Humboldt County
Transit Development Plan
2023-2028

Final Report

October 20, 2023

Prepared by LSC Transportation Consultants

Five-Year Transit Development Plan 2023-2028

Final Report

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Chapter 1
INTRODUCTION

The Humboldt County Association of Governments (HCAOG) is a Joint Powers Agency (JPA) composed of the County of Humboldt and the seven incorporated cities in the county (Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, Trinidad). HCAOG is the designated Regional Transportation Planning Agency (RTPA) for Humboldt County and therefore responsible for transportation planning projects. HCAOG is aware of the important role of public transit in meeting the transportation needs of local residents and therefore has retained LSC Transportation Consultants, Inc., (LSC) to prepare an update to the *Humboldt County Transit Development Plan* (TDP).

The objective of the TDP is to assess current transit operations and other related transportation issues in the study area to identify potential changes that could improve public transit over the next five years. The TDP begins by reviewing current and future demographic conditions, other related transportation plans, public input, the recent operating history of public transit services in Humboldt County, and other connecting services in the study area. Then, the TDP presents an evaluation of service, capital, management, and financial alternatives for each transit program. The TDP presents findings from the demographics review, operations analyses, and alternatives evaluation, which HCAOG and other stakeholders used to determine the recommended service improvements and implementation strategy for the upcoming five-year cycle. The service, capital, and financial plans for each transit program are presented in the final chapters of this updated *Humboldt County TDP*.

STUDY ISSUES

This study takes direction from issues that have impacted transit in Humboldt County during recent years, as well as changing conditions that will likely impact transit demand in the near future. More specifically, the Humboldt County Association of Governments (HCAOG), transit providers and their staff, and local stakeholders and community representatives all identified issues to guide the development of the TDP. The study issues identified include the following:

- Ridership: Ridership dropped sharply during the COVID-19 pandemic and has only slowly begun to recover. What can the Humboldt County transit providers do to attract passengers back to transit? What routing and scheduling changes are necessary to meet the needs of current riders, or is a new service model possible? How can transit providers encourage people to ride the bus instead of using their personal vehicles?
- Funding: Funding is the biggest limiting factor for transit. The need to convert to a zero-emission fleet is expensive and exacerbates the problem of limited funding as local match requirements lessen the attainability, or accessibility, of operating funds. What is the funding outlook for the next five years? What public and private sources of revenue are available? What cost-sharing opportunities or expectations are involved?
- Service Efficiency: What is the most appropriate service plan to meet varied transit needs? What routing and scheduling changes are necessary to maximize efficiency? Can routing be

improved to reduce travel time on existing routes? What will be the costs/benefits of a new service plan?

- Perception of Transit: Many people consider public transit to be for those who cannot afford or use other modes of transportation. There is a perception that transit buses and bus stops are not safe or clean, and this deters riders. How can transit programs change this perception?
- Alternative Transportation: Is microtransit or other on-demand service appropriate for portions of Humboldt County? Would it be cost-effective? How can first-mile/last-mile transportation needs best be addressed?
- Converting Fleets to Zero-Emission Vehicles: The State of California's Innovative Clean Transit Regulation will go into effect during the upcoming planning period, requiring transit agencies to begin acquiring zero-emission buses. The Humboldt Transit Authority was just awarded a $38 million grant to procure 11 zero-emission hydrogen fuel cell electric buses and supportive infrastructure. The new buses will serve the local Trinidad-to-Scotia route as well as a new intercity route (the Redwood Coast Express) to Ukiah. How will this fleet change impact services? What other capital needs will there be during the plan period and how should transit agencies fund these purchases?
- New Transit Center: The Humboldt Transit Authority has procured money for a new, multimodal transit center in Eureka that will accommodate buses, paratransit, and bikes/scooters. How can transit providers support passengers for the first and last miles of their trips (to and from the transit center)?
- Branding: Public transit in Humboldt County currently consists of three transit operators, which collectively operate eight different transit services. A branding study was completed recently, and current marketing efforts should consider the pros and cons of unified branding.
- Fares: Are the fares for the various Humboldt County transit services reasonable? Can the sale of discounted passes be used to boost ridership?
- Intercity Services: There are minimal transit services in Humboldt County outside of Eureka and Arcata. What is the need for intercity transportation in Humboldt County and beyond? How can providers better meet these needs?
- Coordination: Land use development in Humboldt County has made it difficult to serve many residents with public transit. Can transit providers better coordinate with city and county planning officials to ensure transit is considered in new development plans?
- Service Frequency: The low frequency of services was often mentioned by stakeholders as a deterrent to using transit. Are there any services which warrant an increase in frequency? How can increased frequency be funded? Does this require a trade-off in reduced service areas?

- Paratransit and On-Demand: Paratransit ridership has decreased since the COVID-19 pandemic, yet some complain that they are unable to book rides when they want them and find the reservation system frustrating. Do reservation policies need to be reviewed? How effective is paratransit at meeting the needs of eligible passengers? Could general-public dial-a-ride services be offered and combined with paratransit as a service option?
- Student Transportation: Student ridership decreased during the pandemic, but classes are now returning to primarily in-person modes. At the same time, California Polytechnic State University - Humboldt (Cal Poly Humboldt) is planning to expand enrollment to 12,000 students in upcoming years, many of whom will be housed in locations with limited parking. How will their transportation needs be met, and how will this growth affect transit services county-wide? How can the Humboldt Transit Authority and Cal Poly Humboldt best coordinate to ensure equitable service and funding?

These study issues provide a framework for analyzing the recent history of transit in the region and for developing a thorough and effective five-year service plan for the Humboldt County transit providers. The TDP aims to improve public transit services to better serve the greater Humboldt County community of both now and the future.

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Chapter 2

STUDY AREA CHARACTERISTICS

STUDY AREA

Spanning 3,568 square miles in northwestern California, Humboldt County is world-renowned for its stunning geography, characterized by towering redwood forests and a rugged coastline. Humboldt County is quite rural, with a population density of only 38 people per square mile. There are seven incorporated cities in the county: Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad. There are also dozens of census-designated places, with two of the larger ones being McKinleyville and Garberville. Eight federally recognized tribes call Humboldt County home: the Bear River Band of the Rohnerville Rancheria, Big Lagoon Rancheria, Blue Lake Rancheria, Hoopa Valley Tribe, Karuk Tribe, Trinidad Rancheria, Wiyot Tribe, and the Yurok Tribe. Logging and agriculture have historically been the backbone of the Humboldt County economy, but recent decades have seen other sectors grow significantly, such as government services, medical, education, tourism, and recreation.

Humboldt County's road network consists of approximately 1,400 miles of county roads and city streets, as well as 378 miles of state highways and other federal roadways. US Highway 101 (US 101) is the major north-south roadway, passing through most of the county's population centers. State Route (SR) 299 is the main east-west corridor across the county, traveling from the Pacific coast east to Weaverville and Redding, where travelers can then access Interstate 5 (I-5). There are no interstates in Humboldt County. The study area is shown in Figure 1. Humboldt County's vast size and rugged landscape make it difficult to travel around, never mind providing reliable and timely public transportation. Despite the challenging terrain, there is a growing demand for public transit services. The demographic characteristics influencing transit ridership in Humboldt County are explored further in the following section.

POPULATION CHARACTERISTICS

Historic and Projected Population

Population changes can greatly impact the demand for transit services. Table 1 shows the recent population history of Humboldt County and the County's cities (including unincorporated McKinleyville) in comparison with the State of California. Overall, the Humboldt County population grew by 4,996 people from 2005 to 2020 to a total of 136,463 people. This equates to an increase of only 0.2 percent annually, a slower rate compared to the State of California. Arcata and Fortuna saw the greatest growth over the last 15 years (0.7 and 0.6 percent annual growth, respectively), while Blue Lake, Eureka, Ferndale, and Trinidad saw either neutral or negative population growth (Table 1).

Figure 1
Humboldt County Site Map

Table 1: Historic and Current Population

	2005		2010		2015		2020	
	Population	Percent Annual Growth	Population	Percent Annual Growth	Population	Percent Annual Growth	Population	Percent Annual Growth
Humboldt County	131,467	-0.5%	134,623	0.5%	135,052	0.1%	136,463	0.2%
Arcata	17,000	0.4%	17,211	0.2%	18,085	1.0%	18,857	0.8%
Blue Lake	1,212	1.3%	1,253	0.7%	1,278	0.4%	1,208	-1.1%
Eureka	26,793	0.5%	27,125	0.2%	26,811	-0.2%	26,512	-0.2%
Ferndale	1,427	0.6%	1,371	-0.8%	1,435	0.9%	1,398	-0.5%
Fortuna	11,479	1.8%	11,897	0.7%	11,882	0.0%	12,516	1.0%
McKinleyville[1]	15,247	2.3%	16,896	2.1%	16,291	-0.7%	16,292	0.0%
Rio Dell	3,265	0.6%	3,368	0.6%	3,414	0.3%	3,379	-0.2%
Trinidad	342	1.8%	367	1.4%	368	0.1%	307	-3.6%
Unincorporated Areas	54,702	-4.3%	55,135	0.2%	55,488	0.1%	55,994	0.2%
State of California	35,869,173	1.1%	37,253,956	0.8%	38,907,642	0.9%	39,538,223	0.3%

Source: US Census and California Department of Finance.

Note 1: McKinleyville is an unicorporated community but the third largest community in Humboldt County.

To effectively plan for the future of the transit system, it is important to consider recent population trends and population forecasts. While there is an aspect of uncertainty with population models, they are still useful when trying to predict how population-related transit demand may change in upcoming years. Humboldt County population projections by age category, sourced from the California Department of Finance (DOF), are shown in Table 2. Highlights include:

- Humboldt County's population is predicted to grow slightly from 2020 to 2030 (1 percent), before declining in the decade following (-2 percent), negating the previous growth.
- The number of children ages 5 to 17 will decrease at a faster rate than the overall county population (-15 percent from 2020 to 2040).
- The adult population between the ages of 18 to 24 will fluctuate during upcoming years, with an anticipated net decrease of 1 percent between 2020 and 2040.
- The size of the adult population of traditional working age (25 to 64) will experience a net 5 percent decrease between 2020 and 2040.
- The senior population between the ages 65 and 74 is expected to decrease significantly from 2020 to 2040 (-25 percent).
- Seniors between the ages of 75 and 84 will grow at the fastest rate out of all the age categories in Humboldt County in the next decade, growing by a whopping 79 percent between 2020 and 2030 before declining by about 5 percent in the following decade.

Table 2: Humboldt County Population Projections by Age Category

Year	Total (All Ages)	Preschool (0-4 years)	School Age - Young Adult (5-17 years)	College Age (18-24 years)	Working Age (25-64 years)	Young Retirees (65-74 years)	Mature Retirees (75-84 years)	Older Seniors (85 or older)
2010	135,102	7,834	19,456	16,782	73,204	9,767	5,481	2,578
2020	132,706	6,926	20,279	17,033	62,664	16,182	6,869	2,753
2030	133,738	6,182	19,242	17,926	59,083	15,130	12,274	3,901
2040	130,791	6,170	17,304	16,864	59,511	12,204	11,645	7,093
2010 to 2020 Change								
Number	-2,396	-908	823	251	-10,540	6,415	1,388	175
Percent	-1.8%	-11.6%	4.2%	1.5%	-14.4%	65.7%	25.3%	6.8%
2020 to 2030 Change								
Number	1,032	-744	-1,037	893	-3,581	-1,052	5,405	1,148
Percent	0.8%	-10.7%	-5.1%	5.2%	-5.7%	-6.5%	78.7%	41.7%
2030 to 2040 Change								
Number	-2,947	-12	-1,938	-1,062	428	-2,926	-629	3,192
Percent	-2.2%	-0.2%	-10.1%	-5.9%	0.7%	-19.3%	-5.1%	81.8%

Source: California Department of Finance. Report P-2B: Population Projections by Individual Year of Age, 2010-2060

- The senior population aged 85 and above is expected to grow significantly during the current decade (42 percent) before increasing even further in the following decade (82 percent). This is the age group that is most likely to become transit-dependent.

A key takeaway of the population forecast for Humboldt County is that the rapid increase in the number of senior adults ages 75 and older in the coming years will likely result in increased demand for public transit. This expected change in demand means new or expanded transit services should consider the needs of seniors. Examples of transit services popular among seniors are demand response, paratransit, or non-emergency medical transportation programs.

It should be noted that, in contrast to the DOF's predictions, Humboldt County's Economic Development Division projects the county population will grow by over 16,000 people in the next ten to fifteen years based on normal population changes, the anticipated expansion of Cal Poly Humboldt, the jobs and housing that will be generated by development on the Samoa Peninsula, and the growth of the offshore wind industry. County staff believes this prediction may even be conservative, as it does not account for additional population growth due to climate refugees.

If realized, this population growth would exacerbate the housing challenges already being experienced by many local residents due to high home prices and small local housing stock. The US Census Bureau's American Community Survey (ACS) data reveals the overall rental vacancy rate in Humboldt County decreased by 44 percent from 2010 to 2020; Arcata, Eureka, and McKinleyville all had rental vacancy rates at or below the state average of 4 percent in 2020. Despite the increasingly competitive rental market, ACS data also shows the number of occupied homes in Arcata, Eureka, and McKinleyville decreased from 2010 to 2020 by 2, 1, and 8 percent, respectively, suggesting homes have been purchased by seasonal residents or have been converted to vacation rentals.

Transit-Dependent Population

A large portion of transit ridership nationwide tends to be drawn from what is known as the transit-dependent population. The potentially transit-dependent population is comprised of youths, senior adults, persons with a disability, low-income persons, and persons who live in zero-vehicle households. Table 3 presents key demographic data showing where potentially transit-dependent persons live within Humboldt County at the census tract level. Detailed figures representing this data are included in Appendix A. Highlights from Table 3 include the following:

- About one-fifth of the Humbolt County population are youth (children younger than 18). Areas with relatively high numbers of youth include Eureka (26 percent of the overall youth population), Fortuna (15 percent), and McKinleyville (12.5 percent).
- Senior adults over the age of 65 are currently 18 percent of the Humboldt County population (24,287 persons). This is a slightly greater proportion compared to the State of California (15 percent). Large percentages of the countywide senior population live in the Cutten area of Eureka (6 percent), Bayside and Jacoby Creek (5 percent), and Myrtletown (5 percent).
- People with a disability that limits their ability to drive are often reliant on public transit. According to the US Census Bureau definition, there are 22,711 disabled persons in Humboldt County (17 percent). This is a higher proportion than occurs in California (11 percent). Many disabled persons live in Eureka (28 percent of the countywide disabled population), Fortuna (11 percent), Arcata (10 percent), and McKinleyville (9.5 percent).
- Due to the high costs associated with owning and maintaining a vehicle, many low-income individuals ride public transit to get around. 19 percent of Humboldt County's population is estimated to be living under the federal poverty level, which is a higher rate than the State of California (12 percent). One of the factors contributing to this higher rate is that many of the students attending California Polytechnic State University - Humboldt in Arcata are considered to be low-income. Other areas with large numbers of low-income individuals are Old Town Eureka, Fortuna, Loleta, and the Hoopa Reservation.
- Whether or not a household has a vehicle available is a strong indicator of potential transit dependence. As of 2021, there were estimated to be 3,903 households in Humboldt County without a vehicle. Many of these zero-vehicle households are located in the Old Town and Henderson Center in Eureka (10 percent and 7 percent of the countywide zero-vehicle households, respectively), around Humboldt State in Arcata (6 percent), the Hoopa Reservation (6 percent), and in the Rosewood neighborhood of Eureka (5.5 percent).

Transit Needs Index

As there is overlap in where the various transit-dependent groups live, it is helpful to consider the combined transit-dependent population to better understand what areas of Humboldt County have the greatest overall need for transit services. To conduct a more comprehensive analysis of where Humboldt County's transit-dependent population lives, the data presented in Table 3 was used to develop a Transit Needs Index (TNI) for each census tract (Table 4).

Table 3: Humboldt County Demographic Characteristics

Census Tract	Area Description	Total Persons	Total Households	Youth (Under 18 Years)		Seniors (65+)		Persons with a Disability		Persons Below Poverty Level		Zero-Vehicle Households	
				#	%	#	%	#	%	#	%	#	%
1	Eureka / Old Town	4,337	1,957	670	2.6%	540	2.2%	902	4.0%	1,397	5.3%	396	**10.1%**
2	Eureka / Henderson Center	5,981	2,443	1,223	4.7%	693	2.9%	1,005	4.4%	661	2.5%	269	6.9%
3	Eureka / Rosewood	5,097	2,370	951	3.7%	996	4.1%	906	4.0%	1,037	4.0%	215	5.5%
4	Eureka / Herrick Ave	4,245	1,514	888	3.4%	770	3.2%	970	4.3%	1,017	3.9%	139	3.6%
5	Eureka / Old Town	4,361	1,716	832	3.2%	818	3.4%	742	3.3%	1,099	4.2%	270	6.9%
6	Eureka	5,253	2,041	970	3.7%	755	3.1%	1,041	4.6%	618	2.4%	139	3.6%
7	Eureka / Zoo	5,521	2,156	1,109	4.3%	1,383	**5.7%**	892	3.9%	679	2.6%	90	2.3%
8	Myrtletown	5,186	2,155	897	3.5%	1193	4.9%	1,117	**4.9%**	818	3.1%	87	2.2%
9	Bayside / Jacoby Creek	5,325	2,240	796	3.1%	1209	5.0%	504	2.2%	723	2.8%	19	0.5%
10.01	Arcata / Downtown	3,355	1,226	187	0.7%	401	1.7%	185	0.8%	997	3.8%	88	2.3%
10.02	Arcata / HSU	2,962	934	205	0.8%	213	0.9%	332	1.5%	832	3.2%	223	5.7%
11.02	Arcata / Alliance	4,496	1,950	756	2.9%	549	2.3%	604	2.7%	2,242	**8.6%**	99	2.5%
11.03	Arcata	2,152	784	266	1.0%	215	0.9%	249	1.1%	489	1.9%	89	2.3%
12	Arcata / Blue Lake	4,815	1,813	654	2.5%	639	2.6%	585	2.6%	1,188	4.5%	114	2.9%
13	Arcata / Samoa	1,423	627	250	1.0%	289	1.2%	291	1.3%	207	0.8%	25	0.6%
101.02	Willow Creek	2,382	917	748	2.9%	449	1.8%	465	2.0%	450	1.7%	56	1.4%
102	Trinidad / Big Lagoon	2,989	1,213	705	2.7%	623	2.6%	457	2.0%	500	1.9%	32	0.8%
103	Blue Lake	3,223	1,415	517	2.0%	740	3.0%	452	2.0%	498	1.9%	70	1.8%
104	Clam Beach	3,644	1,411	742	2.9%	611	2.5%	711	3.1%	199	0.8%	51	1.3%
105.02	E. McKinleyville	5,626	2,253	1,381	**5.3%**	823	3.4%	1,021	4.5%	1,013	3.9%	42	1.1%
105.03	Central McKinleyville	2,987	1,478	1,043	4.0%	534	2.2%	549	2.4%	899	3.4%	189	4.8%
105.04	W. McKinleyville	3,844	1,483	811	3.1%	700	2.9%	583	2.6%	714	2.7%	116	3.0%
106	Freshwater	1,992	769	328	1.3%	463	1.9%	254	1.1%	229	0.9%	6	0.2%
107.01	Humboldt Hill	4,644	1,704	1,159	4.5%	794	3.3%	417	1.8%	709	2.7%	33	0.8%
107.02	Pine Hills / Fields Landing	2,882	1,013	292	1.1%	593	2.4%	668	2.9%	540	2.1%	146	3.7%
108	Fortuna / Loleta	4,748	1,818	954	3.7%	661	2.7%	940	4.1%	1,176	4.5%	114	2.9%
109.01	Fortuna / Newburg	4,635	1,816	1,042	4.0%	683	2.8%	881	3.9%	868	3.3%	193	4.9%
109.02	Fortuna/Hydesville	4,096	1,643	698	2.7%	898	3.7%	683	3.0%	579	2.2%	43	1.1%
110	S. Fortuna	4,941	1,878	1,208	4.7%	898	3.7%	902	4.0%	586	2.2%	15	0.4%
111	Rio Dell/Scotia	4,405	1,909	1,034	4.0%	743	3.1%	750	3.3%	574	2.2%	96	2.5%
112	Petrolia/Ferndale	3,435	1,331	736	2.8%	928	3.8%	699	3.1%	391	1.5%	37	0.9%
115.01	Garberville/Redway	2,177	935	395	1.5%	663	2.7%	258	1.1%	122	0.5%	41	1.1%
115.02	Shelter Cove	1,120	653	0	0.0%	442	1.8%	244	1.1%	354	1.4%	20	0.5%
116	Garberville/Alderpoint	3,431	1,525	566	2.2%	709	2.9%	575	2.5%	657	2.5%	124	3.2%
9400	Hoopa	3,348	1,030	932	3.6%	669	2.8%	877	3.9%	1,148	4.4%	217	5.6%
	Total	**135,058**	**54,120**	**25,945**	**19%**	**24,287**	**18%**	**22,711**	**17%**	**26,210**	**19%**	**3,903**	**7%**

Source: US Census Bureau American Community Survey 2020-2021.

X% *= (bolded) tracts with the highest percentage of population type.*

Table 4: Humboldt County Transit Needs Index

Census Tract		Youth (Under 18 Years) Rank	Senior Adults (65+) Rank	Persons with a Disability Rank	Persons Below Poverty Level Rank	Zero-Vehicle Households Rank	Overall Transit Needs Index Rank
1	Eureka / Old Town	3	3	4	4	5	19
2	Eureka / Henderson Center	5	4	5	3	4	21
3	Eureka / Rosewood	4	5	5	4	4	22
4	Eureka / Herrick Ave	2	2	3	2	1	10
5	Eureka / Old Town	5	5	5	5	5	25
6	Eureka	4	4	5	2	2	17
7	Eureka / Zoo	3	4	3	2	1	13
8	Myrtletown	1	2	2	1	1	7
9	Bayside / Jacoby Creek	1	1	1	1	1	5
10.01	Arcata / Downtown	2	3	2	5	3	15
10.02	Arcata / HSU	1	1	2	3	4	11
11.02	Arcata / Alliance	2	2	2	4	1	11
11.03	Arcata	2	2	2	3	2	11
12	Arcata / Blue Lake	1	1	1	1	1	5
13	Arcata / Samoa	1	1	1	1	1	5
101.02	Willow Creek	1	1	1	1	1	5
102	Trinidad / Big Lagoon	1	1	1	1	1	5
103	Blue Lake	1	1	1	1	1	5
104	Clam Beach	1	1	1	1	1	5
105.02	E. McKinleyville	1	1	1	1	1	5
105.03	Central McKinleyville	4	3	3	3	3	16
105.04	W. McKinleyville	2	2	2	2	1	9
106	Freshwater	1	1	1	1	1	5
107.01	Humboldt Hill	1	1	1	1	1	5
107.02	Pine Hills / Fields Landing	1	1	1	1	1	5
108	Fortuna / Loleta	1	1	1	1	1	5
109.01	Fortuna / Newburg	2	2	2	2	2	10
109.02	Fortuna/Hydesville	1	1	1	1	1	5
110	S. Fortuna	3	2	2	1	1	9
111	Rio Dell/Scotia	1	1	1	1	1	5
112	Petrolia/Ferndale	1	1	1	1	1	5
115.01	Garberville/Redway	1	1	1	1	1	5
115.02	Shelter Cove	1	1	1	1	1	5
116	Garberville/Alderpoint	1	1	1	1	1	5
9400	Hoopa	1	1	1	1	1	5

Source: LSC Transportation Consultants, Inc.

The TNI ultimately ranks each census tract based on the relative demand for transit services from the population living in the area. The relative demand was calculated by first determining the density of each of the transit-dependent populations in the census tract (for example, the number of low-income persons per square mile), and then dividing the range of densities for each subpopulation into quintiles. Population densities in the lowest quintile were assigned a score of 1 to represent the low density, and therefore low transit need, while the highest population densities were assigned a score of 5 to represent the greater need for transit services. The scores for each subgroup were then summed to yield an overall transit needs index rank (Table 4 and Figure 2). These overall ranks range in value from 5 to 25. The areas with scores close to 25 have the "greatest transit need," as defined by having the highest density of youth, zero-vehicle households, older adults, people with disabilities, and low-income populations.

Humboldt County's population has a greater proportion of transit-dependent persons compared to the State of California, with high numbers of senior adults, disabled persons, and low-income persons. Based on the TNI, the community with the greatest need for transit services in Humboldt County is Eureka. Specifically, the Old Town, Henderson Center, and Rosewood neighborhoods are the census tracts with the highest overall TNI ranks in all of Humboldt County. Besides Eureka, other census tracts with a high overall need for transit services are Arcata, McKinleyville, and Fortuna.

Colleges

Colleges and universities influence the culture, economy, and demographic composition of the communities where they are located. There are two colleges/universities in Humboldt County that contribute to transportation needs: College of the Redwoods and California Polytechnic State University – Humboldt (Cal Poly Humboldt).

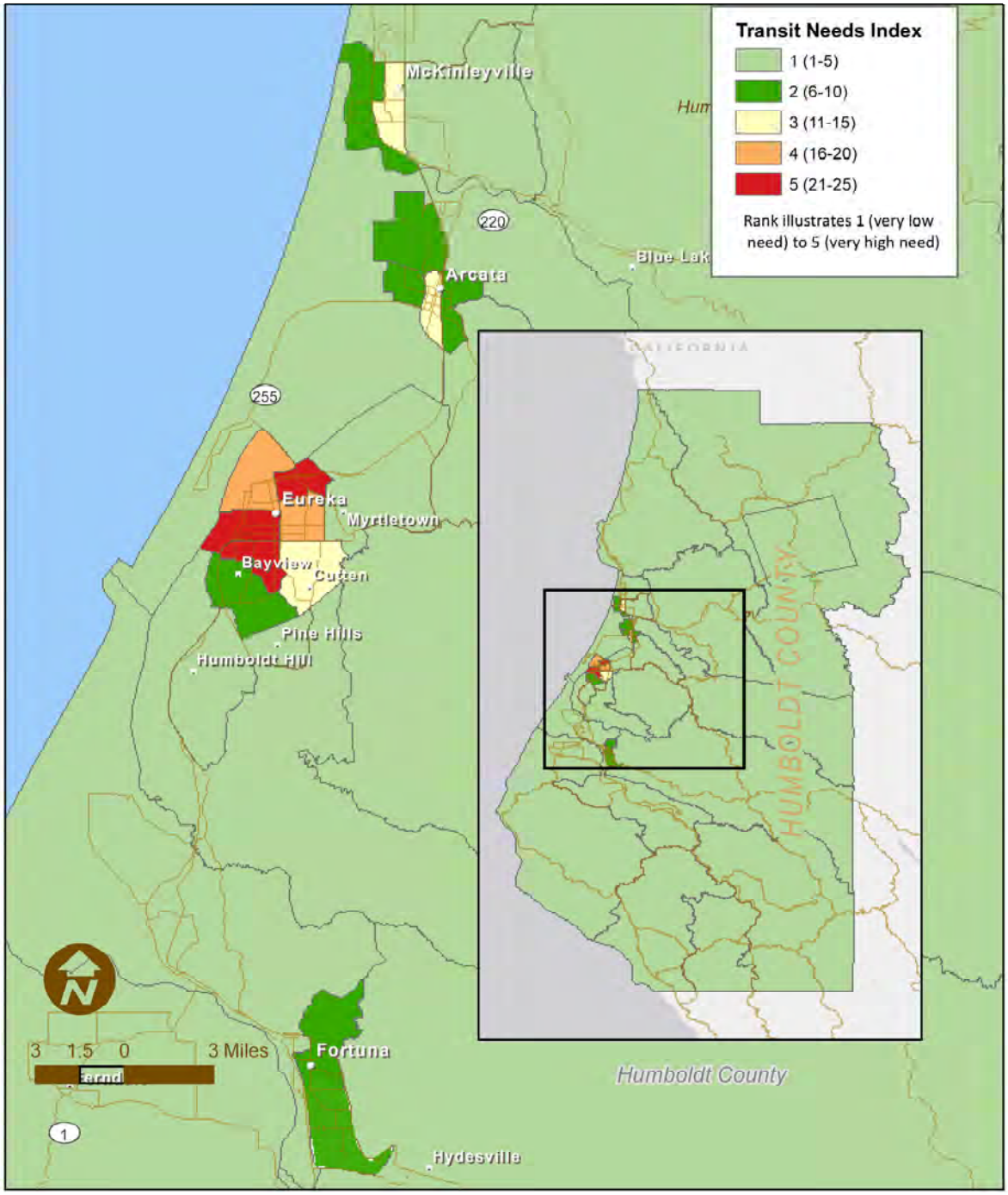
College of the Redwoods

College of the Redwoods is a two-year community college located south of Eureka, with approximately 4,500 students enrolled as of the 2022 fall semester. College of the Redwoods provides housing for only 150 students, meaning the vast majority of students commute. Before the pandemic, College of the Redwoods students and staff were frequent bus passengers, but this changed when the COVID-19 pandemic temporarily forced colleges to switch to virtual instruction in March 2020. Enrollment also declined during the pandemic, and it remains to be seen whether College of the Redwoods enrollment will return to previous levels.

Cal Poly Humboldt

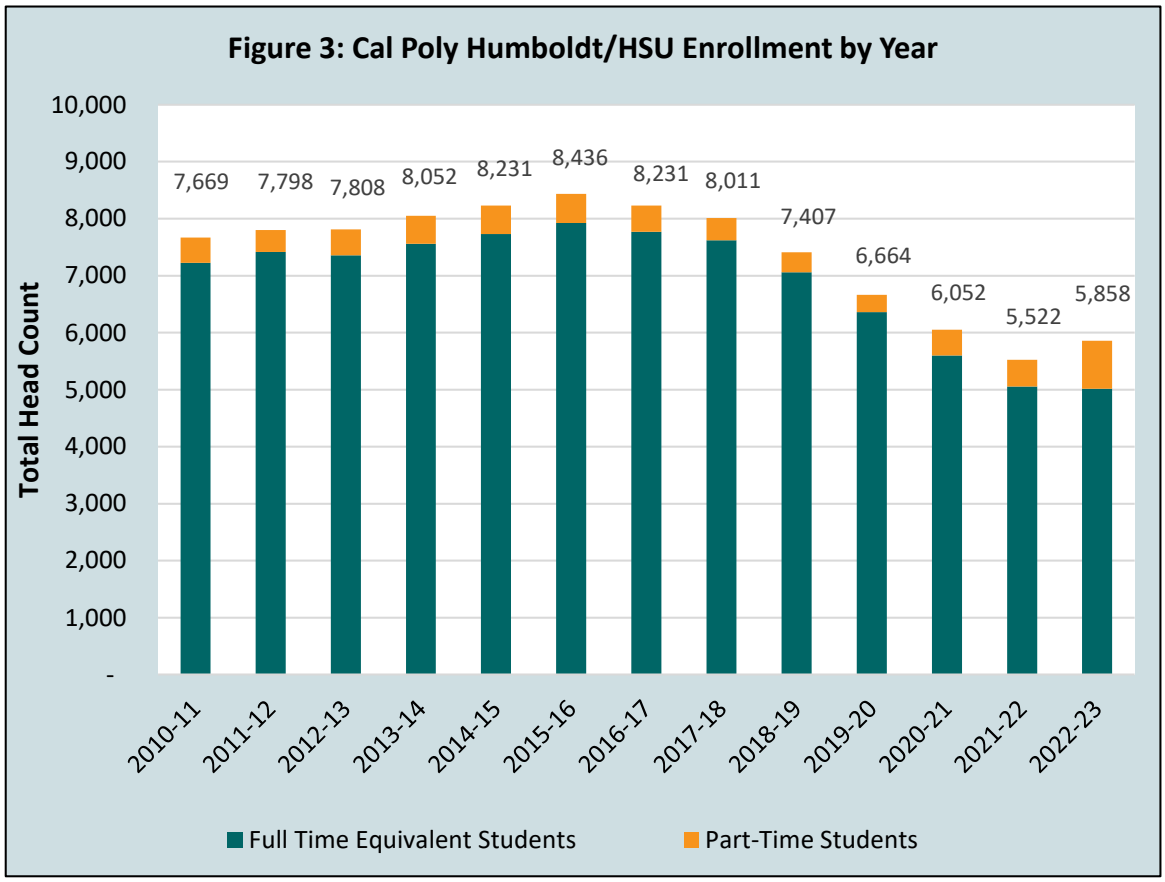
Cal Poly Humboldt, previously administered as Humboldt State University, is a four-year California State University in Arcata. The influx of thousands of Cal Poly Humboldt students each year impacts both the total population size in Arcata as well as local transit operations, with many students historically choosing to ride the bus to and from the campus. This section discusses information related to Cal Poly Humboldt with the potential to impact transit demand during the upcoming five-year planning cycle.

Figure 2
Transit Needs Index



Cal Poly Humboldt / Humboldt State University Enrollment History

Cal Poly Humboldt enrollment has varied substantially over the years, as seen in Figure 3. Before the pandemic, enrollment levels had been trending downwards from a ten-year high in the fall of 2015, when 8,436 students were enrolled. The pandemic exacerbated this downward trend as fewer students chose to enroll while instruction was primarily remote, resulting in enrollment hitting a ten-year low in the fall of 2021 (5,522 students). Enrollment has since begun to rebound as pandemic impacts subside, increasing by 6 percent from the fall of 2021 to the fall of 2022. Enrollment is expected to increase at a faster rate in coming years as Cal Poly Humboldt expands. School officials have confirmed the university's goal is to increase enrollment by 50 percent from 2022 levels by 2025 and by 100 percent by 2030.[1]



[1] Cal Poly Humboldt. (2022, Sept. 30). *Enrollment is up at Cal Poly Humboldt for Fall 2022* [Web]. Humboldt Now.

Cal Poly Humboldt Faculty and Staffing Levels

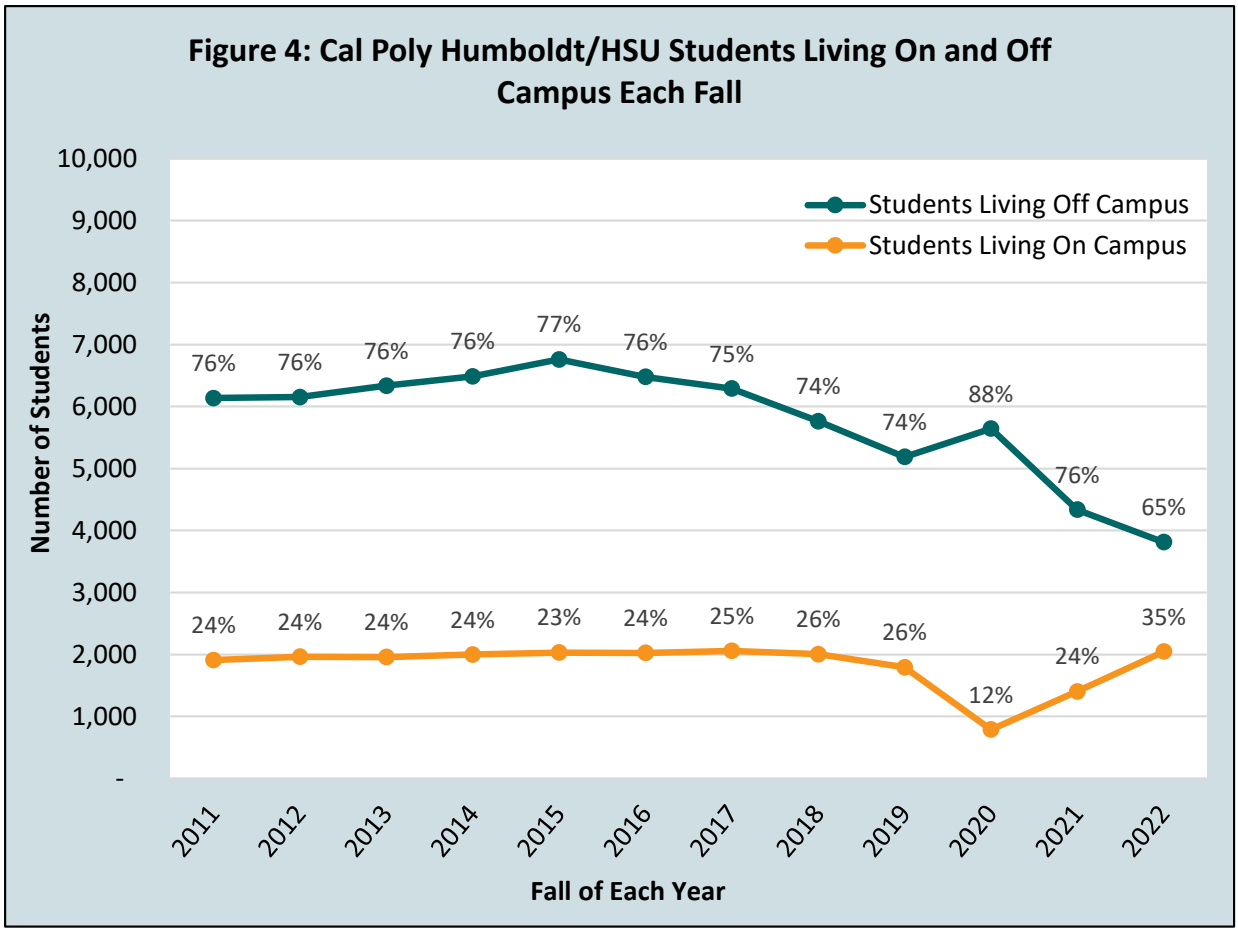
In addition to the thousands of students who attend Cal Poly Humboldt, the university is also one of the largest employers in Humboldt County. As of the fall of 2022, Cal Poly Humboldt had over 500 faculty members and 2,100 staff members. Cal Poly Humboldt's expansion in upcoming years will require the university to hire even more faculty and staff. As student enrollment increases, university leadership anticipates that faculty levels will need to increase by 85 percent and staff levels will need to increase by 60 percent of the observed enrollment growth rate. Based on those rates of increase and the university's goals for enrollment growth, Cal Poly Humboldt will need to employ approximately 700 faculty and 2,700 staff by 2025 and 925 faculty and 3,300 staff by 2030.

Cal Poly Humboldt Student Housing

Cal Poly Humboldt offers housing options for its students on-campus and at off-campus locations in Arcata. For the fall 2023 semester, Cal Poly Humbolt has 1,176 on-campus beds available for first-year students and 565 beds available for upper-class students. The university also has partnered with the Comfort Inn on Valley West Boulevard to provide housing for another 98 upper-class students.

Given the university's planned expansion, Cal Poly Humboldt is undertaking several major capital projects to increase the number of students who can be housed either on-campus or in other off-campus housing facilities provided by the university. Two planned on-campus projects will provide 500 additional beds by the fall of 2026. Off-campus, Cal Poly Humboldt has begun the development of a new housing facility at the old Craftsman Mall site on St. Louis Road. The project will provide 964 beds and is expected to be complete by the fall of 2025. Once these ongoing capital projects are complete, Cal Poly Humboldt will be able to house about 3,000 students in university facilities. If enrollment increases at the targets set by university leadership, the new housing facilities will enable Cal Poly Humboldt to house one-third of its anticipated students in 2025 and one-quarter of its anticipated students in 2030.

Figure 4 shows the proportion of Cal Poly Humboldt Students who have lived on-campus versus off-campus in past years. Before the pandemic, about 75 percent of students lived off-campus. It is expected that 66 to 75 percent of students will continue to live off-campus based on Cal Poly Humboldt's targets for enrollment growth and planned housing projects. While the proportion of students living off-campus will likely remain similar to what has been seen over the past decade, there will be more total students living off-campus due to increased enrollment numbers. This is important to consider when planning transit services, as students living in off-campus housing, whether provided by the school or secured independently, are more likely to use transit to get to and from classes and activities on campus.



Cal Poly Humboldt Transportation Survey

Each April, Cal Poly Humboldt surveys faculty, staff, and students to determine what modes of transportation people are using to commute to campus. Results from these commuter surveys are shown in Table 5. Before 2021, there was no option to answer "Telecommute" on the survey, therefore the results grouped telecommuters with those who walked to campus. Key takeaways from Table 5 include that before the pandemic, most faculty and staff drove to campus. Most students either drove or walked, and 15 percent rode the bus. In Spring 2020, the number of faculty and students who either walked or telecommuted rose significantly over the previous year. By Spring 2021, the vast majority of faculty, staff, and students telecommuted to campus, and the proportion of students who rode the bus to campus plummeted from 15 percent to 1 percent. In Spring 2022, most people were once again commuting to the actual Cal Poly Humboldt campus, although bus ridership rates were still below 2019 levels among faculty, staff, and students.

Cal Poly Humboldt Transportation Initiatives

Cal Poly Humboldt has multiple initiatives through its Parking and Commuter Services dedicated to increasing students' mobility and encouraging public transportation use. The university has partnered with Zipcar, a car-sharing program, to provide two cars for the campus that eligible students can reserve for periods ranging from one hour to a full day, with rates starting at only $5.50 per hour.

Table 5: Cal Poly Humboldt Commute Modes

2019 - 2022

	Automobile		Bike		Carpool		Public Bus		Walk[1]		Telecommute
	%	Avg. Trip Length (Mi)	%	Avg. Trip Length (Mi)	%	Avg. Trip Length (Mi)	%	Avg. Trip Length (Mi)	%	Avg. Trip Length (Mi)	%
Spring 2019											
Faculty	**68%**	9.4	7%	3.4	14%	11	3%	13	9%	0.8	0%
Staff	**68%**	9.4	7%	3.4	14%	11	3%	13	9%	0.8	0%
Students	**34%**	9.6	8%	1.6	9%	7.4	15%	4.2	**34%**	0.7	0%
Spring 2020											
Faculty	**53%**	8.7	16%	3.5	11%	6.9	3%	9.5	18%	0.8	--
Staff	**71%**	10.1	5%	1.8	13%	10.3	2%	12.1	9%	0.6	--
Students	**31%**	9.2	8%	1.2	6%	6.2	15%	4.8	**40%**	0.6	--
Spring 2021											
Faculty	12%	5	1%	2.3	1%	5.1	0%	0.0	3%	0.8	**84%**
Staff	21%	10.9	1%	3.2	0%	23	0%	0.0	4%	0.6	**73%**
Students	3%	6.7	20%	1.5	0%	1.5	1%	3.8	2%	0.5	**93%**
Spring 2022											
Faculty	**51%**	7	11%	2.2	11%	5.6	2%	6.3	16%	0.9	9%
Staff	**65%**	8.9	4%	2.6	12%	8.6	1%	10.3	6%	0.7	12%
Students	**35%**	10	4%	1.6	4%	3.3	6%	3.4	**37%**	0.3	14%

Source: Cal Poly Humboldt Commuter Surveys

Note 1: In 2020, those who commuted by either walking or telecommuting were grouped together into one category.

Note 2: **Bolded %** are those with the highest valutes.

The university has also partnered with the City of Arcata and Tandem Mobility to reinstate a bike-share program within the city and on campus, with rates starting at $1.50 per half hour. Carpooling is incentivized by designating some of the parking spots closest to campus for carpool vehicles. The Homeward Bound Bus Charter Program helps students go home during breaks by providing discounted round-trip transportation between Arcata and San Francisco or Los Angeles. Most relevant to the county's transit services, Cal Poly Humboldt's JackPass program provides students and participating staff with unlimited access to the transit services provided by the Humboldt Transit Authority and the Arcata & Mad River Transit System. This JackPass is discussed further in Chapter 3.

Cal Poly Humboldt Transportation Needs

Cal Poly Humboldt's planned expansion throughout the next five years and beyond will likely result in increased demand for transit services, specifically to and from the Cal Poly Humboldt campus and to destinations in Arcata. The majority of the Cal Poly Humboldt students, faculty, and staff will continue to live off-campus and need to commute to attend class or get to work. While transit ridership rates to and from campus dropped in recent years due to the pandemic, Cal Poly Humboldt's return to in-person instruction will require people to commute to the actual campus once again. It is impossible for all students, faculty, and staff to drive personal vehicles to Cal Poly Humboldt due to limited parking, suggesting that a large number of people may need to rely on transit to get to and from the campus. Students will continue to be incentivized to use transit due to Cal Poly Humboldt's JackPass program as well.

Top Employers

Historically, large employers have generated a high level of transportation needs, a portion of which had the potential to be served by transit. The transportation needs can be generated by employees (such as those of the Sun Valley Group) or by customers or clients (such as Humboldt County Social Services or Target). As with education, some employment opportunities switched to remote work during the pandemic, lessening the number of trips made related to commuting. Some commercial, medical, and social service activity was also conducted virtually. However, as COVID-19 impacts decrease, more workplaces, appointments, and businesses are returning to in-person formats. Large employers therefore still have the potential to generate transit demand, both for employees and for customers.

Table 6 shows the top employers in Humboldt County, based on data from the California Employment Development Department. The top employers represent diverse sectors including medical services, agriculture, service industry, and government. All the top employers are located in either Eureka, Arcata, Trinidad, Blue Lake or Korbel, with the largest employers being Providence St. Joseph Hospital in Eureka and Cal Poly Humboldt. Sun Valley Group operates a greenhouse and farm in the Arcata bottoms, a singular location with day-time work hours that might be served by transit. On the other hand, Green Diamond Resource Company sends employees with company vehicles into the field and would not be well served by transit.

Table 6: Humboldt County Major Employers

Company	Location	# Of Employees
Providence St. Joseph Hospital	Eureka, CA	1,000-4,999
Cal Poly Humboldt	Arcata, CA	1,000-4,999
Sun Valley Group, Inc.	Arcata, CA	500-999
Bettendorf Trucking	Arcata, CA	250-499
Blue Lake Casino & Hotel	Blue Lake, CA	250-499
Eureka City Clerk	Eureka, CA	250-499
Green Diamond Resource, Co.	Korbel, CA	250-499
Humboldt County Social Services	Eureka, CA	250-499
Mad River Community Hospital	Arcata, CA	250-499
Newmarket International, Inc.	Eureka, CA	250-499
Umpqua Bank	Eureka, CA	250-499
Costco Wholesale	Eureka, CA	100-249
County of Humboldt	Eureka, CA	100-249
Danco Group	Arcata, CA	100-249
Eureka High School	Eureka, CA	100-249
Hospice of Humboldt	Eureka, CA	100-249
Humbodlt County Dept. of Health	Eureka, CA	100-249
Humboldt County Behavioral Health	Eureka, CA	100-249
Humboldt County Sheriff's Office	Eureka, CA	100-249
Pacific Seafood, Co.	Eureka, CA	100-249
Redwood Memorial Hospital	Fortuna, CA	100-249
Schmidbauer Lumber, Inc.	Eureka, CA	100-249
Target	Eureka, CA	100-249
United States Postal Service	Eureka, CA	100-249
Winco Foods	Eureka, CA	100-249

Source: California Employment Development Department, Labor Market Info, 2022

Local Commute Patterns

The US Census Longitudinal Employer Household Dynamics dataset (2019) contains information on the nation's commuting patterns. From this data, it is possible to estimate the number of commuters traveling in and out of a specific community for work. Table 7 details commuting patterns for the four most populous communities in Humboldt County. The column on the left shows where residents of the specific community commute to work, while the right column shows where those who work in that community are commuting from. It is important to note that this table shows the number of jobs and not the number of people. One person may hold multiple jobs across the study area. Nonetheless, this data provides helpful information in determining work trip patterns.

As seen in Table 7, half of Eureka's working residents are employed in the city; besides the city itself, the top two communities that supply workers to Eureka are Arcata (15 percent) and McKinleyville (3

percent), while a third of workers come from all other locations. Arcata similarly has 42 percent of working residents in Arcata and almost a quarter work in Eureka. In McKinleyville, which is more of a bedroom community, only 15 percent of working residents are employed in McKinleyville, while 29 percent work in Arcata and 25 percent work in Eureka. Fortuna is similarly a bedroom community with only 25 percent of residents also working there. As to where workers are commuting from, between 39 to 55 percent commute from locations besides the four most populous communities, emphasizing the challenges of meeting commuter needs with transit but the potential need for intercity services.

Table 7: Humboldt County Local Commute Patterns

2019

Eureka

Residents Commute to:	# of Jobs	% of Total	Workers Commute from:	# of Jobs	% of Total
Eureka	5,294	49.2%	Eureka	5,294	28.0%
Arcata	1,591	14.8%	McKinleyville	1,682	8.9%
Myrtletown	325	3.0%	Arcata	1,569	8.3%
All other locations	3,553	33.0%	All other locations	10,370	54.8%
Total Number of Jobs	10,763		Total Number of Jobs	18,915	

Arcata

Residents Commute to:	# of Jobs	% of Total	Workers Commute from:	# of Jobs	% of Total
Arcata	2,831	42.0%	Arcata	2,831	25.7%
Eureka	1,569	23.3%	McKinleyville	1,972	17.9%
McKinleyville	321	4.8%	Eureka	1,591	14.5%
All other locations	2,025	30.0%	All other locations	4,606	41.9%
Total Number of Jobs	6,746		Total Number of Jobs	11,000	

McKinleyville

Residents Commute to:	# of Jobs	% of Total	Workers Commute from:	# of Jobs	% of Total
Arcata	1,972	29.0%	McKinleyville	1,040	39.6%
Eureka	1,682	24.7%	Arcata	321	12.2%
McKinleyville	1,040	15.3%	Eureka	250	9.5%
All other locations	2,110	31.0%	All other locations	1,017	38.7%
Total Number of Jobs	6,804		Total Number of Jobs	2,628	

Fortuna

Residents Commute to:	# of Jobs	% of Total	Workers Commute from:	# of Jobs	% of Total
Eureka	1,222	26.5%	Fortuna	1,141	36.2%
Fortuna	1,141	24.8%	Eureka	244	7.7%
Arcata	282	6.1%	Rio Dell	192	6.1%
All other locations	1,964	42.6%	All other locations	1,576	50.0%
Total Number of Jobs	4,609		Total Number of Jobs	3,153	

Source: US Census Bureau LEHD Database, 2019

RECENT PLANNING STUDIES

There have been several recent planning studies relevant to the current TDP effort. These plans include the most recent updates to the Humboldt County Regional Transportation Plan, Coordinated Public Transit-Human Services Plan, the Humboldt County General Plan, and findings from the most recent Unmet Transit Needs Hearing, among others. These studies were considered in the development of this TDP update to ensure goals are compatible with the goals of other adopted plans across the region. A review of important recent planning studies is provided in Appendix B.

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Chapter 3
EXISTING TRANSIT SERVICES OVERVIEW

INTRODUCTION

There are several transit organizations and providers across Humboldt County that help meet the transportation needs of local residents. The Humboldt Transit Authority (HTA) is responsible for operating and maintaining most of the larger transit providers in the county. This TDP will focus on the services affiliated with the HTA, as well as those of the Arcata and Mad River Transit System, Fortuna Transit, and the Blue Lake Rancheria Transit System. This chapter provides an overview of the services provided by each of these agencies and organizations. Additionally, other Humboldt County transportation programs which also contribute to regional mobility are described as well.

HUMBOLDT TRANSIT AUTHORITY

Organization

HTA was established in 1975 by a joint-powers agreement between the County of Humboldt and the Cities of Arcata, Eureka, Fortuna, Rio Dell, and Trinidad. HTA leadership consists of a seven-member Board of Directors. The Board is comprised of one representative from each of the five incorporated cities included in the joint-powers agreement and two representatives from Humboldt County. The HTA's daily operations are led by the General Manager and supported by key staff such as the Operations Manager, Director of Maintenance, Finance Manager, Human Resources Manager, Administrative Assistant, and ADA Specialist/Title VI Coordinator/Receptionist. The HTA is headquartered in Eureka.

Services Provided & Service Area

HTA operates most of the intercity public transit services across Humboldt County, providing connectivity between the communities and amenities along the US 101 corridor as well as service along CA 299 between Arcata and Willow Creek. HTA also oversees and operates local fixed route service within the City of Eureka via the Eureka Transit Service (ETS). HTA recently began operating the Arcata & Mad River Transit System (A&MRTS) in July 2023. ETS and A&MRTS operations and maintenance services are provided by HTA through separate agreements with each provider. ETS and A&MRTS are discussed in more detail later in the chapter. HTA also administers ADA paratransit Dial-a-Ride (DAR) services for eligible passengers. The DAR services are operated by City Ambulance of Eureka under contract with HTA.

HTA is the Consolidated Transportation Service Agency (CTSA) for Humboldt County. As the CTSA, HTA coordinates the region's various public transportation services and ensures transit operations comply with applicable federal regulations. The overall goals of the CTSA are to increase the number of transit services available for mobility-limited individuals and seniors, reduce costs for public transit, and improve the efficiency of community transportation operations.

Redwood Transit System

The Redwood Transit System (RTS) consists of a mainline, intercity service that travels north-south between the communities of Scotia and Trinidad. On weekdays RTS operates from 6:18 AM until 8:46 PM and on Saturdays RTS operates with a limited schedule from 8:30 AM to 9:27 PM. Headways range from less than a half hour to over two hours, with the highest frequency offered between Valley West in north Arcata and the College of the Redwoods in Fortuna. On four of the southbound and five of the northbound trips, RTS serves Manila on the west side of Humboldt Bay instead of staying on Highway 101 on the east side of the bay as it does on the majority of runs.

The RTS provides connectivity for the communities of Eureka, Arcata, Fortuna, McKinleyville, Westhaven, Trinidad, Fields Landing, Rio Dell, Scotia, and King Salmon, as well as Cal Poly Humboldt, College of the Redwoods, and the California Redwood Coast-Humboldt County Airport (also known as the Arcata Airport, though it is located in McKinleyville). Additionally, RTS connects with Amtrak services in Arcata, Greyhound in Arcata and Eureka, Redwood Coast Transit in Trinidad, McKinleyville (at the airport), and Arcata. RTS is shown with other regional transit services in Figure 5.

Southern Humboldt Intercity

The Southern Humboldt Intercity (SHI) service is a fixed route that runs north-south between Eureka and Benbow, traveling through Fortuna, Rio Dell, Redcrest, Weott, Meyers Flat, Miranda, Phillipsville, Redway, and Garberville along the way. The SHI is also shown in Figure 5. While the Southern Humboldt Local service has been discontinued, SHI passengers traveling between Benbow and Redcrest are still eligible for the Southern Humboldt Local service fares (Table 8B). The SHI service completes three northbound runs and two southbound runs daily, operating between 6:46 AM and 7:15 PM Monday through Friday and between 8:30 AM and 7:00 PM on Saturdays.

Willow Creek Intercity Transit

The Willow Creek Intercity Transit (WC) service operates three round trips between Arcata and Willow Creek, Monday through Saturday. The WC service starts in Willow Creek each morning before traveling 37 miles west to Arcata, stopping at Valley West Boulevard, near Arcata High School at 16th and H Streets, and the Arcata Transit Center. Weekday service begins at 7:15 AM and ends at 5:58 PM and Saturday service begins at 8:25 AM and ends at 7:45 PM. The WC service is shown in Figure 5.

Samoa Transit

The Samoa Transit System began in January 2021 and provided service between the Phyllis Rex Apartment Complex in Samoa and 3rd and H Streets in Eureka. The bus also stopped at Vance and Rideout Streets in Samoa. The service made seven roundtrips on weekdays between 7:05 AM and 7:00 PM and four roundtrips on Saturdays between 8:05 AM and 6:00 PM. This service was introduced to provide important connectivity to ETS and RTS due to the limited schedule of service on the Samoa Peninsula but was discontinued in July 2023 due to low productivity.

Figure 5
Regional Routes Serving Humboldt County

Dial-a-Ride Services

The HTA administers Dial-a-Ride (DAR) services for eligible ADA passengers through a contract with the City Ambulance of Eureka (CAE, discussed further below). Passengers must register with HTA before scheduling any rides. Once approved, passengers can schedule rides by phone. All rides must be scheduled at least 24 hours in advance. Paratransit services are available in four zones, shown in Figure 6, which include Eureka, Arcata, McKinleyville, and supplemental service in Manila, Samoa, Humboldt Hill, King Salmon, Fields Landing, the College of the Redwoods, and along Old Arcata Road. Passengers may be picked up and dropped off in any zone but must pay an additional fare for each zone they cross during their trip. Fares are $3.00 per ride per zone.

Fare Structure

Tables 8A and 8B show the fare structures of the HTA services, as well as those of the other public transit providers discussed in this TDP. Passengers pay varying fares depending on demographics, the transit service, and the method of payment. There are also weekly or monthly transit passes for the RTS, SHI, and WC services. These pass products consist of daily and monthly magnetic swipe passes that passengers use upon boarding. Passes are good for unlimited rides until their expiration date. The new monthly regional transit pass, available for $50, can be used to board any RTS, SHI, WC, ETS, and A&MRTS bus. Pass products can be purchased from the driver (cash only), the HTA office in Eureka, the HTA online store, and the Token Transit App.

In March 2023, HTA introduced tap-to-pay technology. Passengers can now tap a credit/debit card or mobile wallet upon boarding to pay for their fare. The correct fare is automatically deducted. The new system allows passengers unlimited transfers between RTS, SHI, WC, ETS, and DAR during the amount of time they paid for. If they go over in time, the next fare level will be charged. Passengers must use the same credit card or mobile wallet on each bus to avoid paying double fares.

Cal Poly Humboldt's Jack Pass program allows students to ride the RTS, WC, ETS, and A&MRTS routes an unlimited number of times by swiping their current student identification cards through the farebox. Students pay for this service as part of their tuition fees. Staff, faculty, and Extended Education participants can buy the Jack Pass for $60 per semester or $45 during the summer session. Students not enrolled in classes during the summer can also buy the Jack Pass for $45.

Facilities & Maintenance

HTA conducts maintenance in-house at the HTA administrative facility located at 2nd and V Streets in Eureka. The facility includes five bus bays, and an extra lane as well if needed. There is also a storage bay and a room to store vehicle spare parts. Vehicle parts are tracked throughout the shop by barcodes and fleet maintenance software (provided by Ron Turley and Associates) to make sure that the correct agency is charged for each repair. Maintenance staff includes the Shop Supervisor, two mechanics, three technicians, and a cleaner. Maintenance staff are on-site working from 4:30 AM to 7:30 PM. Buses can be fueled up to midnight, during which electronic mileage readings and other downloaded data are exported from the bus.

Figure 6
Humboldt Transit Authority Dial-a-Ride Areas

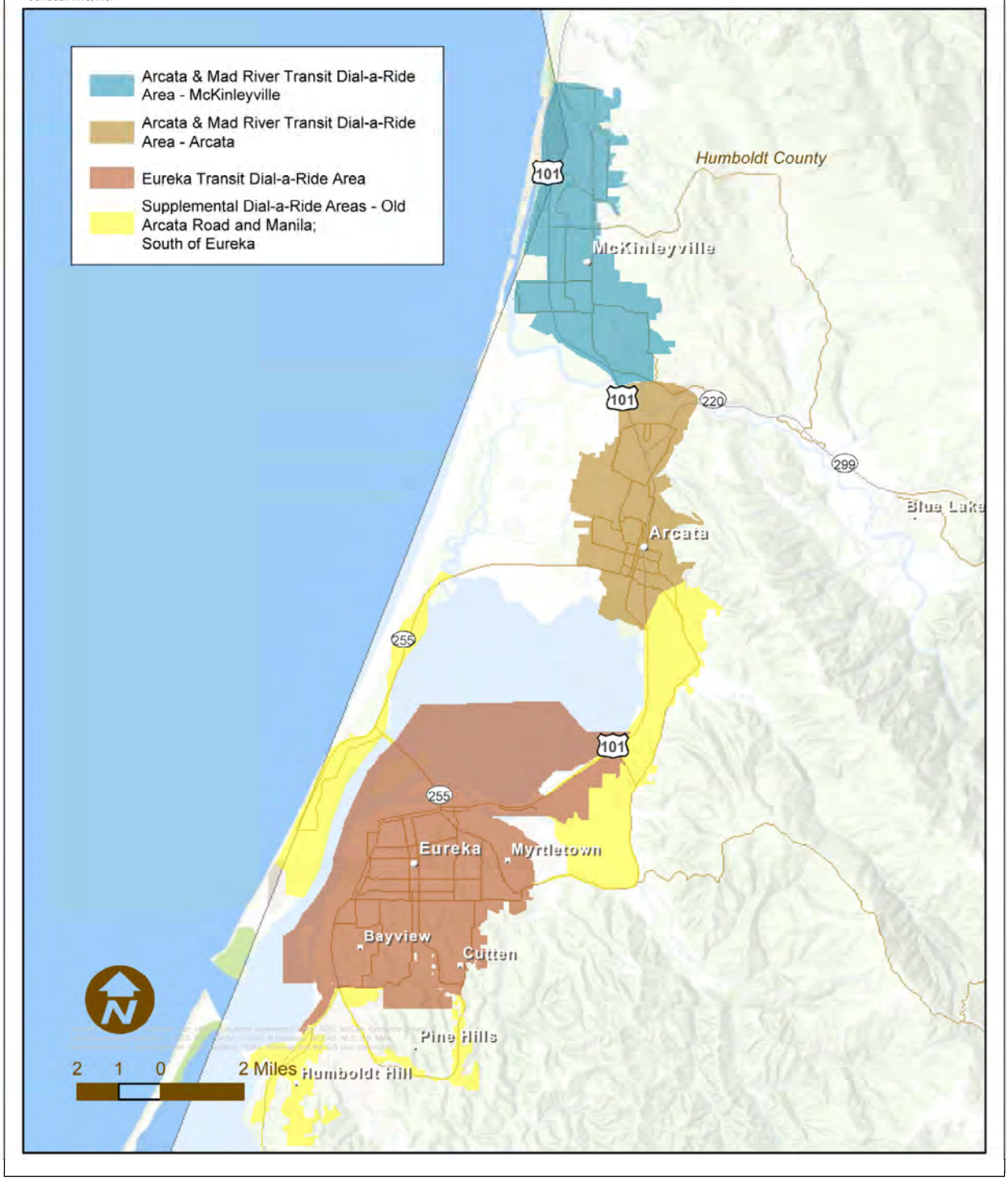


Table 8A: Humboldt County Transit Fares

Redwood Transit System (RTS)				
Fare Type	Cash	Day Pass	Week Pass	31 Day Pass [3]
Adult (18-62)	$3.50	$5.25	$15.75	$62.00
Discounted [1]	$3.15	$5.25	$13.75	$57.00
Southern Humboldt Intercity (SHI)				
Fare Type	Cash	Card		Monthly Pass [3]
Adult (18-62)	$6.25	$4.00		$113.00
Discounted [1]	$5.75	$3.45		$102.00
Southern Humboldt Intercity – Local[2]				
Fare Type	Cash	Card		
Adult (18-62)	$1.65	$1.10		
Discounted [1]	$1.40	$0.95		
Deviated Route Trip	$1.75			
Willow Creek Transit (WC)				
Fare Type	Cash	Card	Day Pass	31 Day Pass [3]
Adult (18-62)	$5.00	$3.30	$8.00	$86.00
Discounted [1]	$4.40	$2.75	$8.00	$81.00
Tap to Pay (RTS, ETS, SHI, & WC)[3]				
Fare Type	2 Hours	Daily	Weekly	Monthly
All Passengers	$2.00	$6.00	$20.00	$50.00
HTA Dial-a-Ride				
Fare Type	Cash	Six-Tickets	** A single ticket or cash fare is charged for each DAR zone served per trip.*	
ADA Eligible Only	$3.00	$18.00		

Note 1: Discounts are for youths (3-17), seniors (62+), and disabled with a valid ID card.

Note 2: Passengers traveling on the SHI service between Benbow and Redcrest are eligible for Southern Humboldt Local fares.

Note 3: Passengers can tap to pay using credit cards, debit cards, or mobile wallets. In order to not be charged for a transfer, they must use the same device to tap onto all buses.

Note 4: The Regional 31-day pass was introduced in Fall 2022 and is good on all HTA and AMRTS Services: Southern Humboldt, Redwood Transit, Eureka Transit, Arcata Transit, and Willow Creek for just $50.00.

Source: HTA

Table 8B: Humboldt County Transit Fares

Eureka Transit Service (ETS)				
Fare Type	Cash	Transit Pass Rate	Day Pass	Monthly Pass [3]
Adult (18-62)	$1.70	$1.40	$3.95	$48.00
Discounted [1]	$1.30	$0.95	$3.00	$41.00
Arcata & Mad River Transit System (A&MRTS)				
Fare Type	Cash	Transit Pass Rate	Day Pass	Monthly Pass [3]
Adult (18-62)	$1.75	$1.25	$2.50	$30.00
Discounted [1]	$1.25	$1.00	$1.50	$25.00
Fortuna Senior Bus Transit				
Fare Type	Cash	15-ride pass		
Senior (50+) and Disabled	$2.50	$22.50		
Blue Lake Rancheria Transit System (BLRTS)				
Fare Type	Cash	10-ride pass	20-ride pass	
Adult (18-62)	$1.65	$15.00	$25.00	
Senior (62+) & Disabled	$1.25	$11.00	$20.00	
Student	$1.50	$13.50	$22.50	
Special Passes				
Fare Type			31-Day Reg. Pass [4]	Jack Pass
All Passengers			$50.00	Not Available
Cal Poly Students				No Charge
Cal Poly Faculty and Staff				$60.00

Note 1: Discounts are for youths (3-17), seniors (62+), and disabled with a valid ID card.

Note 2: Passengers traveling on the SHI service between Benbow and Redcrest are eligible for Southern Humboldt Local fares.

Note 3: Passengers can tap to pay using credit cards, debit cards, or mobile wallets. In order to not be charged for a transfer, they must use the same device to tap onto all buses.

Note 4: The Regional 31-day pass was introduced in Fall 2022 and is good on all HTA and AMRTS Services: Southern Humboldt, Redwood Transit, Eureka Transit, Arcata Transit, and Willow Creek for just $50.00.

Source: HTA, A&MRTS, Fortuna Transit, Blue Lake Rancheria

Historically, it has been a challenge to hire enough local mechanics and technicians to staff the maintenance facility. It will likely become even more challenging to find qualified staff to work on the agency's battery-electric and fuel-cell electric buses. HTA will need to invest in training staff on the proper methods for working with zero-emissions buses.

Fleet Inventory

HTA's fleet consists of 32 active vehicles which are used for the RTS, SHI, WC, and DAR services (Table 9). Fifteen vehicles are designated for use on the RTS, seven are used for the SHI, two are used for the WC, and eight are used for DAR. All HTA vehicles are equipped with wheelchair lifts and tie downs, complying with the Americans with Disabilities Act (ADA) of 1990 requirements. Many of the larger buses have bicycle racks. HTA has begun converting its fleet to zero-emissions buses, with one electric bus in its fleet at the time of writing.

EUREKA TRANSIT SERVICE

Organization

The Eureka Transit Service (ETS) operates local transit services within the City of Eureka. Established in January 1976, ETS's main legislative body is the five-member Eureka City Council. ETS is overseen and managed by the City's Finance Department, which in turn is overseen by the City Manager. HTA operates the fixed route system under contract with ETS, while the DAR service is administered by HTA and operated under a separate contract with the City Ambulance of Eureka. ETS has contracted HTA to operate its services since the mid-1980s.

Services Provided & Service Area

ETS provides transit services throughout the Eureka metropolitan area. Since June 2021, ETS has operated four routes on weekdays and two routes on Saturdays. The Purple, Gold, Rainbow, and Red routes arrive at H and 3rd at 0:59 minutes after the hour. The Purple route departs at 0:59 and the other routes depart at the top of the hour, providing opportunities for transfers as long as the buses are operating perfectly on time. All five routes have layovers of eight or nine minutes at Harris and F Street offering varying opportunities for transfers. Routes run on hourly headways between approximately 7:00 AM and 6:00 PM on weekdays and between 9:00 AM and 5:00 PM on Saturdays. Figure 7 shows the ETS service area and fixed routes.

Gold Route

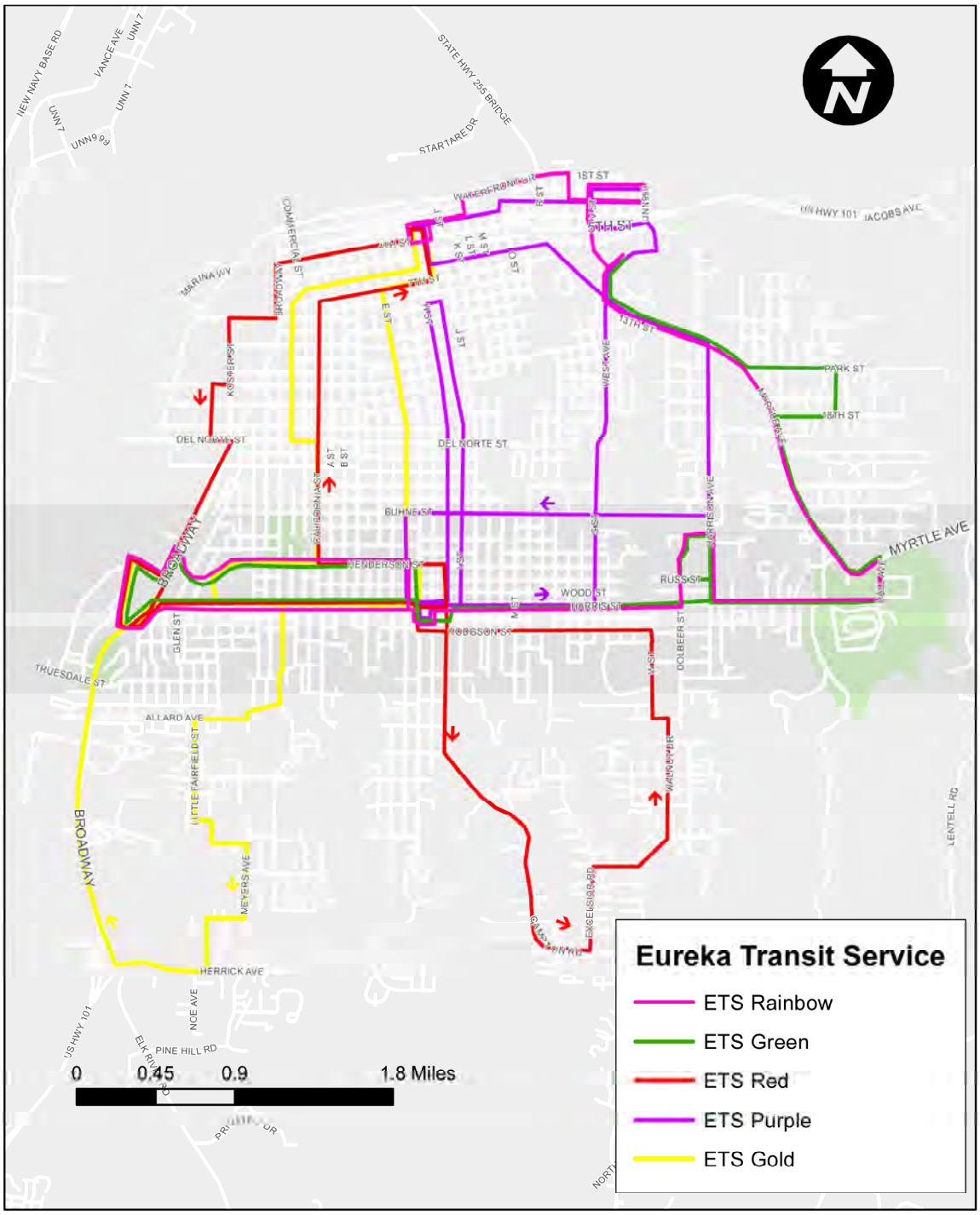
The Gold Route follows a figure-eight shape through Eureka, serving Old Town/Downtown, Bayview, Pine Hill, Bayshore Mall, and Henderson Center. A layover at Harris and F is scheduled from 0:38 to 0:47 each hour, overlapping with the Rainbow and Green routes. The route operates Monday through Friday between 7:00 AM and 6:00 PM and on Saturday from 9:00 AM to 5:00 PM.

Table 9: Humboldt County Transit Fleet Inventories

Year	Make	Model	Quantity	Fuel Type	Service
Humboldt Transit Authority (31 Total Vehicles)					
2011	Gillig	Low Floor Bus	2	Diesel	RTS
2012	Gillig	Low Floor Bus	2	Diesel	RTS
2014	Gillig	Low Floor Bus	5	Diesel	RTS
2015	Gillig	Low Floor Bus	4	Diesel	RTS
2017	Gillig	Low Floor Bus	1	Diesel	RTS
2018	Proterra	ZX5	1	Electric	RTS
2015	Freightliner	--	3	Gasoline	SHI
2018	Freightliner	--	1	Diesel	SHI
2019	Chevrolet	--	1	Gasoline	SHI
2015	Freightliner	--	1	Diesel	WC
2016	Freightliner	--	1	Diesel	WC
2012	Ford	--	1	Gasoline	DAR
2015	Ford	--	3	Gasoline	DAR
2017	Ford	--	1	Gasoline	DAR
2019	Ford	--	3	Gasoline	DAR
2022	Gillig	Low Floor Bus	1	Diesel	--
Eureka Transit System (ETS) (8 Total Vehicles)					
2009	Gillig	Low Floor Bus	3	Diesel	ETS
2014	Gillig	Low Floor Bus	2	Diesel	ETS
2019	Gillig	Low Floor Bus	2	Diesel	ETS
2021	Gillig	Low Floor Bus	1	Diesel	ETS
Arcata & Mad River Transit System (A&MRTS) (8 Total Vehicles)					
2009	Gillig	Low Floor Bus	2	Diesel	A&MRTS
2010	Ford	Cutaway	1	Diesel	A&MRTS
2014	Gillig	Low Floor Bus	2	Diesel	A&MRTS
2019	Chevrolet	Cutaway	1	Gasoline	A&MRTS
2022	Gillig	Low Floor Bus	2	Electric	A&MRTS
Fortuna Transit (3 Total Vehicles)					
2011	Ford	Aerotech Cutaway	1	Gasoline	Fortuna Bus
2015	Ford	El Dorado	1	Gasoline	Fortuna Bus
2017	Ford	Aerotech Cutaway	1	Gasoline	Fortuna Bus
Blue Lake Rancheria Transit System (4 Total Vehicles)					
2013	Ford	--	1	Biodiesel	BLRTS
2014	Chevrolet	--	1	Biodiesel	BLRTS
2019	Ford	--	1	Biodiesel	BLRTS
--	--	--	1	Electric	BLRTS

Source: HTA, Fortuna Transit, Blue Lake Rancheria

Figure 7
Eureka Transit Service Route Map



Green Route

The Green Route serves both of the local hospitals in Eureka (Providence St. Joseph's and General Hospitals), Myrtletown, Silvercrest, as well as the Bayshore Mall and Harris Street. This route only operates on weekdays, running daily from 7:09 AM to 6:09 PM. A layover at Harris and F is scheduled from 0:44 to 0:52 each hour, overlapping with the Gold and Rainbow routes.

Purple Route

The Purple Route also serves downtown Eureka, then serving Silvercrest, the General Hospital, and the Henderson Center. Currently, the service operates on weekdays from 6:59 AM to 5:59 PM. A layover at Harris and F is scheduled from 0:24 to 0:32 each hour, overlapping with the Red route.

Rainbow Route

The Rainbow Route serves a large swath of Eureka, including downtown, Broadway, Bayshore Mall, Henderson Center, Sequoia Park, the General Hospital, the zoo, Costco, and Myrtletown. The Rainbow Route only operates on Saturdays, running from 9:00 AM until 4:59 PM. A layover at Harris and F is scheduled from 0:42 to 0:50 each hour, overlapping with the Gold and Green routes.

Red Route

The Red Route serves downtown Eureka, the Forest Service, Eureka, Bayshore Mall, Sequoia Park, Henderson Center, Cutten, and California Street. The Red Route also serves Costco, a highly trafficked grocery store in the area. This route operates Monday through Friday from 7:00 AM to 5:59 PM. A layover at Harris and F is scheduled from 0:18 to 0:27 each hour, overlapping with the Purple route.

Fare Structure

ETS fares vary depending on the fare type and media (Table 8B). Day and monthly passes are available for purchase onboard (cash only), at the HTA office in Eureka, through the HTA online store, or with the Token Transit app. Passengers can also board ETS using the $50 regional monthly transit pass or the tap-and-pay system (described under the HTA/Fare Structure section). Cal Poly Humboldt students ride ETS for no additional fees through the Jack Pass program (also described above).

Facilities & Maintenance

ETS's fleet is maintained at HTA's administrative facility in Eureka by HTA's maintenance staff as part of the operations contract. To organize the costs of the labor and mechanical parts needed for each repair, the maintenance staff tracks spare parts with barcodes and fleet maintenance software. This organization system ensures that costs are charged appropriately for each bus and transit system.

Fleet Inventory

As seen in Table 9, there are eight active vehicles in the ETS fleet. Per the accessibility requirements of the ADA, all ETS vehicles are equipped with wheelchair lifts and tie-downs. ETS buses are not equipped with bicycle racks, however, which has prompted many passengers to request bicycle racks as a capital upgrade. At this point, all of the ETS vehicles are powered by diesel.

ARCATA & MAD RIVER TRANSIT SYSTEM

Organization

The City of Arcata established the Arcata & Mad River Transit System (A&MRTS) in 1975 to provide alternative transportation for mobility-limited individuals within the community, as well as Cal Poly Humboldt (then Humboldt State University) students. A&MRTS's main legislative body is the five members of the Arcata City Council. As of July 2023, the City of Arcata has entered into a contract for A&MRTS to be administered and operated by the HTA.

Services Provided & Service Area

A&MRTS provides fixed route services within the City of Arcata. There are three routes, named after different colors, all of which begin and end at the Arcata Intermodal Transit Center on hourly headways. The A&MRTS fixed routes and service area are shown in Figure 8.

Gold Route

The Gold Route operates on weekdays between 7:00 AM and 5:00 PM, serving Cal Poly Humboldt, downtown Arcata, and the Valley West Shopping Center.

Red Route

The Red Route operates solely on weekdays from approximately 7:00 AM until 5:00 PM, serving downtown Arcata, Cal Poly Humboldt, Sunny Brae, Lakewood Boulevard, and the Arcata Community Center, among others.

Orange Route

The Orange Route (a combination of Gold and Red) only operates during the evening hours on weekdays (between 5:00 PM and 10:00 PM), serving downtown Arcata, Cal Poly Humboldt, Greenview Market, Sunny Brae, and the Valley West Shopping Center, among other destinations. On Saturdays, the Orange Route operates from about 7:00 AM to 7:00 PM.

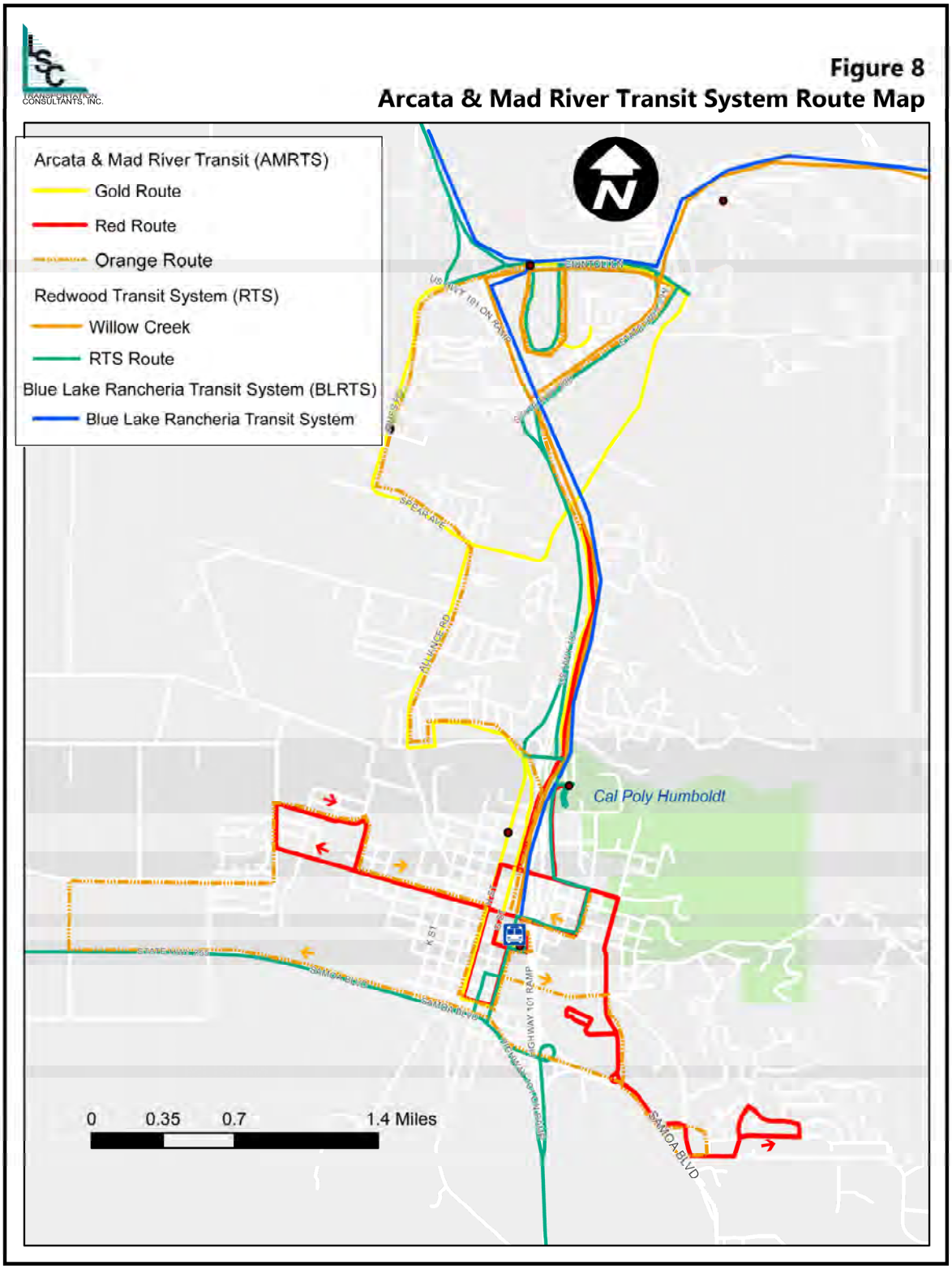
Fare Structure

A&MRTS's fare structure is shown in Table 8B. Passengers can utilize A&MRTS services using specific agency passes, the Humboldt County regional pass, described under the HTA/Fare Structure section, as well as the Jack Pass program (also described above).

Facilities & Maintenance

The Arcata Intermodal Transit Facility, or the Arcata Transit Center, serves not only as the key transfer point for the A&MRTS routes but also as an important regional hub for transportation services along the entire North Coast. From the Intermodal Transit Facility, passengers can transfer to RTS, WC, and Blue Lake Rancheria transportation services in addition to other regional services such as Redwood Coast Transit, Amtrak Thruway buses, and Greyhound buses, all of which will be discussed later in the text. The Arcata Transit Center is located at 925 E Street in downtown Arcata.

Figure 8
Arcata & Mad River Transit System Route Map



HTA handles maintenance of the A&MRTS fleet according to a contract between the two organizations. Maintenance is therefore done at the HTA maintenance facility located at 2nd and V Streets in Eureka, described under HTA/Facilities and Maintenance.

Fleet Inventory

The A&MRTS fleet is comprised of eight vehicles (Table 9). Six of the vehicles are powered by diesel or gasoline. A&MRTS purchased its first two electric vehicles from Gillig in November 2022 and integrated the electric buses into its active fleet in March 2023. A&MRTS plans to retire its two oldest vehicles based on the success of the electric buses. All A&MRTS vehicles comply with ADA requirements, as each bus has wheelchair lifts and tie-downs.

FORTUNA TRANSIT

Organization

Fortuna Transit is administered and operated by the City's Parks and Recreation Department; the Department's director serves as the transit manager. Fortuna Transit's legislative body is the five-member City Council. The City Manager oversees the Parks and Recreation Department.

Services Provided and Service Area

Fortuna Transit is a demand-response, curb-to-curb transportation service that provides rides for seniors ages 50 and older or disabled persons who are unable to drive. People younger than 50 years old may also be eligible for Fortuna Transit services if they provide a medical note stating they are unable to drive.

Passengers can schedule rides by calling dispatch. Passengers can make reservations up to one month in advance for medical appointments, one week in advance for other types of appointments, and the day before for purposes such as shopping.

Fortuna Transit operates almost entirely within city limits, using two zones as general guidance (a north zone and a south zone). These zones were developed to maximize service efficiency and effectiveness. Passengers can schedule rides Monday through Friday between 8:30 AM and 4:00 PM. Since 2018, Fortuna Transit has also provided transportation outside of city limits to Eureka for medical appointments on Tuesdays between 10:00 AM and 2:00 PM.

Fare Structure

Passengers can purchase a one-way fare using cash for $2.50 (Table 8B). Fortuna Transit also offers a 15-ride pass for $22.50, which equates to a 40 percent discount over the base fare.

Facilities & Maintenance

Vehicles undergo regular maintenance inspections at the City of Fortuna's corporation yard located at 190 Dinsmore Drive.

Fleet Inventory

The Fortuna Transit fleet consists of two Ford Aerotech cutaway buses and one Ford Eldorado. The buses were purchased in 2011, 2015, and 2017 (Table 9). Fortuna Transit plans to purchase an electric vehicle when they next need to procure a new vehicle. All of the vehicles can accommodate two wheelchairs, therefore complying with the accessibility requirements of the ADA.

BLUE LAKE RANCHERIA TRANSIT SYSTEM

Organization

The Blue Lake Rancheria Transit System (BLRTS) has been providing transit services since 2002. BLRTS is operated by the Blue Lake Rancheria, a federally recognized tribe in northern Humboldt County located near the City of Blue Lake along CA 299. BLRTS is partially funded by grants awarded through the FTA's Tribal Transportation Program. It is also partially funded by the City of Blue Lake through its TDA fund allocation. BLRTS is administered by the Tribal Transportation Department. The Tribal Transportation Department also coordinates with the Tribe's Meals Programs to deliver meals to homebound seniors in Blue Lake and Fieldbrook, however, this program has its own vehicles separate from BLRTS.

Services Provided & Service Area

The BLRTS operates a deviated fixed route system that transports passengers from the Rancheria and the City of Blue Lake to the Intermodal Transit Facility in Arcata, where passengers can transfer to A&MRTS, HTA, and other intercity services. BLRTS completes five roundtrips between the Rancheria and Arcata between 7:00 AM and 6:00 PM on weekdays. This service has in the past been used by students at both Cal Poly Humboldt and Arcata High School as an affordable alternative for getting to class. BLRTS also partners with the New Horizons Program, so clients can reliably ride the bus as needed. The portion of the BLRTS route in Blue Lake is shown in Figure 5, above, and the portion in Arcata is shown in Figure 8, also above.

Fare Structure

As seen in Table 8B, the one-way base fare for BLRTS is $1.65. Senior adults aged 62 or older and disabled persons can ride for $1.25, while students can ride for $1.50. Passengers can purchase ten-ride passes for $11 to $15, or 20-ride passes for $20 to $25 depending on their fare category.

Facilities & Maintenance

As BLRTS is administered by the tribe's Transportation Department, buses are stored on tribal land. BLRTS has struggled since the beginning of the pandemic to find qualified maintenance staff to work on its vehicles and has also experienced challenges with acquiring the parts necessary for repairs. This at times has limited the number of active vehicles available for transit services. The Rancheria recently installed two charging stations for electric vehicles on tribal land.

Fleet Inventory

The Rancheria has four vehicles used for BLRTS: a 2013 Ford bus, a 2014 Chevy shuttle, a 2019 Ford Bus, and an electric shuttle (Table 9). BLRTS uses biodiesel generated on-site at the Rancheria to fuel its non-electric vehicles.

OTHER HUMBOLDT COUNTY TRANSPORTATION SERVICES

Other transportation providers that provide mobility and connectivity in Humboldt County are described below. The following list is not all-inclusive of every provider in the region.

Public Providers

Redwood Coast Transit

Redwood Coast Transit (RCT) is the public transportation provider for Del Norte County, which borders Humboldt County to the north. RCT provides intercounty service between Del Norte and Humboldt Counties via Route 20, which travels between the communities of Smith River and Arcata. Route 20 southbound passengers arrive in Arcata at 9:26 AM, 12:15 PM, and 5:14 PM. Passengers can board Route 20 northbound at 10:00 AM, 12:50 PM, and 5:50 PM. The standard fare for trips between the two counties ranges from $2 to $10 depending on the length of the trip. Local service within Del Norte County ranges from $1.25 to $4, and local service within Humboldt County costs $5. This service is scheduled to allow transfers to and from Amtrak at the Arcata Transit Center.

Trinity Transit

The public transit system in Trinity County, which is to the east of Humboldt County, is Trinity Transit. The Trinity Transit fixed route system consists of four routes that originate in Weaverville and then travel to the north, south, east, and west. The westbound route brings passengers to Willow Creek, where passengers are then able to transfer to the HTA Willow Creek/Arcata service. This important regional connection allows Humboldt County residents to travel from the coast eastbound to Redding via the HTA and Trinity Transit. Redding is an important destination for many living in northern California, especially for medical appointments. Trinity Transit fares from Weaverville to Willow Creek and from Weaverville to Redding are both $10.00 per one-way trip. A trip from Eureka to Redding using public transit would therefore have a combined base fare of $28.50 one way, with discounts available for eligible passengers.

Tribal Providers

Yurok Tribal Transit Service

The Yurok Tribal Transit Service (YTTS), established in 2013, is a demand-response service operated by the Yurok Tribe Transportation Department and overseen by the Yurok Tribal Council. The YTTS provides transportation primarily between the communities of Klamath and Crescent City (both in Del Norte County) and Wautec, Weitchpec, and Hoopa (all in Humboldt County). The service is available to both tribal and non-tribal members alike. Passengers schedule rides by calling dispatch.

Additionally, trips for employment are offered on weekdays between Klamath and Crescent City (one northbound AM round trip and one southbound PM round trip). A carpool program from Klamath to Arcata is operated by the Tribe's fleet department. The YTTS DAR service is funded by FTA Tribal Transit Formula Grants (5311I funding). The YTTS also began operating a seasonal River Ferry service in 2015, which is funded by Tribal Transit Program Funds. The YTTS fleet consists of 10 vehicles, all of which are ADA-compliant. One of these vehicles has four-wheel drive capabilities and another has all-wheel drive capabilities to allow drivers to reach more remote locations on the reservation.

The Klamath-Trinity Non-Emergency Transportation (K-T NET), a non-profit service provider, previously operated public transportation in northeastern Humboldt County in the communities of Willow Creek, Hoopa, Weitchpec, and Orleans, but discontinued due to low ridership and a lack of funding. YTTS intends to reinstate this service. The intention is to begin by operating the route two times per day, two days per week, and one Saturday per month. This fixed route would help to address the service gap left by KT-NET and would allow passengers to travel to Arcata and Weaverville by enabling transfers to HTA and Trinity Transit in Willow Creek.

YTTS, HTA, and Redwood Coast Transit were jointly awarded a $8.6 million Transit and Intercity Rail Capital Program (TIRCP) grant to purchase ZEVs. For the Yurok Tribe, this project will provide 4 battery-electric buses which will be used for the dial-a-ride services as well as the new fixed route service from Orleans to Willow Creek through the Karuk, Yurok, and Hoopa Tribal lands. The specifics of the service are pending, as the Yurok Tribe is planning to conduct its own Short-Range Transit Plan (per stakeholder discussions in November 2022). Because of this intention, this TDP does not further analyze the YTTS bus services. However, HTA should continue to coordinate with YTTS regarding intercity services between tribal lands, Del Norte County, and Humboldt County.

K'ima:w Medical Center

The K'iam:w Medical Center provides non-emergency medical transportation (NEMT) for patients within the Hoopa Valley. Patients can take advantage of the NEMT service Monday through Friday from 8:30 AM to 6:00 PM. The K'iam:w Medical Center also offers transportation or gas reimbursement for patients with referral appointments outside the Hoopa Valley.

Interregional Services

Amtrak

Amtrak San Joaquin Route 7 provides a "Thruway" bus service between Arcata in Humboldt County south to Martinez in Contra Costa County. Within Humboldt County, the bus has stops in Arcata (at Cal Poly Humboldt and the Arcata Transit Center), Eureka, Fortuna, and Garberville. Recently, Amtrak San Joaquin began offering bus-only tickets, eliminating the prior requirement to purchase a train ticket along with the Route 7 bus ticket. Southbound departures are daily from Arcata at 6:55 AM and 9:50 AM, and northbound arrivals into Arcata are at 5:25 PM and 8:35 PM each day. One-way fares range from $5 for short trips (such as between Arcata and Fortuna) to $42 for longer trips (such as from Arcata to Martinez).

Greyhound

Greyhound operates a line along US 101 between the Bay Area and Humboldt County, with Arcata serving as the northern terminus for the service. Passengers can purchase tickets and board the Greyhound bus at the Arcata Transit Center. The bus also stops in Eureka and Garberville. Other stops further south on the route include Ukiah and Santa Rosa. Greyhound departs from Arcata at 8:45 AM, operating on Monday and Tuesday, Fridays, and the weekends. One-way fares for the bus from Arcata to Santa Rosa are $47 on weekdays and $63 on Fridays and weekends. It costs $42 to get from Arcata to San Francisco (no return trip) on weekdays and $47 on Fridays and weekends. Northbound buses arrive in Arcata at 8:00 PM, except for Tuesdays and Wednesdays on which there is no northbound Greyhound service.

Social Service Providers

Adult Day Health Care of Mad River

Adult Day Health Care of Mad River is a nonprofit organization that aids senior adults and adult dependents with health, recreational, and social services. The organization offers transportation to and from the center to clients living in Eureka, Arcata, Blue Lake, and McKinleyville. The County of Humboldt contributes TDA funding for the program.

Area 1 Agency on Aging Volunteer Driver Reimbursement Program

The Area 1 Agency on Aging (A1AA) operates a volunteer driver program. The program was initially established to help people get to medical appointments in the Eel River Valley and has since expanded to serve everywhere between Scotia and Trinidad, and all the way east to Blue Lake. People are eligible for the service if they are 50 or older, live independently, and have limited resources. Once the A1AA determines eligibility, passengers can use the program to get to medical appointments and to go grocery shopping in Humboldt County. Rides can be scheduled Monday through Friday from 8:30 AM to 4:30 PM and must be scheduled at least five days in advance.

As of November 2022, there were 12 volunteer drivers and 79 repeat riders in the A1AA volunteer driver program. These numbers represent reductions from the pre-pandemic program capacity when the program had upwards of 40 volunteer drivers and around 200 repeat riders. A1AA staff are actively working to recruit drivers so that more riders can benefit from the program. In 2021, 95 clients were served in total, and 15,411 miles were reimbursed. So far in 2022, the program is on track to serve a similar number of clients as the previous year; in 2022, 87 clients have been served and approximately 10,462 miles have been reimbursed. To be a volunteer, individuals must go through annual training, pass a background check, and maintain a high level of car insurance. Volunteers do not have to undergo a drug test. A1AA inspects drivers' vehicles before they begin volunteering. Drivers are reimbursed $0.585 per mile. Most volunteer drivers are also older adults.

Funding has come from various grants, private foundations, and individual donations. Two staff members work with the volunteer driver program directly, with one staff member overseeing the program and the other managing daily tasks. The 2022 budget was around $50,000 for both staff time and mileage reimbursement; however, the ideal level of funding would be closer to $200,000, at least. A greater annual budget would potentially allow A1AA to purchase vehicles for the volunteer driver program, eliminating the need for volunteers to use their own cars, and also would allow the program to reimburse rides to other destinations besides medical appointments and grocery stores.

County of Humboldt Health and Human Services

The County of Humboldt Health and Human Services administers the Transportation Assistance Program (TAP) to assist individuals and families with relocating to communities where they have additional familial support or employment opportunities. TAP provides eligible individuals or families with one-way bus tickets to a pre-designated location, money for meals while traveling, and occasionally fuel money if the eligible participant is a valid driver.

Ferndale Senior Resource Center

The Ferndale Senior Resource Center offers transportation to and from medical appointments and other events for local seniors ages 62 or older. Rides are free within Ferndale city limits. Residents can request rides to Fortuna or Eureka for a fee. Transportation is available Monday through Friday from 9 AM to 5 PM. Rides must be reserved at least 24 hours in advance.

Humboldt Medi-Trans

Humboldt Medi-Trans provides non-emergency medical transportation (NEMT) services within the county. The organization's primary focus is on helping people get to and from dialysis treatment. Humboldt Medi-Trans charges little to no fares. The transportation service receives funding from Medi-Cal and the Partnership HealthPlan of California.

Humboldt Senior Resource Center

The Humboldt Senior Resource Center (HSRC) is a nonprofit organization dedicated to helping senior and disabled adults in the region. The HSRC's Redwood Coast PACE Program helps older adults continue to live independently by providing medical, social, nutritional, and transportation services. The Multipurpose Senior Services Program also helps eligible, frail senior adults continue to live at home, including by helping participants access local transit services. Lastly, the HSRC's Adult Day Health program is a support system for adults with physical and mental disabilities. Roundtrip transportation is provided for Adult Day Health program participants. The County of Humboldt contributes TDA funding to the HSRC for Adult Day Health program transportation.

Redwood Coast Regional Center

The Redwood Coast Regional Center (RCRC) is one of twenty-one private, non-profit regional centers across California serving people with developmental disabilities. The RCRC serves citizens of Del Norte, Lake, Mendocino, and Humboldt Counties. While the RCRC does not provide any transit services directly, it still helps clients with transportation by providing financial assistance or contracting other organizations to provide transportation services.

RCRC helps Humboldt County residents who utilize their programs connect with private rides and provides fare assistance for public fixed route and Dial-a-Ride services across the region. RCRCs also refers clients to A1AA's Volunteer Driver Reimbursement Program. RCRC contracts with various supportive living agencies, board and care homes, adult day services, and other organizations (such as CAE) across Humboldt County to provide both in-county and out-of-county transportation (Coordinated Public Transit-Human Services Plan, 2021).

Private Providers

City Cab / City Ambulance of Eureka

City Cab / City Ambulance of Eureka (CAE) provides transportation services in the greater area around Eureka, Arcata, and McKinleyville. With a fleet of over 40 vehicles, CAE provides taxi services to customers for profit, as well as non-emergency medical transportation services through a contract with the Redwood Coast Regional Center (discussed below) and demand responsive, ADA-compliant transportation through a contract with HTA (described above in the HTA/Dial-a-Ride services section). Dial-a-Ride ridership information is discussed further in Chapter 4.

Cher-ae Heights Casino Shuttle Bus

The Cher-ae Heights Casino offers a shuttle bus service for patrons from Eureka and McKinleyville to the casino, which is located in Trinidad. The shuttle service is complimentary and is available Wednesday through Sunday.

REGIONAL SERVICE COORDINATION

Given the number of transit operators in Humboldt County, it is important to prioritize coordination among the various agencies to provide the most effective services to Humboldt County residents and save resources. The Humboldt County transit operators have demonstrated a commitment to regional coordination, and through their cooperative network, they have developed several products and services to benefit customers and improve operations. These coordinated services and products are highlighted below.

Customer-based Service Coordination

- Regional bus pass and Tap to Pay technology — A 31-day regional transit pass is available for unlimited use on RTS, SHI, WC, ETS, and A&MRTS buses. The regional pass allows passengers to board for a discounted rate. Tap to Pay technology makes it easier for passengers to transfer between participating services.

- Transit system connections – Many of the fixed routes across Humboldt County enhance regional connectivity by allowing passengers to transfer to other services at key locations:
    - Downtown Eureka – Connections between ETS, RTS, SHI, Greyhound, and Amtrak buses are all possible, with the correct fares ready, along 3rd, 4th, 5th, and H Streets in Eureka.
    - Bayshore Mall (Eureka) – Connections between RTS, ETS routes, and SHI.
    - Arcata Intermodal Transit Center – Connections between A&MRTS routes, BLRTS, RTS, and WC are possible. Connections between Humboldt County Transit and Redwood Coast Transit (Del Norte County), Greyhound, and Amtrak Thruway buses are also possible.
    - Fortuna – Connections between RTS and Fortuna Senior Transit. (It is worth noting, however, that very few Fortuna Transit passengers transfer to RTS as the passengers are all seniors or disabled, and primarily traveling just within the local community).
    - Downtown Willow Creek – Connections between WC and Trinity Transit, allowing passengers to travel east to access other services in Weaverville and Redding.
- Dial-a-Ride (DAR) – The City Ambulance of Eureka/City Cab is contracted by the HTA to provide DAR services for eligible passengers who are unable to use the fixed route system in Eureka, Arcata, and McKinleyville, as well as some areas outside of these communities that are still complimentary to the ETS and A&MRTS fixed routes. The DAR service area is split up into zones. The DAR service meets the criteria of the Americans with Disabilities Act (ADA).
- Electronic fareboxes — The larger Humboldt County transit agencies (HTA systems, ETS, and A&MRTS) have all installed electronic fareboxes, allowing for fare media that is transferable on any of these systems (i.e., the Regional Pass). Fare revenues are credited to the transit agency on which the trip took place.
- Central depository — HTA serves as the central depository of fare revenues for HTA services, ETS, and A&MRTS. Given these services all park their buses at HTA facilities, the vaults are taken off the buses at night during refueling. HTA staff then counts fares and distributes revenue shares to the appropriate agency. The City of Arcata sends checks to HTA for transit passes sold at the Arcata Intermodal Transit Facility.
- Social Services Transportation Advisory Council (SSTAC) — The SSTAC is comprised of representatives from local transportation agencies, the CTSA, Cal Poly Humboldt, the California Department of Transportation (Caltrans) District 1, the City Ambulance of Eureka, the County of Humboldt, and members of the public, as well as representatives from non-profit agencies dedicated to improving conditions for senior, low-income, and disabled residents across the region. The previous Service Coordination Committee has been consolidated into the SSTAC since the last TDP update. The objective of the SSTAC is to enhance the mobility of transit-dependent residents across the county by helping to identify unmet transit needs and figuring out how to address reasonable unmet needs. This is done in part by helping HCAOG organize the annual “unmet transit needs” hearing.

SERVICE CHANGES SINCE THE 2017 TRANSIT DEVELOPMENT PLAN

There have been several service changes since the previous TDP update was adopted in November 2017. Besides temporary pandemic-related changes, there have been three notable changes:

- Discontinuation of Tish Non-Village Service: It was recommended in the 2017 TDP that the Tish Non-Village service be discontinued due to its low efficiency and productivity. HTA discontinued the service in June 2019.
- Discontinuation of the Southern Humboldt Local Service: The Southern Humboldt Local Service served Redway and Garberville but was discontinued (per the TDP recommendation) due to low ridership. Instead of the previous service, the Southern Humboldt Intercity service provides route deviations to serve these communities and offers a lower local fare when traveling between Benbow and Redcrest.
- Discontinuation of the Klamath-Trinity Non-Emergency Transit (KT-NeT) service: The KT-NeT service had met an important transit need by providing non-emergency transportation to residents living in northeastern Humboldt and northern Trinity Counties. There used to be a service between Willow Creek, Hoopa, Orleans, and Weitchpec. YTTS is set to begin service in the Orleans/Hoopa/Willow Creek area to help address the need for transportation in the wake of KT-Net being discontinued.

Chapter 4
EVALUATION OF TRANSIT SERVICES

In this chapter, available operating and financial data are evaluated for each of the services operated and administered by the HTA, A&MRTS, Fortuna Transit, and BLRTS. As the HTA only assumed responsibility for A&MRTS operations on July 1, 2023, A&MRTS is not included with the other HTA-administered services in the following analyses. The data presented in this chapter reveals the impacts of the COVID-19 pandemic on transit operations, and how much ridership had recovered on each transit system as of Fiscal Year (FY) 2021-22. The impact of student ridership on the Humboldt County transit providers is also discussed.

HTA EVALUATION

Operating Data

Passenger Trips

Figures 9, 10, and Table 10 all explore HTA ridership. Figure 9 shows HTA ridership from FY 2019-20 through FY 2021-22 by service. As expected, all of the HTA services saw ridership decrease drastically in FY 2020-21 due to the COVID-19 pandemic. Ridership began to recover in FY 2021-22, with RTS providing 214,973 one-way passenger trips, ETS providing 106,390 one-way passenger trips, SHI providing 12,553 one-way passenger trips, WC providing 9,805 one-way passenger trips, and the Humboldt DAR services providing 17,315 one-way passenger trips, totaling 343,721 passenger trips provided by the HTA in all. Of all the HTA offerings, the WC and Humboldt DAR services saw the smallest decrease in ridership (proportionally) over the last three years (-13 percent) while the SHI service saw the greatest decrease (-45 percent). Over 90 percent of passenger trips made in FY 2021-22 on RTS, ETS, SHI, and WC were completed on weekdays (Table 10).

As discussed in previous chapters, students from Cal Poly Humboldt and College of the Redwoods have historically been a large proportion of Humboldt Country transit ridership. Figure 10 displays the impact of college student ridership on the HTA fixed route services' performance during the last three full calendar years. Each year, weekly ridership totals were calculated for RTS, ETS, SHI, and WC for one week when Cal Poly Humboldt and College of the Redwoods were in session ("In Session") and then another week when students were on break. During the last three years considered, HTA carried between 1,487 to 2,764 more passenger trips during the weeks the schools were in session versus when they were out of session. While all four services carry large numbers of students, the proportion of students carried by each service varies. For instance, when the schools were on break in 2022, WC ridership was 62 percent and RTS ridership was 64 percent of in-session ridership levels. Comparatively, ETS and SHI ridership levels were less impacted by students, with out-of-session ridership equaling 87 and 84 percent of session ridership, respectively.

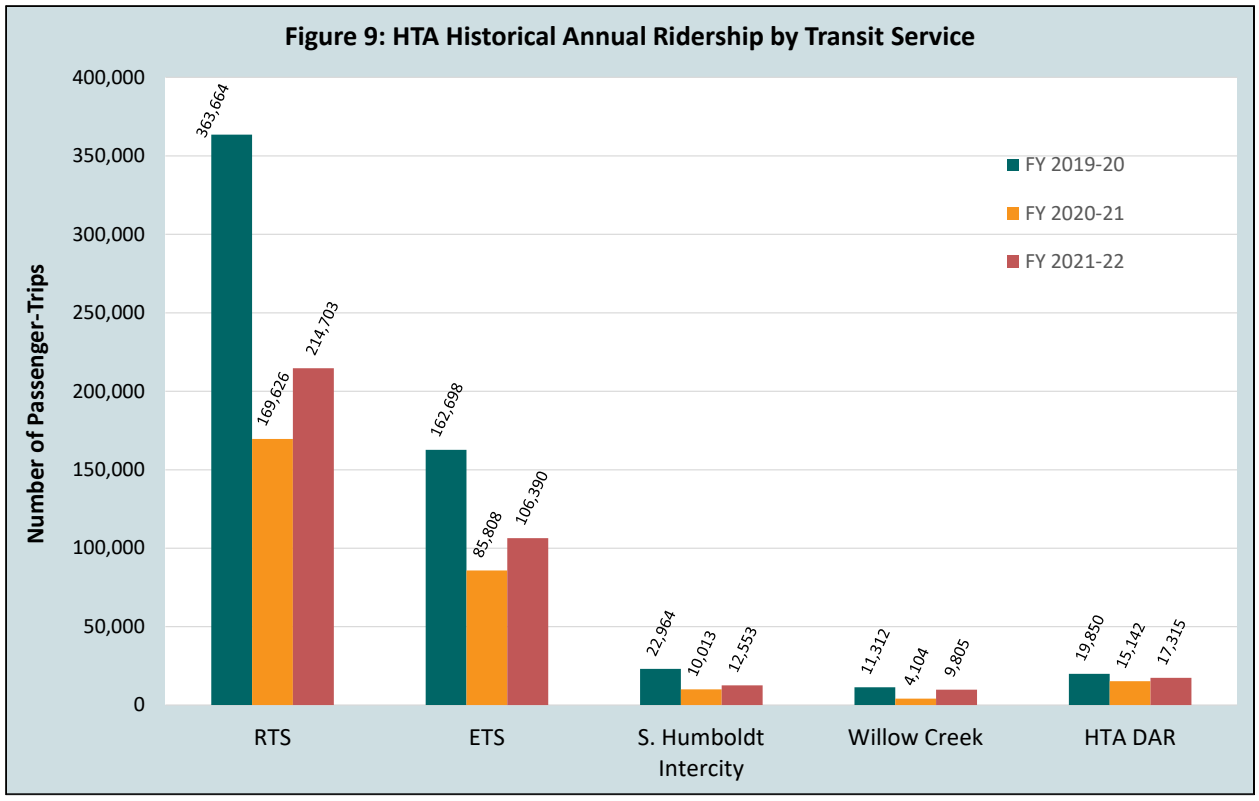


Figure 9: HTA Historical Annual Ridership by Transit Service
Number of Passenger-Trips
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
363,664
169,626
214,703
162,698
85,808
106,390
22,964
10,013
12,553
11,312
4,104
9,805
19,850
15,142
17,315
FY 2019-20
FY 2020-21
FY 2021-22
RTS
ETS
S. Humboldt Intercity
Willow Creek
HTA DAR

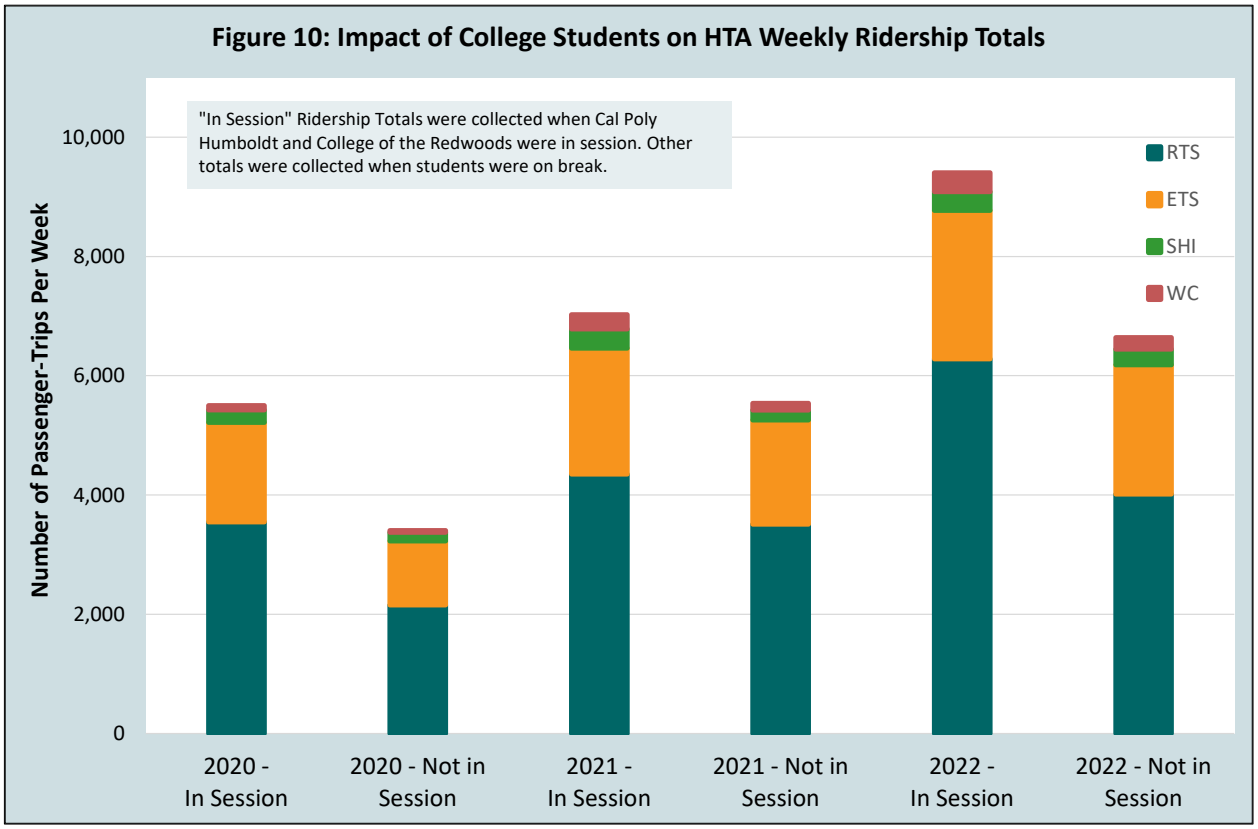


Figure 10: Impact of College Students on HTA Weekly Ridership Totals
"In Session" Ridership Totals were collected when Cal Poly Humboldt and College of the Redwoods were in session. Other totals were collected when students were on break.
Number of Passenger-Trips Per Week
10,000
8,000
6,000
4,000
2,000
0
RTS
ETS
SHI
WC
2020 - In Session
2020 - Not in Session
2021 - In Session
2021 - Not in Session
2022 - In Session
2022 - Not in Session

Table 10: HTA Operations and Performance
FY 2021-22

Performance Data and Indicators	Transit Service: Redwood Transit System	Eureka Transit Service	S. Humboldt Intercity	Willow Creek Intercity	Humboldt Dial-a-Ride	**Total**
Passengers						
Weekdays	194,698	97,664	11,269	9,405	--	313,036
Saturdays/Holidays	20,005	8,726	1,284	400	--	30,415
Total	214,703	106,390	12,553	9,805	17,315	**343,451**
Vehicle Service Miles						
Weekdays	563,880	111,536	115,062	69,342	--	859,820
Saturdays/Holidays	50,400	12,894	25,368	15,400	--	104,062
Total	614,280	124,430	140,430	84,742	85,034	**1,048,916**
Vehicle Service Hours						
Weekdays	26,705	10,424	3,155	1,942	--	42,226
Saturdays/Holidays	2,299	1,150	696	419	--	4,563
Total	29,004	11,574	3,850	2,361	6,910	**46,789**
Operating Costs	$3,630,188	$1,554,425	$589,917	$346,561	$790,440	**$6,911,531**
Fare Revenues	$699,001	$303,032	$93,721	$95,486	$70,011	**$1,261,250**
Operating Subsidy	$2,931,187	$1,251,393	$496,197	$251,075	$720,429	**$5,650,281**
Cost per Passenger Trip	$16.91	$14.61	$46.99	$35.35	$45.65	**$20.12**
Subsidy per Passenger Trip	$13.65	$11.76	$39.53	$25.61	$41.61	**$16.45**
Farebox Return Ratio	19%	19%	16%	28%	9%	**18%**
Passenger Trips per Hour	7.4	9.2	3.3	4.2	2.5	**7.3**
Passenger Trips per Mile	0.3	0.9	0.1	0.1	0.2	**0.3**

Source: June 2022 HTA Board Report

Vehicle Miles and Hours

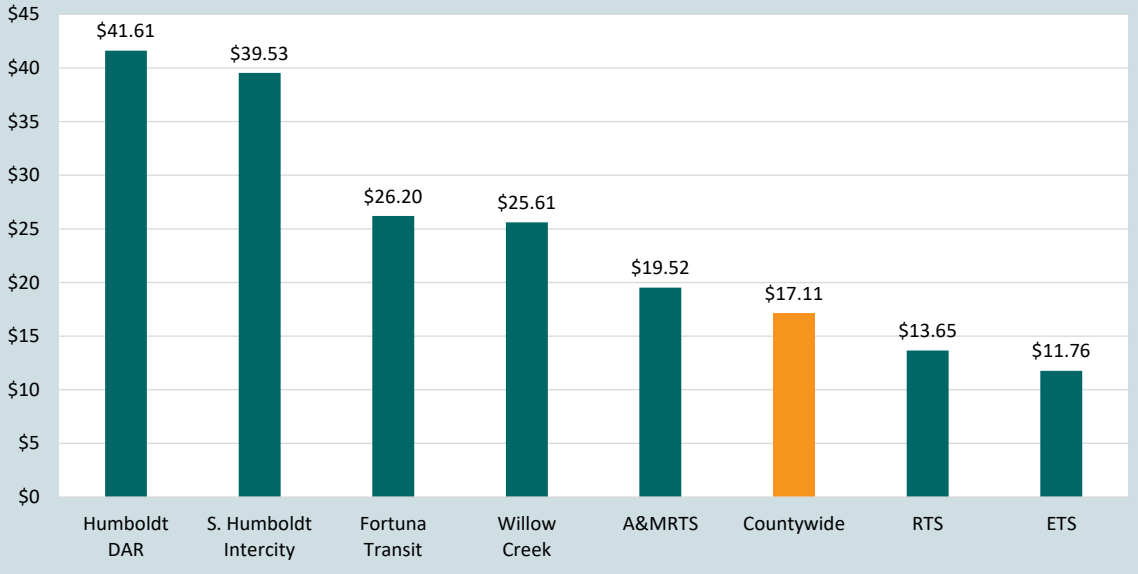
HTA operated 1,048,916 miles and 46,789 hours of service across its various services in FY 2021-22 (Table 10). About 60 percent of the total vehicle service miles and hours were operated on RTS. A quarter of vehicle service hours were operated on ETS, but only 12 percent of vehicle service miles, reflecting how ETS provides local, intercity routes versus intercity service. The Humboldt DAR services also required a greater proportion of vehicle service hours versus miles, while the WC and SHI operations were responsible for slightly greater proportions of the overall HTA vehicle service miles operated compared to hours.

HTA Performance Indicators

Ridership and operations data were used to assess the performance of the HTA services. Table 10 includes information on important performance indicators for each HTA service in FY 2021-22. Key takeaways from Table 10 include:

- Operating Cost per Passenger Trip: Considering all services operated by HTA, the average operating cost[2] per passenger trip was $20.11 in FY 2021-22. Operating costs per passenger trip ranged from $14.61 on RTS to $46.99 on SHI, which was slightly more expensive per passenger trip than the DAR. Typically, DAR services are the costliest type of transit service.
- Subsidy per Passenger Trip: An excellent measure of the cost efficiency of transit service is the subsidy per passenger trip, a value that represents the total public investment per passenger trip. The subsidy per passenger trip is calculated by subtracting the fare revenues generated on the service from the total operating costs, and then dividing the resulting value by the number of one-way passenger trips. In FY 2021-22, the overall subsidy per passenger trip for HTA passengers was $16.44. The most cost-effective service (i.e., the lowest subsidy per passenger trip) was ETS ($11.76) and the least was the DAR ($41.61). The operating subsidies per passenger trip for the HTA services, A&MRTS, and Fortuna Transit in FY 2021-22 are shown in Figure 11 compared to the countywide average.

Figure 11: Humboldt County Transit Providers
Operating Subsidy per Passenger-Trip
FY 2021-22



*Note - BLRTS is not included in the countywide calculation because financial data was not available for FY 2021-22.

[2] Operating cost data was provided by HTA and includes fully allocated costs.

- Farebox Return Ratio: The farebox ratio represents the proportion of operating costs paid for by fare revenues. Before the COVID-19 pandemic, the California Transportation Development Act (TDA) required rural transit agencies (such as those in Humboldt County) to have a farebox ratio of at least 10 percent (or to make up the difference using local funds) to receive TDA funding. As of June 2023, this TDA requirement has not been reinstated. The HTA made the TDA farebox ratio requirement in FY 2021-22 (18 percent); the DAR services had the lowest farebox ratio (9 percent) while the WC service had the highest farebox ratio (28 percent).
- Passenger Trips per Hour and per Mile: The passengers carried per hour of service indicate the relative productivity of the transit system, and therefore its effectiveness. There were 7.3 passenger trips completed per hour on HTA systemwide in FY 2021-22, ranging from a low of 2.5 on the DAR to a high of 9.2 on ETS. HTA carried an average of 0.3 passenger trips per mile in FY 2021-22, ranging from 0.1 to 0.9 passengers per mile depending on the service.

Comparison With Existing Standards

The previous *Humboldt County Transit Development Plan* prepared in 2017 identified example minimum and target performance standards for each of the HTA services, specifically for passenger trips per hour, farebox return ratio, and subsidy per passenger trip. While these example standards have not been formally adopted and the transit services have been subsequently impacted both by the pandemic and significant cost increases, it is useful to compare FY 2021-22 performance with these minimum standards. Regarding the passenger trips per vehicle hour, the SHI and DAR services met the minimum standards (3.0 and 2.5, respectively), while WC was slightly below the standard of 4.5, and RTS and ETS were significantly below their minimum standard of 15.0. Considering the farebox return ratio, both the SHI and the WC services met the minimum 10 percent standard, while the DAR was below the 10 percent standard, the ETS below the 22.4 percent standard, and the RTS below the 26.4 percent standard. Finally, regarding the subsidy per passenger trip, the maximum standard was exceeded for each of the services, which was identified as $3.00 for RTS, $4.00 for ETS, $10.00 for WC, $15.00 for SHI, and $25.00 for DAR.

HTA Operating Costs

HTA's budgeted operating costs for FY 2022-23 are shown in Table 11, categorized by type of expenditure. HTA's operational and administrative costs were projected to equal $6.82 million and maintenance costs to equal $1.68 million, for a total of $8.5 million in direct expenses for FY 2022-23. The largest operational and administrative cost was expected to be payroll and benefits (76 percent of the operational and administrative budget) and the largest maintenance cost for vehicles (70 percent of the maintenance budget). The percentage of operational funds spent on payroll and benefits increased slightly in FY 2022-23 from 72 percent in FY 2021-22. In contrast, the percentage of maintenance funds spent on vehicles has decreased over time; vehicle costs represented 79 percent of the FY 2020-21 maintenance budget and 72 percent of the FY 2021-22 maintenance budget versus only 70 percent in FY 2022-23. While ridership significantly decreased in FY 2020-21 and FY 2021-22 due to the pandemic, operating costs increased, impacting HTA's cost-effectiveness.

Table 11: HTA Operational, Administration, and Maintenance Budgeted Expenses
FY 2022-23

	RTS	ETS	Willow Creek	S. Humboldt Intercity	A&MRTS Maintenance	CTSA	Samoa	Dial-a-Ride	Admin-istration	Maint-enance	**Total**	
Operational & Admin. Expenses												
Payroll and Benefits	$1,495,200	$668,100	$185,962	$386,688	$47,274	$116,402	$9,400	--	$1,221,750	$1,034,250	$5,165,026	61%
General Operating Expenses[1]	--	--	--	--	$200	$500	--	--	$52,350	$25,650	$78,700	1%
Administrative Expenses[2]	$3,500	$600	$100	$200	$300	$750	$134,287	$830,630	$216,300	$3,000	$1,189,667	14%
Operational Expenses[3]	$207,250	$48,300	$26,975	$51,520	$155	$41,500	--	--	--	$8,700	$384,400	5%
Total Operational & Admin. Expenses	$1,705,950	$717,000	$213,037	$438,408	$47,929	$159,152	$143,687	$830,630	$1,490,400	$1,071,600	$6,817,793	80%
Maintenance Expenses												
General Maintenance[4]	$17,500	$7,800	$2,200	$3,900	$4,800	$3,000	--	--	$2,800	$61,000	$103,000	1%
Vehicles[5]	$643,600	$181,800	$92,100	$162,500	$26,700	$17,000	--	--	--	$48,798	$1,172,498	14%
Facilities[6]	$55,572	$55,571	$55,571	$55,571	$55,571	$72,713	$55,571	--	--	--	$406,140	5%
Total Maintenance Expenses	$716,672	$245,171	$149,871	$221,971	$87,071	$92,713	$55,571	$0	$2,800	$109,798	$1,681,638	20%
TOTAL DIRECT EXPENSES	$2,422,622	$962,171	$362,908	$660,379	$135,000	$251,865	$199,258	$830,630	$1,493,200	$1,181,398	$8,499,431	100%

Source: HTA Adopted Budget 2022-2023
Note: Values represent budgeted amounts and not actual totals.
Note 1: Includes dues & subscriptions, general operating supplies, office supplies, printing, meetings and trainings
Note 2: Includes legal expenses, accounting & bookkepping, outside consultants, advertising, cost of funds, non-vehicle insurance, ERMA liability, mileage & per diem, postage, service charges, specialized services
Note 3: Includes driver uniforms & shoes, GFI, WiFi, schedule printing, vehicle insurance, operations supplies
Note 4: Includes general maintenance supplies, shop tools, safety supplies and gear, shop uniforms
Note 5: Includes contract services, contract repairs, fuel, special studies/permits, parts, small tool allowance, tires, Economic Uncertainty Reserve
Note 6: Includes computer and software, facility contract repairs, rental & leases, contract maintenance, utilities, general facility maintenance and repair

HTA Revenues

Expected FY 2022-23 revenues for the various HTA services are shown in Table 12. Operating revenues, which include contract revenue, fare revenue, CARES Act funds, and LCTOP revenues, were projected to comprise 32 percent of total revenues ($2.7 million). The proportion of revenues generated by operating sources has declined in recent years, in part due to low ridership rates during the pandemic. Non-operating revenues include Local Transportation Funds (LTF), State Transportation Assistance (STA) funds, State of Good Repair (SGR) funds, and Federal Transit Administration (FTA) grant funds, Joint Power Agreement member assessment fees, advertising revenues, and rents and leases. The total non-operating revenue in FY 2022-23 was expected to be $5.76 million—61 percent of which was LTF allocations and 18 percent of which was STA funds. Per the HTA budget, total revenues in FY 2022-23 were expected to increase 9 percent over FY 2021-22.

A&MRTS EVALUATION

Operating Data

Passenger Trips

Table 13 shows A&MRTS ridership data for FY 2019-20 through FY 2021-22. The COVID-19 pandemic had a clear impact on A&MRTS ridership; ridership dropped by 70 percent from 242,796 passenger trips in FY 2019-20 to 72,512 one-way passenger trips in FY 2021-22. Ridership in FY 2021-22 was only 30 percent of what it was pre-pandemic, representing a slower recovery compared to other services in the region.[3] Ridership recovered at a faster rate during FY 2022-23 as students returned to in-person instruction at Cal Poly Humboldt; FY 2022-23 ridership totals exceeded FY 2021-22 by only February, with four more months remaining in the year.

The A&MRTS stops with the greatest average daily boarding and alighting activity from June 1 to December 31, 2022, are shown in Table 14. The Library Circle stop at Cal Poly Humboldt was the most popular stop, with an average of 73 people either boarding or alighting at the stop each day. The other stops where over 50 people either boarded or alighted on the average service day included 10th Street and G Street, Arcata Transit Center, and Valley West Boulevard (McDonald's).

Vehicle Hours and Miles

A&MRTS reduced service levels due to the COVID-19 pandemic, resulting in fewer vehicle service miles and hours being operated in FY 2020-21 compared to the year prior (Table 13). In FY 2021-22, A&MRTS operated 68,599 miles and 5,681 hours, representing an 11 percent decrease and a 2 percent increase, respectively, over service levels in FY 2019-20

[3] Per Figure 9, ridership on HTA services in FY 2021-22 were between 54 to 87 percent of ridership prior to the pandemic, or an average of 62 percent of pre-pandemic ridership levels.

Table 12: HTA Revenues

FY 2022-23

	RTS	ETS	Willow Creek	S. Humboldt Intercity	A&MRTS Maintenance	CTSA	Samoa	Dial-a-Ride	Admin-istration	Maint-enance	**Total**	
Operating Revenues												
Contract Transportation	$56,769	$4,508	$92	--	$135,000	--	--	--	--	--	$196,369	2%
Fares	$600,000	$235,000	$30,000	$50,000	--	$50,000	$500	--	--	--	$965,500	11%
CARES Act	$634,593	$223,078	$155,350	$138,743	--	--	$64,471	--	--	--	$1,216,235	14%
Miscellaneous Revenues (LCTOP)	$227,034	$115,319	$4,104	$13,915	--	--	--	--	--	--	$360,372	4%
Non-Operating Revenues												
Advertising Revenue	--	--	--	--	--	--	--	--	$51,000	--	$51,000	1%
LTF/JPA Member Assessment	$1,698,530	$280,883	$260,469	$608,547	--	--	--	$717,435	--	--	$3,565,864	42%
Federal Operating	$487,163	$108,259	$100,000	$200,000	--	--	--	--	--	--	$895,422	11%
State Operating Funds												
STA	$132,000	$292,561	--	--	--	$161,865	$134,287	$113,195	$211,614	--	$1,045,522	12%
State of Good Repair (SGR)	$60,000	$30,000	--	--	--	$40,000	--	--	--	$73,147	$203,147	2%
TOTAL REVENUES	$3,896,089	$1,289,608	$550,015	$1,011,205	$135,000	$251,865	$199,258	$830,630	$262,614	$73,147	$8,499,431	100%

Source: HTA Adopted Budget 2022-2023

Note: Values represent budgeted amounts and not actual totals.

Table 13: A&MRTS Operations and Performance
FY 2019-20 - 2021-22

Performance Data and Indicators	Fiscal Year FY 19-20	FY 20-21	FY 21-22	% Change FY 20 - FY 22
Passengers	123,466	29,649	40,103	-68%
Vehicle Service Miles	76,848	56,285	68,599	-11%
Vehicle Service Hours	5,580	4,252	5,681	2%
Operating Costs	$680,229	$680,232	$821,064	21%
Fare Revenues	$226,717	$38,981	$38,072	-83%
Operating Subsidy	$453,512	$641,251	$782,992	73%
Cost per Passenger-Trip	$5.51	$22.94	$20.47	272%
Subsidy per Passenger-Trip	$3.67	$21.63	$19.52	432%
Farebox Return Ratio	33%	6%	5%	-86%
Passenger-Trips per Hour	22.1	7.0	7.1	-68%
Passenger-Trips per Mile	1.6	0.5	0.6	-64%

Source: A&MRTS Farebox and Ridership Reports

A&MRTS Performance Indicators

A&MRTS's performance was greatly impacted by the COVID-19 pandemic because a large portion of ridership had typically been Cal Poly Humboldt students. When Cal Poly Humboldt went virtual in March 2020, student, faculty, and staff ridership plummeted (discussed in Chapter 2). Table 13 reviews important performance indicators for A&MRTS and the impact of Cal Poly Humboldt switching to remote instruction. Initial FY 2022-23 data suggests that Cal Poly Humboldt's return to primarily in-person instruction will result in A&MRTS performance improving from FY 2021-22.

- Operating Cost per Passenger trip: The operating cost per passenger trip on A&MRTS increased four-fold from $5.51 in FY 2019-20 to $20.47 in FY 2021-22. While this represents a significant increase, A&MRTS was still more cost-effective than many of the other transit services in Humboldt County in FY 2021-22.
- Subsidy per Passenger trip: The subsidy per passenger trip, which is an excellent indicator of cost-effectiveness, increased almost six-fold, from $3.67 in FY 2019-20 to $19.52 in FY 2021-22 (Table 13). A&MRTS's operating subsidy per passenger trip is compared to the other Humboldt County services in Figure 11.
- Farebox Return Ratio: A&MRTS's farebox ratio went from 33 percent before the pandemic, which was quite high for a public transit system, to around 5 percent in the last two years. This is below the TDA requirement for rural transit systems, although this requirement has not been reinstated as of 2023.

Table 14: A&MRTS Bus Stops with Greatest Boarding and Alighting Activity
June 1 - December 31, 2022

Bus Stop Location (Arcata)	Daily Average Boardings	Daily Average Alightings	Average Total Activity
Cal Poly Humboldt - Library Circle	32	42	73
10th St & G St	35	30	65
Arcata Transit Center	31	22	54
Valley West Boulevard (McDonald's)	25	28	53
Humboldt Plaza Apartments	29	16	44
Alliance Rd & Stromberg Ave	23	18	41
Buttermilk Ln & Bayside Rd	14	20	34
Diamond Drive	20	12	32
Uniontown Shopping Center	16	15	31
Foster Ave & Alliance Rd	19	10	29
Crescent Way (Northside)	15	13	27
Valley West Boulevard (South)	16	11	27
Greenview Market	11	15	26
Alliance Rd & Spear Ave	13	13	26
Valley East Boulevard	18	8	26
Parkway Apartments	11	14	25
2nd St & V St	12	13	25
H St & 10th St	2	21	24
18th St & G St	11	11	23
Ridge Road	10	12	22
Mad River Hospital	10	12	22
Zehdner Ave & S St	13	9	22
Renner Station	8	13	21
H St & 6th St	7	13	21
16th St & G St	10	10	20
Camp Curtis	10	10	20
Mad River Gardens	11	9	20

Sources: A&MRTS & HTA

- Passenger Trips per Hour and Per Mile: During the last three years, the number of passengers carried per hour of service dropped by 71 percent from 22.1 to 7.1. In addition, the number of passengers carried per mile of service dropped from 1.6 to 0.6. A&MRTS used to be the most productive Humboldt County transit service but has not been since the pandemic.

Comparison With Existing Standards

Comparing FY 2021-22 performance with the example standards presented in the 2017 TDP highlights the drop in A&MRTS ridership as well as the significant increases in costs since 2017. The FY 2021-22 figure of 7.1 **passenger trips per vehicle hour** was far below the minimum standard of 30 set in the previous TDP. The **farebox return ratio** minimum standard of 18.8 percent was not met. Finally, the FY 2021-22 **subsidy per passenger trip** (at $20.47) far exceeded the maximum standard of $2.50.

A&MRTS Operating Expenses

The City of Arcata's public transit expenses for FY 2020-21 through FY 2022-23 is shown in Table 15. A&MRTS expenses ranged from $963,956 in FY 2020-21 to an adopted budget of $1,294,377 in FY 2022-23. The biggest budgeted expenses for FY 2022-23 were employee salaries and benefits ($540,098), and JPA member fees ($243,783), which are paid to HTA for the City of Arcata's share of RTS and the Arcata DAR. As of FY 2023-24, the City of Arcata now pays HTA to operate A&MRTS.

A&MRTS Revenues

A&MRTS revenue data is also displayed in Table 13. Due to declines in ridership, fare revenue also decreased over the three years considered (-83 percent). A&MRTS revenues were only $38,072 in FY 2021-22 but are projected to increase during FY 2022-23 in tandem with ridership.

Table 15: City of Arcata Public Transit Expenses
FY 2020-21 - 2022-23

	Actual		Adopted
	FY 20-21	FY 21-22	FY 22-23
A&MRTS			
Regular Salaries	$133,995	$154,127	$212,065
Overtime Wages	$1,151	$2,005	$1,000
Part-time & Temporary Salaries	$91,512	$120,473	$161,000
Employee Benefits	$101,135	$121,540	$166,033
Utilities	$1,583	$2,038	$1,750
Advertising	$1,095	$755	$1,500
Training & Conferences	$185	$864	$20,000
Clothing & Personal Expenses	$90	--	$600
Membership & Dues	--	$560	--
Taxes & Other Fees	$324	$810	$500
Insurance	$55,012	$67,555	$74,304
CARES Act Expenditures	$19,743	--	--
JPA Agreements	$236,682	$236,682	$243,783
Postage, Photocopies, Office Supplies	$180	$426	$1,700
Other Department Supplies	$7	$1,985	$500
Small Tools	--	--	$500
Fuel & Lubricants	--	--	$60,000
Equipment Maintenance	$149,915	$206,408	$135,000
IT Services & Maintenance	$12,033	$20,628	$25,390
Overhead	$64,940	$77,920	$79,630
Total A&MRTS Operating Expenses	**$869,582**	**$1,014,776**	**$1,185,255**
Dial-a-Ride			
Regular Salaries	$6,328	$7,027	$7,440
Overtime Wages	$83	$74	--
Employee Benefits	$5,025	$5,156	$6,174
JPA Agreements	$79,281	$79,281	$83,312
IT Services & Maitenance	$3,657	$7,051	$12,196
Total DAR Expenses	**$94,374**	**$98,589**	**$109,122**
TOTAL A&MRTS OPERATING EXPENSES	**$963,956**	**$1,113,365**	**$1,294,377**

Source: City of Arcata Adopted Budget 2022/23

FORTUNA TRANSIT EVALUATION

Operating Data

Passenger Trips

Fortuna Transit ridership and operations data for FY 2019-20 through FY 2021-22 are displayed in Table 16. Fortuna Transit provided 8,118 one-way passenger trips in FY 2019-20, 7,444 one-way passenger trips in FY 2020-21, and 7,713 one-way passenger trips in FY 2021-22. This data shows that Fortuna Transit was only minimally impacted by the pandemic. Ridership levels increased in FY 2021-22 as well, meaning Fortuna Transit ridership only declined by 5 percent over the three years analyzed.

Vehicle Miles and Hours

Fortuna Transit operated 22,710 vehicle service miles and 2,671 vehicle service hours in FY 2021-22, representing slight increases over FY 2019-20 service levels (5 and 8 percent, respectively).

Fortuna Transit Performance Indicators

Also shown in Table 16, Fortuna Transit's performance was analyzed by considering several performance indicators. The results of this performance analysis were as follows:

Table 16: Fortuna Transit Operations and Performance
FY 2019-20 - 2021-22

	Fiscal Year			
Performance Data and Indicators	FY 19-20	FY 20-21	FY 21-22	% Change FY 20 - FY 22
Passengers	8,118	7,444	7,713	-5%
Vehicle Service Miles	21,608	20,834	22,710	5%
Vehicle Service Hours	2,470	2,220	2,671	8%
Operating Costs	$168,110	$181,264	$218,112	30%
Fare Revenues	$15,261	$11,689	$16,000	5%
Operating Subsidy	$152,849	$169,575	$202,112	32%
Cost per Passenger-Trip	$20.71	$24.35	$28.28	37%
Subsidy per Passenger-Trip	$18.83	$22.78	$26.20	39%
Farebox Return Ratio	9%	6%	7%	-19%
Passenger-Trips per Hour	3.3	3.4	2.9	-12%
Passenger-Trips per Mile	0.4	0.4	0.3	-10%

Source: Fortuna Bus Monthly Transit Reports

- Operating Cost per Passenger trip: As operating costs increased by 30 percent while ridership decreased by 5 percent over the three years considered, the operating cost per passenger trip increased from $20.71 to $28.28 (a 37 percent increase).
- Subsidy per Passenger trip: Similarly, the subsidy per passenger trip increased by 39 percent from FY 2019-20 to FY 2021-22, increasing from $18.83 to $26.20 per passenger trip. The FY 2021-22 subsidy per passenger trip is shown in Figure 11.
- Passenger Trips per Hour and Per Mile: The passengers carried per hour of service dropped from 3.3 in FY 2019-20 to 2.9 in FY 2021-22. The number of passengers carried per vehicle service mile also dropped over the three years considered from 0.4 to 0.3. These values are on par with other demand-response systems across the state and country.
- Farebox Return Ratio: The annual farebox ratio was calculated by dividing the year's fare revenues by operating costs. The Fortuna Transit farebox ranged from 9 percent in FY 2019-20 to 7 percent in FY 2021-22, which is below the not yet reinstated 10 percent TDA requirement.

Comparison With Existing Standards

None of the example standards presented in the 2017 TDP (identified prior to the pandemic drop in ridership and recent increases in costs) were met in FY 2021-22. The 2.9 **passenger trips per vehicle hour** were below the minimum standard of 8.0, the 7 percent **farebox return ratio** was below the minimum standard of 10.0 percent, and the **subsidy per passenger trip** ($26.20) exceeded the maximum standard of $15.00.

Fortuna Transit Trip Response Data

As a dial-a-ride service provider, Fortuna Transit tracks service quality measures such as the number of canceled trips (where passengers made appointments but canceled prior to taking them), no-shows (where passengers canceled with less than an hour's notice or did not appear for their trip), and trips denied (where a request was made but was not able to be scheduled). All three of these metrics increased slightly from FY 2019-20 to FY 2021-22, as seen in Figure 12, but still represented only a small portion of the total ride requests. In FY 2021-22, 0.3 percent of trips were no-shows, 0.7 percent of trips were denied, and 2.7 percent of scheduled trips were canceled.

Fortuna Transit Revenues and Expenses

Table 17 shows Fortuna Transit's revenues and expenses over the last three years. The largest revenue source for Fortuna Transit is the City of Fortuna's TDA revenue allocation; TDA revenues were expected to be 94 percent of Fortuna Transit's overall revenues in FY 2022-23. Senior bus fees, or fares, were expected to total $16,000. Operating expenses include salaries, services, supplies, and the HTA contract (which pays for the RTS services that operate within Fortuna).

Figure 12: Fortuna Transit - Trip Response Data

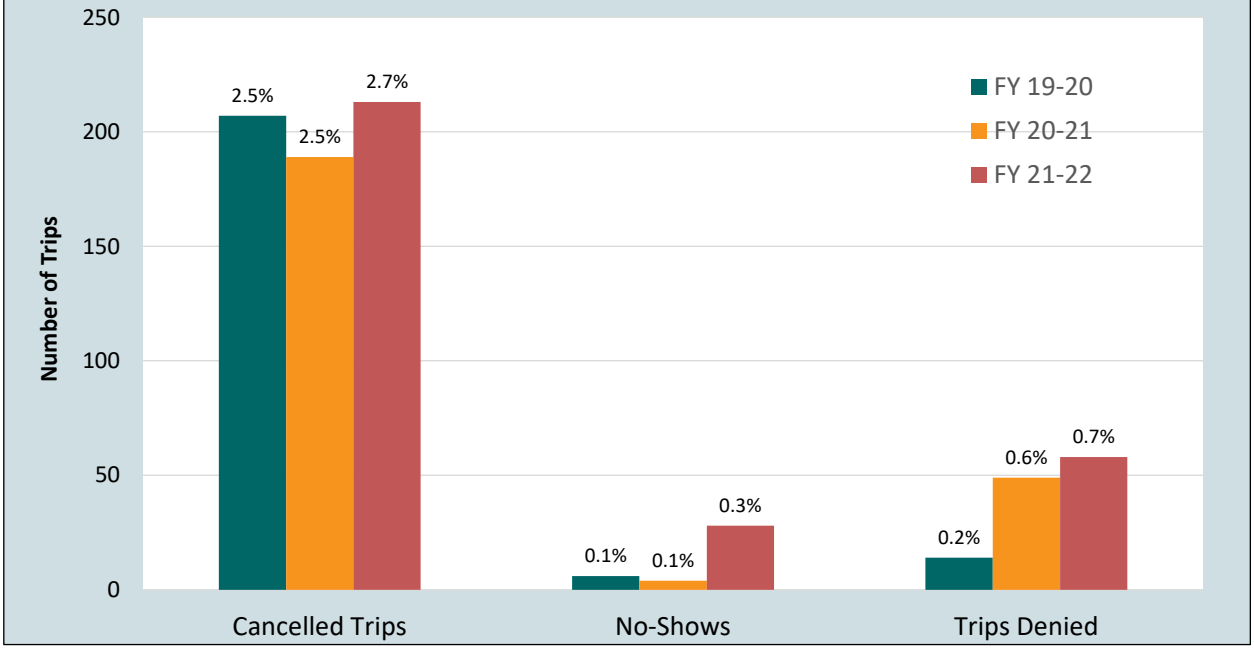


Table 17: Fortuna Transit Expenses and Revenues

FY 2020-21 - 2022-23

Fund History	Actual FY 20-21	Estimate FY 21-22	Adopted FY 22-23
Beginning Fund Balance	$125,758	$95,524	$81,112
Revenues			
Senior Bus Fees	$11,689	$16,000	$16,000
TDA Revenue Allocation	$316,695	$344,000	$381,987
Other	$6,037	$2,400	$2,400
Transfer	$4,431	$5,000	$5,000
Subtotal	$338,852	$367,400	$405,387
Operating Expenditures			
Salaries and Benefits	$150,761	$182,572	$197,944
Service and Supplies	$30,503	$35,040	$37,742
Contract Services - HTA	$163,697	$163,700	$168,700
Depreciation	$24,125	--	--
Subtotal	$369,086	$381,312	$404,386
Net Activity	-$30,234	-$13,912	$1,001
Ending Fund Balance	$95,524	$81,612	$82,113

Source: City of Fortuna FY 2022-23 Adopted Budget

BLUE LAKE RANCHERIA TRANSIT SERVICE EVALUATION

Operating Data

Annual Passenger Trips and Vehicle Hours and Miles

BLRTS operating data for FY 2021-22 is shown by month in Table 18. In FY 2021-22, BLRTS provided 5,831 passenger trips, with the most passenger trips being completed in September 2021 (594). This is significantly below ridership levels seen before the pandemic when BLRTS carried over 10,000 passenger trips annually. However, BLRTS has also decreased service levels in response to lower ridership, cutting three of its daily runs. BLRTS operated 1,284 hours and 28,755 miles of service in FY 2021-22. Variations in service levels each month were due primarily to the number of service days.

Passenger Trips per Hour and Per Mile

On average, BLRTS carried 4.5 passengers per hour of service in FY 2021-22 (Table 18). This figure does not attain the minimum example standard of 8.0 identified in the 2017 TDP. Productivity was greatest in September 2021, the month with the greatest ridership. BLRTS carried an average of 0.2 passengers per mile throughout the entire year.

Table 18: Blue Lake Rancheria Transit System Operations and Performance
FY 2021-22

	Operating Data			Performance Indicators	
Month	Passenger Trips	Vehicle Service Hours	Vehicle Service Miles	Passenger Trips per Hour	Passenger Trips per Mile
July	439	109	2,623	4.0	0.17
Aug.	535	109	2,422	4.9	0.22
Sept.	594	109	2,436	5.4	0.24
Oct.	547	104	2,359	5.3	0.23
Nov.	528	103	2,333	5.1	0.23
Dec.	522	111	2,630	4.7	0.20
Jan.	439	102	2,284	4.3	0.19
Feb.	447	98	2,160	4.6	0.21
Mar.	478	114	2,533	4.2	0.19
Apr.	437	105	2,284	4.2	0.19
May	478	110	2,386	4.3	0.20
June	387	110	2,305	3.5	0.17
Total	**5,831**	**1,284**	**28,755**	**4.5**	**0.20**

Source: BLRTS, HCAOG

Comparison with Existing Standards

In terms of the example productivity standards outlined in the 2017 TDP, BLRTS did not meet the minimum standard for passenger trips per vehicle hour of 8.0 in FY 2021-22, only carrying 4.5 passenger trips per hour. Due to inadequate data, BLRTS's financial performance for FY 2021-22 was not able to be assessed.

Chapter 5
PUBLIC OUTREACH

INTRODUCTION

Public outreach is an essential component of any successful planning effort. During the development of this TDP, multiple outreach efforts were conducted, including:

- Online Community Survey
- Onboard Passenger Surveys
- Stakeholder Interviews
- Two Public Workshops

Key findings from these outreach efforts are highlighted in this chapter, with detailed results included in Appendices C (Online Community Survey), D (Onboard Passenger Surveys), E (Stakeholder Interviews), and F (Public Workshop Live Polling Responses). All public input was referenced throughout the entirety of the TDP planning process. Specifically, public comments helped influence the list of potential alternatives evaluated in Chapters 6 through 9 and were used to determine which alternatives to incorporate into the five-year plans for each of the Humboldt County transit programs.

ONLINE COMMUNITY SURVEY

An online community survey was made available to the public from November 7 to 25, 2022. The online community survey was intended for both those who use public transit as well as those who do not, as it is important to hear from both perspectives to determine potential service changes that could result in increased transit ridership across the entire community. The survey was designed to assess the community's awareness of the various public transit services available in Humboldt County as well as the respondents' current impressions of these services. The survey also asked about the respondents' history of riding the bus, and what service changes might encourage them to ride the bus more, or simply ride the bus at all.

A total of 183 valid survey responses were received online, providing an approximately 90 percent level of confidence. The detailed results are provided in Appendix C, and highlights are discussed below.

Current Impressions

- Respondents were largely dissatisfied with the limited and infrequent nature of the existing Humboldt County services.
- When asked to describe their ideal Humboldt County public transit system, the most popular words used were frequent, reliable, safe, and convenient.
- Respondents believe transit is inadequately funded.

Propensity to Use Transit

- Almost all of the participants had either heard of or had some level of familiarity with RTS (93 percent). The majority of survey respondents also knew, at least somewhat, about the HTA, A&MRTS, and ETS. Samoa Transit and the Yurok Tribe's services were the least well-known.
- 83 percent of community members surveyed, or 148 individuals, said they had used public transit in Humboldt County at some point in the past. That left only 31 individuals who had never used any of the Humboldt County transit services. Survey logic was used to further direct only those 31 individuals to answer questions about why they do not use transit or what improvements might encourage them to use transit in the future. The most common reasons for not using transit, among the 31 people who answered, were:
    - They have their own personal transportation.
    - The transit services are too infrequent.
    - The bus takes too much time.
    - The service area does not include where they need to go.
- The top service improvements that would encourage the 31 respondents who have never ridden public transit in Humboldt County to potentially begin were increased service frequency, expanded service area, and better information.
- 8 individuals said having bike lockers at the bus stations would be helpful.
- 15 individuals said that they would only ever ride the bus if they did not have a car.

Transit Use Patterns

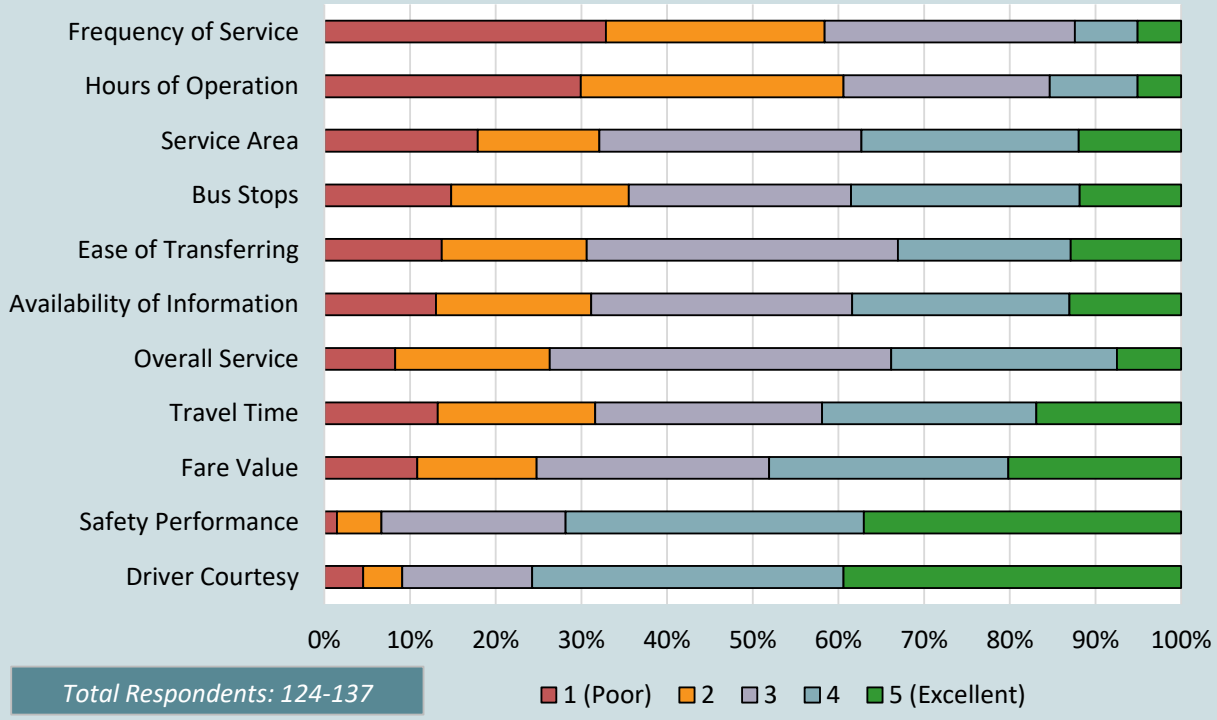
- The transit services most commonly used by the respondents in the past were RTS (74 percent), ETS (52 percent), and A&MRTS (46 percent).
- Overall, the community survey respondents were not frequent transit users; only 12 percent ride the bus 5 or more days per week, while 34 percent ride 1 day a month or less.
- Very few (5 percent) had used Humboldt DAR in the last two years.

Opinions on Transit Service

The community survey asked respondents to rank various characteristics of the transit services from 1 (poor) to 5 (excellent). As seen in Figure 13, driver courtesy and safety performance were the two highest-ranked factors, with an average rating of 4.0. The lowest-ranked factors were the frequency of services and the hours of operation (both 2.3).

Similarly, respondents were also asked to rate aspects of Humboldt DAR on a scale of 1 (poor) to 5 (excellent). Only 9 people responded. Among those 9 individuals, the best aspects of the DAR service were driver courtesy (3.1) and the service area (2.8). The service attributes with the lowest ratings were the value received for fare (2.0), availability of information, and wait times (both 2.3).

Figure 13: Community Survey Respondents Opinions of Humboldt County Public Transit Services



Respondent Demographics

- 32 percent of respondents lived in Eureka, 29 percent lived in Arcata, and the remainder lived in various communities throughout Humboldt County.
- The respondents came from homes with varying incomes, with 59 percent of the 161 respondents living in homes with annual incomes of $60,000 or less and the remaining 41 percent coming from homes with greater incomes.
- Most of the respondents were adults aged 23 to 45 (33 percent). Only 1 respondent was younger than 18 and only 5 percent of respondents were adults aged 18 to 22. Senior adults aged 71 or older represented 7 percent of the total respondents.
- The community survey respondents came from multiple different living arrangements: 26 percent lived alone, 43 percent lived in a household with 2 people, 26 percent lived in a 3- to 4-person household, and 5 percent lived in a household with five or more people.
- Only a small proportion of community survey respondents were likely transit-dependent individuals; only 10 percent of respondents had no licensed drivers in their household, and only 17 percent lived in homes with no vehicles available. 15 percent of respondents mentioned they have a disability that limits their use of fixed route buses.

ONBOARD PASSENGER SURVEYS

Onboard surveys were conducted between October 31 and December 16, 2022, on the HTA Services, A&MRTS, and Fortuna Transit. Surveys were available for passengers to self-administer and collected by the drivers once completed. Agency staff later scanned and returned the surveys to LSC for analysis. To encourage further participation, a trained surveyor rode each A&MRTS route for a total of 10 hours the week of December 5. Also, HCAOG staff rode ETS buses on December 16 to ask passengers to participate.

The survey instruments consisted of a one-page questionnaire that was available in both English and Spanish. There were also forms with larger fonts available in English for visually impaired passengers on RTS, ETS, and Fortuna Transit. In all, 155 survey responses were received across the various services. Appendix D contains a discussion of the detailed onboard survey results, while some of the key takeaways are included below.

Transit Use Patterns

- Almost half of the surveys were completed by passengers on RTS (46 percent). The services with the second and third highest response rates were A&MRTS (27 percent of the total surveys) and ETS (15 percent).
- Top boarding locations included the Library Circle Stop at Cal Poly Humboldt (16 percent), the Arcata Transit Center (6 percent), and Valley West and Valley East Boulevards in Arcata (4 percent). The top alighting locations also included Library Circle (18 percent of alightings), the Arcata Transit Center (7 percent), and the College of the Redwoods (7 percent).
- The majority of the surveyed passengers walked to the bus stop before boarding (83 percent) and to their final destination after alighting (92 percent).
- Many of the surveyed passengers are regular transit riders; 89 percent of the respondents ride the bus at least two days a week, if not more frequently.

Transit Dependency

Some of the survey questions were designed to assess the potential transit dependency of the Humboldt County public transit passengers, such as whether the individual being surveyed had a car available for their trip, whether they used a scooter or wheelchair, and or how many vehicles they had in their household. The results of these questions were as follows:

- Over 75 percent of passengers reported that they were riding the bus roundtrip, suggesting that the bus was either their best option or their only option for travel. This transit dependency is supported by the fact that only 15 percent of riders had a car available for their trip, even though 42 percent had a driver's license.
- Just like in the onboard survey effort for the 2017 TDP, only 2 percent of survey respondents used a wheelchair or scooter to get to fixed route bus services.

- About 17 percent of the surveyed passengers find it difficult to plan trips using other regional transit services, which is a slight decrease compared to 2017 survey results (-3 percent).
- Half of the passengers came from homes with no vehicles available, and another 28 percent had one vehicle in the household.
- When the passengers were asked how they would have made their trip if they had been unable to ride the bus, nearly 40 percent said they would have not made the trip at all, once again suggesting potential transit dependency. 28 percent said they would have walked instead.
- Young adults represented about one-third of the surveyed passengers, reflecting the high ridership rates among local students. However, this still is a notable decrease compared to the 2017 TDP onboard survey effort in which 59 percent of the respondents were young adults. The 2017 surveys were conducted before the COVID-19 pandemic altered college class structures.

Other Trip and Passenger Characteristics

- The primary reasons the passengers were riding the bus were to go to school or college (38 percent) or to go to work (35 percent). These answers varied though depending on the transit system; 64 percent of the passengers on A&MRTS were going to school or college while 64 percent of the SHI passengers were going to work.
- The top sources among the surveyed passengers for information on transit services are the Internet (38 percent), the printed guide (31 percent), posted information at stops (30 percent), and Google Maps (29 percent). This data represents an increase in the use of digital tools compared to the 2017 TDP when only 28 percent of passengers said they used the internet to get information about the bus.
- 72 percent of passengers said they prefer to pay for transit fares using a monthly pass product. Only 17 percent indicated they would prefer cash, followed by 7 percent who would like to pay via a phone application.
- Similar to the 2017 TDP, about a third of passengers reported that they use the Jack Pass through Cal Poly Humboldt. Jack Pass use was most common on A&MRTS (64 percent). As Fortuna Transit is only available to senior adults or disabled persons, passengers were asked whether they use the Fortuna Transit Punch Pass; all six respondents indicated they do use the Punch Pass.
- Over half of the surveyed passengers were students (Cal Poly Humboldt, College of the Redwoods, high school, or other schools). 47 percent of the passengers were employed either full- or part-time.

Passenger Opinions

Similar to the online community survey, the passengers taking the onboard survey were asked to rank characteristics of the Humboldt County public transit services on a scale of "poor" (1) to "excellent" (5). Altogether, the passengers ranked the services an average of 4.3, indicating that most passengers have good perceptions of the Humboldt County public transit services. The number of respondents who ranked each service ranged from 6 (Fortuna Transit) to 69 (RTS). Fortuna Transit was ranked the highest of the five services considered (5.0), while SHI was ranked the lowest (3.9), albeit both rankings were from small samples of passengers. Across the various services, driver courtesy, system safety, and trip length were some of the factors that consistently ranked high, while phone information services, bus stops, and service areas were consistently ranked low.

At the end of the survey, the passengers were given the opportunity to describe any other service improvements they would like to see implemented. Table 19 shows the most requested service improvements by indicating the percentage of respondents from each of the transit services that requested the improvement, and then as well as the total percentage of respondents across all the services who asked for each improvement. As seen in Table 19, later service was the most requested improvement (24 percent), followed by Sunday service (16 percent) and earlier service (10 percent). Appendix D provides details on some of the more specific service improvement requests.

Table 19: Most Requested Service Improvements by Onboard Survey Participants

Improvement	RTS	A&MRTS	ETS	SHI	Fortuna	Total
Later Service	28%	27%	0%	11%	60%	**24%**
Sunday Service	12%	31%	7%	22%	0%	**16%**
More Bus Stops	14%	4%	0%	0%	0%	**8%**
Better Information	10%	4%	7%	0%	0%	**7%**
Earlier Services	14%	4%	0%	33%	0%	**10%**
Lower Fares	8%	4%	0%	0%	0%	**5%**
More Frequent Service	12%	4%	7%	11%	0%	**9%**

STAKEHOLDER INPUT

To learn more about transportation issues in Humboldt County, interviews were conducted with elected officials, social service providers, nonprofit agencies, and others either with an interest or representing those with an interest in transportation. This list of potential stakeholders was developed at the beginning of the planning process. Staff from LSC Transportation Consultants, Inc., reached out to 22 individuals (up to three times) to invite them to participate in an interview. Ultimately, 14 individuals participated. This section briefly reviews some of the themes consistent throughout the various interviews, while a more thorough summary is included in Appendix E.

Who Should be Served by Transit?

When asked who should be served by transit, many stakeholders pointed out transit should be for "everyone." Many also mentioned services should be geared toward the growing populations of Cal Poly Humboldt students and staff, retirees, and climate refugees. A few mentioned that while transit is vital for the transit-dependent, services should be made more attractive to all groups to eliminate the perception that public transit is only for those dependent on the services.

Primary Transit Issues

The stakeholders were asked what they believe to be the big issues impacting Humboldt County public transit. Many mentioned the upcoming expansion of Cal Poly Humboldt as likely impacting transit demand in both the Arcata area and beyond. The growing populations of retirees, climate refugees, and seasonal tourists were also mentioned as likely to spur increased demand for transit services. The slow return of ridership after the pandemic was discussed by stakeholders, as well as the need to encourage greater ridership by making transit more useful and desirable to residents. The top operations challenges discussed by the stakeholders were low frequency, limited hours of operation, limited serviced areas, and insufficient funding for existing services.

Effectiveness

Stakeholders expressed that Humboldt County public transportation is effective at meeting the needs of those who need it most, especially given limited funding. However, population centers have changed, and routes have not, leaving many local residents with no stops near their homes. A lack of funding makes it difficult to expand existing service areas, therefore leaving a gap in service.

Strengths and Weaknesses of Existing Services

Stakeholders were asked to describe the strengths and weaknesses of the Humboldt County transit providers. Some of the common themes in the interview answers were:

- Strong leadership has enhanced regional coordination and modernized the transit system.
- Drivers are great and enhance the passenger experience.
- There is excellent coordination behind the scenes between the transit providers, between the transit providers and Cal Poly Humboldt, and between the various municipalities and tribes. However, coordination could still be improved further.
- Some of the most common service improvement requests across Humboldt County are to increase service frequency and expand current services to more areas. While these changes are needed and would likely increase ridership, funding is limited, and it is nearly impossible to do both.
- Eureka and Arcata routes have not been updated in decades and are confusing to many. In Eureka, the route structure means it may take you 10 minutes to get to a certain destination, but 50 minutes to get home, making it less desirable to take the bus.
- Bus stop improvements would benefit passengers and help increase perceptions of safety.

Branding

Currently, there are three transit operators and eight services operating in Humboldt County. Stakeholders were asked about their thoughts on branding all of the systems under one name/logo. They tended to agree that in the long-run, consistent branding would be beneficial, especially for individuals less familiar with the systems. Having an integrated payment system was mentioned as being the top benefit. However, many also mentioned that they do not think branding should be a priority given the potential impact on ridership is unknown and funding is limited.

Changes in Humboldt County Impacting Transit Services

Stakeholders were asked what changes they believe will impact the need for public transit, or the services themselves, in the next five years. The top changes identified were:

- The planned expansion of Cal Poly Humboldt. This was by far the most common issue mentioned by the stakeholders.
- The expected growth of the senior and disabled populations.
- The new transit center in Eureka (also known as the EaRTH Center) will enhance the passenger experience and likely increase ridership but may also require service changes to serve effectively.
- There are plans to begin pilot microtransit programs across the county, which may drive demand.
- New businesses and housing may impact transit demand. The transit providers and local planners need to coordinate to make sure that these locations can be served by transit.
- New climate plans are promoting infill development in the region, which should benefit the transit system.
- Zero emissions initiatives are going to require transit providers to purchase zero-emissions buses and install the appropriate infrastructure. Routing changes may also be necessary.

PUBLIC WORKSHOPS

Public workshops were held at two key points in this study. First, the existing conditions analysis was presented at the Social Services Transportation Advisory Committee meeting on February 1, 2023, from 2:00 PM to 3:30 PM. The public and stakeholders were also invited to attend. The meeting was available both through Zoom and in person. The purpose of the first workshop was to share early study findings about the demographics of the area and the evaluation of transit services, while also soliciting feedback to ensure these findings matched and represented public perceptions.

The second workshop was held on May 23, 2023, from 5:00 PM to 6:30 PM to present the evaluation of service alternatives. This workshop was also a hybrid virtual and in-person presentation. Live polling was incorporated into the second public workshop to garner feedback about what service alternatives the attendees preferred to see implemented in the final TDP. The polling results are detailed in Appendix F.

SUMMARY

In summary, public outreach conducted for the Humboldt County 2023 TDP indicated the key factors impacting transit use are the limited frequency of service, the limited geographic areas served by transit, long travel times relative to driving, and the limited hours of availability. All of these factors reflect how challenging it is to serve an extensive region with limited existing operating revenues. Another issue impeding transit use is that the private automobile is a relatively convenient option for those physically and financially able to drive given the relative lack of congestion and availability of free parking in the region. Other service elements such as perception of safety/security and transit fares were not found to be significant impediments to transit use for most community members. Feedback received during public outreach indicated increasing regional coordination, implementing common branding, and bus stop improvements could result in increased transit ridership without significant increases in operating subsidy needs.

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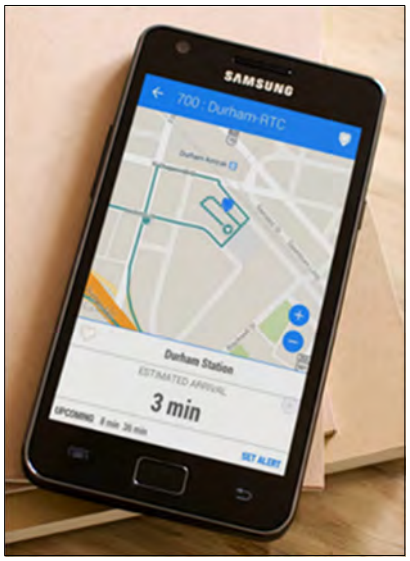
Chapter 6
SERVICE ALTERNATIVES ANALYSIS

INTRODUCTION

It is a unique time for transit services in Humboldt County. First, as with transit programs throughout the nation, ridership has dropped significantly on all transit services in the county, particularly on the larger services such as RTS, ETS, and A&MRTS. At the same time, growth pressures in the region are creating increased travel demand and will continue to do so as retirees, climate refugees, new employees, and an increased number of Cal Poly Humboldt students and staff move to the area. Housing demand is high, which simultaneously pushes housing to more rural locations and encourages infill and denser housing developments. Additionally, the shift to remote work has altered the need for commuting. As all of this is occurring, transit operating costs have grown exponentially due to rising fuel prices and wages, and a shortage of drivers has been a persistent challenge faced by not only Humboldt County but the greater region of Northern California. In short, transit providers are being asked to meet more needs with fewer resources and greater unpredictability. This transportation landscape indicates the need for transit to be innovative and flexible in response.

The chapter presents an evaluation of service alternatives for each of the Humboldt County transit services. The alternatives are intended to address findings presented in the earlier chapters summarizing recent operations, as well as requests and suggestions heard during public outreach.

The Concept of Microtransit



Several of the Humboldt County transit alternatives discussed in this chapter include the introduction of microtransit. 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 short response times, typically within 15 minutes of the request. It can also be an effective service option in areas with high demand for short trips. Microtransit applies the app-based technology developed for transportation network companies (such as Uber and Lyft) to provide a new form of public transit. 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. With microtransit services, passengers typically use an app downloaded on their smartphone or computer to request a ride, then 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 normally can also be requested over the phone. However, most trips are assigned without the need for manual dispatching. Unlike traditional dial-a-ride (DAR)

services, there is no need for 24-hour or more advance reservations. As microtransit is a shared-ride service, multiple passengers may ride the vehicle at the same time. Requirements of the Americans with Disabilities Act (ADA) may be met by ensuring that enough accessible vehicles are available to serve those who require extra accommodations. Automated data collection and reporting provide information that can aid in the better allocation of resources as the microtransit service grows.

One of the potential benefits of microtransit is the possibility of "comingling" general public riders with paratransit riders in the same vehicles. This can reduce overall costs by serving additional people in periods when DAR demand is low. This strategy still meets the requirements of the ADA by prioritizing persons with disabilities, yet also expands general public service without the costs of two separate services. As such, comingling is particularly beneficial in small communities or rural areas.

The cost of obtaining and maintaining software would be determined through the RFP process and is difficult to specify, but based on other microtransit programs, it is estimated that microtransit would incur an annual software cost of $50,000 to upwards of $100,000 depending on the number of vehicle licenses. This figure is supported by the HTA's recent purchase of RideCo software for 10 vehicles for about $50,000. HTA intends to use the RideCo software to operate co-mingled microtransit and paratransit services, as just described above. Typically, microtransit cost estimates include software and support, vehicle licenses, and other miscellaneous fees. Examples of other microtransit programs, including operating parameters, populations served, and ridership are provided in Appendix G.

SERVICE ALTERNATIVES FOR HUMBOLDT TRANSIT AUTHORITY

HTA alternatives were developed to improve service efficiencies and transportation access. The alternatives were influenced by discussions with stakeholders and analysis of survey and workshop feedback. The HTA alternatives evaluation makes the following assumptions:

1. The operating expenses and maintenance expenses reported by HTA from July 2022 through March 2023 were used to estimate the per-hour and per-mile operating costs of each service (Table 20). These costs were then used to estimate the expected operating costs and fare revenues of the various service alternatives. As an example, the equation for estimating RTS costs is as follows:

   Change in RTS Allocated Operating Cost = $83.74 X Change in Vehicle hours
   + $2.37 X Change in Vehicle-Miles

2. For alternatives that expand the span of service, an additional $50 per clock hour was included to reflect the costs of a dispatcher and two mechanics on duty.

3. Service was assumed to include 254 weekdays, 57 Saturdays/Holidays, and 52 Sundays, unless otherwise noted.

4. Ridership was estimated based on historical performance, data from peer systems, and elasticity factors, depending on the alternative. Detailed information regarding how ridership was estimated is included in Appendix H.

Table 20: HTA Cost Formula Factors
July 2022 - March 2023

	Redwood Transit System	Eureka Transit Service	Willow Creek	Southern Humboldt Intercity
Operating Cost[1]	$2,931,923	$1,069,585	$331,874	$610,887
Maintenance Cost	$1,098,854	$335,174	$156,621	$250,899
Other Operating/Admin Cost	$1,833,069	$734,411	$175,253	$359,988
Vehicle Miles	463,620	89,486	64,243	106,455
Vehicle Hours	21,889	8,222	1,795	2,919
Maintenance Cost per Vehicle Mile	$2.37	$3.75	$2.44	$2.36
Operating/Admin Costs per Vehicle Hour[2]	$83.74	$89.32	$97.63	$123.33
Average Fare per Passenger Trip	$2.35	$1.70	$4.00	$3.82

Source: HTA Comparative Performance Activity Report, April 2023
Note 1: Excludes depreciation.
Note 2: Includes allocated administrative costs, excludes maintenance costs.

RTS SERVICE ALTERNATIVES

Alternatives for service improvements on RTS were developed to address several issues and concerns mentioned by residents and stakeholders:

- The most popular service requests mentioned by the onboard survey respondents were for 1) increased frequency; 2) longer span of service, especially later in the day; and 3) increased area of service.
- A major concern of stakeholders, and confirmed by a service quality matrix, is that RTS service between major destinations takes too long, often taking up to three times longer by bus than by car.
- There is a desire for Sunday service.
- Other long-term planning documents, such as the *Regional Transportation Plan – VROOM 2022-2042* (2022 RTP), call for a significant expansion in transit services and ridership.

RTS Express Service

One of the most common issues raised by passengers and the public with RTS is the relatively long travel times. For example, an RTS trip between McKinleyville and College of the Redwoods (CR) takes 1 hour and 13 minutes on the bus versus 40 minutes of travel time by car; this equates to the bus taking 33 more minutes per one-way trip versus a car. For people with access to a car, this increased travel time is a significant impediment to transit use.

One way to reduce travel times and increase the attractiveness of RTS would be to provide express service that skips stops and focuses on serving key transfer hubs to and from local services (such as ETS and A&MRTS). Three RTS express service options were evaluated, focusing on weekday service.

Reflecting the relative passenger activity along the route, these options focus on the portion of the US 101 corridor between McKinleyville to the north and CR to the south. They also focus on increasing service frequency during the periods of the day with the greatest ridership activity. The three options are as follows:

- **McKinleyville – CR Express:** This option would operate two vehicles between central McKinleyville and CR, providing 3 express runs in the AM period (from roughly 7:00 AM to 10:20 AM) in each direction and four runs in the PM period (from 1:40 PM to 6:30 PM). Note that as the express service relies on local transit services to feed passengers to the transit hubs, service earlier or later than these times would be less effective given the current local span of service. An example schedule is shown in Table 21. This schedule only shows the new express runs and does not include the existing local RTS service. Beyond the key transit hubs, some higher activity stops directly along the route could also be served under this schedule. Express runs would be provided every 60 minutes.

Table 21: Example RTS McKinleyville-CR Express Schedule

Southbound	Morning			Afternoon			
McKinleyville (Stores)		7:30 AM	8:30 AM	1:40 PM	2:40 PM	3:40 PM	4:40 PM
Cal Poly Library Circle		7:40 AM	8:40 AM	1:50 PM	2:50 PM	3:50 PM	4:50 PM
Arcata Transit Center		7:46 AM	8:46 AM	1:56 PM	2:56 PM	3:56 PM	4:56 PM
Arcata - H & 6th		7:48 AM	8:48 AM	1:58 PM	2:58 PM	3:58 PM	4:58 PM
Eureka - 4th & U	6:58 AM	7:58 AM	8:58 AM	2:08 PM	3:08 PM	4:08 PM	5:08 PM
Eureka - 3rd & H	7:01 AM	8:01 AM	9:01 AM	2:11 PM	3:11 PM	4:11 PM	5:11 PM
Eureka - 4th & B	7:03 AM	8:03 AM	9:03 AM	2:13 PM	3:13 PM	4:13 PM	5:13 PM
Eureka - Bayshore Mall	7:12 AM	8:12 AM	9:12 AM	2:22 PM	3:22 PM	4:22 PM	5:22 PM
College of the Redwoods	7:24 AM	8:24 AM	9:24 AM	2:34 PM	3:34 PM	4:34 PM	5:34 PM
Northbound							
College of the Redwoods	7:30 AM	8:30 AM	9:30 AM	2:40 PM	3:40 PM	4:40 PM	5:40 PM
Eureka - Bayshore Mall	7:38 AM	8:38 AM	9:38 AM	2:48 PM	3:48 PM	4:48 PM	5:48 PM
Eureka - 5th & D	7:46 AM	8:46 AM	9:46 AM	2:56 PM	3:56 PM	4:56 PM	5:56 PM
Eureka - 3rd & H	7:48 AM	8:48 AM	9:48 AM	2:58 PM	3:58 PM	4:58 PM	5:58 PM
Eureka - 5th & U	7:51 AM	8:51 AM	9:51 AM	3:01 PM	4:01 PM	5:01 PM	6:01 PM
Arcata - G & 5th	8:01 AM	9:01 AM	10:01 AM	3:11 PM	4:11 PM	5:11 PM	6:11 PM
Arcata Transit Center	8:04 AM	9:04 AM	10:04 AM	3:14 PM	4:14 PM	5:14 PM	6:14 PM
Cal Poly Library Circle	8:08 AM	9:08 AM	10:08 AM	3:18 PM	4:18 PM	5:18 PM	6:18 PM
McKinleyville (Stores)	8:18 AM	9:18 AM	10:18 AM	3:28 PM	4:28 PM	5:28 PM	6:28 PM

Note 1: This schedule only shows additional buses that would be added as a result of the new express service. These buses would operate in addition to the existing RTS schedule.

- **Cal Poly – CR Express:** Express service would be provided between Library Circle on the Cal Poly Humboldt campus to CR, with other stops only at the Arcata Transit Center, downtown Eureka, and Bayshore Mall. As shown in Table 22, the shorter route and fewer stops allow express runs to be provided every 30 to 40 minutes. A total of 11 runs would be operated in each direction, using two buses. Like in Table 21, the schedule shown in Table 22 is only the express service schedule and does not include the local RTS service.
- **Cal Poly – Eureka Express**: One bus would be used to operate service every 40 minutes, serving only three stops: downtown Eureka (3rd & H), Arcata Transit Center, and Library Circle (it may be possible to also serve a stop slightly further west in downtown Eureka or in the southern portion of downtown Arcata, depending on detailed running time data). A total of 9 trips could be provided in each direction during the peak periods, as shown in Table 23. Table 23 only shows a possible express schedule and does not detail the local RTS service.

There would be two key benefits to an express service that would spur increases in ridership. First, the express runs would **reduce travel time**. For instance, the transit travel time between Library Circle and downtown Eureka (currently 26 minutes) would be reduced by 5 minutes with the McKinleyville-CR Express option. Considering ridership along each of the corridor segments, average travel time would be reduced by 24 percent by the McKinleyville-CR Express option, 33 percent by the Cal Poly-CR Express option, and 38 percent by the Cal Poly-Eureka Express option.

The second benefit would be the additional runs would provide more schedule options, **reducing the average wait between buses** (the headway). As an example, between 1:30 PM and 6:30 PM, there are a total of 11 RTS runs in each direction serving Eureka and CR, of which 6 in each direction serve McKinleyville. This results in an average headway in each direction of 27 minutes in Eureka and CR, and 50 minutes in McKinleyville. The McKinleyville-CR Express option would add 4 runs in each direction over this period, reducing average headways down to 20 minutes in Eureka and 30 minutes in McKinleyville. The Cal Poly-CR Express option would reduce headways to an average of 18 minutes between Cal Poly and CR (with no change in McKinleyville), while the Cal Poly – Eureka option would also reduce average headways to 18 minutes, but only between Cal Poly and Eureka.

Ridership increases for these options were estimated by first reviewing recent corridor weekday ridership and then factoring for the proportion of ridership traveling between the stops served on the different express service options, as well as for the proportion of ridership traveling during the service periods the express options would operate. An elasticity analysis was then conducted to reflect both the reduction in travel time and the reduction in headway. This analysis is detailed in Appendix H.

In sum, the ridership analysis indicates that the McKinleyville-CR Express option would increase ridership by 33,500 boardings per year over the status quo, the Cal Poly-CR Express option would generate 33,200 additional annual boardings, and the Cal Poly-Eureka Express option would add 19,900 annual boardings. Table 24 summarizes the final values produced by the ridership and cost analysis for the three express service options. As shown, the McKinleyville-CR Express option would require $463,400 in additional funding per year (along with the provision of two buses), the Cal Poly-CR Express option would require $511,300 per year (and two buses), and the Cal Poly-Eureka Express option would require $233,400 per year (and one bus).

Table 22: Example RTS Cal Poly-CR Express Schedule

Southbound	Morning					Afternoon						
Cal Poly Library Circle		7:20 AM	8:00 AM	8:30 AM	9:10 AM	2:10 PM	2:40 PM	3:20 PM	3:50 PM	4:30 PM	5:00 PM	5:40 PM
Arcata Transit Center		7:24 AM	8:04 AM	8:34 AM	9:04 AM	2:14 PM	2:44 PM	3:24 PM	3:54 PM	4:34 PM	5:04 PM	5:44 PM
Eureka - 3rd & H	7:06 AM	7:36 AM	8:16 AM	8:46 AM	9:16 AM	2:26 PM	2:56 PM	3:36 PM	4:06 PM	4:46 PM	5:16 PM	5:56 PM
Eureka - Bayshore Mall	7:13 AM	7:43 AM	8:23 AM	8:53 AM	9:23 AM	2:33 PM	3:03 PM	3:43 PM	4:13 PM	4:53 PM	5:23 PM	
College of the Redwoods	7:25 AM	7:55 AM	8:35 AM	9:05 AM	9:35 AM	2:45 PM	3:15 PM	3:55 PM	4:25 PM	5:05 PM	5:35 PM	
Northbound												
College of the Redwoods	7:27 AM	7:57 AM	8:37 AM	9:07 AM	9:37 AM	2:47 PM	3:17 PM	3:57 PM	4:27 PM	5:07 PM	5:37 PM	
Eureka - Bayshore Mall	7:35 AM	8:05 AM	8:45 AM	9:15 AM	9:45 AM	2:55 PM	3:25 PM	4:05 PM	4:35 PM	5:15 PM	5:45 PM	
Eureka - 3rd & H	7:42 AM	8:12 AM	8:52 AM	9:22 AM	9:52 AM	3:02 PM	3:32 PM	4:12 PM	4:42 PM	5:22 PM	5:52 PM	
Arcata Transit Center	7:54 AM	8:24 AM	9:04 AM	9:34 AM	10:04 AM	3:14 PM	3:44 PM	4:24 PM	4:54 PM	5:34 PM	6:04 PM	
Cal Poly Library Circle	7:57 AM	8:27 AM	9:07 AM	9:37 AM	10:07 AM	3:17 PM	3:47 PM	4:27 PM	4:57 PM	5:37 PM	6:07 PM	

Note 1: This schedule only shows additional buses that would be included with new express service. These buses would operate in addition to the existing buses.

Table 23: Example RTS Cal Poly-Eureka Express Schedule

Northbound	Morning			Afternoon					
Eureka - 3rd & H	7:30 AM	8:10 AM	8:50 AM	2:00 PM	2:40 PM	3:20 PM	4:00 PM	4:40 PM	5:20 PM
Arcata Transit Center	7:42 AM	8:22 AM	9:02 AM	2:12 PM	2:52 PM	3:32 PM	4:12 PM	4:52 PM	5:32 PM
Cal Poly Library Circle	7:46 AM	8:26 AM	9:06 AM	2:16 PM	2:56 PM	3:36 PM	4:16 PM	4:56 PM	5:36 PM
Southbound									
Cal Poly Library Circle	7:50 AM	8:30 AM	9:10 AM	2:20 PM	3:00 PM	3:40 PM	4:20 PM	5:00 PM	5:40 PM
Arcata Transit Center	7:54 AM	8:34 AM	9:14 AM	2:24 PM	3:04 PM	3:44 PM	4:24 PM	5:04 PM	5:44 PM
Eureka - 3rd & H	8:06 AM	8:46 AM	9:26 AM	2:36 PM	3:16 PM	3:56 PM	4:36 PM	5:16 PM	5:56 PM

Table 24: Redwood Transit System - Service Alternatives Summary

	Change In Annual Service						
Service Alternative	Service Hours	Service Miles	Operating Cost	Ridership	Fare Revenues	Operating Subsidy	Peak Buses
RTS Status Quo[1]							
Weekdays	26,705	563,880	$3,572,900	194,698	$457,899	$3,115,001	
Saturdays/Holidays	2,299	12,894	$223,100	20,005	$47,049	$176,051	
Total	29,004	576,774	$3,796,000	214,703	$504,948	$3,291,052	
Alternatives - Change from Status Quo [2]							
RTS Express Service							
McKinleyville-CR Express	3,234	81,255	$463,400	33,500	$78,800	$384,600	2
Cal Poly-CR Express	3,179	103,378	$511,300	33,200	$78,100	$433,200	2
Cal Poly-Eureka Express	1,494	45,720	$233,400	19,900	$46,800	$186,600	1
RTS Span of Service Alternatives							
Later Weekday Service on RTS	2,159	35,560	$274,600	8,000	$18,800	$255,800	0
Later Saturday Service on RTS	114	2,500	$18,100	500	$1,200	$16,900	0
Sunday Service [3]	936	14,130	$135,300	5,700	$13,400	$121,900	0
Samoa Microtransit Service							
Microtransit Service[4]	2,628	52,560	$349,200	11,600	$34,800	$314,400	1
Shift RTS Manila Runs to 101	-251	-4,022	-$30,600	2,800	$6,585	-$30,600	0
Total	2,377	48,538	$318,600	14,400	$41,385	$283,800	0

Note 1: Status Quo is based on 2022-23 operating parameters referenced in Table 20.
Note 2: Parameters and costs represent change over existing services. Includes allocated operating costs.
Note 3: Sunday service would incur additional fixed and operating costs including a dispatcher and mechanic on duty.
Note 4: Assumes a general microtransit fare of $3.00 per one-way trip. Actual fares would need to be determined prior to implementation. Costs include $4,500/yr for app.

Later Weekday Service on RTS Mainline

The last weekday RTS departure time is currently as early as 6:40 PM (at Fortuna) in the southbound direction and 6:28 PM (at Scotia) in the northbound direction. While the lack of evening service is common among rural and small urban transit systems, considering the travel needs generated by evening activities in the Humboldt region (including university/college classes, evening work shift times, and cultural events), evening RTS service would provide mobility benefits to the region. A reasonable scenario given the relative ridership along the route would be to provide two additional trips in each direction between McKinleyville and Fortuna. New northbound departures would be provided from Fortuna at approximately 7:10 PM and 8:30 PM, along with new southbound departures from McKinleyville around 7:45 PM and 8:45 PM.

Considering the relative evening versus daytime ridership seen in other similar areas currently providing evening service as well as in Arcata as well as current RTS weekday ridership, this service is estimated to generate an increase in ridership of 8,000 passenger-trips per year. The service would add 2,159 vehicle-hours and 35,560 vehicle-miles per year. It would also require additional dispatch and maintenance staff to extend the system-wide hours of service. Overall, this option would increase operating costs by $274,600 annually. Subtracting $18,800 in fare revenues, this option would require $255,800 in annual subsidy.

Later Saturday Service on RTS Mainline

On Saturdays, the RTS Mainline starts at 8:30 AM (both northbound and southbound) and ends between 9:15 and 9:30 PM. Under this alternative, two additional runs would be operated on Saturdays; one additional northbound bus would leave CR at 9:25 PM and arrive at Valley West at 10:20 PM, and one additional southbound bus would leave Valley West at 9:20 PM and arrive at CR at 10:10 PM. This would add 114 vehicle hours and 2,500 vehicle miles of service annually at a cost of $18,100 (Table 24). The increase in hours is estimated to generate 500 additional passenger trips per year and fare revenue of $1,200 (based on average fares collected on the route from July 2022 through March 2023). The subsidy required would therefore be $16,900.

Sunday Service on RTS Mainline

RTS Sunday service was discontinued in March 2020 due to low ridership during the pandemic. To reinstate reduced Sunday service between 9:00 AM and 6:00 PM, with hourly departures from Valley West southbound and Bayshore Mall northbound, would add 936 service hours and $135,300 in operating costs, including the costs of additional dispatch and mechanic time on Sundays. Based on RTS Saturday ridership, the observed ratio of Sunday to Saturday RTS ridership before the pandemic, and the percentage of total boardings that occur between Valley West and Bayshore Mall, it is estimated the RTS Sunday service would generate 5,700 boardings annually. Two buses would also be required, impacting the existing employee pool.

Samoa/Manila Microtransit Service

Under this scenario, a microtransit service would be implemented to serve the Samoa Peninsula as far south as Fairhaven and as far north as Manila, along with Woodley Island. In addition, direct microtransit would be provided to downtown Eureka (including the 3rd & H transit hub, and grocery stores at Grocery Outlet and Target) for passengers traveling to and from the peninsula. This service zone is shown in Figure 14. This service would be provided on weekdays from 7 AM to 11 AM and from 1 PM to 6 PM, while on Saturdays the service would be limited to 12 PM to 6 PM.

The microtransit service would replace the fixed route Samoa Transit System, which was suspended as of July 2023. It would also allow the existing RTS runs that travel via Manila (5 northbound and 4 southbound runs per weekday and 2 runs per Saturday) to instead remain on US 101. The RTS runs that operate through Manila currently serve an average of only 3 passengers per day (boarding or alighting). In comparison, the stops in eastern Eureka on US 101 that are not served whenever RTS goes through Manila generate approximately 130 passenger trips per day (or 3 trips per run). In comparison with the past and current transit services catered to the peninsula, a new Samoa microtransit service would have the following impacts on ridership potential:

- Rather than service in Samoa only 7 times per weekday and 4 times per Saturday, service would be available any time during 9 hours per weekday and 6 hours per Saturday.
- The microtransit service would result in reduced wait times compared to the Samoa Transit System or RTS, as passengers would be able to request rides any time during operating hours versus having to wait for a fixed route bus to arrive.
- The microtransit service area would include the Manila area (with a larger population than Samoa) and Fairhaven to serve more residents and employment centers.
- Rather than requiring a transfer at 3rd & H in Eureka to get to activity centers in the downtown area, peninsula residents would be provided with direct trips within the microtransit service area (shown in Figure 14).

Considering these factors and past ridership on Samoa Transit, the microtransit service would likely serve 11,600 passenger trips per year (or 46 per average weekday), as shown in Table 24. Ridership estimates also need to consider the additional impacts, however, of all RTS runs serving US 101 in Eureka instead of deviating to Manila. It is expected that skipping the trips to Manila will slightly increase overall ridership due to the higher ridership generated in eastern Eureka. The net impact of this alternative therefore would be to increase ridership by 14,400 passenger trips per year. Ridership estimates are detailed in Appendix H.

Including the reduction in annual RTS running time by using the US 101 route, this option increases overall service hours by a net of 2,377 and annual vehicle miles by 48,538. These operation numbers would result in the Samoa microtransit service increasing total operating costs by $318,600 per year.

Figure 14
Potential Samoa/Manila Microtransit Service Area

Performance Comparison of RTS Service Alternatives

Table 25 shows the relative performance of each of the RTS service alternatives. The increase in ridership generated by the alternatives ranges from just 500 (by adding later Saturday service) to 33,500 passenger trips (by operating express service between McKinleyville and CR). Annual costs are estimated to increase from $18,100 to $511,300. Performance can be evaluated in terms of passenger trips carried per vehicle service hour (VSH) and operating cost per passenger trip. In terms of passenger trips per VSH, the best alternative is the RTS Express service between Cal Poly and Eureka (13.3). This is followed by the other two express options, both expected to carry 10.4 passenger trips per VSH. Later weekday service is the least productive at 3.7 passenger trips per VSH, while Saturday service would serve 4.4 passenger trips per VSH and Sunday service and Samoa microtransit both would serve 6.1 passenger trips per VSH.

Alternatives can also be measured by cost-effectiveness, specifically the operating cost per passenger trip. This value ranges from a low of $11.73 for the Cal Poly – Eureka Express alternative to a high of $36.31 for later weekday service. Again, by this measure, the express service alternatives are the "best" options, and extended RTS Saturday service is the "worst," with Sunday service and Samoa Microtransit service in the middle. It should be noted that the service alternatives have other benefits, such as providing a transportation option for people without a car on Sunday or providing a later bus that people could use to get home from work or school, which should still be considered beyond traditional performance standards.

Table 25: Comparison of RTS Service Alternatives

Alternatives *(from Table 24)*	Annual Ridership	Annual Operating Cost[1]	Passenger-Trips per VSH	Operating Cost per Passenger-Trip
Status Quo	214,703	$3,796,000	7.4	$17.68
RTS Express - McKinleyville-CR	33,500	$463,400	10.4	$13.83
RTS Express - Cal Poly-CR	33,200	$511,300	10.4	$15.40
RTS Express - Cal Poly-Eureka	19,900	$233,400	13.3	$11.73
Later Weekday Service on RTS	8,000	$274,600	3.7	$34.33
Later Saturday Service on RTS	500	$18,100	4.4	$36.20
Sunday Service	5,700	$135,300	6.1	$23.74
Samoa Microtransit Service & Stop RTS Service to Manila	14,400	$318,600	6.1	$22.13

Note 1: Includes allocated administrative costs.

ETS ROUTE NETWORK ALTERNATIVES

This section presents two system-wide route service alternatives to the existing ETS route structure. The ETS route system currently consists of four routes on weekdays and two routes on Saturdays. Focusing on the weekdays, the four routes are long cross-town routes with large one-way loops. Three routes originate at 3rd/H (Red, Gold, and Purple) at the top of the hour and operate generally north-south, and the fourth route operates generally east-west. All routes also serve a common stop at F/Harris in central Eureka, though direct transfers are only available between three of the routes at any one time due to scheduling limitations. The ETS route structure has evolved, largely to provide at least hourly services to the broadest geographic area within the current financial constraints (funds are only sufficient for four buses on weekdays). The ETS route network alternatives assume the same service hours, with only minimal additional costs due to slight changes in mileage. Detailed explanations of how ridership impacts were calculated for each network alternative are provided in Appendix H.

Existing Route Structure Service Quality

Table 26 presents a summary of the quality of transit service between six key areas of Eureka. The table presents the required travel time (in minutes) for each origin/destination pair. In addition, the available service frequency (either hourly or more frequent) is shown by shading, and the need to transfer as part of the trip is indicated by a "T." As shown, this table reveals the following:

- Under the current route structure and schedule, travel times range up to 85 minutes (1 hour 25 minutes) for a single one-way trip. There are a total of five trips that require 50 or more minutes to complete. Averaging overall trips, the average in-vehicle travel time to complete a trip is 28 minutes.
- Most of the trips (28 out of 30) are currently only provided once per hour[4]. Six out of 30 trips (20 percent) require a transfer. Some of the long existing transit times reflect that there is no central hub that allows passengers to transfer directly between all four buses.

F/Harris Hub Route Structure Scenario

Many cities of Eureka's population and geographic size have found that an effective route structure is a "hub and spoke" system. Under this structure, all buses serve a single hub at a specific time each hour, which allows all passengers to make direct bus-to-bus transfers, rather than having to wait between buses to complete a transfer or needing to walk between different stops. Passengers would also be able to complete any full trip with no more than one transfer. Wait times at the hub between buses would be minimized. Each bus then makes trips out along a "spoke" (which may include a loop at the far end to maximize coverage) before returning to the hub to allow passengers to transfer again. Individual buses may potentially operate more than one route over the hour.

[4] While three routes service downtown and 3rd & H, the fact that all three only serve this stop at the top of the hour limits the effective service frequency to/from other areas to hourly.

Table 26: ETS Transit Service Quality - Weekday Travel Times, Frequency, and Transfers

						Less than 60 Minute Frequency	60 Minute Frequency
Travel Time in Minutes T = Transfer Required		Destination Stop					
		Downtown (3rd & H Sts)	Providence St. Joseph Hospital	Harris & F Sts	Bayshore Mall	Cutten (Fern & Walnut Sts)	Southwest Eureka (Herrick & Vance Aves)
Origin Stop	Downtown (3rd & H Sts)		22	19	13	36	22
	Providence St. Joseph Hospital	34		13	28	33 T	66 T
	Harris & F Sts	14	7		11	8	36
	Bayshore Mall	28	21	7		23	50
	Cutten (Fern & Walnut Sts)	25	11	12	38		57 T
	Southwest Eureka (Herrick & Vance Aves)	39	48 T	19	11	85 T	

Note: Excludes Redwood Transit System service.
Source: LSC Transportation Consultants, Inc. (based on published schedules and Google Maps).

Examples of existing cities with hub-and-spoke systems include Lodi, California; Hanford, California; Carson City, Nevada; and Logan, Utah.

Providing the hub near the center of the service area has the benefit of providing routes with similar running times, increasing the ability to provide direct transfers, while also minimizing out-of-direction travel for individual passenger trips. In Eureka, this location is the existing stop at F/Harris (JoAnne's). Up to three buses are at this location at any one time at present; however, there is sufficient curb space for at least four buses. Figure 15 presents a conceptual route structure with a hub at F/Harris.

As also shown in Table 27, eight route segments were defined. These were developed based on the existing ridership generated by each specific bus stop served by ETS, and the realistic running speed (consistent with existing route running speeds). Route segments were then paired to identify the two segments comprising each route (operated by each bus within a 60-minute schedule), while also providing at least 8 minutes per hour of driver break and recovery time. These full routes are shown in the bottom portion of Table 27.

Figure 15
ETS Routing Alternative - F & Harris Street Hub

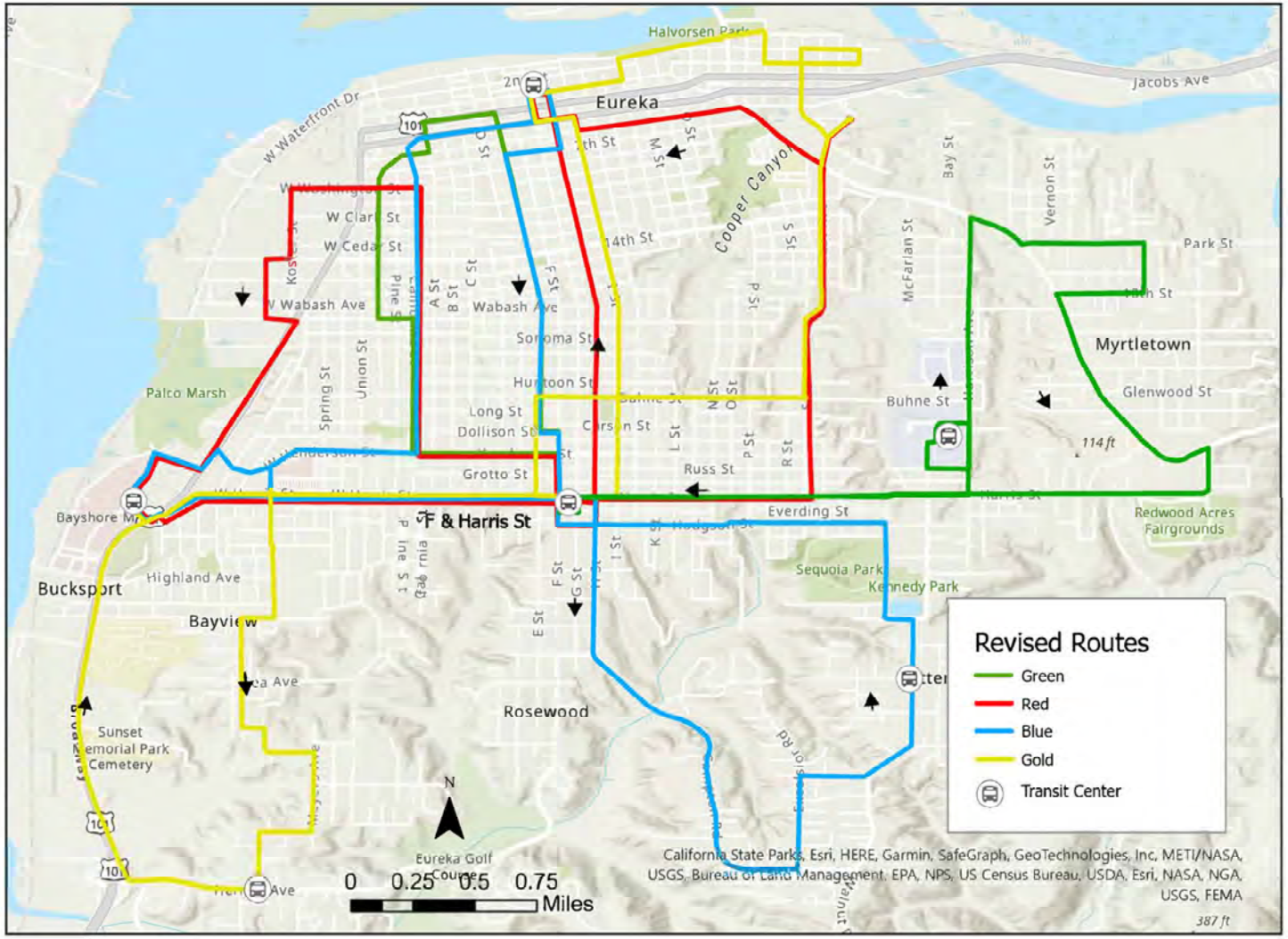


Table 27: F & Harris Hub Scenario Routes

			Distance Route Length (Miles)	Running Time (Minutes)
Individual Route Segments				
North CCW			4.2	19
Central CCW			5.6	25
North CW			6.6	32
Central CW			5.4	24
East			7.2	33
SE			4.8	20
SW			5.8	26
NW			5.4	24
Interlined Routes				
Green	North CCW	East	11.4	52
Blue	SE	North CW	11.4	52
Yellow	SW	Central CW	11.2	51
Red	Central CCW	NW	11.0	50

Source: LSC Transportation Consultants, Inc.

To assess the quality of service provided by this route scenario, it is necessary to develop a simple route schedule. As shown in Table 28, each bus under this example schedule would depart F/Harris 24 to 30 minutes after the top of the hour. They would each depart on one route segment (at various times after the driver breaks), and then all return at 49 to 53 minutes past the hour to F/Harris to transfer passengers before operating the remainder of the route. The routes have been designed to provide two trips per hour to/from both downtown as well as the Bayshore Mall.

Table 28: Example Simplified Schedule - F/Harris Hub Scenario

Bus	Green	Blue	Gold	Red
1st Route	North CCW	SE	SW	Central CCW
2nd Route	East	North CW	Central CW	NW
Minutes Past the Top of the Hour				
Depart F/Harris	30	29	27	24
Downtown (A & 101)	39	--	--	--
Downtown (H & 3rd)	--	--	--	42
Cutten	--	37	--	--
Southwest	--	--	39	--
Bayshore Mall	--	--	41	--
F/Harris	49	49	53	49
St. Joseph Hospital	55	--	--	--
Bayshore Mall	--	57	--	7
Downtown (H & 3rd)	--	11	60	--
Arrive F/Harris	22	21	18	14

Source: LSC Transportation Consultants, Inc.

Table 29 presents a service quality summary for this route alternative, similar to the existing service quality summary for the existing route structure shown in Table 26. In comparison with the existing service quality, the service provided under this route structure alternative is as follows:

Table 29: ETS Transit Service Quality With F & Harris Hub Scenario

Weekday Travel Times, Frequency, and Transfers

	Less than 60 Minute Frequency	60 Minute Frequency

Travel Time in Minutes T = Transfer Required		Destination Stop: Downtown (3rd & H Sts)	Providence St. Joseph Hospital	Harris & F Sts	Bayshore Mall	Cutten (Fern & Walnut Sts)	Southwest Eureka (Herrick & Vance Aves)
Origin Stop	Downtown (3rd & H Sts)		36 T	7	15 T	30	21 T
	Providence St. Joseph Hospital	47		27	46 T	46 T	40 T
	Harris & F Sts	7	6		8	8	12
	Bayshore Mall	14	14 T	7		40	38 T
	Cutten (Fern & Walnut Sts)	30 T	18 T	12	20 T		58 T
	Southwest Eureka (Herrick & Vance Aves)	21	20 T	14	6	62 T	

Change in Travel Time (Minutes)

Origin Stop	Downtown (3rd & H Sts)		14	-12	2	-6	-1
	Providence St. Joseph Hospital	13		14	18	13	-26
	Harris & F Sts	-7	-1		-3	0	-24
	Bayshore Mall	-14	-7	0		17	-12
	Cutten (Fern & Walnut Sts)	5	7	0	-18		1
	Southwest Eureka (Herrick & Vance Aves)	-18	-28	-5	-5	-23	

Note: Excludes RTS service.

Source: LSC Transportation Consultants, Inc. (based on published schedules and Google Maps).

- The maximum trip length is 62 minutes (between southwest Eureka and Cutten), which is still a long trip for a city of Eureka's size, but 23 minutes shorter than the existing longest trip.
- The average in-vehicle travel time is 24 minutes, which is 13 percent less time than the current 28 minutes.
- As shown in the bottom portion of Table 29, travel times are generally reduced for trips to/from southwest Eureka, downtown, and F/Harris; times are generally increased for trips to/from east Eureka (presented by Providence & St. Joseph Hospital).
- There are a total of only 2 trips requiring 50 or more minutes, down from 5 today.

- A total of 5 trips are served more than once an hour, substantially more than the 2 trips today.
- 14 of the 30 trips require a transfer, compared to the 6 requiring a transfer today.

Overall, this route structure would provide a modest improvement in ETS service quality. While more passengers would need to transfer as part of their trip, the average travel time is reduced, and more trips (particularly to/from downtown) are served more than once an hour.

Under this route structure, to provide consistent Saturday service with two buses, one bus would operate the interlined Southwest/Central routes and the second would operate the interlined East/North Counterclockwise routes.

EaRTH Center Route Structure Scenario

The other logical location of a transit hub for the ETS system is at the planned Eureka Regional Transit and Housing (EaRTH) Center at H and 3rd. Enhancing transit to this location would complement the planned housing on the site. This location is currently served by three of the weekday ETS routes, but not the Green Route.

A total of six route segments were first defined, as shown in Table 30. Figure 16 presents a conceptual route plan that incorporates all four buses at the EaRTH Center location. A simplified schedule of these routes is shown in Table 31. With the hub location near one edge of the service area, two of the routes serving the southernmost areas (Southwest and South) would require an hour cycle time. Two route segments would require roughly 33 minutes (West and Southeast) while two would require roughly 17 minutes (East and Central). These latter four route segments would be combined into two routes with an hourly cycle length, for a total of four routes operated hourly by four buses. Each bus would have 10 to 11 minutes of layover/recovery time.

Table 30: EaRTH Center Hub Scenario Routes

			Distance Route Length (Miles)	Running Time (Minutes)
Individual Route Segments				
West			7.5	34
East			3.5	16
Southwest			10.7	50
South			10.8	49
Central			3.8	17
Southeast			7.7	33
Interlined Routes				
Red	West	East	11.0	50
Green	Southeast	Central	11.5	50
Gold	Southwest		10.7	50
Blue	South		10.8	49

Source: LSC Transportation Consultants, Inc.

Figure 16
ETS Routing Alternative – EaRTH Center Transfer Hub

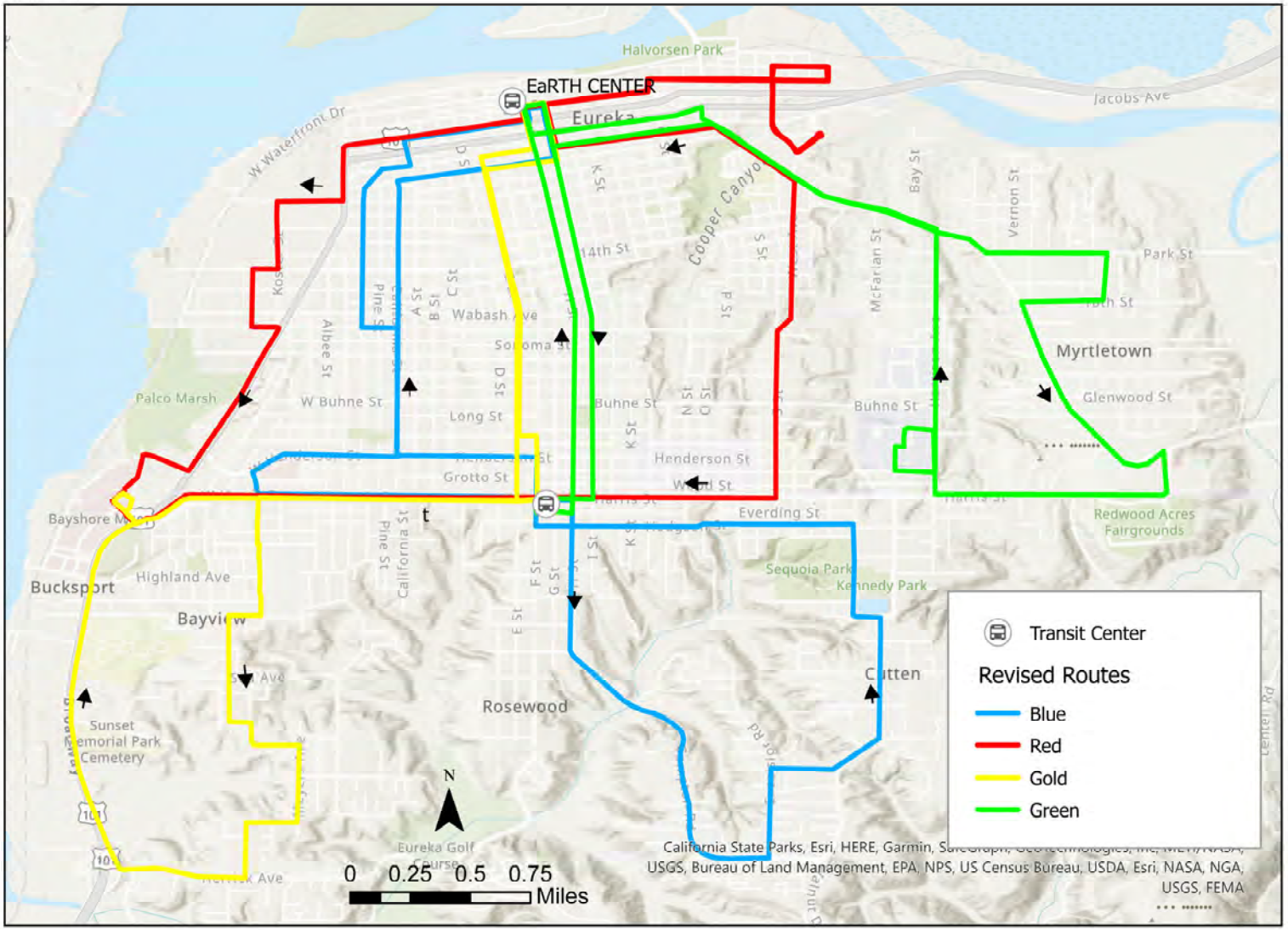


Table 31: Example Simplified Schedule - EaRTH Center Hub Scenario

Bus	Red	Green	Gold	Blue
1st Route	West	Southeast	Southwest	South
2nd Route	East	Central		
Minutes Past the Top of the Hour				
Depart EaRTH Center	0	1	0	2
Bayshore Mall	14	--	--	--
F/Harris	19	--	9	19
St. Joseph Hospital	--	21	--	--
EaRTH Center	34	34	--	--
Southwest	--	--	23	--
Bayshore Mall	--	--	29	--
Cutten	--	--	--	32
Target	42	--	--	--
F/Harris	--	43	37	43
Arrive EaRTH Center	50	51	50	51

Source: LSC Transportation Consultants, Inc.

As indicated in Table 31, all buses would be at the EaRTH Center at the top of the hour. Two buses would return from the first route segment to allow a transfer at the EaRTH Center at 34 minutes past the hour (from West to Central and from Southeast to East). In addition, the schedule would provide a direct transfer time at F/Harris at 19 minutes past the hour (between the West and South routes) and at 43 minutes past the hour (between the Central and South routes).

Table 32 presents the overall service quality provided by a route system with an EaRTH Center hub. In comparison with the existing service quality, this route structure alternative would function as follows:

- The maximum trip length is 70 minutes (between eastern Eureka around the Providence St. Joseph Hospital and Cutten), which is 15 minutes shorter than the existing longest trip.
- The average in-vehicle travel time is 27 minutes, which is 2 percent less than the current 28 minutes.
- As shown in the bottom portion of Table 13, travel times are generally reduced for trips to/from downtown and southwest Eureka, and F/Harris, while travel times generally increase for trips to/from east Eureka (presented by Providence & St. Joseph Hospital) and Bayshore Mall.
- There are a total of 6 trips requiring 50 or more minutes, a modest increase from 5 today.
- 3 trips are served more than once an hour, a modest improvement from the 2 trips today.

On Saturdays under this route structure, the combined Central/Southeast bus and Southwest bus would be operated.

Table 32: ETS Transit Service Quality With EaRTH Center Hub Scenario
Weekday Travel Times, Frequency, and Transfers

	Less than 60 Minute Frequency	60 Minute Frequency

Travel Time in Minutes T = Transfer Required		Destination Stop					
		Downtown (3rd & H Sts)	Providence St. Joseph Hospital	Harris & F Sts	Bayshore Mall	Cutten (Fern & Walnut Sts)	Southwest Eureka (Herrick & Vance Aves)
Origin Stop	Downtown (3rd & H Sts)		21	9	14	31	23
	Providence St. Joseph Hospital	13		22	53 T	70 T	62 T
	Harris & F Sts	8	38		20	13	14
	Bayshore Mall	20	14 T	8		37 T	53
	Cutten (Fern & Walnut Sts)	20	18 T	12	43 T		52 T
	Southwest Eureka (Herrick & Vance Aves)	20	20 T	14	6	68 T	

Change in Travel Time (Minutes)

Origin Stop	Downtown (3rd & H Sts)		-1	-10	1	-5	1
	Providence St. Joseph Hospital	-21		9	25	37	-4
	Harris & F Sts	-6	31		9	5	-22
	Bayshore Mall	-8	-7	1		14	3
	Cutten (Fern & Walnut Sts)	-5	7	0	5		-5
	Southwest Eureka (Herrick & Vance Aves)	-19	-28	-5	-5	-17	

Note: Excludes RTS service.

Note: 10-minute penalty added to trips that require a transfer.

Source: LSC Transportation Consultants, Inc. (based on published schedules and Google Maps).

Overall, this route option provides a modest improvement in service quality compared to the existing routing plan. It does not provide full east-west fixed route service across southern Eureka, requiring travel between eastern Eureka and other areas to go through downtown. However, it does increase service to the EaRTH Center and maximizes potential transfers to and from the RTS buses.

In comparing the two hub options, the F/Harris hub provides better service quality for ETS riders, particularly due to the lower average ride time, the reduced number of long trips over 50 minutes, and the greater number of trips that can be made more than one time per hour. However, the EaRTH Center hub plan provides moderately better opportunities for transfers to/from the RTS service, with a total of 8 arrivals/departures at transfer points in downtown or Bayview Mall per hour, compared with 7 under the F/Harris hub option. It would also make transfers between ETS and RTS buses easier to understand than under the F/Harris hub option.

Other ETS Route Modifications

If the general route structure is maintained (rather than shifting to a hub-and-spoke model, like those discussed above), one relatively modest but beneficial modification would be to shift the Purple Route by providing service in both directions on West Avenue/S Street (rather than providing southbound service on Harrison Avenue) and use this reduced running time to extend north on H Street and I Street to the EaRTH Center. This would provide additional transfer opportunities to other ETS routes as well as to RTS services. There would be no net change in route length or running time. Service on Harrison Avenue would still be provided by the Green Route. This would generate an estimated 900 passenger trips and $1,500 in fare revenue with no added costs, as shown in Table 33.

ETS Span of Service Alternatives

In addition to shorter travel times, common requests for improvements on ETS were for longer hours, Sunday service, and increased frequency. Figure 17 illustrates the current hourly ridership pattern. The cost and ridership impacts of the span of service options are discussed below and depicted in Table 33. The process for calculating ridership impacts of the ETS span of service alternatives is described in more detail in Appendix H.

Expand Weekday Service to 7:00 PM on ETS Gold, Purple, Green, and Red Routes

Currently, the Gold, Purple, Green, and Red Routes operate from approximately 7 AM to 6 PM on weekdays. This schedule can be challenging for workers whose shifts end at 5 PM if their trip requires a transfer, as well as for workers who work later than 5 PM. Under this alternative, service on these four routes would be extended one hour, to 7 PM. This would add 1,016 hours and 11,506 miles of service at an annual cost of $133,800. Before COVID, ridership from 6 to 7 PM was only 2.2 percent of weekday ridership, therefore it is expected that ridership during the extended ETS weekday evening hours would be 2,100 passenger trips annually, generating $3,600 in fare revenue. The resulting annual subsidy would be $130,200, as shown in Table 33.

Expand Weekday Service to 9:00 PM on ETS Gold and Rainbow Routes

Passengers on all Humboldt County transit services, including ETS, indicated a preference for later service. As more local students and workers are expected to find housing in Eureka in the upcoming years, it is worth considering extended evening service to facilitate trips for work, school, and social activities. Under this alternative, the Gold and Rainbow Routes would operate on weekdays from 6 PM until 9 PM. This would add 1,524 hours and 17,145 miles of service at an operating cost of $199,900 annually. The estimated hourly ridership would be similar to that carried in the previous alternative; therefore, ridership would be an estimated 3,200 passenger trips annually, generating $5,400 in fare revenue. The annual marginal subsidy would therefore be $194,500.

Table 33: Eureka Transit Service - Service Alternatives Summary

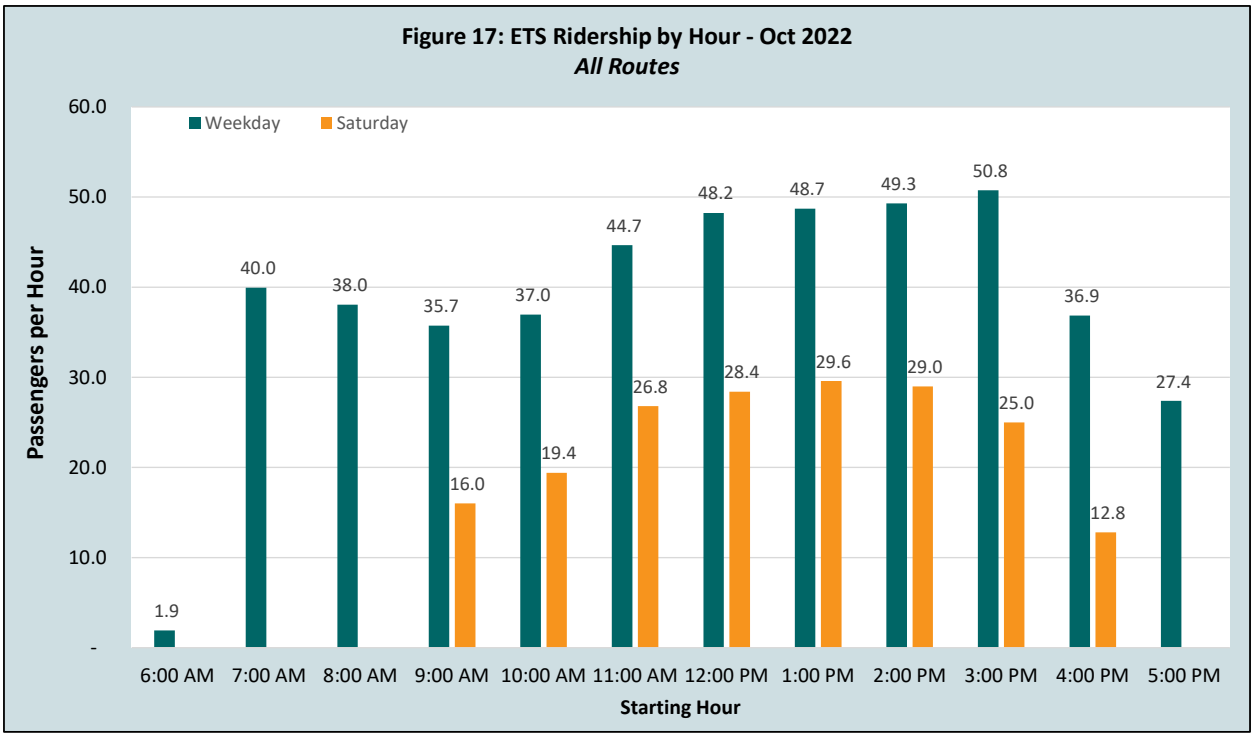
Service Alternative	Change In Annual Service: Service Hours	Service Miles	Operating Cost	Ridership	Fare Revenues	Operating Subsidy	Peak Buses
ETS Status Quo[1]							
Weekdays	10,424	111,536	$1,348,860	97,664	$166,040	$1,182,820	
Saturdays	1,150	12,894	$151,020	8,726	$14,840	$136,180	
Total	11,574	124,430	$1,499,880	106,390	$180,880	$1,319,000	
ETS Service Alternatives - Change from Status Quo[2]							
ETS Route Realignment Alternatives							
Earth Center Hub Scenario	0	0	$0	1,300	$2,200	-$2,200	0
F & Harris Street Hub Scenario	0	0	$0	7,500	$12,800	-$12,800	0
Shift Purple - Harrison to West/S Streets	0	0	$0	900	$1,500	-$1,500	0
ETS Span of Service Alternatives							
Expand ETS Gold, Purple, Green, Red to 7:00 PM Weekdays	1,016	11,506	$133,800	2,100	$3,600	$130,200	0
Expand ETS Gold and Rainbow to 9:00 PM Weekdays	1,524	17,145	$199,900	3,200	$5,400	$194,500	0
ETS Gold and Rainbow Sundays 10 AM - 3 PM[3]	520	5,850	$95,200	2,000	$3,400	$91,800	0
ETS Gold & Red Every 30 Min. 7:30 AM -5:30 PM	5,080	56,388	$665,000	15,300	$26,000	$639,000	2
ETS Microtransit Service[4]	7,656	99,500	$1,106,500	27,700	$72,700	$1,033,800	3

Note 1: Status Quo is based on 2022-23 operating parameters referenced in Table 20.
Note 2: Parameters and costs represent change over existing services. Includes allocated operating costs.
Note 3: Sunday service would incur additional fixed and operating costs including a dispatcher and mechanic on duty.
Note 4: Assumes a general microtransit fare of $3.00 per one-way trip. Costs include $50,000/year for app.

Sunday Service on ETS

ETS passengers frequently request Sunday service. Under this alternative, the Gold and Rainbow Routes would be operated from 10 AM to 3 PM on Sundays. This would add 520 hours and 5,850 miles of service at an operating cost of $95,200 annually[5]. It is estimated based on relative Saturday versus Sunday ridership in similar communities (as well as RTS ridership when Sunday service was previously operated) that hourly ridership would be approximately half of what is observed on Saturdays. Based on average ETS Saturday ridership and the recommended hours of Sunday service (5 hours per day), it is estimated that ETS Sunday service would carry 2,000 passenger trips annually. The Sunday passengers would generate $3,400 in fare revenue, resulting in the annual marginal subsidy for the service being $91,800. Like Sunday service on RTS, however, it should be considered that operating Sunday service on ETS would require additional staff (dispatcher, on-call mechanic, and two drivers), and would impact existing employees by potentially requiring them to work on Sundays.

[5] This includes an additional $50 per clock hour to fund additional dispatcher and mechanic time.



Increased Weekday Frequency on ETS

More frequent transit service is another common request, and the factor found to be most likely to improve service quality for passengers. As doubling the system to provide half-hourly service on all routes is cost prohibitive, this alternative instead evaluated increasing frequency on the Gold and Red Routes (currently the most productive ETS services) to every half hour on weekdays from 7:30 AM to 5:30 PM (ten additional service hours per route, per weekday). This would require two additional vehicles in service and would result in an annual increase of 5,080 service hours and an operating cost increase of $665,000. Based on an elasticity analysis, summarized in Appendix H, ridership would increase by 15,300 passenger trips annually, generating $26,000 in fare revenue, for a marginal operating subsidy of $639,000.

Citywide Microtransit in Eureka

A microtransit program could be implemented for the Eureka area, augmenting the existing fixed route service. This service would have the following characteristics:

- The service area would be consistent with the existing ETS fixed route service area, including the City of Eureka (except the Brainard area) as well as the Myrtletown region.
- Service hours would be consistent with the ETS fixed route service hours – weekdays from 7 AM to 6 PM and Saturdays from 9 AM to 5 PM.
- For purposes of this analysis, a fare of $3.00 per one-way trip for a general adult is assumed, with a reduced fare of $2.60 provided for youth, elderly, and persons with disabilities (the

same percent discount as the existing cash fares). Actual fares would need to be determined at a later date before implementing such a program.

- Riders would use an app or call the dispatcher to request a ride. Service would be provided to serve at least 90 percent of ride requests within a half hour.
- Service would be co-mingled with HTA DAR service to make better use of the existing service.

Ridership on a citywide microtransit service was estimated based on a peer review of other urban microtransit services around northern California and Nevada (Appendix G). Considering the demographic characteristics of Eureka compared with these peer areas, it is estimated that microtransit demand would equal approximately 2.5 trips per thousand residents per weekday. This indicates a total of approximately 27,700 passenger trips per year. Appendix H summarizes how these ridership estimates were made.

The operating costs can be estimated by defining the hourly demand for ridership and the consideration that a reasonable maximum productivity for a demand response system, given Eureka's geography, is 4 passenger trips per service-hour. This indicates that two vehicles would be required on weekdays to serve the demand, and an additional third vehicle would be needed between 11 AM and 4 PM. On Saturdays and holidays, two vehicles would be needed for most hours, except for the first and last hour of the day when one vehicle would be required. Over the course of a year, this would total 7,656 vehicle hours of service. At an estimated average traveling speed of 13 miles per hour, 99,500 vehicle-miles would be operated. These quantities indicate a total operating cost of $1,106,500 per year. Subtracting $72,700 in annual fare revenues, this service would require $1,033,800 in additional annual subsidy funding. This data is listed in Table 33.

As an aside, consideration was also given to fully replacing the ETS fixed routes with microtransit service. However, given the existing ETS ridership and the inherent limitations on the productivity of microtransit, this would require an approximately 130 percent increase in annual service hours and operating costs. Replacing the ETS fixed routes with microtransit would also require up to 10 vehicles in operation at peak times (in comparison to the four current ETS buses) to serve the same number of passengers. In light of the higher cost and lower effectiveness, this option was not considered further.

Microtransit Serving Southwest Eureka

Another possible application of the microtransit concept in Eureka would be to replace fixed route service in a particular portion of the current ETS service area that has relatively low ridership with microtransit, which would allow for a reduction in the number of fixed route buses in operation and thus the amount of funding needed for fixed routes. Reviewing ridership data by stop for the ETS fixed routes (September 2022), the best potential area for a limited microtransit service is the portions of the existing service area south of Harris Street. This area is currently served by the Red Route (the southeastern Cutten area) and the Gold Route (the southwest Bayview and Pine Hill areas), both of which have roughly half of their hourly running time allocated to serving this area. Under this alternative, a microtransit service would be established serving the areas south of Harris Street and providing transfers to the fixed routes at 4th / Harris and Bayshore Mall. The southern

portions of the Gold and Red Routes would be eliminated and the remaining portions of these routes recombined to be served with 1 bus (reducing the total number of fixed route buses in operation from 4 to 3).

The existing fixed route segments that would be eliminated currently serve a total of 188 passenger trips (both boarding and alighting) on weekdays and 77 on Saturdays, with up to 21 passengers in the peak weekday hour and 12 in the peak Saturday hour. To serve the existing ridership given the constraints on the passengers per hour that can be served by microtransit, up to 5 microtransit vehicles would be needed on weekdays and up to 3 on Saturdays. Over the course of the year, a microtransit service serving the existing passengers would operate approximately 13,800 vehicle hours. As 3,500 vehicle hours are operated by the fixed route service in this area today, this equates to approximately 4 times the level of service to serve the existing passengers. This would increase overall ETS operating costs to the order of $1.4 million per year. Moreover, the number of homes not currently within a quarter-mile service area of the fixed routes is relatively low, indicating that the potential for new ridership is limited. For these reasons, this alternative is not considered further.

Performance Comparison of ETS Service Alternatives

Table 34 shows the relative performance of the ETS service alternatives. Both ETS hub scenarios use the same number of buses and hours, so have no cost impact, but they are expected to improve ridership slightly. All of the ETS span of service alternatives would have relatively low productivity (carry less than 4 additional passenger trips for every additional vehicle hour of service) and would incur additional operating costs exceeding $40 per passenger trip. The microtransit service would be slightly more cost-effective (requiring a relatively low $38.14 in operating costs per passenger trip) but would come at a relatively high cost for full implementation.

Table 34: Comparison of ETS Service Alternatives

Alternatives *(from Table 33)*	Annual Ridership	Annual Operating Cost[1]	Passenger-Trips per VSH	Operating Cost per Passenger-Trip
Earth Center Hub Scenario	1,300	$0	NA	$0.00
F & Harris Street Hub Scenario	7,500	$0	NA	$0.00
Shift Purple - Harrison to West/S Streets	900	$0	NA	$0.00
Later ETS Gold, Purple, Green, Red to 7 PM Weekdays	2,100	$133,800	2.1	$63.71
Expand ETS Gold and Rainbow to 9 PM Weekdays	3,200	$199,900	2.1	$62.47
ETS Gold and Rainbow Sundays 10 AM - 3 PM	2,000	$95,200	3.8	$47.60
ETS Gold & Red Every 30 Min. 7:30 AM -5:30 PM	15,300	$665,000	3.0	$43.46
ETS Microtransit Service	27,700	$1,106,500	3.6	$39.95

Note 1: Includes allocated fixed costs.

SOUTHERN HUMBOLDT ALTERNATIVES

The SHI service provides two southbound and three northbound runs between Benbow and Eureka on weekdays and Saturdays (with both morning runs shifted later on Saturdays). This service level reflects changes made to better reflect demand based on low ridership generated by past levels of service. Due to the low population density and high mileage between activity centers, southern Humboldt County is difficult to serve with transit. Currently, 3.3 passenger trips are carried per hour of service, which is slightly higher than carried on the DAR service. Currently, neither an increase nor decrease in service is warranted.

WILLOW CREEK ALTERNATIVES

The WC service consists of three westbound and two eastbound trips per weekday and three round trips on Saturdays. Passengers are mostly high school students residing in the Willow Creek area and attending school in Arcata. Weekday ridership averages 4.8 passenger trips per hour, which is good ridership given the long distance. However, on Saturdays, only 1.0 passenger trip is carried per hour (or 7.7 passenger trips per Saturday, on average). Given this poor performance, two alternatives are considered (Table 35).

Eliminate Saturday Willow Creek Service

Under this alternative, Saturday service to Willow Creek would be eliminated, saving $78,500 in operating costs per year, while reducing ridership by 400 passengers annually (as shown in Table 35).

Table 35: Willow Creek Service Alternatives Summary

Service Alternative	Change In Annual Service: Service Hours	Service Miles	Operating Cost	Ridership	Fare Revenues	Operating Subsidy	Peak Buses
WC Status Quo[1]							
Weekdays	1,942	69,342	$358,660	9,405	$37,603	$321,057	
Saturdays	419	15,400	$78,450	400	$1,599	$76,851	
Total	2,361	84,742	$437,110	9,805	$39,203	$397,907	
WC Service Alternatives - Change from Status Quo[2]							
Eliminate Saturday Service	-419	-15,400	-$78,500	-400	-$1,600	-$76,900	0
Reduce Saturday Service to 2 RTs	-104	-3,730	-$19,200	-50	-$200	-$19,000	0

Comparison of WC Service Alternatives	Passenger-Trips per VSH	Operating Cost per Passenger-Trip[3]
Eliminate Saturday Service	-1.0	-$192.25
Reduce Saturday Service to 2 RTs	-0.5	-$380.00

Note 1: Status Quo is based on 2022-23 operating parameters referenced in Table 20.
Note 4: The change represents the impact of the alternatives over the existing status quo services.
Note 5: Negative values represent savings.

Reduce Willow Creek Saturday Service to Two Round Trips

Under this alternative, the midday run would be eliminated on Saturdays. This would result in cost savings of $19,200 and a reduction in ridership of 50 passengers annually (Table 35).

Performance of Willow Creek Service Alternatives

Both alternatives would result in less ridership, but also substantial savings per passenger trip that is lost (Table 35).

OTHER HTA ALTERNATIVES

Service to Mendocino County – Redwood Coast Express

Given the remote location of Humboldt County, regional services providing connectivity outside of the area fill an important role. Limited service to the Bay Area is provided by Greyhound and Amtrak Thruway, and to a lesser extent, by Cal Poly Humboldt, which often charters buses for college breaks to get students to the Bay Area and Los Angeles area. The Greyhound bus schedule to San Francisco offers limited service, consisting of a morning southbound departure and evening northbound arrival on Thursdays through Mondays only. Amtrak operates a "Thruway" bus service seven days per week between Arcata and Martinez, with two morning departures and two evening arrivals each day.

The HTA will begin operating a new regional transit service to Mendocino County beginning in January 2024. HTA was awarded a Transit and Intercity Rail Capital Program (TIRCP) grant to purchase a hydrogen fuel-cell bus with the intent of providing this new service, known as the Redwood Coast Express (RCX). The RCX bus will operate between Eureka and Ukiah (in Mendocino County), where passengers will be able to transfer to Mendocino Transit Authority (MTA) buses and onward to Sonoma-Marin Area Rail Transit (SMART) trains in Cloverdale or Santa Rosa. SMART trains currently only travel as far north as Santa Rosa, with the extension to Cloverdale pending funding. Redwood Coast Transit (RCT) in Del Norte County also recently received a TIRCP grant to eventually extend the RCX from Eureka northwards to Crescent City. The RCX will continue to evolve as transit services to both the south and the north expand.

It should be noted that the RCX will help to meet the goals set in the *California Intercity Bus Study* for bus service along the US 101 corridor that provides connections to the SMART train network and the Bay Area. However, the RCX will need to expand to meet the plan's service frequency targets; the study set targets for bus service along US 101 to SMART every four hours by 2027, and every two hours by 2050. Some considerations to facilitate future implementation are discussed below:

- Demand for regional service should be monitored. The demand will be linked to local population growth, increases in Cal Poly Humboldt enrollment, and connectivity to activity centers and other transportation services.
- Requiring passengers to transfer is a deterrent to riding. The distance between Eureka and Santa Rosa or San Francisco is long, and transfers may be necessary, but the fewer transfers involved, the better the passenger experience will be, and the more likely that travelers will choose the service.

- Currently, the MTA Route 65 provides service between Ukiah and Santa Rosa, including the Santa Rosa Airport, where it connects with SMART. The route departs just once a day (excluding Sunday), leaving Ukiah at 9:05 AM and then returning at 3:39 PM. The RCX would need to depart Eureka before 6:00 AM to make a full trip to the Bay Area in one day.
- Coordination with other providers will be key. HTA, RCT, MTA, Amtrak, and Greyhound all provide some level of service in the US 101 corridor, and it will be important to maximize resources by coordinating scheduling and avoiding duplication of services. Coordination will also be important for future funding of the services.
- There may be opportunities to coordinate the RCX service with the SHI service, such as timed transfers in Garberville. These two services serve two different transit markets, however, so it is unknown how many people would utilize the transfer opportunity.

HTA should continue to coordinate with the MTA, the Lake Transit Authority, RCT, Amtrak, and Greyhound to ascertain demand, potential scheduling, and funding opportunities and agreements.

SERVICE ALTERNATIVES FOR ARCATA & MAD RIVER TRANSIT SYSTEM

The Arcata and Mad River Transit System (A&MRTS) suffered a substantial ridership loss due to the COVID-19 pandemic, particularly as it serves a large student population. However, ridership in the 2022-23 school year trended approximately 40 percent higher than 2021-22, and 2021-22 was 30 percent higher than 2020-21, indicating ridership recovery is ongoing.

This section presents alternatives to improve the A&MRTS routing within the existing hours of service, as well as options for a 3-bus routing system. Additionally, a span of service alternatives (earlier, later, Sunday, and seasonal services) are evaluated. A few of these options focus on enhancing Cal Poly students' ability to get to and from the main campus from off-campus housing.

Onboard survey results indicate the most desired A&MRTS service improvements are for expanded services, including extended hours, more service days, and increased frequency. The A&MRTS service alternatives evaluated in this section were developed based on survey feedback, discussions with A&MRTS staff, recent ridership, and operating trends, and Cal Poly Humboldt's planned expansion.

For each of the alternatives, the following assumptions have been applied:

- Based on the HTA contract with Arcata for FY 2023-24 operations, the operating cost of additional service is estimated at $106.32 per hour of service; based on fuel and maintenance costs, mileage costs are estimated at $0.78 per mile of service. A service that increases both hours and mileage would incur both costs.
- Expanding service beyond existing HTA hours incurs costs for a dispatcher, at an estimated rate of $50.00 per clock hour.
- The Cal Poly Humboldt "in-session" consists of 160 weekdays and 32 Saturdays of transit operations.

- The Cal Poly Humboldt "out-of-session" consists of 90 weekdays and 18 Saturdays of transit operations.
- The average cash fare collected per passenger trip is currently $0.34, but before COVID with higher use of the Jack Pass, it was $0.05. For this analysis, we are assuming an average cash fare collected per trip of $0.15, unless otherwise noted. In addition, based on fares and ridership from August 2022 to February 2023, 59 percent of riders used a JackPass, and cash fares averaged $0.06 per passenger trip. Pre-COVID, approximately 75 percent of riders used a JackPass. This dropped to 17 percent in the spring of 2020. For purposes of estimating future revenues, JackPass use is assumed to increase to 50 percent of total annual rides. As A&MRTS receives $1.75 for each passenger trip by JackPass, this is equal to an average of $0.87 per total new passenger. Adding the cash fare per passenger, the total revenue per average new passenger would be $1.02, except as noted.
- New Cal Poly Humboldt housing will change the demand for service. In particular, the increased use of temporary housing at the motels in Valley West and the planned 905-bed housing at the Craftsman's Mall will create additional demand. Valley West is served by the God and Orange Routes, but the Craftsman's Mall does not currently receive transit service.

Existing Route Structure Service Quality

As discussed in Chapter 3, A&MRTS operates two routes (Red and Gold) from 7:00 AM to 5:00 PM on weekdays, year-round. A different route (Orange), which combines most of the Red and Gold Route alignments, is operated from 5:00 to 10:00 PM on weekdays and 7:00 AM to 7:00 PM on Saturdays, year-round. These schedules mean A&MRTS operates only one or two buses at any given time. Prior to the pandemic, additional buses (called trippers) were often deployed on weekdays around 8:00 AM and 4:00 PM due to high ridership volumes related to university class schedules.

Table 36 presents a summary of the quality of transit service between six key areas of Arcata served by the Red and Gold Routes. For each trip origin/destination pair, the required travel time (in minutes) is presented. In addition, the available service frequency (either hourly or more frequently than hourly) is shown by shading, and the need to transfer as part of the trip is indicated by a "T." As shown, Table 36 indicates the following:

- Under the current route structure and schedule, travel times range can be up to 91 minutes (1 hour 31 minutes) for a single one-way trip. There are three trips analyzed that require 50 or more minutes to complete. Within the selected matrix, the average in-vehicle travel time to complete a trip is 25 minutes.
- Most of the trips (24 out of 30) are currently only provided once per hour. 5 out of 30 (17 percent) require a transfer. Transfers are only available at the top of the hour, so long travel times result when someone transfers from the end of one route to the end of the other (such as from Greenview Market or Sunnybrae to Valley West).

Table 37 presents a summary of the quality of Orange Route service (evenings and Saturdays) between six key areas of Arcata.

Table 36: A&MRTS Service Quality - Weekday Travel Times, Frequency, and Transfers

Red and Gold Routes

		Less than 60 Minute Frequency	60 Minute Frequency or Greater				
		Destination Stop					
Travel Time in Minutes T = Transfer Required		Arcata Transit Center	Library Circle (Cal Poly)	Sunny Brae (Buttermilk Ln & Bayside Rd)	Greenview Market	Camp Curtis	Valley West Blvd
Origin Stop	Arcata Transit Center		6	23	5	7	26
	Library Circle (Cal Poly)	4		9	17	2	20
	Sunny Brae (Buttermilk Ln & Bayside Rd)	14	10		27	39 T	58 T
	Greenview Market	10	15	33		17	91 T
	Camp Curtis	30	7	16	43		19
	Valley West Blvd	26	16	82 T	49 T	40	

Note: Excludes Redwood Transit System service.
Note: 10-minute penalty added to trips that require a transfer.
Source: LSC Transportation Consultants, Inc. (based on published schedules and Google Maps).

There are no transfers, and there is no service to Camp Curtis, thus adding a one-mile walk for those trips to the CPH Library Circle to catch the bus to any other location. Table 37 indicates the following:

- All travel times on the Orange Route are under an hour, even if a half-hour walk time to the Library Circle is added for passengers to catch the bus to other locations.
- The average travel time is 18 minutes, or if the walking time to Camp Curtis is added, the average travel time is 26 minutes (a minute more than on the Red and Gold Routes). Most of the trips (18 out of 20) are currently only provided once per hour.

Other key characteristics of the existing A&MRTS service, based on performance during FYs 2021-22 and 2022-23, include:

- Weekday day-time routes average 14.7 passenger trips per hour, while weekday evening routes average half that (7.0 passenger trips per hour).
- Saturday ridership averages 10.7 passenger trips per hour.

Table 37: A&MRTS Service Quality - Evenings and Saturdays

Orange Route

Not served evenings or weekends.	Less than 60 Minute Frequency	60 Minute Frequency or Greater

Travel Time in Minutes T = Transfer Required		Destination Stop: Arcata Transit Center	Library Circle (Cal Poly)	Sunny Brae (Buttermilk Ln & Bayside Rd)	Greenview Market	LK Wood (Camp Curtis)	Valley West Blvd
Origin Stop	Arcata Transit Center		5	5	13	*5 minutes, plus 1.0 mile walk	12
	Library Circle (Cal Poly)	4		18	26	No service (1.0 mile mile walk to stop)	6
	Sunny Brae (Buttermilk Ln & Bayside Rd)	17	23		8	*23 minutes, plus 1.0 mile walk	29
	Greenview Market	9	15	52		*15 minutes, plus 1.0 mile walk	21
	LK Wood (Camp Curtis)	*One mile walk, plus 4 minutes	No service (1.0 mile walk)	*One mile walk, plus 18 minutes	*One mile walk, plus 26 minutes		*One mile walk, plus 6 minutes
	Valley West Blvd	17	13	31	39	*23 minutes, plus 1.0 mile walk	

Note: Excludes Redwood Transit System service.
Note: 10-minute penalty added to trips that require a transfer.
Source: LSC Transportation Consultants, Inc. (based on published schedules and Google Maps).

- Ridership (based on boardings by stop from June to December 2022) is spread throughout the service area. A few route segments have lower boardings, specifically near the Arcata Community Center, the stops on Union Street north of 7th, and the Windsong Village neighborhood (only served on the Orange Route).
- While the Red and Gold Route travel times are high between the more distant bus stops (e.g. Sunny Brae, Greenwood Market, Valley West, etc.), coverage is generally good.
- By not serving Camp Curtis on the Orange Route, the Orange Route travel times are much shorter. From June to December 2022, 7 percent of total A&MRTS boardings took place along LK Wood to Camp Curtis.

Route Alignment – Two Bus Routes

Based on the travel matrixes presented in Tables 36 and 37, LSC evaluated numerous alternative route alignments for A&MRTS that would use two buses. The analysis found no realignments that improved travel times, though some offered similar travel times. Changing route alignments would only be recommended if doing so improved travel times or offered clear benefits, as passengers are used to the existing service. Realigning the Red and Gold Routes is therefore not recommended.

Route Alignment – Three Bus Routes

Having A&MRTS operate a third bus would provide higher frequency service in key locations, as well as provide service to new areas. Figure 18 shows a new Green Route, which uses Cal Poly Humboldt's Library Circle as its starting and ending point and serves the stop three times per hour. Over an hour, this route would serve three loops:

1. The downtown loop would go directly from the Cal Poly Humboldt Library to the Arcata Transit Center. From there, the route would go south on H Street and serve South G Street (the new service area). The bus would return past City Hall, and back to Library Circle.
2. The second central loop would depart from Library Circle, travel west on Foster Avenue and north on Alliance Road, east on Spear Avenue and St. Louis Avenue, and return to Library Circle via LK Wood Boulevard.
3. The third northern loop would also serve LK Wood to the St. Louis Overpass but would continue on Spear to Janes Road, then serve Valley West Blvd, and eventually return to the Library Circle by way of US 101 to expedite the loop.

A sample schedule is shown in Table 38. This new route would increase frequency between Cal Poly Humboldt and downtown Arcata, as well as between Cal Poly Humboldt and Valley West. Students living in the Valley West motels would be able to get to campus at 0:09 minutes after the hour on the Green Route or at 0:47 minutes after the hour on the Gold Route on weekdays. If passengers were heading downtown, passengers could leave campus and arrive downtown 0:27 minutes after the hour on the Green Route, or 0:57 minutes after the hour on the Gold Route.

Other benefits of the Green Route are that it would serve a new area south of Samoa Blvd., including affordable housing areas along South H and South G and the Arcata Marsh. Additionally, the Green Route would cross the St Louis overcrossing, thereby providing service in both directions to the future Cal Poly Humboldt housing at the Craftsman's Mall.

The following sections analyze the impacts of operating the Green Route for different spans of service. The details of these calculations are summarized in Table 39. Details regarding ridership estimates are included in Appendix H.

Operate Green Route the Same Hours as Red and Gold

The Green Route could operate the same hours as the Red and Gold. The first run would depart the Library Circle at 7:21 AM, and end at back at the Library Circle at 5:09 PM on weekdays. This would add $295,400 to operating costs and generate 32,900 passenger trips annually, as shown in Table 39. An estimated $33,600 in fare and other passenger revenue would be generated, for an annual subsidy of $261,800. This possible schedule would require A&MRTS to operate one additional vehicle.

Figure 18
Proposed New A&MRTS Green Route

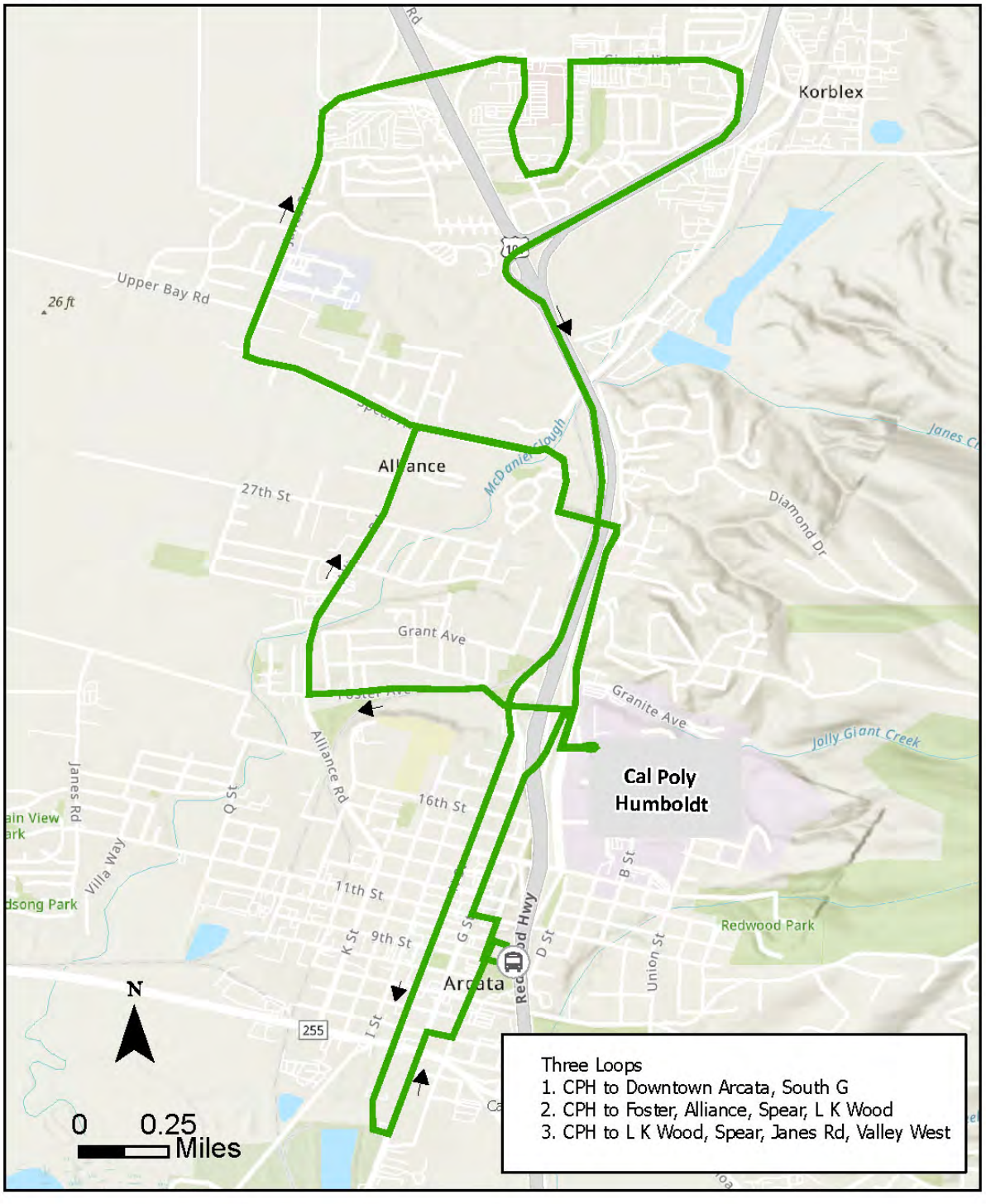


Table 38: Example Schedule - A&MRTS Green Route

New Green Route	
Bus Stops	Time Points (Minutes After the Hour)
CPH Library Circle	0:21
H St. & 18th St.	0:23
H St. & 16th St.	0:24
H St. & 14th St.	0:25
H St. & 10th St. (Minor Theater)	0:26
Arcata Transit Center	0:27
H St & 9th St	
H St & 6th St	0:30
H St & G St (New Stop)	0:31
G St & 5th St	
Uniontown Shopping Center	0:33
City Hall	0:34
12th & G	0:35
18th & G	0:36
CPH Library Circle	0:38
L K Wood Blvd & California Ave	0:39
L K Wood Blvd & Ridge Rd	0:40
St Louis Overpass (New Stop)	
Spear west of Roundabout (New Stop)	0:41
Spear Ave & Alliance Rd	0:43
Alliance Rd. & Stromberg	0:44
Foster Ave. & Alliance Rd.	0:46
CPH Library Circle	0:50
L K Wood Blvd & California Ave	0:51
L K Wood Blvd & Ridge Rd	0:52
St Louis Overpass (New Stop)	
Spear west of Roundabout (New Stop)	0:53
Spear Ave & Alliance Rd	0:55
Mad River Hospital	0:57
Lazy J. Tr. Ranch	0:58
Valley West Blvd. (McDonald's)	0:01
Valley East Blvd & Valley West Blvd	
Valley East Blvd.	
CPH Library Circle	0:09
12 min layover	

Times Key Stops are Served on Other A&MRTS Routes

At CPH Library Circle	
Red Route	0:25
	0:34
	0:53
Gold Route	0:11
	0:47
Orange Route	0:33
	0:09

At Arcata Transit Center	
Red Route (arrive)	0:57
Red Route (depart)	0:05
Red Route	0:20
Gold Route (arrive)	0:57
Gold Route (depart)	0:05
Orange Route (arrive)	:56
Orange Route (depart)	:05
Orange Route	:27

At Valley West Blvd. (McDonald's)	
Gold	:31
Orange	:38

RTS Mainline serves Valley West 13 times daily each direction and CPH Library and the Downtown Arcata Transit Center 25 times daily (each direction).

Table 39: Arcata & Mad River Transit System - Service Alternatives Summary

Service Alternative	Change In Annual Service: Service Hours	Service Miles	Operating Cost	Ridership	Fare Revenues	Operating Subsidy	Peak Buses
A&MRTS Status Quo[1]							
Weekdays	3,838	46,343	$444,220	60,300	$57,246	$386,974	
Saturdays	1,842	22,244	$213,220	6,100	$5,791	$207,429	
Total	5,680	68,599	$458,070	66,400	$63,037	$395,033	
A&MRTS Service Alternatives - Change from Status Quo							
Route Alternatives							
Green Route 7:21 AM to 5:09 PM weekdays	2,540	32,500	$295,400	32,900	$33,600	$261,800	1
Green Route 7:21 -11:09 AM & 2:21-5:09 PM	1,780	22,800	$207,000	21,000	$21,400	$185,600	1
Green Route - When CPH in Session	1,600	20,480	$186,100	25,600	$26,100	$160,000	1
Green Route 7:21 -11:09 AM & 2:21-5:09 PM When CPH in Session	1,120	14,340	$130,300	16,300	$16,600	$113,700	1
Arcata Microtransit Service[2]	5,600	76,000	$663,700	15,500	$39,500	$624,200	2
Span of Service Alternatives							
Start Weekday Service at 6:00 AM (Orange Route)	254	3,840	$30,000	2,700	$2,800	$27,200	0
Start Weekday Service at 6:00 AM (Red & Gold)	508	6,130	$58,800	3,400	$3,500	$55,300	0
Red & Gold til 10:00 PM Weekdays Year round	1,270	12,950	$145,100	700	$700	$144,400	0
Red & Gold til 10:00 PM Weekdays in Session Only	800	8,160	$91,400	600	$600	$90,800	0
In Session Red/Gold Weekdays til 10 PM Orange Saturdays, Out of Session Orange Weekdays til 10 PM and til 7 PM Saturdays	-140	-1,428	-$16,000	-2,100	-$2,100	-$13,900	0
Sunday Service - Orange Route	416	6,282	$69,900	2,700	$2,800	$67,100	0

Note 1: Status Quo is based on 2021-22 hours and miles of service and average fares collected. Cost is assumed to be $106.32/hour based on the HTA contract cost, and $0.78 per mile based on fuel and maintenance costs. Ridership is estimated based on increases from July 2022 to Feb 2023 over the previous year.

Note 2: Microtransit costs include an annual software fee of $4,500 per active vehicle, assuming A&MRTS could share costs with HTA.

Operate Green Route During Peak Periods Only

Another option would be to serve the Green Route during peak hours: 7:21 to 11:09 AM and 2:21 to 5:21 PM on weekdays. This would add $207,000 in operating costs and generate 21,000 passenger trips annually. With $21,400 in fare revenue, the annual subsidy would be $185,600, as shown in Table 39. This alternative would also require A&MRTS to operate one additional vehicle.

Operate Green Route Only While Cal Poly Humboldt In-Session and the Same Hours as Red and Gold

The Green Route could also be operated at the same hours as the Red and Gold Routes, but only while Cal Poly Humboldt is in session. This would add $186,100 in operating costs and generate 25,600 passenger trips annually, as shown in Table 39. An estimated $26,100 in passenger revenue would be generated, resulting in an annual subsidy of $160,000. This alternative would require A&MRTS to operate one additional vehicle.

Operate Green Route Only During Peak Periods and Only While Cal Poly Humboldt In-Session

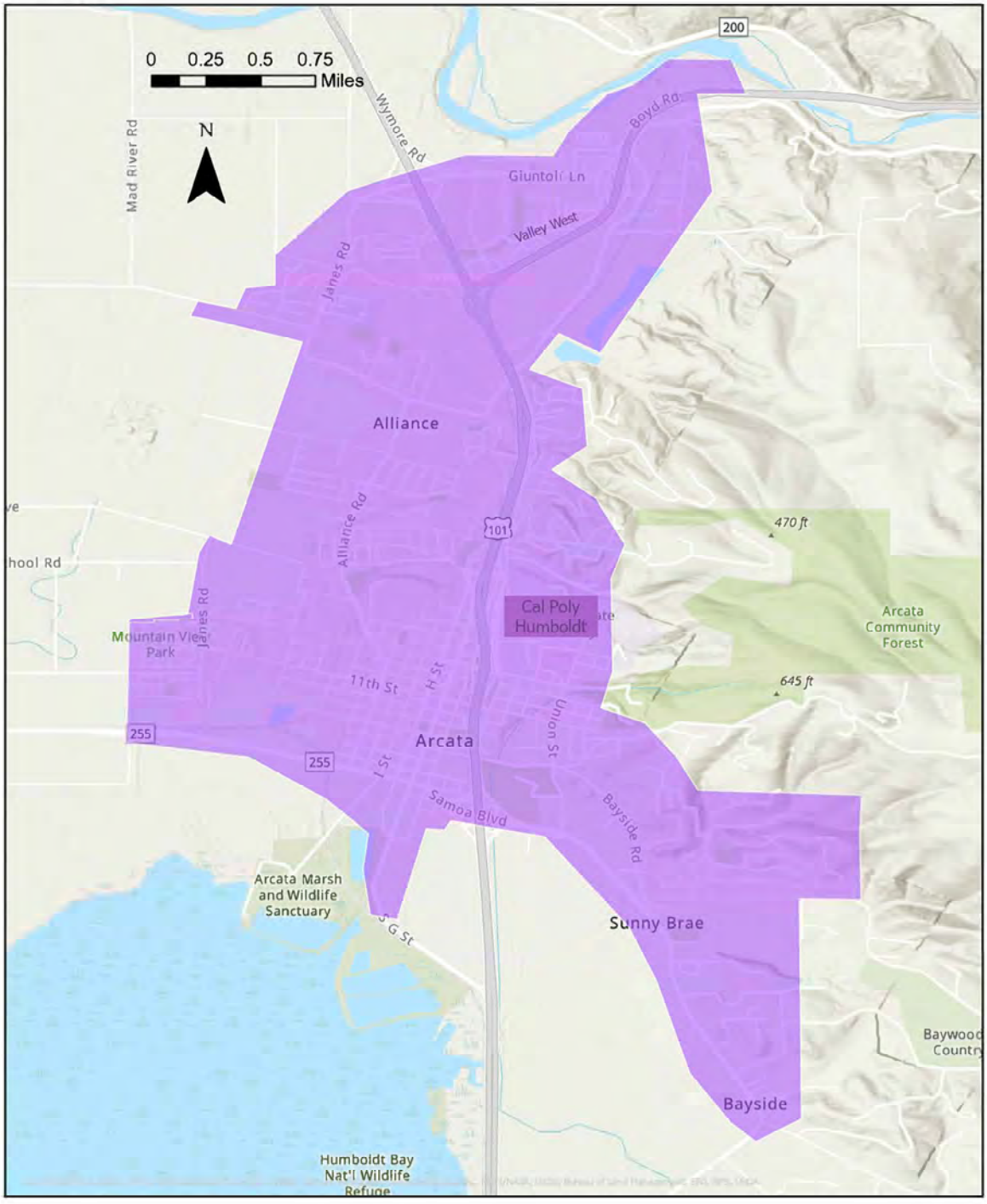
Finally, the Green Route could be operated in the morning and afternoon peak periods, but only when Cal Poly Humboldt is in session. Operating costs would be increased by $130,300, while ridership would be increased by 16,300. Subtracting $16,600 in passenger revenues, the operating subsidy would be increased by $113,700.

Citywide Microtransit in Arcata

A microtransit service could be implemented in the City of Arcata, augmenting the existing fixed route service. This service would have the following characteristics:

- The service area would cover major developments in Arcata, as shown in Figure 19. The zone would also extend south to the three corners at Jacoby Creek Road and Old Arcata Road, addressing an unmet transit need submitted at the FY 2023-24 hearing to operate transit services south of the Buttermilk Lane and Bayside Road stop in Sunny Brae. A microtransit service would meet this need in a more financially feasible manner compared to providing a fixed route service.
- Service hours would be from 7:00 AM to 6:00 PM on weekdays and 9:00 AM to 6:00 PM on Saturdays.
- A general public fare of $3.00 is assumed, with a 30 percent discount for seniors, youth, and persons with disabilities (consistent with the existing proportion of cash fare discount). Jack Pass would not be valid on this service (barring additional funding from CPH) and there would be no multiride passes. This results in an average fare revenue per passenger of approximately $2.55.
- Riders would use an app or call the dispatcher to request a ride. Service would be provided to serve at least 90 percent of ride requests within a half hour.

Figure 19
Potential Arcata Microtransit Zone



- Service would be co-mingled with the existing DAR service in Arcata to make better use of the paratransit service.

Ridership on a citywide microtransit service was estimated based on a peer review of similar urban microtransit services around northern California and Nevada (Appendix G). Considering the demographic characteristics of Arcata compared with these peer areas (the large college student population in particular), it is estimated that microtransit demand would equal approximately 3.0 trips per thousand residents on weekdays. This in turn indicates a total of approximately 59 passenger trips per weekday and 17 per Saturday, or 15,500 passenger trips per year.

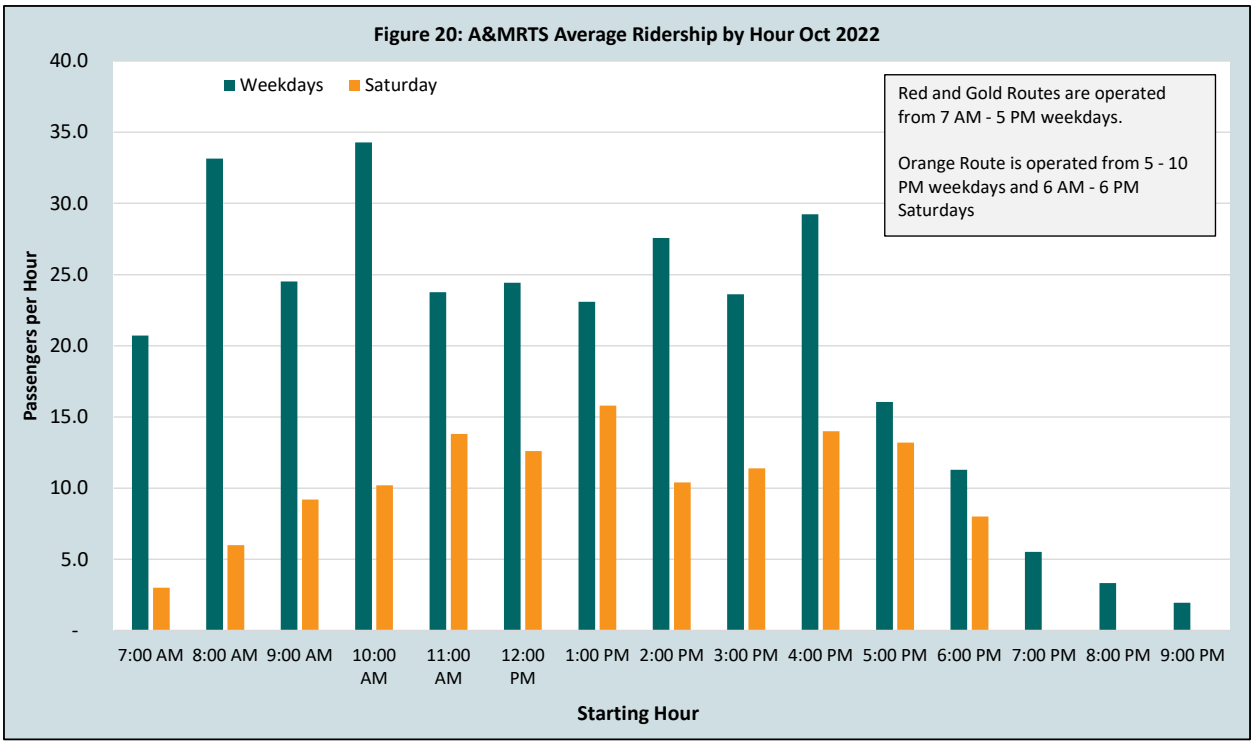
The operating costs can be estimated by defining the hourly demand for ridership and the assumption that a reasonable maximum productivity for a demand response system in a location such as the City of Arcata is 4 passenger trips per vehicle-hour. These factors indicate that two microtransit vehicles would be required during peak weekday hours (7 AM- 4 PM), and one vehicle would be needed on weekdays after 4 PM and on Saturdays to meet demand. Over the course of a year, these operating levels would result in 5,600 vehicle hours of service. At an average travel speed of 13 miles per hour, this would mean that the microtransit service would operate 76,000 vehicle-miles during the 5,600 hours.

These service quantities would result in a total operating cost of $663,700 per year, including an annual software fee of $25,000[6] and a per-vehicle software fee of $4,500. Subtracting $39,500 in annual fare revenues, this service would require $624,200 in additional annual subsidy funding. This is shown in Table 39.

Span of Service Alternatives

As previously mentioned, many A&MRTS passengers and stakeholders want expanded service hours. Extended service hours would be particularly important for Cal Poly Humboldt students who live off-campus or in Valley West and wish to get to and from campus during evening classes or special events. Extended hours would also be useful to local residents to get to jobs and other activities that start after the traditional workday hours of 9 AM to 5 PM. Figure 20 shows ridership by hour on A&MRTS during October 2022. This ridership-by-hour data is then used to inform an assessment of the span of service alternatives. These alternatives only consider the existing A&MRTS routes.

[6] If microtransit is implemented on another system, the $25,000 fee would potentially cover multiple services.



Start Weekday Service at 6:00 AM

On weekday mornings, the first A&MRTS runs carry an average of 20.7 passenger trips, which indicates earlier service may be warranted. One option would be to operate the Orange Route from 6 to 7 AM before switching to Red and Gold service at 7:05 AM. This would add 254 hours of service annually at a cost of $30,000 and would generate an estimated additional 2,700 passenger trips annually. After subtracting passenger revenues of $2,800, the annual subsidy would be $27,200, as shown in Table 39.

Another option would be to operate both the Red and Gold Routes starting at 6 AM, which would add 508 hours of service and increase ridership by an estimated 3,400 passenger trips annually at a cost of $58,800. Subtracting passenger revenues of $3,500, an annual subsidy of $55,300 would be required.

Expand Weekday Evening Service – Operate Red and Gold until 10:00 PM

As shown in Figure 20, ridership drops off by approximately half after 5 PM (which is also when service switches from the Red and Gold Routes to just the Orange Route). Ridership continues dropping off each hour as the evening goes on; only 1.9 passenger trips were carried on average during October 2022 between 9 and 10 PM. This pattern is a strong indication that additional late-night service is not warranted. If both the Red and Gold Routes were operated until 10:00 PM, ridership would only increase by an estimated 700 passenger trips annually, but costs would increase by $145,100.

Expand Weekday Evening Service – Operate Red and Gold until 10:00 PM while Cal Poly Humboldt is In-Session

Another option would be to operate evening service only while Cal Poly Humboldt is in session, as ridership from August to May is approximately 12 percent higher than year-round ridership. Operating the Red and Orange Routes in the evenings only during the school year would add $91,400 in operating costs and would generate 600 passenger trips per year (Table 39).

Operate Gold and Red In-Session / Orange Out-of-Session and Evenings

Given the increased ridership performance during the school year compared to summer, one option would be to improve school-year service by shifting weekday evening service from the Orange Route to the Red and Gold Routes, while reducing summer service by only operating the Orange Route during weekday daytime hours.

As shown in Table 39, this option would result in a net reduction of 140 vehicle hours and a reduction of 1,428 miles of service annually for an operating cost savings of $16,000. Considering both the increase in evening weekday service during the school year and the reduction in daytime weekday service in the summer, it is estimated this option would reduce ridership by 2,100 passenger trips per year and passenger revenues by $2,100, equating to an annual subsidy reduction of $13,900.

Sunday Service

Sunday service is also frequently requested by A&MRTS passengers. Operating the Orange Route on Sundays from 9 AM to 5 PM year-round would add $69,900 in annual operating costs, including costs for additional mechanic and dispatching staff time, as shown in Table 39. Given that Saturday ridership in Arcata equals approximately 75 percent of weekday ridership per hour, and Sundays generally result in a similar additional reduction in ridership from Saturday levels, it is estimated this alternative would generate 2,700 passenger trips per year. This would result in $2,800 in additional fare revenue and an increase in the annual operating subsidy of $67,100.

Comparison of Arcata Alternatives and Performance Analysis

A review of Table 40 reflects the wide range of impacts that the various A&MRTS alternatives would yield on annual ridership and costs. The alternatives' impacts on annual operating costs range from a reduction of $16,000 when increasing in-session service and simultaneously reducing out-of-session service to an increase of $663,700 by operating citywide microtransit.

In terms of performance (as measured in the passenger trips per vehicle hour), the "best" alternative is operating the Green Route all day when Cal Poly Humboldt is in session, which generates 16.0 passenger trips per additional hour of service. The other Green Route options also operate at a relatively high performance, as does starting weekday service at 6:00 AM with the Orange Route. The 15.0 passenger trips per vehicle hour for the increase in Red/Gold service during the school year and the increase in Orange Route service during the summer reflects a *decrease* in passengers divided by a *decrease* in vehicle hours. As this is a relatively high figure compared to the existing A&MRTS average of 11.7, it indicates a relatively poor alternative.

Table 40: Comparison of A&MRTS Service Alternatives

Alternatives *(from Table 39)*	Annual Ridership	Annual Operating Cost[1]	Passenger-Trips per VSH	Operating Cost per Passenger-Trip
Green Route 7:21 AM to 5:09 PM weekdays	32,900	$295,400	13.0	$8.98
Green Route 7:21 -11:09 AM & 2:21-5:09 PM	21,000	$207,000	11.8	$9.86
Green Route - When CPH in Session	25,600	$186,100	16.0	$7.27
Green Route 7:21 -11:09 AM & 2:21-5:09 PM When CPH in Session	16,300	$130,300	14.6	$7.99
Arcata Microtransit Service2	15,500	$663,700	2.8	$42.82
Start Weekday Service at 6:00 AM (Orange Route)	2,700	$30,000	10.6	$11.11
Start Weekday Service at 6:00 AM (Red & Gold)	3,400	$58,800	6.7	$17.29
Red & Gold til 10:00 PM Weekdays Year round	700	$145,100	0.6	$207.29
Red & Gold til 10:00 PM Weekdays in Session Only	600	$91,400	0.8	$152.33
In Session Red/Gold Weekdays til 10 PM Orange Saturdays, Out of Session Orange Weekdays til 10 PM and til 7 PM Saturdays	-2,100	-$16,000	15.0	$7.62
Sunday Service - Orange Route	2,700	$69,900	6.5	$25.89

Note 1: Does not include fixed costs. Microtransit costs include annual software costs.

Cost efficiency (as measured by operating cost per passenger trip) ranges from a low of $7.27 for Green Route all-day service while Cal Poly Humboldt is in-session to a high of $207 for year-round Red/Gold evening service. All Green Route options, as well as the early Orange Route service option, are relatively inexpensive on a per-passenger trip basis. Again, the figure for the increase in Red/Gold service during the school year and the increase in Orange Route service during the summer ($7.62) reflects a *decrease* in both costs and passengers.

SERVICE ALTERNATIVES FOR FORTUNA

The City of Fortuna is served by two transit programs: Fortuna Transit and RTS. Fortuna Transit is a dial-a-ride program that operates Monday through Friday from 8:30 AM to 4:00 PM, with up to two vehicles in operation at a time. This service is restricted to people aged 50 and over or disabled individuals. Approximately 30 passenger trips are made per day on this service.

The RTS Mainline provides service in Fortuna on 14 northbound and 14 southbound runs between 6:30 AM to 6:45 PM on weekdays (and five times between 9:00 AM and 8:00 PM on Saturdays). On weekdays, three of the runs serve the core downtown area of Fortuna, as well as Redwood Village, Redwood Hospital, School Street, and the Park-and-Ride on the west side of US 101. Eleven of the runs make a shorter trip serving half as many stops. Approximately 110 RTS passenger trips originate in Fortuna daily.

Microtransit Service

One option to serve both local trips and regional trips in Fortuna would be to offer local microtransit with the opportunity to transfer to the RTS Mainline service at one or two locations. Under this alternative, the dial-a-ride service would be opened to the general public and expanded to accommodate same-day ride requests received via an app and through calls. To serve greater potential ridership, hours of operation would be from 8:00 AM to 5:00 PM. As explained in the earlier Concept of Microtransit section, Fortuna Transit would use an app (and associated automated dispatching software) for the microtransit service. With the app software handling many, if not most, of the trip requests, dispatchers could focus on addressing any unusual requests or addressing service issues as they arise.

This alternative would allow for the RTS to be streamlined through Fortuna, as suggested in HCAOG's *Mobility-on-Demand Strategic Development Plan* (2020), by providing city-wide transit services available to the general public that people could use to travel to one or two key locations along US 101, from where they would be able to then transfer to the RTS Mainline. Streamlining RTS would result in the existing stops east of Fortuna Boulevard no longer being served by RTS during the hours of the new microtransit service; instead, RTS would only serve the stops along Fortuna Boulevard and at 11th Street/N Street[7]. Except for the Redwood Village Shops stop (which could be relocated to a new location on Fortuna Boulevard), riders at the stops east of Fortuna Boulevard would shift to the microtransit service, and then transfer to RTS at one of the remaining stops. Ridership data indicate that ridership from the eliminated stops totals 26 passenger trips per day. While these riders would switch to the new microtransit service, they would not represent new riders and therefore are not included in the net additional ridership generated by this alternative.

As seen in Table 41, this option would in all result in a net increase in ridership. Based on the evaluation of peer microtransit services (Appendix G) and the demographics of Fortuna, microtransit would serve 4,100 passenger trips per year in addition to existing Fortuna Transit ridership and the RTS passengers who would switch to the service. Based on expected ridership and the assumed fares (general public fare of $3.00), the microtransit service is expected to generate revenues of $12,300 (no additional fare revenue is assumed for existing RTS passengers who used the eliminated stops).

As detailed in Appendix H, the anticipated demand would require two vehicles in operation, except that one additional vehicle would be needed in the 2 PM hour and only one vehicle would be needed in the 4 PM hour. Overall, 18 vehicle hours would be required per weekday, or 7.5 additional hours over the current service levels. At an estimated average of 12 miles per hour, 26,710 vehicle-miles would be operated per year (Table 41). Total operating costs would increase by $181,900. As also detailed in Appendix H, RTS costs would be reduced by $25,700 per year. Subtracting the incremental fare revenues, total subsidy needs (over both the City of Fortuna and HTA0 would increase by $156,200 per year. This alternative would also require the purchase of an additional vehicle.

[7] RTS service would still be needed east of Fortuna Boulevard on Saturdays, and some low level of on-request service may be needed on weekdays prior to and after the microtransit hours of operation.

Table 41: Fortuna Transit - Service Alternatives Summary

Service Alternative	Change In Annual Service: Service Hours	Service Miles	Marginal Operating Cost [2,3]	Ridership	Fare Revenues [4]	Marginal Operating Subsidy	Peak Buses
Fortuna Status Quo[1]							
Total (Weekdays 8:30 AM to 4:00 PM)	2,671	22,710	$218,112	7,713	$16,000	$202,112	2
Fortuna Service Alternatives - Change from Status Quo[5]							
General Public Microtransit (Weekdays 8:00 AM-5:00 PM)	1,905	22,860	$194,200	4,100	$12,300	$181,900	1
Reduction in RTS Operating Costs During Microtransit Hours of Operation			-$25,700			-$25,700	
General Public Dial-a-Ride (Weekdays 8:00 AM-5:00 PM)	381	3,239	$46,300	1,800	$5,400	$40,900	1

Comparison of Fortuna Transit Service Alternatives	Passenger-Trips per VSH	Operating Cost per Passenger-Trip
General Public Microtransit (Weekdays 8:00 AM-5:00 PM)	2.2	$41.10
General Public Dial-a-Ride (Weekdays 8:00 AM-5:00 PM)	4.7	$22.72

Note 1: Status Quo represents service hours, miles and ridership from 2021-22.

Note 2: Marginal Operating Cost is based on the cost allocation, equal to $68.35 per hour and $1.54 per mile of service, plus a $40/hr dispatch fee if hours extend beyond current service hours.

Note 3: Microtransit costs include an annual software fee of $4,500 per active vehicle, assuming Fortuna could share costs with HTA.

Note 4: Fare revenues are assumed to reflect a $3 general public fare for both alternatives.

Note 5: The change represents the impact of the alternatives over the existing status quo services.

General Public Dial-a-Ride in Fortuna

A variation on the alternative above would be to open the current Fortuna Transit dial-a-ride service to the general public. The service parameters would be the same as the microtransit alternative, except the reservation procedures would be through the current reservation system, not by app. Same-day trips would be accommodated only if room is available—otherwise, advanced reservations would be required. As existing RTS riders east of Fortuna Boulevard would not be assured a connection, this option would still require existing RTS services to operate east of Fortuna Boulevard.

A review of general public ridership generated in similar peer communities that offer this type of service indicates this would increase ridership in Fortuna by an estimated 1,800 passenger trips per year (or an average of 7 per weekday), as seen in Table 41. This can largely be accommodated with the existing number of vehicles in operation. Total vehicle hours would be increased by 381, while vehicle-miles would increase by 3,239. Overall operating costs would increase by an estimated $46,300 per year. Subtracting $5,400 in additional fare revenues (at $3 per trip), this option would increase operating subsidy requirements by $40,900 per year. No additional vehicles would be required.

SERVICE ALTERNATIVES FOR MCKINLEYVILLE

The unincorporated town of McKinleyville is served by RTS approximately every hour from 7 AM (first southbound departure from the airport to Fortuna) to 8:30 PM (last northbound arrival at the airport). The route serves seven stops in McKinleyville, primarily along US 101 (Central Avenue), with a loop west on Murray Road, south on McKinleyville Avenue, and back to Central Avenue by way of Railroad Drive. This service provides regional access but limited local service, therefore two options for local McKinleyville service were evaluated. Both assume HTA would be the operator, though whether the contract would be with Humboldt County or the McKinleyville Community Services District would need to be determined.

Fixed Route in McKinleyville

Under this alternative, a one-bus, hourly route would be operated on weekdays from 7 AM to 6 PM and on Saturdays from 9 AM to 4 PM. The route would start at the McKinleyville Shopping Center and make multiple loops from Central Avenue, as shown in Figure 21. Cost assumptions are based on HTA-allocated operating costs for A&MRTS, or $106.32 per hour of service plus $0.78 per mile, but ultimately the costs could be higher or lower depending on who operates the service and how the price is negotiated. Based on the service parameters, the fixed route would operate 3,200 hours and 31,400 miles annually, for an annual operating cost of $364,700, as shown in Table 42.

Ridership estimates are based on daily person-trip rates for smaller communities, a typical 0.5 percent transit mode share, and the proportion of potential ridership within the proposed span of service. Ridership estimates are detailed in Appendix H. Based on these factors, it is estimated that the McKinleyville fixed route would generate 19,800 passenger trips annually.

Table 42: McKinleyville - Service Alternatives Summary

Service Alternative	Change In Annual Service: Service Hours	Service Miles	Operating Cost[1]	Ridership	Fare Revenues[2]	Operating Subsidy	Peak Buses
Local Fixed Route	3,200	31,400	$364,700	19,800	$33,700	$331,000	1
Microtransit	3,193	47,895	$381,400	10,400	$31,200	$350,200	1

Comparison of McKinleyville Service Alternatives	Passenger-trips per Veh-Hour	Operating Cost per Passenger Trip
Local Fixed Route	6.2	$18.42
Microtransit	3.3	$36.67

Note 1: Fully allocated operating cost is based on the Arcata contract costs, equal to $106.32 per vehicle hour plus $0.78 per vehicle mile. Includes $4,500 for vehicle software annual fee.

Note 2: Fare revenues are assumed to be equal to the average fare collected per passenger on ETS in 2021-22, or $1.88 per trip.

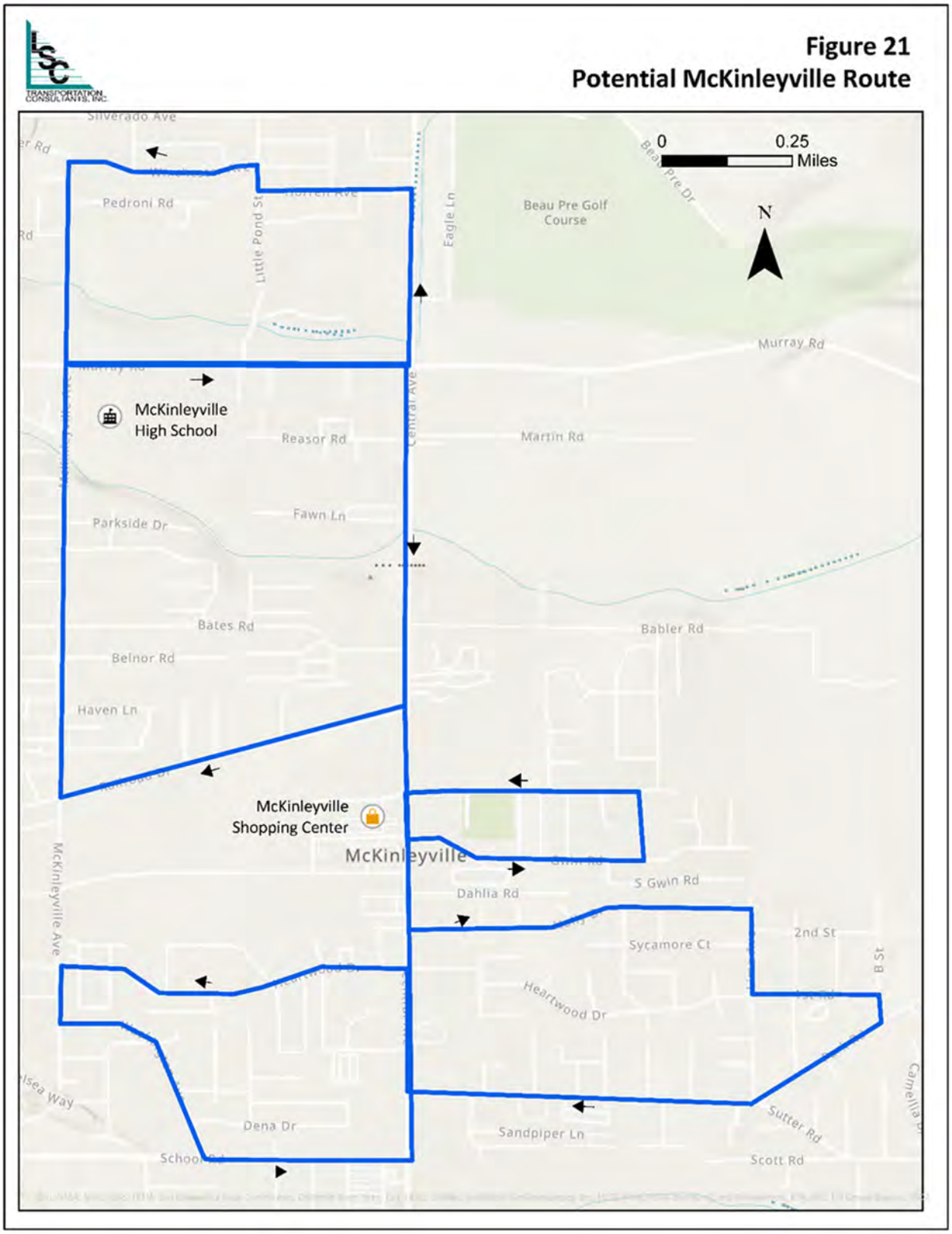


Figure 21
Potential McKinleyville Route
0
0.25
Miles
N
Silverado Ave
Pedroni Rd
Little Pond St
Eagle Ln
Beau Pre Golf Course
Beau Pre Dr
Murray Rd
McKinleyville High School
Reasor Rd
Central Ave
Martin Rd
Parkside Dr
Fawn Ln
Bates Rd
Babler Rd
Belnor Rd
Haven Ln
McKinleyville Shopping Center
McKinleyville
McKinleyville Ave
Dahlia Rd
S Gwin Rd
2nd St
Sycamore Ct
B St
Heartwood Dr
Dena Dr
Sandpiper Ln
Sutter Rd
Scott Rd

At an average cash fare collected of $1.70 (based on ETS fares), the resulting operating subsidy would be $331,000. The service would require one vehicle. There would not be a need to purchase a new vehicle if HTA assumes operations and has space vehicles available.

Several factors indicate a fixed route is not a good strategy to provide local service in McKinleyville. Many of these factors were also identified in the *McKinleyville Transit Study* (2021), which ultimately did not recommend operating a local fixed route. Some of the challenges that would inhibit the success of a McKinleyville fixed route include:

- The street structure results in several neighborhoods with limited access, such as the area west of US 101 served by Murray Road. This reduces the ability of a fixed route bus to serve some neighborhoods efficiently.
- The RTS schedule results in service at various times of the hour over the day. As a result, a fixed schedule serving a transfer point at one particular time for direct bus-to-bus connections would require long wait times at other points during the day.
- Residential density in much of McKinleyville is low, requiring significantly more bus travel time to serve a relatively small number of residents.

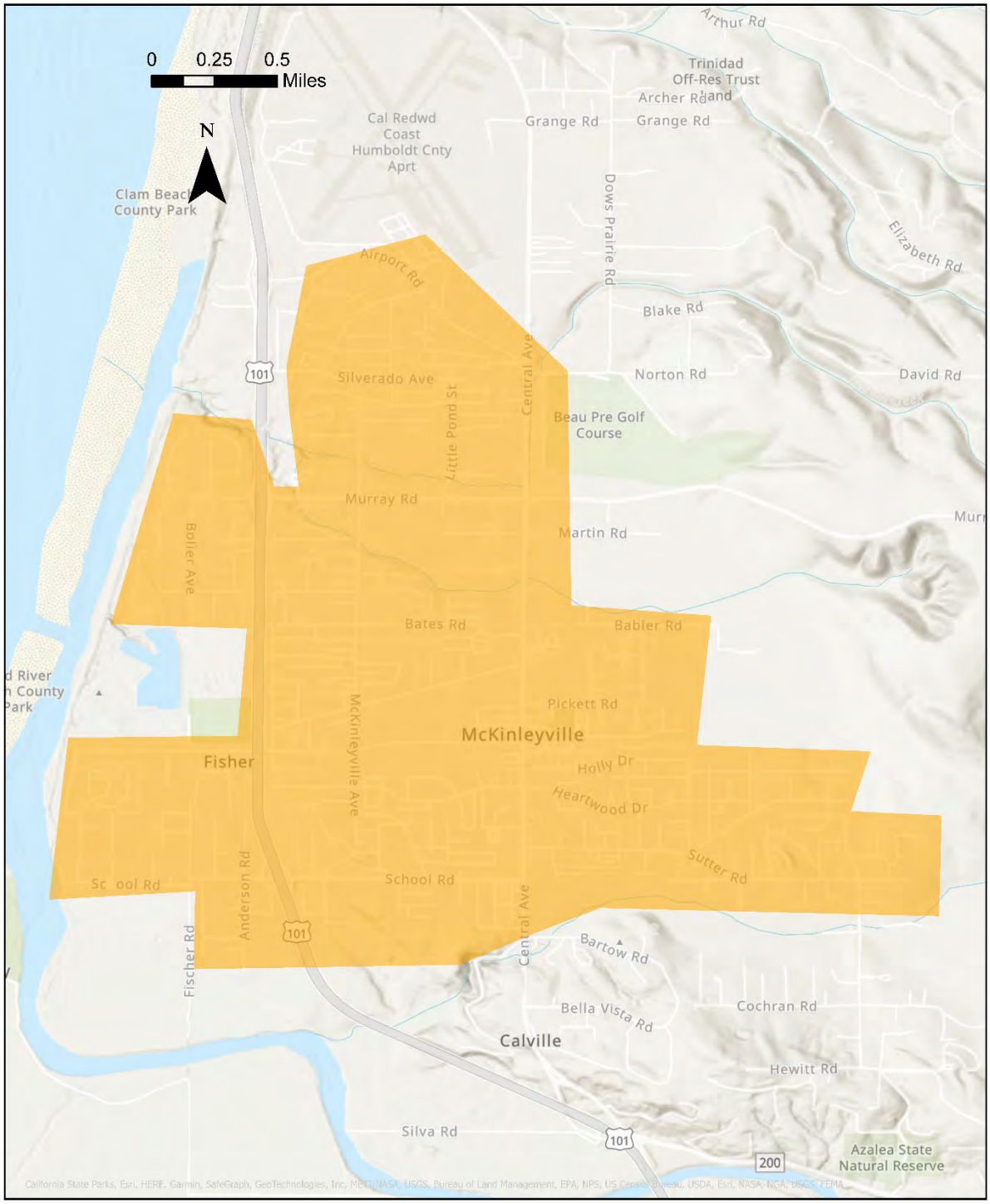
Microtransit in McKinleyville

Another option to serve McKinleyville would be to offer microtransit service. This service would be co-mingled with dial-a-ride, providing shared trips with both ADA and general public riders as scheduling allows. A potential McKinleyville microtransit zone is shown in Figure 22. This service would be available on weekdays from 7:00 AM to 6:00 PM and Saturdays from 9:00 AM to 4:00 PM. Based on the local population and microtransit in other regions, ridership is projected to be 10,400 passenger trips annually (Table 42). This is equivalent to approximately 33 passenger trips per average weekday and 14 passenger trips per average Saturday. This also equates to approximately 3.3 passenger trips being carried per vehicle hour. Ridership estimates are detailed in Appendix H and in line with the *McKinleyville Transit Study* (2021), which predicted that a microtransit service in McKinleyville would carry 3.4 passenger trips per vehicle hour.

A total of 3,193 service hours would be operated annually with one vehicle. In the busiest hour, no more than 4 passenger trips would need to be served, indicating that a single vehicle would be sufficient at all times. On average, there is currently only one passenger trip per day served by the Humboldt DAR that both originates and ends within McKinleyville, indicating a McKinleyville microtransit service would not affect paratransit availability.

This service would operate an estimated 3,193 vehicle hours and 47,895 vehicle-miles each year. At the current HTA rates for A&MRTS including $4,500 in annual software fee per vehicle, this would incur an operating cost of $381,400. Fare revenue, at $3.00 per passenger trip, would total $31,200, resulting in an annual operating subsidy requirement of $350,200 (Table 42). While this alternative is less productive than the fixed route option, it has the benefits of being able to serve all of McKinleyville and better provide direct transfers to and from RTS.

Figure 22
Potential McKinleyville Microtransit Zone



DIAL-A-RIDE CONSIDERATIONS

HTA is contracted by the City of Arcata, the City of Eureka, and the County of Humboldt to administer the operation of a consolidated Dial-a-Ride (DAR) program. HTA in turn contracts with City Ambulance of Eureka (CAE) to operate the service. CAE operates non-emergency medical transportation and taxi services in addition to the DAR. Humboldt DAR service is provided within ADA-mandated areas (those areas within ¾ mile of fixed route service, not including commuter or intercity service), as well as in areas outside of the ADA-mandated zones. The current DAR service area is divided into four zones, as described in Chapter 3, and listed below:

- Zone 1 (two geographical areas, both outside of ADA-mandated service areas)
    - McKinleyville
    - US 101 Corridor between Arcata and Eureka
- Zone 2 - Arcata
- Zone 3 - Eureka
- Zone 4 - Supplemental Areas (Samoa, Manila, Old Arcata Road, Humboldt Hill, King Salmon, Fields Landing, College of the Redwoods) (outside of ADA-mandated service areas)

One "ticket" is required for a ride within each zone. The cost per ticket is $3.00. Each time a passenger crosses into an additional zone to accomplish a single trip, an additional ticket is required. The maximum number of tickets required for a single trip is three. The current service provides a high level of coverage.

Rider Policies

Eligibility

Individuals must complete a written application to be eligible for HTA DAR services. If deemed necessary, HTA states that follow-up interviews may be required to complete the application process. If HTA believes there is an abuse of the process and unqualified passengers are using DAR, it is recommended that HTA consider requiring interviews for all applicants. While requiring an interview sometimes discourages eligible applicants from attempting to apply, it is often necessary to ensure that ADA service is provided to those who most need it.

No-Shows and Cancellations

HTA maintains the following No Show/Cancellation Policy:

> *"A no-show occurs when a rider fails to appear to board the vehicle for a scheduled trip. This presumes the vehicle arrives at the scheduled pickup location and the driver waits at least 15 minutes within the pickup window.*
>
> *Because No Shows and Late Cancelations prevent other passengers from obtaining rides, an accumulation of No Shows and/or Late Cancelations may result in the suspension of service."*

When a rider is a no-show or cancels late, the computer reviews their history to see if there is a pattern of abuse, and the passenger may be suspended. The policy does not specify how many no-shows or late cancelations result in suspension. Additionally, excuses for no-shows and late cancellations listed on the website are fairly vague and include circumstances such as "sudden illness or change in condition" and "family emergency"—which provide a lot of leeway for passengers.

The percentages of no-shows and late cancellations on the HTA DAR service are high. From July to December 2022, 8 percent of trips were no-shows, and 20 percent were late cancellations. This indicates policies need to be clarified and improved, and enforcement may also need improvement.

Funding Agreement for DAR Services

The HTA DAR service area spans from Humboldt Hill to Samoa to McKinleyville and is provided by a single contract with CAE. This region benefits from the fact that a single service is operated, allowing ADA passengers to complete "single seat" trips between the communities in the region. Four entities currently provide local operating funding for this service:

- The City of Eureka, through the HTA, is responsible for the ADA-mandated service area around the ETS fixed routes.
- The City of Arcata is responsible for the ADA-mandated service area around the A&MRTS fixed routes.
- The County of Humboldt is responsible for non-ADA-mandated service areas in McKinleyville and on the fringe of Eureka.
- HCAOG is responsible for other non-ADA-mandated service areas, including Samoa/Manila, Bayside, and Humboldt Hill.

Local funding responsibilities are allocated to the four entities based 50 percent on the proportion of DAR-eligible population and 50 percent on the proportion of ridership being generated within each of the respective zones. The FY 2023-24 funding agreement based on this formula results in the following total funding allocations:

- City of Eureka (HTA) – 58 percent
- County of Humboldt – 18 percent
- HCAOG – 14 percent
- City of Arcata – 10 percent

A key issue with this funding allocation is that it does not reflect that the *cost* of service varies substantially between various communities and service areas. To evaluate this, DAR trip data was evaluated for two weeks in April 2023 (a total of 342 individual passenger trips). The total vehicle-time needed to serve the average trip in each area was identified, including both the passenger trip duration as well as the deadhead time needed for the driver to pick up each passenger. As shown in Table 43, the average request in Eureka requires 12 minutes of vehicle time to fill, while at the other extreme, the average request in McKinleyville requires 31 minutes. In other words, serving a trip in

McKinleyville requires 151 percent more vehicle time (and thus roughly 151 percent additional cost) than a trip in Eureka. This is due to both the fact that the CAE operations base is in Eureka as well as the fact that the higher "density" of trips in Eureka reduces the average deadhead time needed to reach the next pick-up point.

This issue has real ramifications for overall transit services. As Eureka expends all LTF for transit purposes, any additional funds required for DAR limits Eureka's ability to fund other transit service expansions.

Example alternative funding allocation scenarios were developed as shown in the right side of Table 43. These reflect the following:

- Eureka (through HTA) is assumed to be responsible for DAR trips within the ETS-mandated ADA area.
- The City of Arcata is similarly assumed to be responsible for DAR trips within the A&MRTS-mandated ADA area.
- The County of Humboldt is assumed to be responsible for all trips within or to/from McKinleyville.
- HCAOG is assumed to be responsible for all trips to or from Bayside, Manila/Samoa, and Humboldt Hill, as well as for trips between origins/destinations in Eureka and origins/destinations in Arcata.

Table 43: Dial-A-Ride Allocation Scenarios Based on Vehicle-Hours of Service

Trip Origin/Destination		% of All Trips	Average Trip Duration		% of All Vehicle-Hours	Example Scenario: Vehicle-Hours Only, Eureka-Arcata Trips Allocated to HCAOG	Example Scenario: 50% Vehicle-Hours, 50% ADA Population, Eureka-Arcata Trips Allocated to HCAOG
Between	And		Minutes	Hours			
Eureka	Eureka	46.8%	12	**0.21**	29%	Eureka/HTA	Eureka/HTA
Arcata	Arcata	7.3%	17	**0.29**	6%	Arcata	Arcata
Eureka	Arcata	26.3%	29	**0.49**	38%	HCAOG	HCAOG
McKinleyville	Arcata Eureka McKinleyville	11.7%	31	**0.52**	18%	Humboldt County	Humboldt County
Bayside Manila Humboldt Hill	Arcata Eureka	7.9%	22	**0.37**	9%	HCAOG	HCAOG

Total Cost Allocation	Existing Allocation	Example Scenario 1	Example Scenario 2
Eureka/HTA	58%	29%	46%
Arcata	10%	6%	12%
Humboldt County	18%	18%	15%
HCAOG	14%	47%	26%

Note: Based on a review of 2 weeks of all DAR trip logs. Time includes both deadhead and in-service travel time.

One scenario would be to simply apply the percentage of vehicle hours in each trip category. As shown in the bottom of the table, this results in 29 percent of total costs allocated to HTA/Eureka (as compared with the current 58 percent), a drop in Arcata allocations from 10 percent to 6 percent, no change in County allocations, and an increase in HCAOG allocations from 14 percent to 47 percent.

Another scenario would be to use the vehicle hour data as one factor and equally weight it with the proportion of ADA-certified passengers in each jurisdictional area. This results in 46 percent cost allocation for Eureka/HTA, 12 percent for Arcata, 15 percent for the County, and 26 percent for HCAOG. Many other scenarios could be considered, such as allocating responsibility for Arcata-Eureka trips to both of the two cities. Determining a methodology acceptable to all parties will require a detailed evaluation and negotiations.

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Chapter 7
CAPITAL REQUIREMENTS

INTRODUCTION

To operate safe, dependable, and comfortable services, transit agencies need to plan for substantial capital investments into vehicles, facilities, and other amenities. This chapter presents recommended ongoing capital investments for the Humboldt County transit providers throughout the next five years, as well as other additional capital projects that will ultimately enhance transit services and aid with the deployment of zero-emissions vehicles (ZEVs). While there is always a degree of uncertainty when planning capital improvements, as there may be unanticipated capital needs or the pricing of products may change, it is still helpful to identify known needs to assist transit staff with planning funding and procurement.

TRANSIT VEHICLES

Transit vehicles must be regularly replaced to ensure fleets remain in good condition. Transit agencies need to plan when replacing vehicles, as the entire procurement process can take multiple years. The vehicle procurement process has been even more delayed since the COVID-19 pandemic caused global supply chain shortages, emphasizing the need for planning. This section identifies the anticipated vehicle needs and purchasing schedule for each provider based on either the *HTA Zero Emission Bus Rollout Plan* (2023) or the Useful Life Benchmark (ULB) of vehicles as identified by the Federal Transit Administration (FTA). Any expansion vehicle purchases required specifically to support the recommended service plans will be discussed in Chapter 11.

Electric HTA bus; source Schatz Energy Research Center

The State of California's (CA) Innovative Clean Transit (ICT) Regulation will go into effect during the current planning period. Beginning in 2026, the ICT regulation will require 25 percent of small-agency fleet bus purchases to be ZEVs. By 2029, this requirement will increase to 100 percent. To meet this requirement, transit agencies can purchase either battery-electric buses (BEBs) or fuel-cell electric buses (FCEBs). Which agencies purchase will depend on the specific needs of each agency. While CA transit agencies must plan for converting fleets to ZEVs, ZEV technology is continuously improving and evolving, making it difficult to know what type of vehicles will be available. Currently, ZEVs are still more expensive than diesel vehicles, meaning transit providers will need to secure additional funding to meet local match requirements for capital grant funds. However, future pricing of ZEVs is hard to predict, as it is unknown whether the more widespread use of ZEVs will eventually result in prices being more comparable to those of diesel- and gas-powered vehicles. The following discussions regarding each transit provider's anticipated vehicle replacement needs are therefore subject to change as new and improved ZEV technologies are made available.

HTA

As of July 2023, HTA is responsible for a 47-vehicle fleet that is used to operate the RTS, ETS, SHI, WC, A&MRTS, and DAR services. HTA manages vehicle procurement for all of these respective services as well. The current vehicles range in age from 1 to 14 years old and range in capacity from 9 to 35 passengers. Table 44 presents the anticipated HTA vehicle replacement schedule based on the recently approved *HTA Zero Emission Bus Rollout Plan* (Rollout Plan) (2023). This schedule aligns with the ZEV targets set in the 2022 RTP as well.

Table 44: HTA Fleet Replacement Requirements

Estimated Current Cost of Vehicles	Vehicle Parameters	Fiscal Year 23/24	24/25	25/26	26/27	27/28	5-Yr Total
Fixed Route Vehicles	Fixed Route Buses						
Gas/Diesel $586,000	Number of Buses (Gas/Diesel)	0	0	0	0	0	0
Fuel Cell $1,290,000	Number of Buses (Fuel Cell)	0	1	10	5	3	19
	Total Number of Vehicles	0	1	10	5	3	19
	Total Cost (*in thousands*) [1]	*$0*	*$1,355*	*$13,951*	*$7,185*	*$4,440*	$26,931
Cutaway Vehicles	Cutaway Vehicles						
Gas/Diesel $115,000	Number of Vehicles (Gas/Diesel)	1	11	5	2	0	19
Electric $300,000	Number of Buses (Electric)	0	0	5	2	3	10
	Total Number of Vehicles	1	11	10	4	3	29
Does not include any expansion vehicles needed for service alternatives.	Total Cost (*in thousands*) [1]	*$115*	*$1,328*	*$2,244*	*$925*	*$1,033*	$5,645
	Total Vehicle Costs *(in thousands)*	$115	$2,683	$16,195	$8,110	$5,473	$32,576

Note 1: All costs include 5.0 percent annual inflation in 2024/25, and 3.0 percent thereafter.

Note 2: This table states the vehicle replacement requirements per the *HTA Zero Emission Bus Rollout Plan* , adopted June 8, 2023.

Note 3: HTA vehicle needs include vehicles for the RTS, ETS, A&MRTS, SHI, WC, and Humboldt DAR services.

Note 4: Assumes HTA will convert fleets to zero-emissions vehicles by purchasing fuel-cell buses for fixed routes, and battery-electric buses for paratransit and cutaway vehicles needs.

Source: LSC Transportation Consultants, Inc.

Per the Rollout Plan, HTA plans on procuring 19 fixed routes and 29 cutaway buses during the upcoming five-year planning period. Based on recent market costs and expected inflation, it is estimated these vehicle purchases will cost a total of $32.6 million (Table 44). Table 44 reflects HTA's plans to purchase FCEBs for the larger fixed route buses and BEBs for its smaller cutaways. HTA plans to purchase FCEBs to make sure vehicles have adequate range for the long distances and hilly terrain covered by many of the fixed routes. HTA also intends to buy fuel-cell cutaways in the future if technology allows, but at this point, there are none available on the market. The charging requirements of each ZEV model should be reviewed before procurement and deployment.

In 2022, HTA was awarded $38.7 million in funding from the Transit and Intercity Rail Capital Program (TIRCP) to purchase 11 full-sized FCEBs and to construct a new hydrogen fueling station at the HTA maintenance yard, discussed further in the Facility Needs section of this Chapter.

Fortuna Transit

The Fortuna Transit fleet consists of three 8- to 12-passenger cutaway vans that were purchased in 2011, 2015, and 2017. While two of these vehicles have exceeded their ULB of 7 years (the 2011 and 2015 models), all the Fortuna Transit vehicles are still operating without any regular maintenance issues. Nonetheless, all three vehicles should be replaced within the five-year planning period.

The estimated cost for replacing all three vehicles is $360,000, as shown in Table 45. The cost estimate assumes that Fortuna Transit will continue to purchase gas- or diesel-powered vehicles until the ICT Regulation comes into effect. However, City staff have indicated that if funding becomes available, they will likely purchase a ZEV sooner. The 2022 RTP also stated that Fortuna Transit will replace all three of its vehicles with BEBs when able. At this time, Fortuna Transit plans on investing in BEBs specifically, which will be suitable for their local service. If the City of Fortuna procures BEBs in advance of the ICT Regulation, the five-year capital cost would increase by $579,000.

Table 45: City of Fortuna Transit Vehicle Replacement Requirements

Estimated Current Cost of Vehicles	Vehicle Parameters	Fiscal Year 23/24	24/25	25/26	26/27	27/28	5-Yr Total
Paratransit Vehicles	DAR Vehicles						
Gas/Diesel $115,000	Number of Vehicles (Gas/Diesel)	1	1	1	0	0	3
Electric $300,000	Number of Vehicles (Electric)	0	0	0	0	0	0
	Total Number of Vehicles	1	1	1	0	0	3
Does not include any expansion vehicles needed for service alternatives.	Total Cost (*in thousands*) [1]	*$115*	*$121*	*$124*	*$0*	*$0*	$360
	Total Vehicle Costs *(in thousands)*	$115	$121	$124	$0	$0	$360

Note 1: All costs include 5.0 percent annual inflation in 2024/25, and 3.0 percent thereafter.
Note 2: This table states the vehicle replacement requirements per the Innovative Clean Transit Regulation and does not consider any specific agency plans to procure electric vehicles before the regulation goes into effect.
Source: LSC Transportation Consultants, Inc.

Blue Lake Rancheria Transit System

The Blue Lake Rancheria Transit System (BLRTS) has four vehicles: three are powered on biodiesel fuel and one is a BEB. Not all of these vehicles are used to operate the transit service on a daily basis, however, four vehicles are needed in case one is undergoing maintenance. Table 46 shows the estimated BLRTS vehicle replacement schedule. The presented schedule assumes that BLRTS will continue to purchase non-ZEVs until the ICT Regulation comes into effect, however, BLRTS has stated publicly its commitment to sustainability and will likely purchase ZEVs sooner than required. It is recommended that BLRTS procure a replacement vehicle for its 2014 shuttle during FY 2023-24. The 2013 bus will then be due for replacement in FY 2025-26. In all, BLRTS is expected to invest a minimum of $749,000 during the five-year planning period to meet vehicle replacement needs.

Table 46: BLRTS Fleet Replacement Requirements

Estimated Current Cost of Vehicles	Vehicle Parameters	Plan Period (by Fiscal Year) [2] 23/24	24/25	25/26	26/27	27/28	5-Yr Total
Fixed Route Vehicles	Fixed Route Buses						
Gas/Diesel $586,000	Number of Buses (Gas/Diesel)	0	0	1	0	0	1
Electric $1,150,000	Number of Buses (Electric)	0	0	0	0	0	0
	Total Number of Vehicles	0	0	1	0	0	1
	Total Cost (*in thousands*) [1]	*$0*	*$0*	*$634*	*$0*	*$0*	$634
Paratransit Vehicles	Shuttle Vans						
Gas/Diesel $115,000	Number of Vehicles (Gas/Diesel)	1	0	0	0	0	1
Electric $300,000	Number of Vehicles (Electric)	0	0	0	0	0	0
	Total Number of Vehicles	1	0	0	0	0	1
Does not include any expansion vehicles needed for service alternatives.	Total Cost (*in thousands*) [1]	*$115*	*$0*	*$0*	*$0*	*$0*	$115
	Total Vehicle Costs *(in thousands)*	$115	$0	$634	$0	$0	$749

Note 1: All costs include 5.0 percent annual inflation in 2024/25, and 3.0 percent thereafter.
Note 2: This table states the vehicle replacement requirements per the Innovative Clean Transit Regulation and does not consider any specific agency plans to procure electric vehicles before the regulation goes into effect.
Source: LSC Transportation Consultants, Inc.

FACILITY NEEDS

For the context of this study, transit facilities refer to the locations and infrastructure that serve functions related directly to transit administration, vehicle operations, or maintenance. Passenger facility needs are discussed in the next section about passenger amenities.

HTA

Fuel-Cell Electric Bus Fueling Infrastructure

HTA will need to install hydrogen fuel infrastructure before operating FCEBs. Currently, HTA plans to install this infrastructure at the HTA operations and maintenance facility, located between 1st and 2nd Streets and V and W Streets in Eureka. The FCEB infrastructure will not be limited to HTA but will be available to the public as well, promoting the further use of FCEBs by other regional stakeholders.

HTA was awarded $38.7 million in funding from the TIRCP program in 2022 to be used for procuring 11 FCEBs and constructing FCEB fueling infrastructure. Construction has not yet commenced as of June 2023; therefore, the anticipated completion date will not be until 2024 at the earliest. HTA has no other plans to construct FCEB charging infrastructure besides at the maintenance facility.

Operations and Maintenance Facility Upgrades

The need to improve the existing HTA operations and maintenance facility, located between 1st and 2nd Streets and V and W Streets in Eureka, has been an ongoing issue pre-dating the previous 2017 TDP. HTA staff have indicated that it would be preferable to modify the existing facility rather than relocate. Given the facility's age, as well as the anticipated need to expand services in upcoming years to accommodate increased transit ridership (as outlined in the 2022 RTP), the HTA has planned an overhaul of its current facility. Once complete, the HTA will have a larger, energy-efficient facility that

will be able to accommodate a larger vehicle fleet and growing operations and administrative team. HTA also plans to establish the North Coast Zero-Emission Training Center within the new facility, a place where workshops and events can be held to train operators and maintenance technicians on new ZEV technology. Based on the entire project plan, site improvements are expected to include:

- Improved on-site bus parking
- Updated water, sanitary sewer, and gas infrastructure
- Updated site lighting, power, and telecommunications
- Updated stormwater treatment system
- Improved pedestrian flow
- More efficient vehicle circulation

Proposed building improvements will include:

- New 6,000-square-foot, net-zero energy administration building
- New 25,000 or more square foot vehicle maintenance building and North Coast Zero-Emission Training Center
- New 2,000-square-foot storage building
- New 3,800 square foot vehicle bus washing building with detail bay

Additionally, as previously mentioned, the HTA plans to install a new fueling station for FCEBs. A rendering of the complete, upgraded HTA operations and maintenance facility was developed by LDA Architects and is shown in Figure 23. In all, it is estimated the project will cost $62 million. The FCEB fueling station portion of the project has already been funded through a TIRCP grant award. HTA also recently applied for a Federal Transit Administration (FTA) 5339 grant award to fund the initial construction stage and is waiting to hear about the application status.

Redway Satellite Office/Operations Center

Redway is located off of US 101 between Miranda and Garberville. It is served by the SHI service, which operates between Eureka and Benbow. Currently, HTA has no facilities in the southern region of Humboldt County, meaning that the SHI buses have to deadhead south to Benbow to operate the first northbound SHI run each morning. To eliminate the need to deadhead south, a new satellite office in Redway could be considered. This facility would include space for bus storage and the appropriate fueling infrastructure. A recommendation that HTA establish a Redway transit operations center was included in the 2022 Humboldt County RTP. Per the 2022 RTP, the estimated project cost is at least $385,000. No funding has been secured at this time.

Figure 23: Schematic of the Upgraded HTA Operations and Maintenance Facility

Arcata & Mad River Transit System

Arcata Intermodal Transit Facility

Over 20 years old, the Arcata Intermodal Transit Facility is starting to show its age and warrants cosmetic improvements. This may include power washing, improving sidewalks, removal of informal signage, and lighting improvements. There also is a need for consistent security monitoring to ensure all elements of the public perceive this important regional transit link to be a safe and comfortable place.

The 2022 RTP also recommends that the City of Arcata install a solar PV system on the roof of the Arcata Intermodal Transit Facility. The solar PV system would generate sustainable energy for the amenities on-site, reducing the total greenhouse gas emissions produced to power the facility. It is estimated that this project would cost the City of Arcata $910,000. No funding has been secured for this project at this time.

PARK-AND-RIDE LOTS

Park-and-ride lots, either formal or informal, could potentially play an expanded role in the future of transit in Humboldt County. There are four Caltrans-owned park-and-ride lots in Humboldt County, consisting of the following:

- Trinidad East and Trinidad West: on the northeast corner (13 spaces) and northwest corner (8 spaces) of Patricks Point Drive and Main Street, Trinidad
- Fortuna: at the corner of Kenmar Road and Atterberry Lane (20 spaces)
- Elk River: on the northwest corner of the Elk River intersection at Pound Road and Herrick Avenue in Eureka (37 spaces)

In total, these 78 parking spaces are modest in comparison with overall commuting needs.

The Trinidad East and Fortuna park-and-ride lots are currently served by RTS. Commercial, public, or private parking lots with excess capacity could also potentially serve as transit hubs. As an example, the College of the Redwoods has an extensive parking lot that may have parking capacity beyond what is needed to serve the current parking demand.

Maximizing the utility of park-and-ride lots and transit services is most likely to be successful under the following conditions:

- Parking is close to a high-demand activity center (such as a large employer or college—like Cal Poly Humboldt) but not within easy walking distance, and a high-frequency shuttle provides service between the lot and the activity center.
- The park-and-ride lot and associated transit service provide an adequate incentive (in terms of travel time savings or the ability to avoid a stressful drive) to offset the hassle of changing modes from car to bus. In general, planners find that a commute trip of at least 10 miles from the activity center is needed for commuters to find that using the park-and-ride/transit service is worth the inconvenience of shifting modes, absent strong limitations on parking availability at the activity center.
- The transit service needs to be very convenient, providing a one-seat ride without transfers to a stop within a short (within a quarter mile) walk of the work site and not requiring a significantly longer travel time compared with driving (and preferably a travel time saving). Amenities on the bus (such as Wi-Fi, comfortable seats, and individual reading lights) can also help to attract park-and-ride passengers.
- Park-and-ride lots need to provide security for passengers as well as for their vehicles. This includes adequate lighting, the absence of areas that cannot be seen from nearby streets, and potentially the provision of camera systems.
- How parking is managed at the activity center is also crucial to the success of a park-and-ride program. This may include permit parking programs or paid parking programs at the activity center. It also may require limitations on nearby parking options (such as parking on nearby neighborhood public streets). Without a substantial disincentive to auto use through limited

or expensive parking, simply providing transit services and park-and-ride lots may not generate significant transit ridership.

Cal Poly Humboldt is the most obvious high-use activity center for which park-and-ride lots might provide utility, with over 2,000 employees and nearly 6,000 students (and plans for significant expansion by 2030). Furthermore, parking in and around campus is difficult and can be expensive, which also argues for park-and-ride options.

Table 47 presents recent survey data of commuters (students and employees) from the annual commuter survey conducted by Cal Poly Humboldt's Parking & Commuter Services Department. This survey was also reviewed in Chapter 2.

Table 47: Cal Poly Humboldt Commute Distance

	Students	Employees
Live on Campus	19%	1%
0.1-1 Mile	15%	11%
1.1-2 Miles	26%	5%
2.1-3 Miles	5%	6%
3.1-5 Miles	4%	10%
5.1-8 Miles	9%	21%
8.1-11 Miles	9%	22%
11.1-15 Miles	5%	12%
15.1-20 Miles	1%	2%
20.1-30 Miles	2%	3%
30.1-40 Miles	1%	1%
More than 40 Miles	1%	1%
Telecommute	3%	4%
Total in Prime Park-and-Ride Commute Range	**10%**	**20%**

Source: Spring 2022 Commuter Surveys, Cal Poly Humboldt.

As shown, the proportion of commuters that commute more than roughly 10 miles is relatively modest, at 10 percent of students and 20 percent of employees. The *Parking Market Demand Study* (Walker Consultants, 2018) includes maps that reflect the housing location of commuters. These maps also reflect the concentration of persons living within 10 miles of campus (including Arcata, McKinleyville, and Eureka). Persons living more than 10 miles from campus are concentrated in Fortuna in particular, with lower concentrations in the Fields Landing and Trinidad/Moonstone areas.

Considering the factors discussed above as well as the service alternatives presented in Chapter 6, the following are options that could be elements of an expanded park-and-ride program with a relatively high potential for ridership:

- The City of Arcata is considering locations for park-and-ride lots, which could also be served by transit. One location under consideration is the Caltrans right-of-way south of the Sunset Overpass between G Street and Highway 101. This area could accommodate a lot of approximately 80 parking spaces. With a 0.34-mile walk distance, it would require a shuttle

service at least during prime commute periods. In other periods, A&MRTS buses could potentially serve it several times an hour in each direction (depending on the service plan implemented).

- As discussed above, existing public park-and-ride lots beyond the 10-mile commute distance are very limited. Short of constructing new lots, shared use of existing lots could provide a near-term park-and-ride strategy, such as entering into use agreements for park-and-ride use of limited portions of existing lots at the following (so long as studies indicate that these spaces are not needed during weekday daytime hours for other purposes):
  - College of the Redwoods. This could potentially be served by the RTS Express options discussed in Chapter 6 and would be of benefit to the concentration of staff and students living in Fortuna.
  - Bayshore Mall. In particular, there are parking lots at the northern end of the mall that appear to have little or no existing use and could be easily accessed from 101 with an Express Route.
  - The old mill site in Fortuna. This area just east of US 101 and south of Newburg Road could be relatively easily made into a park-and-ride lot serving Fortuna and points south. It would require additional express bus service beyond the options discussed in Chapter 6.
  - Bear River Casino Resort. As parking demand for the casino resort is relatively low during weekday daytime hours when needed for CPH, a shared-use arrangement could potentially make use of a portion of these large lots. While additional express service would be required, this location is only ½ mile off of US 101 and is well located to serve commuters from Fortuna, Ferndale, and the south county.

A park-and-ride program could also serve other major employers, such as Providence St. Joseph Hospital in Eureka. With over 1,000 employees, this facility could generate substantial park-and-ride demand at peak shift change times. This would require direct transit service from park-and-ride facilities, as discretionary commuters find transfers to be a significant detriment to transit service. Evaluating the potential for park-and-ride demand would require a detailed study of parking conditions, employee commute times, and residence location.

PASSENGER FACILITIES AND AMENITIES

The experience of riding transit begins before a passenger ever boards the bus. It is important that while accessing and waiting for the bus, transit passengers feel safe and comfortable. High-quality passenger facilities and amenities, such as bus stop shelters, benches and signs, and transfer centers, benefit passengers by making the time spent before boarding the bus easy and enjoyable. Transit agencies need to continuously invest in passenger amenities, whether by installing new features or by repairing existing capital.

This section highlights some of the ongoing or potential passenger facilities and amenities projects for the upcoming five-year planning period. Many of these projects will require collaboration among the various Humboldt County Transit providers. Once implemented, these projects will result in an all-around improved Humboldt County public transit system.

Bus Passenger Facilities Plan

HCAOG has previously expressed interest in conducting a Bus Passenger Facilities Plan. This study would inventory existing bus stops throughout Humboldt County and recommend improvements for each stop based on which amenities are already present, the state of existing amenities, and average boarding activity. The final Bus Passenger Facilities Plan would prioritize recommended improvements to provide direction on how to best use limited capital funds. Potential improvements could include installing benches, installing signs, replacing existing amenities, or landscaping. Other nearby regions, such as Lake County, have conducted similar studies and used the findings to improve bus stops and enhance the passenger experience. HCAOG, as the RTPA for Humboldt County, would be responsible for preparing this study. The Plan would likely cost about $50,000.

The individual Humboldt County transit providers would be responsible for then implementing the recommended bus stop improvements included in the Bus Passenger Facilities Plan at their respective facilities. Each of the Humboldt County transit providers with bus stops (HTA, ETS, A&MRTS, BLRTS) should establish capital funds to implement the recommended bus stop improvements included in the eventual plan document as well as for normal, ongoing bus stop maintenance. These capital funds should be included in each respective provider's financial plan.

Eureka Regional Transit and Housing Center (EaRTH Center)

The EaRTH Center will be an intermodal transit center and a multi-modal transportation hub, accommodating bicycles, pedestrians, and transit. The center is proposed to have apartment units dedicated to Cal Poly Humboldt students. Other potential transit-related amenities may include a transit plaza, covered seating areas for passengers, lighting, bathrooms, bike share, and bike storage. There will also be businesses along the ground floor, including potentially a café, bike repair shop, pharmacy, daycare, or food trucks. While HTA has received funding for the intermodal center portion of this project through the TIRCP program, it will not be completed until 2025 at the earliest.

McKinleyville Transit Hub

The *McKinleyville Community Plan* (2017) outlined the community's desire to further develop the Town Center to promote a greater sense of identity. The *Draft McKinleyville Town Center Q-Zone Plan* (2022) further describes the intended future character and uses of the Town Center. The draft study recommends that there be a McKinleyville transit facility developed with "convenient access to Central Avenue providing simultaneous loading space for multiple buses, bike lockers, and if grant or other funding is available space for a park-and-ride." The *Draft McKinleyville Town Center Q-Zone Plan* (2022) states this transit hub should be developed before 50 percent of the buildable Town Center is developed.

A McKinleyville Transit Hub would become increasingly important when local transit services are initiated in McKinleyville, as this will generate the need for a transit hub where local and regional buses can meet to transfer passengers. The development of a Transit Hub in the McKinleyville Town Center would improve the experience of transit passengers traveling to or from McKinleyville and further economic development in line with the vision outlined in the Community Plan. The 2022 RTP estimated establishing a Transit Hub in McKinleyville would cost approximately $420,000. The biggest unknown variables that would impact the success and costs of the project would be the costs to buy or lease land, and whether an appropriate site in the Town Center becomes available. This project would need to be further researched and designed before applying for any grant funding. At a minimum, however, the facility should provide the following:

- Transit vehicle capacity for at least one full-size bus and a smaller bus or microtransit van.
- Passenger amenities include protection from the sun and weather, lighting, and security.
- Bike lockers or racks.
- Real-time traveler information.
- Landscaping to provide a pleasant environment and a positive image for transit services.
- Good pedestrian and bicycle access to nearby neighborhoods and activity centers.

New Bus Stops

New bus stops may be needed as part of route reconfigurations, specifically for ETS and A&MRTS. The alternatives considered for these two routing systems are described in Chapter 6, and the recommended routing changes are described in Chapter 11. The A&MRTS Green Route will largely use existing stops, but will warrant the following new stops and amenities:

- Southbound on St. Louis Road at Jase Creek Drive (Bench)
- Northbound on Alliance Road south of Stewart Court (Shelter)
- Southbound on H Street south of Samoa Boulevard (Bench)
- Northbound on G Street south of Samoa Boulevard (Bench)
- Eastbound on H Street at G Street (Shelter)

In addition, one or two new stops with shelters will be warranted at the Cal Poly Humboldt housing at the Craftsman's Mall in Arcata, when completed.

OTHER MISCELLANEOUS CAPITAL NEEDS

Other capital investments that would help improve the Humboldt County passenger experience but do not belong to the previous categories are described in this section.

City of Eureka Bike Lockers and Bike Racks

It was recommended in the 2017 TDP that HTA invest in bike racks for the ETS buses, as passengers have consistently asked for bike racks when given the opportunity to provide public input. Installing bike racks on the buses would encourage greater rates of biking and help transit passengers complete their first/last miles by allowing people to bike to and from Eureka destinations that are further from bus stops.

HTA has not installed bike racks on the ETS vehicles, despite requests, because doing so would take the buses too long to safely operate the current route network. The ETS routes were designed for buses that are 30 feet long, but ETS instead operates buses that are 35 feet long to better accommodate seniors and disabled passengers. Bike racks would add approximately 3.5 feet to the front of the bus, making the buses too long to complete all the required turns along the routes.

Alternatives to installing mounted bike racks on the ETS buses would be to install bike lockers or stationary bike racks at stops around the community. Installing more bike storage would support the objectives of the *Humboldt County Bike Plan* (2018), one of which was to provide bicycle parking at all public destinations, including transit centers and bus stops. HCAOG continues to help local partners install bicycle parking around Humboldt County by providing planning support.

Bike lockers at Solana Beach, CA; Wikimedia Commons.

Bike lockers are small boxes that fit up to two bicycles and can be locked. Bike lockers serve to keep people's bicycles safe from both the potential for robbery as well as from the elements. It is common for public transit providers to install bike lockers at central bus stops. Passengers can then use the bike lockers, typically on a first-come, first-served basis, either for free or for a small charge. Bike racks leave bikes exposed and require riders to bring their own locks, however, they still provide a location for bikers to safely secure their bicycle before boarding the bus. Companies that manufacture bike lockers and bike racks include Madrax, CycleSafe, and Reliance Foundry, among others. Costs for bike lockers start at upwards of $3,000 per locker and costs for a classic U-shaped bike rack start at approximately $225 per unit. These estimates exclude shipping and labor costs.

As described in Chapter 6, this TDP considers two different route network alternatives for ETS. Depending on which, if any, of the route network alternatives are implemented by ETS will impact which locations are best for installing bike lockers. Bike lockers and bike racks should at the very least be installed at F and Harris Streets (bike parking has already been included under the EaRTH Center plan). Other locations for installing bike lockers or bike racks should be selected based on boarding activity and physical constraints, such as whether there is enough space for the lockers or if land ownership/right-of-way rules allow for these features

Bike parked on public bike rack; Wikimedia Commons.

to be installed. The Bus Passenger Facilities Plan, described above, could identify top locations for bicycle infrastructure based on current conditions. The City of Eureka, HCAOG, and the HTA could also use the findings of The Bus Passenger Facilities Plan to promote discussion about how to potentially implement a bike share network in the City of Eureka like the one implemented in the City of Arcata. The planning principles used to expand bicycle parking at bus stops in Eureka could in the future be applied to other Humboldt County communities as well.

Contactless Payment Technology

Recent years have seen a surge in the use of contactless payment technologies, including transit fares. Studies have found that accepting contactless payments has lowered expenses for transit agencies and increased ridership. One form of contactless payment that the fixed route providers in Humboldt County, besides BLRTS, are now accepting is Token Transit fares. This app-based technology removes the need for passengers to go to specified locations to purchase tickets. Tickets are validated electronically, allowing the transit agencies to collect important data on ridership and boardings and also taking pressure off of the already busy drivers. For passengers, the Token Transit app is free. For transit agencies, there are no startup, hardware, or software costs associated with the app; instead, transit agencies enter into an agreement with Token Transit allowing Token Transit to retain a certain percentage of fares purchased through the app up to a set limit. While the Token Transit app needs to be promoted further to encourage expanded use, it has already been helpful to passengers navigating transfers across Humboldt County.

The California Integrated Travel Project (Cal-ITP) is helping transit agencies to procure contactless payment technology. This technology can accept both agency-specific passes and contactless bank card payments and digital wallets. Cal-ITP and the California Department of General Services have collaborated to establish six Master Service Agreements that allow public transit providers to purchase contactless payment hardware and software directly from vendors rather than through competitive bidding. These Master Service Agreements can be utilized by transit providers across the United States. The Humboldt County transit programs should take advantage of Cal-ITP's program to procure and install contactless fare payment technology on all vehicles that do not already have similar technology onboard.

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Chapter 8
FINANCIAL CONSIDERATIONS

INTRODUCTION

Public transit in Humboldt County is funded by federal, state, and local sources ranging from Federal Transit Administration (FTA) grants to one-way passenger fares. One of the most difficult aspects of transit planning is determining what service and capital changes are financially feasible, as transit funding is not necessarily consistent over time. In addition to the unpredictable nature of transit funding levels, there may be restrictions on what funding can be used for. For instance, in recent years there has been more funding available for capital investments versus operations, making it difficult for the Humboldt County transit providers to enhance or expand their services.

This chapter reviews the existing funding resources utilized by the Humboldt County transit operators and then discusses the projected future status of these sources. Potential new sources of funding are then reviewed. Five-year financial plans considering these sources are presented in Chapter 11.

REVIEW OF EXISTING FUNDING SOURCES

The existing funding sources utilized by Humboldt County transportation providers and the understanding regarding future availability are described briefly in this section.

Federal Transit Funding Sources

FTA Section 5310 – Grants for Enhanced Mobility of Seniors & Individuals with Disabilities

The FTA Section 5310 Program provides formula funding to support projects that increase the mobility of senior adults and disabled persons. Funding is given to the states based on the population of senior adults and disabled persons living in the state, and then the states further distribute funding to designated recipients. HCAOG is the designated recipient for Humboldt County. HCAOG then awards funding to various local organizations for eligible projects.

While most Section 5310 funding goes to nonprofit organizations dedicated to the focus populations, public transit operators are also eligible recipients. Projects can be focused on either operations or capital. To be eligible for funding, projects must be included in a locally derived Regional Coordination Plan. The most recent *Humboldt County Coordinated Plan* was completed in 2021 and is due to be updated in the current planning period. One of the priority strategies listed in the *Coordinated Plan* was to implement a multi-organizational approach to solutions to ensure limited funding is used efficiently and unnecessary duplication of services is avoided.

Section 5310 funding will continue to be available for transit-related purposes throughout the next five years.

FTA Section 5311 - Rural Area Formula Grants

The FTA Section 5311 Program provides capital, planning, and operating assistance to support public transportation in rural areas, defined as areas with fewer than 50,000 residents. Funding is based on a formula that considers the land area, population, and transit services in the region. Based on the definition used by the FTA, all areas within Humboldt County are "rural." Section 5311 funding can be used for operations, capital, and planning. Section 5311 will continue to be an important source of revenue throughout the five-year planning period.

State and Local Funding Sources

Local Transportation Funds

The California Transportation Development Act (TDA) continues to be a critical source of funding for transit agencies across the state. Most TDA funds are administered through the Local Transportation Fund (LTF). The LTF is supported by a one-fourth cent statewide sales tax. After the State uses a small proportion for administration, LTF funds are then distributed to each county based on the amount of sales tax collected. Per TDA statutes, LTF can be spent on the following:

- The regional transportation planning agency (in this case, HCAOG) can allocate funds for administrative purposes and planning studies.
- Up to two percent regionwide may be spent on bicycle facilities.
- The remaining funds must be spent for transit and paratransit purposes (operations or capital), unless a finding is made by the regional transportation planning agency that no unmet transit needs exist that can be reasonably met. (Article 4 or 8)
- If a finding of no unmet needs reasonable to meet is made, remaining funds can be spent on roadway construction and maintenance purposes. (Article 8)

LTF funding is distributed to the jurisdictions based on population. Table 48 shows how LTF funding was distributed to each jurisdiction for FYs 2021-22 and 2022-23. In FY 2022-23, the County received nearly half of the LTF funds (47 percent), the City of Eureka received 17 percent, and the City of Arcata received 12 percent. Blue Lake, Ferndale, Fortuna, Rio Dell, and Trinidad use LTF for a combination of transit and non-transit projects, or in the case of Ferndale, solely non-transit projects. These communities are therefore required to participate in the Unmet Transit Needs process each year. As shown in Table 49, the largest amount of funds potentially available for transit is within the funds allocated to Humboldt County ($930,571), while both the City of Eureka and the City of Arcata currently expend all available LTF funds for transit purposes.

Given that the LTF is generated by local sales tax, the amount of funding available is dependent on local economic activity. This dependency makes it difficult to predict the amount of LTF that will be available in any given year. The amount of LTF increased by about 20 percent from FY 2019-20 through FY 2022-23, but funding levels did temporarily decrease in FY 2021-22 in the wake of the pandemic and associated downturn in local economic activity.

Table 48: Humboldt County Local Transportation Fund Revenue Shares

LTF Distribution [1]	2021-22	2022-23
Administrative Allocations		
Humboldt County Association of Governments (HCAOG) [2]	$450,000	$600,000
Humboldt County Auditor's Office	$4,000	$4,000
Reserve for Pedestrian & bicycle facilites/Local Entities	$92,560	$120,426
Total Administrative Allocations	$546,560	$724,426
Allocation by Jurisdiction		
Arcata [3]	$605,852	$815,409
Blue Lake [4]	$41,657	$52,712
Eureka [5]	$904,087	$1,146,425
Ferndale [5]	$44,740	$57,512
Fortuna [5]	$404,974	$541,214
Rio Dell [5]	$111,465	$142,049
Trinidad [5]	$12,065	$14,918
Humboldt County [6]	$2,410,607	$3,130,658
Total Allocated to Jurisdictions	$4,535,447	$5,900,897
Total LTF Funds	**$5,082,007**	**$6,625,323**

Note 1: Estimate by HCAOG pursuant to Section 6620 of the California Administrative Code.

Note 2: HCAOG administration, planning and programing

Note 3: The City of Arcata typically uses LTF only on transit, but has also used LTF funds for bus stops and street repairs.

Note 4: Blue Lake, Ferndale, Fortuna, Rio Dell and Trinidad use LTF for a combination of transit and non-transit and are therefore required to participate in the Unmet Transit Needs process.

Note 5: The City of Eureka consistently uses all of their LTF allocation on transit.

Note 6: The County is required to use their LTF allocation on transit until an unmet transit needs found during the FY 2022-23 hearing are met.

Table 49: Existing LTF Used for Streets & Roads Purposes

FY 2022-23

Humboldt County	$930,571
City of Rio Dell	$87,992
City of Fortuna	$222,850
City of Ferndale	$57,512
City of Blue Lake	$20,337
City of Trinidad	$8,918
City of Arcata	$0
City of Eureka	$0
TOTAL	**$1,328,180**

Source: HCAOG LTF Claims

State Transit Assistance (STA) Funds

The other source of TDA funding is through the State Transit Assistance (STA) program. STA funds are derived from the statewide sales tax on diesel fuel. The tax revenues are deposited in the Public Transportation Account in the State Transportation Fund each year. The state legislature then approves the amount allocated to the State Transit Assistance program as part of the annual state budget process. These funds are then allocated by formula to Regional Transportation Planning Agencies by the State Controller. The formula allocates 50% of the funds based on the proportion of state population residing in that region, and the remaining 50% is allocated according to the prior-year proportion of operating revenues generated in the region out of all transit operating revenues generated statewide. Historically, STA funds have been hard to predict. However, in recent years the STA has become a reliable source of funding to support capital, operations, and planning needs for multiple of the Humboldt County transit agencies. Table 50 shows the amount of STA funding issued to claimants in FYs 2021-22 and 2022-23, as well as what projects STA funds were allocated towards.

Table 50: Humboldt County State Transit Assistance Fund Revenue Shares

STA Distribution	2021-22	2022-23
Claimants		
City of Arcata (A&MRTS)		
Electric Bus	$132,257	$103,740
Operating	--	$150,000
Vehicle Replacement	$36,000	--
HCAOG		
TPA & TDP	--	$130,000
Humboldt Transit Authority (HTA)		
CTSA	$125,596	$129,365
DAR Supplemental	$107,737	$113,195
ETS Bus Replacement	$159,793	--
Maintenance, Licenses, Passenger Info System	$70,000	$196,614
Zero Emission Buses Infrastructure & Planning	$300,000	--
Electric Farebox & Bus Surveillance Cameras	$83,205	--
Safety Consultant	$74,000	--
Vehicle Maintenance & Repairs	$75,000	$180,000
Facility Repairs & ADA Upgrades	$72,711	--
Remix License	--	$15,000
DAR Cameras (5)	--	$32,500
Bike Racks (8)	--	$12,000
Samoa Transit (CAE Contract)	--	$134,287
Operating Assistance	--	$232,561
Total Claims	$1,236,299	$1,429,262
Total STA Funds	**$1,236,299**	**$1,429,262**

Source: HCOAG

State of Good Repair Funds

Senate Bill 1 (SB1), signed into law in 2017, created the State of Good Repair (SGR) funding program for transit purposes. SGR funds are derived from an increase in diesel tax. SGR funds can be used for capital expenses, including preventive maintenance. Senate Bill 125 allows transit agencies to redirect these funds to address funding shortfalls in operating or capital expenses resulting from the impacts of COVID-19 for FY 2019-20 through FY 2025-26. Transit agencies must obtain a board resolution from their governing body identifying the agency's fiscal challenges in order to allow SGR funds to be redirected.

Low Carbon Transit Operations Program

The Low Carbon Transit Operations Program (LCTOP) is an element of the Transit, Affordable Housing, and Sustainable Communities Program established by the California Legislature by Senate Bill 862 in 2014. LCTOP is generated by funds from the Greenhouse Gas Reduction Fund and was created to provide operating and capital assistance for transit agencies to reduce greenhouse gas emissions and improve mobility, with a priority on serving disadvantaged communities. Approved projects in LCTOP support new or expanded bus or rail services, expand intermodal transit facilities, and may include equipment acquisition, fueling, maintenance, and other costs to operate those services or facilities, with each project reducing greenhouse gas emissions. LCTOP funds can also be used to support free or reduced fares for passengers, a funding use that has become more common since the COVID-19 pandemic and has been implemented by several Humboldt County transit providers. For agencies whose service area includes disadvantaged communities, at least 50 percent of the total money received shall be expended on projects that benefit disadvantaged communities.

Transit and Intercity Rail Capital Program

The Transit and Intercity Rail Capital Program (TIRCP) is another element of the Transit, Affordable Housing, and Sustainable Communities Program established by Senate Bill 862. The TIRCP program is supported by funds from the Cap-and-Trade Program, which was extended through 2030. The intention of the TIRCP is to "fund transformative capital improvements that will modernize California's intercity, commuter, and urban rail systems, and bus and ferry transit systems, to significantly reduce emissions of greenhouse gases, vehicle miles traveled, and congestion."[8]

The HTA has been awarded TIRCP funding in the last two funding cycles (2022 and 2023). In 2022, the HTA was awarded $38.7 million towards procuring 11 FCEBs, installing FCEB charging infrastructure, constructing the EaRTH Center, and initiating the new RCX service. In 2023, the HTA was awarded $8.6 million in partnership with the Yurok Tribe and Redwood Coast Transit to deploy four ZEVs in tribal regions, further expand the RCX service, as well as a few other project components more

[8] *California State Transportation Agency. (2023). Transit and Intercity Rail Program. CA.gov. https://calsta.ca.gov/subject-areas/transit-intercity-rail-capital-prog*

focused on Del Norte County. These projects are discussed in previous chapters. The TIRCP program may be revised through Senate Bill 125, which is discussed later in this chapter.

Local Funding Sources

Joint Powers Authority Cost Sharing

The Joint Powers Authority (JPA) agreement which created the Humboldt Transit Authority includes a clause for cost sharing, as follows (paraphrased) in the latest amendment:

> *All costs incurred by the HTA in connection with the operation of RTS, less fare box revenues and other sources of funds, shall be shared by the parties on the following basis:*
>
> - *County – 50 percent*
> - *Participating Cities (Arcata, Eureka, Fortuna, Rio Dell, and Trinidad) – 50 percent*
>
> *The portion to be paid by each city shall be determined by its population relative to the other participating cities (with discussion on increases and decreases relative to the county).*

Table 51 presents the JPA cost-sharing percentages for FY 2022-23 by jurisdiction.

Table 51: Humboldt Transit Authority Shared-Cost Assessments

FY 2022-23

	Service					
HTA Member	RTS	SHI	WC	ETS	Samoa Transit	Arcata DAR
County of Humboldt	50%	100%	100%	27%	100%	60%
City of Eureka	23%	--	--	73%	--	--
City of Arcata	14%	--	--	--	--	40%
City of Fortuna	10%	--	--	--	--	--
City of Rio Dell	3%	--	--	--	--	--
City of Trinidad	0%	--	--	--	--	--

Source: HCAOG

POTENTIAL NEW SOURCES OF FUNDING

In recent years, more potential sources of transit funding have become available as local, statewide, and national agencies continue to push for more environmentally friendly and equitable modes of transportation. New funding sources that could be utilized to implement service and capital components of this TDP are described below.

Bipartisan Infrastructure Law

The Federal Bipartisan Infrastructure Law (BIL) was enacted in 2021 and authorizes up to $108 billion in funding for public transportation. Funding priorities include improving safety for workers, modernizing rail and bus fleets, supporting access to and deployment of sustainable vehicles, and improving access to transit. This funding is distributed to states and transit agencies through existing

FTA programs, such as FTA Section 5310, 5311, and 5307 grants, among others. Funding is also rewarded through FTA programs developed as a result of BIL, such as the State of Good Repair and Rail Vehicle Replacement Program. Funding is distributed per the requirements of each program; for example, additional FTA Section 5310 funding provided through BIL will be available to eligible projects that were included in the locally derived Coordination Plan. Funding can only be awarded for eligible uses of the program. The Humboldt County transit programs should continue to monitor BIL funding and complete all requirements to ensure eligibility for the various FTA award programs.

California Air Resources Board (CARB) Program

CARB administers dozens of incentive and voucher programs intended to improve air quality in California. One such program is the Clean Mobility Options Voucher Pilot Program (CMO). CMO voucher funding can be used to launch and support shared mobility projects and is intended to help communities address transportation gaps and access. Example projects include bike sharing and on-demand ride services, such as microtransit. Vouchers are available on a first-come, first-served basis and are worth up to $1.5 million each. In the most recent round of awards, the CMO program totaled $33 million in voucher funds. The Humboldt County transit programs should continue to monitor CARB incentive and voucher programs for potential capital funding sources.

California Energy Commission

In late 2022, the California Energy Commission (CEC) approved a $2.9 billion investment plan to support the deployment of zero-emission trucks, school buses, and transit buses. The funds will be distributed from 2023 through 2026 through both competitive awards and direct funding agreements. The program will specifically try to alleviate the emissions impacts experienced in communities most exposed to the pollution generated by medium- and heavy-duty vehicles. Eligible funding uses include medium- and heavy-duty ZEV infrastructure, FCEB infrastructure, and workforce development, among others. These funding sources cannot be used to subsidize operations.

Cal Poly Humboldt Funding

Funding transit services by universities and colleges is a common practice. Cal Poly Humboldt has current agreements to fund both A&MRTS and the HTA to provide Cal Poly Humboldt students and staff with free fares on the A&MRTS, RTS, ETS, and WC services during the spring and fall semesters through the Jack Pass program. Per these contracts, Cal Poly Humboldt reimburses each agency (City of Arcata and HTA) for the fares after each quarter based on actual ridership.

As discussed in previous chapters, Cal Poly Humboldt is planning to expand significantly, which will likely cause students to rent properties further from the main campus. There are service alternatives included in Chapter 6 that would increase service to Cal Poly Humboldt to better serve these additional students. The current contracts between Cal Poly Humboldt and both the City of Arcata and the HTA will expire during this planning period, at which time the Jack Pass reimbursement rates should be reviewed to ensure the university is adequately supporting the transit services utilized by its students and staff. Any new services dedicated solely or predominantly to expanded Cal Poly Humboldt park-and-ride programs may require a new contract to provide direct operating support.

California Senate Bill 125

California Senate Bill (SB) 125 was signed by the Governor on July 10, 2023. It changes the TIRCP program into a formula grant program and changes eligible uses for TIRCP funds so recipients could use funding for both operations and capital. To be eligible to receive TIRCP funds in FY 2023-24, RTPA (which in Humboldt County's case is HCAOG) will need to prepare and submit a short-term financial plan and transit operations data before December 30, 2023. This plan must demonstrate a need for funding to be approved.

Once the plan and data are submitted and approved, funding will then be distributed to HCAOG similar to the LTF. This process will need to be repeated in 2024 for HCAOG to be eligible to receive funds available in FY 2024-25. SB 125 outlines what is expected of the short-term financial plan and data. A long-term plan will need to be submitted by June 30, 2026, to maintain eligibility for the revised TIRCP and Zero-Emission Transit Capital Programs. Once again, the long-term plan will need to demonstrate a clear need for funding to remain eligible.

Caltrans Sustainable Transportation Planning Grant Program

The Sustainable Transportation Planning Grant Program was established through the Road Repair and Accountability Act of 2017 to generate reliable transportation funds. Approximately $25 million of funds from this Act are available for each annual Sustainable Transportation Planning Grant cycle. The grant type most relevant to HCAOG and the Humboldt County transit operators is the Sustainable Communities Grants. These grants are being awarded to encourage local and regional planning efforts that will ultimately help California meet its greenhouse gas reduction targets by benefiting the multimodal transportation system.

For FY 2023-24, grant awards will range from $50,000 to $700,000, and local match requirements will be at least 11.5%. During the last round of funding in late 2022, awards were given to studies that will directly support transit improvements such as multimodal access studies, regional transit electrification plans, long-range transportation plans, and transit feasibility studies. It is worth noting that in 2022, the City of Eureka was awarded a Sustainable Communities grant to develop a Bike Plan.

FTA Section 5307 – Urbanized Area Formula Grants

The FTA Section 5307 Urbanized Area Formula Grants are provided to designated urbanized areas for transit capital and operating assistance, as well as for transportation planning projects. An urbanized area, as designated by the US Census Bureau, is defined as an incorporated area with a population of 50,000 or more. The funding is allocated to the state governors, and then to the respective urbanized areas, based on population, population density, and in larger urbanized areas by a formula that also considers transit operations. In urbanized areas with populations between 50,000 and 200,000 residents, the governor dispenses funds to a designated recipient (HCAOG) to then further allocate.

In Humboldt County, the City of Eureka is the largest incorporated community, with a population of 26,512 as of the 2020 Census (Table 1, Chapter 2). This does not exceed the minimum standard to be considered an urbanized area. It is possible, however, that the greater Eureka area, consisting of the city itself plus the census-designated places (CDPs) of Myrtle, Cutten, Rosewood, Pine Hill, and

Humboldt Hill, has a population of 50,000 residents or greater. In the future, HCAOG could lead efforts to define the greater Eureka area as an urbanized area per the Census Bureau's definition. If this designation were verified, Eureka would then become eligible for FTA Section 5307 grants. It should be noted that FTA 5307 recipients are subject to increased direct oversight from the FTA and are also required to submit a full National Transit Database Report each year.

Local Transportation Tax

Transit services need to meet farebox revenue requirements per California statutes to qualify for state funding sources, however, the law permits transit agencies to use other locally derived funding sources, such as a local transportation tax, to increase fare revenues. Unlike grant programs, a transportation tax is a more guaranteed tool for funding public transit. However, such a tax requires voter approval.

In May 2023, the Humboldt County Board of Supervisors approved $336,000 to hire a public policy firm to research reliable funding opportunities, including a sales tax, for future road repairs and transportation improvements. The county levies a half-cent sales tax through Measure Z for public safety (passed in 2014), but the funding is dedicated to safety, with the largest share going to the sheriff's department. An ad hoc committee will oversee the process and make recommendations for future funding priorities. The committee has agreed to include public transportation as one of the areas which need funding.

The sales tax, if approved, would provide a new source of funding for public transit in Humboldt County. The structure of the tax has still not been determined; therefore, it is unknown how much funding would likely be generated for transit, or if there would be limitations on how the funding could be spent. Depending on what eligible uses are approved for the tax revenue, it is possible the funding could be used on both transit operations and capital investments, potentially allowing for the expansion of services.

Paid Parking Revenues

Some communities and colleges/universities use paid parking program revenues to help fund public transit programs. This has the double benefit of providing an incentive to shift from auto to transit travel while helping to fund improved transit services.

Regional Early Action Planning (REAP) Grants

The REAP grant program through the California Department of Housing and Community Development focuses on accelerating housing production and is also intended to reduce Vehicle Miles of Travel (VMT). As such, it can potentially support transit strategies to reduce VMT associated with new housing. The current round of funding provides up to $510 Million statewide and is available to various entities including HCAOG. Future funding rounds have not been confirmed at this time.

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Chapter 9
MARKETING STRATEGIES

INTRODUCTION

Transit marketing is critical for attracting riders, providing service information in a timely manner, and establishing a recognizable brand. During many of the stakeholder interviews, detailed in Appendix E, the stakeholders noted that public transit in Humboldt County is perceived as a service solely used by and intended for the transit-reliant population. Marketing strategies should therefore focus on attracting discretionary riders. Additionally, ensuring schedules and information about the transit systems are easy to find, understandable, and updated is key to attracting and keeping ridership. This chapter discusses some specific marketing strategies to facilitate these concepts.

CURRENT MARKETING ACTIVITIES FOR HUMBOLDT TRANSIT PROVIDERS

Humboldt County transit providers have limited operating funds, so not surprisingly, none of them have a dedicated marketing budget. Instead, each provider incorporates activities and materials to promote services simply whenever funding and staff capacity allow. The existing use of marketing tools and strategies is described below.

Branding

Currently, each of the various Humboldt County transit providers has its own branding and identity. Each system has unique color schematics for buses and promotional materials. There has been discussion, and even a commissioned study, to potentially brand all systems together in hopes that this might improve passengers' understanding of the continuity between the services, but there is also a desire to maintain the uniqueness of each system per stakeholder interviews. The advantage of singular branding is the public perceives the system as seamless, and having a systemwide fare mechanism becomes easier. The disadvantage is that it adds costs, particularly initially, when limited marketing funds could be prioritized towards attracting discretionary riders back to transit. Additionally, each transit system is unique; unified branding would require consensus among the different transit managers. A compromise may be to add a singular logo that identifies each system that participates in a universal payment method. Progress is already being made towards simplifying payment by implementing contactless payment technologies and regional pass products.

Website Design

HTA maintains a website for RTS, ETS, WC, SHI, Samoa Transit, A&MRTS, BLRTS, and DAR. The website is well-designed and easy to navigate. The website includes:

- Real-time trip planning (by destination and time of day) and service updates.
- A page for each fixed route system with information on all corresponding routes and runs that can be viewed as digital, interactive maps/schedules, or downloadable PDF schedules. Each system page also summarizes the communities served and the fare structure.
- A page for the DAR service, showing a map of the different zones and information on eligibility and how to schedule a ride.
- A page with written directions on how to navigate the Humboldt County transit network and plan a ride, including how to find the best route, buy fares, and expectations for passenger conduct. There are "How to Ride" videos in both English and Spanish.
- A separate fare page summarizing each service's fare structure and where/how to purchase fares, transfer policies, and the various pass products available.
- At the bottom, a navigation menu with links to backgrounds on the providers and the JPA that formed the HTA, the staff directory, job postings, procurement information, HTA Board of Directors meeting agendas, the Title VI Plan, projects and planning, complaints, the ADA Plan, and more.
- The ability to buy fares and pass products online.
- Information on other regional transit services such as Trinity Transit, and a contact page for RTS, ETS, A&MRTS, and BLRTS and a general contact form.

Overall, the HTA website is extremely informative on the public transit offerings available in Humboldt County. The only noticeable feature missing from the website is a place for information on real-time service updates and alerts, such as weather or construction delays. The current news bulletin covers changes that were planned. Currently, a link to the HTA Facebook page can be found at the bottom navigation menu. If other social media accounts are established in the future, they should be linked to each system's respective website page.

The City of Fortuna hosts information on Fortuna Transit on its website. The Fortuna Transit page includes information on passenger eligibility, ride eligibility, hours, and how to make a reservation. The City of Fortuna provides an active link to the HTA website for people who need transportation outside of the city limits or who do not qualify for the Fortuna Transit service.

Print Materials/Riders Guide

Passenger guides provide directions for riding the bus in addition to being promotional tools. Passenger guides are especially important for transit passengers who do not have a mobile device to access route information on the go. HTA provides printed schedules for all of the Humboldt County fixed route services, which can also be downloaded from the HTA website. HTA recently compiled all

of the schedules into a pamphlet and distributed the information to regional stakeholders to further share with their clientele. HTA also had the printed schedules posted in a library display at the Main Library in Eureka. If resources allow, it would be beneficial for technology-limited passengers if HTA developed a comprehensive, printed rider's guide with information on passenger policies, fares, and schedules for all of the transit services (RTS, WC, SHI, ETS, A&MRTS, BLRTS, and Fortuna Transit).

Social Media

Social media is an increasingly important part of outreach and marketing. A well-organized and regularly updated social media platform can effectively and quickly reach a broad audience. Transit agencies across the nation are now frequently using social media to provide real-time information about service changes and interruptions as well as for more general promotion of available services and upcoming events. Social media posts can be designed to engage with followers or to recruit new passengers through methods such as "pushing" a post.

HTA has a Facebook account with over 1,000 followers. The Facebook page includes information on how to access the HTA website and how to contact staff either by phone, email, or in person. HTA uses this account primarily to post news on bus stop locations, upcoming service changes, holiday information, weather impacts, and job postings. The Blue Lake Rancheria has Facebook and YouTube accounts, on which they have promotional videos about the agency's ZEV technology, however, these accounts are for the tribe as a whole and are not exclusive to information on transit. There are no other social media accounts for any of the Humboldt County transit providers.

Phone Information

Many individuals, particularly seniors, and visually impaired individuals, prefer to receive information by phone. It is important for accessibility that transit providers continue to offer information over the phone. Staff are available by phone on weekdays during typical business hours to provide information on RTS, ETS, and BLRTS, and on weekdays and Saturdays to discuss A&MRTS. The providers' phone numbers and office hours are posted on the HTA website under the "Contact" page.

Phone information should be included on bus stop signage and any social media accounts the transit providers have (or establish in the future). It would be helpful for non-English speakers if the transit providers invested in an option for passengers to get phone information in other languages, such as Spanish. Another strategy to improve the Humboldt County transit program's phone information would be if the providers designated one, centralized phone contact that residents could call to learn about real-time information for all of the various services. For instance, each agency could provide real-time information to HTA so the HTA phone receptionist could answer public questions on all the Humboldt County routes and services.

Special Events and Promotions

Special events and promotions can be utilized to reward current riders and encourage new riders. Examples that have been implemented by other transit agencies include free-fare days, discounted seasonal passes, or complimentary transit for popular local events. These types of promotions require dedicated funding, such as additional LCTOP funds. The Humboldt County transit providers have held these types of promotions in the past; during recent years, Humboldt County held free-fare days for all local services and allowed children under the age of 18 to ride for free during the summer (advertisement shown to the right).

Another lower-cost option for promoting the transit system through events would be to partner with local organizations with missions related to transportation and transit. For instance, in the winter of 2023, the environmental organization 350 Humboldt conducted a campaign to encourage members to ride the bus for trips that cannot be reasonably completed solely by bike. The HTA could, in the future, provide an organization like 350 Humboldt with rider's guides and discounted passes to support these related campaigns and encourage participation.

Active Management

Active management refers to responsive and adaptive decision-making by transit directors/managers. The HTA, A&MRTS, BLRTS, and Fortuna Transit directors and managers continually review the performance of their respective transit services and modify services in response to community needs. An obvious example of active management was when the agencies reduced service levels in response to the COVID-19 pandemic, and how the agencies are now increasing service levels as demand slowly returns. The Humboldt County transit providers have also had to alter services due to the nationwide driver shortage, but active management practices have helped each agency make decisions about which services to reduce and how to communicate service reductions to the public.

Humboldt County transit directors/managers have historically been active in discussions about how to eliminate some of the difficulties that arise due to there being multiple transit providers in the region. Agency leaders have discussed strategies such as implementing uniform bus branding and introducing a single payment system. These past efforts have contributed to successful collaborations such as the 31-Day Humboldt Regional Pass product. The Humboldt County transit managers must

continue to participate in collaborative discussions to improve the overall regional transit system and facilitate increased ridership while also continuing to meet the expectations of each specific community and brand.

HUMBOLDT COUNTY TRANSIT PROVIDERS MARKETING CHALLENGES AND RECOMMENDATIONS

While HTA does an excellent job with current marketing activities which encompass the many services offered in Humboldt County, the authority feels challenged in trying to reach potential new riders. This is a common challenge for most transit systems, and addressing the challenge requires a transit agency to understand its target market. Surveys were conducted for riders of all the transit systems (except BLRTS) in 2022 which help to identify who is using transit and what is important to riders.

The onboard survey results indicate that a large number of people in Humboldt County are riding the bus either to get to school or work (38 percent and 35 percent of the respondents, respectively). This is supported by the fact that most of the respondents were frequent transit riders; most ride the bus 2 to 5 days per week. The survey respondents primarily get transit information from the internet (38 percent), printed guides (31 percent), information posted at stops (30 percent), and Google Maps (29 percent). The onboard survey results are discussed in Appendix D.

Overall, those who participated in the onboard survey had good impressions of the Humboldt County transit providers and ranked the services highly. The online community survey results (Appendix C) more clearly reveal the challenges HTA and the other Humboldt County transit agencies have encountered when trying to reach new riders. Over 60 percent of the community survey respondents did not know of the WC, BLRTS, SHI, Fortuna Transit, or Samoa Transit services. The top words used to describe the current transit system were limited, infrequent, and slow, and the survey participants ranked the various transit providers significantly worse than the passengers who took the onboard survey. 34 percent said they do not use public transit because it is difficult to use and 21 percent because they do not know about the services.

Together, the results from the two survey efforts can be used to develop new marketing strategies and tools that will be effective in reaching current riders and be more likely to attract new riders. The best practices for rural transit are to use all marketing tools available and to particularly take advantage of low-cost, high-impact activities such as social media and public outreach. These strategies are discussed below by category of the intended audience.

Current Riders

The best marketing strategies aim to retain existing riders while also attracting new ones. HTA and the other Humboldt County transit providers must continue to develop marketing materials that are both informative and practical for current riders to maintain the good perceptions of the transit held by most passengers.

- Branding/Physical Presence: The Humboldt County transit providers should continue to pursue options that will make it easier for riders to navigate between different systems, such as a common payment system.
- Bus Displays: The information on vehicle head signs and internal bulletin display boards on the buses are highly visible to passengers. The information contained within these displays should be attractive, informative, and quickly convey information.

- Website Improvements: HTA should add a specific section to the website homepage for important real-time service alerts. The HTA website should also include a link to the Fortuna Transit page in case eligible passengers are searching for information.
- Printed Materials: HTA could develop a full rider's guide document discussing information for all of the transit services in the county, including fixed route schedules, fare policies, transfer information, and rules for passenger conduct. While the final document may be dense, it would still serve as a comprehensive resource for passengers who cannot access digital information regularly. This comprehensive rider's guide should also be made in Spanish.
- Social Media: At this time, HTA is the only transit provider with an exclusive social media account. All of the individual providers should establish their own Facebook and Twitter accounts to share important service changes but also to share exciting news such as the deployment of new ZEVs, positive rider experiences, or progress on ongoing capital projects. Alternatively, transit information for all of the Humboldt County transit programs could be shared via single, consolidated social media accounts. The providers would have to agree on who should manage said accounts.
- Phone Materials: The relevant agency's phone information should be included on all new and replacement bus stop signs installed during the planning period. It would also be beneficial if HTA developed phone resources for Spanish-speaking individuals.
- Special Promotions: Special promotions can serve as an opportunity to thank current passengers for their use of the transit system and to boost passenger morale and perceptions. Each agency should continue to offer special free-fare days or pass promotions when finances allow. New technologies such as ZEVs or the Token Transit app should continue to be pushed through concerted marketing efforts to excite passengers about the positive changes occurring on the bus.

- Active Management: Humboldt County is already benefiting from the hands-on approach taken by local transit managers. Active management of the transit system will become even more important as the various managers work to attract riders, convert fleets to ZEVs, and implement new services spanning local to interregional distances. Active management is one of the best strategies for retaining ridership because the transit manager can respond to the immediate needs and concerns of the riders and strives to provide the best service possible.

Attracting Students

Students from Cal Poly Humboldt and College of the Redwoods have historically comprised a large portion of Humboldt County transit ridership. The Humboldt County transit providers must encourage students to return to the bus system now that in-person instruction has resumed at both universities. The planned expansion of Cal Poly Humboldt in upcoming years also represents a large pool of potential new transit riders that HTA and A&MRTS, in particular, should market to. Specific strategies to attract college students might include:

- Campus visits and presentations on what services are available at the start of the school year.
- Creating specific promotional materials describing the transit services to each campus and information on the Jack Pass.
- Requests that campuses share promotional materials, preferably through the campus messaging network or email system.
- Partnering with on-campus clubs and organizations either interested in transit or could benefit from learning more about transit services.
- Radio and newspaper advertising; and
- On-campus kiosk with rider's guides.

Attracting New Riders

Every transit system experiences turnover in ridership as students graduate, residents move, and people acquire cars and/or driver's licenses. Unfortunately, many transit agencies find attracting new riders to replace those leaving to be a challenge. The onboard survey results revealed that most passengers have used public transit in Humboldt County for 2 or more years (53 percent), while far fewer are new passengers (only 20 percent began riding public transit within the previous 6 months). Strategies that HTA and the other providers should engage in to try and reach new riders include:

- Testimonial Advertising: Transit systems inevitably have grateful passengers. Transit agencies should let riders tell their stories. This can be done as a newspaper story, as part of a flyer or poster, or as a radio spot. Identify regular passengers on the transit system (a single mom, a student, a disabled passenger, a local politician, etc.) and ask why they ride, what they like about the service, and how transit personally helps them. These testimonials could inspire the public and help to improve the poor perceptions of the existing transit system held by the greater community.
- Outreach Campaigns about New Technology and Projects: Transit services in Humboldt County are continuously evolving as new services are implemented and new technologies deployed. The transit providers should try to promote the transit system by developing outreach materials describing exciting changes such as new facilities, ZEVs, the Token Transit app, and other services. Emphasizing how the transit system is improving and easy to use will help to counter perceptions the Humboldt County transit services are dated and may cause some non-riders to reconsider using transit.
- Social Media Campaigns: As previously mentioned, the HTA has a Facebook page with over 1,000 followers. Many transit agencies use Facebook advertising to reach people who are on the platform but unfamiliar with available transit services. HTA should utilize Facebook advertising to increase awareness of the transit system and to attract riders back to the service. These campaigns should be done outside of the "holiday season" months of November and December when Facebook is flooded with advertisements. If HTA budgeted $250 for Facebook advertisements annually, the HTA's posts would reach a significant number of people on the platform.
- Special Events and Partnerships: Free-fare days not only reward current passengers, but also have been found to entice both new and past riders to hop on the bus. When funding allows, the transit agencies should try to offer special events such as free-fare days to lower the barriers to reaching new riders. These could be used to encourage people to try the Token Transit app as well. The transit agencies should also work to partner with local organizations with an interest in transit to encourage ridership by planning events, an example being a "Ride the Bus to Work Day."
- Public Presentations: Public speaking is the ultimate low-cost marketing tool. Public speaking can be interactive with the speaker fielding questions and conveying customized information for the specific audience. Target audiences would likely be seniors, students, social service program clients, and employee groups. Presentations to schools and colleges, businesses, employers, social services, senior residences, senior centers, and neighborhood associations would therefore be appropriate. Presentations should be tailored for the general public, both riders and non-riders alike. Speaking to members of civic and business organizations enables the transit agency to set up an identity as part of the community and get information to residents who may not normally interact with transit.

Chapter 10

REVIEW OF POLICIES AND PERFORMANCE STANDARDS

INTRODUCTION

Public transit agencies benefit from developing performance standards to evaluate their safety, effectiveness, efficiency, and quality. As Humboldt County's transit programs receive public funding, goals and standards are important tools for communicating to the public how effectively funds are being spent. Performance standards should be designed to assess whether services meet the community's needs. If a certain service is consistently not meeting performance standards, it should encourage a conversation about whether policy or service changes are warranted.

It is important for a transit agency to regularly reevaluate its goals and standards. This is especially true in the wake of the COVID-19 pandemic, as changed ridership patterns have prompted a need for new, more appropriate standards. New standards may also be merited whenever new services are implemented. The Humboldt County transit programs' FY 2021-22 performance is evaluated in this chapter using the standards adopted in the 2017 TDP. Some of the standards from the previous TDP have been updated to better reflect transit conditions in the post-COVID era. The proposed standards included in this 2023 TDP should be used for guiding operational decisions throughout the next five years, as well as for evaluating the success of service changes and pilot programs implemented as a result of this TDP. The standards were designed to be ambitious enough to encourage improvement but realistically achievable to be meaningful, particularly in the aftermath of COVID-19. The goals and standards presented in this TDP consider financial realities and are therefore not as ambitious as the transit ridership growth targets set in the 2022 Humboldt County RTP, which do not reflect financial constraints.

Goals should be broad in scope and apply to all services operated by a transit agency. Performance standards, however, should consider the specific type of service that is being evaluated. For instance, local routes typically carry far more passenger trips per vehicle service hour compared to DAR, so the two types of services should not be held to the same standard. Based on the different relative performance expected for different types of transit services, this chapter outlines performance standards for each of the eight services analyzed in this study: RTS, ETS, SHI, WC, Humboldt DAR, A&MRTS, Fortuna Transit, and BLRTS.

SAFETY GOALS

The top goal of all transit programs should be to operate safely. This is best measured in the number of preventable accidents. The industry standard is that all services should operate with a minimum of 100,000 miles between preventable accidents. A target standard is to operate 500,000 miles between accidents. This safety standard remains unchanged from the 2017 TDP. In FY 2021-22, RTS, ETS, and the Humboldt DAR all experienced accidents at a frequency that fell short of the minimum standard. A&MRTS, the City of Fortuna, and Blue Lake Rancheria did not provide data for this metric. This data is shown in Table 52.

Table 52: Recommended Humboldt County Transit Safety Standards

Shading Indicates Does Not Meet Minimum Standard
Shading Indicates Meets Minimum Standard
Shading Indicates Meets Target Standard

1. PROVIDE SAFE TRANSIT SERVICES			
Miles Between Accidents			
	Recommended Standard		FY 2021-22 Performance [1]
Service Type	Minimum Standard	Target Standard	
RTS	100,000 Miles Between Accidents	500,000 Miles Between Accidents	47,252
ETS			17,776
SHI			140,430
WC			No Accidents
Humboldt DAR			85,034
A&MRTS			N/A
Fortuna Transit			N/A
BLRTS			N/A

Note 1: Data is from 2021-22.

Source: HTA

TRANSIT QUALITY AND EFFECTIVENESS GOALS

The 2017 TDP recommended the Humboldt County transit agencies adopt goals to provide high-quality and effective transportation services. Updated standards for these goals to help achieve optimal performance are discussed below.

On-Time Performance

On-time performance is an important indicator of service quality. Services that consistently run late jeopardize passengers' confidence in reliability and harm the reputation of services. While some factors are beyond the control of transit programs, such as accidents, unusual traffic congestion, or other unforeseen circumstances, services should be planned so they can operate on time and transport passengers with minimal delays. "On-time" is defined as leaving the stop no more than five minutes after the scheduled time and never early.

Table 53 shows the recommended minimum and target on-time performance standards for each program, and the FY 2021-22 status (where available). The on-time standards for the fixed route services have been increased from the previous TDP to be in line with Caltrans standards, and the standards for the Fortuna Transit and the Humboldt DAR (both dial-a-ride) services remain unchanged. Only ETS met the minimum on-time standard in FY 2021-22. SHI and WC both fell well short of meeting the standard, likely due to the long distances of the trips and unpredictable road conditions. A&MRTS and Fortuna verbally acknowledged meeting standards but did not have data available.

Table 53: Recommended Humboldt County Transit Quality and Effectiveness Standards

Shading Indicates Does Not Meet Minimum Standard
Shading Indicates Meets Minimum Standard
Shading Indicates Meets Target Standard

2. PROVIDE HIGH QUALITY PUBLIC TRANSIT SERVICES			
On-Time Performance (Measured as Percent On-Time)[2]			
Transit Service	Recommended Standard [3]		FY 2021-22 Performance [1]
	Minimum Standard	Target Standard	
RTS	90%	95%	85.4
ETS	90%	95%	91.6
SHI	90%	95%	76.8
WC	90%	95%	63.2
Humboldt DAR	Pick-up Within 30 Min. Window	Pick-up Within 30 Min. Window	N/A
A&MRTS	90%	95%	Meets requirement [4]
Fortuna Transit	Pick-up Within 30 Min. Window	Pick-up Within 30 Min. Window	Meets requirement [4]
BLRTS	90%	95%	N/A

3. PROVIDE EFFECTIVE PUBLIC TRANSIT SERVICES			
Passenger-Trips per Vehicle Service Hour			
Transit Service	Recommended Standard		FY 2021-22 Performance [1]
	Minimum Standard	Target Standard	
RTS	11.0	15.0	7.4
ETS	11.0	15.0	9.2
SHI	2.5	3.5	3.3
WC	4.0	4.5	4.2
Humboldt DAR	2.5	3.5	2.5
A&MRTS	18.0	20.5	7.1
Fortuna Transit	2.5	3.5	2.9
BLRTS	6.0	7.5	4.5

Note 1: Data is from FY 2021-22.

Note 2: "On-time" is defined as never early and not more than 5 minutes late.

Note 3: On-time performance standards sourced from Caltrans report "Baselines: Current and Further Transit Trends."

Note 4: Transit provider has indicated they meet the standard, but does not have specific data.

Source: HTA, A&MRTS, Fortuna Transit, BLRTS, CAE

Passengers Carried per Vehicle Service Hour

The number of passenger trips carried per vehicle service hour is a strong indicator of the effectiveness of transit service. This factor was significantly impacted during COVID, as ridership dropped sharply. Nonetheless, the number of passengers carried per hour of service is still a helpful metric for transit agencies when determining which services are successful, and which are struggling.

Table 53 presents minimum and target standards for passengers per service hour for each service. The 2017 TDP standards were modified based on how much ridership had dropped on each specific

service from FY 2019-20 to FY 2021-22. This data resulted in the A&MRTS standard decreasing by 40 percent from the 2017 TDP, the standards for RTS, ETS, SHI, and BLRTS decreasing by 25 percent, and the standards for WC and the Humboldt DAR decreasing by 5 percent. The Fortuna Transit standards were changed to be the same as those for the Humboldt DAR to reflect that both programs operate dial-a-ride services.

As indicated, none of the services met the target standards in FY 2021-22. The SHI, WC, Humboldt DAR, and Fortuna Transit all met the minimum standards, while RTS, ETS, A&MRTS, and BLRTS did not. The poor performance regarding these effectiveness standards is primarily due to low ridership during FY 2021-22 when the pandemic was still in full force. Also, as previously stated, the standards have been set higher than actual performance in hopes that transit programs will recover from COVID impacts. Initial performance during FY 2022-23 suggests that most of the providers will meet the minimum standards for passenger trips per vehicle service hour.

TRANSIT COST EFFICIENCY GOALS AND STANDARDS

Each transit program should emphasize cost efficiency. The following section discusses the two standards adopted in the 2017 TDP to measure the cost-effectiveness of the Humboldt County transit providers.

Farebox Recovery Ratio

In simple terms, the farebox return ratio is the ratio of the operating income (largely fare revenues, but also including advertising revenue) divided by the operating expenses. The TDA establishes minimum farebox recovery ratios, but these requirements were put on hold during the pandemic and are currently under review. Despite this hold, the farebox recovery ratio is still included in this TDP as a standard to assess the cost efficiency of transit services. The 2017 TDP standards have been revised so that going forward, all services are simply recommended to have farebox ratios that exceed the TDA's minimum standard for rural transit agencies (10 percent or greater) (Table 54). In FY 2021-22, RTS, ETS, SHI, and WC all met the minimum farebox standard, while A&MRTS, Fortuna Transit, and the Humboldt DAR did not. Data was not provided for BLRTS.

Operating Subsidy per Passenger trip

The final standard included in the 2017 TDP was marginal operating subsidy per passenger trip. This is calculated by determining the total operating cost of a service, subtracting fare revenues, and then dividing the remaining value by the number of passenger trips. To reflect changing costs and ridership since the 2017 TDP, the previous standards were increased by 24.2 percent to account for inflation from January 2017 through December 2022 (as measured by the California Consumer Price Index), and then increased an additional 25 percent to reflect lower ridership post-pandemic. Table 54 presents only a recommended maximum marginal operating subsidy per passenger trip for each provider. Table 54 also shows how FY 2021-22 performance compared to these newly recommended standards. As shown, RTS, ETS, and WC have marginal operating subsidies below the maximum standards and are therefore considered to have met standards. Data was not available for BLRTS. The recommended maximum standards should be increased annually to account for inflation.

Table 54: Recommended Humboldt County Transit Cost Efficiency Standards

Shading Indicates Does Not Meet Standard
Shading Indicates Meets Standard

4. PROVIDE COST EFFICIENT SERVICES		
Minimum Farebox Return Ratio		
Transit Service	**Recommended Standard[2]**	**FY 2021-22 Performance [1]**
RTS	10% Minimum	19.3%
ETS		19.5%
SHI		15.9%
WC		27.6%
Humboldt DAR		8.9%
A&MRTS		4.6%
Fortuna Transit		7.3%
BLRTS		N/A

Marginal Operating Subsidy per Passenger-Trip		
Transit Service	**Recommended Maximum Standard[3]**	**FY 2021-22 Performance [1]**
RTS	$4.66	$6.96
ETS	$6.21	$6.28
SHI	$23.29	$30.80
WC	$15.53	$18.97
Humboldt DAR	$38.81	$5.95
A&MRTS	$3.88	$19.52
Fortuna Transit	$23.29	$26.20
BLRTS	$15.53	N/A

Note 1: Data is from FY 2021-22.

Note 2: Minimum standards for farebox ratio are sourced from the TDA requirements for rural transit agencies.

Note 3: The standard for marginal operating subsidy per passenger-trip should be updated annually according to inflation rates recorded by the CA Consumer Price Index.

Source: HTA, A&MRTS, BLRTS, Fortuna Transit, Triennial Performance Audits.

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Chapter 11
TRANSIT DEVELOPMENT PLAN

INTRODUCTION

This Humboldt County TDP has been developed based on the following:

- The detailed review of existing conditions and potential improvements presented in previous chapters.
- Substantial input from the public and passengers, as well as key stakeholders.
- A review of available, and potentially available, near-term funding.
- A recognition that short-term transit strategies need to support long-term regional goals of significant expansion in public transit services and ridership.

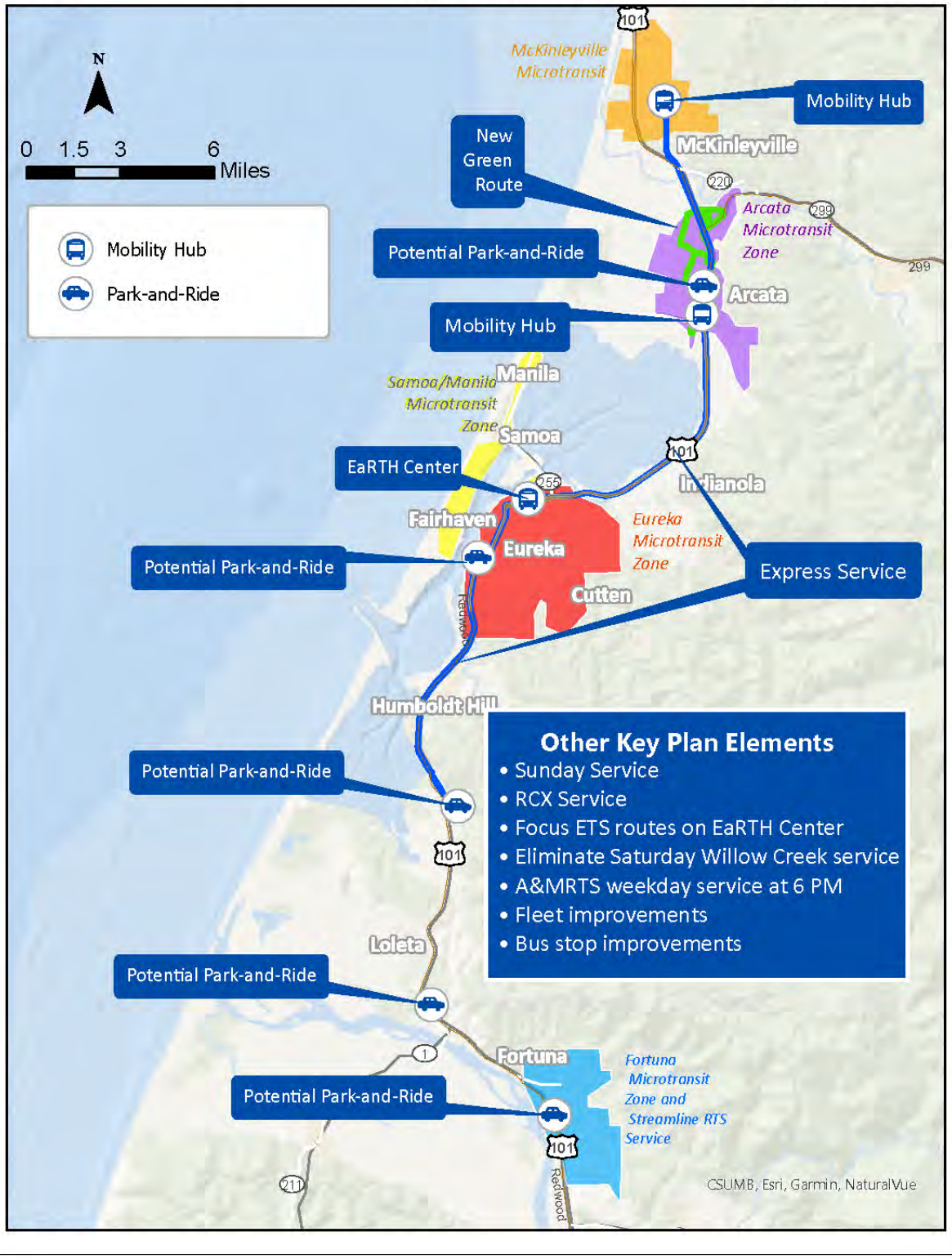
However, these factors must be considered in light of the limited transit funding currently available. In both Eureka and Arcata, all existing available funding for transit is already being used, and the funding potentially available for transit in other Humboldt County jurisdictions is very limited. Reflecting Humboldt County's goal to expand public transit access in the region, this TDP goes beyond existing defined funding levels to include viable service improvements that will require additional funding to achieve. A map depicting key TDP elements is shown in Figure 24.

A key element of this TDP is the provision of microtransit services in various communities. As an overview, there are two general approaches to implementing microtransit:

- An entirely new service can be implemented. In this approach, the microtransit service has its own brand separate from existing DAR programs. This has the advantage of generating a high level of public awareness about the new service. It also does not change existing services for DAR riders. This approach, however, can require substantially higher costs. For instance, adding up the estimated operating costs for the various microtransit alternatives discussed in Chapter 6 that assumed the implementation of entirely new services indicates a potential total operating cost of roughly $2.7 million per year.
- Service can be implemented incrementally by expanding access to existing DAR services. In this approach, the transit provider rolls out the microtransit service by first introducing an app for reservations, then by making the DAR service available to the general public. In this scenario, same-day general public requests can be accommodated on a space-available basis with a priority for ADA passengers. General public fares may be higher than fixed route or DAR fares to manage general public demand. As funds allow, the service capacity can be expanded to improve response times and allow fares to be dropped to encourage additional general public ridership.

Given the high costs of the first option and the uncertainties associated with implementing a new service model, the second, incremental approach is recommended for new microtransit services in Humboldt County.

Figure 24
Humboldt County Transit Development Plan



HUMBOLDT TRANSIT AUTHORITY SERVICE PLAN

The HTA service plan encompasses the RTS, ETS, WC, and SHI services. The main goals of the service plan are to strengthen regional transit service along the US 101 corridor and improve local connecting services (with a focus on microtransit) within individual communities. Note that as the implementation of RCX service and the elimination of Samoa Transit have both already been decided, they are not described further in this section.

Express Service

The most effective short-term service improvement to the RTS mainline service is to implement an express service between Arcata (Cal Poly Humboldt) and Eureka. For instance, a Cal Poly Humboldt – Eureka Express service is forecast to carry over twice as many new passenger trips per hour of service (13.3) than the implementation of a Sunday RTS service (6.1). As the express service will provide travel times that are more on par with the private automobile, it can attract new riders that are currently discouraged from riding the bus due to long travel times (based on existing service schedules it now takes 12 more minutes to travel between Cal Poly Humboldt and downtown Eureka on transit than by car).

The Cal Poly Humboldt–Eureka Express service would consist of one bus operating 40-minute round trips from 7:30 AM to 9:26 AM (three round trips) and from 2:00 PM to 5:56 PM (six round trips) on weekdays. In addition to providing faster travel times (passengers will save 5 to 9 minutes per one-way trip), this change will also increase service frequency during the busiest portions of the day from 9 runs in each direction to 20 runs in each direction.

The Cal Poly Humboldt – Eureka Express service should not be considered as part of the RTS "base" service funded through the JPA, as this would increase the amount of LTF funding required from JPA members (such as the Cities of Fortuna and Trinidad) that would not benefit directly from the new service. A separate funding strategy will need to be established. The longer-term goal should be to provide an express service between McKinleyville and CR using two buses to operate hourly service.

Sunday RTS Service

Beyond express service, Sunday service is also recommended as a longer-term improvement to RTS. The provision of service on Sunday helps more people to adopt a car-free lifestyle by enabling people to access work, social, shopping, and recreational commitments on Sundays. Over time, Sunday service can result in additional ridership on other days of the week as well, as residents choose to reduce or eliminate the number of cars they own due to the expanded availability of transit.

This service expansion is less important than initiating express service, as it is less productive and cost-effective. Sunday service is also relatively challenging, as it requires maintenance and dispatch staff, in addition to drivers, on an additional day of the week. RTS Sunday service would not be as well utilized if implemented in isolation as it would be if accompanied by Sunday service in connecting systems, specifically ETS and A&MRTS. It is therefore recommended that Sunday service not be implemented until funding for service on all three of these systems can be secured. This expansion will require an additional funding source.

Incrementally Implement McKinleyville Microtransit Service

Existing DAR services in the McKinleyville area should be expanded and opened to the general public using a reservation/scheduling app. McKinleyville is well suited for microtransit service due to the dispersed nature of the roadway network and residential areas coupled with the relatively high rate of growth. In addition to trips within McKinleyville, the microtransit service should focus on providing first-mile/last-mile access to RTS. A specific fare policy will need to be developed that yields general public ridership demand that can be met with a good quality of service given available resources.

Samoa/Manila Microtransit Service

As reflected in the recent elimination of Samoa Transit, the peninsula is a difficult area to serve with traditional fixed routes. However, a standalone microtransit service would also incur very high costs per passenger trip. Service to the peninsula (beyond the nine daily RTS runs serving the Manila Community Center) would best be provided as an extension of a successful Eureka microtransit service, as will be discussed below. Therefore, expanding microtransit to Samoa and Manila should be considered only once microtransit has been implemented in Eureka. Specific parameters such as fare levels and hours of operation would depend on available funding.

Streamline Weekday Fortuna Service

Once a full microtransit service is available in Fortuna (as discussed under the Fortuna Transit Service Plan section), RTS weekday service in Fortuna can be simplified to serve only the Fortuna Boulevard corridor and the 11th & N stop. On Saturdays, the existing RTS service to stops east of Fortuna Boulevard will need to remain in place until Fortuna Transit begins providing microtransit on Saturdays as well. RTS could accommodate any ride requests from passengers trying to transfer to RTS early and late on weekdays when Fortuna Transit is not in operation on a demand-response basis.

Further streamlining to limit RTS service in Fortuna to a single stop along US 101 is not recommended as it could reduce RTS access for approximately 200 Fortuna passengers. This would greatly increase the demand for and cost of the Fortuna Transit microtransit service and could reduce overall transit ridership.

Revise ETS Routes to Coordinate Service at Earth Center

The ETS routes should be revised to provide direct, convenient transfers between all buses at the new EaRTH Center (3rd & H). This change will increase connectivity for passengers making trips within Eureka and will also improve the convenience of connections to RTS (including the new Cal Poly Humbolt – CR Express service). Revising the ETS routes is an important step in improving how the local and regional systems operate as a whole. Detailed schedule planning will be needed to optimize coordination between the ETS and RTS schedules.

Incrementally Implement Microtransit in Eureka

As discussed above, an incremental implementation of microtransit service in Eureka is recommended. The service should gradually be implemented by first making the current DAR available to the general public through the use of the RideCo app. As more funding becomes available to expand capacity, HTA should increase marketing of the general public microtransit option.

ETS Sunday Service

ETS Sunday service is recommended as part of a comprehensive implementation of Sunday service on RTS, ETS, and A&MRTS (at a minimum). While Sunday service will generate lower productivity than current ETS services, the provision of transit services seven days a week will allow more residents to fully participate in all aspects of life without the need for a vehicle and would therefore likely lead to an increase in transit use on other days of the week. A reasonable first step would be to implement Sunday service on the Gold and Rainbow Routes from 10 AM to 3 PM. Future expansion of Sunday service could also be considered as ridership warrants.

Eliminate Saturday Willow Creek Service

Saturday service on the WC service should be eliminated, as current ridership does not warrant the associated operating costs; Saturday ridership on WC is roughly a quarter of weekday ridership, resulting in an operating cost per passenger trip of approximately $115. Saturday service could be reevaluated again in the future to determine if reinstating the service would be more cost-efficient.

Southern Humboldt Intercity Service

No changes are recommended to the SHI service. As the new RCX service matures, changes to the SHI service that would allow for better coordination between the two services should be considered.

Demand Response System Policies

HTA and the contractor (CAE) should increase enforcement of the no-show and late cancellation policies. No-show passengers (which currently consist of 8 percent of ride requests) and late cancellations (20 percent of ride requests) represent a significant waste of limited resources that in turn reduces the quantity of service available to other riders. In addition to enforcing existing policies, the DAR policy language regarding “valid excuses” should be made more explicit.

Dial-A-Ride Funding Agreement

DAR funding responsibilities should be adjusted to reflect the relative costs associated with the provision of service to various areas and corridors in Humboldt County. A focused study should be undertaken to address funding responsibilities and to support discussions regarding changes in these responsibilities. This is particularly important as the current agreement reduces the funding available for the City of Eureka that could be used for other transit improvements.

HTA Service to Blue Lake

As this TDP was being finalized, the Blue Lake Rancheria Transit System announced the discontinuation of services. Subsequently, as a short term measure, HTA modified the Willow Creek route to serve Blue Lake, with stops at City Hall and the casino. HTA is the agency most suited to continue to serve Blue Lake and should consider possible changes to how Blue Lake is served based on ridership needs and input (such as extension of existing RTS runs that currently terminate at Arcata). Long term funding for service to Blue Lake should also be considered, including possible inclusion of Blue Lake into the HTA joint powers agreement.

Operating Costs

Future HTA operating cost forecasts under the recommended service plan over the next five years are presented in Table 55. These forecasts reflect the following:

- "Status Quo" operating costs are based on the adopted FY 2023-24 budget. A 5 percent inflation factor is then assumed for FY 2024-25, and a 3 percent inflation factor for each subsequent year. Based on this predicted inflation, HTA operating costs for existing services will increase to $11,511,400 by the fifth year of the TDP planning period. Note that these costs include operations for A&MRTS.
- Operating costs for individual plan elements are based on the FY 2022-23 cost estimates presented in Chapter 6. These are increased by a 5 percent inflation factor for the first plan year and a 3 percent inflation factor for the subsequent years.
- The HTA service plan elements are assumed to be implemented on the following schedule:
  - Eureka-Cal Poly Humboldt Express service is implemented in FY 2024-25. In FY 2026-27, this is expanded to provide a McKinleyville-CR Express service.
  - Sunday service is implemented in FY 2026-27, for both RTS and ETS.
  - Microtransit service in McKinleyville and Eureka is gradually expanded to add 25 percent of the full potential service hours each year until fully implemented.
  - The savings in operating costs associated with streamlining service in Fortuna (associated with Fortuna microtransit) are assumed to occur in FY 26-27.
  - The WC Saturday service is eliminated in FY 24-25.

In total, the plan elements will increase operating costs by $2,761,400 by the final year of the plan, or a 24 percent increase over the status quo, for a total operating budget of $14,272,800 in FY 2027-28.

Ridership Forecasts

Ridership impacts of the HTA service plan elements are estimated for each of the five years of the plan period, as shown in the center portion of Table 56. The following methodology was applied in developing these forecasts:

Table 55: Humboldt Transit Authority Plan - Operating Costs

Plan Element	Fiscal Year 23-24	24-25	25-26	26-27	27-28
OPERATING COSTS					
Status Quo Operating Cost [1]	$10,032,900	$10,534,500	$10,850,600	$11,176,100	$11,511,400
Service Plan Element Operating Costs					
Eureka - Cal Poly Humboldt Express	$0	$257,300	$265,000	$273,000	$281,200
McKinleyville - CR Express	$0	$0	$0	$542,000	$558,300
Sunday RTS Service	$0	$0	$0	$158,300	$163,000
McKinleyville Microtransit Service	$0	$105,100	$216,600	$334,600	$459,500
Streamline Fortuna RTS Service	$0	$0	$0	-$54,000	-$55,700
Revise ETS Route to Focus on 3rd & H Hub	$0	$0	$0	$0	$0
Eureka Microtransit Service	$0	$305,000	$628,300	$970,700	$1,333,000
ETS Sunday Service	$0	$0	$0	$111,300	$114,700
Eliminate Saturday Willow Creek Service	$0	-$84,800	-$87,300	-$89,900	-$92,600
Subtotal: Service Plan Elements	*$0*	*$582,600*	*$1,022,600*	*$2,246,000*	*$2,761,400*
Percent Change	*0%*	*6%*	*9%*	*20%*	*24%*
Net Operating Cost [1]	$10,032,900	$11,117,100	$11,873,200	$13,422,100	$14,272,800

Note 1: Based on the adopted FY 2023-24 budget, including direct and indirect expenses for RTS, ETS, Willow Creek, Southern Humboldt, and DAR-CTSA contract. Assumes 5% inflation for FY 24/25 and 3% annual inflation for subsequent years. Includes the impacts of elimination of Samoa service and the start of RCX service.

Source: LSC Transportation Consultants, Inc.

Table 56: Humboldt Transit Authority Plan - Ridership and Fare Revenues

Plan Element	Fiscal Year 23-24	24-25	25-26	26-27	27-28
RIDERSHIP					
Status Quo Ridership [1]					
Existing RTS Minus Samoa	295,900	310,700	326,200	342,500	359,700
RCX	1,500	4,100	4,700	4,900	5,100
ETS	129,600	136,100	142,900	150,000	157,500
Willow Creek	12,500	12,800	13,000	13,300	13,500
Southern Humboldt	13,600	13,800	14,100	14,400	14,700
Dial-A-Ride	19,600	20,600	21,600	22,700	23,900
Subtotal	472,700	498,100	522,500	547,800	574,400
Service Plan Element Ridership Impacts					
Eureka - Arcata Express	0	27,300	39,100	0	0
McKinleyville - CR Express	0	0	0	58,300	67,800
Sunday RTS Service	0	0	0	5,800	8,400
McKinleyville Microtransit Service	0	3,800	8,100	12,700	17,800
Revise ETS Route to Focus on 3rd & H Hub	0	0	0	1,200	1,700
Eureka Microtransit Service	0	8,900	18,600	29,300	41,000
ETS Sunday Service	0	0	0	1,900	2,700
Eliminate Saturday Willow Creek Service	0	-500	-500	-500	-600
Subtotal: Service Plan Elements	0	39,500	65,300	108,700	138,800
Percent Change	*0%*	*8%*	*12%*	*20%*	*24%*
Net Ridership	472,700	537,600	587,800	656,500	713,200
Percent Increase over FY 23/24 Ridership		*14%*	*24%*	*39%*	*98%*
PASSENGER REVENUES					
Status Quo Fare Revenues [2]					
Existing RTS Minus Samoa	$593,100	$876,200	$920,000	$965,900	$1,014,400
RCX	$10,000	$27,300	$31,300	$32,600	$33,900
ETS	$219,400	$280,700	$294,700	$309,300	$324,800
Willow Creek	$27,700	$28,400	$28,800	$29,500	$29,900
Southern Humboldt	$51,400	$56,700	$58,000	$59,200	$60,400
Dial-A-Ride	$82,000	$86,200	$90,400	$95,000	$100,000
Subtotal	$983,600	$1,355,500	$1,423,200	$1,491,500	$1,563,400
Service Plan Element Revenues					
Eureka - Arcata Express	$0	$77,000	$110,300	$0	$0
McKinleyville - CR Express	$0	$0	$0	$164,400	$191,200
Sunday RTS Service	$0	$0	$0	$16,400	$23,700
McKinleyville Microtransit Service	$0	$11,400	$24,300	$38,100	$53,400
Revise ETS Route to Focus on 3rd & H Hub	$0	$0	$0	$2,500	$3,500
Eureka Microtransit Service	$0	$26,700	$55,800	$87,900	$123,000
ETS Sunday Service	$0	$0	$0	$3,900	$5,600
Eliminate Saturday Willow Creek Service	$0	-$1,100	-$1,100	-$1,100	-$1,300
Subtotal: Service Plan Elements	$0	$114,000	$189,300	$312,100	$399,100
Percent Change	*0.0%*	*8.4%*	*13.3%*	*20.9%*	*25.5%*
Net Passenger Revenues	$983,600	$1,469,500	$1,612,500	$1,803,600	$1,962,500

Note 1: Based on 2021-22 annual ridership factored by the year-over-year to date ridership increases identified in the April 2023 Performance Activity Report, as well as a 5 percent annual growth rate for RTS, ETS and DAR services and a 2 percent annual growth rate for Willow Creek and Southern Humboldt services.

Note 2: Based on the average fare from the year to date ridership and passenger revenue figures identified in the April 2023 Performance Activity Report.

Source: LSC Transportation Consultants, Inc.

"Status Quo" ridership is estimated by applying the year-over-year percent increase from the April 2023 HTA Performance Report to FY 2021-22 ridership totals. Samoa Transit ridership is subtracted out of the RTS figures to reflect the elimination of that service. To account for the ongoing recovery of ridership since the pandemic as well as future growth in the demand for transit services in Humboldt County, a 5 percent annual growth factor is applied for the RTS, ETS, and DAR services and 2 percent for the WC and SHI services.

- RCX ridership status quo ridership is assumed to be 4,500 passengers per year is assumed, as discussed in the 2017 TDP. The FY 2023-24 figure is lowered to reflect a service start date of January 2024.
- The ridership estimates for individual service elements presented in Chapter 6 are used to define the full potential ridership of the service change.
- The implementation schedule presented in Table 55 was applied to the ridership figures.
- For new services (including RCX), annual factors are applied to reflect that the full potential ridership of a new service is typically not reached until the third year of service after passengers become more aware of the new service and change their travel patterns. These factors estimate 66 percent of full ridership in Year 1 and 90 percent in Year 2 and are based on research presented in the *Transit Cooperative Research Program Report 95: Traveler Response to Transportation System Changes Handbook*.

As shown, the service plan elements are forecast to increase ridership by 138,800 passenger trips per year, or 24 percent over the status quo. Even with the expected growth in status quo ridership also accounted for, FY 2027-28 ridership is forecast to total 713,200, or 98 percent above FY 2022-23 ridership. Of note, this ridership increase of 98 percent is substantially greater than the operating cost increase of 31 percent, indicating that as a whole, the presented service plan improves HTA's cost-effectiveness.

Passenger Revenue Forecasts

Passenger revenue forecasts were made based on the annual ridership estimates, and the following:

- Passenger revenues for existing RTS services (minus Samoa Transit) as well as the Express and Sunday RTS service expansions were estimated using the average RTS passenger revenue per passenger trip as identified in the April 2023 Performance Report.
- For the RCX, the $10,000 passenger revenue identified in the adopted FY 2023-24 budget was used, growing in proportion with ridership in subsequent years.
- For the McKinleyville microtransit service, an average fare of $3.00 per passenger trip was assumed.

As shown in the bottom portion of Table 56, passenger revenues are forecast to grow to $1,962,500 per year by the final year of the planning period, or a growth of $988,441 over the five years.

ARCATA AND MAD RIVER TRANSIT SYSTEM SERVICE PLAN

The overall goal of the service plan for A&MRTS is to expand service throughout the community (including additional service areas and an expanded span of service) and improve the capacity and convenience of transit options to and from the Cal Poly Humboldt campus.

Implement the Green Route All Weekdays When Cal Poly is in Session

A new route (the Green Route) should be implemented on weekdays during the university sessions from 7:21 AM to 5:09 PM. This route will consist of three loops operated in turn using one vehicle, with each loop beginning and ending at Library Circle. As shown in Figure 18 (Chapter 6), the first loop will serve the downtown Arcata neighborhoods and extend to serve a new transit service area along South G Street (17 minutes of running time). After returning to Library Circle, the same bus will operate a central loop in a clockwise direction along LK Wood Boulevard, St Louis Road, Spear Avenue and Alliance Road (12 minutes running time). Finally, the bus will operate a clockwise loop in the northern portion of Arcata via LK Wood Boulevard, St. Louis Road, Spear Avenue, Alliance Avenue, Valley West Boulevard, and Valley East Boulevard, returning to Library Circle via US 101 (19 minutes running time). This proposed schedule provides a 12-minute layover before the next departure. The Green Route configuration presented in this TDP would benefit the community by providing direct service in both directions between the Cal Poly Humboldt campus and the Craftsman's Mall housing areas, faster service between Cal Poly Humboldt and the Valley West area, and new service to the neighborhood along South G Street south of Samoa Boulevard. It is forecast to have relatively high productivity (16.0 passengers per vehicle hour) and low costs per passenger trip ($7.27).

Operate an Orange Route Run at 6:00 AM – 7:00 AM on Weekdays, Year Round

One new, early morning Orange Route run should be operated between 6 AM and 7 AM on weekdays to serve work trips. The high ridership levels seen during the current first hour of service starting at 7 AM indicate a high need for earlier morning service. It is recommended this change be implemented year-round rather than being limited to when Cal Poly Humboldt is in session, to better serve non-student riders. If ridership grows, shifting service to instead provide the Red and Gold Routes beginning at 6:00 AM could be considered.

Implement Sunday Service

Limited A&MRTS service on Sundays is recommended as a longer-term plan element. This should only be implemented if RTS Sunday service is also available to provide connectivity beyond Arcata as well as to share the costs of additional dispatch and maintenance staff on Sundays. Sunday service would increase mobility options for community members traveling for work, social/religious, recreational, and shopping purposes. Sunday service on A&MRTS may also further encourage students to live in Arcata without a car, generating more transit use (and reduced auto use and parking need) throughout the week. A reasonable first stage of Sunday service would be to operate the Orange Route from 10 AM to 3 PM. A&MRTS Sunday service could then be expanded at a later point as warranted by ridership demand.

Arcata Microtransit Service

It is recommended that the general public microtransit service be implemented in Arcata by expanding the existing DAR service through the use of an app that is also available to the general public. This would also provide an additional mobility option for those residents whom the fixed routes do not serve well. As shown in Figure 19 in Chapter 6, the service area should extend beyond the existing A&MRTS fixed route service area to include Bayside to the southeast and additional employers to the west (such as Sun Valley Group and Sierra Madre Mushrooms). Two additional vehicles will ultimately be operated at peak times. General public fares will need to be defined so that demand is limited to levels that can be adequately served.

Operating Costs

Forecasted operating costs under the A&MRTS five-year service plan are shown in Table 57. Costs reflect the recent contract for direct HTA provision of A&MRTS service and include DAR and HTA funding. A 5 percent inflation rate is assumed for the FY 2024-25 plan year, and 3 percent for the remaining years. Service elements are assumed to be implemented as follows:

Table 57: A&MRTS Plan - Operating Costs

Plan Element	Fiscal Year 23-24	24-25	25-26	26-27	27-28
OPERATING COSTS					
Status Quo Operating Cost [1]	$1,387,700	$1,457,100	$1,500,800	$1,545,800	$1,592,200
Service Plan Element Operating Costs					
Green Route	$0	$205,200	$211,300	$217,700	$224,200
6:00 AM Orange Route Weekday Run	$0	$33,100	$34,100	$35,100	$36,100
Sunday Orange Route Service	$0	$0	$0	$81,800	$84,200
Microtransit Service	$0	$182,900	$376,800	$582,200	$799,600
Subtotal: Service Plan Elements	*$0*	*$421,200*	*$622,200*	*$916,800*	*$1,144,100*
Percent Change	*0%*	*29%*	*41%*	*59%*	*72%*
Net Operating Cost	$1,387,700	$1,878,300	$2,123,000	$2,462,600	$2,736,300

Note 1: Based on the City of Arcata 2023-24 budget. Assumes 5% inflation for FY 24/25 and 3% annual inflation for subsequent years.

Source: LSC Transportation Consultants, Inc.

- Green Route and 6 AM weekday Orange Route services are implemented in FY 2024-25.
- Sunday Orange Route service is implemented in FY 2026-27.
- Microtransit service is gradually implemented over four years.

The service plan elements are forecast to increase operating costs by $1,144,100 by FY 2027-28. Including the effects of inflation on the existing service costs, total operating costs by the end of the plan period will equal $2,736,300, or an 82 percent increase over status quo costs. Meeting these costs will require additional new funding sources.

Ridership Forecasts

Ridership forecasts account for both growth in Cal Poly Humboldt enrollment as well as the local population. Cal Poly Humboldt administration has indicated the university's goal is to increase enrollment by 50 percent by 2025 and 100 percent by 2030. For this five-year TDP, a conservative 50 percent growth in enrollment over the next five years is assumed. The total Arcata population is also assumed to grow by 1 percent based on recent population trends discussed in Chapter 2. As 64 percent of A&MRTS ridership is comprised of Jack Pass users, the overall ridership growth rate over the five years considered is expected to be 7 percent under the status quo scenario.

The implementation schedule presented in Table 57 was applied to ridership estimates presented in Chapter 6 for each of the various service plan estimates to determine how the service plan would impact total ridership by year. For new services, annual factors are applied that reflect that the full potential ridership of a new service typically is not reached until the third year of service, as passengers become aware of the availability of the new service and change their travel patterns. These factors estimate 66 percent of full ridership in Year 1 and 90 percent in Year 2 and are based on research presented in the *Transit Cooperative Research Program Report 95: Traveler Response to Transportation System Changes Handbook*. The resulting ridership forecasts are shown in Table 58.

Overall, the A&MRTS service plan elements are forecast to increase ridership by 69,400 passenger trips per year, or 64 percent over the status quo. Including the growth in base-case ridership, FY 2027-28 ridership is forecast to total 177,800, or 127 percent above FY 2022-23 ridership.

Passenger Revenue Forecasts

Farebox revenues are estimated based on the FY 2023-24 budget and by applying the existing average fare revenue per passenger trip to the ridership estimates ($0.95), except that a $3.00 average fare is applied to future microtransit service ridership. As shown in the bottom portion of Table 58, the A&MRTS service improvements are forecast to generate $95,300 in additional fare revenues. Including growth in revenues from existing services, total fare revenues are forecast to increase by $163,300 over the plan period.

FORTUNA TRANSIT

Fortuna Microtransit Service and Streamlining of RTS Service

It is recommended that the existing Fortuna Transit dial-a-ride be gradually expanded to provide a comingled microtransit service, serving both existing ridership as well as the general public. In the short term, the City should work with HTA to share the costs of the RideCo app. Fares should initially be established for general public ridership at a relatively high level, such as $3 to $4 per one-way trip. Free transfers to/from the RTS service should also be provided. If funding allows expansion of service levels, fares could be reduced and additional marketing to the general public implemented.

Once it is shown that there is adequate capacity to accommodate the existing RTS ridership at the stops east of Fortuna Boulevard on the new microtransit service, the RTS route can be streamlined to focus on Fortuna Boulevard and Main Street, with passengers traveling to and from the eastern areas

of Fortuna transferring to the microtransit service. If future funding allows and demand warrants, providing microtransit service on Saturdays should be considered.

Table 58: A&MRTS Plan - Ridership and Fare Revenues

Plan Element	Fiscal Year 23-24	24-25	25-26	26-27	27-28
RIDERSHIP					
Status Quo Ridership [1]					
A&MRTS	83,500	89,100	95,100	101,600	108,400
Service Plan Element Ridership Impacts					
Green Route	0	15,700	22,900	27,100	29,000
6:00 AM Orange Route Weekday Run	0	10,200	14,900	17,700	18,900
Sunday Orange Route Service	0	0	0	4,900	7,100
Microtransit Service	0	3,000	6,300	10,100	14,400
Subtotal: Service Plan Elements	0	28,900	44,100	59,800	69,400
Percent Change	*0.0%*	*32.4%*	*46.4%*	*58.9%*	*64.0%*
Net Ridership	83,500	118,000	139,200	161,400	177,800
Percent Increase over FY 23/24 Ridership		*41%*	*67%*	*93%*	*113%*
PASSENGER REVENUES					
Status Quo Fare Revenue [2]					
A&MRTS & DAR	$228,000	$243,300	$259,700	$277,400	$296,000
Service Plan Element Revenues					
Green Route	$0	$14,900	$21,700	$25,700	$27,500
6:00 AM Orange Route Weekday Run	$0	$9,700	$14,100	$16,800	$17,900
Sunday Orange Route Service	$0	$0	$0	$4,700	$6,700
Microtransit Service	$0	$9,000	$18,900	$30,300	$43,200
Subtotal: Service Plan Elements	$0	$33,600	$54,700	$77,500	$95,300
Percent Change	*0.0%*	*13.8%*	*21.1%*	*27.9%*	*32.2%*
Net Passenger Revenues	$228,000	$276,900	$314,400	$354,900	$391,300

Note 1: Based on 2021-22 annual ridership factored by growth in 2022-23 and forecast based on CPH attendence growth and Arcata population growth.

Note 2: Based on the existing average fare, except a $3 fare is assumed for microtransit service.

Source: LSC Transportation Consultants, Inc.

Operating Costs

Status quo operating costs, as shown in Table 59, are based on the adopted City of Fortuna FY 2023-24 budget, excluding the funds provided to HTA. These costs are then increased by 5 percent for FY 2024-25 and 3 percent in the years thereafter to reflect inflation. The operating costs assume a gradual expansion of the existing Fortuna Transit service into a full, co-mingled microtransit service over four years. Given both inflation and the recommended service changes, total operating costs would increase by $270,800 over FY 2023-24 costs (52 percent). This will require an additional, new funding source.

Table 59: Fortuna Transit Plan - Operating Costs, Ridership, and Fare Revenues

Plan Element	Fiscal Year 23-24	24-25	25-26	26-27	27-28
OPERATING COSTS					
Status Quo Operating Cost [1]	$249,800	$262,300	$270,200	$278,300	$286,600
Service Plan Element Operating Costs					
Microtransit Service	$0	$53,500	$110,300	$170,400	$234,000
Percent Change	*0%*	*20%*	*41%*	*61%*	*82%*
Net Operating Cost	$249,800	$315,800	$380,500	$448,700	$520,600
RIDERSHIP					
Status Quo Ridership [1]	7,800	7,900	7,900	8,000	8,100
Additional Microtransit Ridership					
RTS Ridership Shifted to Microtransit	0	0	0	2,600	2,700
Other General Public Microtransit	0	400	800	1,200	1,600
Subtotal	0	400	800	3,800	4,300
Percent Change	*0%*	*5%*	*10%*	*48%*	*53%*
Net Ridership	7,800	8,300	8,700	11,800	12,400
Percent Increase over FY 23/24 Ridership		*6%*	*12%*	*51%*	*59%*
PASSENGER REVENUES					
Status Quo Fare Revenue [2]	$16,000	$16,200	$16,200	$16,400	$16,600
Service Plan Element Revenue					
Microtransit Service	$0	$1,200	$2,400	$11,400	$12,900
Percent Change	*0.0%*	*7.4%*	*14.8%*	*69.5%*	*77.7%*
Net Passenger Revenues	$16,000	$17,400	$18,600	$27,800	$29,500

Note 1: Based on the adopted City 2022-23 budget. Assumes 5% inflation for FY 24/25 and 3% annual inflation for subsequent years. Excludes funds provided to HTA.

Note 2: Based on 2021-22 annual ridership factored by 1 percent annual growth based on population forecasts.

Note 3: Based on the existing average fare, except a $3 fare is assumed for microtransit service.

Source: LSC Transportation Consultants, Inc.

Ridership Estimates

In the status quo scenario, Fortuna Transit ridership is forecast to increase by 1 percent annually over the next five years based on population growth. The incremental increases to ridership generated by the new microtransit service are expected to occur slowly as service is expanded, with a larger increase in ridership likely in FY 2026-27 as RTS ridership east of Fortuna Boulevard is shifted to microtransit. Overall, Fortuna Transit ridership is forecast to increase by 12,400 passenger trips per year, or 59 percent in total over the five years.

Farebox Estimates

Fare revenues were estimated assuming the current average fare per passenger for existing paratransit passengers ($2.07) and a $3.00 fare for general public microtransit riders. Total revenues are forecast to increase to $29,700 by the end of the plan period, or an increase of $13,700 over current levels, as shown in the bottom of Table 59.

CAPITAL PLAN

Develop the EaRTH Center Transit Hub

The site of the existing transit hub at 3rd and H Streets in downtown Eureka will be expanded into a multimodal and multifunction transportation and housing complex, incorporating transit, bicycle, pedestrian, and retail uses. While plans have yet to be finalized, focusing on the following transit-specific elements will be important:

- Bus loading bays adequate to accommodate up to four ETS buses, two RTS buses, one intercity bus, and two microtransit vans at one time.
- Safe and attractive passenger waiting amenities.
- Real-time travel information and ticketing facilities.
- Bicycle, pedestrian, and micromobility access/amenities.

The EaRTH Center is also proposed to have commercial and service destinations, such as coffee shops and a day care. The EaRTH Center will serve as a key transfer point between ETS, RTS, and other intercity services, improving the ability of the various services to function as a cohesive network.

Investigate a Central Eureka Transit Hub

While the primary transit hub in Eureka under this plan is the EaRTH Center site, there will continue to be many transfers made between ETS routes in central Eureka. Currently, most of these transfers occur at the F and Harris stop. Amenities at this location are limited to a single small bus shelter, and there is little opportunity for improvements. The site also does not provide a good public image for Humboldt County public transit. A new transfer hub in this vicinity (within a few blocks of F and Harris Streets) should be investigated and potentially developed to accommodate up to 3 buses plus 2 microtransit vans at a time. The site should also include shelters, seating, lighting, and landscaping.

Investigate a Willow Creek Mobility Hub

Willow Creek is a connection point between three transit services (HTA Willow Creek service, Trinity Transit and Yurok Tribe Transit Services). While it currently has a good transit stop with shelter, there is no dedicated auto parking. A focused study is recommended to investigate the potential use of parking for both transit and ridesharing purposes, as well as other improvements to enhance passenger comfort and security.

McKinleyville Transit Hub

A transit hub should be constructed in central McKinleyville along Central Avenue. At a minimum, the hub should provide capacity for two buses and a microtransit van and contain attractive passenger facilities, real-time travel information, and bicycle parking/charging. Depending on land availability and grant funding levels, the McKinleyville transit hub would optimally include a park-and-ride lot.

HTA Operations Center Improvements

HTA's Maintenance and Administration Building along V Street in northeast Eureka is well-located for efficient transit operations. With elements that date back to the 1950s, improvements are needed both to provide a modern and safe facility as well as to accommodate zero-emission technology.

After renovations, the HTA facility is proposed to include six maintenance bays, administrative offices, solar panels and battery storage, shade structures for bus parking, break rooms, and a 250-kilowatt hydrogen fuel generation. Including engineering/environmental fees, permit fees, cost escalation to 2024, construction management, and other soft costs (as well as 20 percent contingency), the total improvement project is estimated to cost $62.1 Million.

Improvements to Arcata Transit Center

The City of Arcata should explore options to relocate the existing Arcata Transit Center to a location with direct access to US 101, avoiding the need to travel through local streets. As regional and express services expand in the future, this will be increasingly important to improve the efficiency of services while reducing impacts on downtown streets. The existing site would still be served by local services, and could also be repurposed as a housing, small commercial and local mobility hub.

If a new site proves infeasible, recommended improvements to the Arcata Transit Center consist of repairs to streetscape elements, a power cleaning of the facility, and improved lighting/security, which may include additional fencing. Public art could also make the area more enjoyable to the public. Additional security patrols should also be provisioned to improve the public's perception of safety at the facility. If funding can be provided, solar panels should also be installed.

New Park-and-Ride Facilities

The City of Arcata should partner with CPH and Caltrans to pursue provision of a new park-and-ride lot in the southwest corner of the US 101/Sunset Avenue interchange, served by public transit.

Closer to residential areas further from campus, there are many opportunities to make better use of existing parking lots not fully used during peak commute periods, such as at Bayshore Mall, Bear River Casino Resort, CR, and the old mill site in Fortuna. A detailed study (including discussions with landowners) should be conducted to assess park-and-ride opportunities and how transit services (including the new RTS Express service) could serve these locations. In addition to serving Cal Poly Humboldt, new park-and-ride facilities could also serve other employers in the region, particularly those located along direct transit routes.

Bus Stop and Bus Stop Access Improvements

HCAOG should undertake a comprehensive study of existing bus stop conditions and appropriate improvements. Especially given Humboldt County's maritime climate, bus stop amenities such as shelter, lighting, and security are important elements of each passenger's transit trip. As such, improving bus stops is important for attracting discretionary riders. A study that inventories existing stops and applies ridership data to identify appropriate enhancements (shelters, benches, lighting, signage, pullouts, bike/ped access) should be conducted. The resulting improvement plan should also consider ways that consistent branding at bus stops can support a regionwide transit network.

A large majority of transit passengers in the region walk or bike on at least one end of their transit trip. Providing pedestrian and bicycle connections between bus stops and nearby transit generators is therefore key in encouraging non-auto trips. Transit management staff should be involved in non-motorized planning processes conducted by local jurisdictions as well as participating in review of roadway improvement plans and private development plans to enhance connections to transit stops and to avoid the need for intimidating walking or cycling along busy roadways to access stops.

Transit Fleet Improvements

Replacement Vehicles

As detailed in Tables 45 to 47 in Chapter 7, the fleet replacement requirements of the various Humboldt County transit systems over the coming five years will be significant:

- HTA (Including RTS, ETS, A&MRTS, SHI, WC and DAR)
  - 19 fixed route hydrogen buses -- $26.9 Million
  - 29 cutaway vehicles (19 gas/diesel, 10 hydrogen) -- $5.6 Million
- Fortuna Transit
  - 3 battery electric cutaway vehicles ($939,500)
- BLRTS
  - 1 fixed route diesel bus ($634,000)
  - 1 diesel shuttle van ($115,000)

In total, vehicle replacements through FY 2027-28 are forecast to cost the Humboldt County providers at least $33.7 million.

Expansion Vehicles

The full implementation of the service plan elements discussed earlier in this Chapter will require the following additional vehicles:

- 2 low-floor buses (fuel-cell electric) for RTS Express service - $2,580,000
- 2 electric-battery vans for Eureka microtransit service - $600,000

- 1 electric-battery van for McKinleyville microtransit service - $300,000
- 2 electric-battery vans for Arcata microtransit service - $600,000
- 2 electric-battery vans for Fortuna microtransit service - $600,000

This totals $5,460,000 in additional vehicle costs

Total Vehicle Requirements

Considering all replacement and expansion vehicles, 62 new vehicles will be needed under this plan over the next five years, consisting of 22 buses and 40 vans/shuttle vehicles. The total cost for all of the new vehicles will be approximately $39 million.

Microtransit App

HTA has recently selected the RideCo app to power new microtransit services. This license should be promoted on a regional basis (including for future services, such as in Fortuna) with costs shared across the various providers. This will make microtransit services more convenient for passengers as they expand into multiple communities.

MARKETING PLAN

As detailed in Chapter 9, marketing for public transit services in Humboldt County should be enhanced as follows:

- Regional Branding – At present, public transit services are a potentially confusing mix of eight different logos and names. As transit demand between communities increases, passengers will be increasingly likely to use multiple services. Developing a consistent region-wide brand for public transit service will enhance the ability of passengers to comprehend the various transit options. It will also increase awareness of public transit by consistently reinforcing one primary image and message. The Ride Humboldt branding has recently been recommended for future use and should be a key focus of marketing efforts. It should be noted that some individuality can still be maintained within a regional brand, by providing the name of an individual service using a smaller font and differentiated color (such as Ride Humboldt – Fortuna). Developing a unified regional brand was also recommended in the recently completed Triennial Performance Audit for HCAOG.
- HTA Website Improvements – While HTA has developed a well-designed and useful website, it should be improved by providing real-time service information and updates such as service interruptions or construction delays. This service information can also be pushed out via social media. Links for Fortuna Transit and Yurok Tribe Transit Services should also be added.
- Regional Riders Guide – HTA should develop a regional Ride Humboldt riders guide, providing comprehensive information on all services in Humboldt County, including routes, schedules, fares, and policies. This would support efforts to enhance connectivity between all of the regional public transit services. While an increasing proportion of riders access information through online and social media channels, printed materials are still important to many

current and potential transit passengers. A Spanish version of the guide should also be developed.

- Social Media – While HTA maintains a Facebook account, other providers (BLRTS and Fortuna) should also establish social media accounts to provide real-time updates on service improvements and interruptions. This will be particularly important in Fortuna as general public services are expanded. An alternative would be to designate one organization to be responsible for centralized social media accounts that have information on all of the various providers.
- Phone Information – Agency phone numbers should be included on new bus stop signs. HTA should also improve its capabilities to provide phone assistance in Spanish. The Humboldt County transit providers should consider establishing a centralized phone resource with real-time information on all the various services.
- Special Promotions – Promotional events such as free-fare days should be conducted to expand public awareness of transit options and to tie with new services.
- University and College Marketing Focus – Marketing targeted towards Cal Poly Humboldt and CR students is particularly important, given the continual turnover in the student population. Recommended targeted marketing strategies are as follows:
  - Table events on campus for new student orientation and other key events.
  - Preparation of specific marketing materials detailing the Jack Pass and services to/from campus.
  - Provision of marketing materials (including social media posts) to new students before arrival to highlight the ability to attend college or university without bringing a car to the region.
  - Working with the campus administration to promote transit use through their outreach efforts.
  - Advertising through on-campus newspapers and radio stations.
  - On-campus kiosks and posters.

INSTITUTIONAL PLAN

Conduct a Transit Institutional Structure Study

As the key transit institutional structure in Humboldt County, the HTA has been vital in the development of a regional transit network. The provision of services by HTA to individual jurisdictions (the City of Eureka and now the City of Arcata) has been an additional step that allows sharing of overhead costs and specialized services (such as transit grants management) in a manner that further benefits Humboldt County transit passengers. A further step in regional coordination would be to consider having HTA operate Fortuna Transit.

The current JPA structure that guides LTF contributions from member jurisdictions is not appropriate for funding the expansion of intercommunity services that only benefit portions of the region, such as the proposed RTS Express service. New agreements will be needed to support these more localized services that do not benefit other HTA member jurisdictions.

Given these considerations and the changes in the transit environment since HTA's formation, it is recommended that a detailed study be conducted of transit institutional structure and funding mechanisms throughout Humboldt County. This study should consider HTA membership, board composition, the potential service and financial efficiencies of further integration, as well as funding policies such as making HTA a direct claimant for TDA funds. It could also address potential changes in the dial-a-ride funding agreement as discussed above.

Adopt Performance Standards

Assessing services (both existing and potential future services) against performance standards is an important management tool. As the potential service needs are varied over the region, considering numeric standards can help to ensure that limited resources (particularly operating subsidy funding) are allocated effectively. Standards can also help to flag potential issues, such as on-time performance challenges. It is recommended that the Humboldt County transit providers review and adopt the standards detailed in Chapter 10 and use them both to monitor existing services and to evaluate future service options.

Coordinate with the Yurok Tribal Transit System

The Yurok Tribe is currently planning to conduct its own Short Range Transit Plan (per stakeholder discussions in November 2022). Because of this intention, this TDP does not identify additional services to be provided by the Yurok Tribe. However, HTA should continue to coordinate with the Yurok Tribal Transit Service for intercity services between Tribal Lands, Del Norte County, and Humboldt County. This is particularly important considering the Transit and Intercity Rail Capital Program (TIRCP) grant jointly awarded to HTA, Redwood Coast Transit Authority, and the Yurok Tribe.

Encourage Transit Supportive Land Use Planning

Development patterns are a key factor in generating transit ridership as well as in allowing provision of efficient transit services. Concentrating new development along transit corridors increases the number of persons that can conveniently use transit service as well as reducing the need for inefficient deviations in transit routes to serve new developments. Design of new roadways can also potentially aid in the provision of direct transit services or alternatively can require out-of-direction travel. There are also other elements of local plans, standards and regulations that can support transit, such as progressive parking policies and transportation demand management requirements.

Transit management staff as well as HCAOG should be active participants in local jurisdiction's planning processes to make sure that transit services are fully considered. In addition, transit agencies should be provided with the opportunity to provide input on specific development plans to ensure that any appropriate transit service can be provided efficiently as well as to ensure that pedestrian access to stops is considered.

Study Free Fare Options

Various long-range planning documents, such as the 2022 RTP, call for significant increases in transit ridership. As is evidenced by the detailed analysis of ridership and costs presented in this TDP, generating large increases in ridership through service expansion is an expensive proposition. An alternative means of expanding ridership is through eliminating transit fares, which can be a much more effective use of additional transit subsidy funding (as measured by subsidy required per additional transit rider) versus service expansion. Examples of systems that have eliminated fares include the following:

- The Mountain Line system in Missoula Montana eliminated fares in 2015. This resulted in a 70 percent increase in ridership, and passenger surveys indicate that 48 percent ride more frequently due to the elimination of fares.
- The Corvallis Transit System went fare-free in 2011, which increased ridership by 38 percent in the first year.
- The Tahoe Truckee Area Regional Transit system in the North Tahoe / Truckee area eliminated fares in 2019, which resulted in a 33 percent increase in year-over-year ridership before the pandemic.

The obvious issue with the elimination of fares is how to replace the lost revenue (totaling roughly $1.2 million across the Humboldt County transit providers). Additionally, the increase in ridership resulting from a free-fare policy may result in overcrowding of buses at peak times and an unsustainable increase in demand for the new microtransit options. Another issue specific to Humboldt County is that existing Jack Pass users would be unaffected by a fare reduction program, and reimbursements from Cal Poly Humboldt and CR may be affected. If potential sources of subsidy funding can be identified, a detailed study on the impacts of a free-fare program would be appropriate. In the meantime, more focused strategies (such as free-fare summer passes for youth) may be feasible.

Investigate Urbanized Area Designation

Designating the Eureka area as an "Urbanized Area with a population of 50,000 or more" under federal regulations would substantially increase potential transit funding in the Humboldt region.

For instance, the key FTA funding program for urban areas (Section 5307 – Urbanized Area Formula Grants program) provides a total of $7.1 billion annually, while the FTA non-urbanized area program (Section 5311 Formula Grants for Rural Areas) provides only $935 million annually. Designation as an urbanized area with the minimum required population is based on a complicated set of rules that consider population, housing unit density, and how much area with lower population density separates higher-density areas. The 2020 US Census found the urban area population for Eureka to be 45,951, which is very close to the 50,000-population threshold. HCAOG should conduct a focused study to determine if the Eureka area meets the criteria for urban transit funding programs. Existing federal regulations (absent special legislation) would likely postpone the official designation of Eureka as an urban area until after the 2030 Decennial Census.

Conduct a Comprehensive Operational Assessment

HCAOG should pursue conducting a Comprehensive Operational Assessment (COA), which is a detailed study focusing on route and schedule redesign. Building on the strategies identified in this TDP, it would provide the opportunity to evaluate origin/destination data (such as cellphone-based "Big Data") and identify means of better aligning transit service with mobility patterns. The COA could also include focused outreach to non-riders to gain further insights on which factors currently limit transit use. In particular, a COA could investigate different means of better coordinating individual local and regional service elements into a more effective comprehensive network.

Conduct a Long-Range Transit Plan Study

Many of the long-range mobility goals of the region are not attainable within the five-year TDP planning horizon given funding constraints, staff capacity limitations, and the long-range nature of land use changes that would be required to support transit-oriented development. HCAOG should undertake a long-range transit plan that can provide the appropriate planning horizon to consider overarching land use/transit strategies, associated network design and coordination of services, and specific transportation demand management strategies to support ridership growth. This study should also include significant public outreach/education, consideration of institutional modifications, as well as assessment of long-range demographic trends and their impacts on mobility needs.

FINANCIAL PLAN

Financial planning and forecasting for public transit services is particularly challenging at present. With the end of pandemic-related Coronavirus Aid, Relief and Economic Security (CARES) Act funding and lingering impacts on fare revenues stemming from lower ridership levels, many transit agencies across the nation are facing a serious "financial cliff." Partially in response to this predicament, the State of California has recently instituted new programs (and changes in established programs) that will help address this transit funding issue, though at present the details are unclear. Fortunately, Humboldt County transit programs are in better financial shape than many others across the state. Nevertheless, the following financial plan should be considered as a "best estimate" of an uncertain near-term future. Changes in funding plans will be needed as the respective service plans are implemented.

HTA

Table 60 presents the financial plan for HTA, encompassing the following:

- Base case operating costs as well as the costs associated with plan elements are drawn from Table 55, above.
- Contract transportation costs (including A&MRTS service), advertising revenues, JPA member assessment, FTA 5311, CARES Act, LTF, STA, State of Good Repair, LCTOP, and TIRCP fund levels for FY 2023-24 are drawn from the adopted HTA budget.

- CARES Act funding is assumed to end after the current fiscal year. For other sources, future year increases are equal to the assumed rate of inflation (5 percent for FY 2024-25 and 3 percent annually thereafter).
- Fare revenues are drawn from Table 56, above. The financial plan assumes no change in fare levels for existing services and a $3 fare for new microtransit services.

As shown, identified operating funding sources total up to $11.02 million by FY 2027-28, but that total is expected to be $3.25 million short of anticipated annual operating costs. This indicates the need for additional, ongoing operating funding sources if the HTA service plan is to be realized. There are several possible new funding sources, including the following:

- California Senate Bill (SB) 125, recently signed into law, changes the current competitive TIRCP program into a formula distribution based on population and allows the valid uses to include operations. It also establishes a new "Zero-Emission Transit Capital Program" that will be distributed 50 percent based on population and 50 percent based on transit operator revenues (similar to how the existing STA funding is allocated) for zero-emission capital and operations. As guidelines for these new programs will not be finalized until the end of September 2023, specific funding levels are not currently known. However, the law does stipulate that RTPA (HCAOG, in this case) prepare a short-term regional financial plan by the end of December 2023.
- Regional Early Action Planning (REAP) grants, available through the California Department of Housing and Community Development, provide funding to expand housing while also improving mobility options such as transit service. HCAOG has applied for $3.4 million in funding including $2.2 million for microtransit service along with $1.2 million in housing development and entitlement as well as pedestrian improvements.
- Cal Poly Humboldt can choose to financially support transit services, such as those directly improving access to the campus (RTS Express service, the additional A&MRTS Green Route, and Arcata microtransit).
- New "self-help" local transit funding could be generated through a countywide sales tax effort. Sales tax for transit services typically has a higher chance of success with the voters if part of a larger transportation tax, including other modes such as highway improvements and bicycle/pedestrian improvements.

Table 60: Humboldt Transit Authority Financial Plan

	Fiscal Year					5-Year Plan Total
	23-24	24-25	25-26	26-27	27-28	
OPERATING PLAN						
Status Quo Costs (From Table 55)	*$10,032,900*	*$10,534,500*	*$10,850,600*	*$11,176,100*	*$11,511,400*	*$54,105,500*
Operating Plan Elements *(From Table 55)*	$0	$582,600	$1,022,600	$2,246,000	$2,761,400	$6,612,600
Total Operating Costs	**$10,032,900**	**$11,117,100**	**$11,873,200**	**$13,422,100**	**$14,272,800**	**$60,718,100**
Operating Revenues						
Contract Transportation	$729,300	$765,800	$781,100	$796,700	$812,600	$3,885,500
Fares *(From Table 56)*	$983,600	$1,469,500	$1,612,500	$1,803,600	$1,962,500	$7,831,700
Advertising Revenue	$175,000	$183,800	$187,400	$191,200	$195,000	$932,400
LTF/JPA Member Assessment	$4,004,700	$4,204,900	$4,289,000	$4,374,800	$4,462,300	$21,335,700
Federal Operation 5311	$1,171,300	$1,229,900	$1,254,500	$1,279,600	$1,305,100	$6,240,400
CARES Act	$930,900	$0	$0	$0	$0	$930,900
STAF - State Operating Funds	$1,126,800	$1,183,100	$1,206,800	$1,230,900	$1,255,600	$6,003,200
State of Good Repair	$222,800	$233,900	$238,600	$243,400	$248,300	$1,187,000
LCTOP - Low Carbon Transit Ops. Program	$373,000	$391,700	$399,500	$407,500	$415,600	$1,987,300
TIRCP - Transit & Intercity Rail Capital Program	$325,000	$341,300	$348,100	$355,000	$362,100	$1,731,500
Additional Operating Funding Required	*$0*	*$1,113,200*	*$1,555,700*	*$2,739,400*	*$3,253,700*	*$8,662,000*
TOTAL OPERATING REVENUES	**$10,042,400**	**$10,003,900**	**$10,317,500**	**$10,682,700**	**$11,019,100**	**$52,065,600**
CAPITAL PLAN						
Vehicle Replacement Costs *(From Table 44)*						$32,575,700
Fleet Expansion Costs						
2 Express Route Buses						$2,580,000
2 Eureka Microtransit Vans						$600,000
1 McKinleyville Microtransit Van						$300,000
Subtotal						$3,480,000
Operations Center Expansion/Improvement						$62,077,900
Earth Center / Fuel Cell Buses(1)						$17,591,000
McKinleyville Transit Hub						$300,000
Bus Stop Improvements						$266,400
Total Capital Costs						**$116,291,000**
Capital Revenues						
• Capital reserves						
• Low Carbon Transit Operations Program						
• Transit & Intercity Rail Capital Program						
• State Transit Assistance Funds						

Note 1: Includes RCX operation and funding for RCTA and Yurok Tribe improvements.

HTA capital costs over the TDP period are shown at the bottom of Table 60. These include the following:

- A total of $32,575,500 in vehicle replacement costs.
- A total of $3,480,000 for the purchase of 2 buses and 3 vans for service expansion.
- $62,077,900 in costs for the renovation and expansion of the HTA Operations Center.
- $17,591,000 for the EaRTH Center and associated transit improvement costs.
- $300,000 is allocated for a McKinleyville Transit Hub.
- $50,000 per year (rising with inflation) for bus stop improvements.

Over the five years covered by this TDP, these capital costs total $116.3 million. While existing grants provide a good start to meeting this need, additional grants and funding sources will also be needed.

RTS Express Service Funding

As RTS Express service benefits only a portion of the broader HTA service area, it should be considered a "Non-Shared Cost" under the terms of the HTA Joint Powers Agreement. A separate funding agreement will be needed to provide local funding for this service.

Revise the DAR Service Agreement

The existing DAR funding agreement does not reflect that serving some areas (notably Eureka) requires significantly fewer resources than other areas (notably longer trips from outlying areas). It also does not directly address the high costs of service between Eureka and Arcata. This agreement should be reconsidered to assign cost responsibilities more equitably and to free up the City of Eureka transit funding currently used to support DAR services for new transit services.

City of Arcata

The financial plan for the City of Arcata services is shown in Table 61 and is based on the following:

- Status quo costs are drawn from the City's FY 2023-24 budget and include A&MRTS costs, DAR costs and HTA funding. Future costs reflect a 5 percent rate of inflation for FY 2024-25 and a 3 percent rate for subsequent years.
- Operating costs for the plan elements are drawn from Table 57, increasing with inflation.
- Fare revenue estimates are drawn from Table 58.
- Ongoing operating subsidy sources consist of State of Good Repair funds, LTF, STA funding, advertising revenue, charter revenue and vending revenue. These sources are assumed to increase with the rate of inflation.

In total, operating costs are forecast to increase to $2.7 million by the end of the plan period. Existing operating funding sources will total $1.7 million in the last year of the plan period, or $984,900 short of expenses.

Table 61: Arcata & Mad River Transit System Financial Plan

	Fiscal Year					
	23-24	24-25	25-26	26-27	27-28	5-Year Plan Total
OPERATING PLAN						
Status Quo Costs (From Table 57)	*$1,387,700*	*$1,457,100*	*$1,500,800*	*$1,545,800*	*$1,592,200*	*$7,483,600*
Operating Plan Elements *(From Table 57)*	$0	$421,200	$622,200	$916,800	$1,144,100	$3,104,300
Total Operating Costs	**$1,387,700**	**$1,878,300**	**$2,123,000**	**$2,462,600**	**$2,736,300**	**$10,587,900**
Operating Revenues						
Fare Revenues (*From Table 58)* [1]	$228,000	$276,900	$314,400	$354,900	$391,300	$1,565,500
State of Good Repair	$30,000	$31,500	$32,400	$33,400	$34,400	$161,700
LTF	$749,400	$786,900	$810,500	$834,800	$859,800	$4,041,400
STA Fund	$250,000	$262,500	$270,400	$278,500	$286,800	$1,348,200
Miscellaneous[2]	$156,100	$163,900	$168,800	$173,900	$179,100	$841,800
Subtotal: Existing Sources	$1,413,500	$1,521,700	$1,596,500	$1,675,500	$1,751,400	$7,958,600
Additional Operating Funding Required	$0	$356,600	$526,500	$787,100	$984,900	$2,655,100
TOTAL OPERATING REVENUES	**$1,413,500**	**$1,878,300**	**$1,596,500**	**$1,675,500**	**$1,751,400**	**$8,315,200**
Capital Plan						
Vehicle Replacement & Expansion Costs *(Included in HTA Financial Plan)*						--
Arcata Transit Center Improvements						$100,000
Passenger Amenity Improvements						$166,600
Total Capital Costs						**$266,600**
Capital Revenues						
STA Funds						
FTA 5311 Funds						
Capital Reserve Funds						

Note 1: Fare revenues including HSU contract, cash fares, DAR, bus ticket sales.

Note 2: Advertising revenue, charter revenue, vending revenue.

Source: LSC Transportation Consultants, Inc.

New funding resources will therefore be needed to achieve the recommended service plan. Possible new funding sources, as discussed under the HTA Financial Plan, include the following:

- New state funding associated with SB 125 legislation.
- Additional Cal Poly Humboldt funding for services directly benefiting the campus, such as the Green Route and Arcata microtransit.
- New joint housing/transit grants.
- City of Arcata General Fund or an additional tax measure to be explored in the future.

Capital costs for A&MRTS are estimated as follows:

- Bus replacement and expansion costs are included in the HTA financial plan (Table 60).
- $100,000 for improvements to the Arcata Transit Center.$20,000 per year is allocated for bus stop improvements based on the regional bus stop inventory/plan to be conducted by HCAOG. With inflation, these improvements will total $106,600 over the five-year plan period. An additional $60,000 is included for stop improvements for the Green Route.

Potential funding sources for capital items include STA funding, FTA 5311 funding, Cal Poly Humboldt funding (such as for new vehicles serving the campus and/or stops at student housing locations), and City General Funds.

City of Fortuna

Table 62 presents the financial plan for Fortuna Transit, reflecting the following:

- Annual operating costs are drawn from Table 59 and reflect inflation (5 percent in FY 2024-25 and 3 percent annually thereafter) and the implementation of microtransit service. These annual operating costs exclude City funds allocated to HTA.
- Fare revenue figures are also drawn from Table 59.
- TDA funding (excluding funds allocated to HTA) totals $233,800 in the current year and is assumed to increase by the rate of inflation.
- As discussed above, the implementation of a microtransit service with adequate capacity to accommodate existing RTS riders to/from the stops east of Fortuna Boulevard will allow streamlining of RTS service and a resulting reduction in RTS operating costs. This level of Fortuna Transit microtransit capacity is forecast to occur in FY 2026-27, yielding a reduction in RTS costs of $54,000 per year. This is shown in Table 62 as additional revenues available to the Fortuna Transit program.

In sum, existing funding sources will be up to $96,400 short of annual operating costs depending on the plan year, meaning the Fortuna Transit service plan will require additional funding sources. Potential new sources include STA funding, REAP joint transit/housing funding, STA 5311 funding, and the City of Fortuna General Fund.

Table 62: Fortuna Transit Financial Plan

	Fiscal Year					5-Year Plan Total
	23-24	24-25	25-26	26-27	27-28	
Service Plan Operating Cost *(From Table 59)* [1]	**$249,800**	**$315,800**	**$380,500**	**$448,700**	**$520,600**	**$1,915,400**
Revenues						
Fare Revenues (*From Table 59)* [2]	$16,000	$17,400	$18,600	$27,800	$29,500	$109,300
TDA Allocation	$233,800	$245,500	$265,500	$295,800	$339,400	$1,380,000
Subtotal: Existing Sources	$249,800	$262,900	$284,100	$323,600	$368,900	$1,489,300
Reduction in HTA Funding Reflecting Reduced RTS Operating Costs with Microtransit	$0	$0	$0	$54,000	$55,600	
Additional Operating Funding Required	$0	$52,900	$96,400	$71,100	$96,100	$316,500
TOTAL OPERATING REVENUES	**$249,800**	**$315,800**	**$380,500**	**$448,700**	**$520,600**	**$1,915,400**
CAPITAL PLAN						
Vehicle Replacement Costs *(Electic)*						**$360,100**
Fleet Expansion Costs						
2 Electric Microtransit Vans						**$230,000**
Total						**$590,100**

Note 1: Operating costs based on 2023-24 budget and recommended service plan. Excludes HTA funding.

Source: LSC Transportation Consultants, Inc.

One potential funding strategy would be to work with other jurisdictions in Humboldt County to prepare joint grant requests for microtransit services and the associated fleet expansions.

Capital costs over the five-year TDP period are shown at the bottom of Table 62 and include:

- A total of $360,100 in vehicle replacement costs.
- A total of $230,000 for the purchase of 2 vans for microtransit service expansion.

Capital funding strategies for Fortuna Transit include FTA 5311 funding, STA funding, REAP, and new funding sources coming out of SB 125.

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Chapter 12

TRANSIT STRATEGIES TO SERVE CAL POLY HUMBOLDT

The conversion of Humboldt State University to Cal Poly Humboldt and the planned growth of the university associated with this conversion is expected to significantly increase overall mobility needs in Humboldt County. The limited parking and housing available on campus as well as Cal Poly Humboldt's goals to reduce environmental impacts all point to the need for expanded transit access to and from the campus. This chapter summarizes the TDP plan elements which will most directly serve Cal Poly Humboldt. These plan elements are summarized in Figure 25.

In Arcata, a key element will be the initiation of the A&MRTS Green Route service. This has been specifically designed to provide direct service to the campus from key student housing areas, including the Craftsman's Mall development area, Valley West, the substantial amount of student housing along Alliance Road, as well as areas with high concentrations of student housing in downtown Arcata and the area along G and H Streets south of Samoa Boulevard. The Green Route will provide three opportunities to arrive or depart from campus each hour during class sessions.

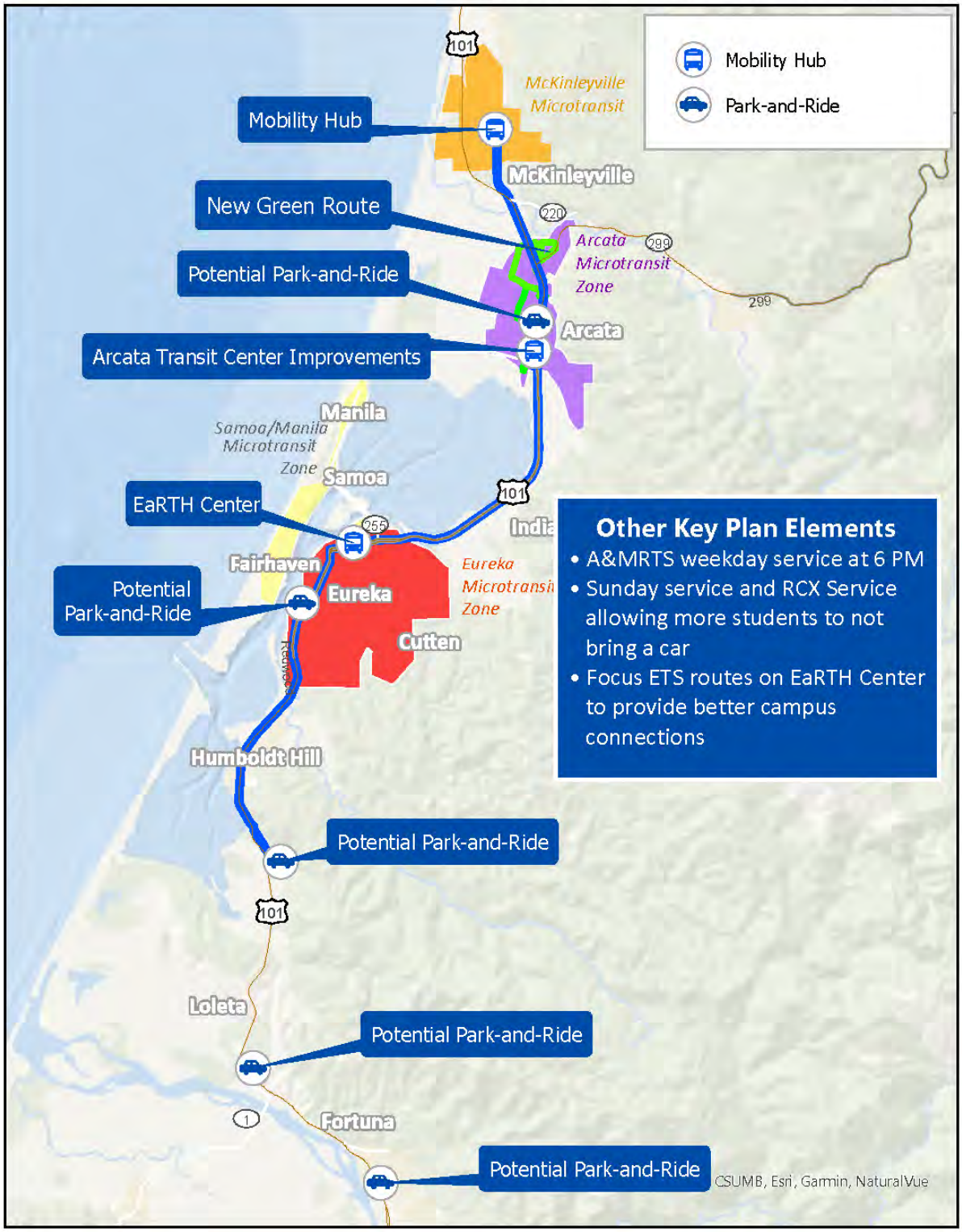
Arcata microtransit service will also provide access to and from campus from other areas of Arcata not currently served by the A&MRTS fixed routes, including Bayside. It will increase overall transit capacity as well as provide greater flexibility regarding travel times. Direct service from homes to campus will attract riders who are not willing to wait for fixed routes.

An earlier 6:00 AM Orange Route service will be provided on weekdays. This will be particularly useful for staff and faculty with early work start times.

RTS Express service along the US 101 corridor will significantly increase the convenience of transit service between the Cal Poly Humboldt campus and Eureka to the south and McKinleyville to the north. In addition to reducing travel times to be more comparable with the private automobile, it will increase the frequency of service times in peak commute periods. As campus enrollment and staff numbers increase, the RTS Express service will be of increasing benefit to those traveling to and from the campus from McKinleyville and Eureka. It also will be a key element in a park-and-ride strategy.

In Eureka, the EaRTH Center transit hub project will provide an improved opportunity to transfer between local ETS services and the RTS (including the RTS Express). The housing components of the EaRTH center project will also benefit the overall housing stock in the region, potentially providing additional housing opportunities for Cal Poly Humboldt students, faculty, and staff. Revisions to ETS routes to focus on the EaRTH Center will optimize connections between ETS and RTS, allowing for better opportunities for timed transfers. In addition, a Eureka microtransit service will also increase first-mile/last-mile connections to RTS services for people traveling north to the Cal Poly Humboldt campus in Arcata.

Figure 25
TDP Elements Benefiting Cal Poly Humboldt



To the north of the campus, the McKinleyville microtransit service will significantly expand the ability of Cal Poly Humboldt students and staff to transfer to RTS service to and from the campus. A McKinleyville mobility hub will provide a safe and attractive facility for transfers between microtransit and RTS services, as well as for bicycle/pedestrian access.

Sunday service on RTS, ETS, and A&MRTS will expand the ability of students and residents to access activities seven days a week. In particular, this will encourage Cal Poly Humboldt students to "not bring a car to campus" when moving to the region, thereby stimulating additional transit ridership on other days of the week. Another service improvement (already planned) is the implementation of RCX service, which will expand access between Humboldt County and the Bay Area. Increased connectivity to the Bay Area will also make it easier for students to attend Cal Poly Humboldt without a car.

Park-and-ride lot options are recommended for further study in this TDP. Considering that a substantial proportion of students and staff live more than 10 miles from campus, the limited availability of parking on campus, and the potential availability of existing, underutilized parking along the RTS route (thus avoiding the cost and environmental impacts of new lot construction) all point to a high potential for a successful park-and-ride program that would be utilized by students, faculty, and staff.

In sum, the Humboldt County TDP will greatly increase the number of public transit buses directly serving the Cal Poly Humboldt campus (the A&MRTS Green Route and RTS Express service), expand the geographic scope of residential areas with convenient transit access to campus, improve transit travel times to better compete with the private automobile, expand the span of time public transit services are available to the campus, and increase the potential that students choose to attend Cal Poly Humboldt without bringing a car to the region.