Lassen County Transit Development Plan

2021-2026

Final

Prepared for the

LASSEN COUNTY TRANSPORTATION COMMISSION

Prepared by

LSC Transportation
Consultants

Lassen County
Transit Development Plan

Prepared for

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CHAPTER I
INTRODUCTION

Lassen County has offered public transportation services since 1981. These services have provided mobility to the county's residents, including access to important medical, recreational, social, and economic services and opportunities. Public transit is an integral element in the quality of life the community provides its citizens. The intent of this Short-Range Transit Plan (2021 – 2026) is to provide a five-year business plan for the transit system. The plan will evaluate the specific needs for transit services, as well as develop recommendations for improvements and service revisions. This is accomplished through the review of existing transit conditions, evaluation of operations, and public outreach (via community-wide surveys and stakeholder interviews). In subsequent documents, a wide range of service alternatives will then be evaluated and stable funding sources for operations and capital improvements of transit services will be identified.

The document presented herein presents the setting in which transportation services are provided, as well as a thorough evaluation of existing transit services.

STUDY ISSUES AND CHALLENGES

The Lassen Transit Services Agency (LTSA) and Lassen County Transportation Commission (LCTC) provided oversight and input for this Transit Development Plan. This plan was prepared at an unprecedented time for public transit—during the COVID-19 pandemic. The following issues need to be addressed as part of this study:

- Prior to the COVID-19 pandemic, public transit ridership was declining nationwide due to a variety of factors including a higher level of auto ownership.

- Public health concerns and economic restrictions resulting from the COVID-19 pandemic has had a devastating effect on public transit ridership. Most rural transit agencies significantly reduced service, with many switching to more demand-response type systems. Many transit agencies stopped charging a fare to limit human interaction and provide economic relief. Commuter services have been particularly hard hit as more employees are able to work remotely from home. Nobody knows how public transit ridership will rebound once the world goes back to "normal." This makes it challenging to plan.

- With lower economic activity, sales tax revenues have declined. Transportation Development Act Local Transportation Funds (TDA LTF), which stem from sales tax revenues, are the primary funding source for public transit in California. All transit operating revenue for Lassen County has declined by 38 percent between FY 2018 – 19 and FY 2020 – 21. Fortunately, federal aid (CARES Act) has helped hold LTSA a float in the short-term. However, financial trends show that revenue sources are not growing as fast as operating costs for LTSA. This makes it more challenging to meet TDA farebox ratio requirements. There also may be a need to reduce services to meet reduced revenue expectations at the end of this planning period.

- Lassen County does not have major medical facilities or specialized services such as dialysis centers. Therefore, there is a great need for out-of-county transportation to more urbanized centers such as Reno. This problem has been compounded by the fact that Sage Stage discontinued intercity transit service to Reno during the pandemic.

All these issues need to be considered as part of the Short-Range Transit Development Plan update.

Chapter II
STUDY AREA CHARACTERISTICS

GEOGRAPHY OF LASSEN COUNTY

Located in the northeast quadrant of California, Lassen County is composed of mountains, high desert, and fertile valleys. The major arterial highway through Lassen County is US 395, connecting the county to Alturas and Modoc Counties to the north and Reno, Nevada to the south. State Routes 44 and 36 also service the area, connecting Lassen County to the greater Sacramento Valley and the city of Redding. Susanville is the largest community and the county seat. It serves as the governmental, commercial, lodging, medical, educational, and tourist center of the region. The study area also includes extensive public lands for recreation as well as attractions such as the Bizz Johnson Trail. The study area is shown in Figure 1.

Lassen County's climate is characterized by warm, dry summers and cold, moderately wet winters. Low temperatures in January average 21 degrees Fahrenheit, while the high temperatures in July average 93 degrees Fahrenheit. Annual precipitation levels range from less than 10 inches of rain in Susanville up to 45 inches of snow and rain over Fredonyer Pass.

POPULATION

Current Population

As shown in Figure 2, Lassen County has a low-density population. Most of the population is concentrated in and around Susanville and the prisons. The total population of the County in 2018 (including the institutionalized population) was estimated to be 31,185 people with 15,216 (48.8 percent) residing in the Susanville area.

Historic and Projected Populations

According to the California Department of Finance (CA DOF), Lassen County has experienced a 13.6 percent decline in population over the past ten years as shown in Table 1. Based on the CA DOF population projections, this decline is expected to continue over the next 20 years, resulting in a total decline of 8.9 percent in population between 2020 and 2040.

While total population has declined since 2010, the number of residents who are ages 65 and older has increased by 27.6 percent over the last decade. This older population is expected to continue to grow through 2030 by another 8.6 percent. This implies that transit services will continue to be necessary to accommodate growth in the older adult population.

Transit Dependent Population

Nationwide, transit system ridership is drawn largely from various groups of persons who make up what is often called the "transit dependent" population. This category includes youths, elderly persons, persons

Figure 1
Lassen County Site Map

Figure 2
Lassen County Total Population

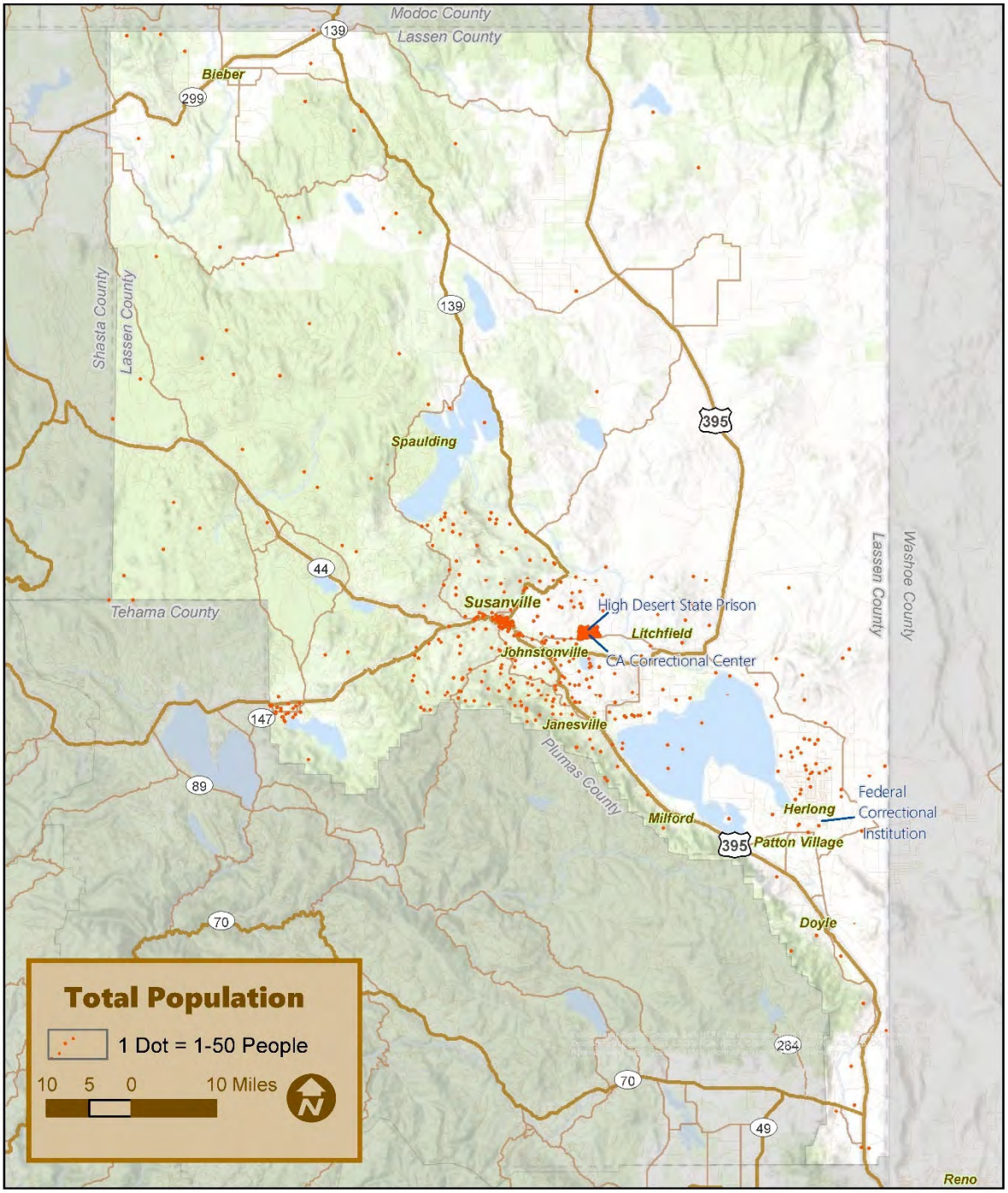


Table 1: Historical and Projected Lassen County Population

Age Groups	2010	2015	2020	2025	2030	2035	2040
Preschool (0 - 4 Years)	1,631	1,468	1,506	1,606	1,480	1,312	1,190
School Age (5 - 17 Years)	4,635	4,040	3,733	3,827	3,730	3,687	3,489
College Age (18 - 24 Years)	3,805	3,515	3,362	2,917	2,842	2,747	2,778
Working Age (25 - 64 Years)	21,253	17,761	16,651	16,678	16,105	16,002	15,802
Young Retirees (65 - 74 Years)	2,001	2,559	2,927	2,820	2,467	1,877	1,352
Mature Retirees (75 - 84 Years)	1,038	1,034	1,272	1,760	2,022	1,867	1,640
Seniors (85 + Years)	446	535	614	327	776	975	1,128
Total Population	34,809	30,912	30,065	29,935	29,422	28,467	27,379
65 Years and Older	*3,485*	*4,128*	*4,813*	*4,907*	*5,265*	*4,719*	*4,120*

	Total Population Change		
	#	%	Annual %
Growth from 2010 - 2020	-4,744	-13.6%	-2.9%
Growth from 2020 - 2030	-643	-2.1%	-0.4%
Growth from 2030 - 2040	-2,043	-6.9%	-0.5%

Source: California Department of Finance, 2020

with disabilities, low-income persons, and households with no available vehicles for use. There is considerable overlap among these groups. Table 2 presents the transit dependent population by Census Tract Block Group in Lassen County from the 2018 American Community Survey (ACS) from the U.S. Census.

- The youth population (children aged 10 to 17 years of age) represents 10.2 percent of the study area population, totaling 2,270 persons. The youth population is considered to be transit dependent persons, as children of school age that travel independently may need public transit to go to/from school or after school activities. The block groups near Susanville Ranch Park and South of Gold Run Road have the highest number of youths (177 and 172 youths, respectively). Figure 3 displays the proportion of youth population in each block group. Block Groups with the greatest proportion of youth are central Susanville (19.7 percent), northwest Susanville (17.5 percent), and Spaulding (17 percent). As a whole, the City of Susanville has a total of 932 youths (roughly 11.5 percent of the City of Susanville's population).

- There are an estimated 4,198 older adults (ages 65 years and older) residing in Lassen County, comprising 18.8 percent of the total population. The proportion of elderly persons is greatest in the community near Milford, Wendel, Herlong, with 61 percent of their total population being persons ages 65 and older (Figure 4). Other areas with high proportions of elderly persons include the block group near the Susanville High School (334 persons, 48.5 percent) and Doyle/South County (278 persons, 39.7 percent).

Figure 3
Lassen County Youth Population

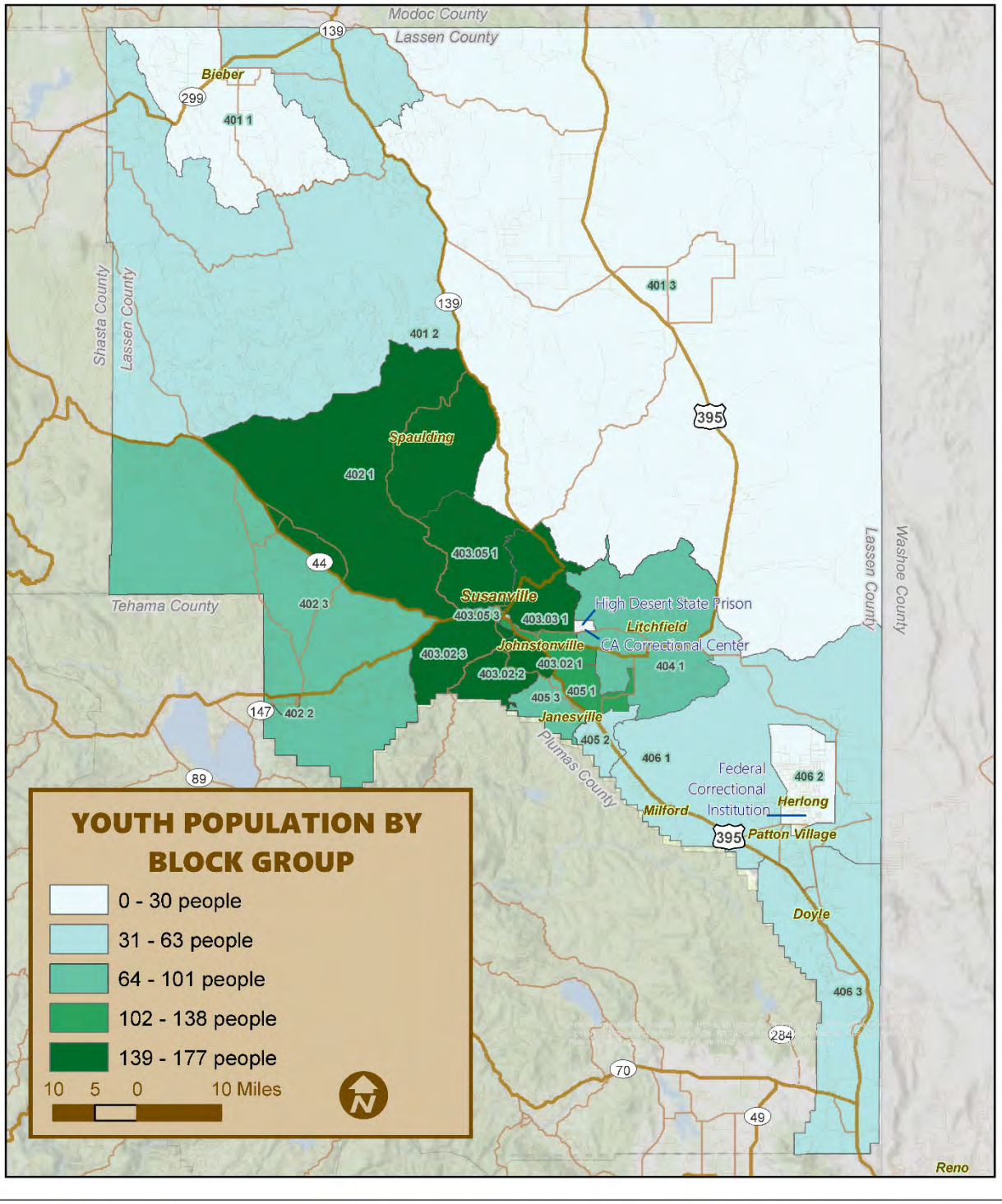
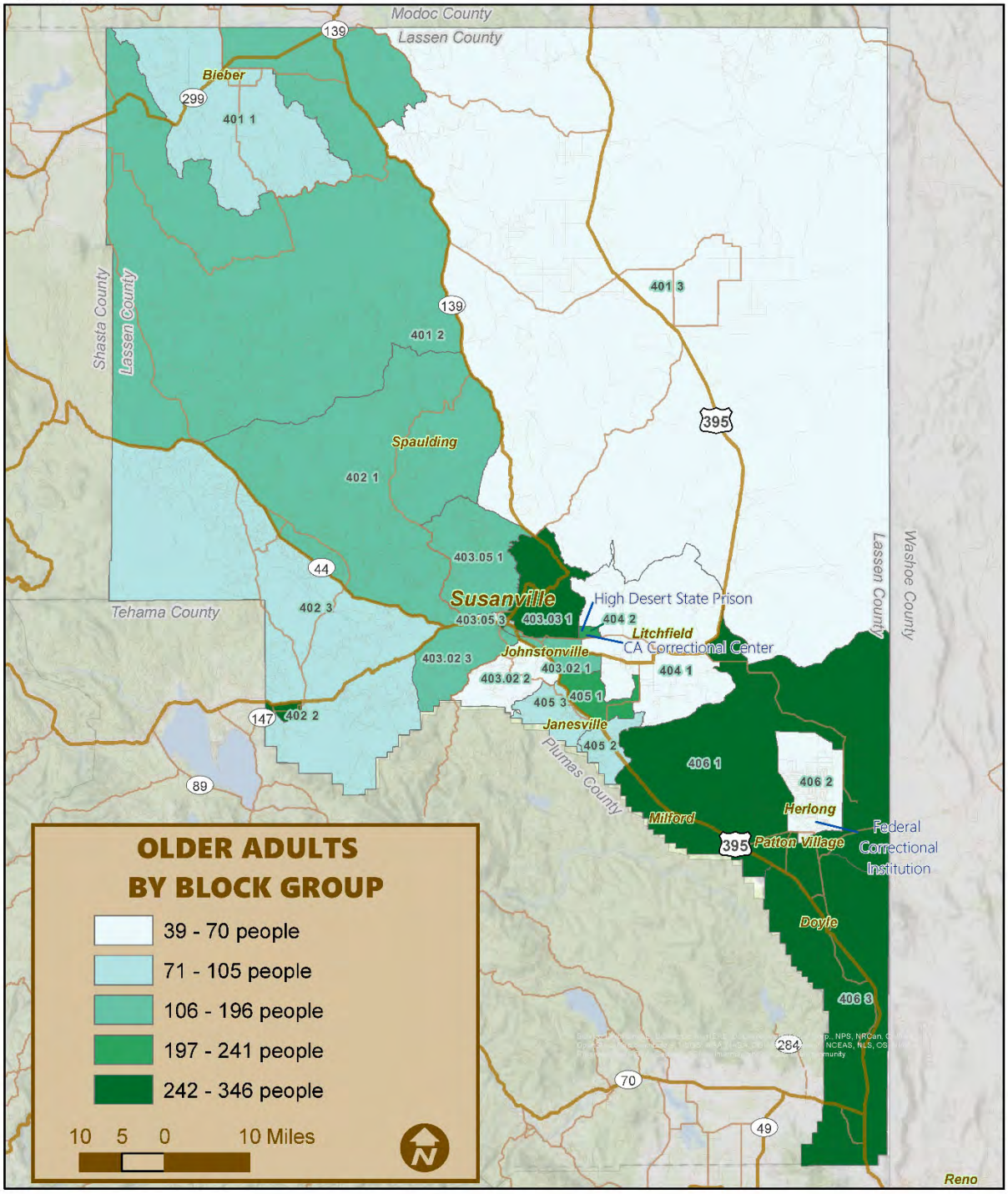


Figure 4
Lassen County Older Adults (65 and Older)



- The ACS also counts the population living below the poverty level, defined by several factors including household income and the number of dependent children. Residents living below the poverty level comprise 13.2 percent of the countywide population, compared to 11 percent statewide. As shown in Table 2 and Figure 5, the areas with the greatest percentage of population below the poverty level include the southern portion of the county near the community to Doyle, the northwest area of Susanville, and the area east of Johnstonville.

- Finally, one of the strongest indicators of transit dependency is the number of households without a vehicle available. There are 560 households in Lassen County without a vehicle (4.4 percent) of all households, with particularly high proportions in the northeast and southwest parts of Susanville as shown in Table 2 and Figure 6.

- There are 4,236 disabled persons in Lassen County, which comprises 19 percent of the study area population (Figure 7). The area that has the highest concentrations of persons living with disabilities includes the communities of Madeline and Termo (39.6 percent). In addition, the community of Herlong has the greatest number of disabled residents: 261 people.

ECONOMIC PROFILE

Historically, the local economy of western Lassen County has been based on mining and timber. Today, retail trade and government services dominate the current economic base. Additionally, occupations are growing in the gaming industry, computer network and systems administration, and prisons, adding to the diversity of the economy.

Major Employers

Major employers in Lassen County encompass a wide range of industries, ranging from government offices to health care to grocery stores. There are three prisons in Lassen County (High Desert Prison in Susanville, California Correctional Center in Susanville, and the Federal Correctional Institute in Herlong). Other major employers in Susanville include the City of Susanville, Lassen County, Diamond Mountain Casino, Forestry and Fire Protection, Walmart, Lassen National Forest, Northeastern Rural Health Clinics, and school districts. The US Army Depot in Herlong is also a major employer. As Table 3 indicates, more than half (55.6 percent) of the county's current labor force is made up of employment in the public administration, educational, and health/social services.

Labor Force

The ACS provides insight into the employment conditions in Lassen County. The pre-pandemic unemployment rate in Lassen County was roughly 6.1 percent in 2018. This was greater than the 2018 statewide unemployment rate of 5.1 percent. In terms of the number of people, this equates to 9,332 people in the labor force, 570 of which are considered unemployed. Considering that there are currently 22,304 non-institutionalized people living within the county, nearly 42 percent of the Lassen County population are likely either too young or old to be considered a part of the civilian work population. Economic restrictions resulting from the COVID -19 pandemic pushed the unemployment level in Lassen County to 7.1 percent as of February 2021.

Table 2: Lassen County Population Characteristics

Census Tract	Block Group	Area Description	Total Population	Institutionalized Yes	Institutionalized No	Total Households	Youth (10-17) #	Youth (10-17) %	Elderly (65+) #	Elderly (65+) %	With #	With %	Below Poverty #	Below Poverty %	Zero Vehicle Households #	Zero Vehicle Households %
401	1	Bieber/Nubieber	432	56	376	276	20	5.3%	105	27.9%	46	12.2%	68	18.1%	15	5.4%
401	2	Ash Creek Wildlife Area	747	-	747	596	63	8.4%	183	24.5%	79	10.6%	31	4.1%	9	1.5%
401	3	Madeline/Termo	323	-	323	264	21	6.5%	39	12.1%	128	39.6%	76	23.5%	4	1.5%
402	1	Spaulding	905	-	905	1055	154	17.0%	187	20.7%	48	5.3%	16	1.8%	7	0.7%
402	2	Westwood	1,229	-	1,229	992	85	6.9%	308	25.1%	111	9.0%	174	14.2%	34	3.4%
402	3	Norville, Lasco, Coppervale	542	-	542	431	83	15.3%	105	19.4%	96	17.7%	90	16.6%	18	4.2%
403.02	1	Lake Leavitt	1,252	-	1,252	565	138	11.0%	183	14.6%	124	9.9%	106	8.5%	0	0.0%
403.02	2	South of Gold Run	1,520	10	1,510	686	172	11.4%	39	2.6%	29	1.9%	70	4.6%	6	0.9%
403.02	3	North of Gold Run	1,341	-	1,341	724	154	11.5%	187	13.9%	118	8.8%	44	3.3%	68	9.4%
403.03	1	Lassen CC, outskirts	1,376	173	1,203	571	153	12.7%	308	25.6%	200	16.6%	175	14.5%	92	16.1%
403.03	2	E of Hall, N of Main	592	-	592	411	55	9.3%	98	16.6%	84	14.2%	55	9.3%	46	11.2%
403.03	3	W of Hall, E of Grand, N of Main	569	-	569	261	112	19.7%	174	30.6%	218	38.3%	308	54.1%	57	21.8%
403.04	1	Susanville HS	688	-	688	365	100	14.5%	334	48.5%	61	8.9%	255	37.1%	51	14.0%
403.04	2	E. of Alexander, S of Main	810	69	741	449	110	14.8%	158	21.3%	167	22.5%	220	29.7%	39	8.7%
403.05	1	Susanville Rch Prk to Eagle Lk	1,559	-	1,559	809	177	11.4%	196	12.6%	170	10.9%	216	13.9%	13	1.6%
403.05	2	E of Roop, N of Main	709	-	709	269	124	17.5%	151	21.3%	196	27.6%	78	11.0%	14	5.2%
403.05	3	W of Roop, N of Hwy 36	808	-	808	415	101	12.5%	70	8.7%	152	18.8%	146	18.1%	47	11.3%
404	1	Litchfield, Standish	1,094	-	1,094	632	76	6.9%	67	6.1%	110	10.1%	235	21.5%	6	0.9%
404	2	Correctional Facilities	8,259	8,138	121	12	0	0.0%	214	--	1,323	--	0	--	0	--
405	1	East of Hwy 395/Janesville	1,316	-	1,316	586	135	10.3%	241	18.3%	67	5.1%	36	2.7%	11	1.9%
405	2	South of Janesville	597	-	597	303	36	6.0%	95	15.9%	35	5.9%	108	18.1%	0	0.0%
405	3	Janesville	1,370	-	1,370	645	96	7.0%	92	6.7%	129	9.4%	96	7.0%	15	2.3%
406	1	Milford, Wendel, Honey Lake	1,002	435	567	671	34	6.0%	346	61.0%	169	29.8%	58	10.2%	0	0.0%
406	2	Herlong	1,445	-	1,445	138	30	2.1%	40	2.8%	261	18.1%	16	1.1%	1	0.7%
406	3	Doyle/S. County	700	-	700	632	41	5.9%	278	39.7%	115	16.4%	256	36.6%	7	1.1%
TOTAL STUDY AREA			*31,185*	*8,881*	*22,304*	*12,758*	*2,270*	*10.2%*	*4,198*	*18.8%*	*4,236*	*19.0%*	*2,933*	*13.2%*	*560*	*4.4%*
		City of Susanville	15,216	7,122	8,094	3529	932	11.5%	1,114	13.8%	1,060	13.1%	1,355	16.7%	387	11.0%

Note 1: Institutionalized population includes persons incarcerated and living in a skilled nursing facility.
Note 2: Institutionalized Population based on 2010 Census proportion to current population.
Source: US Census American Community Survey 2014 - 2018 Five Year Estimates

Figure 5
Lassen County Residents Living Below the Poverty Level

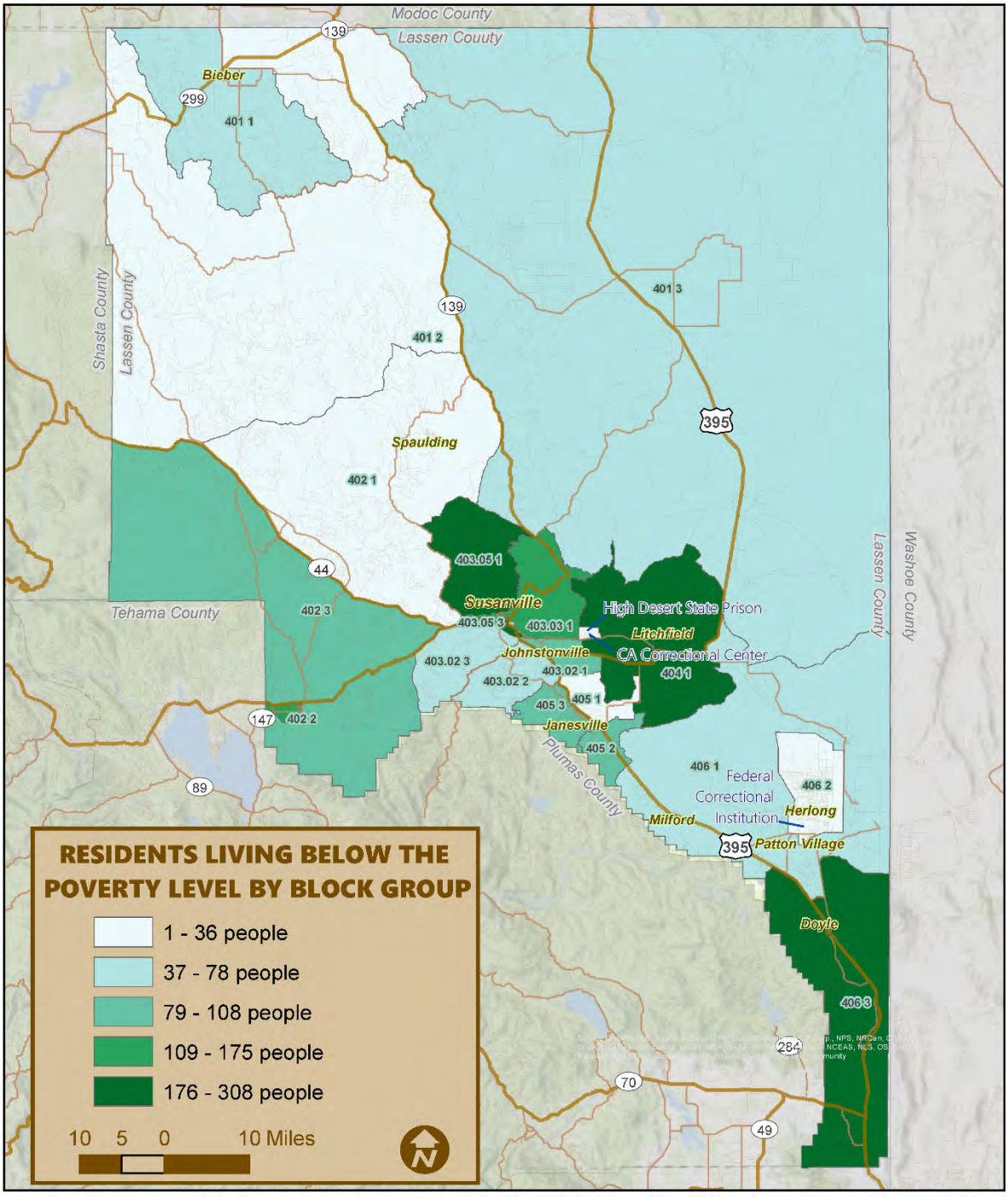


Figure 6
Lassen County Households with No Vehicles

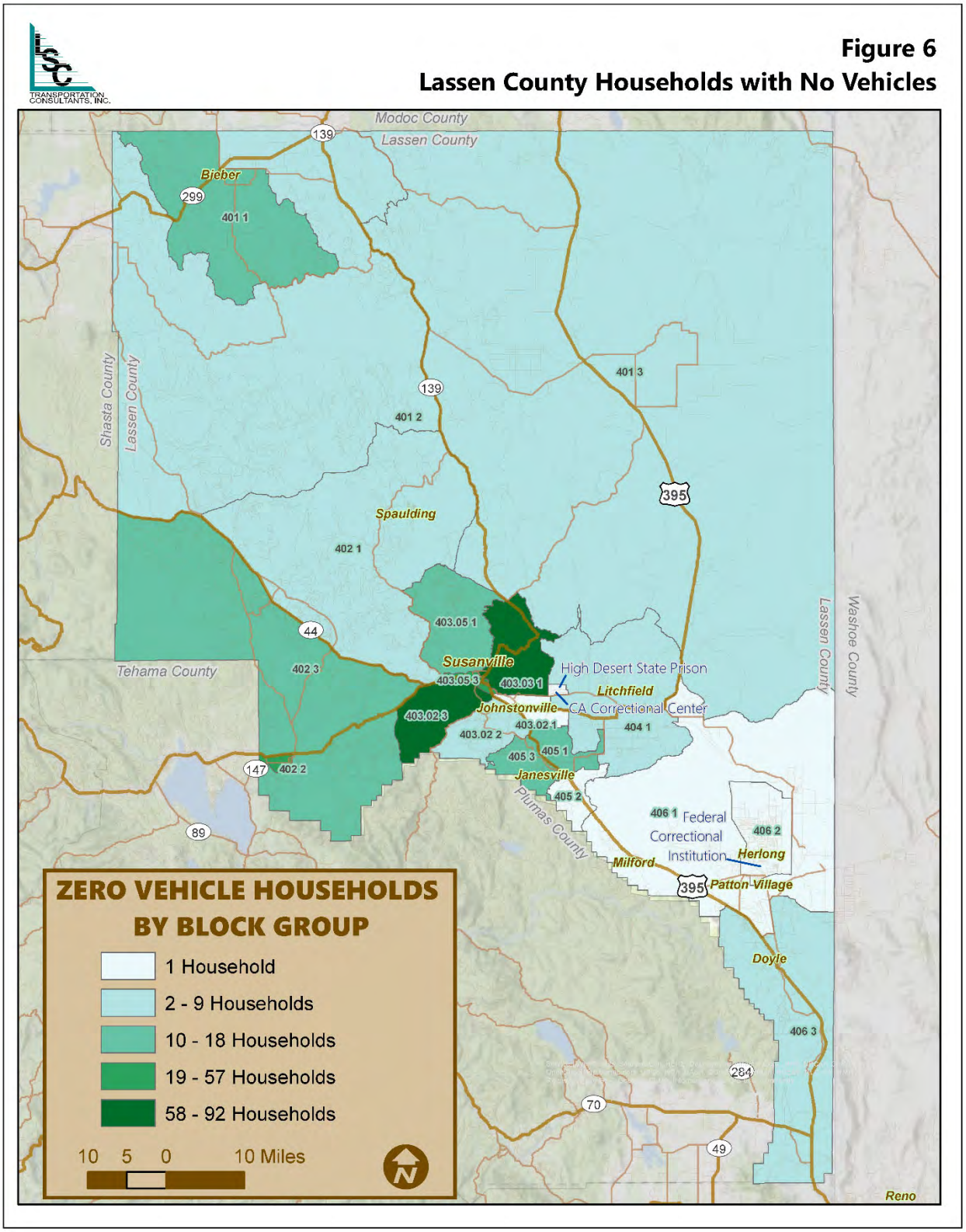


Figure 7
Lassen County Residents with Disabilities

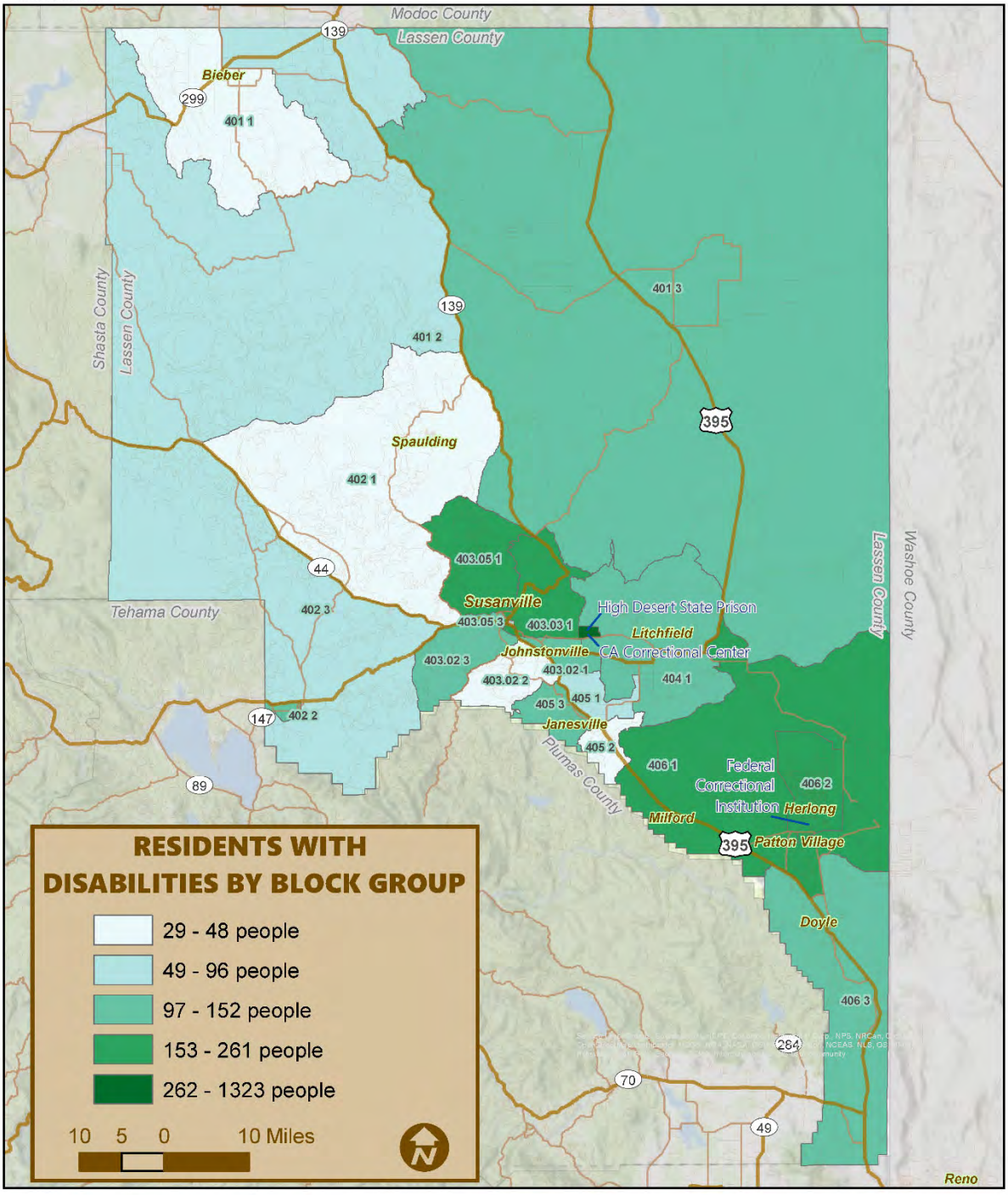


Table 3: Lassen County Employment by Industry		
	Jobs	
Industry Type	#	%
Public administration	2,944	33.5%
Educational services, and health care and social assistance	1,945	22.1%
Retail trade	705	8.0%
Arts, entertainment, recreation, accommodation and food services	614	7.0%
Agriculture, forestry, fishing, hunting, and mining	585	6.7%
Construction	587	6.7%
Professional, scientific, and waste management services	307	3.5%
Transportation and warehousing, and utilities	284	3.2%
Other services, except public administration	253	2.9%
Finance and insurance, and real estate and rental and leasing	218	2.5%
Manufacturing	151	1.7%
Wholesale trade	102	1.2%
Information	93	1.1%
Total	8,788	

Source: American Community Survey 2014-2018

COMMUTE PROFILE

Means of Transportation to Work

The American Community Survey's 5-Year Estimates for 2014 – 2018 include data regarding what mode of transportation workers in the County use to get to / from work. As shown in Table 4, the majority of employed residents (81.2 percent) drove alone, while 9.4 percent carpooled. Of other means of transportation to work, 3 percent walked, 5.7 percent worked at home, and only 0.4 percent used public transit. In the City of Susanville, which is a denser community, 1.9 percent use public transit and 9.9 percent walk.

Commute Patterns

A common trip purpose for public transit trips is "work". Therefore, a review of commute patterns is vital to an effective transit study. The U.S. Census Bureau maintains the "Longitudinal Employment-Household Dynamics" dataset, which provides detailed information on commute travel patterns. It should be noted that this data is collected based on permanent residence for employees and main office address for employers, so there may be inaccuracies due to where military personnel and seasonal employees identify their permanent residences and there may be differences between what the data shows and where employees report to work. Additionally, the data does not separate employees who work from home. Nonetheless, the data gives some useful insight regarding the general flow of commuters. Table 5 presents commute pattern data for both employed residents of Lassen County and persons travelling to Lassen County for work. Major commute pattern findings include the following:

Table 4: Lassen County Commute Travel Characteristics														
Census		Drove Alone		Carpooled		Public Transit		Walked		Other		Worked At Home		Total Work
Tract	Description	#	%	#	%	#	%	#	%	#	%	#	%	Force
401	Bieber/Nubieber, Ash Creek, Madeline, Termo	358	68.6%	3	0.6%	0	0.0%	22	4.2%	8	1.5%	131	25.1%	522
402	Westwood, Norville, Lasco, Coppervale	790	79.0%	161	16.1%	0	0.0%	9	0.9%	0	0.0%	40	4.0%	1,000
403.02	Lake Leavitt, Gold Run Valley	1,465	81.2%	155	8.6%	0	0.0%	32	1.8%	22	1.2%	132	7.3%	1,804
403.03	North Side of Susanville	710	79.1%	63	7.0%	2	0.2%	80	8.9%	0	0.0%	43	4.8%	898
403.04	South Side of Susanville	441	85.1%	38	7.3%	2	0.4%	26	5.0%	0	0.0%	11	2.1%	518
403.05	NE Susanville	1,080	86.3%	55	4.4%	28	2.2%	58	4.6%	5	0.4%	28	2.2%	1,252
404	Litchfield, Standish	312	84.8%	23	6.3%	0	0.0%	6	1.6%	0	0.0%	27	7.3%	368
405	Janesville and surrounds	1,140	91.0%	113	9.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,253
406	Milford, Wendel, Honey Lake, Herlong, Doyle	585	67.8%	186	21.6%	0	0.0%	22	2.5%	0	0.0%	70	8.1%	863
	TOTAL STUDY AREA	6,882	81.2%	797	9.4%	31	0.4%	254	3.0%	34	0.4%	481	5.7%	8,478
	City of Susanville	*2,574*	*72.5%*	*349*	*9.8%*	*66*	*1.9%*	*350*	*9.9%*	*59*	*1.7%*	*150*	*4.2%*	*3,548*

Source: US Census ACS 2014-2018 5-Year Estimates, Table DP03: Selected Economic Characteristics

- Around half of Lassen County employed residents work within the City of Susanville (50.1 percent or 3,804 employees). Johnstonville (2.5 percent, 191 employees) is another Lassen County community with relatively high number of jobs for Lassen County residents.

- Of the residents commuting out of the county for work, the largest number travel to Redding (143 employees or 2 percent). Other out-of-county locations include Reno and Sparks, Nevada (3.9 percent or 284 employees, cumulatively).

- Approximately 44 percent, or 3,197 employees, who work in Lassen County live in Susanville.

- As shown in Figure 8, nearly 56 percent of employed Lassen County residents' travel time to work is between 10 and 30 minutes, followed by 20 percent whose travel time is less than 10 minutes.

MAJOR TRANSIT ACTIVITY CENTERS

Major Activity Centers

The identification of commercial, locations which are common transit destinations is useful in determining where transit services might be needed. These transit activity centers are considered both in terms of areas that produce transit trips (residential locations) and those that attract transit trips (commercial, employment, educational, recreational, medical, and social service agency locations). The

Table 5: Lassen County Commute Patterns

Where Lassen County Residents Work			Where Lassen County Workers Live		
Susanville	**3,804**	**50.1%**	**Susanville**	**3,197**	**44.1%**
Redding	228	3.0%	**Johnstonville**	**143**	**2.0%**
Johnstonville	**191**	**2.5%**	Redding	143	2.0%
Sacramento	154	2.0%	Reno, NV	141	1.9%
Chico	149	2.0%	Sparks, NV	130	1.8%
San Francisco	64	0.8%	Janesville	88	1.2%
Chester	62	0.8%	**Westwood**	**88**	**1.2%**
Medford, OR	57	0.8%	Red Bluff	65	0.9%
Westwood	**51**	**0.7%**	Cold Springs, NV	52	0.7%
Eureka	49	0.6%	Chico	51	0.7%
Red Bluff	42	0.6%	Chester	45	0.6%
Klamath Falls, OR	42	0.6%	Lake Almanor Country Club	33	0.5%
Janesville	**41**	**0.5%**	Alturas	31	0.4%
Oroville	41	0.5%	Sacramento	30	0.4%
Santa Rosa	38	0.5%	Hamilton Branch	28	0.4%
All Other Locations	*2,574*	*33.9%*	*All Other Locations*	*2,980*	*41.1%*
Total Workers	7,587	100%	Total Workers	7,245	100.0%

Note: **Bold font** denotes Lassen County community

Source: U.S. Census Bureau, OnTheMap Application and 2017 LEHD Origin-Destination Employment

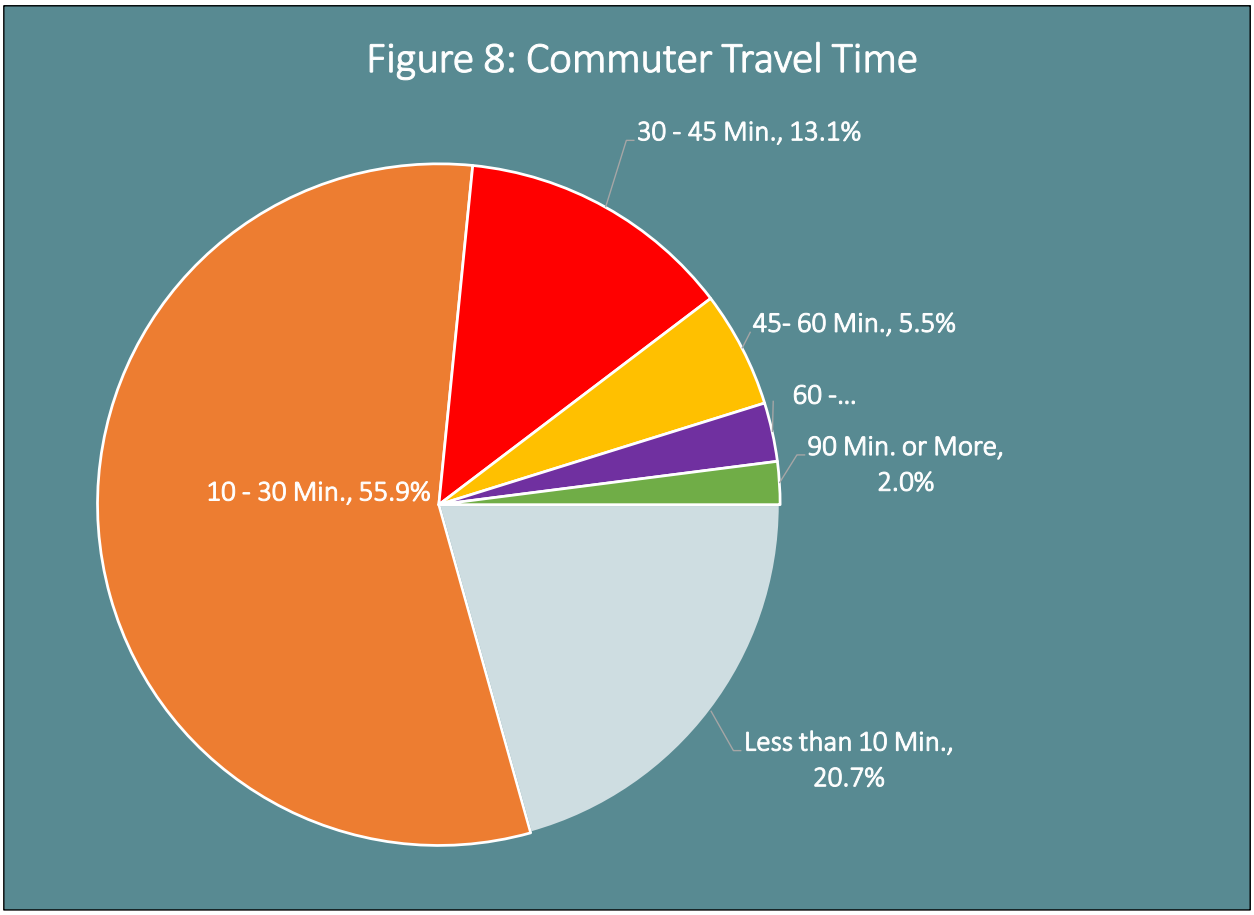
region's major activity centers are situated in and around Susanville, as well as in the smaller communities of Chester, Janesville, and Herlong. These activity centers are presented in Figures 9 and 10.

Lassen County Transit Development Plan (2017)

In 2017, LSC Transportation Consultants developed the *Lassen County Transit Development Plan* for Fiscal Years 2017 to 2021. The document focused on identifying and recommending potential service alternatives, as well as capital and financial plans for LTSA. The plan recommended service changes such as converting five Susanville City Route bus stops into on-demand stops and requiring a minimum ridership of three passengers to operate the Eagle Lake Route. Other alternatives analyzed included:

- Operating a second Susanville City Route bus on weekdays.
- Extend service to 9:00 PM.
- Eliminate West County Midday run.
- Discontinue West County Route to Hamilton Branch and Chester.

The Plan also developed a list of capital improvements that included purchasing new vehicles, improving existing bus stops, and the construction of a formal transit center in Susanville.



REVIEW OF EXISTING PLANNING DOCUMENTS

The following presents a review of relevant existing planning documents that have helped guide the transit program in Lassen County. This is not an all-inclusive list, but rather the most recent and most pertinent reports that have been completed.

Lassen County Regional Transportation Improvement Plan (2018)

In 2018, the LCTC identified projects eligible to be completed with State Transportation Improvement Program (STIP) funding. As a result, Lassen County was able to complete six of seven projects with previous partial STIP funding. This RTIP provided the funding necessary to complete infrastructure projects along Skyline Drive and State Route 36 South-East Gateway.

The 2018 RTIP identified over $14 million of capital improvements on transportation infrastructure (spread over 7 distinct capital projects) during the six-year programming horizon. In addition, $336,000 for planning programming and monitoring were identified as well.

Figure 9
Lassen County Activity Centers

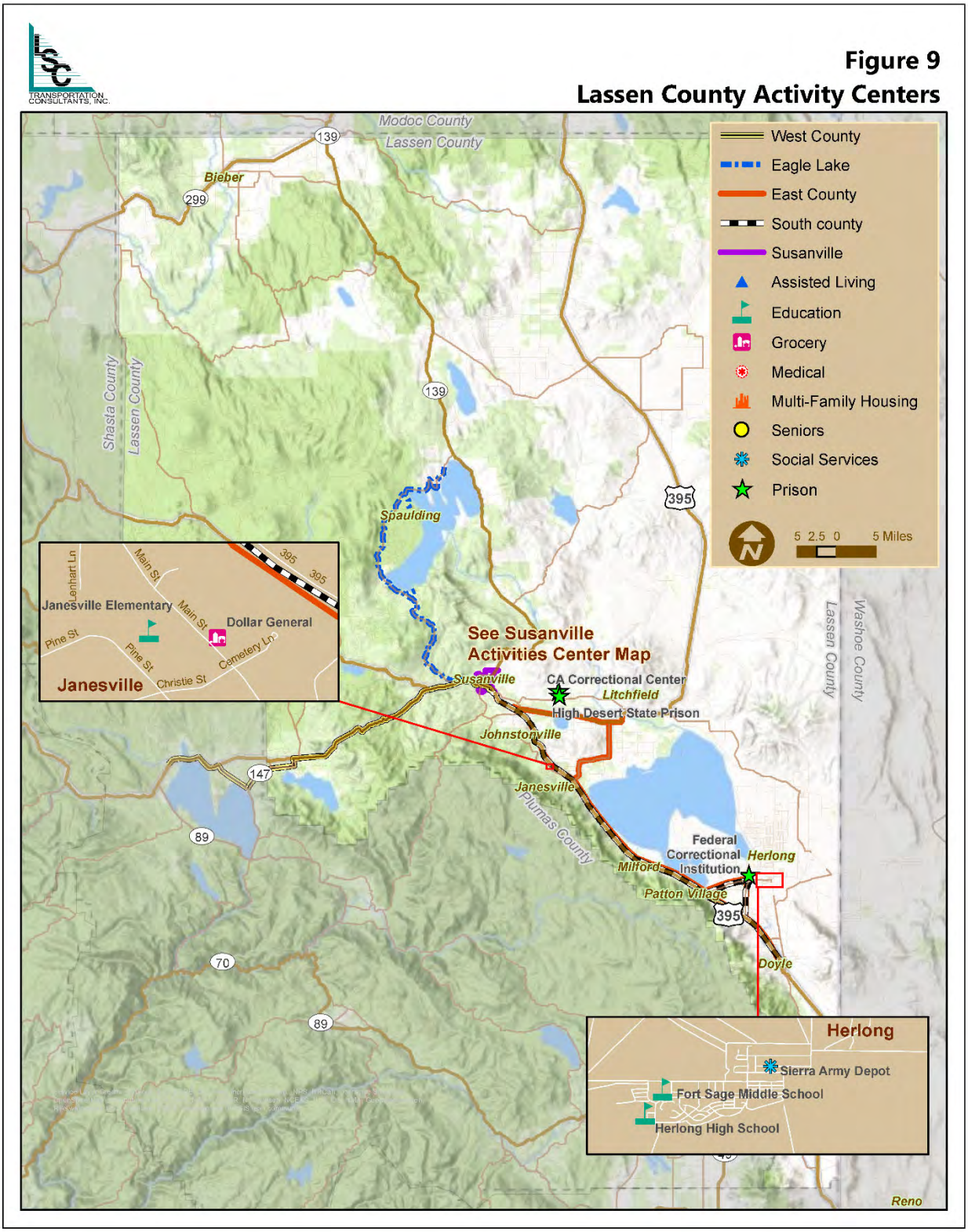


Figure 10
Susanville Activity Centers
Casino
Assisted Living
Education
Grocery
Medical
Multi-Family Housing
Seniors
Social Services
Susanville Route
Diamond Mountain Casino
Susanville Indian Rancheria Apartments
Lassen Indian Health Center
Meiss Apartments
Lassen County Public Health
Lassen Community
Juniper Ridge Apartments
McKinley Elementary
Lassen County Veteran Services
Lassen Adult School
Lassen High School
Lassen Family Services Inc
Susan River Apartments
Lassen Senior Services
Walmart
Walgreens
Diamond View Middle School

Lassen County Regional Transportation Plan (2017)

This Regional Transportation Plan (RTP) was the developed in 2018 by Green DOT Transportation Solutions. This Plan was developed to identify the transportation needs within the Lassen County region through a public input process, thorough data analysis, and coordination with other plans and studies. After identifying regional transportation needs, the RTP developed project lists categorized by type. These projects included the following:

- Connectivity improvements to various county and town roadways.
- Bridge improvements.
- Bicycle lanes and pedestrian paths throughout the County, but primarily in Susanville.
- Shelter, bench, and signage improvements to transit.

Coordinated Public Transit – Human Service Transportation Plan (2015)

In 2015, the LCTC commissioned the University of the Pacific Business School Business to complete an update to the Coordinated Public Transit-Human Services Transportation Plan. The plan explored ways in which to improve mobility for the county's most vulnerable populations such as seniors, people with disabilities. The plan identified seven major strategies to address issues relating in transit connectivity gaps within Lassen County, access to adjacent counties, and affordability of services. These implementation strategies included the following:

1. Maintain, evaluate, and strengthen transportation services.
2. Multi-organizational approach to solutions.
3. Create/implement strategies from a marketing plan/assessment.
4. Route Modifications
5. Establish a Mobility Management staff position.
6. Maintain and strengthen interregional transportation services and connections.
7. Address duplication of services.

An update to the Coordinated Plan is being conducted concurrently with this TDP update.

City of Susanville Vehicular Wayfinding Sign Plan (2015)

The Wayfinding Sign Plan was written to provide directional information, create a sense of place through design, and consolidate existing signage to have a more cohesive look throughout the region. The plan identified six various design options and narrowed the choices to one through public participation and frequent review by city staff. Lastly, the plan identified 35 different destinations throughout Susanville.

Triennial Performance Audits (2016-2018)

Triennial Performance Audits were conducted by Michael Baker International for both the Lassen County Transportation Commission and the Lassen Transit Service Agency Fiscal Years 2016-17 to 2018-19. The audits recommended the following actions:

- Prepare separate State Controller Reports for public fixed route and specialized dial-a-ride services.

- Ensure that LTSA expenditures are reflected accurately in the annual fiscal and compliance audits as part of an enhanced financial oversight effort.

- Include in the automated reporting system monitoring operational data such as road calls, accidents, and complaints (i.e., the number of complaints/accidents per miles driven).

- Implement greater security measures for storing farebox vaults.

- Develop a focused bus stop improvement plan.

Lassen County General Plan (2000)

The Lassen County General Plan encourages adequate, cost-effective public transit services for elderly and handicapped peoples, and supported implementation of the Regional Transportation Plans.

City of Susanville General Plan (1990)

The Circulation Plan element within the City of Susanville's General Plan was last updated in 1990 and the transportation element focused primarily on the roadway system with no mention of transit.

Unmet Transit Needs Reports

The California TDA requires annual unmet transit needs hearings if a jurisdiction proposes to spend some Local Transportation Fund resources on streets and roads. As part of the process the Social Services Transportation Advisory Council (SSTAC) holds a public meeting each year to receive public input on transit needs in the region. Unmet needs are defined as any deficiency within any transit service under the jurisdiction of the LCTC. Requests serving a small group of individuals, or that would duplicate current service, are not considered unmet needs. Before an unmet transit need can be funded with LTF funds, it must be deemed "Reasonable to Meet," which considers factors such as potential farebox ratio, transit use, and paratransit compatibility. The following summarizes findings from unmet transit needs hearings over the past three years.

Fiscal Year 2018 – 19

For Lassen County, a public hearing was held on April 6th, 2017. No one from the public attended the hearing, and no public requests were made. Council members identified that the following unmet transit needs were not reasonable to meet:

- Transportation to church on Sundays
- Out of County NEMT service

Other issues that were expressed but ultimately considered not to be an unmet transit need included improvements to regional transit operator coordination and the construction of a formal bus stop at the intersection of County Road A21 and Old Town Road.

Fiscal Year 2019 – 20

The SSTAC meeting was held on March 22nd, 2019. The following concerns were brought up:

- There is a need for service to Reno, particularly from the prisons on Saturdays.
- Staff receive many calls for service along Richmond Road.
- Half-hourly service on the Susanville City route
- Out-of-county transportation to medical destinations

No unmet transit needs were deemed reasonable to meet.

Fiscal Year 2020 – 21

A public hearing was held on February 26th, 2020, where six SSTAC members (five in person, one by phone) and LCTC staff attended as well as one member of the local news media. The Unmet Transit Need Report identified that service along Richmond Road between SR 36/US 395 and the Susanville City Limits was an unmet need that is reasonable to meet. Unmet transit needs included:

- Service to Lake Forest Area – Along Eagle Lake Road
- Add a Second City of Susanville Route to provide half-hourly service.
- Extend Dial-A-Ride Hours of Operation Until 9:00 PM
- Service along Richmond Road

LASSEN COUNTY TRANSPORTATION COMMISSION

The Lassen County Transportation Commission (LCTC) serves as the designated Regional Transportation Planning Agency for Lassen County. LCTC is responsible for the preparation of transportation plans and the management of state and federal transportation funding. The LCTC is comprised of three members of the Lassen County Board of Supervisors and three members of the City of Susanville City Council. Each year the LCTC allocates transit funding, primarily Transportation Development Act (TDA) funds to the Lassen Transit Service Agency (LTSA) for the operation of the Lassen Rural Bus System, (LRB) which is the only public transit system in the region.

LASSEN TRANSIT SERVICE AGENCY

The LTSA is the institutional organization which provides public transportation services in Lassen County. Until 2001, the County of Lassen operated LRB, when a Joint Powers Agreement (JPA) was signed between the County of Lassen and the City of Susanville creating the LTSA. LTSA has hired a private contractor, Paratransit Services, to perform day to day operations and maintenance functions of LRB.

LASSEN RURAL BUS

The LRB system began service in July of 1981 using two wheelchair-accessible vehicles to operate one fixed route and Dial-A-Ride service. The LRB system has since grown to a vehicle fleet of eleven, providing a Susanville City Route and several inter community routes which are shown in Figures 11 and 12 and described below. A Dial-a-Ride service is also provided for those meeting particular criteria.

Susanville City Route

Fixed route service is provided on the Susanville City Route (City Route) on one-hour headways between 7:00 AM and 6:55 PM, Monday through Friday, and from 8:00 AM to 3:52 PM on Saturday. The service area is entirely within the Susanville city limits at designated stops only (no flag stops). The route is depicted in more detail in Figure 11. The City Route serves all the major activity centers in Susanville including Wal-Mart, the Sierra Shopping Center, the Lassen Shopping Center, the Susanville Shopping Center, Lassen Senior Services, the Lassen Banner Hospital, City/County Administrative offices, Meadowview School, Lassen High School, Lassen Community College, and the Sierra Shopping Center.

Susanville Express Route

The Susanville Express Route was implemented in October of 2020 as a way of providing shorter travel times between common destinations in Susanville. The route operates roughly on half-hourly headways between 10:00 AM and 4:00 PM. The route is a one-way clockwise loop which is like the Susanville Fixed Route service but does not serve as many destinations.

Figure 11
Susanville Route Map

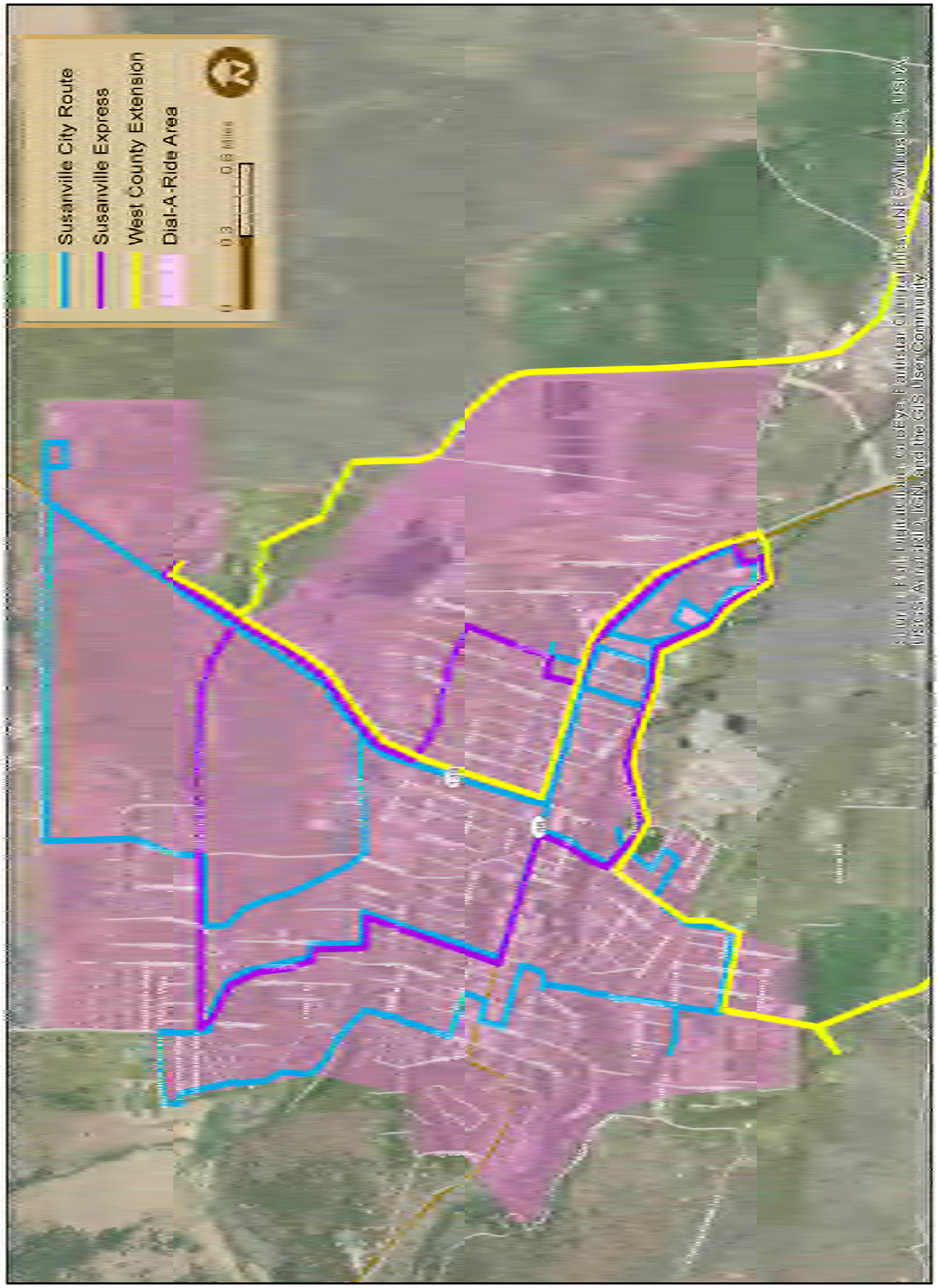


Figure 12
Lassen County Transit Routes

West County Route

The West County Route provides round trip service between Susanville, Westwood, Lake Almanor, and Chester (in Plumas County) three times per day during the week and twice on Saturdays. Points served on this route include Devil's Corral, Westwood, Clear Creek, and Hamilton Branch. Within Susanville, stops are scheduled at Riverside Drive, Main and Gay Street, Diamond Mountain Casino, Lassen Community College, and Wal-Mart. In addition, passengers may "flag" the bus anywhere along the route if it is a safe location. The route is shown in Figure 12.

The morning run leaves Susanville Walmart at 5:21 AM, arriving in Westwood at 6:01 AM and Chester at 6:25 AM, and returning to Susanville at 7:26 AM. A midday trip leaves Susanville at 12:10 PM, arriving in Westwood at 1:02 PM and Chester at 1:26 PM, and returning to Lassen Community College at 2:35 PM. The evening trip leaves Susanville at 5:15 PM, arrives in Westwood at 6:07 PM and Chester at 6:31 PM, before returning to Safeway/Sierra Shopping Center at 7:39 PM. This schedule allows college students to arrive to campus on time for 8:00 AM classes. In addition, the West County Route allows for transfers to Plumas Transit with departures from Hamilton Branch in Chester at 6:42 AM and 1:43 PM, with a return to Chester at 6:19 PM.

West County Extension

This service was started in 2020 in response to an unmet transit need request. The extension serves residential neighborhoods along Richmond Road (south of Susanville), the Susanville Airport and Johnstonville, Susanville Mobile Home Park and Lassen Community College with two round trips per day.

South County Commuter and Deviated Fixed Routes

The Sierra Army Depot (SIAD) located in Herlong, located 37 miles south of the City of Susanville employs over 1,000 people, many of whom live in Susanville. The South County Commuter Route provides a public transit commute option for these employees. The South County Commuter departs Susanville for SIAD at 5:13 AM with stops in Johnstonville, Janesville, and Milford, as shown in Figure 12. The return trip to Susanville departs SIAD at 5:00 PM.

Instead of the South County Commuter morning run deadheading back to Susanville, the Commuter Route becomes the South County deviated fixed route between Herlong and Susanville by providing service to the communities of Doyle, Milford, and Janesville. The route may deviate up to ¾ of a mile off the regular route. The bus departs Herlong at 6:30 AM and arrives at Lassen Community College and Northeastern Rural Health at 8:00 AM, before returning to Safeway/Sierra Shopping Center at 8:06 AM. In the afternoon, the revers occurs. The bus departs Susanville from the Safeway/Sierra Shopping Center at 3:00 PM, arriving at the Herlong Fort Sage Family Resource Center at 4:35 PM. Then the bus begins the evening commuter route back to Susanville.

The South County commuter does not operate on federal holidays. To supplement service on Fridays, the East County Route operates, as described below.

East County Route

The East County Route, also shown in Figure 12, provides Friday service between Susanville and Herlong in the mornings (stopping at Standish, Litchfield, Leavitt Lake, Johnstonville) and from Susanville to Herlong in the afternoon. The morning route departs Riverside Drive (Safeway/Sierra Shopping Center) at 8:20 AM and on to Standish (Wayside Inn) at 9:55 AM and Litchfield (Heard's Market) at 10:01 AM before returning to Lassen Community College and Riverside Drive (Safeway/Sierra Shopping Center) at 10:38 AM and 10:45 AM, respectively. The afternoon route leaves Lassen Community College at 1:01 PM and arrives at Standish at 1:37 PM and Litchfield at 1:43 PM before returning to Riverside Drive at 3:25 PM. The East County schedule provides riders living in the southeast portion of the county with a shorter layover time in Susanville than the South County route.

Eagle Lake Route

The Eagle Lake Route is a seasonal route offered on Saturdays along the west side of Eagle Lake starting and ending in Susanville. Service begins Saturday of the Memorial Day weekend, and ends on Labor Day weekend, or, weather permitting, the final Saturday of September. Service is by appointment only and require a minimum of 10 riders to make a reservation. Passengers must call by 5:00 PM the Wednesday before their planned trip. The morning route departs Susanville at 10:00 AM, arriving at the Mariner's Resort at Stone's Landing at 11:31 AM, departing at 11:35 AM to return to Susanville by 1:15 PM. The late afternoon route departs Safeway/Sierra Shopping Center at 3:00 PM, arriving at Stone's Landing at 4:31 PM, and returning to Susanville by 6:15 PM.

Dial-A-Ride

A Dial-a-Ride (DAR) door to door demand response service is provided to qualifying individuals living within the city limits of Susanville, as depicted in Figure 12. To use the service, customers must be identified as seniors aged 60 years and over, or as disabled. The DAR service requires a one-day advance reservation and is the ADA complementary paratransit service for the Susanville fixed route.

OTHER REGIONAL TRANSIT/TRANSPORTATION SERVICES

In addition to LTSA there are other regional public transit services rail service and social service / non-profit specialized transportation programs.

Sage Stage Service to Reno

For many years, LTSA has contributed approximately $30,000 annually to the Modoc Transit Agency to share the cost of intercity bus service from Alturas to Reno, Nevada with stops in Likely, Madeline, Susanville, and Doyle. Service was available on Mondays, Wednesdays, and Fridays until a recent surge in the COVID pandemic when services were suspended. Generally, passengers must make a reservation at least one day in advance, although several walk-on stops are available on the route on a space-available basis. The bus will not run unless there is at least one confirmed reservation.

Sage Stage Reno service departs Alturas at 8:00 AM, stops in Likely at 8:20 AM, Madeline at 8:35 AM, Susanville at 9:45 AM, arriving at the Reno Airport at 11:45 AM. The return trip departs Reno at 1:30 PM, arriving in Susanville at 3:30 PM and Alturas at 5:30 PM.

Single-ride fares are offered to the public, and discounted single-ride fares are offered for children ages 12 and under, seniors aged 60 and ADA-qualified individuals with disabilities. The fare between Alturas and Susanville is $18.00 for general passengers, and $13.50 discounted; from Susanville to Reno is $22.00, discounted to $16.50; and from Likely or Ravendale to Susanville is $15.00, discounted to $11.00.

This service is partially funded with Federal Transit Administration (FTA) 5311 Intercity Grant funds as it provides transportation to the intercity transportation such as the airport and Greyhound. Many passengers use the service to get to medical appointments in Reno. Sage Stage Reno service carried 1,358 one-way passenger-trips in FY 2018 – 19. This number decreased to 883 trips in FY 2019 – 20 (presumably because of the pandemic). Roughly 57 percent of passenger boardings in FY 2018 – 19 and 59 percent of boardings in FY 2019 – 20 were made by Lassen County residents.

Lassen Senior Services

Lassen Senior Services (LSS) provides transportation for seniors (ages 60 and older) living within Lassen County to and from their lunch meal site located in Susanville. Lassen Senior Services also provides trips to medical appointments, shopping, banking, and the post office within Lassen County. In addition, meal and other delivery services are provided to clients living in Westwood and Doyle. Intercity transportation is available from Susanville to Reno (on alternating Tuesdays and Thursdays) with a minimum of two passengers being registered at least 48 hours in advance. Donations of $1.00 are suggested fare for local rides, and contributions of $25 (or $40 per couple) are suggested for Reno trips.

LTSA contracts with LSS to provide transportation services for seniors that LRB is unable to provide. The agreement includes an annual LTSA payment of $86,000 (with $5,000 set aside for vehicle maintenance) for the services provided by LSS.

According to LTSA reports, Lassen Senior Services carried 3,364 one-way passenger trips in FY 2019 – 20 and 2,641 trips in FY 2018 – 19 with the funding provided by LTSA. LSS currently has seven vehicles available for use. This includes 2 nine-passenger buses, 1 wheelchair van, and 3 six-passenger vans.

Lassen County Veteran's Services Office (VSO)

Once or twice per week, the Lassen County VSO transports veterans from Susanville to the Veteran's Medical Center in Reno. It also provides more frequent transportation for veterans between Alturas and Reno.

Lassen County Health and Human Services

The Lassen County Health and Human Services (HHS) provides transportation for social-service needs, which must be arranged by a caseworker.

Crossroads Ministries

Crossroads Ministries is a church-affiliated non-profit organization that provides services to needy individuals who request it, including transportation. With two six-passenger vans, Crossroads serves approximately 40 to 50 passenger-trips each week, and the majority is for medical purposes. Crossroads also provides clients with LRB passes and Greyhound vouchers on occasion.

Far Northern Regional Center/North Valley Services/Lassen Life Skills

Far Northern Regional Center (FNRC) provides transportation for persons with developmental disabilities through contracted service with LRB, and through two vehicles owned by North Valley Services. Clients of North Valley Services and Lassen Life Skills receive unlimited trips on both the fixed-route and Dial-A-Ride for a set fee of $115 per client per month. FNRC riders made up 19.7 percent of LRB ridership in FY 2018 – 19.

Mt. Lassen Motor Transit – also known as "The Mail Truck"

Mt. Lassen Motor Transit, based in Red Bluff, provides charter bus and tour services throughout the nation. Services are based out of Redding, Red Bluff, and Chico.

Big Valley 50 Plus

LTSA contracts with Big Valley 50 Plus (BV50Plus) to provide public transportation services to people of all ages in northern Lassen County. Roundtrip service between the Nubieber and Adin is provided on Tuesdays, Wednesdays, and Thursdays between 9:50 AM and 2:45 PM. The route begins at the Nubieber Post office at 9:50 AM and travels north to the Adin Supply Co. and Adin Post office around 10:45 AM, before returning to the Bieber Veterans Hall at 11:15 AM. The route then leaves the Veteran's Hall at 1:15 PM and runs south to Nubieber Post Office at 1:35 PM before returning north to Adin Supply Co and Adin Post Office at 2:30 PM. The route then travels south and ends at the Veteran's Hall in Bieber at 2:45 PM. Other major stops along this route include the Mountain Valleys Health Center, Big Valley Family Resource Center, and Big Valley Market.

Additionally, trips are provided leaving the Bieber Veteran's Hall at 7:00 AM to Redding on the first and third Monday, Klamath Falls on the second Monday, and Susanville on the fourth Monday of each month. General fares are $3 for local trips and $20-$25 for regional trips. Reduced fares are available to children and disabled riders, and passengers 60 years and over can ride for free.

LTSA pays BV50Plus $44,300 to support transportation services, of which $5,000 is set aside for vehicle maintenance. BV50Plus currently owns three vehicles, however only one is currently operational with the other two needing maintenance. During FY 2018 – 19, BV50Plus provided 2,128 passenger trips.

LASSEN RURAL BUS FARE STRUCTURE

Fares depend on the route and distance travelled. A one-way trip on the City Route is $1.00 or $0.50 for discounted passengers. All other routes are based on a zone system. It costs $2.00 to board the bus and one additional dollar for each 15-mile line crossed, unless the trip is within the City of Susanville, then it is the same as the city fare. A 50% reduction is available for discounted passengers.

All bus routes have monthly and daily passes available at general and reduced rates. As summarized in Table 6, general monthly systemwide passes are offered at $90, followed by a monthly City Route pass for $40. Monthly Commuter passes are also available for $90 or $105 with access to the Sierra Army Depot base. Reduced prices for systemwide and City Route passes are $45 and $20, respectively. Daily City Route passes are $3 ($1.50 reduced) with daily systemwide passes costing $5 ($2.50 reduced). Kool Kid

Table 6: Lassen Rural Bus Fare Structure		
Passes	General	Reduced
Monthly System Pass	$90	$45
Monthly City Pass	$40	$20
Monthly Commuter Pass	$90	N/A
Daily City Pass	$3	$1.50
Daily Systemwide Pass	$5	$2.50
Kool Kid	$15	N/A
Source: LRB Riders Guide, 2019		

passes are available for $15 for children ages 6 to 17 years old which are valid between Memorial Day and Labor Day.

CHANGES TO SERVICES (PAST FIVE YEARS)

The previous TDP was completed in June of 2016. While core services remain similar, the following describes minor changes that have occurred since the previous TDP:

- Minor schedule changes to routes.
- Modification of the South County routes
- Created on-demand stops in Susanville.
- Grocery delivery service to at-risk populations during the COVID-19 outbreak
- Decrease in service along the East County Route (from weekdays to Fridays only).
- New West County Extension to serve Richmond Road.
- City Express Route

LASSEN RURAL BUS OPERATING CHARACTERISTICS & HISTORICAL RIDERSHIP TRENDS

Historical ridership from Fiscal Year (FY) 2015-16 to FY 2019 – 20 is presented in Table 7 and Figures 13 and 14. In the table, total percentage change in ridership is analyzed for the total five-year period as well as the four-year period which was not impacted by COVID. The total number of systemwide annual one-way passenger-trips has decreased by 14.1 percent over the past five fiscal years. However, since FY 2015-16, ridership has increased on the West County route (by 22.5 percent), and the South County Deviated Route to Susanville (20.4 percent). During the same period, routes with the largest percentage decrease in ridership were the South Commuter (-55 percent) and East County Route (-92 percent). Ridership on the Susanville City Route has remained relatively steady over the years (0.2 percent decrease) while ridership on the DAR service decreased by 14 percent over the five years. Compared to other rural transit services, LRB has generally had a relatively positive trend in ridership growth over the past five years.

COVID-19 IMPACTS ON RIDERSHIP

As can be seen in Table 7, the fixed routes which experienced large reductions in ridership over the five-year period had already seen significant downturns in ridership prior to the COVID outbreak in FY 2019 – 20. These include South County Commuter and East County. Eagle Lake did not operate in FY 2018 – 19 as

it did not receive the minimum number of requests and there was a wildfire in the region. Prior to COVID, ridership on the Susanville City Route had increased by 10 percent, South County by 35 percent and West County Route ridership had increased by 44 percent between FY 2015 – 16 and FY 2018 – 19. DAR ridership increased by 27.2 percent during that time.

The impacts of Covid-19 on transit ridership can be seen more clearly in Figure 15 which presents ridership by month from FY 2017 – 18 to FY 2019 – 20. As shown, FY 2019 – 20 started with greater ridership than previous years during the month of July and continued to stay fairly consistent through February compared to previous fiscal years. The biggest decline in FY 2019 – 20 ridership occurred between March and April (-47.9 percent) as a direct result of government mandated shut-downs, with another 5.3 percent decline occurring through May. Recent ridership data shows that systemwide ridership began to rebound in June of 2020 through October of 2020, after which ridership began to decline again. This trend correlates with the surge of COVID cases in the fall of 2020.

Table 8 and Figure 16 illustrate the monthly ridership trends by route for FY 2019 – 20. South County to Susanville saw the greatest decrease in ridership of all routes (-89 percent) over the two months between February and April, followed by West County (-53 percent).

Ridership by Fare Type

Table 9 and Figure 17 displays the FY 2019 – 20 annual systemwide LRB ridership by fare type (general passenger, senior/disabled, free, etc.). LRB does not track pass use by type; therefore, all boardings made using a pass as well as transfers are included in the "Passes/Transfers" category. This represents the largest category of boardings by fare type (41 percent). As shown, public passengers who purchased a single ride fare account for 9 percent of annual boardings. Senior and disabled riders who purchased a single ride fare make up 14 percent of the annual ridership profile. Lassen College passengers account for another 9.6 percent, of the total annual ridership. Attendants and free riders make up 2.9 and 3.7 percent of ridership, respectively.

Roughly, 19.7 percent of boardings can be attributed to FNRC clients. As part of their annual agreement, FNRC paid LTSA $84,295 for their clients to use both fixed route and DAR services in FY 2019 – 20. LTSA reports show that the majority of FNRC clients rode DAR (84 percent), but 6 percent rode the Susanville City Route, and another 6 percent rode the West County Route in FY 2019 – 20.

LTSA has an agreement with Lassen Community College where the college pays LTSA $20,000 annually and students can receive a free bus pass for the semester. College ridership decreased from 10,190 in FY 2018 – 19 to 7,182 in FY 2019 – 20, likely due to COVID. Approximately 71 percent of college students ride the City Route; 17 percent ride the West County Route and 12 percent ride the South County Route.

Table 7: Annual Systemwide Ridership by Route

Year	Fiscal Year 2015-16	2016-17	2017-18	2018-19	2019-20	Change in Ridership FY 2015-16 to FY 2018-19 (Pre-COVID) #	%	Change in Ridership (5 Years) #	%
Susanville City Route	40,498	43,645	43,849	44,692	40,436	4,194	10.4%	-62	-0.2%
South County Commuter	18,548	13,457	9,829	9,500	8,338	-9,048	-48.8%	-10,210	-55.0%
West County	6,103	7,378	8,398	8,799	7,476	2,696	44.2%	1,373	22.5%
South County to Susanville	2,058	2,662	2,695	2,788	2,477	730	35.5%	419	20.4%
East County	2,631	1,073	971	433	194	-2,198	-83.5%	-2,437	-92.6%
Eagle Lake	88	82	107	0	19	-88	-100.0%	-69	-78.4%
Fixed Route/Commuter Total	**69,926**	**68,297**	**65,849**	**66,212**	**58,940**	**-3,714**	**-5.3%**	**-10,986**	**-15.7%**
Dial-a-Ride	17,070	20,126	19,979	21,791	15,751	4,721	27.7%	-1,319	-7.7%
Systemwide Total	**86,996**	**88,423**	**85,828**	**88,003**	**74,691**	**1,007**	**1.2%**	**-12,305**	**-14.1%**

Source: LRB Operating Services Annual Report, 2019-2020

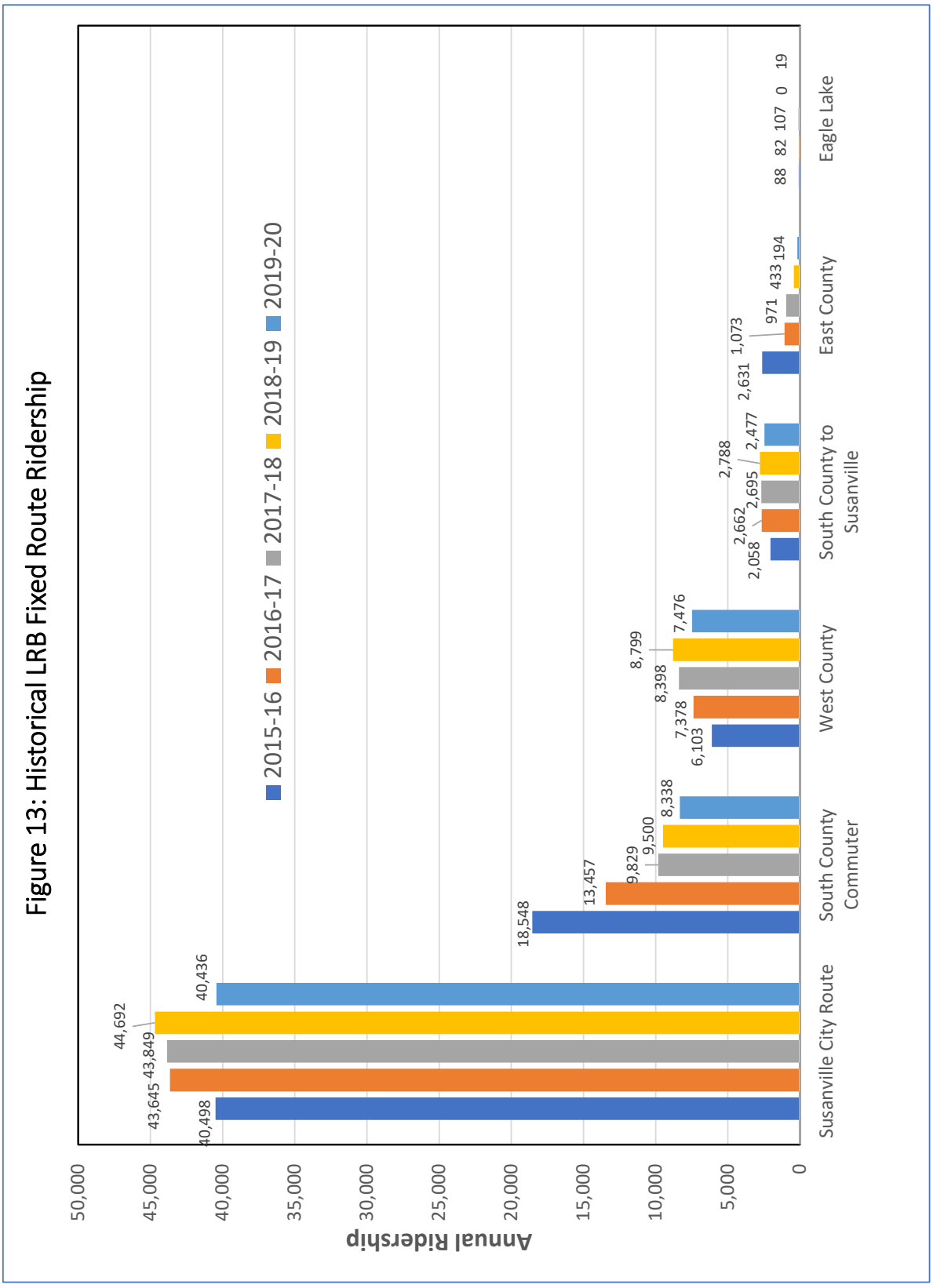


Figure 13: Historical LRB Fixed Route Ridership
2015-16
2016-17
2017-18
2018-19
2019-20
Annual Ridership
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Susanville City Route
South County Commuter
West County
South County to Susanville
East County
Eagle Lake
40,498
43,645
43,849
44,692
40,436
18,548
13,457
9,829
9,500
8,338
6,103
7,378
8,398
8,799
7,476
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1,073
971
433
194
88
82
107
0
19

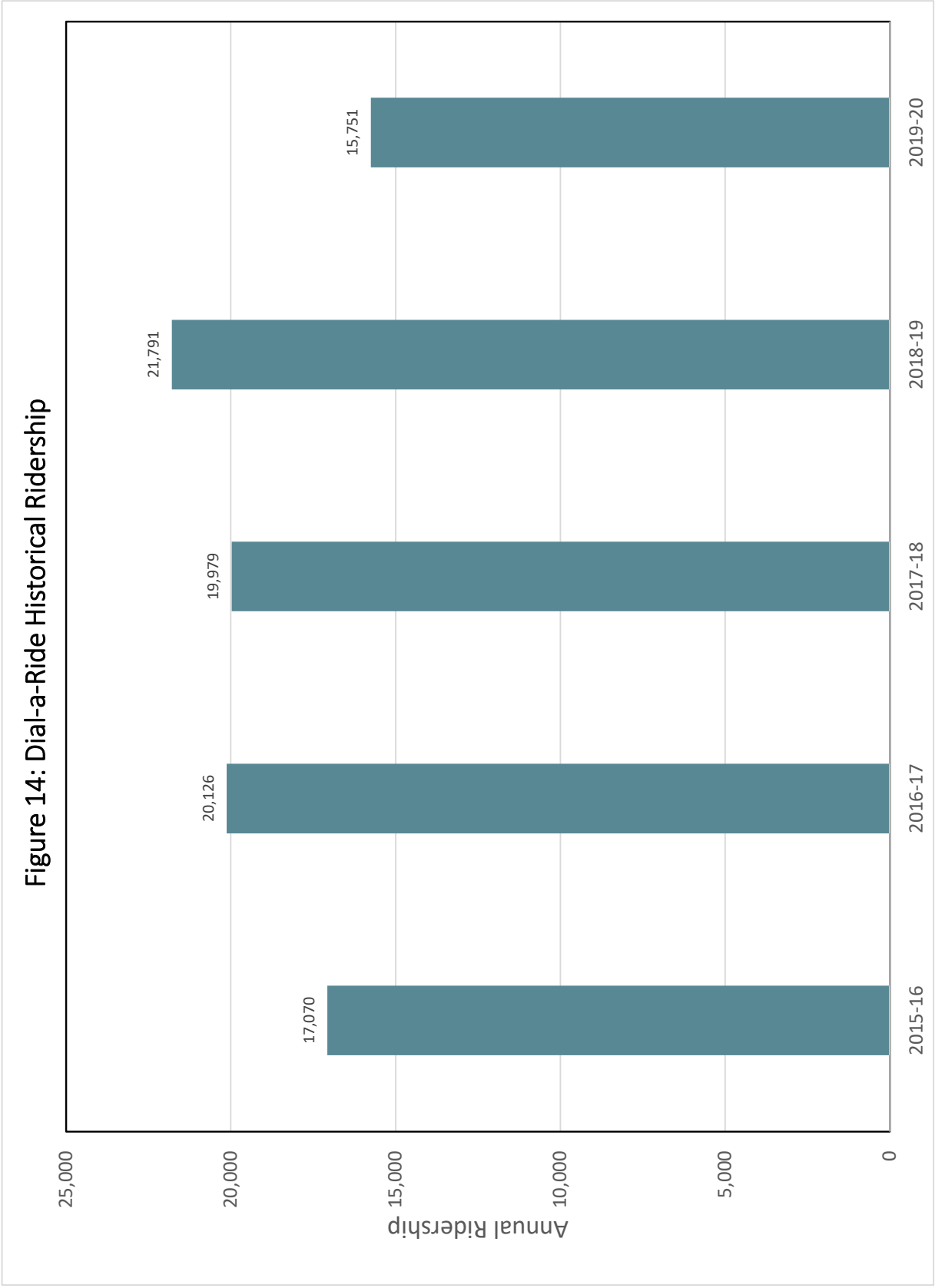


Figure 14: Dial-a-Ride Historical Ridership
Annual Ridership
25,000
20,000
15,000
10,000
5,000
0
17,070
20,126
19,979
21,791
15,751
2015-16
2016-17
2017-18
2018-19
2019-20

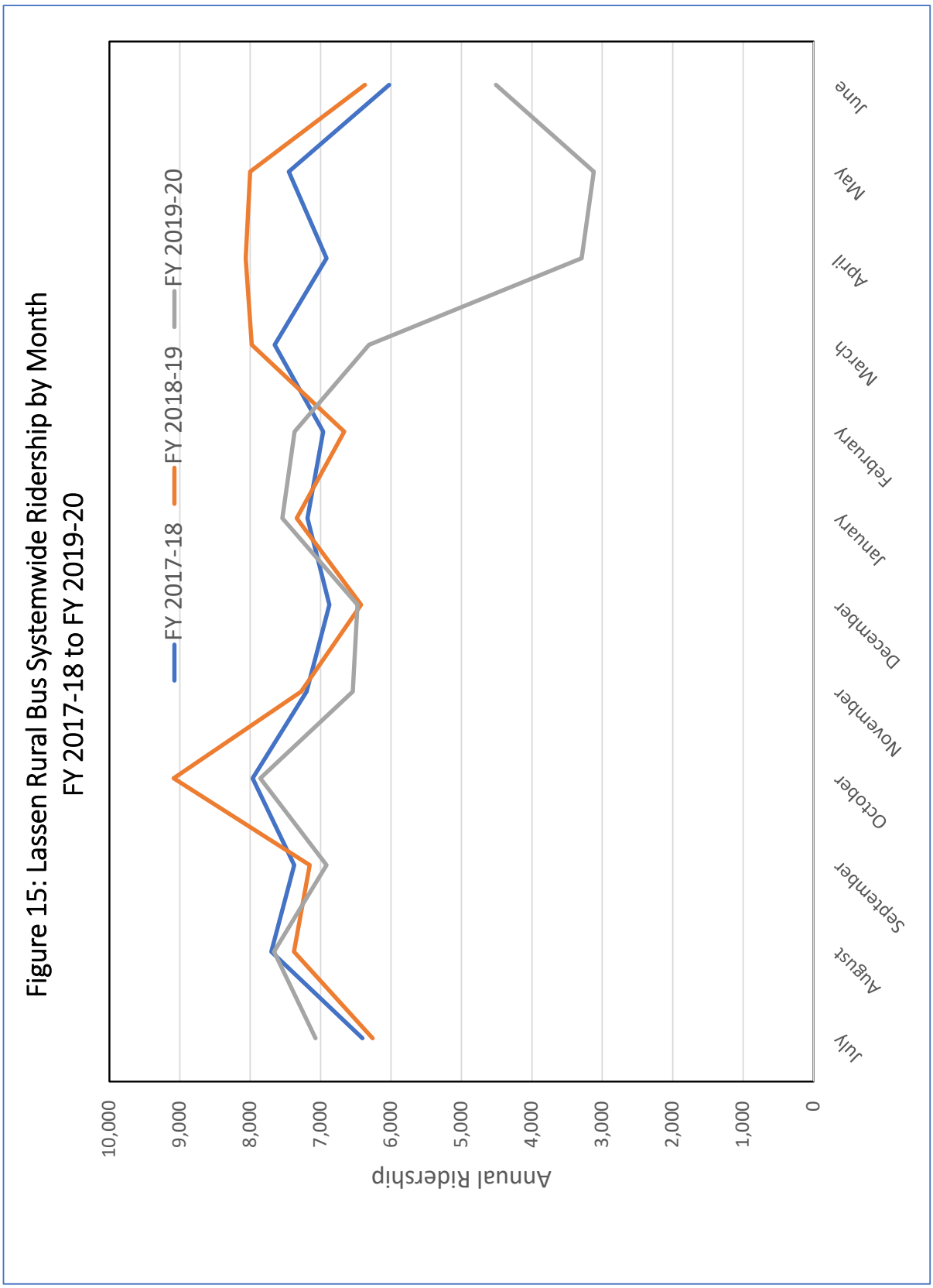


Figure 15: Lassen Rural Bus Systemwide Ridership by Month
FY 2017-18 to FY 2019-20
FY 2017-18
FY 2018-19
FY 2019-20
Annual Ridership
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
July
August
September
October
November
December
January
February
March
April
May
June

Table 8: FY 2019-20 Monthly Ridership by Route

Route	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Impacted by COVID Mar	Apr	May	June	Total
Susanville City Route	3,284	4,078	3,551	3,882	3,338	3,406	3,781	3,903	3,550	2,471	2,287	2,905	**40,436**
South County Commuter	845	800	753	870	608	850	856	753	783	382	338	500	**8,338**
West County	690	768	700	830	621	615	720	721	547	337	374	558	**7,481**
South County to Susanville	186	258	288	293	236	189	318	324	230	35	45	75	**2,477**
East County	12	22	6	21	19	16	30	17	16	13	15	7	**194**
Fixed Route/Commuter Total	*5,017*	*5,926*	*5,298*	*5,896*	*4,822*	*5,076*	*5,705*	*5,718*	*5,126*	*3,238*	*3,059*	*4,045*	***58,926***
Dial-a-Ride	2,055	1,737	1,617	1,960	1,720	1,399	1,839	1,650	1,189	55	60	465	**15,746**
Systemwide	**7,072**	**7,663**	**6,915**	**7,856**	**6,542**	**6,475**	**7,544**	**7,368**	**6,315**	**3,293**	**3,119**	**4,510**	**74,672**

Source: LRB Ridership Information, 2020

Figure 16: FY 2019-20 Monthly Ridership by Route

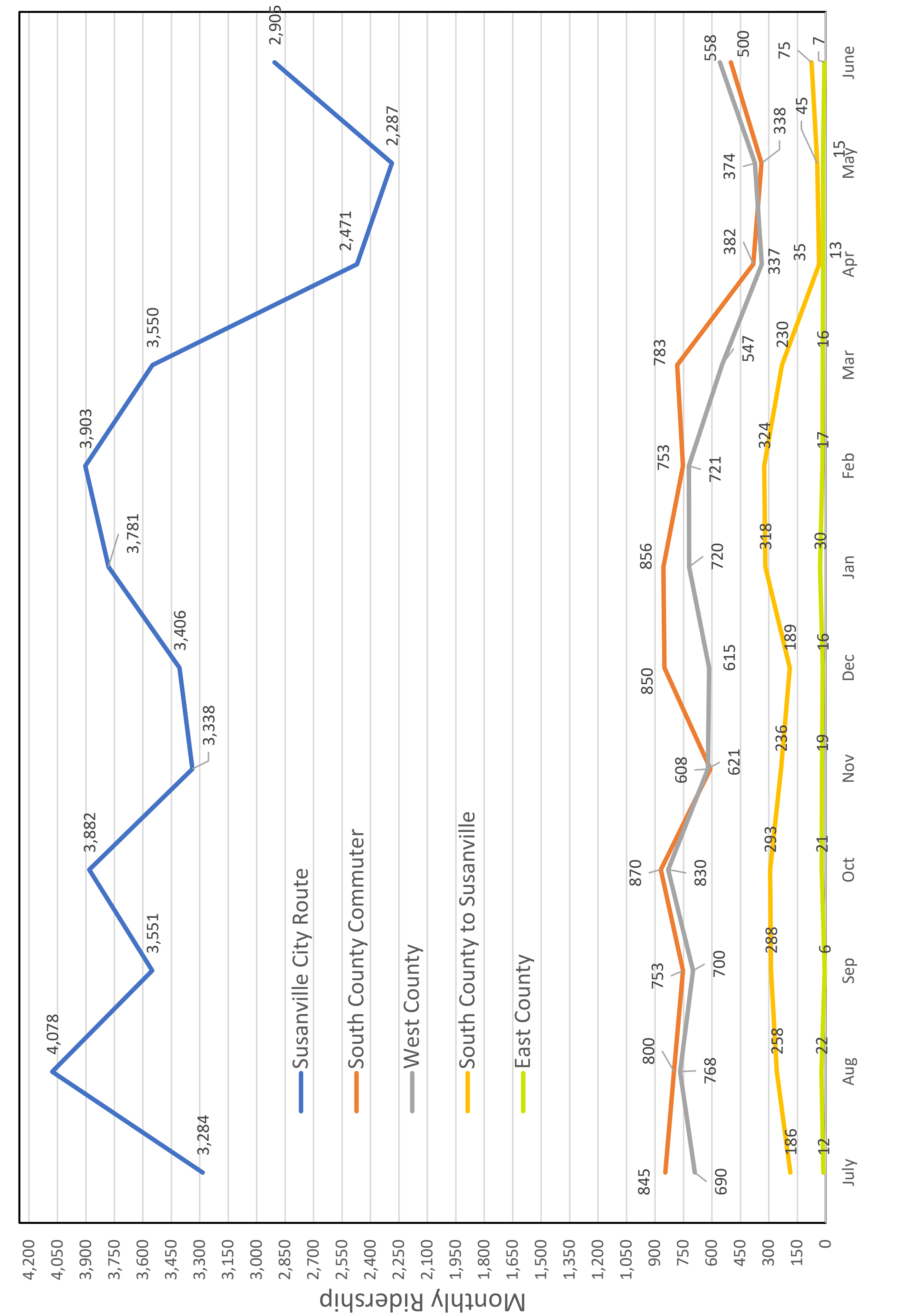
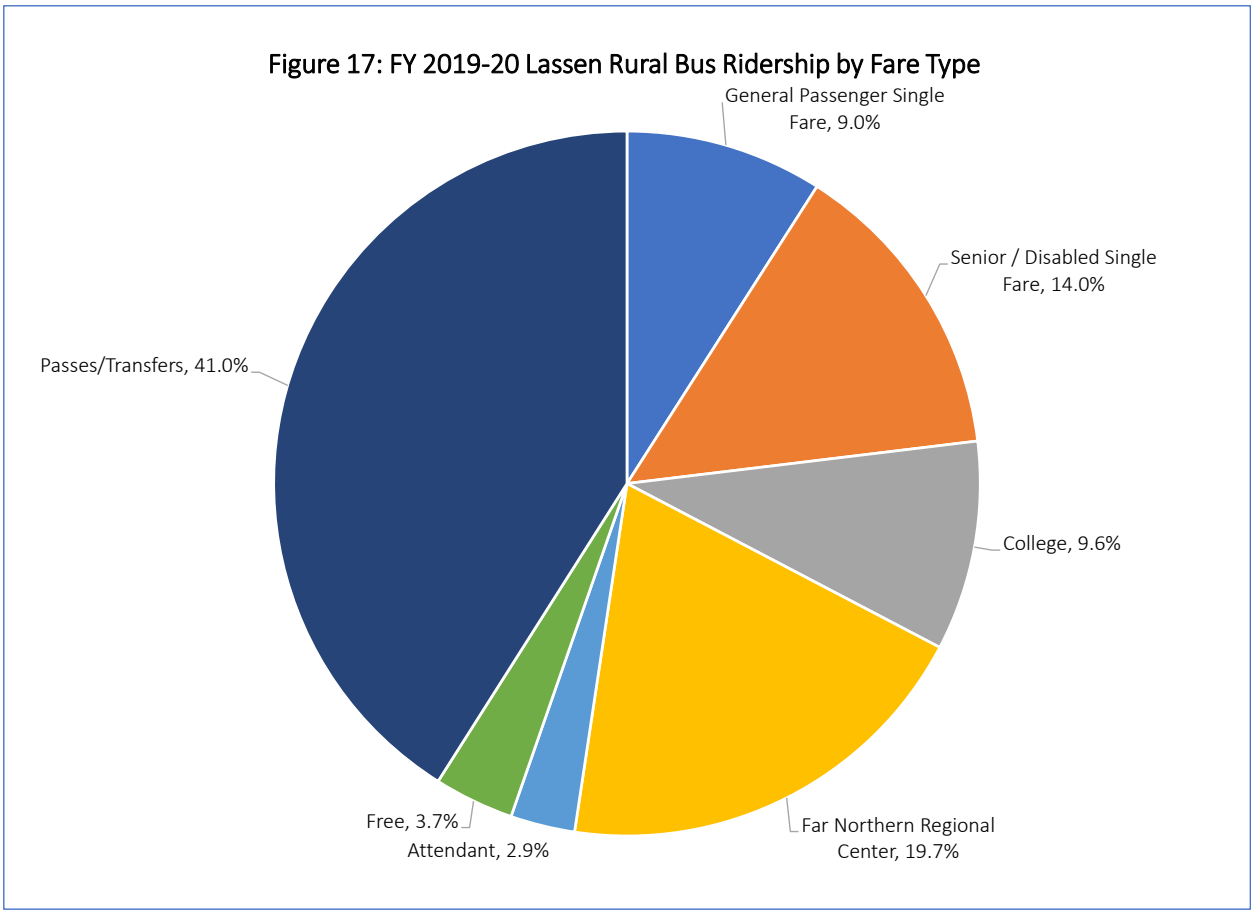


Table 9: FY 2019-20 Lassen Rural Bus Ridership by Fare Type

	Susanville City Route		South County Commuter		South County Susanville		West County		East County		Dial-a-Ride		**Total by Fare Type**	
Type	#	%	#	%	#	%	#	%	#	%	#	%	#	%
General Passenger Single Fare	5,714	14.1%	38	0.5%	200	3.0%	790	10.6%	10	5.2%	0	0.0%	6,752	9.0%
Senior / Disabled Single Fare	7,742	19.1%	22	0.3%	378	5.6%	1,110	14.8%	101	52.1%	1,125	7.1%	10,478	14.0%
College	5,107	12.6%	4	0.0%	837	12.4%	1,209	16.2%	25	12.9%	0	0.0%	7,182	9.6%
Far Northern Regional Center	963	2.4%	0	0.0%	331	4.9%	978	13.1%	2	1.0%	12,425	78.9%	14,699	19.7%
Attendant	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2,199	14.0%	2,199	2.9%
Free	2,365	5.8%	0	0.0%	209	3.1%	151	2.0%	4	2.1%	2	0.0%	2,731	3.7%
Passes/Transfers	18,545	45.9%	8,274	99.2%	522	7.7%	3,238	43.3%	52	26.8%	0	0.0%	30,631	41.0%
Total	**40,436**	**100%**	**8,338**	**100%**	**2,477**	**37%**	**7,476**	**100%**	**194**	**100%**	**15,751**	**100%**	**74,672**	**100%**

Source: LTSA

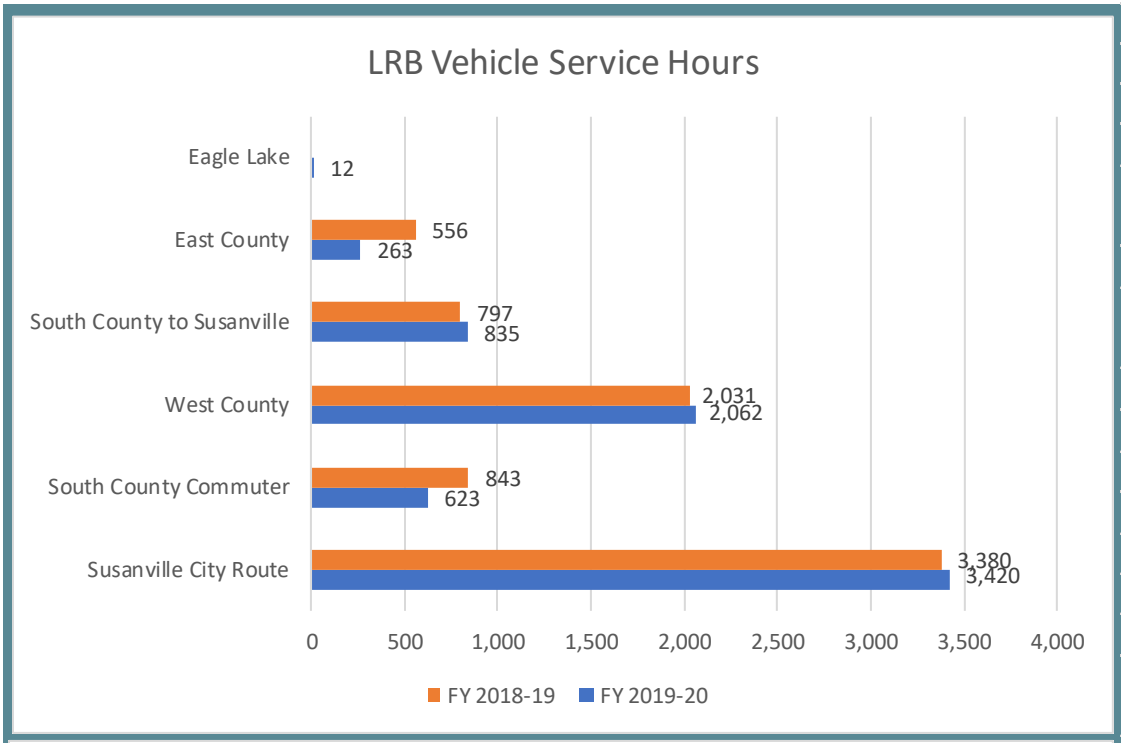


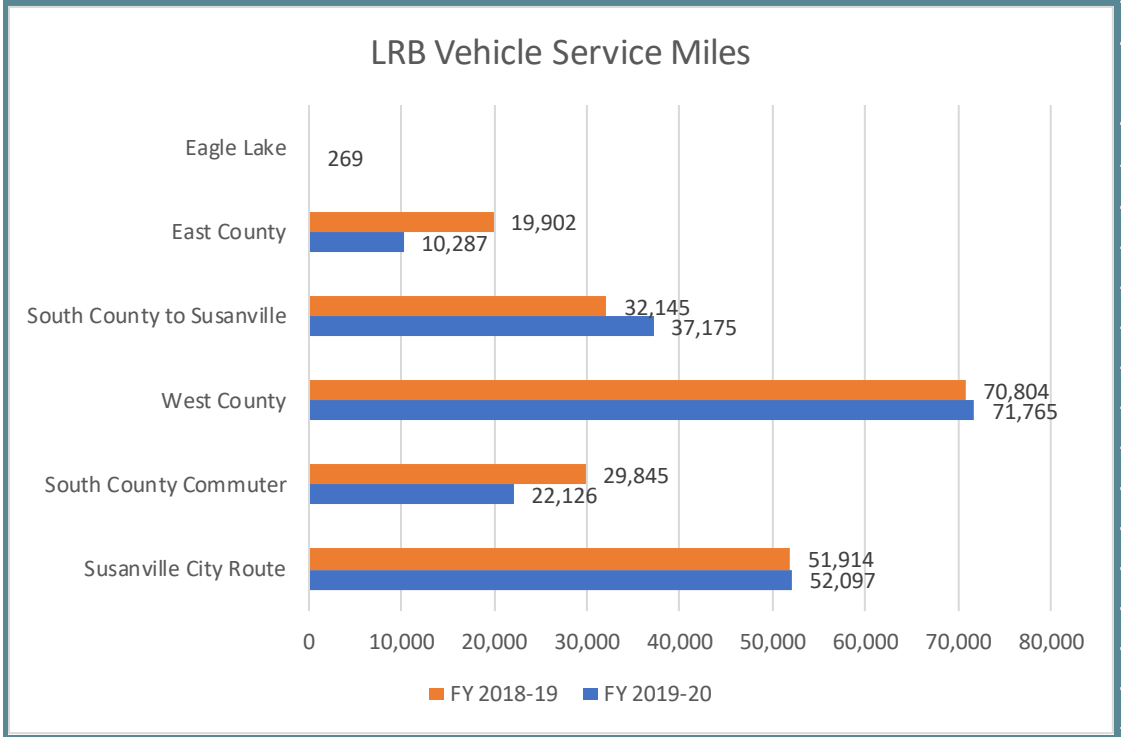
Vehicle Hours and Miles of Service

Fixed route systemwide service levels, or the number of hours and miles that transit vehicles are in service and available to transport passengers, only decreased by 5 percent between FY 2018 – 19 and FY 2019 – 20 for all fixed routes (Figure 18). The East County and South County Commuter routes experienced the greatest decrease in vehicle service hours (VSH) (-52.8 percent and -26.1 percent, respectively). The routes that increased their VSH over the past two fiscal years included the South County to Susanville (4.8 percent), West County (1.5 percent), and Susanville City Route (1.2 percent). Overall, LRB has not had to cut fixed route transit service significantly due to the COVID outbreak.

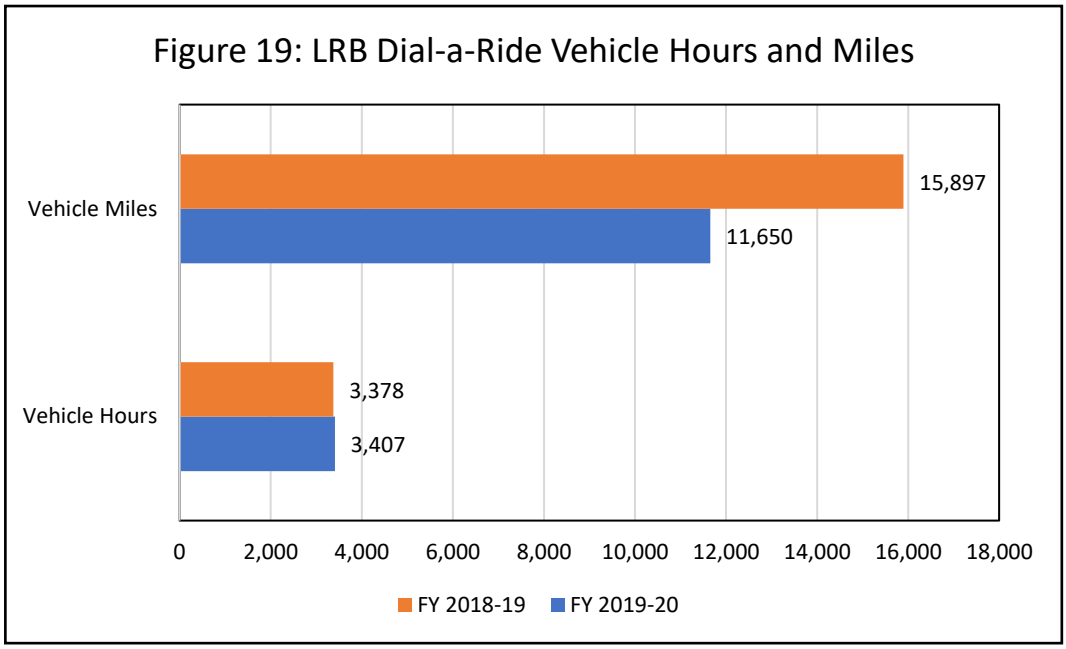
Fixed route vehicle service miles (VSM) also only decreased by five percent between FY 2018 – 19 and FY 2019 – 20. Similarly, to the VSH above, both the East County and South County Commuter routes had a decrease in VSM (-48.3 percent and -25.9 percent, respectively). The South County to Susanville route increased its miles of service by 15.6 percent, followed by the West County route (1.4 percent), and Susanville City route (0.4 percent). It should be noted that the Eagle Lake service did not operate in FY 2018 – 19.

Figure 18: Lassen Rural Bus Vehicle Service Hours and Miles by Route





As shown in Figure 19, Dial-a-Ride VSH stayed the same over the past two fiscal years, while VSM decreased by 26.7 percent in the past fiscal year. This indicates fewer DAR trips, but the transit contractor is in service for the full day, regardless of trips reserved.



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COST ALLOCATION MODEL

When developing and evaluating service alternatives, it is useful to have a cost model that can accurately show the financial impact of any proposed change. A cost allocation model for public transit services allocates the total costs by service quantity (fixed, hours, and miles). Fixed costs include administrative staff time, utilities, the transit contractor's fixed monthly rate and other cost categories which do not generally change if service levels are changed. Hourly costs represent the contractor's variable or hourly contract rate. Per mile costs represent fuel as these expenses are dependent on the number of miles the buses drive. Systemwide cost factors (cost per hour, cost per mile, and fixed costs) are then applied to the actual or proposed miles and hours for each route to estimate the operating cost of each route. Table 10 presents the cost allocation model for Lassen Rural Bus based on actual FY 2018 – 19 costs.

FY 2018 – 19: Total operating expenses of $1,037,863 = $25.86 per vehicle service hour + $0.41 per vehicle service mile + $662,362 in fixed costs

In order to show pre-COVID and during COVID performance at the route level, a cost allocation model was also developed for FY 2019 – 20 (Table 11).

FY 2019 – 20: Total operating expenses of $1,017,566 = $26.41 per vehicle service hour + $0.39 per vehicle service mile + $657,752 in fixed costs

Table 10: FY 2018-19 Lassen Rural Bus Operating Cost Model

		Cost Model Variable		
	Total	Fixed	Vehicle Service Hour	Vehicle Service Mile
Non-Contractor Fixed Costs	$244,378	$244,378		
LTSA Contractor Variable Direct Costs	$284,049		$284,049	
LTSA Contractor Fixed Costs (Admin)	$417,984	$417,984		
Fuel (Transportation and Travel)	$91,442			$91,442
TOTAL	**$1,037,852**	**$662,362**	**$284,049**	**$91,442**
Service Quantities			**10,984**	**220,507**
FY 2018-19 Operating Cost Model =		**$662,362 +**	**$25.86 +**	**$0.41**

Source: LTSC FY 2018/19 Year End Review, LRB Ridership info 1819 SSTAC

Table 11: FY 2019-20 Lassen Rural Bus Operating Cost Model				
			Cost Model Variable	
	Total	Fixed	Vehicle Service Hour	Vehicle Service Mile
Non-Contractor Fixed Costs	$230,881	$230,881		
LTSA Contractor Variable Direct Costs	$280,524		$280,524	
LTSA Contractor Fixed Costs (Admin)	$426,871	$426,871		
Fuel (Transportation and Travel)	$79,290			$79,290
TOTAL	**$1,017,566**	**$657,752**	**$280,524**	**$79,290**
Service Quantities			**10,621**	**205,369**
FY 2019-20 Operating Cost Model =		**$657,752 +**	**$26.41 +**	**$0.39**

Source: LTSC FY 2019/20 Year End Review

LASSEN RURAL BUS PERFORMANCE

Table 12 presents operating data and performance measures at the route level for LRB in FY 2018 – 19 (pre-COVID) and Table 13 presents the same operating data and performance measures for FY 2019 – 20 (during COVID). Figure 20 compares the past two fiscal years' performance. These tables and figures are discussed below.

- Passenger-Trips per Vehicle-Hour of Service - An important measure of service effectiveness is "productivity," defined as the number of one-way passenger-trips provided per vehicle service hour. On a systemwide level, LRB carried 8.0 passenger-trips per hour in FY 2018 – 19. This figure decreased to 7.0 trips per hour in FY 2019 – 20 during COVID. In FY 2018 – 19 the Susanville City Route was the most productive and carried a respectable 13.2 passenger-trips per hour. The other fixed routes are not as productive and carry 3 – 4 trips per hour (West County) and 3 – 3.5 trips per hour (South County to Susanville). Passenger-trips per vehicle hour only decreased slightly because of the pandemic. In FY 2019 – 20 the South County Commuter productivity increased to surpass that of the Susanville City route with 13.4 passengers per hour due to a greater decrease in vehicle hours than passenger-trips while productivity on the Susanville Route decreased to 11.8 trips per hour. The Eagle Lake Route (1.6 passenger-trips per hour) and the East County (0.7, 0.8 passenger-trips per hour) carry very few passengers per vehicle hour of service. LRB DAR carried 6.5 passenger-trips per hour in FY 2018 – 19 and 4.6 trips per hour in FY 2019 – 20. This represents a high level of productivity for a demand response service and is a result of the partnership with FNRC to transport clients to/from programs and destinations. The decrease in DAR productivity is likely due to only some of the programs operating during COVID.

Table 12: FY 2018-19 Lassen Rural Bus Operating Statistics and Performance

Measures	Susanville City Route	South County Commuter	West County	South County to Susanville	East County	DAR	Total Systemwide
Vehicle Hours	3,380	843	2,031	797	556	3,378	**10,984**
Vehicle Miles	51,914	29,845	70,804	32,145	19,902	15,897	**220,507**
Passenger Trips	44,692	9,500	8,799	2,788	433	21,791	**88,003**
Psgr Trips/Hour	13.2	11.3	4.3	3.5	0.8	6.5	**8.0**
Psgr Trips/Mile	0.9	0.3	0.1	0.1	0.0	1.4	**0.4**
Fare Revenue Collected on LRB Buses	$13,940	$6,549	$10,417	$2,300	$238	$2,294	**$35,738**
Total Fare Revenue	$49,453	$26,785	$19,161	$6,375	$853	$76,197	**$178,824**
Total Allocated Operating Cost	$312,712	$85,045	$204,330	$81,967	$56,151	$297,647	**$1,037,852**
Operating Subsidy	$263,259	$58,260	$185,169	$75,592	$55,297	$221,451	**$859,028**
Op Cost/Psgr Trip	$7.00	$8.95	$23.22	$29.40	$129.68	$13.66	**$11.79**
Op Subsidy/Psgr Trip	$5.89	$6.13	$21.04	$27.11	$127.71	$10.16	**$9.76**
Total Farebox Ratio	15.8%	31.5%	9.4%	7.8%	1.5%	25.6%	**17.2%**
Average Fare	$1.11	$2.82	$2.18	$2.29	$1.97	$3.50	**$2.03**
Op Cost/Vehicle Mile	$6.02	$2.85	$2.89	$2.55	$2.82	$18.72	**$4.71**
Op Cost/Vehicle Hour	$92.53	$100.84	$100.62	$102.90	$101.01	$88.11	**$94.49**

Note: Eagle Lake route was not in service during FY 2018-19.

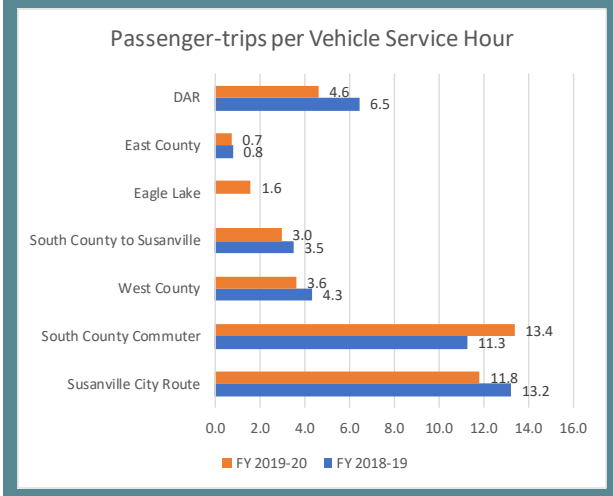
Note: Fare Revenue per Route was estimated based on ridership by type data but monthly pass boardings by type of passengers are not recorded.

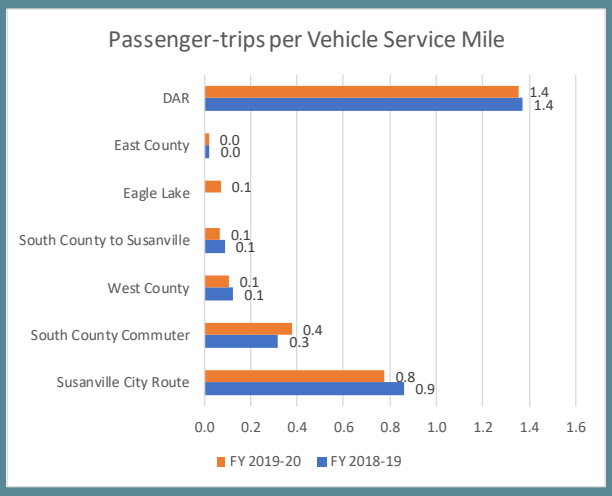
Source: 2018-19 LRB Operating Services Annual Performance Report

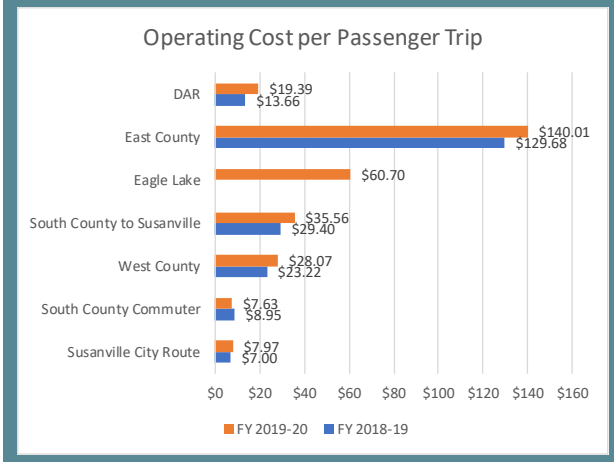
Table 13: FY 2019-20 Estimated Lassen Rural Bus Performance Measures								
Measures	Susanville City Route	South County Commuter	West County	South County to Susanville	East County	Eagle Lake	DAR	Total Systemwide
Vehicle Hours	3,420	623	2,062	835	263	12	3,407	**10,621**
Vehicle Miles	52,097	22,126	71,765	37,175	10,287	269	11,650	**205,369**
Passenger Trips	40,436	8,338	7,476	2,477	194	19	15,751	**74,691**
Psgr Trips/Hour	11.8	13.4	3.6	3.0	0.7	1.6	4.6	**7.0**
Psgr Trips/Mile	0.8	0.4	0.1	0.1	0.0	0.1	1.4	**0.4**
Fare Revenue Collected on Buses	$12,514	$5,443	$10,038	$2,091	$144	$27	$1,969	**$32,225**
Total Fare Revenue	$47,294	$21,917	$18,747	$6,672	$318	$44	$85,599	**$180,592**
Total Allocated Operating Cost	$322,243	$63,579	$209,868	$88,083	$27,161	$1,153	$305,478	**$1,017,566**
Operating Subsidy	$274,948	$41,663	$191,121	$81,410	$26,843	$1,109	$219,879	**$836,973**
Op Cost/Psgr Trip	$7.97	$7.63	$28.07	$35.56	$140.01	$60.70	$19.39	**$13.62**
Op Subsidy/Psgr Trip	$6.80	$5.00	$25.56	$32.87	$138.37	$58.36	$13.96	**$11.21**
Farebox Ratio	14.7%	34.5%	8.9%	7.6%	1.2%	3.9%	28.0%	**17.7%**
Average Fare	$1.17	$2.63	$2.51	$2.69	$1.64	$2.34	$5.43	**$2.42**
Op Cost/Vehicle Mile	$6.19	$2.87	$2.92	$2.37	$2.64	$4.29	$26.22	**$4.95**
Op Cost/Vehicle Hour	$94.22	$102.05	$101.78	$105.54	$103.47	$97.08	$89.66	**$95.81**

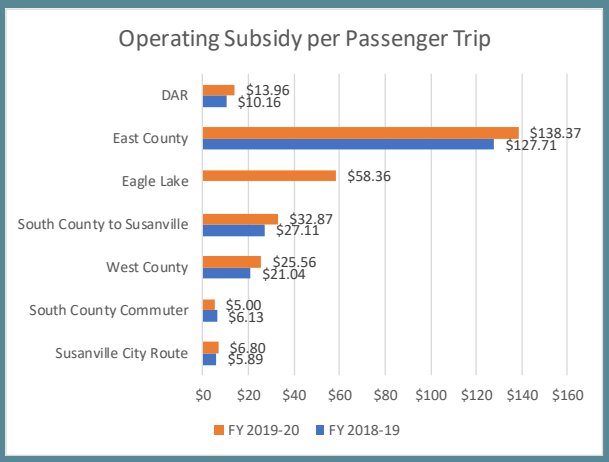
Source: 2019-20 LRB Operating Services Annual Performance Report

Figure 20: Lassen Rural Bus Performance Indicators









- Another measure of service effectiveness is **passenger-trips per service mile**. In both FY 2018 – 19 and FY 2019 – 20 DAR provided the greatest number of passenger-trips per service mile (1.4), followed by the Susanville City Route (0.80 and 0.90). The routes which travel long distances such as West County and South County to Susanville routes each averaged 0.1 passengers per mile, while the South County Commuter served about 0.4 passengers per mile.

- Dividing the allocated cost by the number of passenger-trips served on each route yields the **cost per passenger-trip**. As shown, the highest cost per passenger-trip in FY 2018 – 19 was on the East County Route ($129.68 per trip), followed by South County to Susanville ($29.40), West County ($23.22), and Dial a Ride ($13.66). The Susanville City Route had the lowest per passenger cost per trip ($7.00). Cost per passenger-trip was generally greater in FY 2019 – 20 due to lower ridership. Overall trends remained relatively the same with the East County Route being the least cost effective ($140.01 per trip) and the Susanville City Route and South County Commuter being the most cost effective with $7.97 per trip and $7.63 per trip, respectively. It cost $11.79 per passenger trip to operate in FY 2018 – 19 and $13.62 in FY 2019 – 20.

- Fare revenue includes actual cash fares collected on LRB buses, revenue from pass sales as well as revenue from agreements with Lassen Community College and the Far Northern Regional Center. Ridership from college students and FNRC clients is tracked on a per route basis however, it is unknown which route transit riders who purchased monthly passes used. Therefore, in Tables 12 and 13, revenue from pass sales was allocated to each route based on the proportion of cash fares used on each route.

- Dividing fare revenues by passenger-trips equates to the average fare paid per passenger. Note that average fare figures in Tables 12 and 13 include the revenue received from Lassen Community College and Far Norther Regional Center which boost the average fare significantly. On a systemwide bases, LRB had an average fare of $2.03 in FY 2018 – 19 and $2.42 in FY 2019 – 20. The increase in average fare is due to an overall decrease in passenger-trips but an increase in the amount FNRC paid LRB for their clients to use transit services. This is particularly evident in the high average fare for DAR in FY 2019 – 20 ($5.43), the service which most FNRC clients use.

- The operating subsidy per passenger-trip is calculated by subtracting fare revenues from the costs of each route, divided by the number of passenger trips. This is a particularly useful performance measure, as it directly relates the key public input to a public transit program (subsidy funding) with the key "output" (passenger-trips). As shown in Table 12 the most cost-effective services in FY 2018 – 19 were the City Route and South County Commuter, which required respectively $5.89 and $6.13 in operating subsidy for every passenger-trip (the system average subsidy being $9.76). On the other extreme, the East County service required $127.71 in operating subsidy per trip. During COVID (Table 13), systemwide operating subsidy per trip increased to $11.21. On a per route basis in FY 2019 – 20, the East County route was again the least cost effective ($138.37) and the South County Commuter and City Route the most cost effective ($5.00 and $6.80 per trip). DAR services had an operating subsidy per trip of $13.96 in FY 2019 – 20.

- The farebox ratio is fare revenues divided by the operating costs. In other words, what proportion of operating costs are covered by fare revenues. The South County Commuter route had the highest farebox ratio in FY 2018 – 19, 31.5 percent, followed by DAR (25.6 percent). The South County Commuter route costs more to ride and the DAR revenue is heavily subsidized by FNRC. In contrast the East County route had a farebox ratio of 1.5 percent that fiscal year. Farebox ratio trends were similar the following year. South County Commuter (34.5 percent), DAR (28.0 percent) and East County (1.2 percent). Farebox ratio is a particularly important performance indicator as it sets forth a transit operator's level of eligibility for TDA funds. Rural transit operators must maintain a systemwide farebox ratio of 10 percent. If farebox ratio falls below this level for more than one year, the amount of TDA funding which the transit operator is eligible is decreased by the difference between the fare revenue needed to make the required farebox ratio and actual fare revenue. In FY 2018 – 19, LRB had a 17.2 percent systemwide farebox ratio. In FY 2019 – 20, farebox ratio actually increased to 17.7 percent. For both years, LRB far surpassed the TDA requirement.

PERFORMANCE OF CONTRACTED SERVICES

As indicated above, LTSA contracts with three different agencies to provide transit services which are needed for the community but challenging for LTSA to provide.

- Sage Stage—Intercity transit service to Reno one round trip per day, three days per week
- Big Valley 50 Plus—Shuttle trips within Bieber and intercity trips from Bieber to Redding, Susanville, and Klamath Falls
- Lassen Senior Services—Senior transportation to congregate meals in Susanville and trips to Reno

As TDA funds are used to pay for the contracts, it is worthwhile considering the operating performance of these services. Table 14 presents a summary of performance indicators for the contracted services. As shown, LTSA's cost per passenger-trip ranges from $20.68 on Big Valley 50 Plus in FY 2018 – 19 to $32.56 for Lassen Senior Services in FY 2018 – 19.

Table 14: Performance of LTSA Contracted Services

	Lassen Senior Services	Big Valley 50 Plus	Modoc Sage Stage [1]
FY 2018-19			
Passenger-trips	2,641	2,128	1,358
Vehicle Service Miles	36,605	21,930	59,973
LTSA Contribution	$86,000	$44,005	$30,000
LTSA Cost per Trip	$32.56	$20.68	$22.09
Trips per Vehicle Mile	0.07	0.10	0.02
FY 2019-20			
Passenger-trips	3,364	1,815	883
Vehicle Service Miles	33,052	23,067	41,300
LTSA Contribution	$86,000	$39,791	$26,894
LTSA Cost per Trip	$25.56	$21.92	$30.46
Trips per Vehicle Mile	0.10	0.08	0.02

Note 1: Trips represent Lassen County boardings but miles are total route miles.

Source: LTSA Operating Services Performance Report

PERFORMANCE OF NEW AND EXTENDED SERVICES (PILOT PROJECTS) IMPLEMENTED IN 2020

The FY 2020 – 21 Unmet Transit Needs process found that three unmet transit needs were reasonable to meet: 1) Service along Richmond Road between SR 36/US 395 and the Susanville City Limits and 2) Serve the Lake Forest Community with the West County Route on a reservation basis 3) Add a second bus to the Susanville City Route. In October of 2020, Lassen Rural bus implemented the West County Extension to serve Richmond Road and a Susanville Express Route.

The Susanville Express Route provides a more direct loop around Susanville than the existing City Route (16 timed stops instead of 46 timed stops). The route operates between 10:30 AM and 4:00 PM on roughly half-hourly headways. Between the months of October and January 2020 the Susanville Express Route averaged 1.74 passenger-trips per vehicle service hour. During the same period, the regular City Route averaged 8.44 trips per hour. Typically, it takes one to three years for a new service to see its full potential. Additionally, the Express Route began just as systemwide ridership was decreasing because of the fall COVID surge.

After the West County Route's first morning trip round trip to Chester, the bus becomes the West County Extension. The West County extension begins at Riverside Drive, travels west to Richmond Road, turns left on Richmond Road to serve outlying neighborhoods, crosses US 395 to serve the Susanville Airport and the Johnstonville store, then travels north to serve the college then back south on SR 139 to Riverside Drive. The same loop occurs after the mid-day West County Route. Between October and January of 2020, the West County Extension had carried a total of 11 passenger-trips or on average 0.07 trips per hour. The West County Route also has the COVID related challenges as the Express Route.

LASSEN RURAL BUS CAPITAL ASSETS

LRB's capital equipment and infrastructure supports Lassen Rural Bus Fixed Route and Dial-A-Ride services, as well as Lassen Senior Services.

Facilities

The maintenance and operations facility for Lassen Rural Bus is located at Johnstonville Road just south of Skyline Road in Susanville. The facility provides administrative space, a driver break room, two maintenance bays and a bus wash.

Vehicle Fleet

As shown in Table 15, Lassen Rural Bus's vehicle fleet consists of a total of 11 buses. Of these buses, three large 39-41 passenger over-the-road commuter buses and the remainder are smaller buses, with passenger capacities of 19-24. The average age of the vehicles is 4.2 years.

Bus Stops

LTSA is in the process of improving bus stops in Susanville and Westwood. In 2020, LTSA installed 12 new bus stop signs within the City of Susanville. There are plans to install more bus stop signs along the state highways in 2021. The bus stop improvement program also includes plans to install up to 10 shelters at high activity stops and install more bicycle racks at existing bus stops. These improvements will increase the visibility of the transit system and make it easier for potential new riders to use LRB.

Technology

Lassen Rural Bus has implemented an Automatic Vehicle Locator (AVL) passenger access system using GPS to transmit vehicle location. Passengers can track bus locations on the internet through the mobile application ETA SPOT.

Table 15: Vehicle Fleet List

Make/Model	Vehicle Year	Funding Program	Seating Capacity	Wheelchair Positions	Condition	Mileage	Replacement Year
GMC/ ARBOC	2014	Prop1B/ PTMISEA	19	3	Good	156,502	2022
GMC/ ARBOC	2014	Prop1B/ PTMISEA	19	3	Good	131,881	2023
GMC/ ARBOC	2014	Prop1B/ PTMISEA	19	3	Good	139,689	2023
Gillig Corporation	2010	STIP	39	2	Adequate	339,177	2023
Gillig Corporation	2012	Prop1B/ PTMISEA	39	2	Good	260,158	2025
GMC/ ARBOC	2019	Prop1B/ PTMISEA	19	3	Excellent	2,496	2028
GMC/ ARBOC	2019	Prop1B/ PTMISEA	19	3	Excellent	2,472	2028
Glaval/ Freightliner	2016	Prop1B/ PTMISEA	22	2	Excellent	34,063	2029
Glaval/ Freightliner	2016	Prop1B/ PTMISEA	22	2	Excellent	52,520	2029
Glaval/ Freightliner	2020	5339 (State)	24	2	Excellent	13,319	2032
Gillig Corporation	2020	5339 (State)	39	2	Excellent	11,317	2033

Source: LTSA

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Chapter V
PERFORMANCE STANDARDS

An important element in the success of any organization is a clear and concise set of goals and objectives, as well as the performance measures and standards needed to attain them. As a public entity, a public transit organization is expending public funds and therefore has a responsibility to provide the public with transparent information on how funds are being spent and how well it is doing in meeting its goals. Funding partners also have a responsibility to ensure that funds provided to the transit program are being used appropriately. This is accomplished by providing information on the effectiveness and efficiency of the transit program. Additionally, an adopted set of goals and performance standards helps to communicate the values of the transit program to other organizations, to the public, and to the organization staff.

Per the LCTC adopted definition of "Unmet Transit Needs which are Reasonable to Meet":

- An identified unmet transit need can be determined to be "reasonable to meet" if it is demonstrated, based upon LCTC staff analysis or other independent evidence, that the transit need can be met within the following performance and financial standards:
  - The performance standard for fixed-route systems is 10% fare revenue ratio.
  - All other systems shall achieve at least the fare revenue ratio and passenger productivity standards established in the Lassen County Transit Development Plan and the Regional Transportation Plan or as established by statute.

- An extension of service shall not cause the system of which it is a part to fail to meet the system-wide performance standards. Considered separately, it shall achieve at least half the system-wide performance standards, except in case of an extension of service determined to be a necessary lifeline service for transit dependent populations.

- The unmet transit need will not require the expenditure of more than the affected jurisdiction(s) proportional share of Transportation Development Act funds that are apportioned by LCTC based on population.

- The prior Transit Development Plan did not identify any goals or performance standards. Currently the only performance standard for LTSA services is the 10 percent TDA farebox ratio requirement. Developing performance standards as part of this transit planning effort will provide LCTC and transit staff with performance metrics with which to evaluate requests for new or expanded services. Performance standards will be particularly useful for the unmet transit needs process as without a quantitative measure determining if an unmet transit need meets reasonable to meet criteria becomes more challenging.

- Therefore, this chapter proposes a variety of performance standards for LTSA services (Table 16). The standards were based on historical performance and industry standards. These standards will be used to evaluate performance of service alternatives.

TABLE 16: Lassen Rural Bus Standards for Transit Service

Fiscal Year 2019-20 Results

Shading Indicates Does Not Meet Standard

Performance Measure	Service Efficiency: Farebox Return Ratio Standard	Service Effectiveness: Marginal Subsidy Per Passenger-Trip (1)	Service Effectiveness: Passenger-Trips per Vehicle Service Hour
Commuter Services			
Standard	**10%**	**$2.00**	**13.0**
South County Commuter	35%	$0.37	13.4
Local Fixed Route Services			
Standard	**10%**	**$2.00**	**8.0**
Susanville City Route	14.7%	$1.56	11.8
Inter-community Deviated Fixed Routes			
Standard	**5.0%**	**$25.00**	**2.5**
West County	8.9%	$8.48	3.6
South County	7.6%	$12.00	3.0
East County	1.2%	$54.57	0.7
Special Routes			
Standard	**5.0%**	**$20.00**	**2.0**
Eagle Lake	3.9%	$19.64	1.6
Demand Response			
Standard	**10%**	**$1.00**	**3.0**
Dial-a-Ride	28.0%	$0.56	4.6
Systemwide			
Standard	**10%**	**$5.00**	**5.0**
FY 2019-20	17.75%	$2.40	7.03

Note: Fixed costs excluded

An on-line community survey was conducted during February of 2021 to obtain a better understanding of public transit needs and issues in Lassen County. A total of 139 people participated in the survey. The survey was advertised through various local news outlets, stakeholders, and social media. The survey consisted of 15 questions.

GENERAL DEMOGRAPHICS (QUESTIONS 1, 2, 3, AND 4)

About 50.4 percent of all respondents were between the ages of 41 and 64 years old, followed by 30.2 percent between the ages of 26 and 40 years old, and a combined 17.3 percent who are ages 65 or older (Figure 21). There were no participants under the age of 18 years old.

As shown in Figure 22, approximately 76 percent of those taking the survey live in Susanville, followed by Janesville (9 percent). Of the 5 percent who answered "other", these answers included Lake Forest, Lake Almanor, and Chester.

Questions 3 and 4 asked whether respondents had a driver's licenses and a car available at home for their use. Of those who took the survey, nearly all respondents or 96 percent had a driver's license and nearly as many (94 percent) had access to a vehicle for travel, as shown in Figure 23.

TRIP PATTERNS AND COMMUTE MODES (QUESTIONS 5 AND 6)

Respondents were asked which community they travel to for various trips including work, doctor/medical appointments, school, recreation/social, grocery shopping, and banking. Table 18 summarizes the results:

- Work—Roughly 79 percent of respondents work in Susanville followed by 3 percent who work in Johnstonville just southeast of Susanville. Of those who responded to this question, 5 percent indicated that they are currently retired. Of the 2 percent who answered "Other," Bieber and Reno were mentioned.

- Doctor or medical appointments—Susanville is the most common destination (49 percent), followed by Reno, Nevada (39 percent). In comparison, the proportions reporting travel to other cities was relatively low, with 2 percent going to Redding and 2 percent going to Chico.

- Susanville is the most frequent school destination (75 percent of respondents). This was followed by Janesville (10 percent) and Johnstonville (5 percent). No participants indicated that they were currently attending classes online.

- 35 percent of respondents indicated that Susanville is the destination for Recreational and social destinations, followed by Reno (23 percent). Another 5 percent travel to Janesville. Of the 11 percent who responded "Other," destinations such as Lake Tahoe and Eagle Lake were mentioned.

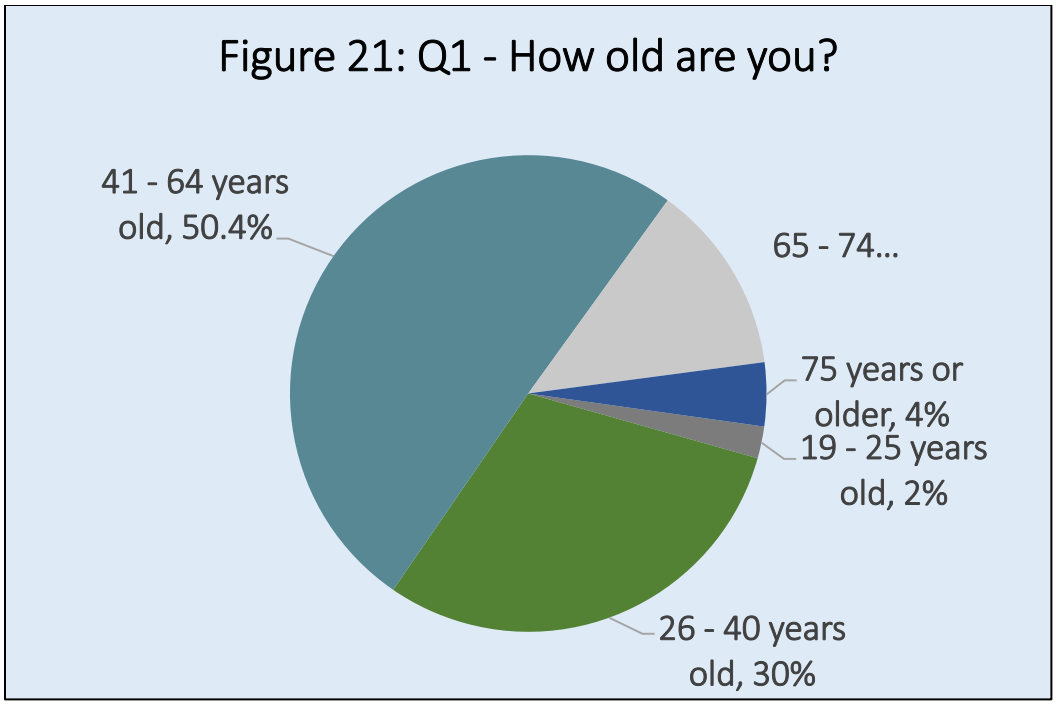


Figure 21: Q1 - How old are you?
41 - 64 years old, 50.4%
65 - 74...
75 years or older, 4%
19 - 25 years old, 2%
26 - 40 years old, 30%

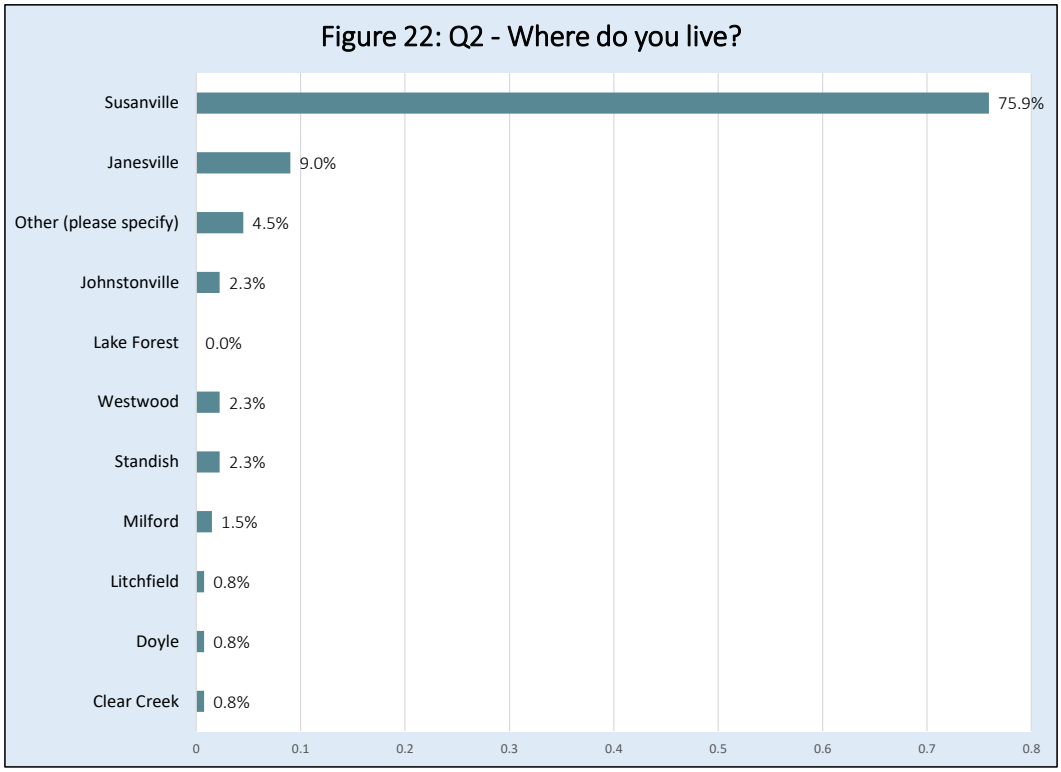


Figure 22: Q2 - Where do you live?
Susanville 75.9%
Janesville 9.0%
Other (please specify) 4.5%
Johnstonville 2.3%
Lake Forest 0.0%
Westwood 2.3%
Standish 2.3%
Milford 1.5%
Litchfield 0.8%
Doyle 0.8%
Clear Creek 0.8%
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8

Table 17: Q5 - Which community do you travel to for…

	Work	Doctor/ Medical	School	Recreation / Social	Grocery Shopping	Banking
	%	%	%	%	%	%
Susanville	79%	49%	75%	35%	75%	80%
Herlong	2%	0%	0%	1%	0%	0%
Janesville	1%	0%	10%	4%	0%	0%
Johnstonville	3%	0%	5%	0%	0%	0%
Lassen County	3%	0%	0%	6%	2%	1%
Litchfield	1%	0%	0%	0%	0%	0%
Reno	1%	39%	3%	23%	20%	6%
Redding	1%	3%	0%	3%	2%	0%
Plumas County	0%	1%	0%	2%	0%	1%
Retired	5%	0%	0%	0%	0%	0%
Chester	0%	3%	0%	5%	1%	1%
Eagle Lake	0%	0%	0%	2%	0%	0%
Lake Almanor	0%	0%	0%	2%	0%	0%
Lake Tahoe	0%	0%	0%	2%	0%	0%
Doyle	0%	0%	0%	1%	0%	0%
Chico	0%	2%	3%	3%	2%	0%
Online	0%	0%	0%	0%	0%	4%
Other	2%	4%	5%	11%	0%	8%

Figure 23: Q3 & Q4 - Respondent Driver's Characteristics

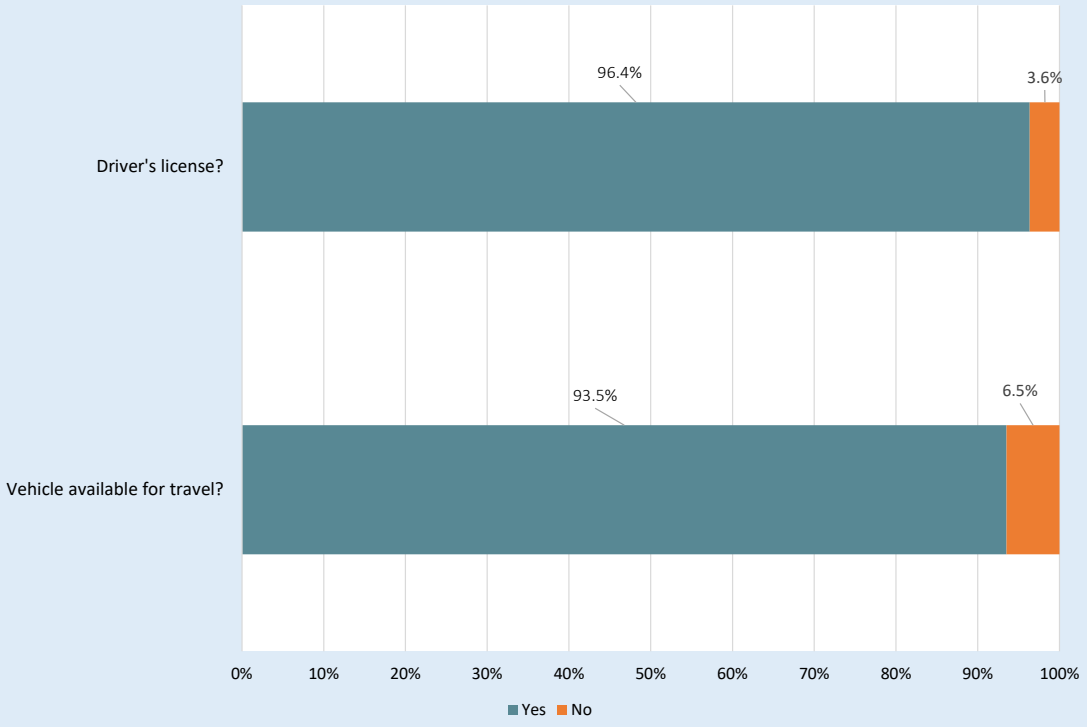


Table 18: Q6 - What best describes your occupation?	Responses	
Answer Choices	#	%
Employed full-time	89	67%
Employed part-time	10	8%
Unemployed	3	2%
College student	1	1%
K-12 student	0	0%
Retired	26	20%
Other (please specify)	3	2%

- The majority of respondents (75 percent) go to Susanville for shopping trips, followed by 20 percent who travel to Reno.

- Susanville is the most common destination for banking (80 percent of respondents) with 6 percent of respondents travelling to Reno, Nevada.

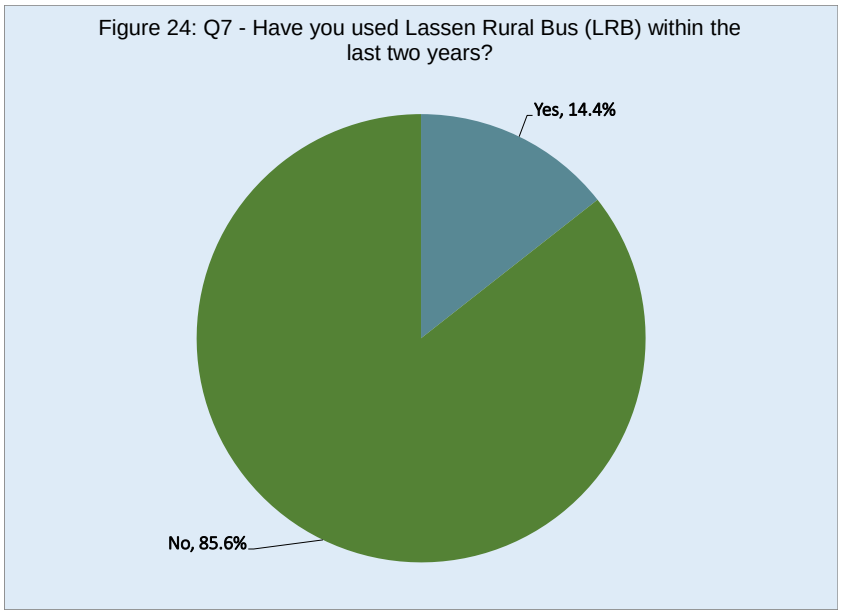
When asked about occupational status, 67 percent of respondents stated that they were employed full-time, followed by 20 percent who are currently retired (Table 17). About 8 percent of those taking the survey currently work part-time. Of those who answered "Other," these responses included stay-at-home parent, self-employed, and currently looking for work.

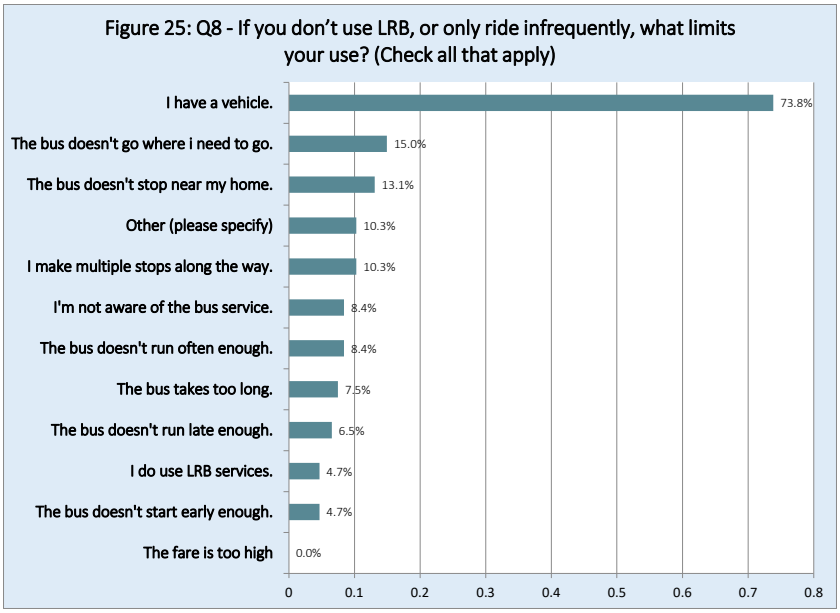
LASSEN RURAL BUS AND TRANSIT USE (QUESTIONS 7, 8, 9, 10, 11, 12, AND 13)

The majority (86 percent) of those taking the survey stated that they have not ridden Lassen Rural Bus (LRB) during the last two years, as shown in Figure 24. Figure 25 illustrates why that might be. As shown, more than half (74 percent) answered that they have their own vehicle and have no need for the service. Other responses included that the bus does not go where they need to go (15 percent) and that the bus does not stop near their home (13 percent). Of the 10 percent who answered "Other", responses included concerns about Covid-19 exposure, long drive times, and scheduling issues.

When asked what could be done to encourage more frequent LRB use, 43 percent indicated "Other". Of these responses, many stated that because they currently have a vehicle, they would not likely take the bus for any reason (Figure 26). Of those who would like to ride the bus, 29 percent asked for better service near their homes and closer to their destinations. Another 19 percent would like to see more frequent service. A list of specific suggestions is included as Attachment A.

When asked whether respondents would still be able to get to various destinations if LRB did not exist, many indicated yes (between 77 to 87 percent as shown in Figure 27). However, when looking at individual destinations, 24 percent of respondents indicated that they would not be able to get to school if not for LRB. Another 17 percent of those surveyed stated that they would not be able to get to various social service appointments without service as well.





Respondents who indicated they had ridden LRB in the last two years were asked a set of different questions. When asked how frequently they ride LRB, 41 percent stated that they no longer use LRB, followed by about 35 percent who use LRB less than once per month and 10 percent ride LRB more than ten times per month (Figure 28). This question was then followed up by asking which LRB services participants have used in the past (Figure 29). About 36 percent use the Susanville City Route, followed by the Susanville Express (24 percent), and the West County Route (Mon-Fri) (12 percent). Those who answered "Other" mentioned that they use Dial-a-Ride services.

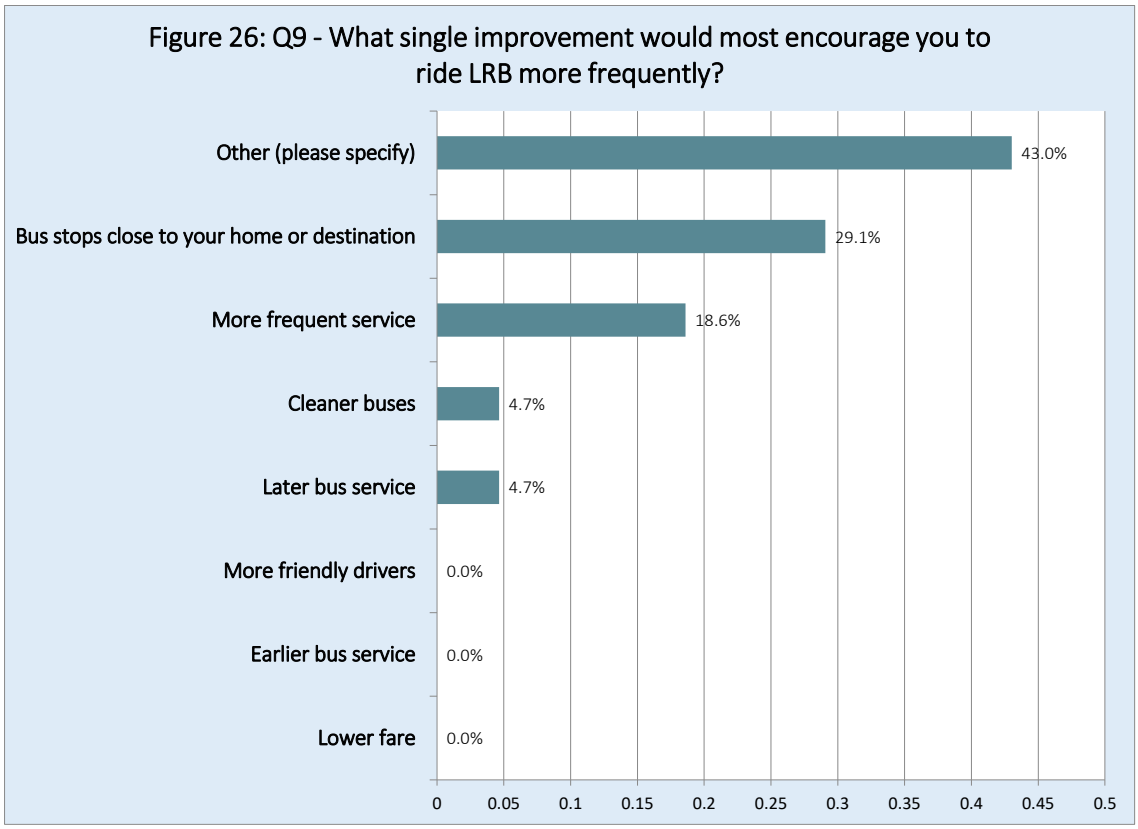


Figure 26: Q9 - What single improvement would most encourage you to ride LRB more frequently?
Other (please specify)
43.0%
Bus stops close to your home or destination
29.1%
More frequent service
18.6%
Cleaner buses
4.7%
Later bus service
4.7%
More friendly drivers
0.0%
Earlier bus service
0.0%
Lower fare
0.0%
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5

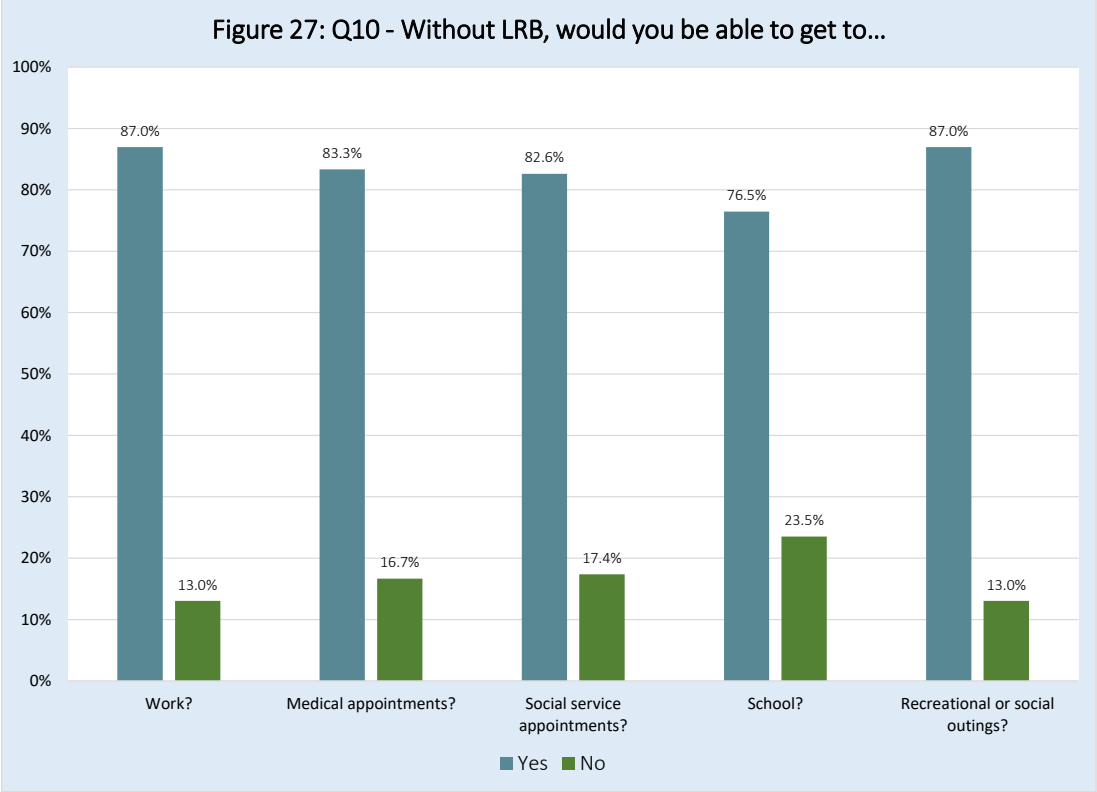
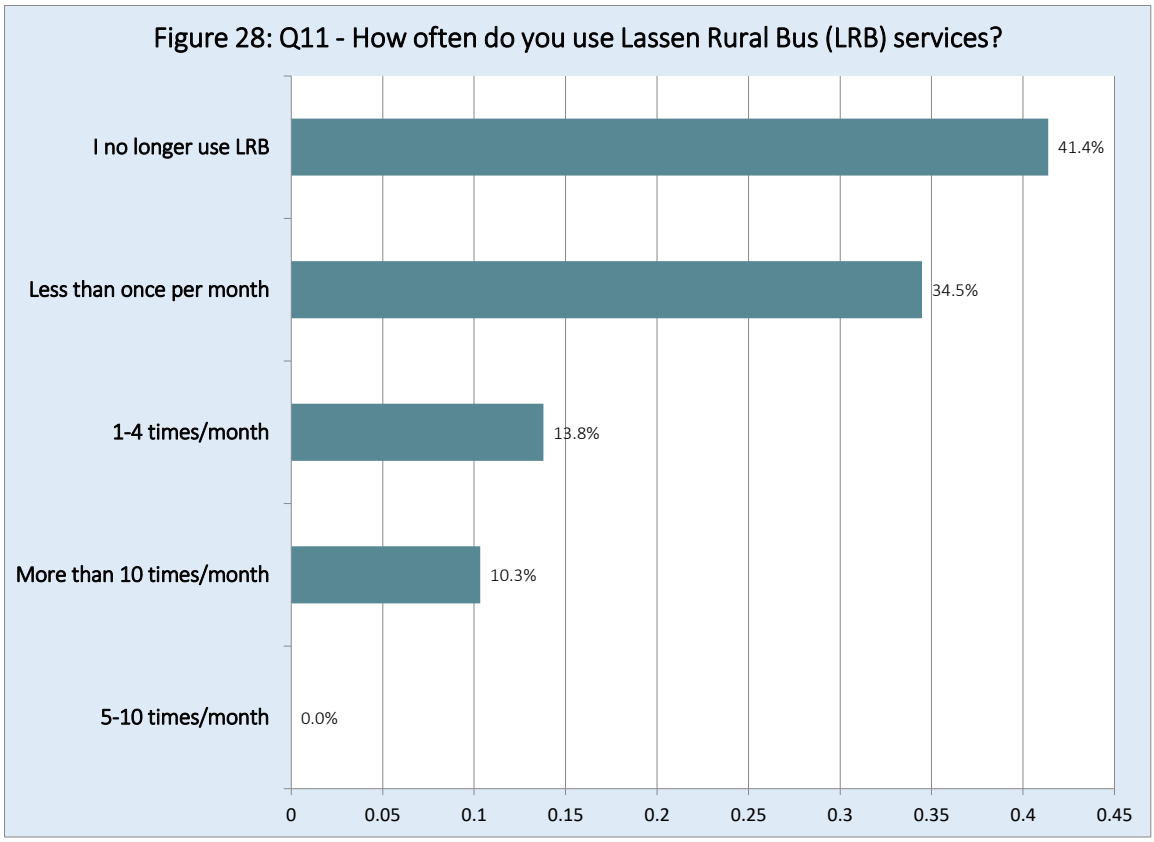


Figure 27: Q10 - Without LRB, would you be able to get to...
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
87.0%
13.0%
83.3%
16.7%
82.6%
17.4%
76.5%
23.5%
87.0%
13.0%
Work?
Medical appointments?
Social service appointments?
School?
Recreational or social outings?
Yes
No



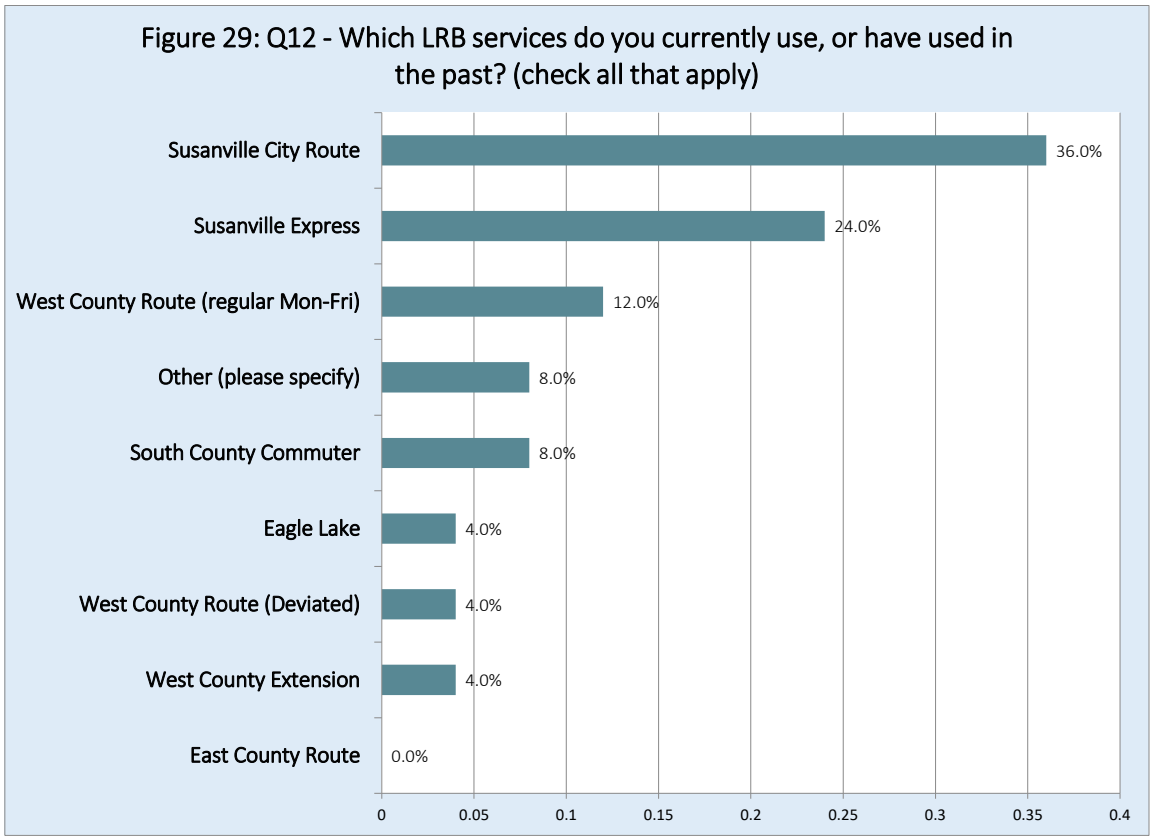
LASSEN RURAL BUS DESTINATIONS (QUESTIONS 13 AND 14)

A total of 16 participants mentioned where they usually get on and off LRB. As could be expected, most of the trips were made within Susanville. The following is a list of common LRB route destinations:

- Walmart, Susanville
- Westwood Community Center
- Janesville
- Lassen Historical Museum, Susanville
- Lassen College
- Sierra Army Depot, Herlong
- Devils Corral Trailhead
- Senior Center, Susanville

LASSEN RURAL BUS CHARACTERISTICS (QUESTION 15)

Figure 30 summarizes survey respondents' perceptions of various aspects of LRB and its operations. As illustrated, participants ranked bus stop and shelter conditions to be poorest on a scale from 1 (poor) to 5 (excellent). The highest ranked characteristic, with 70 percent of participants stating "excellent", was driver courtesy. Overall system safety, driver safety, and Covid-19 safety measures also ranked very high with 55 percent answering "excellent" for all.



OPEN COMMENTS (QUESTION 16)

The final question asked respondents to share their comments. A total of 12 respondents had additional input. These responses are included as Attachment A and summarized below:

- Additional Dial-a-Ride services was requested after 5:00 PM on weekdays to accommodate later appointments, as well as on Saturdays.
- Transit services to Redding, Red Bluff, and Chico was requested.
- Additional bus stop signage was requested.
- General comments of support for LRB and their current services.

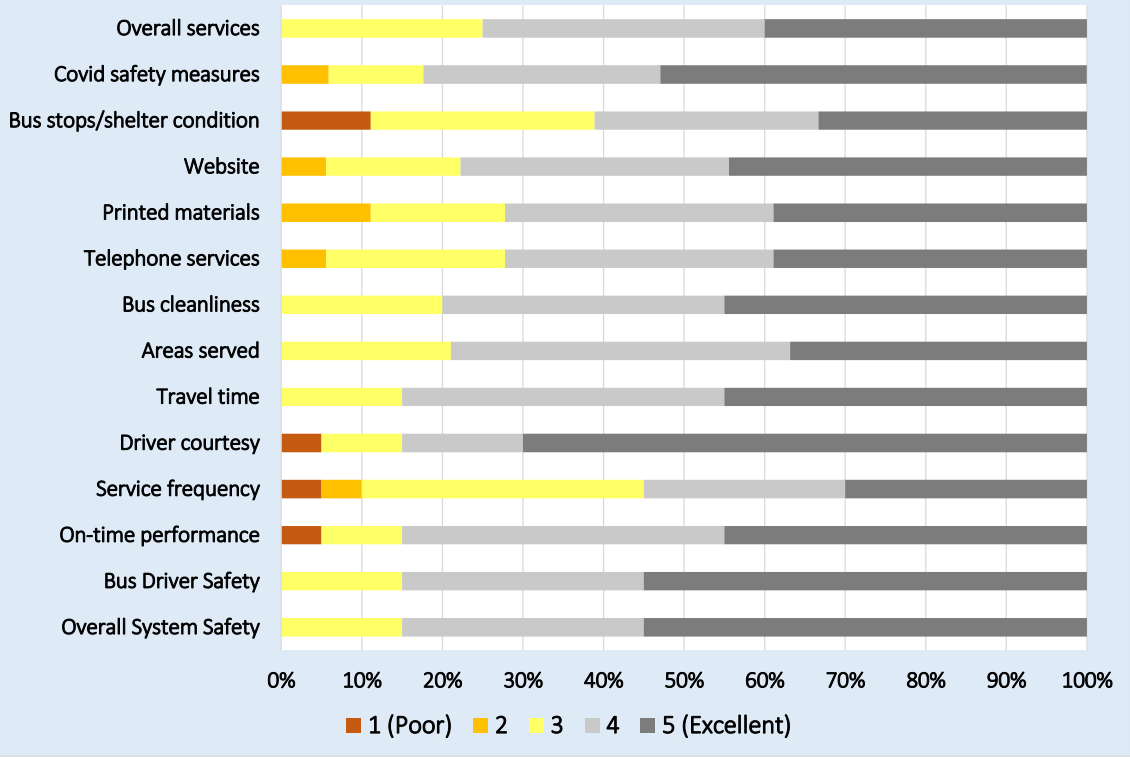
ONLINE SURVEY CONCLUSIONS

Responses throughout the survey echoed a theme that while many choose not to ride transit services, it is still felt to be very important for those who do. The following includes a summary of major findings from the survey:

- Most respondents have a driver's license (96 percent) and have a vehicle at home available for their use (94 percent).

- Susanville is the most common community destination for all types of trips (work, doctor's appointments, school, recreation, and banking). However, increased connectivity to Reno is deemed important to serve those who need access to doctor's appointments (nearly 40 percent) and shopping (about 20 percent).

Figure 30: Q15 - Rank the Following Characteristics (Community Survey)



- As with most rural transportation systems, survey recommendations were most related to increasing service areas, frequency, and hours of service. Of the nearly 86 percent of participants stating that they do not currently use LRB, about 28 percent of those respondents may consider using LRB if routes were expanded to better serve their homes.

- When considering infrastructural improvements, LRB should consider updating existing bus stops and shelters. This can be accomplished through providing bus signage, lighting, and benches.

Service improvement suggestions included later Dial-a-Ride service for those who have appointments running later than 5:00 PM and intercounty transportation.

ONBOARD PASSENGER SURVEY SUMMARY

An onboard passenger survey was conducted during March of 2021 to obtain a better understanding of public transit needs and issues in Lassen County according to current passengers. A total of 30 people participated in the survey. The survey was distributed with hanging folders and contact-less return. It was advertised along bus routes and specific stops through flyers. The survey consisted of 17 questions. With a small number of participants, the following provides an overview of survey responses.
Additional comments and concerns are included in Attachment A with the Online Community Survey Responses.

- When asked which route riders were currently using, nearly half (45 percent) of respondents indicated they were using Dial-A-Ride, followed by Susanville City Route (25 percent), and Susanville Express (12 percent).

- When asked what time passengers were riding the bus, over half (56 percent) of respondents rode between 10:00 AM and 2:00 PM, followed by 30 percent riding between 6:30 AM and 10:00 AM.

- When asked to share where passengers were getting on and off the bus, over on third (35 percent) were traveling from home to Lassen Life Skills (San Francisco Avenue). Other frequently occurring pick up and drop off destinations included the Lassen Manor, the Diamond Mountain Casino, and Safeway.

- Most people taking the survey (79 percent) were coming from their home. This suggests that many people took the survey as they saw it and did not fill out another for their return trip.

- When asked how respondents got to the bus and how they would complete their trip, more than half (56 percent) of respondents walked to where the bus picked them up. Of the remaining responses 36 percent indicated they were picked up at their homes by Dial-a-Ride. After getting off the bus 43 percent answered that they would walk.

- As for trip purpose, 35 percent of passengers were going home, 32 percent were going to a recreational or social engagement, and 11 percent were going shopping.

- 62 percent of those answering the survey do not currently have a driver's license.
- 68 percent of respondents do not require a wheelchair lift/ramp to board or exist the bus.

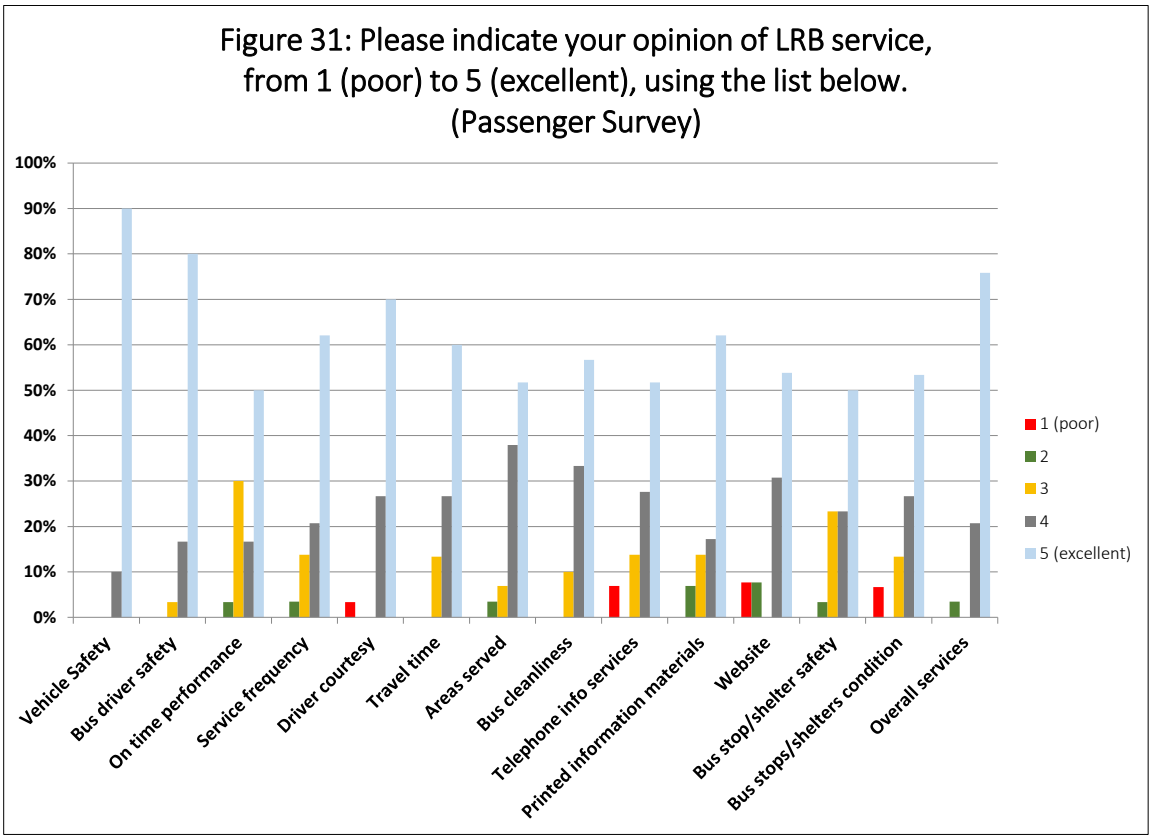
- When asked how often respondents ride the bus, 57 percent replied that they use the bus daily, followed by 27 percent who ride the bus 2 to 4 days per week.

- Most respondents (83 percent) do not have a vehicle for use.

- Survey respondent age ranges varied with 47 percent being between 25 and 59 years old. This was followed by 23 percent between the ages of 60 and 74, ages 75 and older, and ages 19 to 24, both 13 percent, respectively.

- Only 30 percent of respondents indicated that they were college students.

- Respondents were asked to indicate their opinion of LRB services from 1 (poor) to 5 (excellent). These responses are shown in Figure 31 and summarized below.



- Also, as shown in Figure 31, LRB characteristics that some respondents ranked 1 or 2 included website, telephone info service, bus stops and shelter condition, and driver courtesy.

- On time performance was ranked as a 3, or Fair, most consistently amongst respondents.

- Areas served and bus cleanliness was ranked as 4, or good, most consistently.

- Vehicle safety, bus driver safety, and overall services were all ranked as excellent by most respondents.

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The basis for any transit plan is the development of an effective and appropriate service strategy. The types of service provided, their schedules and routes, and the quality of service can effectively determine the success or failure of a transit organization. The service plan provides a basis for, capital requirements, funding strategies, as well as institutional and management strategies.

While the review of existing services in earlier chapters of this document applied a cost model for a previous year, for purposes of informing decision making regarding future services it is appropriate to apply a cost model based upon expected future costs. LTSA non-contractor FY 2020-21 expenditures were increased for inflation and combined with the FY 2021-22 new operating contract costs to develop a cost model for FY 2021-22:

Operating Cost in 2020/21 = $0.41 X Total Vehicle-Miles +
$41.68 X Total Vehicle-Hours +
$878,630

These cost factors will be applied to the operating characteristics (hours of service and miles of service) identified in the service alternatives to estimate the cost impacts of each alternative.

SERVICE EXPANSION ALTERNATIVES

Service to Reno

Although Lassen County has a hospital and other medical offices, patients must often travel to Reno, Nevada for specialized medical care. For example, there are no dialysis centers in Lassen County. It is not uncommon for a patient to be rushed to a hospital in Reno (90 miles away) in an ambulance and then have no transportation home to Lassen County. Lassen County residents also need to travel to Reno to connect to intercity transportation services or do some shopping. Existing services between the Susanville area and Reno are limited, as discussed below:

- Currently, Lassen Senior Services provides transportation to Reno for seniors one or two days per week. Reservations are required 48 hours in advance and a minimum of two passengers must be registered before the service will operate.

- In the past, the Susanville Rancheria provided transportation to Reno, but this service was discontinued in 2020.

- Southern Cascades Community Service District is a health care transportation provider primarily for Medicaid recipients (although they will transport the public for a substantial fee) in Modoc, Lassen, and Siskiyou counties. Southern Cascades is based in Adin in Modoc County and is assigned rides through the transportation broker MTM. The Southern Cascades service area focuses on northern Lassen County, Modoc and Siskiyou Counties and provides transportation to

a wide range of urban areas such as Reno, Chico, Sacramento, and Redding. Southern Cascades will operate 24 hours a day as needed to provide medical transportation. Southern Cascades uses the revenue from the Medicaid reimbursements to finance Emergency Medical Services for its service area. Southern Cascades does not typically provide trips within Susanville. However, Southern Cascades has a vehicle based in Janesville and therefore can provide some rides between southern Lassen County and Reno. For this to happen, the passenger requesting the ride from the transportation broker, MTM, must specifically request that Southern Cascades provide the service.

- Plumas County Seniors Transportation is operated by the Plumas County Public Health Agency. The program is funded in part by TDA funds and primarily provides transportation to/from nutrition sites in Plumas County. With 24-hour advance notice, Plumas County Seniors will also provide transportation for shopping trips and medical appointments as far as Reno, Truckee, Chico, Sacramento, and San Francisco Plumas County Seniors is an out-of-county option for seniors living in Westwood, as pre-COVID the agency operated a bus between Chester, Westwood, and Susanville. Plumas Seniors partners with Plumas Transit to provide a weekly Reno trip available for any age to access the airport, Greyhound, Amtrak, and shopping; however, the most direct route to Reno from Quincy travels along SR 70 to Hallelujah Junction at US 395 and bypasses Susanville.

- Until the COVID-19 pandemic, Sage Stage operated intercity transportation between Alturas and Reno with a stop in Susanville, three days per week. LTSA shared the cost of this service with Sage Stage. Reservations were required in advance. This service has been temporarily suspended due to low demand during the pandemic but is anticipated to resume by the end of June 2021.

In summary, Lassen County residents, particularly those under the age of 60, have very few options for public transportation to Reno. The need for transportation to medical appointments in urban areas such as Reno is likely to grow as the community ages. Improved transportation to Reno has been a transit need identified in Social Service Transportation Advisory Council (SSTAC) meetings for at least the past three years. The following service alternatives explore various ways to augment transportation to Reno for Lassen County residents.

Continue Partnership with Sage Stage

Sage Stage provided intercity public transit service from Alturas to Reno with stops in Madeline, Doyle, and Susanville three days per week by reservation. LTSA contributes $30,000 per year for the service and prior to the pandemic generated close to 1,400 boardings in Lassen County annually. This equates to an operating cost per trip of $22.09 in FY 2018-19, which is like the performance of the West County Route during the same year. Modoc County Transportation Agency (Sage Stage) applies for FTA 5311(f) grants to fund half the operating cost of the service. The amount LTSA has contributed to Sage Stage has not changed for several years. As it has been demonstrated through the unmet needs process that transportation to Reno is important to Lassen County residents, it is recommended that LTSA continue their partnership with Sage Stage to fund the intercity Reno route.

Non-Emergency Medical Transportation

The disadvantage of the Sage Stage intercity route to Reno is that there is only a two-hour layover in Reno before the bus returns north to Susanville. This works fine for intercity travelers going to the airport or Amtrak and not returning on the same day. It might be a sufficient layover for shopping or for a medical appointment, assuming the passenger can be picked up/dropped off directly at the medical office; however, the timing is tight. Feedback from transit staff and the SSTAC indicate that the primary reason Lassen County residents want more service to Reno is for medical appointments. Therefore, one alternative to consider is Non-Emergency Medical Transportation (NEMT) to Reno.

The potential service would supplement the Sage Stage intercity service and Lassen Senior Services program. Trip purposes should be limited to medical appointments, but the service should be available to the public. The Reno NEMT service could be offered one day per week, preferably Tuesday or Thursday so as not to overlap with the Sage Stage service. At least 48-hour-advance reservations should be required with the option to make a reservation up to two weeks in advance. If there are more than a few passengers on any one service day, there could be designated pick-up locations in Susanville such as the Casino, Susan River Apartments and Walmart. Passengers could also schedule a DAR trip to bring them to one of these locations. If requested, passengers could be picked up along US 395 in the communities of Janesville, Herlong and Doyle.

Using one van, morning pickups in Susanville would occur around 8:30 AM. The van would arrive in Reno around 10:00 AM and drop off passengers at their medical appointments. The driver will layover in Reno and then begin picking up passengers at 1:30 PM for the return trip to Susanville. Passengers could be back in Susanville by 3:30 PM. This schedule would allow passengers to connect to/from the West County Route but would require one to two hours of layover on each end of the trip in Susanville. It is not anticipated that much ridership would be generated on the LTSA NEMT service by north Lassen County residents. Similarly, Plumas County residents living in Chester or Hamilton Branch would have a similar option to catch the West County Route and transfer to the NEMT service. As Plumas County Seniors offers transportation to the public directly to Reno from Plumas County one day per week, connecting through Susanville would not be a preferable option.

As shown in Table 18, this alternative would cost on the order of $19,000 annually to operate. El Dorado Transit operates an NEMT service between Placerville and Sacramento with stops at Park and Ride lots in Diamond Springs, Shingle Springs, and El Dorado Hills. The service operates two days per week and carried 344 passenger-trips annually pre-pandemic. This equates to about 3.3 one-way passenger-trips per service day. The demand for this service is difficult to predict but requiring a minimum of two passengers per trip would help to ensure a minimum level of efficiency and would help to gauge the demand.

The fare for an NEMT service should reflect the distance traveled. Sage Stage charges $22 per one-way trip between Susanville and Reno for public passengers and $16.50 for discounted passengers. The El Dorado Transit NEMT service charges $10 per one-way trip regardless of where boarding location and there is no discount fare available. To be consistent with the Sage Stage service, a LTSA

TABLE 19: Service Alternatives

FY 2021-22

Alternatives / Options/Details	Annual (Change from Existing) Operating Days	Vehicle Service.. Miles	Vehicle Service.. Hours	Operating Cost	Ridership Impact (One-Way Trips) Daily	Ridership Impact (One-Way Trips) Annual	Annual Farebox Revenue	Annual Subsidy Required
Service Expansion Alternatives								
Transit Service to Reno								
NEMT Service	52	9,308	364	$ 19,400	4.0	210	$ 4,095	$ 15,300
Intercity Service between Susanville and Reno	104	18,408	520	$ 30,000	3.8	400	$ 7,800	$ 22,200
Susanville Express Route								
Serve more destinations under existing schedule (planned)	255	0	-34	$ (1,400)	1	255	$ 79	$ (1,479)
Expand service span to include the 9:00 AM and 4:00 PM hour	255	9,367	709.75	$ 33,800	2.3	600	$ 186	$ 33,600
2-Loop Route								
One bus	300	-3,500	0	$ (1,600)	9.3	2,800	$ 900	$ (2,500)
Two bus	300	36,400	3,100	$ 145,800	59.3	17,800	$ 5,500	$ 140,300
South County Shopper								
1 additional RT, 1 day per week	52	4,940	104	$ 6,600	2.8	150	$ 130	$ 6,470
East County Shopper								
1 additional RT, 1 day per week	52	1,856	62	$ 3,400	2.0	100	$ 70	$ 3,330
Dial-A-Ride								
General Public On-Demand Service Along Richmond Rd		300	--	$ 136		60	$ 105	$ 31
Service Reduction Alternatives								
East County Route								
Discontinue East County Route (planned)	52	-10,287	-263	$ (15,600)	-3.7	-194	$ (318)	$ (15,300)
Saturday Service								
Operate 2 buses instead of 3, same schedule	52		-143	$ (6,000)	-3	-160	$ (50)	$ (5,950)
Operate 2 buses instead of 3, shift West County schedule	52		-91	$ (3,800)	-2	-100	$ (30)	$ (3,770)
Eliminate West County Saturday Service	52	-4,264	-264.16	$ (12,900)	-11	-580	$ (780)	$ (12,120)
Eliminate Susanville Fixed Route Saturday Service	52	-6,032	-416	$ (20,100)	-76	-3,970	$ (1,230)	$ (18,870)
Eliminate DAR Saturday Service	52	-364	-416	$ (17,500)	-4	-190	$ (20)	$ (17,480)
Eliminate Saturday Service in Susanville		-6,396	-832	$ (37,600)	-80	-4,160	$ (1,250)	$ (36,350)
Susanville Express Route								
Discontinue Route	255	-18,023	-1,346	$ (64,300)	-14	-3,570	$ (1,100)	$ (63,200)
Susanville Fixed Route								
Eliminate Last Run	255	-3,698	-255	$ (12,300)	-6.8	-1,730	$ (540)	$ (11,760)

NEMT service should charge a similar fare. This is also close to the same fare per mile as the Sac-Med service. Under this assumption, the LTSA NEMT service would bring in $4,000 in fare revenue, leaving an operating subsidy of around $15,000 per year.

LTSA does not have a small wheelchair accessible mini van to operate this service. Therefore, LTSA would need to apply for an FTA 5310 grant to purchase one. Alternatively, LTSA could use one of the spare cutaways in the LRB fleet.

One of the comments received at unmet transit needs meetings is that Lassen County residents are often taken by ambulance to hospitals in Reno which have more facilities and technologies. When the patient is discharged from the hospital, they may have no return transportation to Lassen County. In these cases, one of the small NEMT or demand response services such as Southern Cascades or Lassen Senior Services may be able to provide transportation for the patient; however, not everyone may be aware of these services. It would be beneficial for the community if LTSA were to act as a mobility manager for Lassen County and be able to distribute information regarding all transportation services available. Coordination with the various agencies and other jurisdictions such as Plumas County is discussed more in the Lassen County Coordinated Public Transit Human Services Transportation Plan.

General Public Intercity Transportation from Susanville to Reno

Another option would be to provide public intercity transportation for any purpose between Susanville and Reno on Tuesdays and Thursdays (opposite of Sage Stage). Like the NEMT only service described above, the bus could leave the Walmart at Susanville at around 8:00 AM. This would allow for transfers from the morning West County Route. The bus would serve the Reno Amtrak/Greyhound station and the Airport around 9:30 AM. This would allow for a good connection to Greyhound travelling to Sacramento and departing Susanville one hour earlier would allow for a good connection with Amtrak to Sacramento; however, the return trip would require an overnight stay in Reno. Additional stops at various medical destinations could be arranged upon request for an additional fee. The intercity bus would depart Reno around 11:30 AM and return to Susanville around 1:00 PM. Passengers needing to transfer to the West County Route would have to layover in Susanville until 5:00 PM.

If operated two days per week, intercity service between Susanville and Reno would cost on the order of $29,200 annually (Table 19). Ridership can be estimated from ridership on the Sage Stage Reno Route generated by Lassen County. In FY 2018-19, 1,358 one-way passenger-trips were generated by Lassen County residents. An elasticity analysis can be applied to estimate the additional number of trips if service were offered five days per week instead of three (LRB intercity at 2 days per week and Sage Stage at 3 days per week). Elasticity is a measure of a variable's sensitivity to a change in another variable. In this example, it indicates how much ridership will increase if service levels are increased. The results show that roughly 400 additional one-way passenger-trips would be generated. Interestingly, this figure is very close to the result of Rural Intercity Transit Demand Model developed through the Transportation Research Board.

Stipulations for the FTA 5311(f) intercity transit program require “meaningful connections” to intercity transit services as well as amenities such as luggage racks. The westbound Amtrak California Zephyr train

from San Francisco to Chicago arrives in Reno at 8:25 AM. The eastbound train departs Reno at 4:06 PM. Connections to Greyhound Bus service would be possible around 10:30 AM and 2:00 PM. This intercity service alternative could provide meaningful connections to intercity transit services in Reno. If competitive FTA 5311(f) grant funding were obtained, it could pay for roughly half of operating subsidy of the service. However, as Sage Stage already receives FTA 5311(f) funding, this service would be in competition with Sage Stage for grant funds.

As a comparison with the NEMT service option above if the same levels of service were provided operating costs and ridership estimates would be similar. The NEMT service allows transportation to be tailored more to older adults needing transportation to medical appointments. Public outreach has indicated that this is where more of the need lies and will continue this way as the population ages. Therefore, NEMT service is the preferable option.

Coordination with Plumas County

The Plumas County Short Range Transit Plan suggests possible future coordination with LRB at Hallelujah Junction (US 395 and SR 70) for trips to Reno. If Plumas Transit were able to extend transit service 25 miles east of Portola to Hallelujah Junction, there could be timed connections with the LRB service to Reno.

Coordination with Commuter Transportation from Reno to the Sierra Army Depot

According to the Census LEHD data, approximately 270 Reno and Sparks residents worked in Lassen County in 2017. The Sierra Army Depot (SIAD) is one of the largest employers in Lassen County. Located in Herlong, roughly 50 miles from north Reno, it is relatively easy to live in Reno and work at SIAD. The South County Commuter Route carries mostly commuters to SIAD from Susanville but there is no public transit route from Reno to SIAD. Washoe RTC service only goes as far north as the Stead/Lemmon Valley area. It would be convenient if such a route allowed Lassen County residents to access services in Reno for the reverse trip.

If a Susanville based LRB bus were to provide transportation for commuters from Reno to SIAD, the bus would need to depart the yard in Susanville at 4:00 AM to pick up employees in Reno/Stead and deliver them to SIAD in time for 6:30 AM shifts. This would be extremely early for Susanville residents needing to go to Reno for medical appointments or shopping. As Reno is a much larger urban area than Susanville, it would be difficult to capture much ridership from commuters living in Reno. The route would likely only serve a Park and Ride location in north Reno. The return trip would leave Susanville at around 4:15 PM to pick up workers at SIAD by 5:00 PM and return them to Reno by 6:00 PM. The bus would then return to Susanville arriving around 7:30 PM. This would be a very long day for Lassen County residents trying to get to Reno as well as an expensive option given the long deadhead. Due to the timing, it is not realistic for one bus to serve both Reno area commuters to SIAD as well as Lassen County travelers to Reno. Therefore, this option was not considered further.

Susanville Express Route

The top two improvement requests among respondents to the on-line community survey were 1) bus stops closer to my home or destination and 2) more frequent service. On-time performance was one of the lower ranking transit qualities for respondents to the on-board survey. LTSA recently implemented the Susanville Express Route to provide more frequent service and shorter travel time between common destinations, particularly to/from the college. Although the Susanville Express route is not as productive as the regular Susanville Fixed route, the service began during COVID and has not been in operation for more than one year. So far, the service has received positive feedback from passengers. The Susanville Express route was reviewed for potential changes which might encourage additional ridership.

Revise Route to Serve More Transit Activity Centers and Reduce Travel Times

The Susanville Express Route was designed to complement the regular route by serving the most common bus stops in Susanville more frequently and reducing travel time between major destinations. The study team compared the travel time between transit activity centers in Susanville such as Walmart, Diamond Mountain Casino, Eskaton, Main Street, Lassen College, and various apartments on both the regular Susanville Fixed Route and the Susanville Express Route (Table 20). Travel time on the Express Route is generally shorter than on the regular Susanville Fixed Route. In some cases, the Express Route saves as much as 46 minutes (trips from Eskaton to Walmart). In instances where travel time on the Express is slower than the regular route, the regular route travel time is fairly short (around 10 minutes). Therefore, it is reasonable that once more passengers become aware of the Susanville Express route, ridership will increase without significant changes to the Express Route particularly as the two routes can be used interchangeably with a transfer ticket (if it is within a two-hour window).

Boarding and alighting counts were conducted for the 2016 TDP on the Susanville Route. A review of this data indicates that bus stops with the highest level of boarding activity are served by the Susanville Express Route with a few exceptions. The Meadowbrook Apartments is a common residential location for transit riders. Beginning in July 2021, LTSA revised the Express Route to serve the Meadowbrook Apartments as well as the City/County offices. Adjustments were also made to make the total route time 30 minutes instead of 34 minutes. It is estimated that this addition will save roughly $1,400 in operating costs annually and garner approximately 1 additional passenger-trip each weekday.

Banner Lassen Hospital/Northeastern Rural Health Clinic represented five percent of average weekday daily boardings in 2016. This stop is not served by the Susanville Express Route. Serving the hospital would add another 5 minutes and 1.5 miles to the route. Adding the hospital to the schedule on top of serving the Meadowbrook Apartments would push the route closer to hourly headways or 53-minute roundtrip and would still only generate 1 – 2 passenger-trips per day. A trip between Eskaton and the hospital takes around half an hour on the regular route and it would only be a few minutes shorter on the Express Route. However, the reverse trip from the hospital to Eskaton would be relatively short on the Express Route (around 10 minutes). Given all these factors it is recommended that the Express Route not serve the hospital at this time. As the route is monitored going forward, the hospital could be considered as an on-demand stop.

Table 20: LRB Travel Time between Major Transit Activity Center

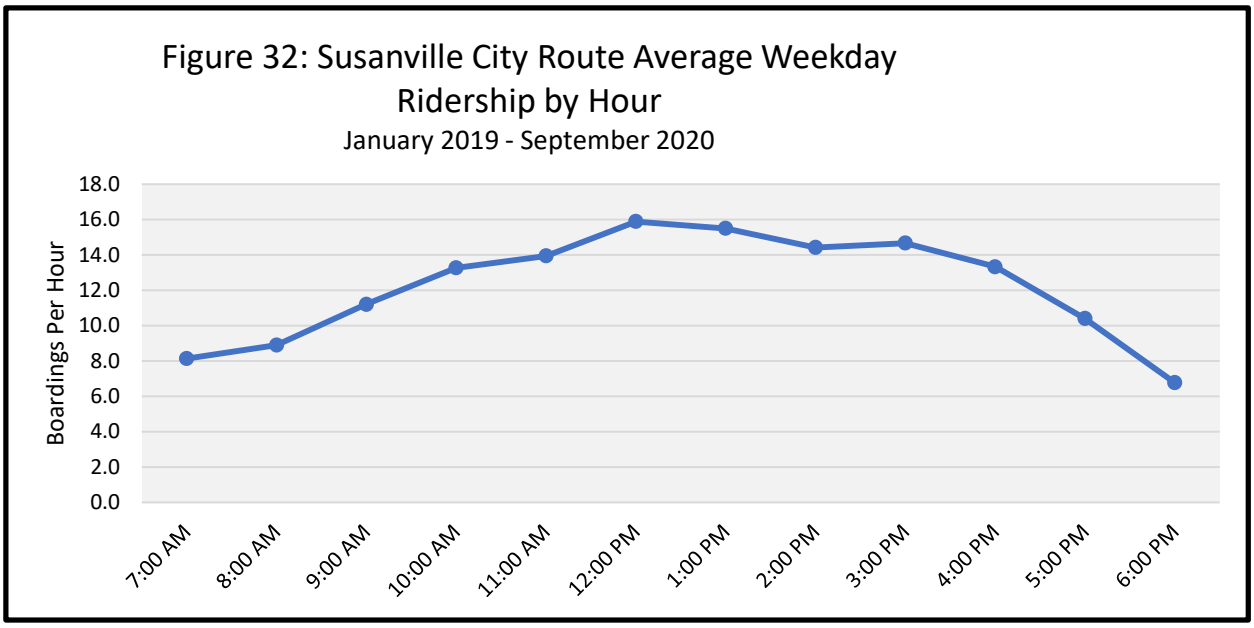
From	To	Travel time in minutes between destinations		Travel Time Savings
		Express	Regular	
4th & Ash (Midtown)	Lassen College	-	4	-
4th & Ash (Midtown)	Safeway	-	5	-
Alexander and Riverside Dr	Lassen College	15	7	0
Banner Hospital	Eskaton	-	27	-
Banner Hospital	Main & Gay St. (Westside of Town)	-	43	-
Burger King / Chevron Gas Station (Center of Town)	Diamond Mountain Casino	9	14	5
Burger King / Main St.&McDow (Center of Town)	Walmart	26	12	-14
City and County offices (Nevada Street)	Susanville Garden Apt	4	53	-
Diamond Mountain Casino	Burger King / Chevron Gas Station (Center of Tow	21	46	25
Diamond Mountain Casino	Walmart	17	16	0
Eskaton	Banner Hospital	-	33	-
Eskaton	Walmart	7	55	48
Lassen College	4th & Ash	-	10	-
Lassen College	Alexander and Riverside Dr	14	53	39
Lassen College	Orange St. & Limoneria Ave. (Citrus Manor Apt)	-	50	-
Lassen Community College	Walmart	12	27	15
Lassen Public Health Complex	Meadowbrook Apt (Cherry Terrace)	-	31	-
Main & Gay St. (Westside of Town)	Banner Hospital	-	17	-
Main & Gay St. (Westside of Town)	Walmart	-	40	-
Meadowbrook Apt (Cherry Terrace)	Lassen Public Health Complex	-	29	-
Meadowbrook Apt (Cherry Terrace)	Walmart	20	44	24
Orange St. & Limoneria Ave. (Citrus Manor Apt)	Lassen College	-	10	-
Safeway	4th & Ash (Midtown)	-	37	-
Susanville Garden Apt	Walmart	20	47	27
Walmart	Burger King	4	30	26
Walmart	Diamond Mountain Casino	13	44	31
Walmart	Eskaton	23	5	0
Walmart	Garden Apartments	11	13	0
Walmart	Lassen Community College	18	35	17
Walmart	Main & Gay St. (Westside of Town)	-	20	-
Walmart	Meadowbrook Apt (Cherry Terrace)	11	16	5

Note: Shading indicates estimated travel time based on revised Susanville Express Route beginning in July

Expand Service Hours

Currently the Susanville Express Route operates from 10:37 AM to 4:00 PM, using one bus and one part-time driver (six-hour day). Ridership by hour data for the Susanville Fixed Route from January 2020 to September 2020 is presented in Figure 32. As shown, average weekday boardings per hour are 12 or above from 10:00 AM to 4:00 PM. However, average weekday boardings during the 9:00 AM hour and 4:00 PM hour remain above 10. This indicates that a reasonable amount of ridership could be gained by expanding service to include the 9:00 AM and 4:00 PM hour.

As the Susanville Express operates on close to 30-minute headways, expanding service into the 9:00 AM and 4:00 PM hour would require 4.5 additional Express loops (currently the last loop of the day terminates at Riverside). This would cost around $33,400 annually. Ridership was estimated by applying the proportion of average daily ridership during the 9:00 AM and 4:00 PM hours on the Regular Susanville Fixed Route to the average daily ridership on the Express Route. The analysis showed that only a small



amount of ridership would be generated daily (just over two passenger-trips per day). This is mostly because the Express Route has carried very few passengers to date.

Susanville Fixed Route

2-Loop Route

The 2016 SRTP analyzed another route alternative to the Susanville Fixed Route aimed at reducing travel time between major destinations. This 2-Loop Route is shown in Figure 33. The route travels from Mid-Town to Lassen Senior Services, Riverside Drive, Lassen College, Banner Memorial Hospital, Meadowbrook Apartments, and back to Mid-Town.

This option differs from the regular Susanville Fixed Route in the following ways:

- The northwest portion of the route is changed so that Weatherlow St. and Roop Street are not served.
- N Fairfield and Pau Bunyan Rd is added as an on-demand stop.
- Relocation of the Susanville Garden Apartments and Casino stops, requiring a longer walk to the stops
- The Meadowbrook Apartments are severed but the stop would need to be relocated.

This option differs from the Susanville Express Route in the following ways:

- The 2-Loop route serves Numa Road at Cameron Road
- Service north of Main Street is provided in a counterclockwise direction instead of clockwise

Figure 33
Susanville Two Loop Route Alternative

- Service is provided in the southwest portion of town along Richmond Road and Modoc Street, serving the Diamond View Middle School and Community Pool.
- There would be an on-demand stop at N. Fairfield and Paul Bunyan and Susanville Ranch Park
- The southeast portion of town (near Safeway) is served in the counterclockwise direction. The Susanville Express Route and the Susanville fixed route travel in a clockwise direction.

One Bus

This 2-Loop Route could be operated using one bus (providing service once an hour) or two buses (providing service every half-hour, with buses meeting in the mid-town area to transfer passengers). When the 2-Loop Route option with a single bus was compared to the Susanville Fixed Route, it was estimated that average in-vehicle travel time would decrease by 3.2 minutes, to 24.0 minutes per passenger-trip. As shown in Table 19, the 2-Loop route option will decrease annual vehicle-miles by 3,500 per year, saving an estimated $1,600 annually, if it were to replace the regular Susanville Fixed Route. In addition to cost-savings, the slight reduction in average travel time and new service area will increase ridership by an estimated 2,800 passenger-trips per year (which includes the ridership loss from making some stops on-demand and relocating some stops). Accounting for the added $900 in fare revenues, this alternative would decrease annual operating subsidy by an estimated $2,500 over the Susanville Fixed Route.

The objective of the 2-loop alternative was to reduce travel times for passengers. The Susanville Express Route does this (Table 20) in addition to providing half hourly service. Although the 2-loop option would increase ridership if it replaced the Susanville Fixed Route, it would also require relocation of bus stops.

Two Buses

The 2-Loop Route was also evaluated using a system of two buses with half-hourly headways. In this alternative, each bus would depart a joint stop in the mid-town area, and travel either the north or south loop. After completing each 30-minute loop, each bus would then meet to transfer passengers and then travel the opposite loop, completing both loops every hour. With this route system, passengers could transfer at Mid-Town to expedite certain trips located on the same loop (for example, from Meadowbrook Apartments to Lassen College or from Riverside Drive to Lassen Social Services). Due to the relatively low weekend ridership, the second bus would only operate during weekdays, while the above one bus, 2-Loop Route would operate on Saturdays as well.

It is estimated that this option would reduce travel time to 4 minutes less than the average on the Susanville Fixed route but would require a transfer for some trips. As shown in Table 19, this option requires an additional 3,100 vehicle-hours and 36,400 vehicle-miles each year, raising annual operating costs by $145,800. Subtracting the additional fare revenues of $5,500, the required annual operating subsidy would be $140,300.

This option would require establishing a transfer point in Mid-Town. One possible location is the vacant lot east of the IGA on the corner of Grand and 1st. The bus travelling from the north could turn right on North Street off of Ash then left onto Grand Avenue to reach the transfer point. The bus travelling from the south could do the opposite and turn right on the Grand Avenue from Main Street then return to Ash

Street via North Street. In addition to the high cost of this alternative, further study would be required to design and plan for a transfer point in Mid-Town.

South County Shopper One Round Trip One Day per Week

The current South County Route is an extension of the South County Commuter from Susanville to SIAD in Herlong. The route officially begins at the Family Resource Center in Herlong, stops in Doyle and Milford along US 395, does a loop on Main Street in Janesville then turns on Sears Rd and CR A-3 to serve Standish. Litchfield can also be served on-demand. The bus then continues west to Leavitt Lake, Johnstonville and Susanville via US 395. With the current schedule a resident of Doyle needing to do some shopping in Susanville could catch the bus at 6:53 AM but would not arrive at Walmart in Susanville until a little after 8:00 AM. By private vehicle, this trip would take closer to 40 minutes. After a 7 hour stay in Susanville, the Doyle resident could catch the bus near Walmart at Riverside Drive in Susanville at 3:00 PM and return home by 4:12 PM. This provides a lifeline connection to Susanville for South County residents but requires a long stay in Susanville. The early departure from South County may discourage shoppers and the departure time from Susanville (3:00 PM) may not allow for South County residents to commute to Susanville to work. Additionally, it would take that same Doyle resident much less time to drive to north Reno to go shopping (about 35 minutes).

As part of this alternative an additional run to South County is considered that would provide a public transit option into Susanville with a shorter travel time and shorter layover time in Susanville. This South County Shopper would not serve Standish, Litchfield, and Leavitt Lake, as that area would be served by the East County Shopper, discussed below. Using the same bus as for the South County and South County Commuter Route one day per week only, the South County Shopper would depart Susanville at Riverside Drive around 10:00 AM and travel directly to Doyle with stops at the Susanville Mobile Home Park, Johnstonville, Janesville, Milford. The bus would arrive at the Doyle Senior Center around 10:45 AM. The return trip would serve the Herlong Resource Center, Lassen Community College and Northeaster Rural Health in Susanville and arrive at Riverside Drive around noon. This would give South County residents a three-hour layover in Susanville before the afternoon South County Route departs southbound.

This option would cost roughly $6,400 annually to operate. Ridership was estimated as follows. Average daily ridership on the South County to Susanville Route was reduced to eliminate the proportion of boardings on this route by residents of East County, as they would no longer be served by this route. That average daily ridership figure was adjusted to reflect reduced travel time and decreased layover in Susanville. Only a small amount of ridership is anticipated annually, 150 one-way passenger-trips. Assuming the current average fare for the South County route, the South County Shopper would bring in $340 in fare revenue resulting in an annual operating subsidy of $6,060.

East County Shopper One Run a Day One Day a Week

The East County Route, which only operates on Fridays, carries less than one-passenger-trip per hour. As a result, this route will be discontinued beginning July 1st, 2021. East County residents will still be served by the South County Route on weekdays. The South County Shopper alternative discussed above does not include service to the East County communities of Standish, Litchfield, and Leavitt Lake. Therefore, the option of an East County Shopper was explored. Similar to the above alternative, the East County Shopper

would provide residents of eastern Lassen County with another option to take the bus into Susanville one day per week at a time which is more convenient for shopping or medical trips. Depending on when the East County Shopper is scheduled, it would reduce layover time in Susanville from seven hours to three hours. Boarding and alighting surveys of Lassen Rural Bus in 2016 indicate that just under 11 percent of boardings on the South County route occur in the eastern portion of the county. This equates to around just one passenger-trip per day. One could expect a small increase in ridership if the layover in Susanville were shorter to around two passenger-trips per day. The current East County Route (which also serves South County) carries around three trips per day on average. This alternative would not carry sufficient ridership to improve upon the current East County route which is being discontinued.

Dial-A-Ride—On-Demand Service along Richmond Road

As a result of the unmet needs process, fixed route transit was implemented along Richmond Rd between the southern city limit of Susanville and Johnsonville. The corridor was served once in the morning and once in the afternoon Monday through Friday as an extension of the West County Route. The service carried only three passenger-trips per month on average for the first four months of service. The area is generally large lot single family homes who likely have a vehicle available. As a result, the West County Extension will be discontinued beginning July 1, 2021.

Another option to serve this corridor is to extend the DAR service area as far as Richmond Road on an on-demand basis. Currently DAR is available to ADA passengers only and within the city limits of Susanville, as is required by the ADA. If DAR service were implemented along Richmond Road, it should serve the public as there is no public transit available at all along the corridor. This would result in adding public DAR to one small area of Lassen County where DAR is not even available to the public in Susanville. This could be confusing to public passengers that they could only use DAR along Richmond Road. Additionally, ridership data from the West County Extension indicates that there would be extremely low demand for service in this area.

However, the current transit operating contract covers 8 hours of DAR service on weekdays and 6 hours of service on Saturdays. Typically, there is a fair amount of downtime for the DAR vehicle. During this time the DAR vehicle could pick up/drop off passengers at Richmond Road and the operating cost would only be fuel costs (as there would be no additional driver costs). As stated above, ridership on the West County Extension was extremely low (3 passenger-trips per month). Even if 5 passenger-trips per month were carried, the fuel cost would only be around $140 per year with the operating subsidy at around $30 per year. Therefore, it is reasonable to operating public DAR service by request only along the Richmond Road corridor if it does not impact regular DAR service.

Volunteer Driver Program

In addition to the strategies discussed above, Lassen County could benefit from a volunteer driver program if sufficient advocacy for such a program can be developed. Volunteer driver programs can be useful in serving rural areas and small urban areas where budgets will not allow all areas to be served, or where demand is so low and infrequent that regular service is not warranted. There are multiple approaches generally used for such programs and many handbooks and resources describing how to start programs. In general, there are several approaches, such as:

1. True Volunteer Programs, where the driver provides transportation to passengers using their own vehicle with no or nominal reimbursement.

2. Driver Reimbursement Programs, where the passenger selects a driver of their choosing (either someone known to the passenger or someone from a list provided by the program), and the driver is reimbursed at a per-mile rate using their own vehicle.

3. Supported Volunteer programs, where volunteer drivers are recruited and/or vehicles are provided by a public or non-profit entity.

Relying strictly on volunteers to provide transportation as a community service using their own resources is a difficult task. The primary challenge is the need to continually recruit volunteers as burnout is high. This type of program has the most success in small, tight-knit communities with a strong advocate for the program. This type of grass-roots volunteer program requires a local advocate to organize and launch such an effort. LTSA's role would be secondary to the organizer's and would primarily be to publicize such a program and serve as an informational source to potential volunteers and passengers in need.

Driver reimbursement programs are often used by transit agencies or social programs to "fill in the gap" of transportation needs, particularly in rural areas, in post-transit hours, or for specific populations (such as seniors, homeless or others with high transit needs). Such programs are sometimes supported by Area Agencies on Aging, Social Service programs, or hospitals. The support can be offered in terms of financial (on a per-mile basis) and coordination. One of the advantages of a driver reimbursement program is that it tends to limit the liability of the sponsoring agency as the agency has no say in assigning specific individual drivers to a passenger trip.

Finally, some volunteer driver programs are more substantial and may include donated vehicles, ongoing financial support, and/or paid administrative support. Funding sources may come through CTSA funding, FTA 5310 grants, private donations, or other specialized grants. Sometimes a transit agency will donate a vehicle to a volunteer program.

One of the more well-known programs is the Independent Living Partnership: Transportation Reimbursement and Information Project (TRIP) program in Riverside County. This program sells software to organizations wishing to start similar programs. TRIP boasts over 115,000 trips provided annually, with $950,000 of funds to support mileage reimbursement and administration of the program.

Closer to home, Tuolumne County has partnered with local non-profit organizations to provide a reimbursement program called the Tuolumne Trip Program. The program is designed to serve residents who require extra assistance and therefore are unable to use the fixed route or DAR services. Eligible users are responsible for finding and paying their own volunteer driver. TCTA only provides reimbursement for the trip and therefore the program requires little in the way of administrative costs. The Tuolumne Trip Program is advertised through social service agencies and the TCTA Executive Director approves each users' eligibility. TCTA provides up to $10,000 in LTF funding for the reimbursements. In FY 2018-19 a total of 270 trips were provided with an average cost per trip provided of $24.67.

For Lassen County, any of these approaches would be reasonable and helpful, but the driver reimbursement program is most appropriate for Lassen County. A driver reimbursement program could be useful for providing transportation to Reno or transportation to Susanville from the outlying communities of Janesville, Standish, or Doyle. The Coordinated Public Transit Human Services Plan further discusses a volunteer driver program.

Continue to Fund Contract Services

LTSA currently pays Lassen Senior Services $86,000 and Big Valley 50 $44,000 annually as contract transit services. Big Valley 50 provides important public transit for residents in the very northern portion of the county. It would be very expensive for LRB to either deadhead to the Beiber area or logistically more challenging to store a bus in the area. Big Valley 50 services perform the most productive of the three contract services (Lassen Senior Services, Big Valley 50, and Sage Stage) with a pre-COVID LTSA operating cost per trip of $20.28. This is lower than the cost of operating the West County Route. Therefore, it is recommended that LTSA continue to fund Big Valley 50 transit services.

Lassen Senior Services (LSS) also provides important transportation to Lassen County seniors such as transportation to congregate meals and trips to Reno for medical appointments or shopping. LSS receives Planning and Service Area 2 Area Agency on Aging (PSA 2 AAA) funding which is a Joint Powers agency providing aging and adult services in Lassen, Modoc, Shasta, Siskiyou, and Trinity Counties. During a recent audit of LSS by PSA 2, it was discovered that LSS's record keeping was not adequate to determine that grants were being charged correctly. One of the areas which came under review was that LSS was using TDA funds to pay for meal deliveries. This is not typically a use of TDA funds. After extensive review, PSA 2 decided to withdraw future funding from LSS and recommend a corrective action plan which would include hiring an accounting firm to assist with record keeping and grant procedural requirements. To date, LSS has not implemented PSA 2's recommendations.

The LTSA Board recently decided to continue the contract with LSS as transportation to seniors in Lassen County remains an important need. However, LTSA terminated the vehicle maintenance contract with LSS. Now, LSS will need to maintain their vehicles through private mechanics. This may increase LSS's vehicle maintenance costs but may reduce wait time for vehicle repairs. One option which could assist LSS become eligible for PSA2 funding again would be to provide funding for LSS to hire an accounting firm to prepare and track invoices and other grant related paperwork. In the long run this would benefit LTSA as LSS would be eligible for more grant sources and could therefore provide more transportation to seniors in Lassen County. Big Valley 50 has a similar process.

Alternative Forms of Transportation (Micro-transit and Transportation Network Companies)

Serving lower-demand areas and serving low-demand periods (such as evenings) have long been a challenge for public transit agencies. With the nationwide decline in public transit ridership, transit operators and public agencies are looking for new and innovative ways to provide public transit that will attract more riders at a lower cost. Contracting with Transportation Network Companies (TNCs) such as Lyft or Uber is seen by many as a potential solution. As an example, the Go Dublin program in Dublin, California provides subsidy for rides on three services (Uber POOL, Lyft Line, and DeSoto Cab) at a 50%

rate up to a maximum of $5. This service subsidizes approximately 15,000 trips per year, at an average subsidy of $2.80 per trip. One challenge with TNC service is that they typically do not have ADA accessible vehicles. Currently, there does not appear to be a reliable amount of TNC vehicles available in the Susanville area to make a program like this work. However, this could be considered over the long term.

Over the last several years, the concept of "microtransit" has seen increasingly widespread application across the nation. The goal of microtransit service is to provide coverage over an area not served efficiently by fixed-route service with a short response time, typically within 15 minutes of the request. Microtransit applies the app-based technology developed for transportation network companies (such as Uber and Lyft) to provide a new form of public transit service in lower demand and lower density areas. While the concept of real-time, demand-response service has been envisioned for many years, it could not be effectively implemented until recently with the advent of new technology. Passengers typically use an app downloaded on their smartphone or computer to request a ride and a routing algorithm assigns the ride request to a specific driver/vehicle. The passenger is provided with an estimated service time, and fares are typically handled through the app. In addition, to ensure equitable accommodation, rides may also be requested directly over the phone. However, most trips are assigned without the need for manual dispatching. Unlike traditional dial-a-ride services, there is no need for a 24-hour-or-more advance reservation. As microtransit is a shared-ride service, multiple passengers may be on the vehicle at the same time. Requirements of the Americans with Disabilities Act may be met by ensuring that enough accessible vehicles are available to serve those who require accessible service.

There are many options that can be considered under the overall concept of microtransit:
Service areas can be constrained ("geo-fenced") to allow trips only within a specific zone, or between specific points.

- Typically, a service area will include a key transfer point to/from high quality fixed route service, such as at a transit center.

- Service can be provided on a door-to-door level (whereby passengers indicate specific addresses), a corner-to-corner level (service only to a nearby public street intersection), or on a defined checkpoint level (with specific signed transit service stops). To facilitate the response time, users are often asked to meet the vehicle at a nearby intersection. This also enhances productivity as the vehicle can operate on primary streets and avoid many neighborhood streets.

- Service can be provided through a private service contractor (which provides the app, drivers, and vehicles) or through public sector employees (using an app purchased on a subscription basis).

- The response time can be varied. As discussed below, some microtransit services provide service within a 15- or 20-minute time from the ride request, while others only guarantee service within an hour or two of each request.

Transit agencies have typically found microtransit to be effective within a defined range of productivity levels. A minimum level of productivity (passenger-trips per vehicle-hour) is needed to justify the expenditure of public resources. While this is a matter of local priorities, typically a productivity of less than 1.8 is found to be infeasible. On the other hand, over a maximum level of productivity of roughly 8 passenger-trips per vehicle-hour, fixed route service (or a combination of fixed route and microtransit) is appropriate as a fixed-route driver can serve higher demand levels more efficiently.

Key factors garnered from a literature review regarding operating a microtransit system include:

- Sufficient vehicles must be operated to ensure a response time of 15 minutes or less. To ensure adequate response time, one vehicle per 3.4 square miles may be required depending on local density and characteristics of the area to be served.

- Population density, while not the only factor, must be high enough to ensure sufficient demand and reasonable travel distances. The residential density may be lower than that required to support fixed-route transit, but densities lower than 2,000 residents per square mile do not appear to support an effective microtransit service. Those areas with densities greater than 2,400 residents per square mile are more likely to be effective.

- The level of demand generated by residents is approximately 1.5 daily trips per capita for the area being served. This varies depending on the demographics of the area and convenient links to regional services and areas outside the microtransit zone.

- The most effective microtransit service is linked to either rail or Bus Rapid Transit (BRT) service, providing first and last mile connections. Connections to high-speed regional transit service increases the level of demand and the productivity for the microtransit service.

- For service to employment destinations, microtransit is much more dependent on connections to high-speed regional transit as the first and last mile connection.

- The highest productivity of microtransit services was less than 10 passengers per vehicle-hour. Very few achieved a productivity of greater than 3.0 passengers per vehicle-hour and at least one pilot program had a productivity of less than 1.0 passenger per vehicle-hour. Productivity is likely to be 3.0 passengers per vehicle-hour or less.

Although Susanville has sufficient density to make a microtransit system work, the existing Susanville Fixed Route is currently serving 11.8 per hour. To serve the same number of passenger trips would require almost three times the number of vehicle-hours. This would not be cost-effective. Microtransit services can be effective in areas with limited or no fixed route service and trip distances are relatively short. However, applying the technology of requesting DAR service using an application could be attractive to passengers.

SERVICE REDUCTION ALTERNATIVES

LTSA revenues are not keeping pace with operating costs. Combined with a slow decrease in population (countywide population is down 10.8 percent from three years ago), and closure of the California Correctional Center, Lassen County will have fewer residents spending money and creating sales tax revenues which make up a large part of the LTSA budget. It is likely that LTSA will need to reduce transit services during this planning period to maintain a balanced budget. Therefore, service reduction alternatives were reviewed.

Eliminate East County Route

As of July 1, 2021, LRB is discontinuing the East County Route due to low ridership (less than 4 trips per day). This will save around $14,800 annually in operating subsidy.

Provide Saturday Service with Two Vehicles Instead of Three

Currently, the Susanville Fixed Route (Regular), West County Route and DAR operate on Saturdays using a total of three vehicles. One option considered was to reduce the number of vehicles required to run service on Saturday by using the same bus to operate the Susanville Fixed Route and West County Route. Under this alternative only DAR would serve Susanville until 10:45 AM when the West County Route returns to the Casino in Susanville from the morning run. Beginning at 10:45 AM transit service in Susanville would be fixed route provided by the bus used for the West County Route until around 4:00 PM when it would transition back to the West County Route. The DAR service in Susanville between 8:00 AM and 10:45 AM could be a “checkpoint” DAR service. A checkpoint service consists of a demand response service with a set of time stops which must be served within a 15-minute window. Passengers would be able to request a pickup/drop off at other locations within the DAR service area. Eliminating Susanville Fixed Route Service between the hours of 8:00 AM and 10:45 AM would save around $6,000 annually in operating costs.

One consideration with this alternative is if the demand for transit service in Susanville is greater than what could be served with DAR on Saturday mornings before 10:45 AM. LRB carries and average of 76 one-way passenger-trips each Saturday. Fixed Route ridership by hour is not tracked on Saturdays but applying the proportion of mid-week ridership by hour to the Saturday average daily ridership shows that roughly 4.5 trips are carried during the 8:00 AM hour, 6 during the 9:00 AM hour and 7 during the 10:00 AM hour. For a DAR service to carry more than 5 passenger-trips per hour, the DAR is usually transporting groups of passengers to one location such as a senior lunch or adult day care program. This would not likely be the case on a Saturday. Although some of the passengers who would be unable to get a DAR slot in the morning would use the fixed route later in the day, the Saturday route would likely be unable to serve some ridership, on the order of 3 one-way trips per day or about 160 trips each year. In summary, this alternative would save $5,800 annually after accounting for the loss in fare revenue.

Another option would be to start the West County Route one hour earlier at 7:20 AM so that fixed route service in Susanville could be provided beginning at 9:45 AM instead of 10:45 AM. This would help address the capacity issue on DAR while the West County route is in operation however, it would reduce operating cost savings to $3,800 from $5,800 above. The disadvantage of this option is that many passengers on the morning Saturday West County Route use the bus to transport them to the Bizz

Johnson Trailhead at Devil's Corral for a one-way down-hill ride back into Susanville. In the past, the BLM has provided a bike trailer which accommodates up to 8 bikes for this purpose. Departing Susanville at 7:20 AM for a bike ride may be early for the casual biker. Therefore, there would likely be a small loss of ridership on the West County Route. The West County Route carries on average 11.5 one-way passenger-trips on Saturdays. If 2 trips were lost each Saturday on the West County route because of the schedule shift, there would be a loss of $200 in fare revenue. In summary this alternative would save $3,600 annually.

Eliminate Susanville Express Route

So far, the Susanville Express Route has not performed up to expectations with a productivity of less than three passenger-trips per hour. As discussed in this study, full ridership potential is not typically reached until after three years of service. Additionally, the service was started during the pandemic. However, if budget cuts become necessary over this five-year planning period, it is reasonable to consider the elimination of this new route. Discontinuing the Susanville Express Route would reduce annual operating costs by $63,500. Given current ridership levels, LTSA would lose 3,570 one-way passenger-trips and $4,180 in associated passenger revenue. This results in an overall savings in annual operating subsidy of $59,320 per year. If ridership picks up significantly post pandemic, impacts on ridership would be greater and reduction in operating subsidy would be less.

Eliminate Last Run of Susanville Fixed Route

As demonstrated in Figure 32, average weekday ridership by hour drops from 10.4 in the 5:00 PM hour to 6.8 in the 6:00 PM hour. In fact, ridership is lowest during the 6:00 PM hour. Therefore, another cost cutting measure could be to eliminate the last round trip of the day and terminate the Susanville Fixed Route at 6:00 PM instead of 7:00 PM. This would save $12,100 in operating costs. Using ridership by hour data from January 2019 to September 2020 as a guide, it is estimated that approximately 1,730 one-way passenger-trips would be lost. This equates to a total operating subsidy savings of $10,080.

Eliminate Saturday Service

Eliminating transit service on Saturday is another means of reducing costs.

Eliminate West County Saturday Service

Eliminating the West County Route on Saturday would reduce ridership by around 580 passenger-trips and reduce operating subsidy by $11,540 annually.

Eliminate Saturday Service in Susanville

Discontinuing Saturday service in Susanville would mean eliminating both the fixed route and DAR. The Susanville Fixed Route generates the greatest amount of ridership. Therefore, there would be a loss of around 4,160 passenger-trips with an annually operating subsidy savings of $36,350. Although as shown in Table 19, eliminating only DAR would save the most in operating subsidy with the fewest passenger-trips lost, LTSA must operate DAR the same hours as fixed route service per ADA law.

Comparison of Service Alternatives

A quantitative comparison of the service alternatives is presented in Table 21. The ridership impacts range from a gain of 17,800 annual passenger-trips by implementing the 2-Loop-Two Bus option to a loss of 3,570 annual passenger-trips by eliminating the Susanville Express Route. The 2-Loop – Two Bus alternative is also the most expensive option to implement with a $140,300 operating subsidy. For service reduction alternatives, discontinuing the Susanville Express will save the most operating subsidy annually.

Table 21: Performance of Service Alternatives

Shading indicates alternatives achieving standards

Alternative	Change From Existing Service: Net Annual Ridership	Net Annual Operating Subsidy	Psgr-Trips per Service-Hour	Marginal Operating Cost per Psgr-Trip	Marginal Subsidy per Psgr-Trip	Marginal Farebox Ratio
Local Fixed Route Standard			8.0		$2.00	10%
Commuter Route Standard			13.0		$2.00	10%
Intercommunity Route Standard			2.5		$25.00	5%
Demand Response Standard			3.0		$1.00	10%
Special Route Standard			2.0		$20.00	5%
Service Expansion Alternatives						
NEMT Service to Reno	210	$15,300	0.6	$92.38	$72.86	21%
Intercity Service to Reno	400	$22,200	0.8	$75.00	$55.50	26%
Susanville Express - More destinations	255	-$1,479	-7.5	-$5.49	-$5.80	-6%
Susanville Express - Expand Service Hours	600	$33,600	0.8	$56.33	$56.00	1%
2-Loop Route - One Bus	2,800	-$2,500	--	-$0.57	-$0.89	-56%
2-Loop Route - Two Buses	17,800	$140,300	5.7	$8.19	$7.88	4%
South County Shopper	150	$6,470	1.4	$44.00	$43.13	2%
East County Shopper	100	$3,330	1.6	$34.00	$33.30	2%
On-Demand DAR Service to Richmond Rd	60	$31	--	$2.27	$0.52	77%
Service Reduction Alternatives						
Discontinue East County Route	-194	($15,300)	0.7	$80.41	$78.87	2%
Saturday Service 2 bus, same schedule	-160	($5,950)	1.1	$37.50	$37.19	1%
Saturday Service 2 bus, shift West County schedule	-100	($3,770)	1.1	$38.00	$37.70	1%
Eliminate West County Saturday Service	-580	($12,120)	2.2	$22.24	$20.90	6%
Eliminate Susanville Saturday Service	-4,160	($36,350)	5.0	$9.04	$8.74	3%
Discontinue Susanville Express	-3,570	($63,200)	2.7	$18.01	$17.70	2%
Eliminate Last Run of Susanville Fixed Route	-1,730	($11,760)	6.8	$7.11	$6.80	4%

In terms of productivity, none of the service expansion alternatives will carry 8.0 passenger trips per hour (standard). However, the 2-Loop, Two Bus alternative will carry 5.7 trips per hour. Serving more destinations on the Susanville Express Route (which is planned for implementation in July) is the most productive with 1.7 passenger-trips per hour. Discontinuing the East County Route (another planned service change) will eliminate the fewest passenger-trips per hour.

All the service reduction alternatives will meet at least one of the performance standards recommended in this plan. Eliminating Saturday Susanville Fixed Route service would lose 9.5 trips per vehicle hour which is a high level of productivity. The Saturday Service 2 bus options also have a relatively high-cost savings ($37 per hour) with little ridership loss (1 trip per hour).

For the service expansion alternatives, the 2 Loop, One Bus alternative and the DAR along Richmond Rd option meet two of the three performance standards. The NEMT Service to Reno and Intercity Service to Reno have a high marginal farebox ratio, 22 percent, and 27 percent respectively, because of the high fare charged. That comes at a cost of $70.98 and $53.50 per trip in annual marginal operating subsidy, above the $20.00 standard for a special route. The 2 Loop-Two Bus option will cost very little so it also has a high marginal farebox ratio (56 percent). Discontinuing the East County Route saves $78 per hour in operating subsidy while losing less than one passenger-trip per hour.

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TRANSIT PLAN CHALLENGES

As indicated at the beginning of this document, Lassen County faces multiple challenges with respect to public transit.

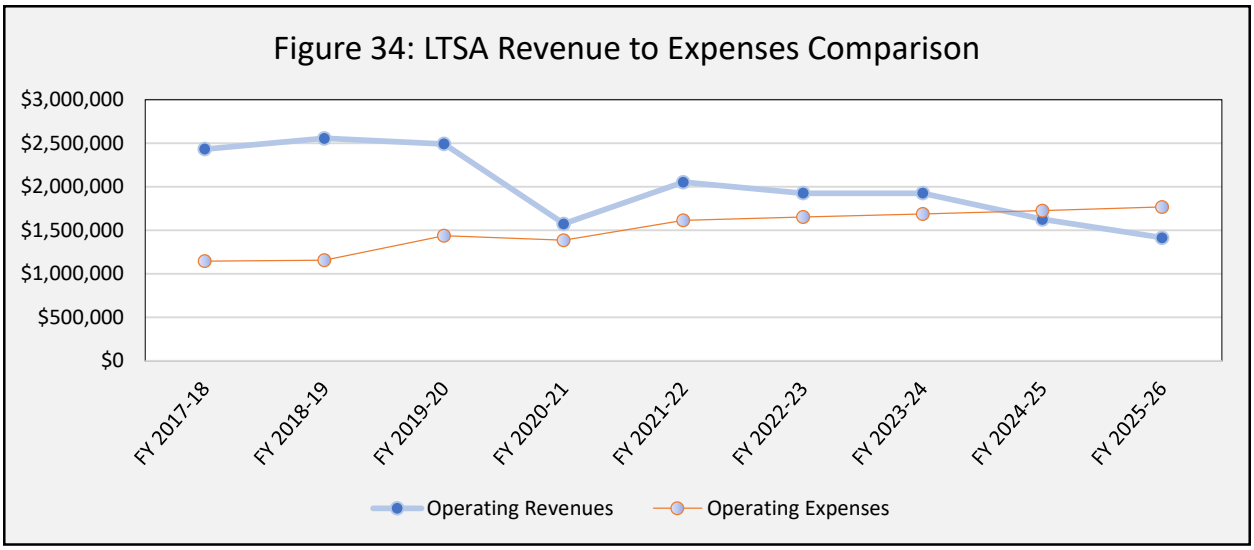
- **Population Decline**—The California Department of Finance projects a 2.1 decrease in the population of Lassen County between 2020 and 2030. Recent estimates show that the population has already decreased by 10.8 percent between 2018 and 2021. The City of Susanville's population has decreased by 14.9 percent between 2018 and 2021. Not only does the lower population mean fewer people to ride the bus but it also means fewer people spending money and generating sales tax. TDA revenues (40 percent of operating revenues) is derived from sales tax revenues.

- **Aging Population**—As Lassen County residents age in place, they will be less likely to be able to drive or use the fixed route. Therefore, more demand response services will be required including medical transportation to Reno. Unfortunately, these types of services are not as efficient as the Susanville Fixed Route.

- **Prison Closure**—In April 2021, the state announced the expected closure of the California Correctional Center (CCC) outside Susanville by June 30, 2022. Approximately 1,481 incarcerated people are housed at the facility located in Leavitt and there are currently 1,080 staff. The prison is not directly served by LRB for several reasons. Visiting hours are on weekends and holidays when the South/East County Route does not operate. The CCC does not allow visitors to walk on to the site; therefore, the bus would have to drive on to the prison grounds. This leads to complications with obtaining security clearance as well as the safety and comfort of other passengers.

  The prison closure may have the impact of reducing overall LRB ridership as families of prisoners and prison guards move away from Susanville and no longer ride the bus. Another important impact from the prison closure is the fact that it would reduce the population of Lassen County which is already shrinking. Many state and federal funding sources are based on population. When families of prison guards leave the County to work at another institution, there will also be a reduction in sales activity which will in turn reduce TDA revenues to the region.

- **Declining Transit Revenues and Increasing Costs**—As shown in Figure 34 below, transit revenues available for LTSA operations have declined 36 percent in FY 2020 – 21 from the previous year. Transit revenues are expected to increase slightly over the next three years because of federal stimulus funding but then begin to decline by FY 2024 – 25. Operating



- expenses are expected to increase by 16 percent in FY 2021-22 from the previous year due to a new operating contract (which is more in-line with other areas). Operating costs are then expected to increase with inflation at a rate of around 2.5 percent annually.

These challenges do not justify an expansion in public transit service in the next five years and in fact it may be necessary to significantly reduce service during the last two years of the TDP planning period. With an aging population, LTSA will need to focus more on specialized services tailored to the needs of the elderly and transit dependent. Coordination among all transit operators, public, private, and non-profit will become increasingly important. This is also discussed as part of the Coordinated Public Transit Human Services Transportation Plan.

TRANSIT PLAN RECOMMENDATIONS

The Study Team has the following recommendations for LTSA over the next five years based on estimated levels of funding available. Rationale behind these recommendations is described in the following sections.

- Operate at base case scenario this coming fiscal year (FY 2021 – 21).
  - Susanville Fixed Route—as currently operated, around 3,420 VSH annually.
  - Susanville Express—with modifications proposed by LTSA to begin on July 1. This includes serving the City/County offices and the Meadowbrook Apartments. The schedule will also be tightened to operate on half-hourly headways (1,320 VSH annually).
  - Susanville DAR—as per the new operating contract, 2,500 VSH annually.
  - West County Route—as currently operated with no West County Extension, 2,060 VSH annually.

  - South County Commuter—as currently operated, 620 VSH annually.
  - South County to Susanville—as currently operated, 835 VSH annually.
  - Eagle Lake—as currently operated on-demand, 12 VSH annually.

- In FY 2022 – 23, the NEMT service to Reno is recommended to address a long standing and growing unmet transit need.
- Offer DAR service to the public along Richmond Road by request only if it does not cause capacity constraints for ADA eligible passengers in the regular DAR service area.
- In FY 2023 – 24, LTSA should reevaluate the Susanville Express Service, regardless of the funding outlook. If ridership does not meet standards, it should be eliminated. It will also be in FY 2023 – 24 when LTSA will need to prepare another forecast of transit revenues to expenditures for at least a three to period, to determine if transit operations can be sustained at current levels. If necessary, LTSA could begin with the service reduction options listed in the Service Alternatives Section.

TRANSIT PLAN BUDGET

The transit plan recommendations were based on the estimated LTSA budget. Table 22 presents compares projected transit operating revenues to operating costs for LTSA for the next five years. The following discussion explains how these estimates were derived.

Operating Expenses

Marginal operating costs for baseline services were calculated using the cost factors in the FY 2021 – 22 cost model. Next, fixed costs from the FY 2021 – 22 cost model were added. The combined total of marginal and fixed costs equals LRB operating expenses in Table 22. Lastly contracted services costs were included. This equates to $1,615,360 in total operating expenses for FY 2021 – 22.

To determine future year operating expenses, LRB costs were increased at the rate of 2.5 percent annually. Contracted services costs are expected to remain the same as they have for several years.

Operating Revenues

Revenues available to public transit over the next five years were estimated as follows:

Non-LTF Revenue Projections

In Table 22, non-Local Transportation Fund (LTF) revenue projections are displayed below transit operating expenses and are based on the following assumptions:

Table 22: LTSA Operating Budget Forecasts

	Initial Contract Period				
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Transit Operating Expenses (FY Base Case Service Plan)					
LRB	$1,455,060	$1,491,440	$1,528,730	$1,566,950	$1,606,120
Big Valley 50	$44,300	$44,300	$44,300	$44,300	$44,300
Lassen Senior Services	$86,000	$86,000	$86,000	$86,000	$86,000
Modoc Sage Stage	$30,000	$30,000	$30,000	$30,000	$30,000
TOTAL TRANSIT EXPENSES	**$1,615,360**	**$1,651,740**	**$1,689,030**	**$1,727,250**	**$1,766,420**
Non-LTF Revenue Sources					
STA for Operating (including carryover)	$350,215	$208,077	$268,000	$273,360	$278,830
FTA 5311	$219,000	$223,400	$227,900	$232,500	$237,200
Passenger Fares (Existing Service Plan)	$165,000	$170,000	$180,000	$180,000	$180,000
CARES/CRRSA	$212,250	$289,940	$289,940	$0	$0
Subtotal	$946,470	$891,417	$965,840	$685,860	$696,030
LTF Required for Transit Expenses	$668,890	$760,323	$723,190	$1,041,390	$1,070,390
LTF Available					
LTF Carryover	$562,632	$437,642	$275,119	$237,929	$0
Annual Revenue	$795,000	$805,000	$810,000	$826,200	$842,720
Administration and Planning	*-$240,000*	*-$195,000*	*-$110,000*	*-$110,000*	*-$110,000*
Bicycle and Pedestrian Reserve (2%)	*-$11,100*	*-$12,200*	*-$14,000*	*-$14,320*	*-$14,650*
Remaining Available LTF Annual Revenue	$543,900	$597,800	$686,000	$701,880	$718,070
Total LTF Available	$1,106,532	$1,035,442	$961,119	$939,809	$718,070
Transit Revenues					
LTF Revenue to Transit	$668,890	$760,323	$723,190	$939,809	$718,070
Transfer from Capital Fund					
Non-LTF Revenues	$946,470	$891,417	$965,840	$685,860	$696,030
Transfer from Operating Reserves	$0	$0	$0	$0	$0
TOTAL TRANSIT REVENUES	**$1,615,360**	**$1,651,740**	**$1,689,030**	**$1,625,669**	**$1,414,100**
Total LTF Remaining at End of Year After Transit Claim	$437,642	$275,119	$237,929	$0	$0
Transit Operating Budget / Deficit	**$0**	**$0**	**$0**	**-$101,580**	**-$352,320**

- TDA State Transit Assistance (STA) revenues in FY 2021 – 22 are based on LCTC carryover figures and state assumptions and will return to FY 2018 – 19 levels ($268,000) in FY 2023 – 24 then subsequently increase at the rate of inflation.

- FTA 5311—Federal Transit Administration revenues will grow at a low rate of inflation (2 percent annually).

- Passenger Fares—LTSA estimates FY 2020 – 21 fares at $165,000. In FY 2010 – 20 (pre-pandemic) passenger fares reached $180,000 per year. Therefore, it is assumed that as ridership returns to pre-COVID levels, fare revenue will return to previous levels by FY 2023 – 24.

- CARES/CRRSA—Corona Virus Aid Relief and Economic Security (CARES) Act funding will be divided between this fiscal year and FY 2021 – 22. It is anticipated that Corona Virus Response Relief Supplemental Appropriations (CRRSA) funds in the amount of close to $300,000 will be available for both FY 2022 – 23 and FY 2023 – 24 operations.

The next section of Table 22 shows the amount of LTF revenues required to fully fund the LTSA operating budget (Transit Expenses – Non-LTF Revenue Sources = LTF Revenues Required). In FY 2021 – 22 that amount is estimated at $688,890.

LTF Available

LTF revenues are the primary funding source for LTSA but in accordance with TDA law some of these funds can be allocated for other transportation purposes. Therefore, Table 22 presents calculations to estimate the amount of LTF available for LTSA in the "LTF Available" section. The following assumptions were made for LTF revenues:

- From year to year there is often "Carryover" of LTF funds that were not used the prior year. This excess LTF can be used for streets and roads purposes if it has been determined that all public transit needs reasonable to meet have been met. Excess LTF can also be carried over to the next fiscal year to supplement the transit operating budget. Table 22 assumes extra LTF will not be allocated for streets and roads purposes as part of this financial plan. Rather the excess LTF will be carried over to the next fiscal year to be made available for transit purposes. This analysis assumes that roughly $562,632 in carryover LTF will be available for public transit purposes in FY 2021 – 22.

- The total allocation of new LTF revenues for all purposes is estimated at $795,000 in FY 2021 – 22. This amount is assumed to return to historic levels ($810,000) by FY 2023 – 24 and will increase by 2 percent annually in subsequent years with inflation.

- Per TDA, LCTC and the County can take an LTF allocation in the amount necessary to administer TDA. This is referred to as the Administration and Planning Allocation. In FY 2021 – 22 it is estimated that $240,000 will be required for administration and planning. This includes payments to the County for "unfunded" PERS liabilities. The amount of LTF required for administration purposes will decrease to $110,000 by FY 2023 – 24.

- Next, two percent of the remaining amount is typically set aside for bicycle and pedestrian purposes. This money can be used as a local match for bicycle and pedestrian improvement projects. In FY 21-22, it is estimated that $1,106,532 LTF will be available for transit after subtracting administration and planning and bicycle/pedestrian allocations and carryover is included.

Revenue to Expenditure Comparison

Figure 34 above presents a graph of historical and projected revenue available for LTSA compared to historical and projected transit operating expenses. Projected LTSA operating revenue represents the amount of LTF available for public transit each year (allocations for administration and planning and bicycle and pedestrian facilities subtracted), STA, FTA, passenger fares and CARES/CRRSA.

As shown in the figure, from FY 2017-18 to FY 2020-21 there has been more revenue available than LTSA needed to operate. The extra funds have been carried over to the next year and/or used for non-transit purposes in accordance with TDA. This next fiscal year (2021 – 22) through FY 2023 – 24, estimates indicate that there will be sufficient revenue available for operating expenses (Table 22). This will change in FY 2024 – 25, when operating expenses are expected to exceed revenues by around $100,000. In FY 2025 – 26 the budget deficit will grow to $352,320. There is sufficient money in the operating reserves and capital fund to cover this deficit while still having sufficient to implement all elements of the capital plan discussed below.

CAPITAL PLAN

Capital requirements for LTSA over the next five years are identified in Table 23. As shown, LTSA plans to make a variety of bus stop improvements as well as improvements to the operations and maintenance facility which are important to maintain a safe and operable public transit system. These include roof replacement, security improvements to the vault room and updating the bus wash. Over the next five years, LRB will need to replace four transit vehicles and a service truck to maintain a safe fleet and minimize vehicle maintenance costs. LTSA would also like to expand the parking at the operations facility to provide additional room for buses as well as for future electric vehicle charging stations.

Beginning with buses purchased after January 1, 2026, 25 percent of new transit vehicle purchases over 14,000 pounds gross vehicle weight rating will need to be Zero Emission Buses (ZEB) per California Air Resources Board (CARB) regulations. At present, ZEB vehicles (whether battery electric buses or hydrogen) are much more expensive than diesel buses. By 2029, 100 percent of new vehicle purchases must be ZEB (with some exemptions for situations where ZEBs are infeasible). Small transit agencies such as LTSA will need to develop a Zero Emission Bus Rollout Plan by July 1, 2023. The Rollout Plan should demonstrate how the agency will gradually transition 100 percent of their fleets to ZEB by 2040. LCTC will initiate the effort to create a Bus Rollout Plan in the next fiscal year.

Given vehicle replacement schedule, LTSA need not budget for ZEB vehicles within the five-year TDP planning period. All these replacement vehicles are therefore assumed to be diesel or gasoline fueled. It is anticipated at additional grant funding sources will be available to pay for the replacement of transit vehicles with more expensive ZEB beyond 2025. The LCTC is in the process of searching for funding to help pay for the cost of the required Bus Rollout Plan.

Table 23 presents the capital plan costs and revenues. Capital costs total $2.3 million over the next five years, largely for vehicle replacement. Capital funds are assumed to come from the following sources:

- State Transit Assistance State of Good Repair funds, on an ongoing basis, increasing at a very low rate as allocations are population based.

- Low Carbon Transit Operations Program (LCTOP) funds, on an ongoing basis, increasing with inflation.

- Outside grant funding is assumed for vehicle purchases beyond FY 2021 – 22. Possible grant sources include the Federal Transit Administration 5339 Bus and Bus Facilities grant program and the California State Transportation Improvement Program (STIP). The federal funding program will fund up to 80 percent of total costs, while STIP funds can be used for 100 percent of total costs. It is assumed that federal funds (80 percent) are available for both sets of bus purchases.

LTSA currently has a capital replacement fund with a balance as of July 2021 expected to equal $560,500. As shown in Table 23, this fund balance does not drop below $379,000 over the next five years. This analysis indicates that no operating funds will be needed for capital purposes over this planning period (assuming typical other funding sources remain), and the capital fund will be able to help address capital needs beyond the planning period. Additionally, there is sufficient revenue in the capital fund to provide support for transit operations. As discussed below, a transfer from the capital fund to the operating fund could provide a balanced operating budget for the five-year TDP planning period while still providing sufficient revenue to replace the vehicle fleet at the recommended intervals.

FINANCIAL PLAN

It is possible that revenues will grow at a faster rate than projected in Table 22 or there will be less inflation of fixed costs and fuel prices. Additionally, there is a possibility the recurring transit revenue sources will grow more than estimated in the budget table or new funding sources will become available over the next five years as the state struggles with how to meet greenhouse gas emission targets. The study team has reviewed a variety of combinations of implementing service reductions and policy changes to have a financially constrained transit plan. The bottom line is that for the first three years of the planning period (which is the length of the current operating contract), a balanced budget could be achieved with a transfer of $150,000 from the capital fund. However, in FY 2024 – 25, the financial outlook looks significantly worse (mostly due to the loss in federal stimulus funding). A drastic cut in transit services may be required to make operating costs equal revenues. Even if all the service reduction operation elements discussed in Table 19 are implemented in FY 2024 – 25, there would still be an operating deficit.

KEY POLICY QUESTIONS

The future budget deficit issue brings a few key policy questions to light, as discussed below.

<u>Should excess LTF revenues to be carried over from year to year for public transit purposes until a time when the base level of transit service (11,000 vehicle-hours of service per year) can be easily funded for a period of at least two years?</u>

Table 23: LTSA 5-Year Capital Plan

	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Capital Replacement Fund 569 Starting Balance	$560,500	$379,135	$549,795	$744,795	$835,955
LTF Balance from Prior Year	$98,497				
STA Balance from Prior Year	$22,700				
Capital Expenses					
Bus Stop Improvements	$335,000	--	--	--	--
Vehicle Replacement	$195,000	$350,200	$0	$568,700	$568,710
Roof Renewal LRB	$100,000	--	--	--	--
Security Improvements (Vault Room)	$63,960	--	--	--	--
Facility Parking Expansion	--	--	$50,000	--	--
Update Bus Wash	$30,000	--	--	$45,000	--
Security Vehicle Replacement	$71,455				
Misc. Shop Equipment	$5,000				
Total Expenses	**$800,415**	**$350,200**	**$50,000**	**$613,700**	**$568,710**
Capital Revenues					
LTF (Capital) (Claim)	$90,415				
STA (Capital) (State of Good Repair)	$44,500	$44,500	$44,900	$45,800	$46,700
Low Carbon Transit Operations Program	$192,323	$196,200	$200,100	$204,100	$208,200
PTMISEA Bus Stop Enhancements	$156,000	--	--	--	--
CalOES	$14,615	--	--	--	--
Discretionary Grant (80 percent Bus Funding)	$0	$280,160	$0	$454,960	$454,968
Total Revenues	$497,853	$520,860	$245,000	$704,860	$709,868
Annual Balance	-$302,562	$170,660	$195,000	$91,160	$141,158
Capital Replacement Fund 569 Ending Balance	**$379,135**	**$549,795**	**$744,795**	**$835,955**	**$977,113**
Transfer to Operating Fund	$0	$0	$0	$0	$0
Revised Capital Replacement Fund 569 Ending Balance	**$379,135**	**$549,795**	**$744,795**	**$835,955**	**$977,113**

The primary purpose of the TDA is to fund public transit services (though funding for streets and roads can be provided if there are no unmet transit needs that are reasonable to meet). As shown in Figure 34, there have been times in the past where revenues greatly exceeded costs for public transit and therefore, there was sufficient funding for other transportation purposes. However, this is expected to shift over the next few years. By FY 2024-25 currently foreseeable revenues will not meet expenditures. The financial analysis in this study assumes that excess LTF revenues from each fiscal year will be carried over for public transit purposes the following fiscal year. Without this carryover, the transit budget would not be funded in the next fiscal year (FY 2021 – 22).

Pros:

- Extends the time LTSA can operate at status quo levels. While TDA considers funding only on a year-by-year basis, retaining funds to ensure future warranted transit services can be provided is in keeping with the purposes of the TDA.

Cons:

- No LTF funding available to the local jurisdictions for streets and roads purposes.

Should LTSA use funds reserved for capital purposes to cover operating expenses?

As of this fiscal year, LTSA has a balance of $560,500 in the Capital Reserve Fund. In this analysis, this money is reserved as local match for FTA grants to purchase new transit vehicles when they have reached the end of their useful life. One option for LTSA would be to use some of the Capital Reserve Fund to cover the operating deficit over the short-term. It is anticipated that if roughly $100,000 is transferred from the Capital Reserve Fund to operating reserves in FY 2024-25 and $350,000 is transferred from the Capital Reserve Fund to operating reserves, LTSA will be able to operate without service reductions over the next five years. If this policy is adopted, the LCTC/LTSA should ensure that during a year where vehicles need to be replaced, FTA funding can be procured to help pay for bus purchases prior to transferring money to the operating fund.

Pros:

- LTSA could operate at baseline service levels through FY 2025-26

Cons:

- This increases the risk that future reductions in other capital funding grant revenues impacts the transit program.

Should STIP funds be used to replace the larger transit vehicles when they reach the end of their useful life?

One of the larger 39 passenger commuter buses (Bus 101) was purchased with STIP funds in 2010. Transit vehicle replacement is an eligible use under the STIP program and does not require a local match. If STIP funds were used again to replace Bus 101, roughly $100,000 in local match could be saved and used for other capital or operating purposes.

Pros:

- Requires no local match and frees up Capital Reserve Funds for other purposes.

Cons:

- Must be balanced with other regional capital improvement priorities.

Should TDA funds be used to pay for unfunded CalPERS liabilities?

Unfunded liabilities for the CalPERS retirement fund are the difference between the estimated obligations to retirees and the current value of assets. CalPERS estimates that it is only 70 percent funded. To decrease unfunded liabilities, CalPERS is requiring a greater contribution from employers. A portion of the TDA administrative and planning allocation will be used to help the County pay for the unfunded CalPERS liabilities.

Pros:

- The County budget is tight and could benefit from the additional monetary support.

Cons:

- If this money were instead used for public transit operations, LTSA would be able to fund baseline service levels through FY 2024-25 without a transfer from the capital fund.

IMPLEMENTATION PLAN

As indicated in the above analysis, budget shortfalls are likely to occur FY 2024 – 25 without new revenue sources. FY 2023 – 24 marks the end of the transit operating contract with Paratransit Services (after which options to extend are possible). The State of California has adopted ambitious goals to reduce greenhouse gas emissions. Transportation (cars/trucks/buses) is one of the larger sectors causing greenhouse gas emissions. Therefore, it is reasonable to think that the state will need to invest more heavily in public transit to meet those greenhouse gas targets. As such, this plan recommends focusing on a three-year period and reevaluating in FY 2023 – 24. With the potential for new funding sources and the unpredictable volatility of transportation funding sources, there may not be a need to make drastic cuts to service in FY 2024 – 25 or FY 2025 – 26.

Further, with a fiscally constrained plan for a three-year period, LTSA could afford the NEMT service to Reno which is an important unmet transit need and a good use of public transit funds in Lassen County. The annual operating subsidy for NEMT service to Reno is around $15,000, or less than 1 percent of the total transit operating budget. Table 24 displays projected operating costs and revenues for this plan. Specific year by year implementation is as follows:

Table 24: LTSA FY 2021-22 - 2023-24 Financial Plan

Operating Plan

	FY 2021-22	FY 2022-23	FY 2023-24
Base Case Costs (FY 2021-22 Existing Service Plan)	$1,615,360	$1,651,740	$1,689,030
Estimated Transit Revenues	$2,053,002	$1,926,859	$1,926,959
Suplus/Deficit	*$437,642*	*$275,119*	*$237,929*
Operating Plan Element			
NEMT Service to Reno		$15,683	$16,075
On Demand DAR Service to Richmond Road	*$30*		
Total Operating Plan Elements	*$30*	*$15,683*	*$16,075*
Suplus/Deficit	$437,612	$259,437	$221,854

FY 2021 – 22

- Discontinue East County Route
- Discontinue West County Extension
- Modify Susanville Express to serve Meadowbrook Apartments and City/County Offices
- Modify schedule to meet half-hourly headways
- Continue to monitor ridership on Susanville Express
- Create marketing materials for new NEMT service to Reno

- Implement on-demand DAR service along Richmond Rd.
- Continue bus stop improvements
- Replace bus #20 and service truck
- Roof renewal project for operating facility
- Security improvements for operating facility
- Replace brushes on bus wash
- Apply for FTA funds to replace buses #19 and #21

FY 2022 – 23

- Implement and Market NEMT Service to Reno (assuming funding can be assured for two years).
- Continue to monitor ridership on Susanville Express. If ridership does not meet local fixed route standards, route should be discontinued at the end of the year.
- Replace buses #19 and 21.

FY 2023 – 24

- Begin operating facility parking expansion.
- Amend TDP to reflect current financial outlook.

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Attachment A
Lassen Rural Bus On-line Community Survey Responses

What single improvement would most encourage you to ride LRB more frequently?

covid-19 exposure is my main concern
I would never ride this bus
No application to my needs.
None
nothing
Nothing would rather drive
I have a car I don't need a bus
Direct service to Susanville from Janesville if roads were bad or just didn't want to drive. Would like to eliminate having to go to Herlong. Would like a trip to Reno with 2 or 3 different places to stop. 2 - 3 hour layover in Reno
Information availability made easier
Info
Trips allowing for proper shift change at the prisons
I prefer to use my own vehicle
Nothing
Nothing
nothing except extreme poverty
As I age, and driving becomes more difficult, I will use it.....
I have a car. Why would i need bus?
Nothing would as I have a car and that is more convenient.
Nothing
I will not use the bus system
Mask Use enforcement on the bus
I don't ride the bus, I live within 5 minutes of everything and just use my car
None, when I have ridden the bus, it has been fine.
more flexible scheduling
I have vehicle
Don't use
I do not use this service but I greatly appreciate it in our community. I think improved covered clean bus stops are important.
I always drive myself
None
nothing as I drive my own vehicle
I don't need to ride the bus
would not use regardless of improvements
None

Is there anything else you would like to tell us about your experiences on LRB?

A Dial A ride Saturdays service and after 5:00 pm no way home from late appointments
Bus service to Redding, Red Bluff, Chico would be nice.

I don't use the bus service but I think it is vital for people who cannot drive.
It is a valuable service that is needed.
I've never used the system so I can't answer any of these questions fairly.
Please place Bus Stop signs at all stops!
Sorry I have never used it
super good
they are great
very nice service
We are very grateful for the service to sierra army depot from Milford, for work.
We need LRB especially for seniors who can no longer drive!

Lassen Rural Bus Onboard Passenger Survey Responses

Sometimes I go to church at Sacred Heart on the 6:30 AM bus. In inclement weather, it would be helpful to be picked up somewhere near Meadowbrook Loop. (See my map on back of survey)

Everyone who drives the buses are very helpful and wonderful drivers and are helpful when talking on the phone with information. My God Bless this wonderful bus company with a rich and wonderful blessing; they are truly a blessing for everyone in Susanville. Thank you!

Later city bus service on Saturday would be helpful. Dog feces at the bus stops.

Driver made false statements about me and denied me service to get back home. Driver did not respect my rights to privacy. He yelled at me in public.

Good job