 percent of the respondents utilize El Metro two or more days per week.

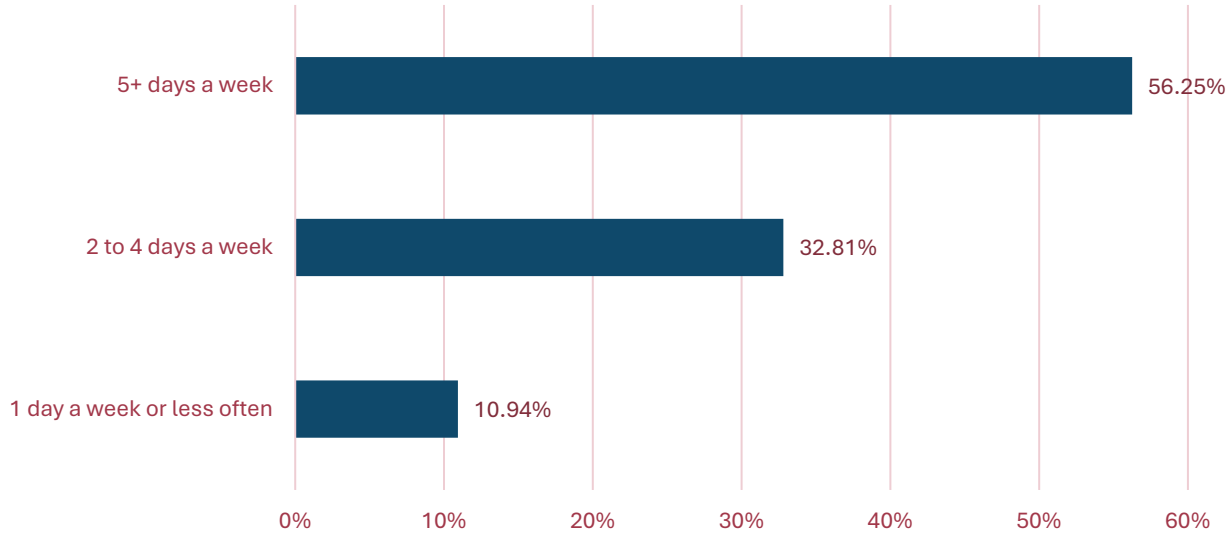


Figure 5-3. Question 3 Survey Results

Which other travel options do you usually have available?

The results of this question are summarized in **Figure 5-4**. Based on this sample of El Metro riders surveyed, many riders have limited travel options besides using public transportation. Many respondents (44 percent) indicated that they have no other reliable travel options besides El Metro for some or all of their trips. Many of the other modes are car dependent, asking family/friend for a ride (30 percent), taxi or rideshare (20 percent), or driving a personal vehicle (16 percent). Nearly one third of respondents can utilize a multimodal option (biking or walking). Survey respondents were able to select multiple options.

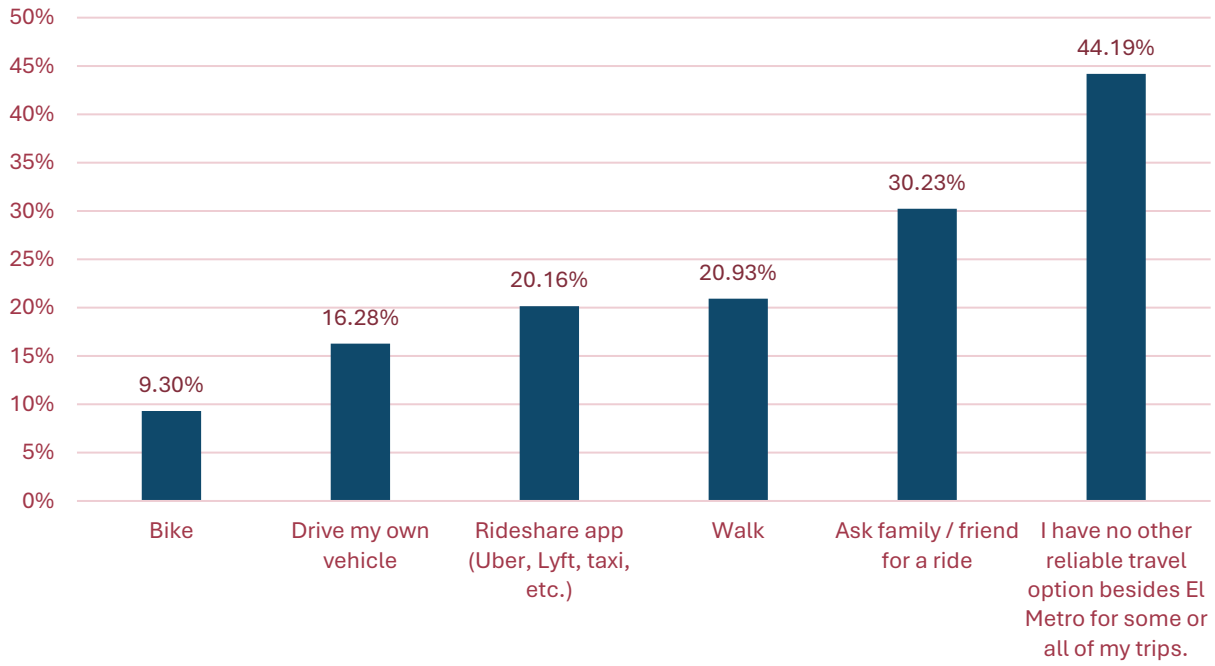


Figure 5-4. Question 4 Survey Results

How satisfied are you with the quality of El Metro?

The results of this question are summarized in **Figure 5-5**. The majority of respondents (84 percent) being either very satisfied or satisfied with the quality of El Metro's services. Of the riders who participated in the survey, 11 percent were neutral. The remaining five percent were either dissatisfied or very dissatisfied with the quality of El Metro.

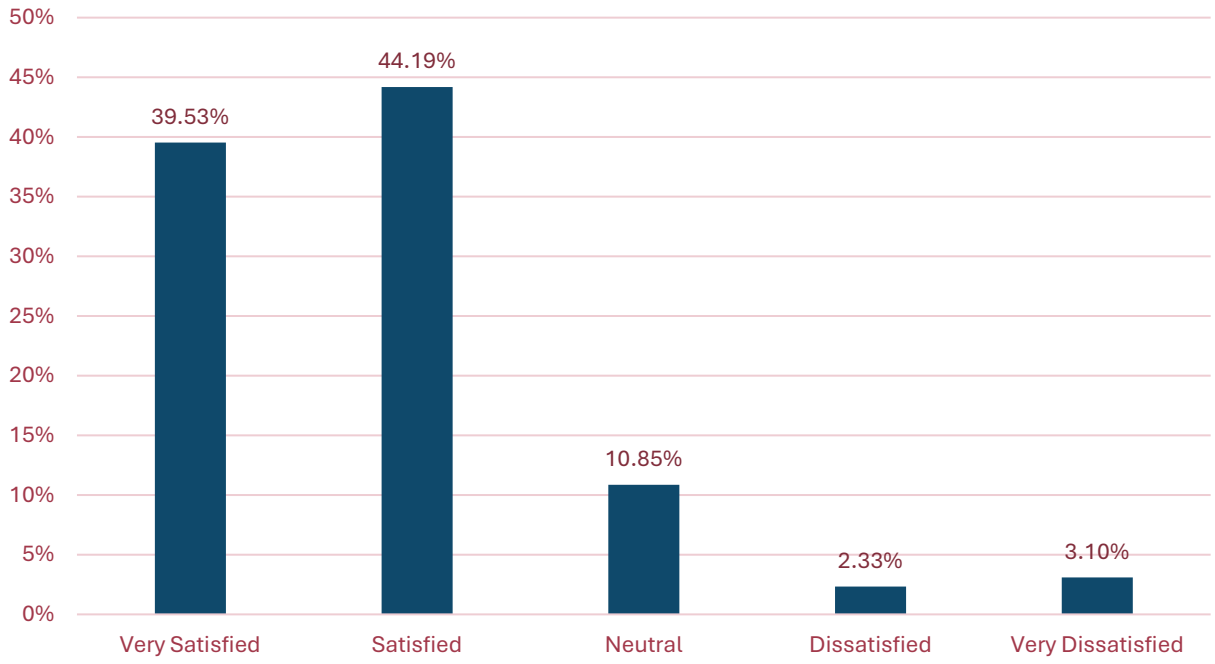


Figure 5-5. Question 5 Survey Results

What do you like about using El Metro; what works well?

The results of this question are summarized in **Figure 5-6**. This was an open-ended question to understand what users like about using El Metro and what works well. Overall, 73 riders expressed their satisfaction with El Metro services. In general, riders appreciate the schedule, amenities (including air conditioning), on-time service, cost, and the routes working for where they need to go. The top two areas of satisfaction were related to the schedule and amenities, expressed by nearly 50 percent of survey takers combined.

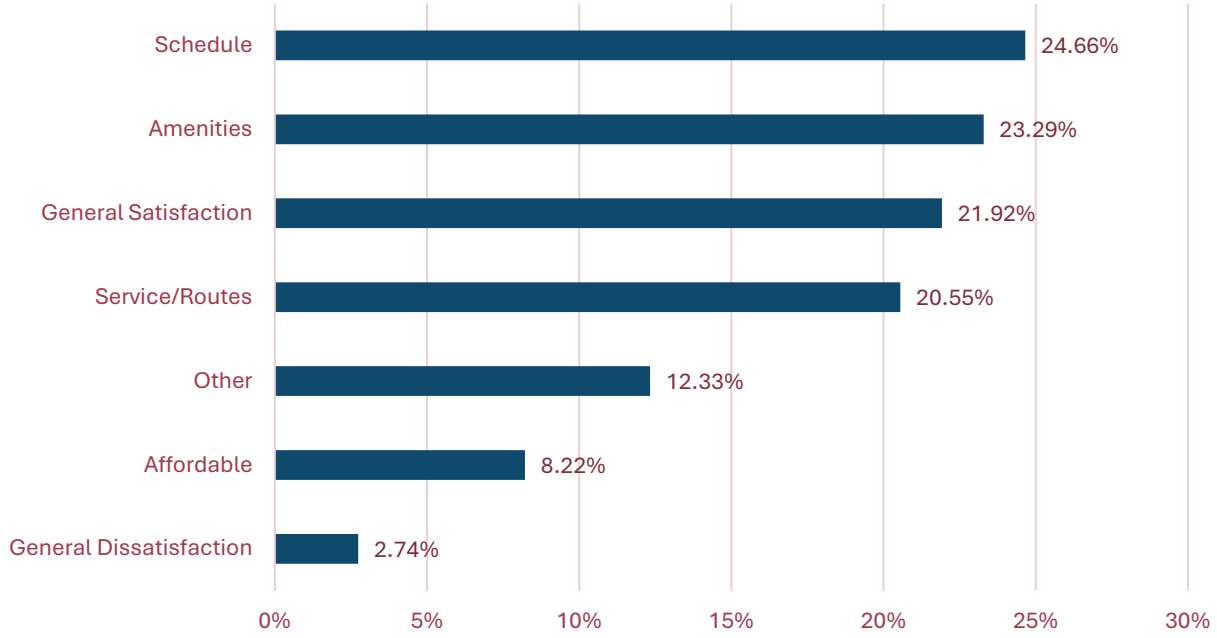


Figure 5-6. Question 6 Survey Results

Selected Survey Responses

"It is comfortable, and always on time. Drivers are nice, and the buses clean."
"It gets me to where I need to go."
"Buen servicio"

How could El Metro be better?

The results of this question are summarized in **Figure 5-7**. This was an open-ended question to understand how El Metro could improve, with 115 survey responses. Feedback was categorized into a variety of buckets; the top two areas of improvement included improving/maintaining schedules and adding more routes. Other common suggestions included adding more buses (17 percent of responses) and better amenities, particularly working air conditioning and improving cleanliness (15 percent of responses). Several responses called out Route 16 and access to TAMIU, with more buses needed on that particular route to serve the number of students traveling to the campus. This sentiment was also expressed in some open-ended responses to the prior survey question.

The other category includes responses suggesting additional alerts, more seating for the disabled, electric buses, improved customer service (including not having to purchase tickets at the station, the behavior of drivers/dispatchers, updating information on Google Maps, digital passes for Android), and adding microtransit.

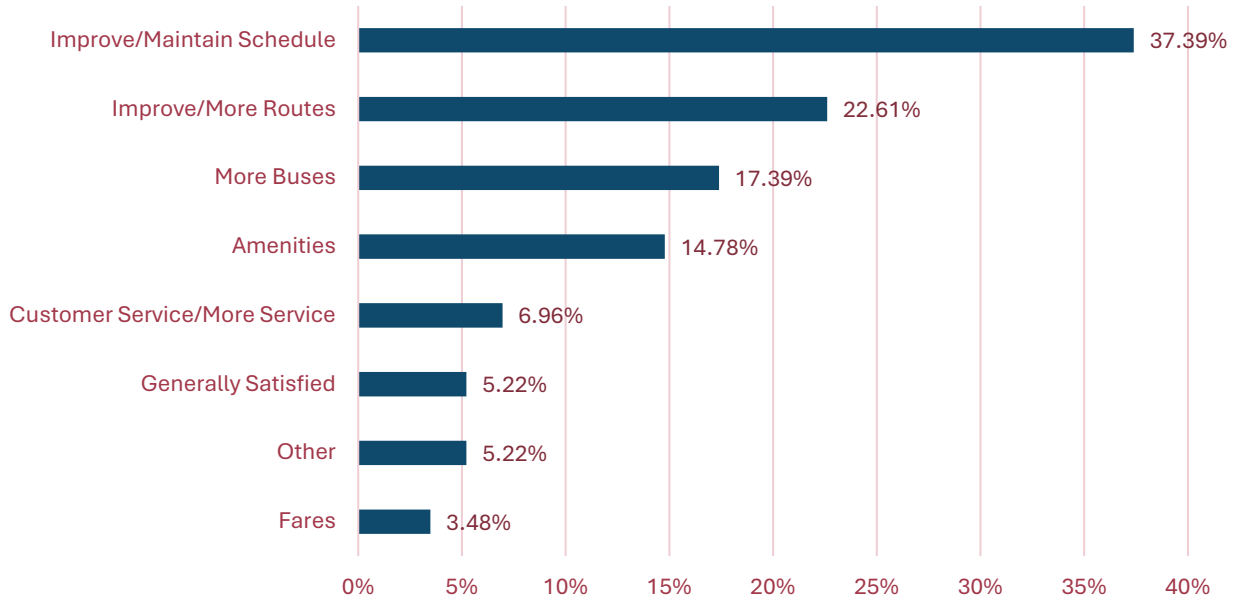


Figure 5-7. Question 7 Survey Results

Selected Survey Responses

"Better hours"
"Better times"
"Add more routes"
"Extend route schedule"
"Routes more often"
"Putting another bus for the Route 16 at 8:15"

How interested are you in El Metro trying microtransit in one or several areas of Laredo?

The results of this question are summarized in **Figure 5-8**. The vast majority of respondents (93 percent) were either very interested in or somewhat interested in El Metro trying microtransit in one or several areas of Laredo. The remaining seven percent of respondents were either not sure/need more information or not at all interested.

In the online survey, people who responded with "very interested" or "somewhat interested" were asked about ideas for zones or suggestions on microtransit (question nine), whereas people who responded "Not sure; I need to know more" or "Not at All Interested" were asked to share questions or concerns about microtransit (question 11). The paper survey contained arrows to indicate the skip logic, however, a respondent could write answers in either box.

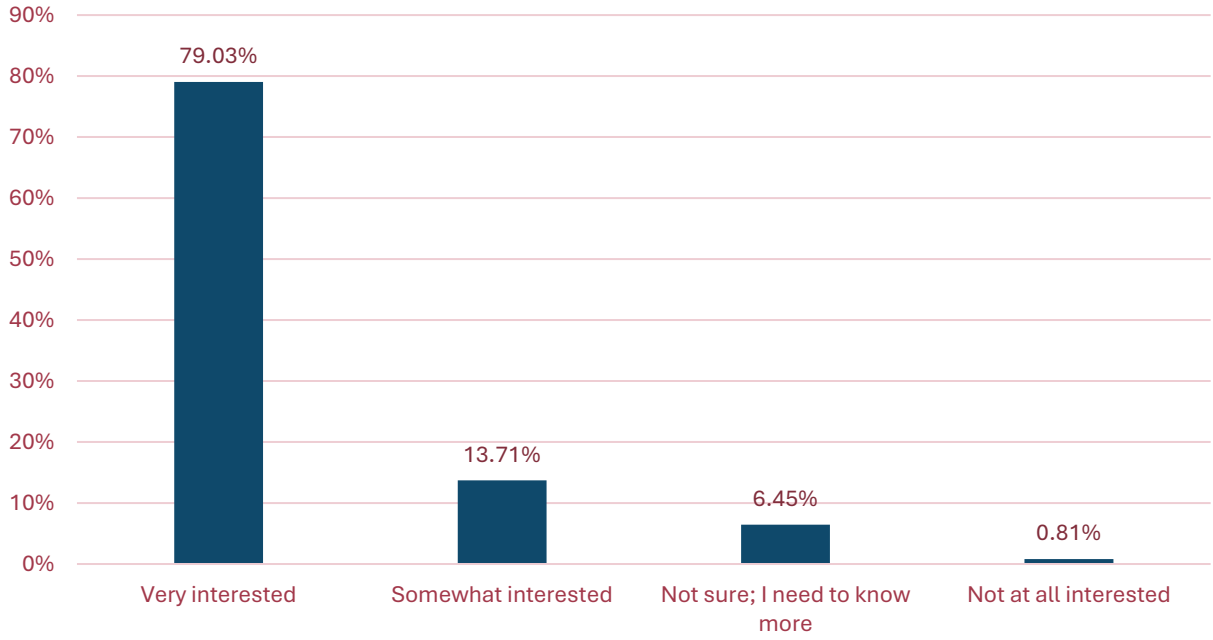


Figure 5-8. Question 8 Survey Results

Please share any ideas you have for us about microtransit, such as where you think we should try a zone or any other suggestion.

The results of this question are summarized in **Figure 5-9**. This question was asked of respondents who said they were very interested or somewhat interested in microtransit. This was an open-ended question that received 100 responses. The top location proposed for microtransit was Central Laredo/Downtown (28 percent). The second highest specific location was North Laredo, Mines Road, and Northwest Laredo (16 percent). There were about 15 responses indicating educational facilities, either school or calling out the Texas A&M International University campus specifically. Several responses (20 percent) had non-specific answers, including areas not served well by a bus line. These are categorized in the other category.

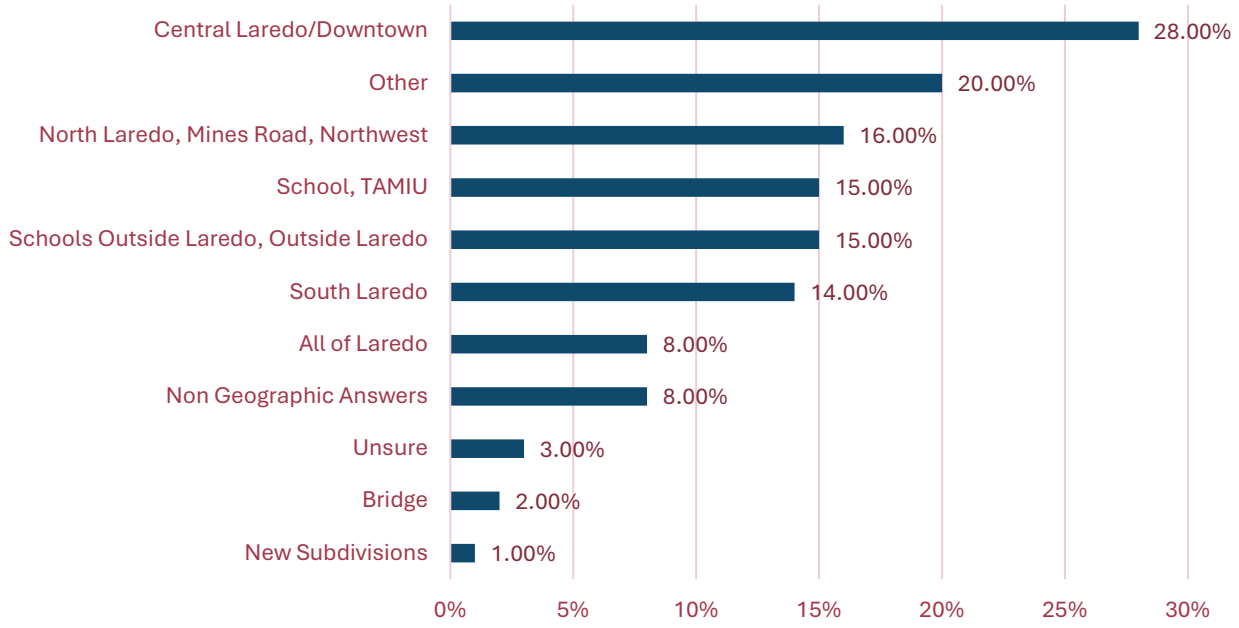


Figure 5-9. Question 9 Survey Results

Selected Survey Responses

"It could help go to places where the bus typically doesn't reach"
"South Laredo"
"Central Laredo"
"All Laredo"
"Mines Rd"
"TAMIU"

What types of places might you go on microtransit?

The results of this question are summarized in **Figure 5-10**. 104 of the survey respondents answered this question. The top destination people indicated that they might go on microtransit was work (43 percent). The next highest destinations were school (34 percent) and shopping (29 percent).

The other category (34 percent) was developed based on the responses that did not fit into other categories. Some of these responses included medical appointments/clinics, smaller areas less accessible by larger vehicles, all of Laredo, rural areas, and religious institutions.

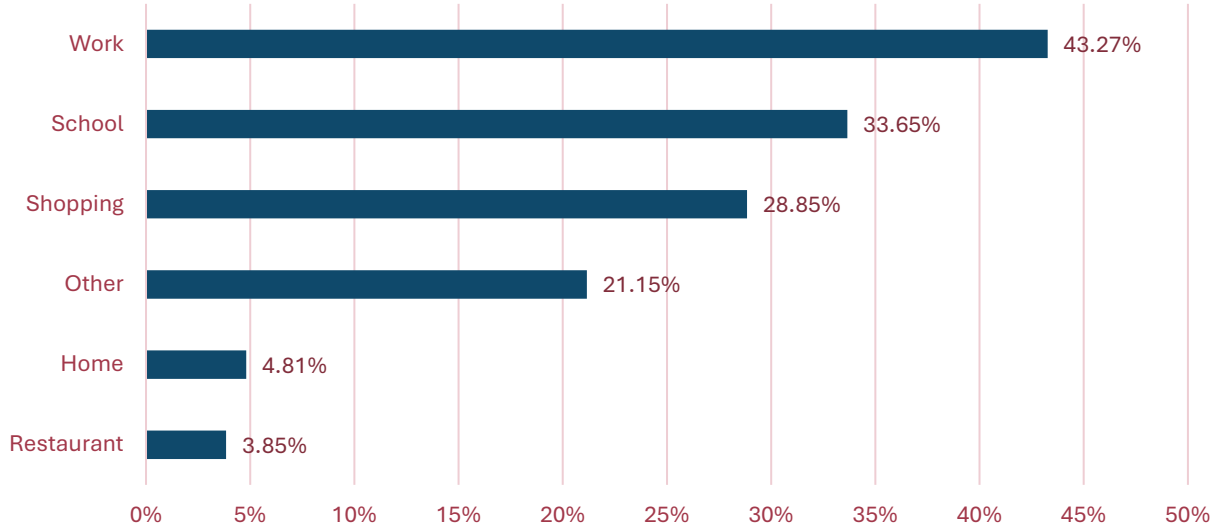


Figure 5-10. Questions 10 and 12 Survey Results

Selected Survey Responses

"School"
"Around the neighborhood"
"Work"
"Mall and HEB"
"Smaller areas less accessible to larger vehicles"
"Doctors appointments"
"I might go to stores, work and residential areas"
"To a local restaurant or bar"

Please share your questions or concerns about microtransit.

This question was only asked to respondents who answered question about their interest in microtransit as "Not sure; I need to know more" or "Not at All Interested." Only five respondents answered this question. The responses were related to the fares/schedule, improving El Lift before adding another service, wanting more information about microtransit, and one not applicable response.

Demographic Questions

Optional demographic questions were collected at the end of the survey. **Table 5-2** and **Table 5-3** summarize the results of these questions. Approximately 29 percent of the survey respondents were between the ages of 18 – 24, which was the largest age bracket represented. More survey respondents were female than male, for those who answered about their gender.

Table 5-2. Question 13 Survey Results

Age Range	Percent of Survey Respondents
Under 18	4.62%
18-24	29.23%
25-34	12.31%
35-44	8.46%
45-54	11.54%
55-64	10.00%
65 or older	5.38%
Prefer Not to Answer	8.46%

Table 5-3. Question 14 Survey Results

Gender	Percent of Survey Respondents
Female	49.23%
Male	40.00%
Another Gender	0.00%
Prefer Not to Answer	10.77%

Key Takeaways

The public provided valuable input on microtransit within Laredo. Based on the survey results, there is a high level of interest in microtransit for Laredo. Some of the locations that the public specified for a potential microtransit zone were used to develop zones for consideration.

Based on the comments, many respondents are either satisfied or very satisfied with El Metro's service. The public did suggest some areas for improvement for El Metro, such as adjustments to the schedule to stay on time, more buses on certain routes to help with overcrowding, and adding more fixed routes to better serve Laredo.

In-Person Stakeholder Engagement

The consultant team connected with riders in November 2024 and February 2025. In November, the team spoke with riders at the transit center to better understand the current El Metro system and the potential for microtransit, while passing out flyers encouraging riders to take the microtransit survey. At this time, the team also conducted interviews with bus operators to understand the transit system from that perspective. In February 2025, an open house style public meeting was held at the transit center to obtain feedback on the proposed microtransit zones.

November 2024 Interviews

Discussion with Riders

The consultant team spoke with riders at the downtown transit center and encouraged them to complete the survey, through passing out flyers with the QR code. The team also had paper surveys to walk through with the riders or allow them to fill out individually in that format. Most of the riders who were interviewed relied on El Metro to get to school, work and shopping destinations (such as the grocery store). From discussions with the transit riders, there were a few key themes that emerged:

- People were concerned about the frequency of buses
    - Microtransit could provide an alternative to long wait times for the fixed route buses
- Microtransit could serve as another backup form of transportation
- Microtransit could help fill in gaps in routes and timing

The consultant team also rode the circulator routes and spoke with riders who were utilizing these routes to better understand if microtransit could provide an alternative solution or improved mobility and access for these riders.

Rider Feedback

"[El Metro] works well to get to/from work"
"[El Metro needs] better route times"
"Extend [El Metro's] route times"
"[El Metro] is punctual"

Figure 5-11. Discussions with riders at the transit center

Discussion with Operators

The consultant team spoke with El Metro bus operators as part of the engagement efforts. The conversations included an explanation of microtransit as well as a few questions, which included the following:

- What is your first thought about microtransit in Laredo?
- [Fixed Route Operators] Are there any particular segments of a route, days, and/or times-of-day when you seldom or never see riders?
- [El Lift Operators] What suggestions, questions, or ideas do you have as we consider moving forward with microtransit, especially as you think about your El Lift riders?
- Do you have any other ideas or suggestions about microtransit in Laredo (such as locations to consider for a zone, particular days/times to use microtransit, etc.)?

From discussions with bus operators, including those who drive the circulator and other lower performing routes, the following themes emerged:

- Operators agree the circulator routes have been and continue to be low ridership.
- The infrequent riders do rely on the bus to reach a few key destinations, principally shopping at major retailers (e.g., major grocery stores, major department stores, and healthcare related appointments).
- While many of El Metro's riders utilize the downtown transit center, some riders do not as those riders' trips begin and end in neighborhoods and business districts.
- The circulator routes, and some other routes, routinely are delayed by heavy truck traffic, principally in the northern reaches of Laredo.
- Fixed routes often pass through residential areas with two-lane streets and tight corners – making safe operations a consistent challenge that may be alleviated with smaller vehicles.

The operations staff interviewed generally agreed opportunities exist to improve transit in the edge areas of Laredo where both older communities persist, and now new residential and commercial development is occurring.

February 2025 Public Meeting

An open house public meeting was held on February 28, 2025 at the transit center. The purpose of the meeting was to introduce the public to the concept of microtransit, review the proposed zones, and obtain feedback. The consultant team and members of LWCAMPO and El Metro staff spoke with riders both in the lobby and those who were outside waiting for buses. Comment cards were also provided to collect feedback. Images of the boards and the lobby set up are shown in **Figure 5-12**.

Figure 5-12. Public Meeting Setup , February 2025

Through discussions with members of the public and transit riders, a few key themes emerged:

- Nearly everyone was in favor of microtransit and having it as an option
    - Some people wanted additional zones or areas for it to cover (including TAMIU or specific medical facilities).
    - People liked the idea of microtransit, even if they would not necessarily use it with the zones as proposed.
- Many riders come from Mexico; since the proposed zones do not include downtown, many of them would not utilize the proposed microtransit system. However, they were not opposed to El Metro implementing it.

Figure 5-13. Public Meeting, February 2025

Rider Feedback

"I would use [microtransit] to go to the stores, [microtransit] is a good option because sometimes I do not have a way to get around"
"Excellent idea! The waits are too long for the bus, I like that it is on demand"
"Excited to see service ridership grow"
"Good idea for areas where it's hard to walk"

Directed Stakeholder Engagement

The consultant team presented at two LWCAMPO meetings in Fall 2024. Regular updates on the study were given at subsequent meetings by LWCAMPO. The consultant team also engaged with non-profit stakeholders directly to discuss microtransit in Laredo and obtain their feedback.

MPO Active Transportation Committee

The consultant team presented virtually to the Active Transportation Committee on October 30, 2024. At this time, the concept of microtransit and the objectives of the study were presented.

MPO Technical Committee

The consultant team presented to the MPO Technical Committee in November 2024, in person. The discussion revolved around the potential usage of microtransit, target populations, education about a new service and challenges. The key themes from the discussion included the following:

- Looking at north Laredo would be beneficial, as there is limited fixed route coverage and tractor trailer traffic that could utilize the service.
- Education will be paramount to implementing microtransit; ensuring that riders are comfortable with microtransit and how to use it.
- Microtransit could be utilized for replacing Sunday service and/or used to expand the hours of the current system.
- Keeping the cost low would be important in order for the public to utilize microtransit service.

Non-Profit Stakeholder Engagement

As part of this study, non-profit organizations whose missions and services relate to transit and mobility were identified by LWCAMPO and El Metro for interviews and discussions regarding potential microtransit service. They included:

- El Aguila Rural Transit (part of Webb County Community Action Agency)
- Ruth B. Cowl Rehabilitation Center
- Webb County Veterans Service Office
- Bethany House of Laredo
- South Texas Development Council

The consultant team pursued interviews with each organization and successfully interviewed El Aguila Rural Transit. The interview request included the draft microtransit zones for feedback. The goals of these conversations were to understand more about the services provided by each non-profit, how the population could use microtransit, and any considerations for implementation of microtransit in Laredo.

The team extended the invitation to participate via repeated emails and phone calls in early 2025. The following sections highlight information about each partner and summarize any information collected via an interview or by other means (e.g., phone call, website, news articles).

El Aguila Rural Transit

El Aguila Rural Transit, part of the Webb County Community Action Agency, is the state designated rural transit operator for areas outside of the Laredo urbanized area and as such receives FTA Section 5311 and State of Texas funding. The agency entered operation in the 1980s. The agency seeks to provide mobility to individuals with no other alternative. Trips begin in rural areas but connect riders to/from destinations anywhere within Webb County, including Laredo. El Aguila's transit services are principally demand responsive, requiring an advanced reservation at least by the day prior.[16]

The consultant team spoke at length with Roberto Martinez, Transportation Director. Key takeaways from the conversation included:

- Most El Aguila riders are part of low-moderate income households and are highly sensitive to the fare amount – and currently transfers between routes or services requires paying a fare each time.
- El Aguila riders are principally making trips directly to/from a particular destination within Laredo or request to connect with El Metro services at the downtown transit center.
- It is not likely for El Aguila riders to use microtransit due to a need to transfer from service to service in both directions and due to the location of zones.

El Aguila strongly recommends the region's partners to continue building trust and ensure services co-operate when feasible. El Aguila also recommends ensuring the fare remains affordable and that any avenue to reduce transfer fares would be welcome.

Ruthe B. Cowl Rehabilitation Center

The mission of Ruthe B. Cowl Rehabilitation Center is "to assist all individuals with disabilities whose conditions can be improved by the services offered." The center receives some of the region's FTA Section 5310 funds to offset a portion of the cost of mobility services for individuals with disabilities and older adults. Ruthe B. Cowl has three accessible vans.

Webb County Veterans Service Office

The Webb County Veterans Transportation Assistance Program provides veterans with free transportation to medical appointments within Laredo and up to a 200-mile radius, such as McAllen, Harlingen, Corpus Christi and San Antonio. The service is also available to surviving

[16] This type of general public demand response service is common in rural areas across Texas and is dissimilar to the on-demand microtransit in question because same day trips are not allowed (and generally there is not a mobile app involved to help riders book/complete trips day-of).

spouses and family members. The primary trip purpose is always healthcare related and provided at no cost to the individual.

Bethany House of Laredo

Bethany House is a non-profit organization whose mission is “to feed the hungry and shelter the homeless”. Bethany House opened in 1982 and serves people experiencing homelessness or who are at risk of becoming homeless.

South Texas Development Council

South Texas Development Council (STDC) works to plan, coordinate, and implement regional strategies. Their initiatives seek to improve health, safety, and general welfare. Four counties formed STDC in 1956 and the region is an official planning region for the State of Texas. STDC creates the regionally coordinated transportation plan and has a Transportation Steering Committee.

Chapter Conclusion

The public engagement efforts aimed to educate and inform the public about the concept of microtransit and obtain feedback about microtransit as an option for Laredo. Overall, the public is supportive of implementing microtransit service. However, in order for the service to be successful, it will be essential to continue to educate the public and market the service. Chapter 6 contains further recommendations about implementation.

6. Recommendations

6. Recommendations

This chapter documents the recommended route forward for El Metro to implement on-demand microtransit in one or several zones. First, the benefit cost assessment summarizes both quantitative and qualitative outcomes of adding the new service type. Second, the recommended phased implementation commends a course of action for El Metro and partners to strategically introduce microtransit into Laredo.

Microtransit Benefit-Cost Assessment

El Metro currently operates local bus fixed routes with complementary paratransit, known as El Lift. The Federal Transit Administration (FTA) requires monthly and annual reporting to the National Transit Database (NTD). **Table 6-1** summarizes El Metro's 2023 Annual Agency Profile, including brief comments about the 10-year trend. El Metro operates all services directly.

Table 6-1. Overview of El Metro's Services

Transit Mode	Vehicles Operated in Maximum Service	Spare Vehicles Available	Annual Unlinked Passenger Trips	Vehicle Revenue Miles	Operating Expense	Cost per Trip	Comment
Local Bus	37	7	1,769,691	1,602,404	$15.46 million	$8.74	Vehicles averaged 8.6 years old; spare ratio was right near the desirable target of 20%; service cost per mile on steady trend; ridership performance was gradually decreasing pre-2020, hit a low in 2021, and is gradually improving
Demand Response (aka "El Lift")	8	14	28,640	199,647	$2.52 million	$87.84	Vehicles averaged 7.1 years old; spare ratio well above 20%; service cost per mile peaked in 2021; ridership performance held steady at a low level over 10-year period
Agency Total	**45**	**21**	**1,798,331**	**1,802,051**	**$17.98 million**	**$10.00**	**El Metro has spare vehicles available to support a microtransit pilot program**

Source: NTD Agency Profile 2023

The COVID-19 pandemic substantially disrupted transit services beginning in March 2020; in general, transit is only recently seeing a return to comparable pre-pandemic ridership (2019).

Baseline & Scenarios for Small Zones and Late Evening

Microtransit is not a panacea capable of resolving all challenges of both the transit agency and riders. Rather, microtransit can be beneficial and efficient when utilized strategically. The Benefit Cost Assessment (BCA) is intended to highlight key differences between an existing baseline scenario and a microtransit scenario wherein one or multiple zones exist in Laredo:

- **Baseline Scenario**
    - El Metro continues long-term operation of 24 local bus routes (including the circulators) and El Lift paratransit during the currently scheduled hours of operation.
- **Microtransit Scenario**
    - El Metro continues short-term operation of 24 local bus routes (including the circulators) and El Lift paratransit but simultaneously implements one or multiple microtransit zones.
    - During or after a pilot period, El Metro strategically reduces fixed route service within each microtransit zone, dependent on ridership data from the period. Fixed route changes may include:
        - Eliminate fixed route entirely
        - Eliminate the portion of fixed route within the zone, preserving transfer opportunity for riders to transfer between microtransit and the fixed route system
        - Leaving fixed route as-is if the route ends a short distance inside the microtransit zone at a transfer hub, thereby providing a transfer opportunity to reach destinations outside the zone
        - Leaving fixed route as-is if the route is adjacent the zone boundary and provides a transfer opportunity to reach destinations outside the zone
    - After the pilot period within small zones, El Metro considers two zones for late evening service across the entire service area.
        - The evening microtransit offering adds service after the fixed route operation ends, until 11:00 p.m.

The evening microtransit offering may coincide with fixed route schedule changes, such as eliminating certain final trips on particular routes, after the evening service is piloted and El Metro decides whether to permanently support the evening service.

Zone 3 is one of the zones recommended for Phase 1 implementation. There are three options: leaving the circulator route as is, eliminating it entirely, or eliminating it within the zone. **Figure 6-1** shows various options for Zone 3, in western Laredo. These options are denoted as A, B, and C. However, in all cases, riders will have access to primary destinations within the zone and via transfers to continuing fixed routes. The microtransit scenario expands the hours of operation on weekdays and Saturday and adds service on Sunday, which does not presently exist. This is one

example of how microtransit implementation improves riders' experience and creates operational efficiency for El Metro.

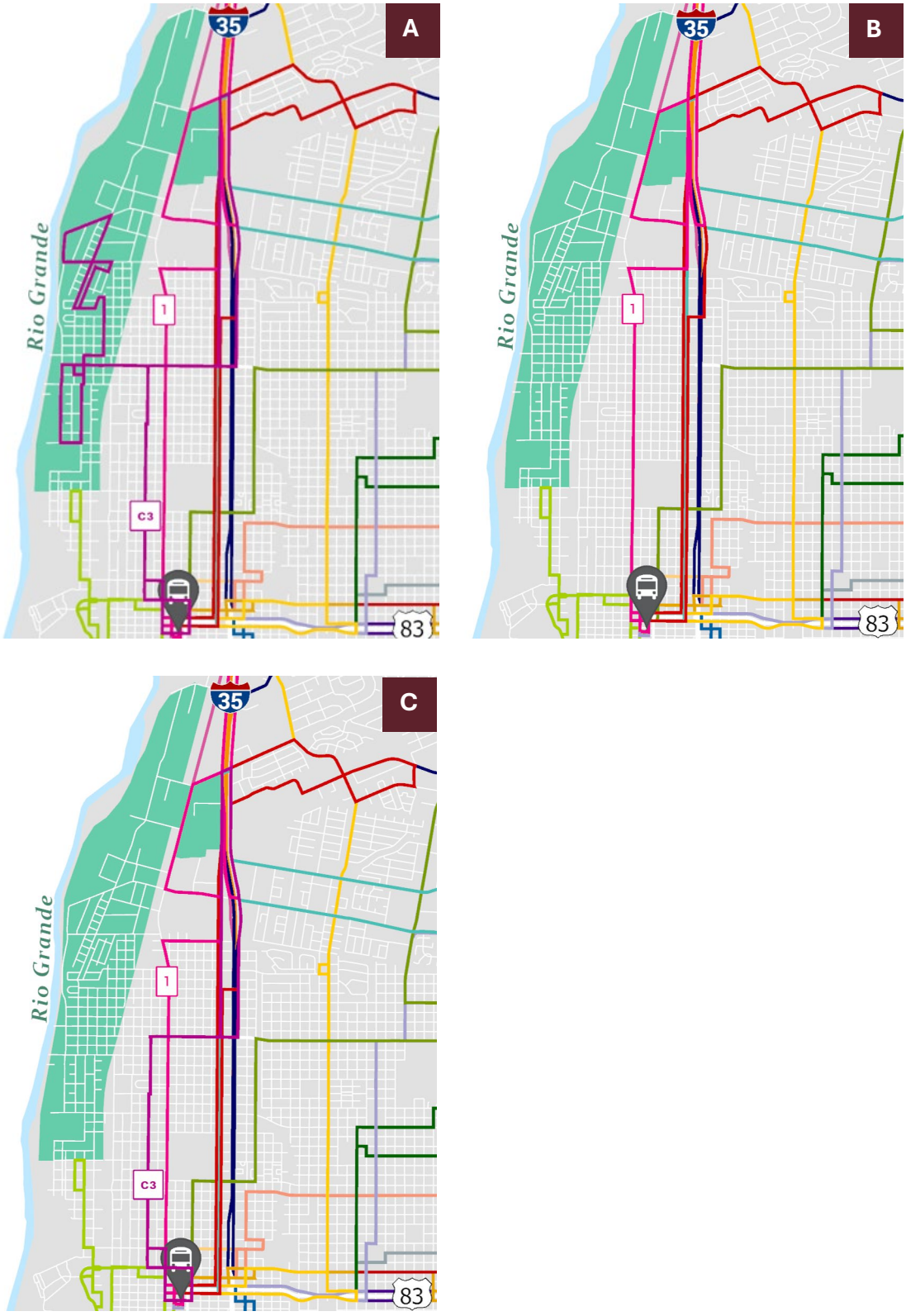


Figure 6-1. Example of Change from Baseline to Microtransit Scenarios in a Single Zone Area

Adding on-demand microtransit requires upfront capital investment and ongoing operating support. El Metro may decide it is advantageous, in the long-term and after careful consideration, to cease operating the portions of fixed routes within a microtransit zone if and when said zone is made permanent. The purpose of this section is to explore the ins and outs of such a course of action. The information is provided only to highlight the relative degree of cost efficiency possible between continuing the status quo baseline versus eventually adjusting fixed route bus service within a zone.

The BCA generally considers each zone separately. This study makes a recommendation for microtransit implementation. El Metro will ultimately decide which zone(s) is/are the highest priority for pilot implementation. Decisions around long-term implementation of fixed route changes will subsequently be specific to each zone. It is recommended for the late evening city-wide zones to be considered for implementation only after El Metro has piloted one or several smaller zones during the daytime hours, to afford the agency time to adjust to the new transit offering and accurately gauge ridership demand.

Note About Fare Revenue

The BCA and recommendations all assume the current fare payment methods and amounts continue and are utilized for microtransit services. The implementation framework discusses the potential situations wherein transit agencies may choose to implement more variable or distance-based passenger fares.

Quantitative Findings

Table 6-2 compares the baseline fixed route scenario to the microtransit scenario in Year 1 for the potential zones in strategic areas of Laredo.

- Every potential zone is currently served by multiple bus routes and has El Lift paratransit service within ¾ of a mile of the fixed route.
- Operating Zones 1, 2, or 1 & 2 combined in north Laredo could involve complete replacement of certain fixed routes and modest reduction in the alignment of other routes.
- Operating Zone 3 in west Laredo could involve ceasing to operate the C3 circulator, as the portion of C3 outside the zone is duplicated by other fixed routes.
- Operating Zones 4 or 5 long-term will not render entire fixed routes redundant but may allow for the streamlining of existing fixed routes within the zones.

The table intentionally does not reflect the quantitative benefits resulting from the late evening city-wide zones. The late evening microtransit alternative offers minimal opportunities for service efficiency, as the principal proposal is to add a new block of service hours for the general public, service area wide. Therefore, essentially all operating expenses for late evening microtransit are new, additional expenses. The value proposition for late evening service is primarily qualitative.

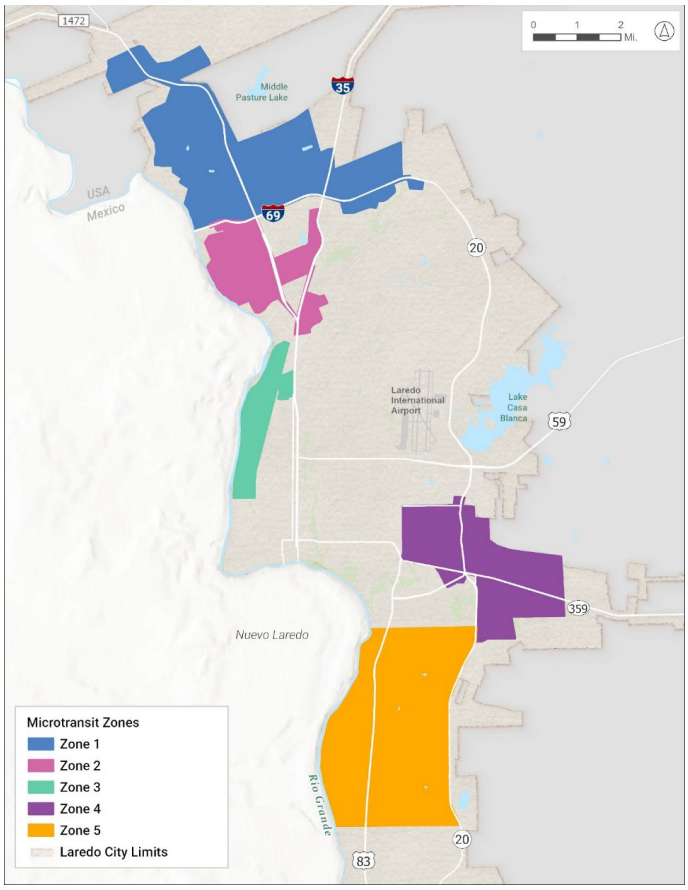


Figure 6-2. Microtransit Zones

Table 6-2. Baseline & Microtransit Scenario Benefit Cost in Year 1

			BASELINE SCENARIO		LONG-TERM MICROTRANSIT SCENARIO				
Zone	**Fixed Route**	**Long-Term Action** *(if microtransit permanent)*	**Fixed Route Vehicle Revenue Hours**	**Fixed Route Operating Expense**	**Fixed Route Vehicle Revenue Hours**	**Net Reduction to Fixed Route Vehicle Revenue Hours**	**Net Reduction to Fixed Route Operating Expense**	**Year 1 Microtransit Operating Expense** *(Low = 30-min wait time) (High = 10-min wait time)*	**Year 1 Percent of Operating Expense for Microtransit Offset by Fixed Route Long-term Action** *(range from low to high)*
Zone 1 North Laredo	C1 Killam Green Ranch Circulator	Eliminate route	2,449	$267,428	0	2,449	$267,428	$1,601,200 – $2,532,300	**15% – 23%**
	17 Mines / Industrial Park	Eliminate route within zone, preserve transfer stop(s)	6,362	$694,632	5,404	958	$104,587		
	3 Convent / McPherson 12BShiloh Express 4 Springfield 1 Santa Maria	Leave as-is, ends at hub							
	12A Del Mar Express 16 Casa Verde / Del Mar	Leave as-is, touches edge of zone							
Zone 2 North Laredo	C1 Killam Green Circulator	Eliminate route within zone, preserve transfer stop(s)	2,449	$267,428	1,516	933	$101,918	$931,200 – $1,067,400	**22% – 25%**
	17 Mines / Industrial Park		6,362	$694,632	5,147	1,214	$132,578		
	3 Convent / McPherson 12B Shiloh Express	Leave as-is, touches edge of zone							
Zones 1 & 2 Combined (North Laredo)	C1 Killam Green Ranch Circulator	Eliminate route	2,449	$267,428	0	2,449	$267,428	$2,532,300 – $3,997,200	**18% – 28%**
	17 Mines / Industrial Park	Eliminate route within zone, preserve transfer stop(s)	6,632	$694,632	2,249	4,113	$449,064		
	3 Convent / McPherson 12B Shiloh Express 4 Springfield 1 Santa Maria	Leave as-is, ends at hub							
	12A Del Mar Express 16 Casa Verde / Del Mar	Leave as-is, touches edge of zone							
Zone 3 West Laredo	C3 Riverside Circulator	Eliminate route	2,683	$292,979	0	2,683	$292,979	$533,700	**55%**
	1 Santa Maria 2A San Bernardo / Social Security 2B San Bernardo / Calton	Leave as-is, touches edge of zone							
Zone 4 East Laredo	8B Villa Del Sol / Cheyenne	Eliminate route within zone, preserve transfer stop(s)	2,911	$317,848	1,129	1,782	$194,524	$1,067,400 – $1,601,200	**26% – 39%**
	19 Santo Nino / Larga Vista		4,185	$456,956	2,336	1,849	$201,905		
	11 Gustavus / Airport		4,408	$481,314	4,199	209	$22,825		
	13 Heritage Park 8A Medical Center	Leave as-is, touches edge of zone							
Zone 5 South Laredo	C2 South Laredo Circulator	Eliminate route	2,259	$246,660	0	2,259	$246,660	$3,463,500 – $5,462,100	**19% – 30%**
	9 Market / New York	Eliminate route within zone, preserve transfer stop(s)	7,887	$861,164	5,715	2,172	$237,108		
	10 Corpus Christi		8,684	$948,206	7,569	1,115	$121,791		
	14 Santa Rita		4,923	$537,525	2,848	2,075	$226,547		
	19 Santo Nino / Larga Vista		4,185	$456,956	4,016	169	$18,453		
	20 Los Angeles / Sierra Vista		4,619	$504,366	2,886	1,733	$189,244		

Note: It is not recommended to eliminate fixed routes without further study, particularly in zones where there are multiple fixed routes (i.e., Zone 5).

Quantitative Observations for Daytime Microtransit Zones

In general, strategically reducing fixed route services in correlation with permanent microtransit in areas of Laredo would result in some offset to microtransit operating expenses. The net cost savings by reducing redundant services range from 15 to 55 percent of the microtransit costs.

> **Replacing fixed route service with microtransit will not reduce El Metro's overall operating costs but nonetheless may be beneficial to riders and the agency. There is not a one-to-one tradeoff between adding microtransit and removing a circulator route, for example.**

The following subsection discusses the additional qualitative benefits attendant to microtransit.

El Metro should consider collecting a reliable sample of stop-level ridership on any route under consideration for a service reduction or elimination due to on-demand microtransit. An even better course of action would be to conduct an onboard origin-destination survey. An origin-destination survey collects factual information about riders' trip patterns using transit and personal/household characteristics. Origin-destination surveys generally identify four to five locations during each rider interview: home, trip origin, trip boarding location, trip alighting location, and trip destination. The resulting information is an anonymous dataset containing a statistically valid representation of a typical day for El Metro riders. This type of survey is most commonly collected via site intercept interviews of a random sample of riders along each route, in each direction, by time-of-day. Many agencies procure a survey collection firm. The private firms with this expertise generally use customized software on tablets with locally hired but trained interviewers.

The stop level ridership and/or origin-destination pattern will enable El Metro to accurately estimate the change in systemwide ridership. The information will also help the agency to understand how trip patterns may vary by trip purpose, travel alternatives, and in other ways that are not easily understood without strong data. In other words, the additional data will enable the agency to ascertain which portion of a fixed route's ridership may switch to microtransit or how many microtransit trips will transfer to the fixed route(s) at the edge of a zone.

El Lift Paratransit

El Metro provided data about El Lift paratransit trip origins and destinations over a recent 12-month period. The dataset included about 34,000 one-way trips. Overlaying the trips onto the five potential daytime microtransit zones revealed the relatively small opportunity to potentially comingle some El Lift trips with general public microtransit trips (see **Table 6-3**). About 10 percent

of El Lift trips involved an origin and/or destination within one of the five daytime microtransit zones. Of those ~3,300 trips, only up to eight percent of El Lift trips would have occurred completely internally to one of the five zones – meaning microtransit could only have possibly transported a small number of El Lift trips. For most existing El Lift riders, microtransit will not replace their paratransit trips, but would instead provide an accessible same-day travel option within particular zones. It is possible with microtransit, that trip patterns might change depending on the convenience of the service. For example, a rider might choose to go to a grocery store within their zone now with the advent of the new service, instead of having to go to one farther away.

Table 6-3. El Lift Trips: Context with Microtransit Zones 1-5

	Inter-Zonal Trips by Count				Inter-Zonal Trips by Percentage		
Zone	**Internal**	**Entering**	**Leaving**	**Total**	**Internal**	**Entering**	**Leaving**
Zone 1 (North Laredo)	7	712	190	909	0.8%	78%	20.9%
Zone 2 (North Laredo)	98	772	392	1,262	7.8%	61%	31.1%
Zone 3 (West Laredo)	0	756	120	876	0.0%	86%	13.7%
Zone 4 (East Laredo)	150	1,217	905	2,272	6.6%	54%	39.8%
Zone 5 (South Laredo)	263	1,989	1,118	3,370	7.8%	59%	33.2%

The estimated cost efficiencies for daytime microtransit focus strictly on fixed route and microtransit and intentionally do not account for potential savings in El Lift paratransit services. In this sense the operating efficiencies represent a relatively conservative estimate of the fiscal implications of microtransit.

- El Lift's cost per trip was about $88 (in 2023).
- Local bus cost per trip, $10 (in 2023), ranges widely based on the intensity of ridership compared to the hours required:
    - The best performing routes see average cost per trip from $5-6.
    - The lowest performing routes see the average cost per trip around $23-100 (much variation).
- Microtransit may run about $30-60 per trip on average.

This study recommends that El Metro continue offering El Lift to all existing eligible riders whilst exploring fixed route changes and the agency becomes acquainted with microtransit. El Metro's microtransit mobile app and phone/radio dispatch operation can gradually introduce comingling of ADA El Lift trips with microtransit. Microtransit will provide El Lift riders with same day trip opportunities within a zone. El Lift eligible riders would continue to have curb-to-curb access to the

broader service of the fixed route system. The technology that would support the microtransit service could eventually be utilized for El Lift, which could allow for same day reservations, real-time vehicle tracking and online payment capabilities. Another benefit of a pilot microtransit program would be familiarity with the new technology.

Qualitative Advantages & Challenges

Rider Experience

A new on-demand microtransit zone may or may not see more trips per revenue hour over the existing lower performance fixed routes within the zone. Performance may be better or the same. If performance trends significantly worse (i.e., fewer trips costing more), then El Metro should explore maintaining or restoring the fixed route. What will be true about on-demand microtransit compared to the infrequent and circuitous fixed routes is the new zone-based service's ability to provide a significantly better experience to riders. Riders will be able to, even if cost neutral to the agency, more reliably and flexibly connect from any origin within the zone to any destination within the zone, or to transfer to the fixed route network. Additionally, even with an average wait time of 20 minutes, riders will generally spend less time waiting for microtransit than for the infrequent fixed route. Riders will also spend less time reaching microtransit because the service generally will pick-up or drop-off at curb locations near the rider or destination. The convenience of the new daytime microtransit may well attract new riders who are not presently willing or able to access the fixed route.

The late evening city-wide microtransit zones would provide riders with an entirely new opportunity – to utilize transit for trips anywhere in Laredo as late as 11p.m. Adding the late evening service potentially improves service for all existing riders and any potential riders not currently utilizing El Metro due to service hours.

Operational Ease & Safety

On-demand microtransit will utilize smaller vehicles than the fixed route. The smaller vehicles can more safely and nimbly navigate the relatively narrow streets and tight corners common in many Laredo neighborhoods. The smaller vehicles have a lower capital cost and require less expensive maintenance to maintain in a state of good repair. El Metro could also opt to utilize operators without a commercial driver's license.

The late evening city-wide microtransit zones present significant challenges in terms of operational ease and safety. The late evening service requires substantial additional investment in non-operator staffing, such as for road call response, call center reception, and supervision. The late evening service also may increase insurance expenses due to increased risk of the later, low-light

hours. The late evening service may place El Metro into the appearance of direct competition with private sector taxi and transportation network companies (TNCs); microtransit involves waiting times and shared rides and is not 100 percent synonymous with taxi or TNC service.

The late evening service will require several vehicles in concurrent operation; the exact number can only be estimated to be as many as about a dozen vehicles. The evening service picks up as other services conclude and can therefore use the same vehicles as the other services. The additional revenue mileage will accelerate vehicle wear and require accelerated preventative maintenance to maintain a state of good repair.

Comingling Select ADA Trips

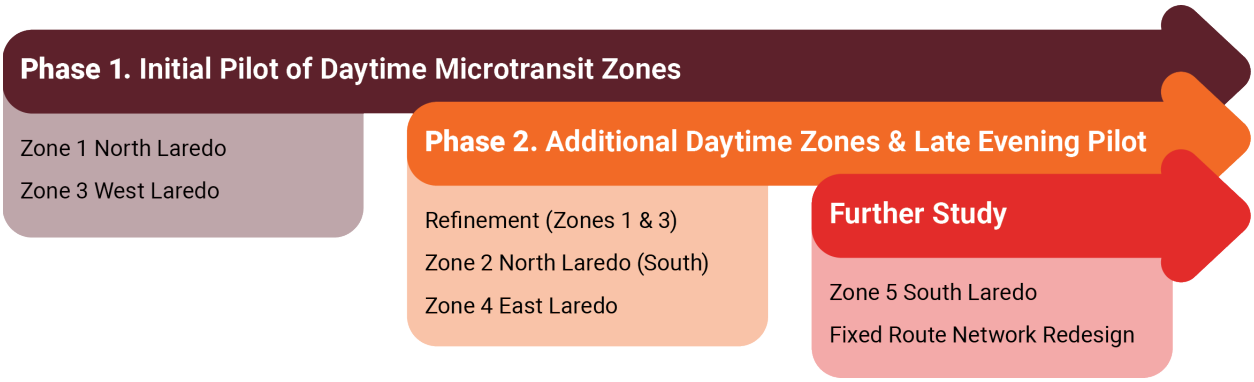
The consultant team recommends El Metro continue to operate fixed routes during the pilot period for an on-demand microtransit zone. Such a course of action will also provide time for the agency to explore travel training[17] to help riders eligible for complementary paratransit, El Lift, to begin using the accessible on-demand service for some of their trips. Travel training would involve El Metro proactively educating riders to foster riders' familiarity and comfort using the new microtransit service. El Metro will benefit from service and cost efficiencies, while riders will benefit by having a same-day trip alternative. Should El Metro eventually decide to reduce or eliminate fixed route service within a zone, this study recommends the agency continue to provide an accessible curb-to-curb service for individuals eligible for El Lift paratransit at the time the fixed route service is changed.

The late evening microtransit alternative extends service beyond when the fixed route system operates. The microtransit service would need to continue to utilize either 100 percent accessible vehicles, or at least a sufficient number of active accessible vehicles to promptly accommodate trips requested by riders needing an accessible vehicle. This is a requirement per State of Texas and FTA policy.

[17] Further information about travel training can be found here: https://www.nationalrtap.org/Resources/Best-Practices-Spotlight/Archive-Travel-Training

Recommended Phased Implementation of Microtransit

The study's recommended course of action to El Metro and partners is detailed below. This plan is based on a careful review of all previously documented information, both quantitative and qualitative. The recommended phased implementation commends a course of action for El Metro and partners to strategically introduce microtransit into Laredo (see **Figure 6-3**). The associated tables with the graphic represent Year 1 metrics for vehicles, cost and ridership.



Phase 1: Initial Pilot of Microtransit Zones

Zone	Square Mileage	Vehicles	Cost	Ridership
Zone 1	9	3-4	$1.6M-2.53M	39,700
Zone 3	2	1-2	$0.53M	7,800
Total	**12**	**4-6**	**$2.13M-3.06M**	**47,500**

Phase 2: Additional Daytime Zones and Late Evening Pilot

Zone	Square Mileage	Vehicles	Cost	Ridership
Zone 2	3	2	$0.93M-1.1M	23,400
Zone 4	5	2-3	$1.1M-1.6M	32,900
Late Night	70	18	$2.33M	58,800
Total	**8 // 70**	**4-5 // 18**	**$4.36M-5.03M**	**56,300 // 58,800**

Phase 3: Further Study

Zone	Square Mileage	Vehicles	Cost	Ridership
Zone 5	10	7-11	$3.46-$5.46M	117,400

Note: Metrics are for year 1 of service implementation

Figure 6-3. Visual Summary of Phased Introduction of Microtransit into Laredo

The recommendations in this report closely harmonize with the recommendations in the 2021 Comprehensive Operational Analysis (COA). This study's quantitative analysis and public engagement confirmed and refined the COA's recommendations. The recommended phased

implementation charts the route for El Metro to introduce microtransit as a third transit mode in Laredo – over time to enable the agency to manifest results and apply the lessons learned.

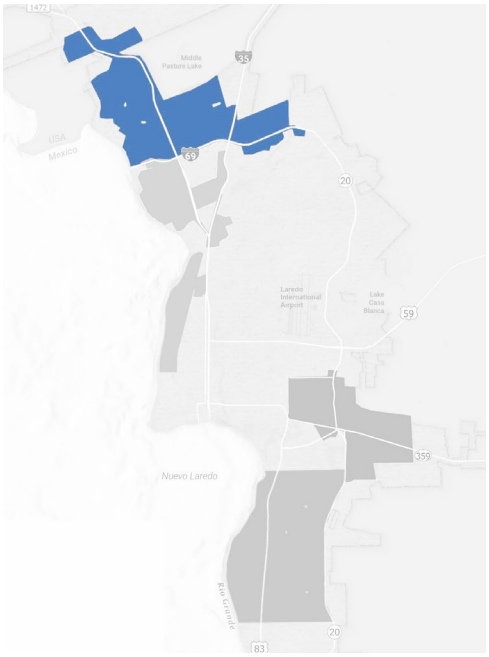
Phase 1. Initial Slate of Daytime Microtransit Zones

The consultant team's recommendation is for El Metro to begin with the pilot implementation of two daytime microtransit zones – Zone 1 and Zone 3. The duration of the pilot period should be at least 12 months. El Metro should ensure at least two microtransit vehicles are always present in each zone. El Metro should prepare for and apply the actions in the implementation framework contained in the next section. The pilot period for Phase 2 will enable El Metro to learn about actual local ridership demand and to become deeply acquainted with providing a high-quality, reliable microtransit service.

Zone 1 North Laredo

Zone 1 is a priority for implementation because of two principal reasons:

- The zone includes a wide variety of land uses, including residential areas of generally low density and street networks less conducive to supporting fixed route transit (i.e., walkability to bus stops).
- Commercial and industrial areas enable El Metro and LWCAMPO to test the use case for microtransit to alleviate some of the local traffic congestion due to commercial vehicles on local roads (i.e., proactively market the service to employees and truck drivers so commercial vehicles are not utilized for personal trips within the zone, such as while the driver is waiting for a load)



Furthermore, through the public engagement efforts, the survey indicated support for a microtransit zone in north Laredo, including near Mines Road.

A pilot program in this zone affords El Metro the opportunity to learn about how to serve riders in a variety of contexts – residential, commercial, and industrial/freight use cases.

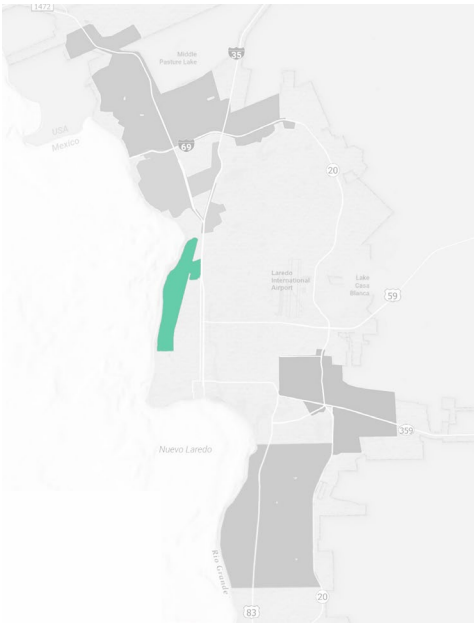
The commercial and industrial areas include several large logistics centers with limited transportation access for buses to bring riders close enough to their destinations in order to attract the riders in the first place. However, some riders utilize the existing fixed route as a pseudo express route, meaning a group of riders routinely ride at particular times for long distances to

reach particular stops near business centers. El Metro should coordinate with operations staff familiar with these routes to identify opportunities to reduce fixed route service in ways less disruptive to workers relying on transit in volumes challenging to service via microtransit (i.e., El Metro may desire to avoid ending a fixed route at the edge of the zone in situations where those persons are traveling into the zone for a particular stop as a group, to avoid creating unnecessary transfers).

Zone 3 West Laredo

Zone 3 is a priority for implementation for the following reasons:

- Zone 3 is the most compact zone and possesses a mix of land uses in a generally long-established area of Laredo.
- Zone 3 allows for the complete replacement of the low-performing C3 Riverside Circulator fixed route, which means at least 55 percent of the operating cost will be offset (this could approach near 100 percent of the microtransit operating cost as El Metro will likely achieve a lower operating cost per revenue hour for microtransit as compared to fixed route at $109.19 per vehicle revenue hour).



A pilot program in this zone affords El Metro the opportunity to learn about ridership demand when the C3 Circulator route is replaced. El Metro can eliminate the C3 Circulator route in concert with proactively rolling out microtransit. All El Lift riders should continue to be eligible for paratransit service regardless of any changes to the ¾-mile required ADA service area. One of El Metro's microtransit vehicles should visit the stops formerly served by Route C3 at the former timepoints to contact existing riders and ensure a smooth transition to utilizing the new microtransit service.

Phase 2. Additional Daytime Zones and Late Evening Pilot

The study's recommendation is for El Metro to continue implementing microtransit in Phase 2 – principally by refining daytime zones, adding an additional daytime zone, and introducing late evening service as a 12-month pilot.

Zone 1 & 3 Refinements

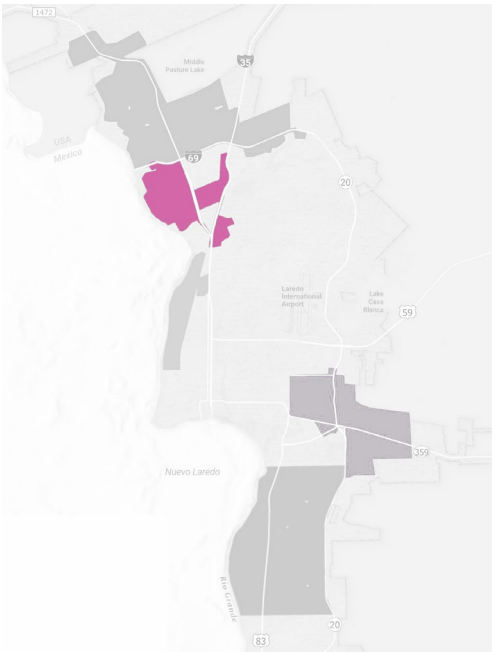
El Metro should plan to refine and adapt Phase 1 zone boundaries based on rider requests and collected comments. For example, there was interest from some stakeholders for Zone 3 to serve the Mall del Norte, near the proposed zonal boundary. At this time, inclusion of the mall is not

recommended; it can already be accessed via fixed route, and not serving the mall will allow for the limited resources to serve trips to other destinations, such as grocery stores.

Zone 2 North Laredo Addition

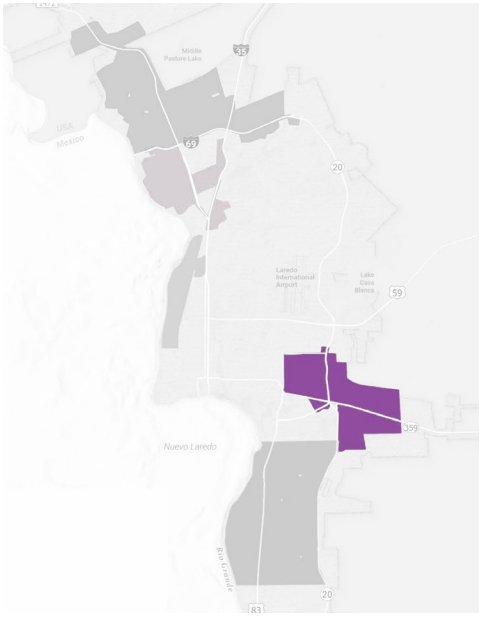
El Metro could consider extending microtransit service into the area covered by Zone 2 into the initial Zone 1 area – for a larger northern zone – or to operate Zone 2 separately in Phase 2.

Another suggestion heard while talking to stakeholders would be to extend Zone 2 further east to cover the Academy Sports + Outdoors store and the restaurants located between International Boulevard and Bucky Houdmann Boulevard in northeast Laredo. This area is still developing, but additional demand could exist in the future.



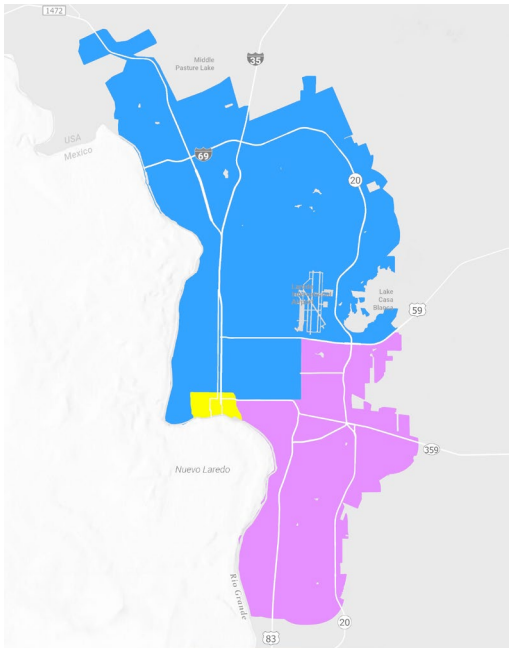
Zone 4 East Laredo Addition

This study recommends El Metro to plan to begin to operate Zone 4 in Phase 2. El Metro can apply lessons learned about reducing fixed route service strategically in Phase 1. The agency can also better estimate likely ridership given the types of destinations riders seek to reach in Laredo via riding microtransit.



Late Evening Pilot

El Metro should consider piloting the late evening service as part of Phase 2. The exact nature of demand for microtransit in the evening hours will remain partially unknown but El Metro will have established a new branded service and can more easily support an evening operation. Additionally, delaying the piloting of evening service affords El Metro with more time to consider the service delivery options available to the agency (i.e., directly operating like daytime zones or contracting all or part of the evening service).

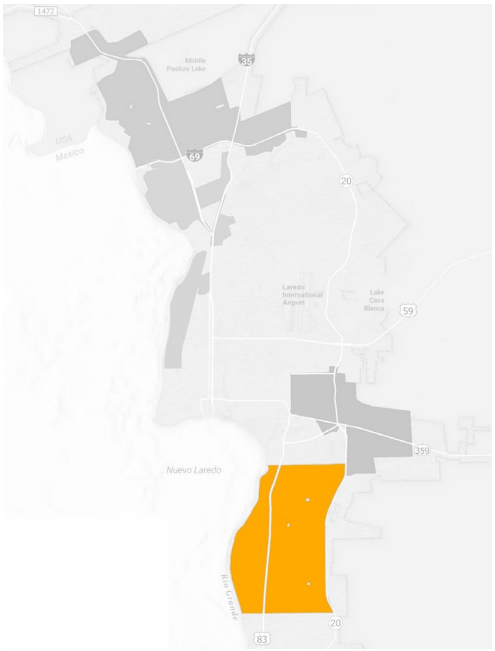


Recommendation for Further Study

This study recommends El Metro and LWCAMPO continue to refine the region's transit services by performing a geographically focused study on Zone 5 South Laredo, or a comprehensive fixed route network redesign study on the whole of Laredo. Further study is warranted before implementing microtransit zones to replace mid-performing fixed route segments. The additional information and rider engagement will ensure the eventual solutions improve existing riders' experiences and create opportunities for El Metro's services to most efficiently serve new riders across the community.

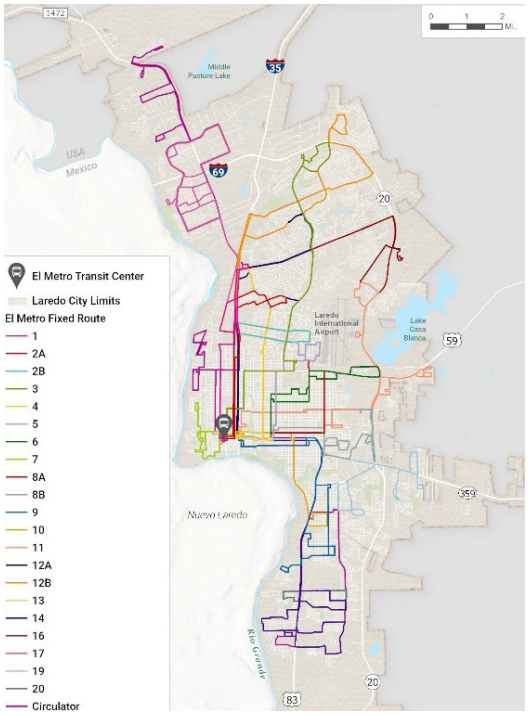
Zone 5 South Laredo Study (i.e., limited network redesign)

El Metro should apply the agency's lessons learned and manifested ridership demand to re-evaluate the value proposition for Zone 5 in South Laredo. Zone 5 as currently envisioned would introduce microtransit into an area with many fixed routes. El Metro should complete an origin-destination survey and/or stop level ridership analysis. This information will enable the agency to understand the implications of introducing microtransit to replace some or most fixed route in Zone 5, including likely changes to rider trip patterns internal and external to the zone.



Fixed Route Network Redesign Study (i.e., complete redesign)

The key takeaways from the 2021 COA included noting relatively low service frequency across all fixed routes and services that did not reflect demand. The COA recommendations included implementing distributed hubs so not all routes needed to go downtown and implementing select route adjustments. This study concurs with these recommendations.



El Metro and LWCAMPO should consider a systemwide study to identify opportunities to create a network of more linear, higher-frequency fixed routes in both North-South and East-West directions. Any new network should be carefully constructed to provide sufficient capacity from and to the downtown transit center, while also enabling riders to make more direct trips in other locations of Laredo. The new network may consist of a different number of fixed routes, with microtransit to provide broad and consistent access to the new fixed route network.

The consultant team strongly recommends any network redesign involve proactive rider engagement. Additionally, El Metro should collect a stop level ridership inventory and/or an origin-destination onboard survey. The data collection will enable El Metro to concretely understand how their new network would serve existing riders and overall demand. The agency should also carefully monitor which routes have surges in demand that leave riders waiting for the next bus, a long wait, due to a bus filling to capacity during peak hours (i.e., riders left waiting for 30+ minutes in the morning peak period could instead be served by an El Metro spare vehicle and then ultimately the new network can ensure sufficient capacity). In addition, app-based microtransit service is itself a data-collection tool. Collecting and analyzing ridership and trip-request data can help optimize microtransit zones and trip booking parameters (e.g., maximum wait time, maximum travel time, etc.).

Chapter Conclusion

The study recommends implementing a pilot program of least 12 months with two of the daytime zones: Zone 1 (North Laredo) and Zone 3 (West Laredo). These zones are chosen based on stakeholder feedback, a test case for tractor-trailer truck usages, the size and land uses in these zones, as well as ability to replace low-performing circulator routes. Starting with two zones will allow El Metro to learn about ridership demand and become acquainted with providing microtransit service. Lessons learned from this pilot program will inform the implementation of a second phase with additional microtransit service. The second phase can involve refining the first daytime zones, adding additional daytime zones for Zone 2 (North Laredo) and Zone 4 (East Laredo), and introducing late evening service. Finally, the recommendation is to continue to refine the region's transit services by performing a geographically focused study on Zone 5 (South Laredo), or a comprehensive fixed route network redesign study on the whole of Laredo.

7. Implementation Framework

7. Implementation Framework

This chapter provides El Metro and partners with information about the key implementation activities required to introduce on-demand microtransit, and to sustain and refine the service into the future. First, the key activities section highlights fundamental requirements for microtransit service. Second, the performance tracking section commends a suite of metrics intended to monitor the balance of service quality from both agency and rider perspectives.

Key Activities to Implement Microtransit

Implementing microtransit involves planning for and funding many fundamental administrative and operational aspects. **Figure 7-1** highlights key activities involved in implementing the new mode of service.

Figure 7-1. Key Implementation Activities

The following sections provide El Metro staff and partners with essential implementation information to establish and then maintain sustained success of microtransit. El Metro leadership expressed a clear intent to operate the daytime microtransit zones directly and not to utilize any private sector partnership except for the technology solution to facilitate trip booking and management. For this reason, this plan focuses on implementation key activities for a principally directly operated service and only touches briefly on the potential value of a turn-key operator to run the late evening microtransit pilot in Phase 2.

Technology Requirements

Software

El Metro will need to procure a technology partner to be responsible for and provide a platform or technology-based app. It is possible that the existing El Lift paratransit software could support microtransit. Smartphone apps (iOS and Android) are the preferred method to plan, book, and pay for trips. Many existing riders also appreciate and hope El Metro will ensure cash fares and phone reservations are available long-term. El Metro should ensure their technology solution can support fare collection, transfers, and trip subsidy functions (as applicable per agency policy at the time of implementation). The app must meet the requirements of the on-demand service and provide trips within the restrictions of El Metro's service policy to monitor on-time performance. It is recommended for El Metro to consider the following during the technology procurement:

- Reporting functions are accessible to El Metro and enable sufficient detail for the agency to review the number of trips, trip lengths, and other service tracking data.
- The technology provider commits to provide sufficient training during initial implementation and on a periodic basis thereafter, especially during the first year and when any major technology updates occur.
- Include the ability to seamlessly incorporate high-quality Spanish translation and function into the app and associated tools.
- Necessary software updates provided by the technology provider.
- The availability and security of data collected about riders and their trips, and the security of the platform to hold personally identifiable data.
- If preferred, El Metro may opt to procure a white labeled app (i.e., that appears as an agency-owned app to riders) with terms and conditions spelling out the role of El Metro and the technology provider.

The following is an example of a common structure for a contract with a technology provider for microtransit software-as-a-service:

- One-time startup or platform fee – $10,000 to $50,000
    - Sometimes fee reoccurs with additional zones or if major changes are requested
- Monthly software fee, generally per vehicle – $500 to $700 per month
- Additional fees based on options in the contract:
    - Spanish translation of mobile application – $5,000 to $10,000 onetime
    - License per revenue mile for web services server charges (sometimes included in monthly per vehicle fee) – $0.20 to $0.30 per revenue mile
    - Bilingual website set-up – $5,000 to $7,500 onetime
    - Bilingual training and marketing materials support - $15,000 to $25,000 in year one and thereafter closer to about $5,000 per year

Fare Payment

El Metro should ensure their fare and/or microtransit technology partner supports all common and emerging fare payment methods – such as in-app, online, and cash. El Metro riders are used to cash fares and for the near future El Metro should maintain the ability to accept cash, while also establishing a clear mechanism for riders to transfer. Transfers are important as the microtransit service is designed to connect riders to the fixed route network for most trips; riders should not be expected to pay two fares on trips coordinated by El Metro between transit modes. The software must maintain a level of security sufficient to house rider data and payment information. El Metro will have to work with the technology providers on the use and disbursement of fares obtained through online systems.

Many transit operators choose to offer on-demand microtransit utilizing the same fare regimen as other transit modes. Some other agencies choose to utilize a fare specific to the on-demand service. All peer agencies reviewed by the consulting team applied the same fare schema across all zones.

The most common reason to decide to utilize an on-demand specific fare is to enable an additional control lever for managing the service's performance. Agencies with on-demand specific fares most commonly utilize a base fare for a trip up to a predetermined distance and thereafter charge an additional fare per each additional mile up to a maximum fare. For example, Denton County Transportation Authority (DCTA) employs a $1.50 base fare for trips up to four miles long and then an additional $0.50 per mile up to a maximum total fare of $5.00 per each one-way trip.

El Metro should decide if encouraging shorter trips within zones may be a priority and plan fare structure changes accordingly. It is not recommended to consider distance-based fares during pilot periods, as doing so adds complexity while recovering a relatively small amount of funds from fares within modest size zones wherein long trips are less likely to be common. Rather, El Metro should observe and refine microtransit over time, including zone boundaries, service hours, and fare mechanisms. The single highest priority change regarding fares and microtransit is to ensure no-cost transfers are possible from the service to/from fixed routes. The same change could be implemented to afford all El Lift paratransit riders with the same transfer accommodation.

The one exception to the above recommendation about distance-based fares applies if El Metro implements late evening microtransit city-wide in a later phase. The recommended late evening zones are considerably larger and cover the entire service area. Therefore, riders' trips may be significantly longer. El Metro should consider a variable distance-based fare similar to DCTA's model for any late evening microtransit service in large zones.

Onboard Equipment

El Metro will need to outfit each microtransit vehicle, including spare vehicles, with onboard equipment (i.e., fare boxes and electronic fare validators) to ensure both banked and unbanked passengers may effectively utilize the new on-demand microtransit service. El Metro will also need to equip each vehicle with a conveniently mounted tablet. The tablet is primarily to assist the operator to efficiently provide service, including active coordination for shared riders by the software platform. El Metro will also need to continue to equip each vehicle with whatever fare payment systems are in use systemwide.

Operations and Maintenance

El Metro can utilize the surplus spare lighter duty vehicles in the existing fleet to operate the new on-demand microtransit service. The agency is already accustomed to maintaining vehicles.

The pilot microtransit services in one or several small zones during regular operating hours will not require any significantly different management structure to succeed, though as the program grows a dedicated operations manager could be beneficial. The same individual could also have responsibility for the El Lift paratransit service. In this scenario, El Metro has one fixed route operations manager and one demand responsive operations manager.

Implementing the late evening city-wide microtransit service will require El Metro to hire additional non-operator staff to support the operators working the late evening hours (i.e., road call support, supervisor, call center, etc.). This is one of the key reasons that this study recommends El Metro introduce microtransit by first implementing one or several of the smaller zones operating during regular hours. El Metro can learn the nuances of and ridership demand for the new type of service, then apply lessons learned to refine the pilot zones or add additional microtransit services.

El Metro will need to establish protocols for on-demand operator training. Communication will be key to both internal coordination and to ensuring all riders experience as consistent an experience as is feasible. A key factor for successful on-demand microtransit is, much like El Lift paratransit, never to leave a rider stranded when the customer has appropriately made a trip booking.

If El Metro also allows trips to be booked by phone, the agency will need to ensure sufficient capacity is available to field calls reliably. The same-day nature of on-demand services require prompt, concise communications channels. El Metro could even provide a tablet and training to staff at the customer service center at the downtown transit center to enable riders to book a microtransit trip in person with staff assistance. The transit center is the central service hub for the entire network. El Metro should ensure information on the new service is apparent and clear at the transit center, in addition to the marketing efforts to take place within each zone.

Insurance

El Metro will utilize existing vehicles and organizational structures to operate the new on-demand microtransit services. No additional risk or special considerations related to insurance requirements are anticipated, because El Metro already operates services of both a fixed and demand responsive nature. If El Metro decides to offer the late evening microtransit service, then additional consideration should be given to insurance requirements, as agency risk may be some degree higher during consistently low-light hours with fewer vehicles and staff ready to respond in case of a challenge in the field.

Driver training

El Metro will need to provide staff with clear training during the implementation of the new service. The training should address how to use the technology involved and any communication protocol (especially if phone reservations are taken; meaning some riders will not be as easy to communicate with as others).

El Metro may decide it is strategic to utilize some non-CDL operators as microtransit vehicles will not require a commercial license. The non-CDL operators will still require similar training and must meet similar drug and alcohol standards as CDL peers.

Marketing

For a new service model to succeed, it is critical to understand best-practice marketing tactics. El Metro should consider hiring a marketing ambassador for the new service, either part-time or full-time during the pilot period. The ideal candidate will strongly identify with riders about the realities and challenges of utilizing transit in Laredo and be able to compassionately assist individuals to begin utilizing the new microtransit service.

El Metro should also consider ways to proactively travel-train existing riders on using the microtransit service through explaining how the service works. One such idea would be to contact riders in-person on the fixed route to help them make the return trip via microtransit with a discount code for free rides.

El Metro should consider branding the microtransit service as a distinct, new offering. This could include vehicle wraps and coordinated marketing collateral materials.

Marketing and outreach efforts will be necessary to publicize the new on-demand service. Some ideas include:

- Placing information at all stops within a new zone and onboard fixed route vehicles serving nearby routes
- Placing posters at the downtown transit center
- Establishing an ambassador's program in partnership with a non-profit or an educational institution; ambassadors would be customer service individuals at the transit center and in the field to assist individual riders to book a trip, complete a trip (i.e., with the rider), and generally to be a frontline presence for El Metro.
- Proactive engagement with partners at frequent destinations (e.g., grocery stores, department stores, major employers, senior centers, etc.).
- Partner with the following non-profit organizations and other local government agencies for events, newsletters, etc.:
    - El Aguila Rural Transit (part of Webb County Community Action Agency)
    - Ruth B. Cowl Rehabilitation Center
    - Webb County Veterans Service Office
    - Bethany House of Laredo
    - South Texas Development Council
- Press releases by El Metro and proactively seeking local newspaper and television news coverage
    - Information can be distributed to both local Laredo press and Nuevo Laredo press to explain the new coverage
    - Press can be invited to utilize the new service and going along with a rider to show how to use the service
- Website pages specific to the selected service, including specifics on booking a trip, a map of the service areas, hours of operation, fares, and how transfers to fixed route works.
- Promotional videos and radio advertisements (i.e., these can be included in the technology procurement for the app/software provider).
- Paid social media advertisements.

Funding

The FTA considers on-demand microtransit to be a demand responsive service for funding and reporting purposes. El Metro's introduction of the new microtransit service will utilize existing funding sources. The following points briefly highlight a few potential opportunities or considerations for El Metro:

- Late Evening Service: Potential Contracting Implications
    - El Metro could opt to utilize a contractor for some or all microtransit services, especially to simplify operational delivery for the late evening city-wide zones when

the agency's other modes cease operation. E Metro could use one of a variety of service contracts to procure support for all or selected functions related to microtransit – from full turnkey to technology only.
    - If El Metro decided to utilize a service contract then the type of contract may mean the agency can utilize FTA Section 5307 funding for an additional portion of the contract cost due to capital cost of contracting. Capital Cost of Contracting (CCOC) is essentially the FTA's allowing a larger portion of the contract to be paid with federal funds due to the service contract involving the private party incurring capital expenses for vehicles and/or vehicle maintenance facilities or equipment.
    - El Metro would not receive any additional FTA Section 5307 funds due to contracting or CCOC, but the non-federal match required for the contracted service may be modestly lower than the agency is accustomed to and thereby free up local funds for other purposes. This is only a benefit to El Metro if the agency consistently has a surplus of FTA Section 5307 capital funds.
- Currently, LWCAMPO does not receive Congestion Mitigation Air Quality (CMAQ) funding. However, it may be eligible to this type of funding at some point in the future.
    - CMAQ funds would flow through LWCAMPO.
    - Transit service pilots are typically an allowable use of CMAQ funds, provided criteria are met.
    - CMAQ funds in other regions often support piloting services for a 1- to 3-year period.

Federal Civil Rights Considerations

El Metro and agency partners are familiar with federal and state requirements related to providing transit services. The following information is offered as information only to highlight key considerations during implementation of the new type of transit service that bridges fixed routes and El Lift paratransit.

- **Title VI**: El Metro will need to complete a Title VI analysis to ensure the new service, and any attendant service changes, do not adversely affect different areas of Laredo based on race, color, or national origin.
- **Americans with Disabilities Act (ADA):** El Metro will need to ensure services comply with ADA requirements.
- **Unbanked Population:** To ensure individuals with no debit or credit card can access the service, vehicles should be equipped with fareboxes so passengers may use cash while boarding the vehicle. If the program becomes cashless in the future, customers should be permitted to use cash to purchase pre-paid and re-loadable fare cards from local retailer that can then be used to pay for trips (i.e., El Metro might partner with key local retailers near designated anchor points or frequent destinations).

- **Limited English Proficiency (LEP):** El Metro will need to follow LEP procedures as deemed by the Civil Rights Act of 1964 to ensure that the vital information for the service – including announcements, booking language, and other service information – is available in any language identified as a Safe Harbor language in the service area. The safe harbor threshold is any eligible LEP language that makes up 5 percent or 1,000 people of the total population served. This will, of course, be Spanish in the El Metro service area.
- **Smartphone/Internet Access:** A call center should be available for customers without a smartphone or internet access. El Metro can utilize its existing customer service mechanisms to reserve a trip, or a procured contractor can host a call center for trip bookings specific to microtransit (this is often an option provided by technology partners working in the microtransit industry). Either option requires customer service personnel to be trained to understand the intricacies of the service and compliance requirements.

Performance Tracking

While planning for new service relies heavily on demographic and land-use analyses, the evaluation of existing services requires an ongoing review of service performance. Service standards and performance monitoring programs are essential for transit systems, as they provide both a basis on which service adjustments may be considered and an opportunity for public transparency. From a planning perspective, the ongoing service monitoring of both fixed-route and on-demand microtransit services will help El Metro identify opportunities to right-size service deemed to be either under- or over-performing

For example, a fixed-route service that has consistently low ridership or productivity could be replaced in part or whole with an on-demand microtransit zone, which may be more cost-effective in serving lower-demand or challenging built environments. Conversely, El Metro can adjust any on-demand microtransit zone that has outstripped the agency's ability to meet ridership demand, which may involve transitioning the service back to a more regularly scheduled service (i.e., fixed route, deviated fixed route, etc.) which can more efficiently transport large volumes of riders.

The following sections provide El Metro with recommended performance measures and a service review protocol.

Recommended Measures

El Metro should track on-demand microtransit performance using the agency's typical key performance indicators (KPIs) and some additional measures:

- Unlinked passenger trips per vehicle revenue hour
- Unlinked passenger trips per vehicle revenue mile
- Operating expense per unlinked passenger trip
- Complaints per 1,000 trips
- Mean distance between service calls
- Incidents per 100,000 miles

El Metro should also use the following KPIs specific to on-demand microtransit:

- Average wait time (i.e., average response time in minutes)
- On-time performance (i.e., percent of trips adhering to the target <## minutes response window)
- Percent shared trips (i.e., portion of all trips with 2+ riders onboard)
- Percent of time the mobile app is up and functioning

Recommended Service Review Protocol

On-demand microtransit services require intermittent review to maintain high service quality while balancing operational requirements for the agency. The consultant team recommends El Metro anticipate reviewing each zone periodically. The following list is one potential approach:

- Month Three – review service marketing and trip location requests to identify any potential small zone adjustments
- Month Six – review the zone's performance/cost trend and conduct proactive marketing to fill any apparent unmet demand (i.e., key destinations not seeing demand for trips)
- Every Three, Six, or 12 Months Thereafter – review zone performance and decide on adjustments to on-time performance, shared rides, or average wait time KPIs (i.e., to manage demand if exceeding budgeted resources)

Several peer transit agencies in Texas and elsewhere have learned by experience to periodically review on-demand services using a pre-determined methodology. Capital Metro's Pickup on-demand services follow a standard practice for review and adjustment every six months.[18] San Antonio Via's Via Link on-demand service, another peer explored in Chapter 2, also provides reporting metrics.[19] Peers provide El Metro with additional insight into how to stand-up, monitor, and report on-demand microtransit services.

[18] CapMetro's Pickup service dashboard, which displays statistics on the service, is available here: https://www.capmetro.org/dashboard/pickup-stats

[19] San Antonio's Via Link service dashboard, which displays statistics on the service, is available here: https://app.powerbigov.us/view?r=eyJrIjoiM2Q0NWI0OTAtOTQ1Ny00YmJkLTg4YzQtNTdkMzYxNzg5ZmRkIiwidCI6IjJhMzAzM2MyLWFkNzYtNDI2Yy05YzVhLTIzMjMzY2RlNGNkZSJ9

Recommended Fixed Route Performance Review

It is recommended for El Metro to establish a minimal performance threshold for fixed routes, such as based on unlinked passenger trips per vehicle revenue hour. A recommended practice could be for El Metro to review a route in detail when for four consecutive quarters the route is low performing. The review exercise should include staff holding a workshop and field review to determine potentially causes and improvement options, including microtransit, marketing, traffic signal coordination, or many other potential actions to support a better service with more ridership.

Chapter Conclusion

Overall, microtransit can provide an alternative modal option, which would complement the existing El Metro fixed route and paratransit service, while also creating an improved rider experience and coverage in certain parts of Laredo. Implementing microtransit involves planning for and funding many fundamental administrative and operational aspects; this section reviewed items that are essential for successful microtransit implementation, considering that El Metro is interested in operating the service directly, with assistance from an external vendor for the technology requirements to support microtransit. After implementation, it is essential that El Metro continue intermittent review and tracking performance measures to ensure that microtransit is providing a reliable, high-quality service.

Microtransit can provide an alternative modal option, which would complement the existing El Metro fixed route and paratransit service, while also creating an improved rider experience and increased coverage in certain parts of Laredo.