Appendix A

DEMOGRAPHIC MAPS AND EMPLOYMENT DATA

DEMOGRAPHIC MAPS

This Appendix contains demographic maps that supplement information provided in Chapter 2 of this Humboldt County Transit Development Plan (TDP). The maps depict where potentially transit dependent persons live in Humboldt County. The population categories analyzed include:

- Figure A-1, Youths under 18 years of age – many youths have commitments outside of the home but are not yet old enough to drive or do not have a parent/guardian available to give them a ride. Those who can drive may not yet have a car available to use.
- Figure A-2, Elderly population ages 65 and older – there are many senior adults who are not as comfortable driving or not able to drive anymore, yet still need to get out of the home, particularly to attend medical appointments.
- Figure A-3, The population living below the poverty level –who often lack the means to acquire or maintain a private automobile. This population is defined by several factors including household income and the number of dependent children.
- Figure A-4, Individuals with a disability – who may have limited abilities to drive.
- Figure A-5, Households without a vehicle available – those who live in home without a vehicle available are very likely to rely on alternative transportation such as public transit.

Figure A-1
Youth Population Density (Under 18 Years of Age)

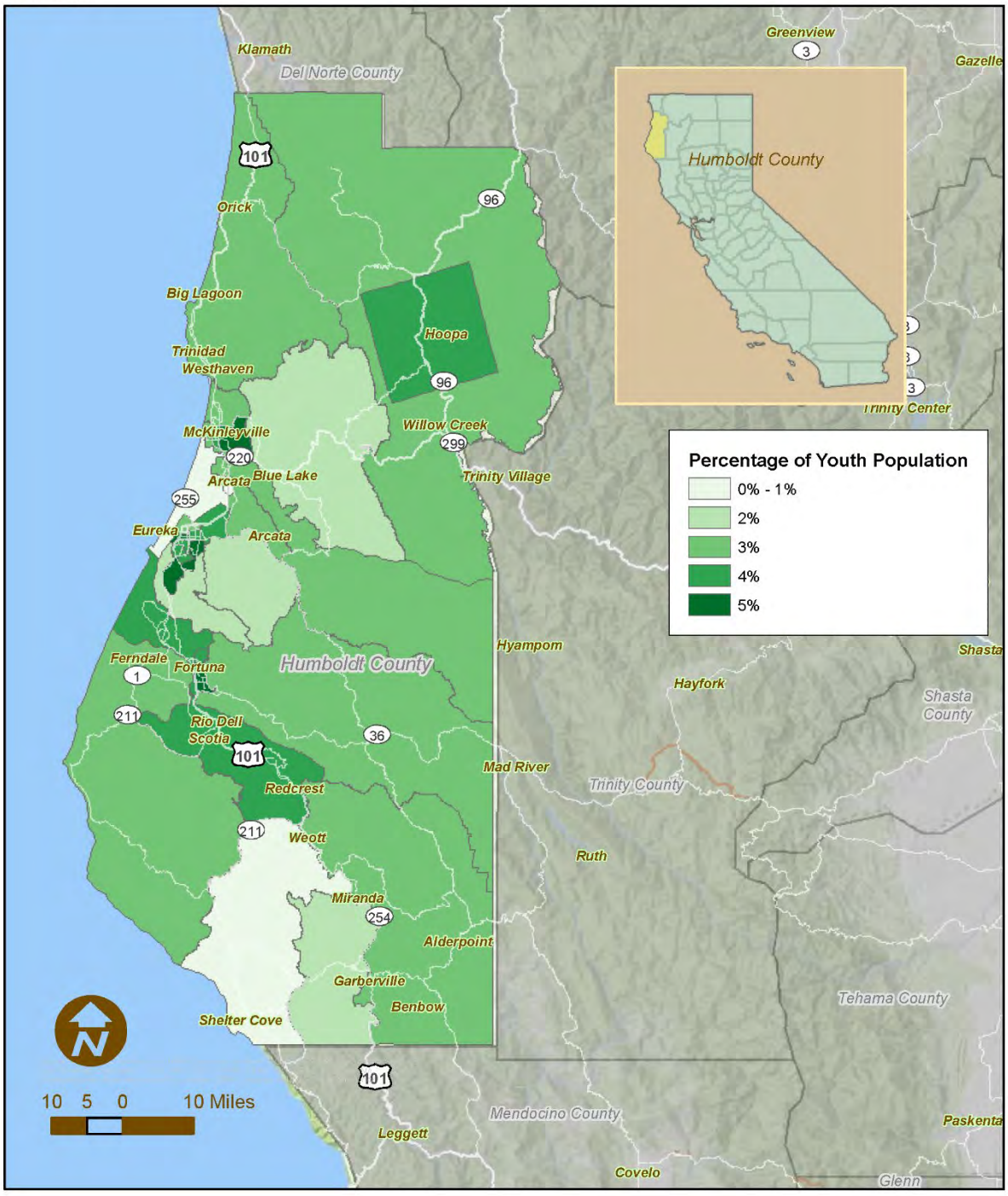


Figure A-2
Senior Population Density (Ages 65 and Older)

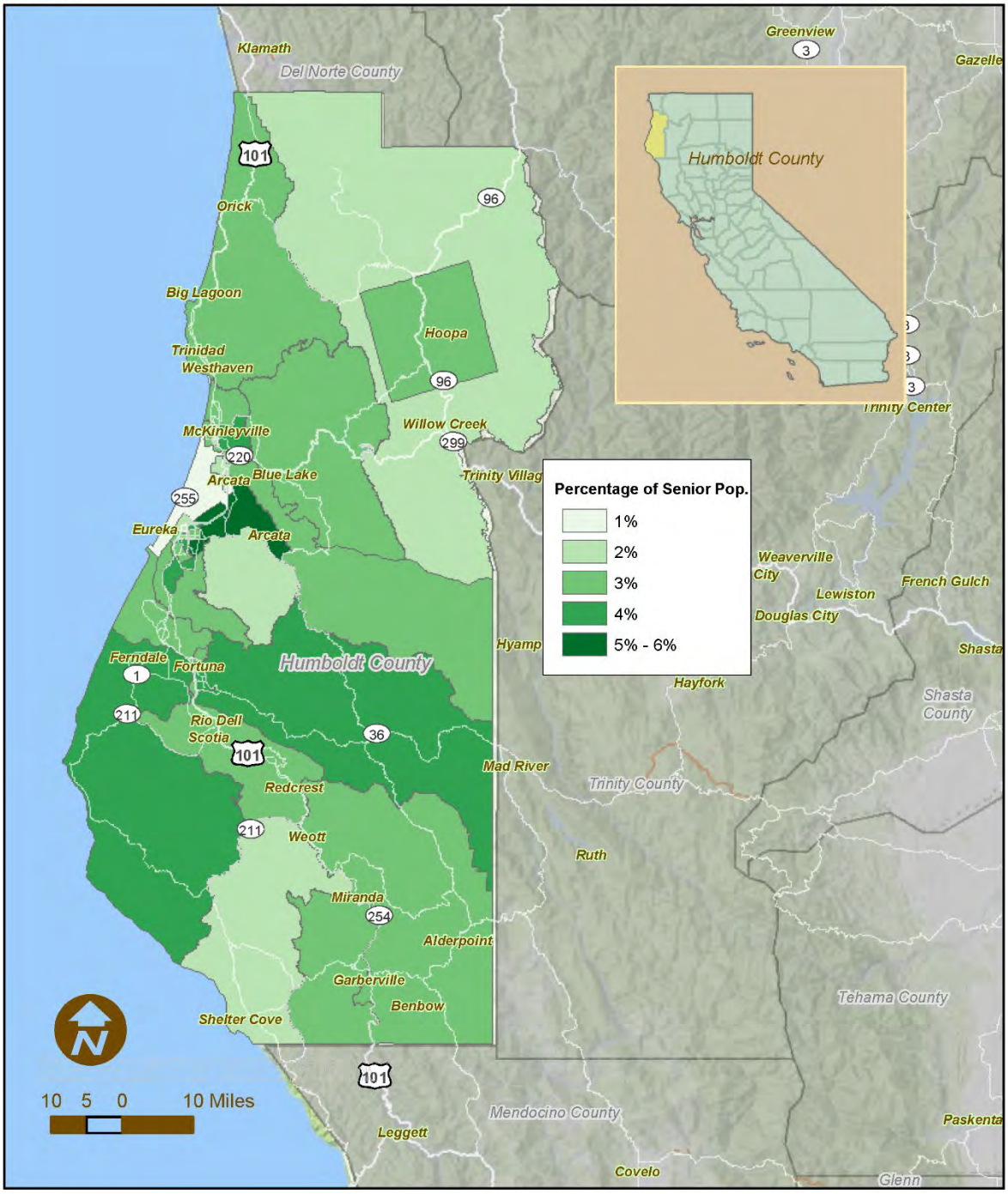


Figure A-3
Population Density of People Living Below the Poverty Line

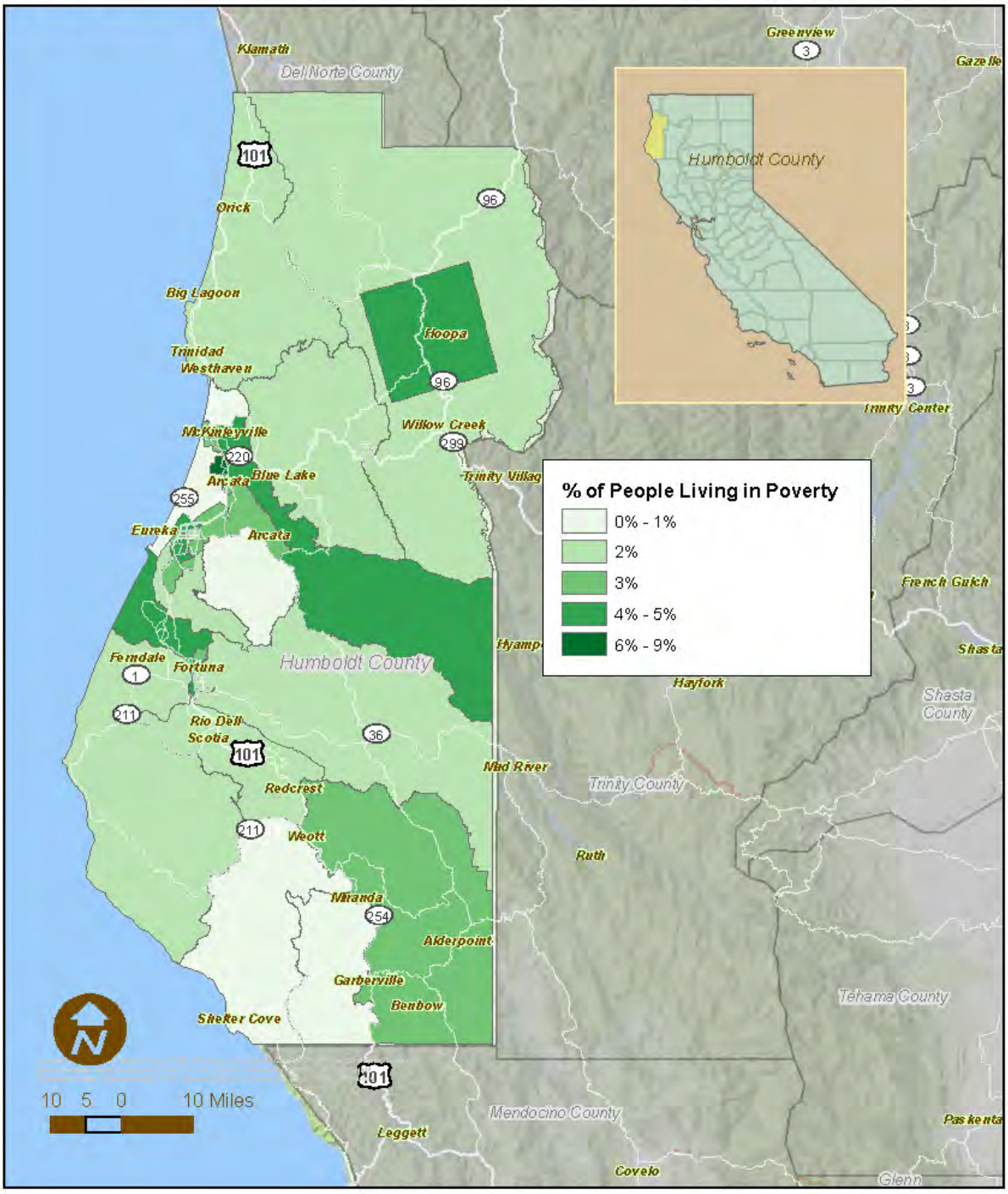


Figure A-4
Population Density of Persons Living with a Disability

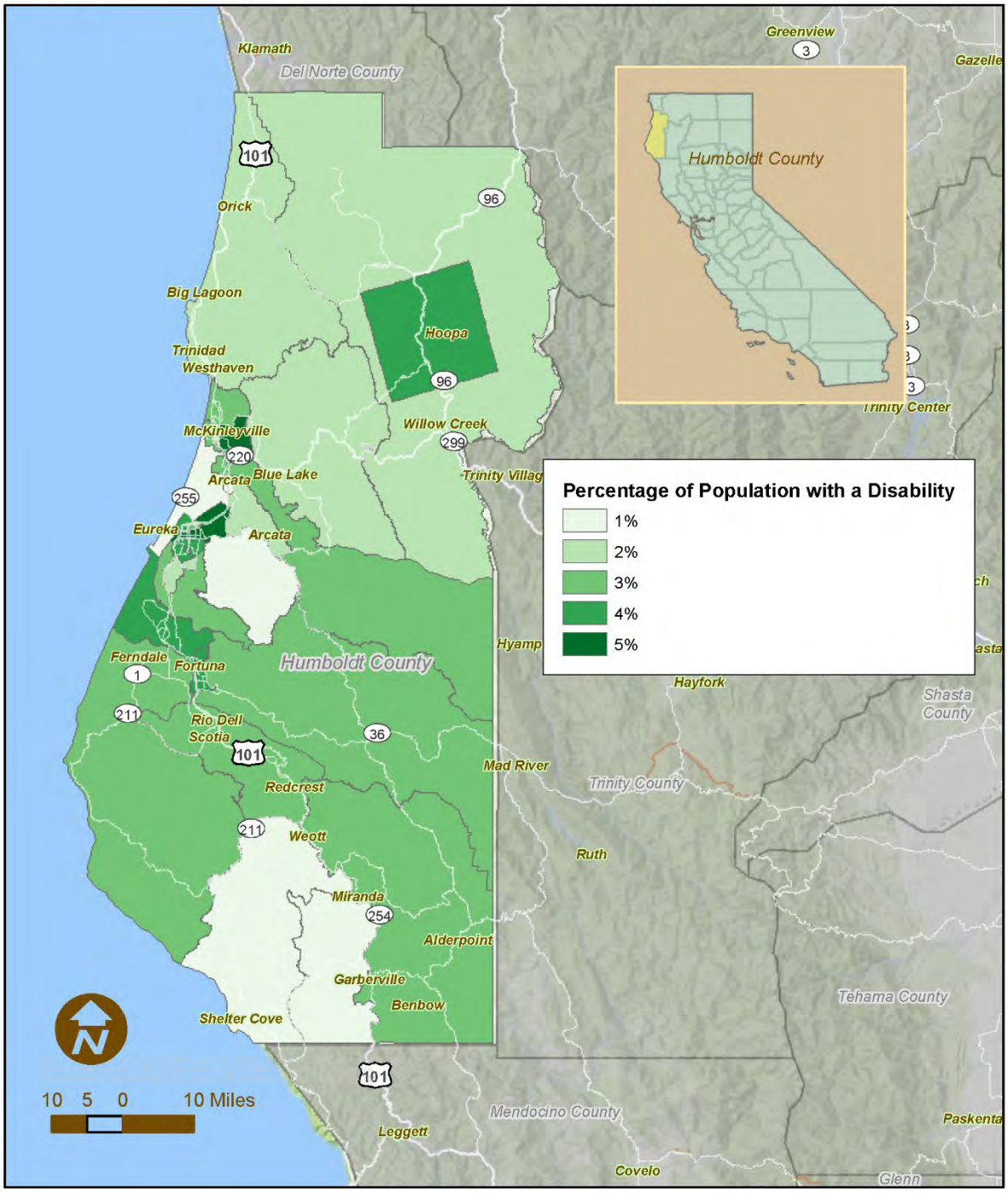
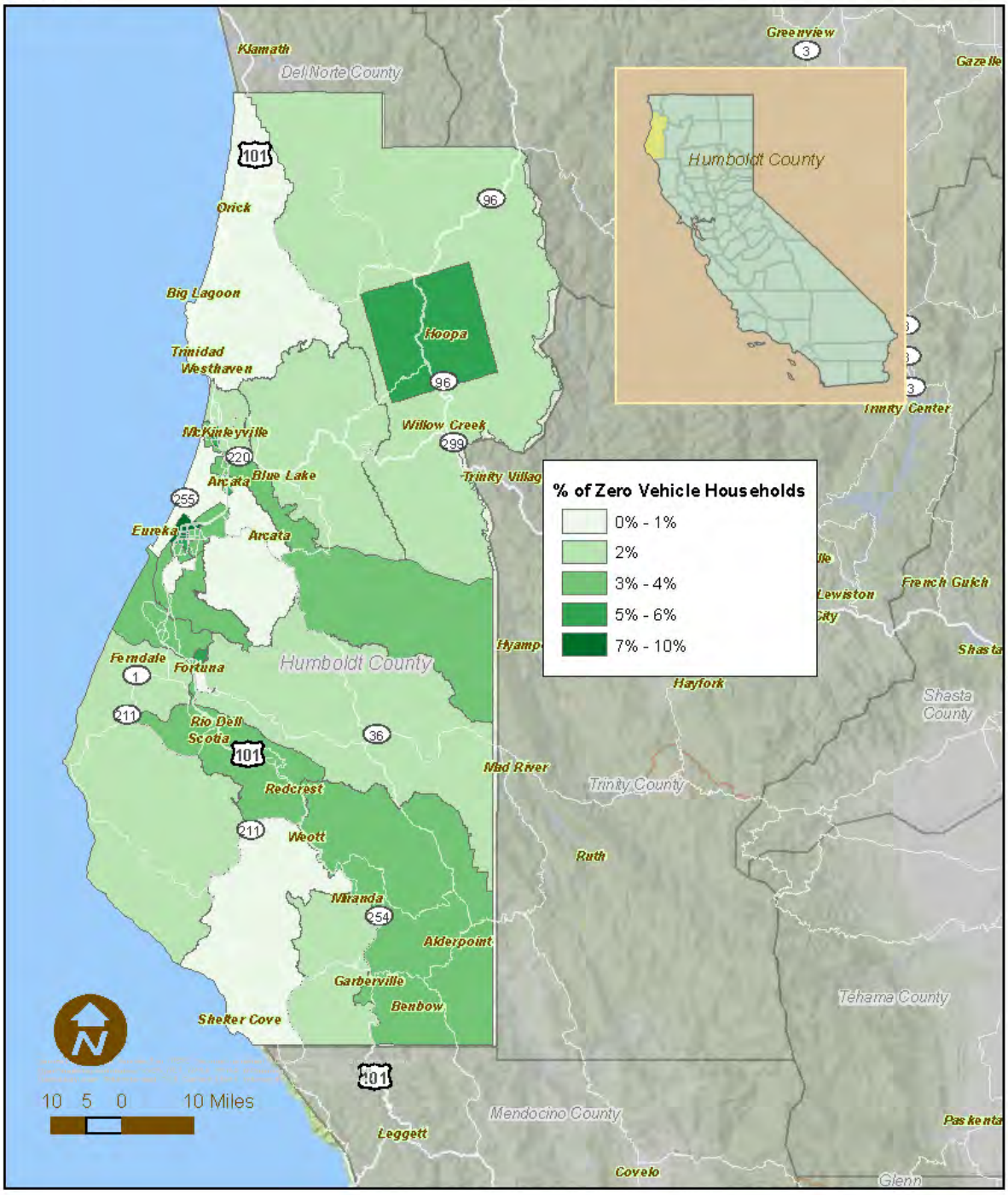


Figure A-5
Zero Vehicle Household Density



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Appendix B

REVIEW OF RECENT PLANNING STUDIES

Appendix B

REVIEW OF RECENT PLANNING DOCUMENTS

INTRODUCTION

There are a number of recent planning efforts that are related to the current Transit Development Plan (TDP) update. Many of these studies have been organized by the Humboldt County Association of Governments (HCAOG) and the various transportation agencies which operate in Humboldt County. This Appendix only briefly discusses the components of these plans relevant to public transit and the TDP. When necessary, the plans reviewed in this section are referenced in the main TDP report to ensure coordination of planning efforts.

Humboldt County Regional Transportation Plan (2022)

The Regional Transportation Plan (RTP) is a long-term planning document covering a 20-year horizon. The RTP outlines goals and projects for each transportation sector across Humboldt County. All of the various projects described in the report support the overall goal of working "for Humboldt County to have a carbon-neutral, multi-modal transportation system that is comprehensive, safe, sustainable, and equitable." The key public transit goal identified in the RTP is as follows:

- *"GOAL: Achieve an integrated and sustainable multimodal transportation system that provides public transportation options for all users traveling in Humboldt County. Transit and paratransit users have options for affordable, reliable, and efficient transit service that effectively meets their local and regional mobility needs."*

A key policy is the following:

- "*POLICY TRANSIT-1: To grow and meet transit demand, fund programs and support services that make public transportation a fast and convenient way for people to get to their destinations. Support funding expanded routes, increased trip frequency, faster travel times (express routes), and first-last mile services including on-demand service. Prioritize programs with the highest potential to increase ridership and reduce the number of single-occupancy-vehicle trips made in Humboldt County."*

In addition, a key objective (under the category of Environmental Stewardship and Climate Protection) is to "*Double transit trips by 2025, and again by 2030, and again by 2040.*" The RTP described the following short-term projects for public transit (not including vehicle replacements):

- Study benefits, tradeoffs, and feasibility of local/regional fare-free transit programs (2022-24)
- Design and construct hydrogen fuel station (2024)
- Install zero-emission fueling infrastructure in Willow Creek (2024)
- Establish a satellite office/transit hub in Redway (2023)
- Establish a McKinleyville Transit Hub in the center of town (2025)
- Establish Eureka Intermodal Transit Center (2024)
- Bus parking restructuring (2022)
- Construct additional maintenance bays for the Humboldt Transit Authority (HTA) (2022)
- Install solar PV system at HTA maintenance facility in Eureka (2022-2025)
- Microtransit pilot program in McKinleyville (2025)

Additionally, the RTP long-term vison includes:

- Arcata: Install solar PV system on transit center roof (2031)
- HTA: Feeder bus lines to McKinleyville, Manila, Trinidad, and Fortuna to connect to the RTS commuter line (2023-43)
- HTA: Park-and-Ride lots with multi-modal facilities (e.g., bike lockers, bus shelter), located near transit stops (2023-33)
- HTA: Increase frequency of Redwood Transit System (RTS) services (e.g., express service between McKinleyville and Eureka, & late night service)

Coordinated Public Transit - Human Services Plan: Humboldt County (2021)

The Coordinated Public Transit – Human Services Plan (CPTHSP) describes projects that will improve the state of transportation specifically for persons with disabilities, senior adults and persons with low incomes living. For projects to receive funding from Federal Transit Administration (FTA) Section 5310, they must be included in the CPTHSP. Humboldt County's most recent update to its CPTHSP outlines the following priority strategies for coordinating transportation services, addressing unmet transit needs, and improving transportation for those in need:

- Maintain, evaluate, and strengthen transportation services
- Review the internal structure and methodology for changing entities and setting fares before expanding on-demand services
- Review and evaluation of the needs for non-emergency medical transportation (NEMT)
- Multi-organizational approach to solutions
- Maintain and strengthen interregional transportation connections.

McKinleyville Transit Study (2021)

The McKinleyville Transit Study was developed for HCAOG and the Humboldt Transit Authority (HTA) primarily to assess the viability of implementing fixed route services in McKinleyville like those provided in Eureka and Arcata. The study team identified two key themes when reviewing old planning documents and conducting public outreach: "*1. There is strong interest in improving HTA's Redwood Transit System ('RTS'); and 2) there is recognition that McKinleyville could use its own service, separate from RTS.*" Although there was evidence of interest in implementing more transit services within McKinleyville, the study team also found through analysis that it would be unlikely a fixed route service in McKinleyville would experience the same levels of ridership as the transit agencies in Eureka and Arcata. Considering the interest in more intra- and intercity services in the McKinleyville area and the project costs and ridership levels, the study ultimately recommended that new intracity transit service in McKinleyville be introduced in the form of a one to two year flexible microtransit service. Staff could analyze the productivity of the microtransit program to determine if fixed route service is merited.

Total Cost of Ownership Comparison between Fuel Cell and Battery Electric Transit Fleets for Humboldt County (2021)

The Schatz Energy Research Center analyzed the total cost of ownership (TCO) of battery electric and fuel cell electric bus options to help prepare the HTA and the other transit agencies in Humboldt County for the transition to zero-emissions buses (ZEBs). As it will be extremely likely that charging

infrastructure will be shared by multiple transit services, the study considered all of Humboldt County's transit services, as well as Del Norte County's Redwood Coast Transit and Trinity County's Trinity Transit. The study considered the TCO for five different deployment plans which ranged from full fleet conversion to battery electric buses (BEBs) to full fleet conversion to fuel cell electric buses (FCEBs). It was found that adopting a fleet of entirely BEBs would result in higher upfront capital costs and lower operating costs while a fleet of entirely FCEBs would result in the opposite cost scenario. Having a mixed fleet of BEBs and FCEBs would result in capital costs similar to the all-FCEBs scenario and operating costs between the all BEBs and the all FCEBs scenario. While having a fleet of entirely BEBs would result in cheaper operating costs, BEBs would require Humboldt County to either expand the size of its transit fleets or overbuild charging infrastructure to ensure buses can reliably provide service.

Climate Resilient Battery Electric Fleet Feasibility Assessment for Humboldt County Public Transit (2020)

California's Innovative Clean Transit (ICT) Regulation has prompted transit agencies across the state to quickly begin converting their fleets to ZEBs. This process requires not only procuring new buses, but also installing optimally located charging infrastructure that will allow buses to safely complete their routes. In this report, the study team considered the electrification of Humboldt County's transit fleets through the lens of climate change. The team considered the anticipated impacts of climate change in Humboldt County, and how these changes may impact roads, electricity, charging infrastructure, and communications infrastructure. The assessment's final recommended fleet electrification strategy was for HTA to do pilot deployments of ZEBs. The study recommended first trying ZEBs for the routes in the Arcata and Mad River Transit System and Eureka Transit System. Potential near-term funding opportunities identified include the PG&E Electric Vehicle Fleet Program, the California Department of Transportation Strategic Partnership Grant, and the Carl Moyer Infrastructure Application. The top barriers to electrifying the Humboldt County transit fleets identified by the study were the limited range and power of ZEBs and the charging requirements.

Mobility-on-Demand Strategic Development Plan (2020)

The Mobility-on-Demand Strategic Development Plan was developed to support the overarching goal of "*providing affordable and accessible mobility solutions for all travelers."* The Plan describes ways for Humboldt County to advance projects and potential pilots related to integrated and technology-enabled mobility. A framework for measuring the relative success of these pilot programs was also outlined. Near term potential pilot projects identified in the report include:

- Streamline the Redwood Transit System (RTS) Mainline alignment by eliminating three current deviations. This would be done by expanding dial-a-ride and on-demand options within the local communities impacted so people can still get to the RTS stops. An example mentioned was eliminating the Fortuna deviation and then opening the Fortuna Transit Senior Bus to all ages.
- Begin a "modern hitch-hiking" program, where the public transit agency procures and deploys an app-based service that matches available drivers with passengers in need of rides.
- Expand bike-share options, especially near transit stops.

Blue Lake Rancheria Transit Study (2019)

The primary purpose of the Blue Lake Rancheria Transit Study was to analyze the costs and benefits of a potentially expanding the Blue Lake Rancheria Transit System (BLRTS) services to include service to McKinleyville, Fieldbrook, western Glendale, and Korbel. The study assessed seven different scenarios, and eventually recommended that the Rancheria consider implementing two of the seven.

The first recommended alternative was to coordinate with HTA to have the Willow Creek Intercity Service stop in Blue Lake along its current route between Willow Creek and Arcata. This service would enable BLRTS to focus its resources on supplementing the Willow Creek service by performing two morning runs to Arcata, a morning commuter run to McKinleyville through Fieldbrook. BLRTS would then provide two evening runs to Arcata and an evening commuter run from McKinleyville through Fieldbrook. The BLRTS bus would provide deviated fixed route service. The study team found that this alternative was the most feasible way to provide service to Fieldbrook, but if implemented would likely impact both the City of Blue Lake's and Humboldt County's transit budgets.

The second recommended alternative also consisted of BLRTS coordinating with HTA to have the Willow Creek service stop in Blue Lake throughout the day, allowing BLRTS to use its resources to expand service to new areas. In this scenario, BLRTS would provide two morning runs to Arcata and back, one morning deviated commuter run to Arcata through McKinleyville, and then the same number of runs in the afternoon. This scenario was the most financially feasible and provided Rancheria residents with the most opportunities per day to get to the Arcata Intermodal Transit Facility but would require passengers to endure longer trip times.

Humboldt Transit Development Plan (2017-2022)

The Transit Development Plan (TDP) is a short-term planning document that outlines a service, capital, and financial plan for the transit system for a 5-year time period. The last TDP was prepared by LSC Transportation Consultants, Inc., for HCAOG and adopted in 2017. The TDP also included a strategic plan for the Humboldt County Social Services Transportation Advisory Council (SSTAC). Summarized below are some of the highlights from the recommended service plans for each of the Humboldt County transit agencies analyzed:

- Arcata & Mad River Transit System (A&MRTS): Adjust the schedule to better match the class schedule at Cal Poly Humboldt, make the Community Center an on-demand stop, extend transit service to South G Street, and (depending on funding) provide a high frequency shuttle between Cal Poly Humboldt and Downtown Arcata during peak periods.
- Redwood Transit System (RTS): Develop an "Express Service" between Eureka and Arcata and implement later Saturday service on the Mainline.
- Southern Humboldt Intercity (SHI) Service: Begin providing SHI service on weekends.
- Willow Creek (WC): Add on-demand stop in Blue Lake.
- Eureka Transit Service (ETS): Begin earlier weekday service.

No changes in service were recommended for the Fortuna Transit Senior Bus or the Blue Lake Rancheria Transit System. Some changes have already been implemented since the 2017 TDP was adopted, such as eliminating the Tish Non-Village and Southern Humboldt Local services. It is

important to reevaluate Humboldt County transit services in this current TDP effort, as this new update will consider how the COVID-19 pandemic impacted public transit.

Humboldt County General Plan for Areas Outside the Coastal Zone (2017)

The Humboldt County General Plan was adopted in October 2017. Overarching goals of the plan related to public transportation include encouraging transit-oriented development and mitigating carbon emissions by increasing transit use. The Circulation Element of the General Plan promotes having a balanced transportation network that includes public transportation services. Policies recommended in the Circulation Element related to public transit include circulation planning for public transit access, coordinating existing and future public transit services between rural and more urbanized areas in the county, integrating automobile and bicycle transportation with the public transportation network by ensuring there are the appropriate parking amenities at bus stops, increasing the percentage of trips made by public transit in the county compared to by personal vehicle, and designing bus stops that are convenient to activity centers and promote increased ridership. These policies and goals are considered during this TDP effort when relevant.

Unmet Transit Needs (2022)

The California Transportation Development Act (TDA) requires regional transportation planning agencies (RTPAs) to hold an annual hearing to determine unmet transit needs across the region. TDA funding must be spent on any unmet transit needs deemed at the hearing to be reasonable to meet before the RTPA can allocate any TDA funding to projects not directly related to public transportation and pedestrian facilities. As of the 2017 TDP, HCAOG defines unmet transit needs as:

1. "Trips requested from residents who do not have access to public transportation, specialized transportation, or private transport services or resources for the purpose of traveling to medical care, shopping, social/recreational activities, education/training, and employment; or

2. Proposed public transportation, specialized transportation, or private transport services that are identified in the following (but is not limited to): a Transportation Development Plan, Regional Transportation Plan, Coordinated Public Transit-Human Services Transportation Plan."

HCAOG uses four criteria to determine whether unmet transit needs are reasonable to meet. These criteria assess the short-term and long-term operational feasibility and financial sustainability of each proposed transit service change. At the FY 2022-23 hearing, held in April 2022, 156 comments were received. 35 of these comments were found to be unmet transit needs per the definition adopted by HCAOG. 31 of these unmet needs were found to be unreasonable to meet. Some of the unmet needs had already been addressed: later weekday service between Eureka and Arcata was set to begin in July, HTA had already added a new bus stop near Burney Vista Point, earlier weekday service to McKinleyville was set to begin in July, and there are already transportation services to Del Norte County. In addition, the SSTAC conducted detailed research to determine the feasibility of transit services between Humboldt County and local destinations in Humboldt County, but this type of transit program was found to still be unreasonable.

Appendix C

DETAILED COMMUNITY SURVEY RESULTS

Appendix C

DETAILED COMMUNITY SURVEY RESULTS

ONLINE COMMUNITY SURVEY RESULTS

To gain a better understanding of how local residents both utilize and perceive the various transit systems across Humboldt County, an online community survey was made available from November 4 to December 2, 2022. The online survey was intended for everyone from regular transit users to those who have never ridden the bus before. The value of the online community survey results, therefore, is that they provide insight into the travel patterns and views of the community at large. This information can then be used to design effective service improvements that can be implemented throughout the next five years and potentially increase transit ridership countywide.

The community survey was advertised by emailing Humboldt County stakeholders, who in turn distributed the survey to their own networks, primarily via email and social media posts. HCAOG also posted the survey information to its website and social media. The Mad River Union ran an advertisement for the survey for a two-week period. The online community survey was also mentioned in a local TV news special.

The survey was entirely online, with a simple introduction and 30 questions in multiple choice, short-answer, or comment format. Survey logic was used, so in certain instances only those who answered a question one way were invited to answer more questions on that topic. There were English and Spanish versions of the survey available, but everyone answered in English. A total of 183 people completed the survey. The number of answers per question varies, as people did not provide an answer to every question. This Appendix contains detailed results by question, while highlights of the community survey are referenced in the main text of the TDP.

CURRENT IMPRESSIONS

Q1 & Q2. Current Versus Ideal Public Transit System (176 Responses)

The survey respondents were asked to describe the existing public transit system in Humboldt County with three words, and then they were asked to describe the ideal public transit system they would like to see in Humboldt County with three different words. Figure C-1 shows a word cloud of the top words used to describe the current system and Figure C-2 shows a word cloud of the top words used to describe the ideal system.

The top words used to describe the current public transit system were limited, infrequent, and slow (Figure C-1). These words are rather negative and suggest that a common view held by Humboldt County community members is that the transit system, while essential and helpful for those who need it, is not widespread, frequent, or reliable enough for people to want to ride the bus regularly.

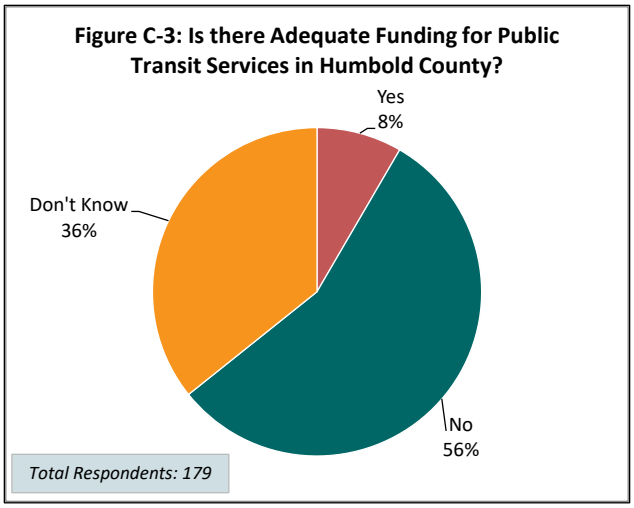
The top words used to describe the ideal transit system were frequent, reliable, safe, and convenient (Figure C-2). These words are nearly the opposite of the top words used to describe the current local transit system, suggesting the top service changes that residents would like to see are expanded service areas, more frequent service, and longer hours. Many people expressed how they hoped for a transit system that promoted green and ecofriendly transportation.

Figure C-1: How Community Survey Participants Describe Current Transit System in Humboldt County

Figure C-2: How Community Survey Participants Describe Ideal Transit System in Humboldt County

Q3. Is there Adequate Funding for Public Transit Services in Humboldt County? (179 Responses)

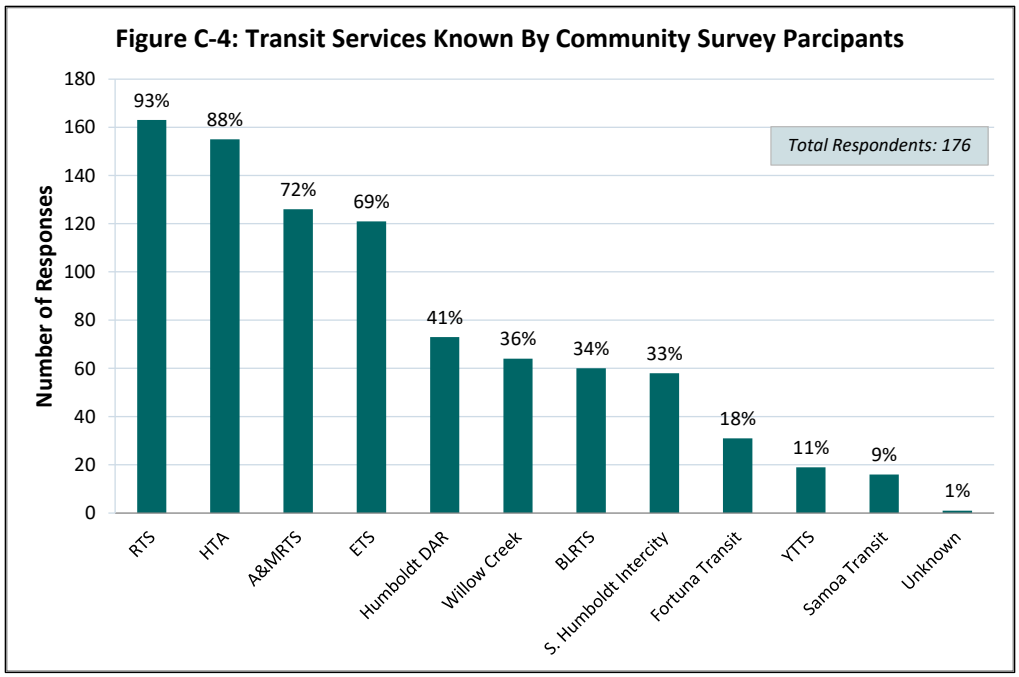
As seen in Figure C-3, when asked if there is adequate funding for public transit services in Humboldt County, the majority of respondents said no (56 percent). Only 8 percent of respondents thought current funding levels are adequate, while the remaining 36 percent said they were unsure.



KNOWLEDGE OF LOCAL PUBLIC TRANSIT

Q4. Transit Services Known by Community Survey Participants (176 Responses)

To assess how familiar the community survey respondents are with the various transit services available in Humboldt County, the participants were asked to select from a list all of the transit services they had either heard or knew of. The Redwood Transit System (RTS) was the most known among the survey respondents (93 percent), followed by the Humboldt Transit Authority (HTA) (88 percent), the Arcata & Mad River Transit System (AMRTS), and the Eureka Transit Service (ETS) (69 percent). The remaining transit services were known by less than half of the participants (Figure C-4).



POTENTIAL TO USE PUBLIC TRANSPORTATION

Q5. Past Public Transit Use in Humboldt County (179 Responses)

The vast majority of the community survey respondents have used public transit in Humboldt County at some point in the past (83 percent). The remaining respondents have never ridden buses locally.

Q6. Reasons for Not Using Public Transit in Humboldt County (29 Responses)

The respondents who said they had never used public transit in Humboldt County in Question 5 were then asked to select the primary reasons why they don't ride the bus. The top reason among the participants was that they have their own personal transportation available (66 percent). Regarding the actual transit services themselves, the respondents said they don't ride the bus because the bus comes too infrequently (59 percent), riding the bus takes too much time (52 percent), and the service area is too limited (48 percent). Table C-1 displays the other reasons cited by the survey respondents for why they choose not to ride public transit.

Table C-1: Reasons for Not Using Public Transit in Humboldt County

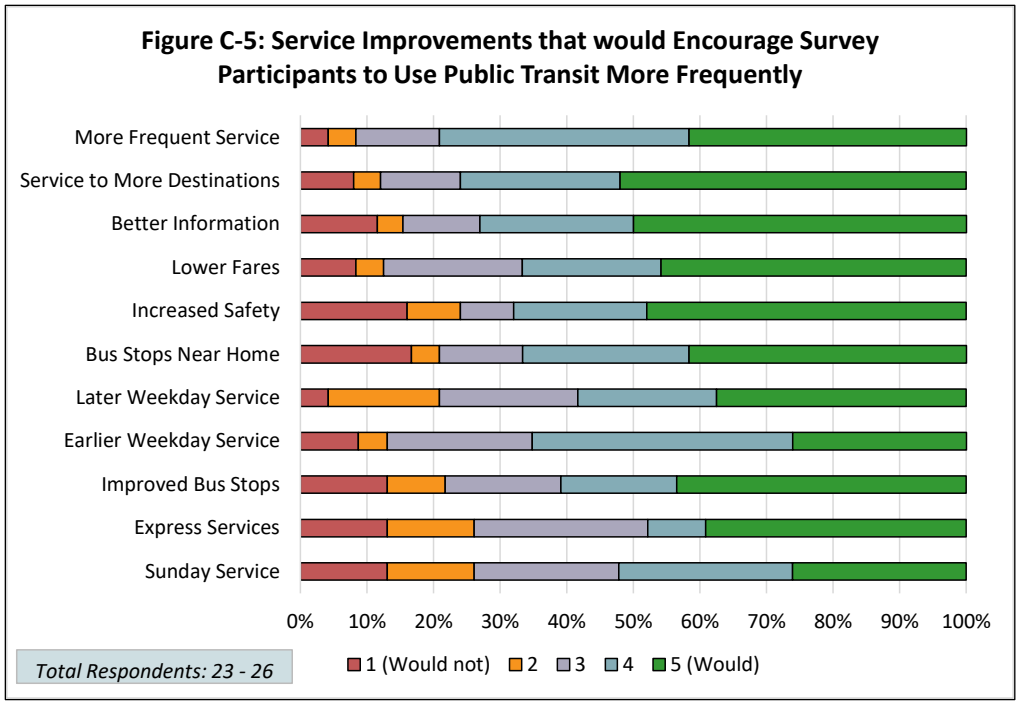
Reason	# of Participants	% of Participants
Have Personal Transportation	19	66%
Service Frequency	17	59%
Takes too Much Time	15	52%
Service Area	14	48%
Difficult to Use	10	34%
Hours of Operation	10	34%
Don't Know About the Services	6	21%
Costs too Much	3	10%
No Services or Passes for the Dis	2	7%
Don't Need to Travel Far	1	3%
Safety Concerns	1	3%
Total Responses	**29**	**100%**

Q7 & Q8. Service Improvements that would Encourage Survey Participants to Use Public Transit More Frequently (23-26 Responses)

The survey respondents who have never ridden the bus in Humboldt County were asked to rank several service improvements on a scale of 1 (would not) to 5 (definitely would) on the likelihood of whether the improvement, if implemented, would encourage them to use transit (Figure C-5) The most popular service improvements among the respondents were more frequent service (4.1), service to more destinations (4.0), and better information on the available services (4.0). Operating transit services on Sunday and starting new express transit services received the lowest amount of support (3.4 and 3.5, respectively). When asked to rank the single most important service improvement that would encourage the survey respondents to ride public transportation more often, more frequent service was the highest ranked.

Q9. Amenities that would Help Participants Get to Bus Stops (18-19 Responses)

Of the survey respondents who said that having bus stops closer to home was important to getting them to ride transit more often, having bike lockers at the bus station was ranked as being the most useful amenity, followed by having the ability to put a bike on the bus.



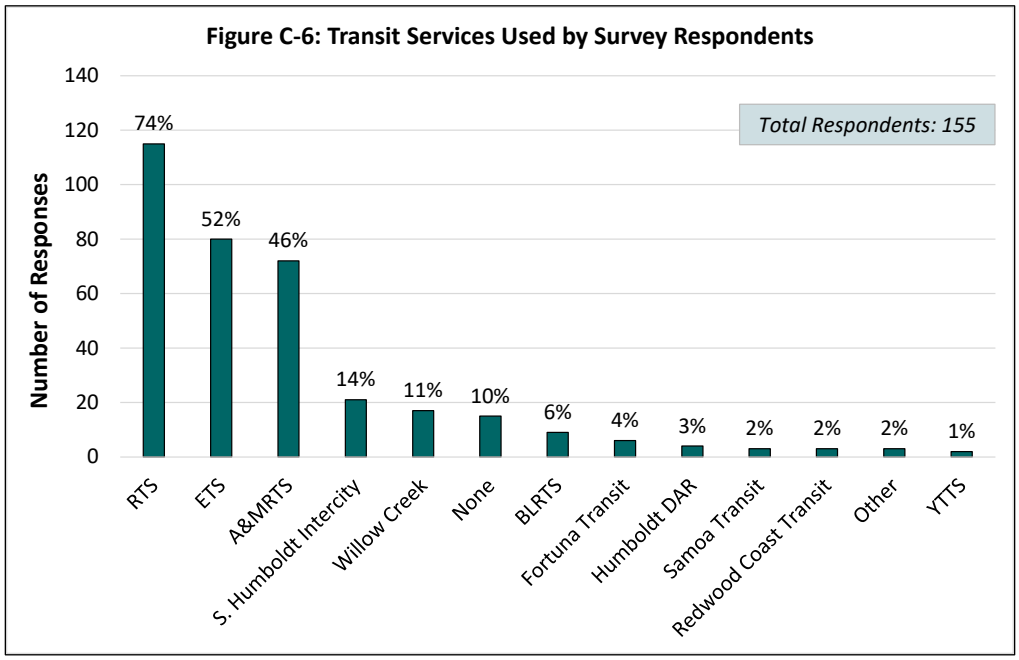
Q10. Would the Survey Participants Ride the Bus Even if they had a Personal Vehicle (29 Responses)

The 29 individuals who had never ridden public transit in Humboldt County were asked whether or not they would ride the bus even if they had a personal vehicle available. Half of these respondents said that they would be willing to ride the bus even though they had a car, indicating that there is potential for these individuals to ride the bus if certain service improvements are implemented.

PAST TRANSIT EXPERIENCE

Q11& Q12. Transit Services Used by Survey Respondents (155 Responses)

The survey respondents who have used public transit in Humboldt County in the past were asked to select all of the transit services they have used (Figure C-6). Nearly three quarters of the respondents had ridden RTS, just over half had ridden ETS, and just less than half had ridden A&MRTS. 15 percent or less of the respondents had ridden the Southern Humboldt Intercity (SHI) service, the Willow Creek (WC) service, Blue Lake Rancheria Transit System (BLRTS), or any of the other Humboldt County transit services (Figure C-6). Redwood Coast Transit is the public transit system in Del Norte County, which directly north of Humboldt County. The respondents were asked to select one of the transit services they have ridden in the past to discuss more in the survey. The results specific to each of the Humboldt County public transit systems are discussed below. It is worth noting that the answers provided are not representative of all Humboldt County transit riders towards these various services, as only small numbers of survey participants evaluated each system, and many of these participants are not frequent transit riders. However, the answers provided can still provide insight into general views and perceptions of each transit system, as well as some of the service improvements which would potentially encourage greater transit ridership.



Q13, Q14, Q15, & Q16. Experience with Redwood Transit System (RTS) (57-66 Responses)

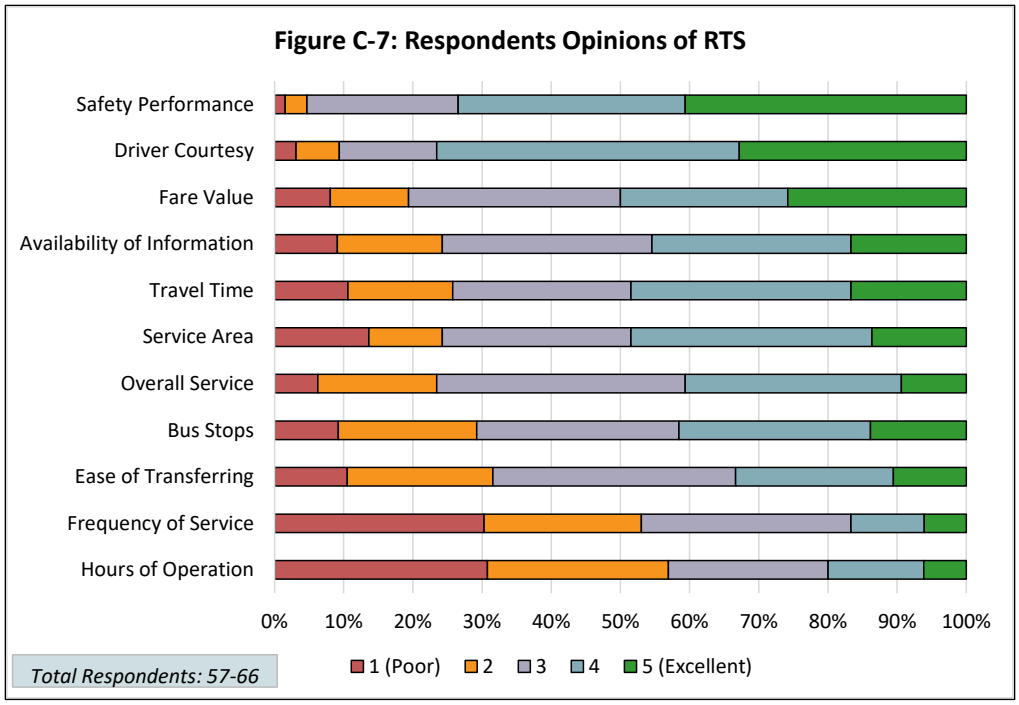
Table C-2: Frequency Respondents Ride RTS

Frequency	# of Participants	% of Participants
5 or More Days / Week	14	21%
2-4 Days / Week	14	21%
1 Day / Week	3	4%
1-4 Days / Month	1	1%
< 1 Day / Month	30	45%
Don't Know	5	7%
Total Responses	**67**	**100%**

Over 40 percent of the 67 respondents who chose to evaluate the RTS reported that they ride the RTS either 5 or more days per week or 2 to 4 days per week, meaning nearly half of the people who evaluated the RTS in the online survey are regular riders. Table C-2 shows the full results of how frequently participants ride RTS.

The respondents were then asked to evaluate RTS by ranking various service characteristics on a scale of 1 (poor) to 5 (excellent). As seen in Figure C-7, the highest ranked factors were safety performance (4.1) and driver courtesy (4.0), while the lowest ranked characteristics were RTS's hours of operation and service frequency (both 2.4). In all, the respondents had generally average perceptions of RTS, rating the overall service an average of 3.2 out of 5.

The respondents were then presented with a list of service improvements and asked to how likely they would be to ride RTS more frequently if each improvement was implemented on a scale of 1 (would not) to 5 (definitely would). The most popular service improvement was more frequent service (4.3), followed by service to additional destinations and improved bus stops (both 4.1). The service improvements that would be the least influential towards encouraging the respondents to ride RTS more often were later weekday service (2.5) and lower fares (3.2). When asked to choose the single most important service improvement, 24 percent said more frequent service.



Q13, Q14, Q15, & Q16. Experience with Eureka Transit Service (ETS) (27-31 Responses)

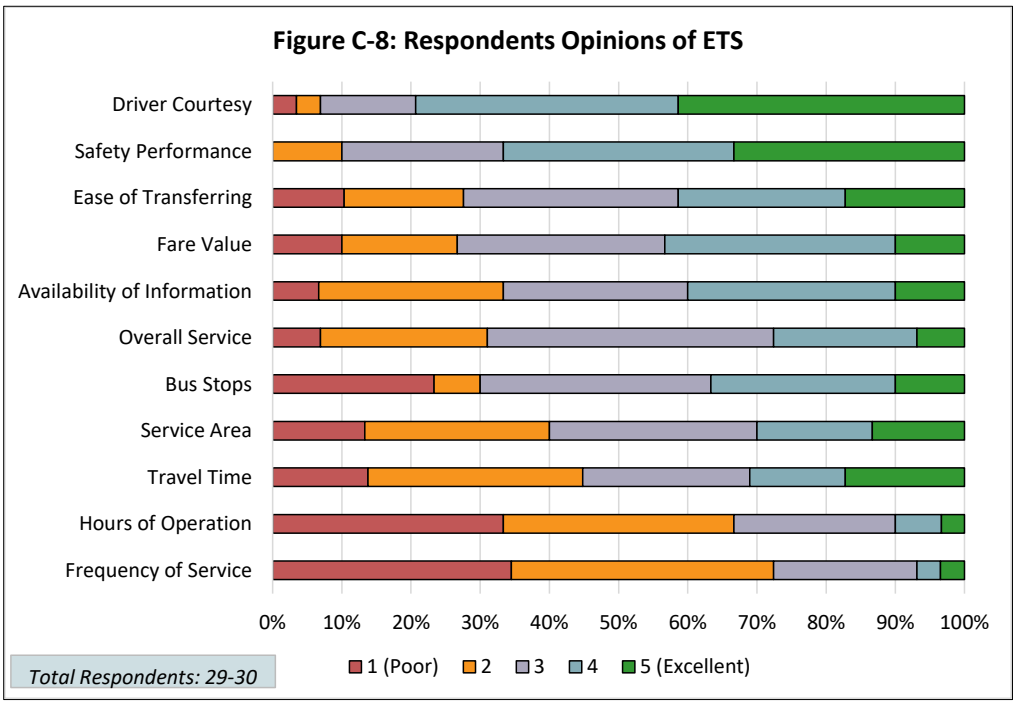
Table C-3: Frequency Respondents Ride ETS

Frequency	# of Participants	% of Participants
5 or More Days / Week	2	7%
2-4 Days / Week	5	17%
1 Day / Week	1	3%
1-4 Days / Month	9	31%
< 1 Day / Month	7	24%
Don't Know	5	17%
Total Responses	**29**	**100%**

31 individuals evaluated ETS in their survey. Most of these people only ride ETS semi-regularly; 31 percent ride ETS 1 to 4 days per month and 24 percent ride less than once per month. Full results for how frequently the respondents ride ETS are shown in Table C-3.

The respondents then ranked ETS by service feature on a scale of 1 (poor) to 5 (excellent). Figure C-8 shows the results to this question. The respondents ranked the overall service an average of 3.0. Driver courtesy (4.1) and safety performance (3.9) were the highest ranked aspects of ETS, similar to RTS. The lowest ranked service features were ETS's frequency (2.0) and hours of operation (2.1), which were also the lowest ranked features of RTS as well.

Just like the respondents who evaluated RTS, the participants then ranked service improvements on the likelihood the improvement would influence them to ride ETS more often. Also, just like RTS, the most popular potential ETS service improvement was more frequent service (4.6). This was followed by service to additional destinations (4.4) and later weekday service (4.3). The service improvements least likely to influence the participants to ride ETS more were new express routes (3.3) or earlier weekday service (3.6). After prioritizing their most important service improvements, more frequent service was the most important for nearly 20 percent of the respondents.



Q13, Q14, Q15, & Q16. Experience with Arcata & Mad River Transit System (A&MRTS) (15-17 Responses)

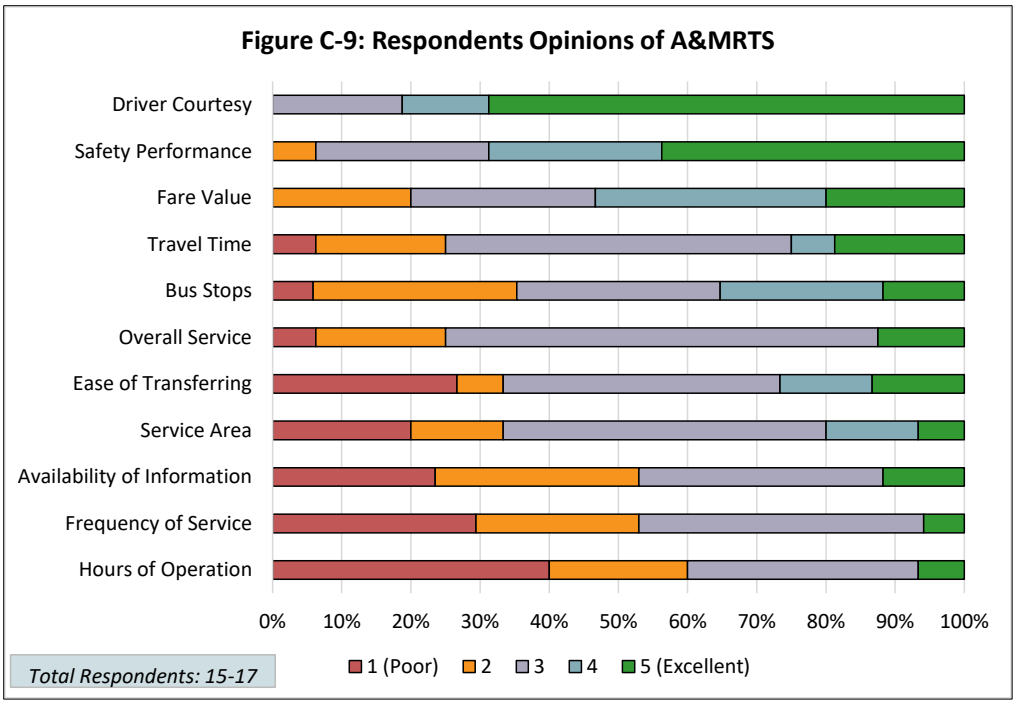
Table C-4: Frequency Respondents Ride A&MRTS

Frequency	# of Participants	% of Participants
5 or More Days / Week	0	0%
2-4 Days / Week	3	18%
1 Day / Week	0	0%
1-4 Days / Month	5	29%
< 1 Day / Month	5	29%
Don't Know	4	24%
Total Responses	**17**	**100%**

Only 17 survey participants chose to evaluate A&MRTS in their survey. As seen in Table C-4, about 60 percent of these respondents ride A&MRTS either once a week or less. Nobody reported to riding A&MRTS 5 or more days per week.

The respondents evaluated A&MRTS various service characteristics on a scale of 1 (poor) to 5 (excellent), shown in Figure C-9. Much like the other transit systems, the highest ranked factors were driver courtesy (4.5) and safety performance (4.1). The lowest ranked characteristics were the hours of operation (2.1) and service frequency (2.3), also just like the other systems and reflecting an overall trend in the answers of the community survey respondents.

Out of the potential service improvements listed on the survey, the ones considered by the survey participants to be the most likely to encourage them to ride A&MRTS more often were more frequent service (4.3), service to additional destinations, and improved bus stops (both 4.1). The service improvements least likely to encourage the respondents to ride A&MRTS more were later weekday service 92.5) and lower fares (3.2).



Q13, Q14, Q15, & Q16. Experience with Other Humboldt County Public Transit Services (27-31 Responses)

Two people evaluated the Blue Lake Rancheria Transit System (BLRTS). One rides BLRTS two to four days per week and the other rides between one to four days per month. Safety performance and driver courtesy were the highest ranked aspects of the BLRTS service, while availability of information and bus stops were the lowest.

Only one person evaluated Fortuna Transit. This person uses Fortuna Transit 1 to 4 days per month and ranked the overall service 3 out of 5. The respondent ranked six components of Fortuna Transit service above average (4 out of 5) but said they would be more likely to use the service if there was service to additional destinations and Sunday service.

One person evaluated the new Samoa Transit Service. This person uses the Samoa Transit service one to four days per week. They thought the best aspect of the service is the value received for the fare, but that the hours of operation, service frequency, information, and bus stops could all be improved. Increasing the service frequency was the top change that would encourage the person to ride Samoa Transit more.

Five people evaluated the Southern Humboldt Intercity (SHI) service. Only three of these people answered how frequently they use the SHI, of which two people ride less than one day per month and one person rides two to four days per week. Safety performance and driver courtesy were the two highest ranked aspects of the SHI service (both 3.8). The service improvements considered the most likely among the respondents to cause them to ride the SHI more was service to additional destinations and later weekday service.

Three people evaluated the Willow Creek (WC) Intercity service, of which one person rides the WC bus two to four days per week, one person rides one day per week, and the other uses the service

with an unknown frequency. The highest ranked aspects of the WC service by the respondents were the travel time and ease of transferring, while the lowest ranked was the frequency of service. The respondents indicated that more frequent service, lower fares, and service to additional destinations would likely result in them using the WC service more often.

PAST EXPERIENCE WITH HUMBOLDT DIAL-A-RIDE

Q17. Use of Humboldt Dial-a-Ride in Last Two Years (167 Responses)

Only 9 individuals who were surveyed (5 percent of total responses) had used Humboldt Dial-a-Ride (DAR) services in the last two years. The low use of Humboldt DAR among the respondents may not be eligible for the service. Others may live outside the service area.

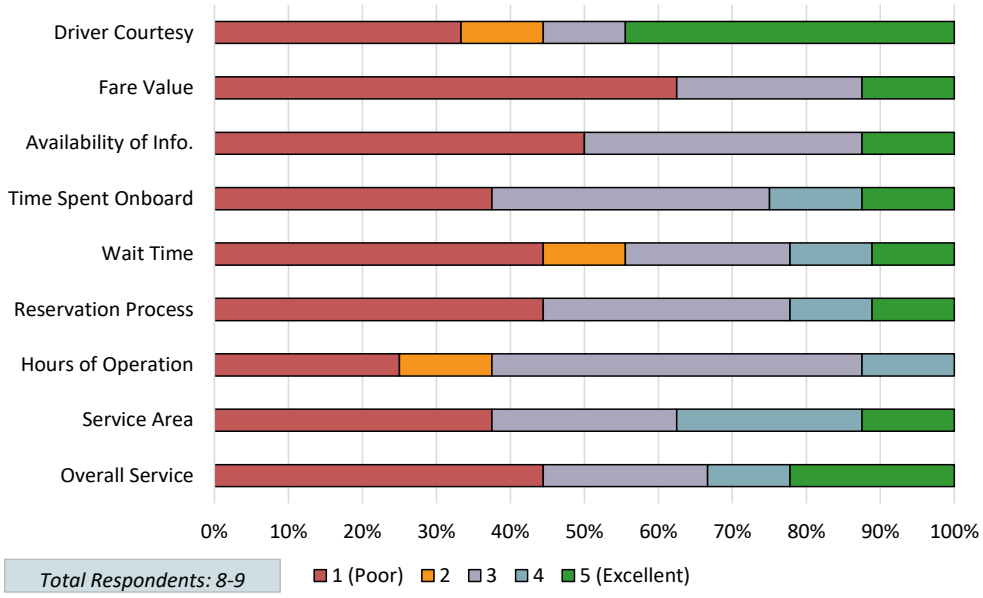
Q18. Frequency Respondents Ride Humboldt DAR (9 Responses)

The respondents who indicated that they had used Humboldt DAR during the last two years were asked how frequently they used the service. Three people regularly used Humboldt DAR, taking rides at least once per month or more. Four people used Humboldt DAR less frequently, requesting rides less than once per month. Two people didn't know how often they used the service.

Q19. Respondents Opinions on Humboldt DAR (8-9 Responses)

Similar to the question asked of the respondents evaluating Humboldt County fixed route services, the respondents who had ridden Humboldt DAR in the past were asked to rank various aspects of the service on a scale of 1 (poor) to 5 (excellent). Figure C-10 shows the results to this question, and that the few respondents who ranked the Humboldt DAR service did not think highly of the service. The highest ranked aspects of the service were the service area (2.8) and the time spent on the DAR vehicle (2.6). These results are from a very small sample of mostly irregular riders; therefore they are not representative of the views of Humboldt DAR riders at large.

Figure C-10: Respondents Opinions on Humboldt DAR



INFORMATION ON SURVEY RESPONDENTS

Q20, Q23, Q27, Q28, Q29, & Q30. Demographics of Survey Respondents (161 -166 Responses)

Table C-5 summarizes the demographic information of the community survey respondents. Overall, the most common demographic groups represented by the respondents were adults ages 23 to 45 years old, Eureka residents, full-time employees, people without a disability limiting their use of fixed routes, and people who identify as white/Caucasian.

Table C-5: Demographics of Survey Respondents

		#	%
Age			
Younger than 18		1	0%
18 - 22 Years		12	5%
23 - 45 Years		74	33%
46 - 61 Years		42	19%
62 - 70 Year		21	9%
71 Years or Older		16	7%
	Total	166	100%
Community of Residence			
Eureka		53	32%
Arcata		48	29%
Fortuna		11	7%
McKinleyville		10	6%
Cutten		7	4%
Manila		6	4%
Blue Lake		5	3%
Rio Dell/Scotia		4	2%
Willow Creek		3	2%
Ferndale		2	1%
Trinidad		2	1%
King Salmon		2	1%
Shelter Cove		2	1%
Redway		2	1%
Westhaven		2	1%
Other Humboldt Locations		4	2%
	Total	165	100%
Does Respondent Have Disability that Limits Use of Transit			
Yes		24	15%
No		139	85%
	Total	163	100%

		#	%
Employment Status			
Employed Full-Time		80	48%
Employed Part-Time		25	15%
High School Student		1	1%
Cal Poly Humboldt Student		16	10%
College of the Redwoods Student		9	5%
Homemaker		4	2%
Retired		36	22%
Unemployed		5	3%
Disabled		3	2%
Other		3	2%
	Total	166	100%
Annual Household Income			
$10,000 or less		20	12%
Between $10,001 and $20,000		23	14%
Between $20,001 and $30,000		17	11%
Between $30,001 and $60,000		35	22%
Between $60,001 and $75,000		22	14%
Between $75,001 and $100,000		23	14%
Over $100,000		21	13%
	Total	161	100%
Race/Ethnicity			
Asian or Pacific Islander		5	2%
Black or African American		1	0%
Hispanic or Latinx		16	7%
Hmong		0	0%
Multiracial		3	1%
Native American or Alaskan Native		8	4%
White or Caucasian		124	55%
Other		8	4%
	Total	165	100%

Q21. Major Intersections Near Survey Respondents' Homes (158 Responses)

Table C-6: Major Intersections near Survey Respondents' Homes

Street	Community	# of Participants	% of Participants
Alliance Ave & Foster Ave	Arcata	4	3%
11th St & Janes Rd	Arcata	3	2%
West Ave & Myrtle Avr	Eureka	3	2%
Samoa Blvd & Union St	Arcata	3	2%
11th St & N St	Arcata	2	1%
4th & R St	Eureka	2	1%
Bayside Rd & Crescent Way	Arcata	2	1%
Central Ave & Murray Rd	McKinleyville	2	1%
Lupin Dr & Peninsula Dr	Manila	2	1%
Wringley Rd & Elk River Rd	Eureka	2	1%
Sutter Rd & Central Ave	McKinleyville	2	1%
Rohnerville Rd & School St	Fortuna	2	1%
Total Responses		**158**	**100%**

To determine more specifically where the survey respondents live, and whether or not transit services can be provided near their homes, the respondents were asked to identify the nearest major intersection to their home. Table C-6 shows the top responses. Some of the most popular streets, rather than intersections, were Alliance Rd in Arcata (11 responses), Harris St in Eureka (11 responses),11th St in Arcata (7 respondents), Rohnerville Rd in Fortuna (5 responses), and E street in Eureka (5 responses).

Q22. How Participants Learned about the Online Survey (166 Respondents)

Table C-7: How Participants Learned about the Online Survey

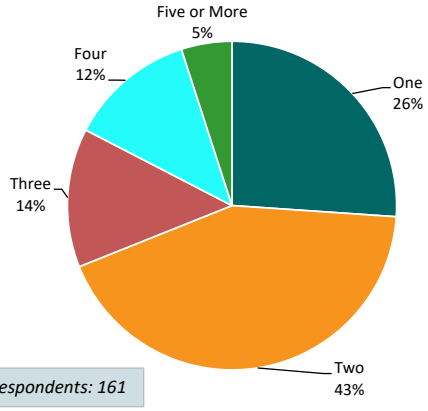
Source	# of Participants	% of Participants
Facebook	77	46%
Instagram	25	15%
CRTP	23	14%
HCAOG Website/Email	12	7%
Friends or Family	6	4%
Email	6	4%
Transit Website	4	2%
Work	4	2%
Don't Know	3	2%
TV	2	1%
Onboard Transit Bus	2	1%
Other	4	2%
Total Responses	**166**	**100%**

As described in the introduction to this Appendix, the online community survey was distributed to key stakeholders across Humboldt County, who then provided the survey materials to their own networks via multiple different platforms. Table C-7 lists all of the ways the respondents learned about the online survey. The top ways that people saw the survey information was on Facebook, Instagram, and through an email blast from the Coalition for Responsible Transportation Priorities (CRTP). This data indicates that social media platforms were effective at communicating public outreach information for transit planning in Humboldt County, at least in this instance.

Q24, Q25, & Q26. Number of People Able to Drive and the Number of Vehicles Available per Household (161-164 Responses)

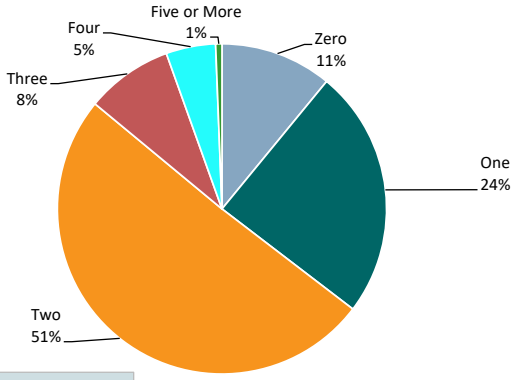
To determine the relative access to personal vehicles in each of the survey respondents' households, they were first asked to identify how many people live in their home (Figure C-11). The survey respondents were then asked how many licensed drivers live in their homes (Figure C-12). From these two figures, it is evident that there are many homes in which not every person has a driver's license. For instance, 31 percent of the community survey respondents live in homes with three or more people, but only 14 percent live in homes with three or more licensed drivers. Figure C-13 then shows the number of working vehicles available in each of the survey respondent's homes. One takeaway from both Figures C-12 and C-13 is that 11 percent of community survey respondents live in homes with no licensed drivers and 17 percent live in homes with no working vehicles, indicating that potentially these community members may benefit from public transit. While 74 percent of the respondents live in homes with two or more people (Figure C-11), only 52 percent live in homes with two or more cars (Figure C-13).

Figure C-11: Number of People in the Survey Respondents' Households



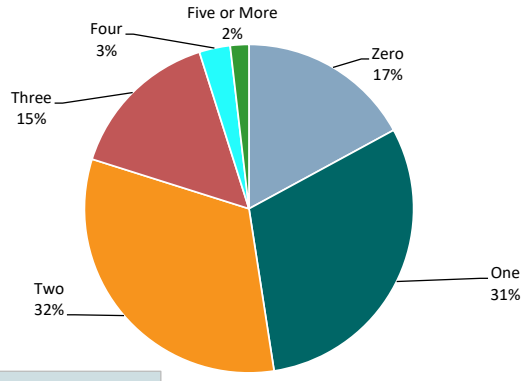
Total Respondents: 161

Figure C-12: Number of Licensed Drivers in the Survey Respondents' Households



Total Respondents: 164

Figure C-13: Number of Working Vehicles in the Survey Respondents' Households



Total Respondents: 164

Appendix D

DETAILED ONBOARD SURVEY RESULTS

Appendix D

DETAILED ONBOARD SURVEY RESULTS

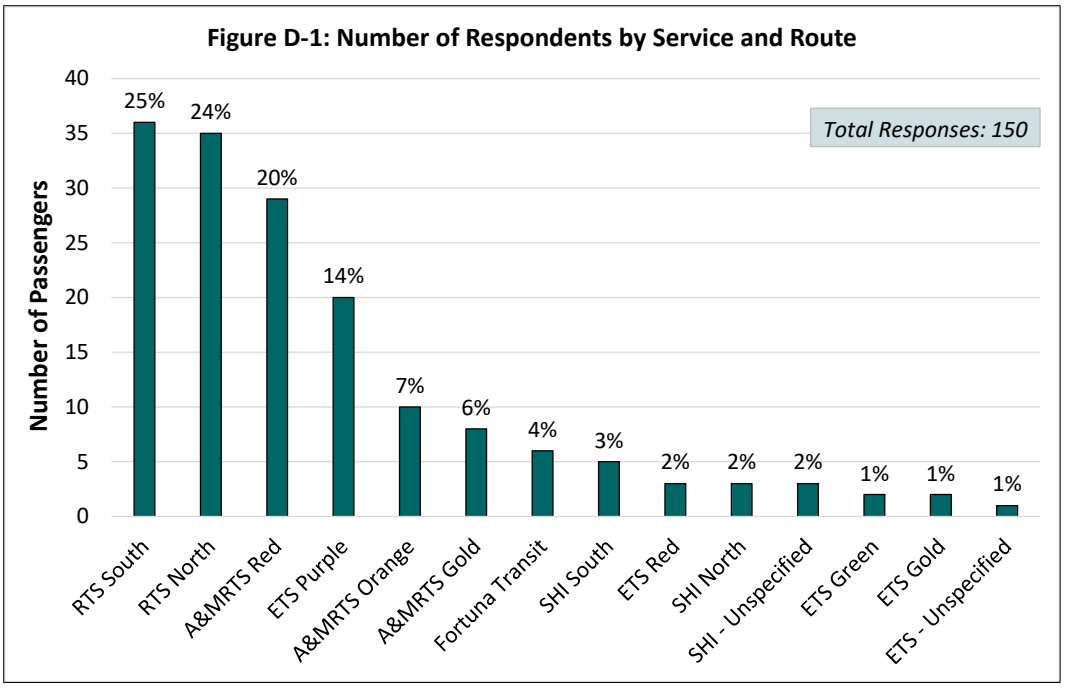
ONBOARD SURVEY RESULTS

Public outreach is an essential component of any successful transit planning effort. To learn about how current passengers use the various Humboldt County transit services, and whether these services are meeting the transportation needs of local residents, an onboard survey effort was conducted during the development of the Humboldt County Transit Development Plan (TDP). Surveys were available for passengers to self-administer from October 31 to December 16, 2022, on Humboldt Transit Authority (HTA), Arcata and Mad River Transit System (A&MRTS), and Fortuna Transit vehicles. Drivers collected the completed surveys, and then agency staff scanned and returned them to LSC Transportation Consultants, Inc., to analyze. Flyers with QR codes were also provided to the transit operators to post onboard vehicles and at key stops, such as the Arcata Transit Center, so passengers could scan the QR codes and complete digital versions of the surveys. Additionally, a trained surveyor rode A&MRTS buses for ten hours and a HCAOG staff member rode Eureka Transit Service (ETS) buses for about four hours to encourage people to complete surveys.

All survey materials and flyers were available in both English and Spanish. Each survey instrument consisted of a short introduction and between 22 to 25 questions, depending on the service, in multiple choice, short-answer, or comment format. Survey instruments with large text were also provided for Redwood Transit System (RTS), ETS, and Fortuna Transit passengers. A total of 155 people completed an onboard passenger survey on five separate transit services. Only one person completed their survey in English. The onboard survey results are discussed in depth in this Appendix, while highlights are summarized in Chapter 5 of the TDP.

Q1. Number of Respondents by Service and Route (150 Responses)

Figure D-1 shows which transit services and routes the passengers were riding when they completed the onboard survey. Nearly 50 percent of the passengers surveyed were riding the RTS Mainline, with an almost equal number riding northbound and southbound (Figure D-1). One fifth of the onboard survey participants were riding the A&MRTS Red Route, 7 percent were riding the A&MRTS Orange Route, and 6 percent were riding the A&MRTS Gold Route. The most popular ETS route among the surveyed passengers was the Purple Route (14 percent of total survey responses).



Q2. Boarding Times (137 Responses)

Most of the passengers boarded the bus in the morning (65 percent), with the most popular time period for boarding being between 8:00 AM and 9:59 AM (28 percent) (Table D-1). Only 16 percent of the passengers who completed an onboard survey boarded the bus after 4:00 PM.

Table D-1: Boarding Times

Time	# of Participants	% of Participants
6:00 AM - 7:59 AM	23	17%
8:00 AM - 9:59 AM	39	28%
10:00 AM - 11:59 AM	27	20%
12:00 PM - 1:59 PM	13	9%
2:00 PM - 3:59 PM	14	10%
4:00 PM - 5:59 PM	16	12%
6:00 PM - 8:00 PM	5	4%
Total Responses	**137**	**100%**

Q3 & Q5. Top Boarding (141 Responses) and Alighting Locations (142 Responses)

It is important to know where passengers are boarding and alighting to plan effective routes and to prioritize potential

Table D-2: Top Boarding Locations

Stop / Intersection	Community	# of Participants	% of Participants
Library Circle (Cal Poly Humboldt)	Arcata	23	16%
Arcata Transit Center	Arcata	9	6%
Valley West Blvd & Valley East Blvd	Arcata	6	4%
3rd St & H St	Eureka	5	4%
5th St & H St	Eureka	5	4%
Bayshore Mall	Eureka	5	4%
Buttermilk Ln & Bayside Rd	Arcata	4	3%
Crescent Way	Arcata	4	3%
School Rd	McKinleyville	4	3%
5th St & D St	Eureka	3	2%
Greenview Market	Arcata	3	2%
Total		**141**	**100%**

bus stop improvements. Tables D-2 and D-3 show the most popular boarding and alighting locations among the surveyed passengers. The Library Circle stop at Cal Poly Humboldt was both the top boarding (16 percent) and alighting (18 percent) location among the surveyed passengers, reflecting the return of Cal Poly Humboldt student, staff, and faculty ridership post-pandemic. The Arcata Transit Center was also a highly used stop among the surveyed passengers (6 percent of boardings and 7 percent of alightings). A number of people were traveling to College of the Redwoods in Eureka (7 percent of alightings).

Table D-3: Top Alighting Locations

Stop / Intersection	Community	# of Participants	% of Participants
Library Circle (Cal Poly Humboldt)	Arcata	26	18%
Arcata Transit Center	Arcata	10	7%
College of the Redwoods	Eureka	10	7%
Bayshore Mall	Eureka	7	5%
Valley West Boulevard	Arcata	6	4%
5th St & U St	Eureka	4	3%
5th St & G St	Arcata	3	2%
Burre Center	Eureka	3	2%
14th St & B St	Arcata	2	1%
4th St & B St	Eureka	2	1%
Broadway St & Del Norte St	Eureka	2	1%
Total		**142**	**100%**

Some of the other communities where passengers were either traveling from or to, but which are not shown in the tables, included Fortuna, King Salmon, Loleta, and Rio Dell. Due to the service area, all of the Fortuna Transit passengers boarded and alighted in the City of Fortuna.

Q4 & Q6. How Passengers Arrived at the Bus Stop (148 Responses) and then got to their Final Destination (140 Responses)

To better understand public transit passengers' overall travel patterns, passengers were asked how they got to the bus stop prior to boarding, and then how they planned to get to their final destination after alighting. As seen in Figures D-2 and D-3, the vast majority of passengers reported that they had walked to the bus stop (83 percent), and that they would then walk to their destination (92 percent). The high rates of walking support the emphasize the need for the Humboldt County public transit agencies to continue to implement first/last mile solutions for passengers, as it is much more difficult for passengers to get to destinations further from the bus routes if they are walking. Besides walking, small numbers of people got to and from the bus stop by bicycling or by transferring between buses.

Figure D-2: How Passengers Arrived at the Bus Stop

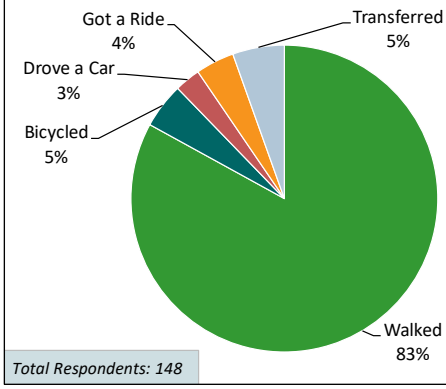
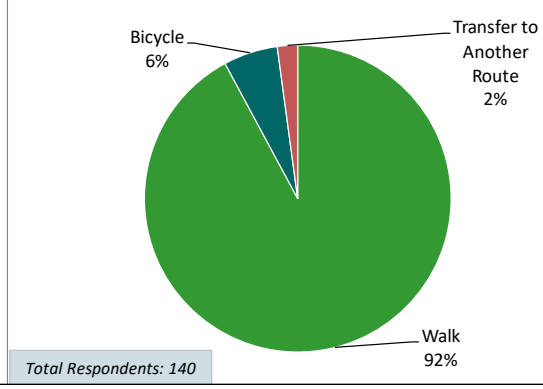
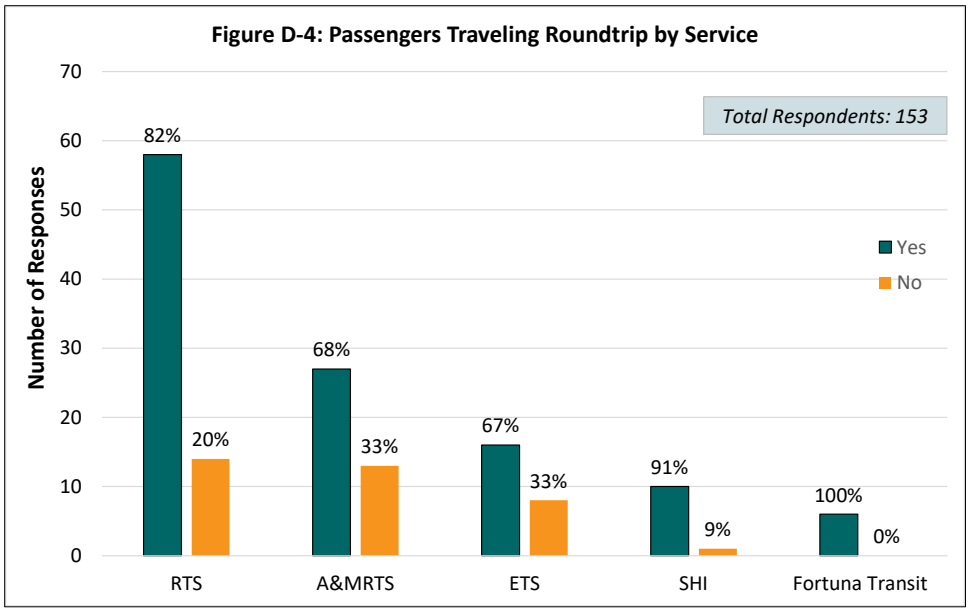


Figure D-3: How Passengers Planned to Get to their Final Destination after Alighting

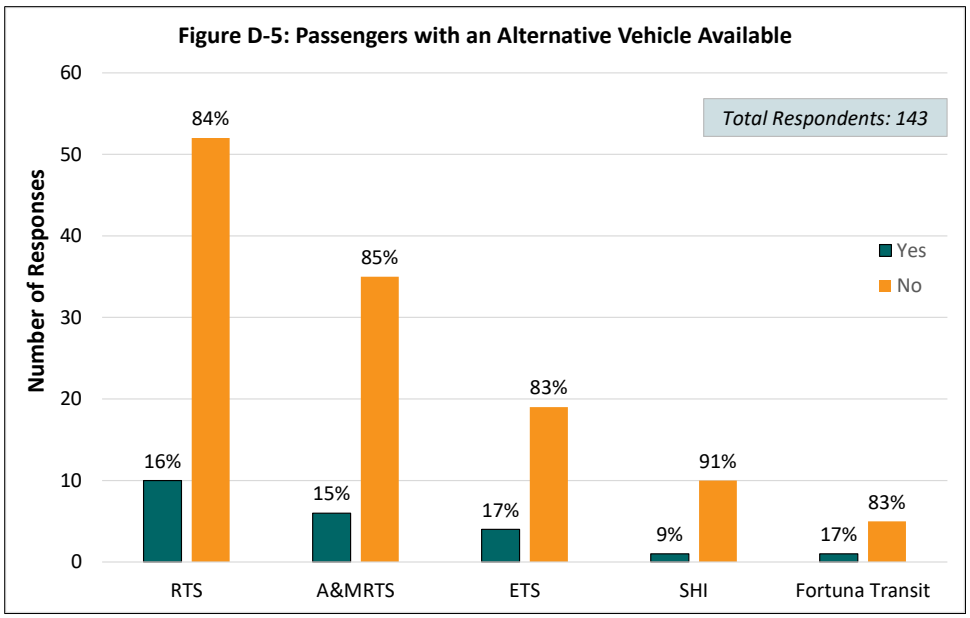


Q7. Roundtrip Travel Patterns by Service (153 Responses)



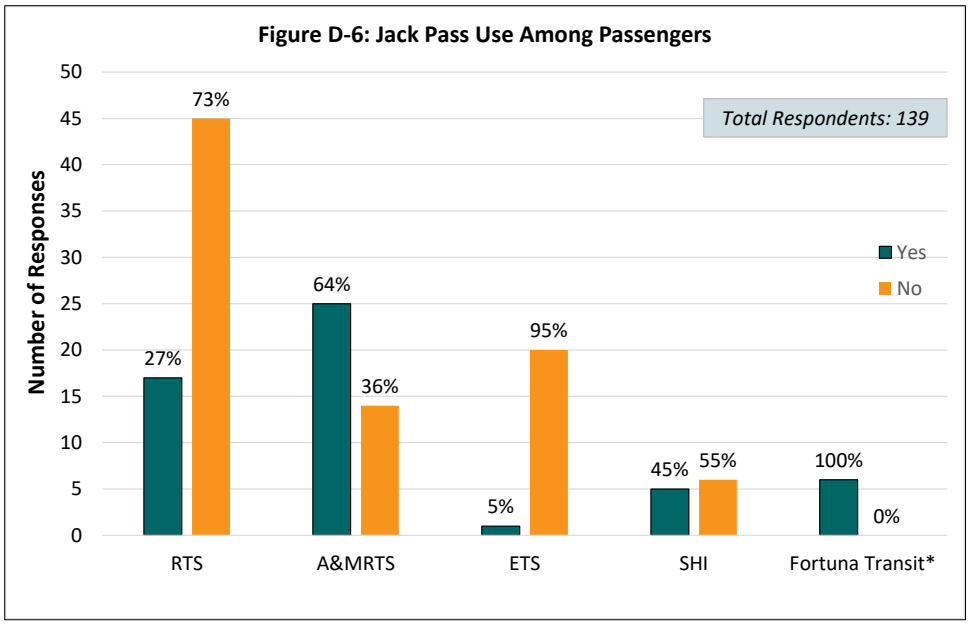
If a passenger is transit dependent, they will likely need to ride the bus both to and from their destination. Over three quarters of the surveyed passengers reported that they were riding the bus roundtrip, indicating that a large portion of Humboldt County public transit riders are potentially transit dependent (Figure D-4). By service, 81 percent of the passengers riding RTS and about two thirds of the passengers on both A&MRTS and ETS were riding roundtrip. All of the passengers riding Fortuna Transit and all but one of the passengers riding the HTA's Southern Humboldt Intercity (SHI) service were riding the bus roundtrip the day they were surveyed.

Q8. Alternative Vehicle Availability (143 Responses)



Whether or not someone has a vehicle available is another indicator of potential transit dependency. As seen in Figure D-5, most passengers reported that there was no alternative vehicle available for them to use (85 percent), suggesting that a large portion of Humboldt County public transit riders rely on the bus for their mobility needs. RTS had the greatest proportion of passengers with a car available (19 percent), followed by A&MRTS (17 percent).

Q9. Jack Pass Use Among Passengers (139 Responses)



Cal Poly Humboldt offers the Jack Pass for students, staff, and faculty. Jack Pass users have unlimited free rides on RTS, ETS, A&MRTS, SHI, and the HTA's Willow Creek (WC) service. This product is described in greater detail in Chapter 3 of the TDP. Figure D-6 shows that 36 percent of the surveyed passengers use the Jack Pass program, another data point that reflects the returning Cal Poly Humboldt student, staff, and faculty ridership. As expected, Jack Pass use was highest on A&MRTS. As Fortuna Transit only serves senior adults or persons with disabilities, most Fortuna Transit passengers are not affiliated with Cal Poly Humboldt, therefore they were asked about whether or not they use Fortuna Transit's punch pass. All six Fortuna Transit passengers surveyed use the punch pass.

Q10. Primary Trip Purpose (153 Responses)

Table D-4: Primary Trip Purpose

Trip Purpose	RTS	A&MRTS	ETS	SHI	Fortuna	Total
School/College	41%	64%	0%	18%	0%	38%
Work	38%	31%	29%	64%	0%	35%
Shopping	11%	19%	29%	0%	40%	16%
Personal Business	15%	7%	25%	9%	20%	14%
Medical/Dental	10%	5%	8%	0%	40%	8%
Multipurpose	7%	10%	8%	9%	0%	8%
Recreational/Social	6%	7%	8%	0%	0%	6%
Other	1%	5%	0%	0%	0%	2%

Knowing why passengers are traveling on the bus can provide insights into where and when they may need public transit services. Table D-4 shows the percent of passengers riding for each specific trip purpose, as well as the total percentage of onboard survey respondents traveling for the said purpose. Across the services, the top reason for riding the bus was to go to school or college (38 percent). A&MRTS had the greatest proportion of riders going to school or college (64 percent), followed by RTS (41 percent). The second most popular trip purpose among the surveyed passengers was to go to and from work (35 percent), with 64 percent of SHI and 38 percent of RTS passengers traveling for this reason. Full results are shown in Table D-4.

Q11. How Passengers would have Made Trip if Transit was Unavailable (152 Responses)

Table D-5: How Passengers Would Have Made Trip if Transit was Unavailable

	RTS	A&MRTS	ETS	SHI	Fortuna	Total
Not Made the Trip	51%	22%	38%	18%	50%	39%
Walked	13%	61%	21%	18%	33%	28%
Got a Ride	21%	10%	25%	18%	0%	18%
Driven Alone	16%	10%	8%	9%	0%	12%
Taxi/Uber/Lyft	1%	2%	17%	36%	17%	7%
Bicycled	4%	2%	0%	0%	0%	3%
Social Service Agency Ride	3%	0%	0%	0%	0%	1%
School Shuttle	0%	5%	0%	0%	0%	1%
Other Bus	0%	0%	0%	0%	17%	1%

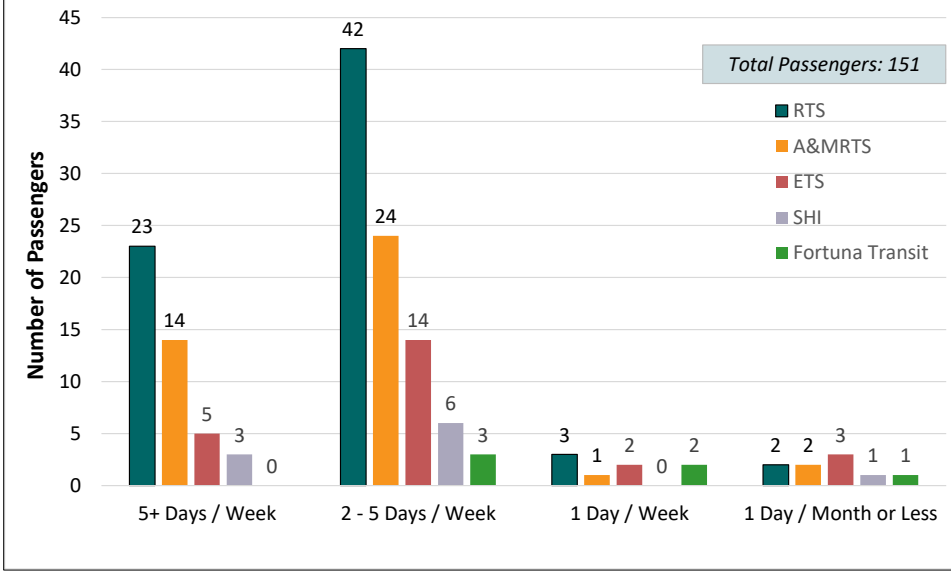
Passengers were asked how they would have completed their trip if the service they were riding was unavailable. The most popular answer was that the passengers would not have made their trip at all (39 percent of total responses) (Table D-5). However, most of the A&MRTS passengers said they would have instead walked (61 percent) and the most popular alternative for the SHI passengers would have been to call a taxi, Uber, or Lyft (36 percent).

Q12. Preferred Payment Method for Transit Fares (138 Responses)

The Humboldt County transit providers have worked to make it easier for passengers to pay fares on the various transit services by developing new payment methods. From the passengers' perspective, 72 percent of those surveyed said they prefer to pay their fares with a monthly pass product, 17 percent prefer cash, 7 percent prefer using a phone application, and only 4 percent prefer using a credit card.

Q13. Frequency Passengers Ride Public Transit (151 Responses)

Figure D-7: Frequency Passengers Ride Public Transit



Most of the passengers surveyed are frequent transit users, with 89 percent that reported to riding the bus at least two days a week or more. As seen in Figure D-7, most of the passengers on each service reported to riding the bus two to five days a week. The regular ridership reported by the onboard survey participants suggests that many current passengers are able to use Humboldt County public transit for their daily needs.

Q14. How Long have Passengers used the Transit Service (150 Responses)

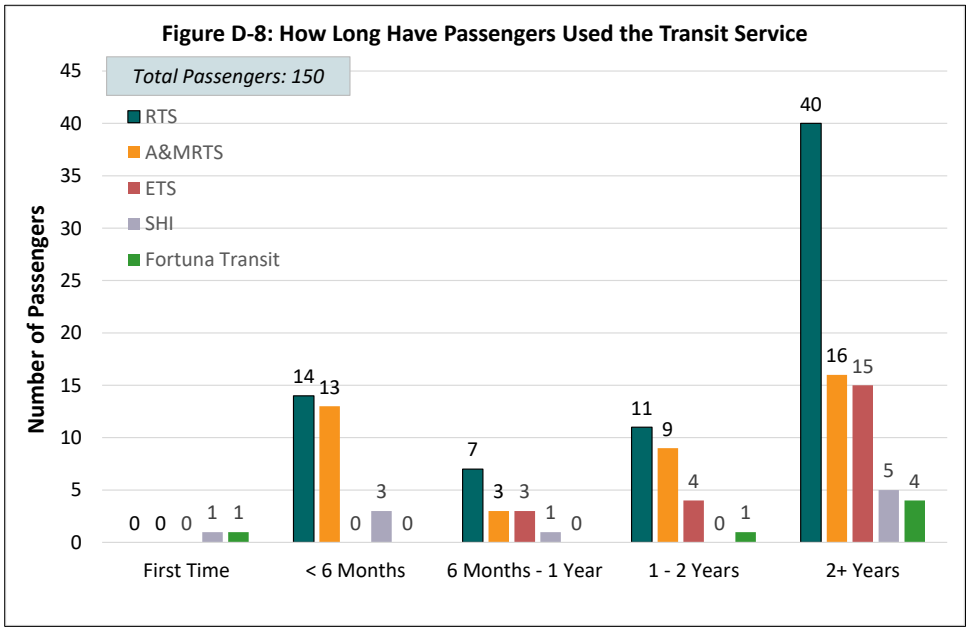


Figure D-8 shows how long the passengers have been using the service they were riding when they completed the survey. Most passengers have used the transit service they were riding for two years or more (53 percent). The only service on which more than half of passengers had begun riding within the last two years was A&MRTS, which is likely due to the high number of students who ride. Many Cal Poly Humboldt students are new riders because they either recently enrolled at the university, or they recently moved to the area for the first time to attend classes in person since pandemic restrictions lifted.

Q15. Primary Sources for Transit Information (146 Responses)

For passengers to rely on the transit system, they need to be able to get accurate information from accessible sources. Table D-6 shows the primary sources used by the surveyed passengers to get transit information. The most popular source was the internet (38 percent), followed by the printed guide/schedule (31 percent), and then by the printed information at bus stops (31 percent). Compared to the previous TDP, far more participants said they use phone applications or websites (30 percent use Google Maps and 8 percent use the Transit App). These rates were lowest among the Fortuna Transit Passengers (0 percent use either source), which follows the national trend of older adults being less likely to use technology compared to younger persons.

Table D-6: Primary Sources for Transit Information

Information Source	RTS	A&MRTS	ETS	SHI	Fortuna	Total
Internet	51%	25%	27%	50%	0%	38%
Printed Guide / Schedule	25%	30%	50%	50%	0%	31%
Bus Stops	28%	43%	14%	50%	0%	30%
Google Maps	26%	43%	9%	50%	0%	29%
Bus Driver	16%	23%	41%	50%	50%	25%
Cal Poly Humboldt	6%	18%	0%	20%	0%	9%
Telephone	6%	10%	5%	0%	50%	8%
Transit App	15%	5%	0%	0%	0%	8%
Family / Friend	6%	18%	0%	20%	0%	9%
Cal Poly Humboldt	6%	5%	0%	20%	0%	5%
College of the Redwoods	4%	3%	0%	0%	0%	3%
Other	3%	0%	5%	0%	0%	2%

Q16. Do Passengers Find it Difficult to Plan Connections to Regional Transit Services? (122 Responses)

The public transit system in Humboldt County is complex, with eight separate transit services operating solely within the county in addition to other interregional services. 17 percent of passengers said they find it difficult to plan connections to other regional transit services. Improved or redesigned informational resources may help some of these passengers plan interregional trips.

Q17. Passenger Opinions on the Humboldt County Public Transit Services (6-69 Responses)

Each passenger was asked to evaluate the service they were riding by ranking the service characteristics on a scale of 1 (poor) to 5 (excellent). Overall, 69 people evaluated RTS (Figure D-9), 38 evaluated A&MRTS (Figure D-10), 23 evaluated ETS (Figure D-11), 10 evaluated SHI, and 6 evaluated Fortuna Transit. While these samples are small, the results can still reveal some basic trends in what passengers enjoy or dislike about each of the transit services.

RTS passengers ranked system safety and driver courtesy the highest out of all the service features considered (both 4.5). They also had good perceptions of the travel times (4.3) and the information available via the internet (4.1). The lowest ranked RTS service characteristics

Figure D-9: Passenger Opinions of RTS

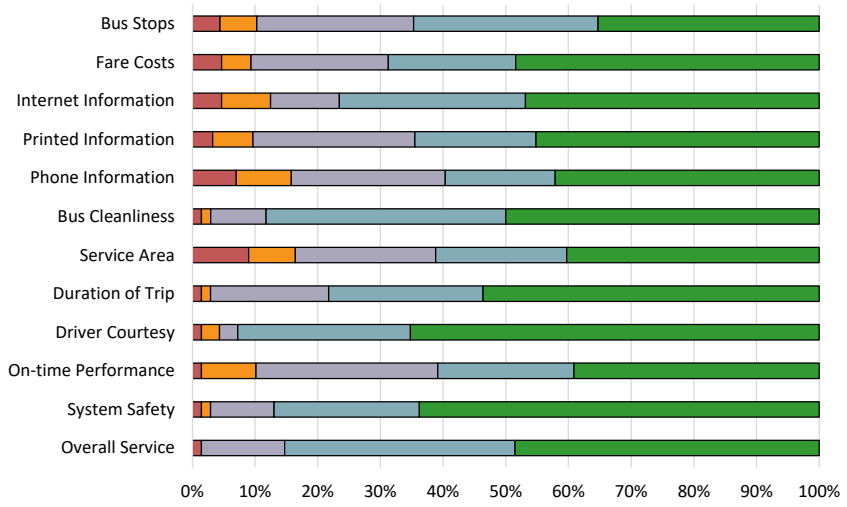
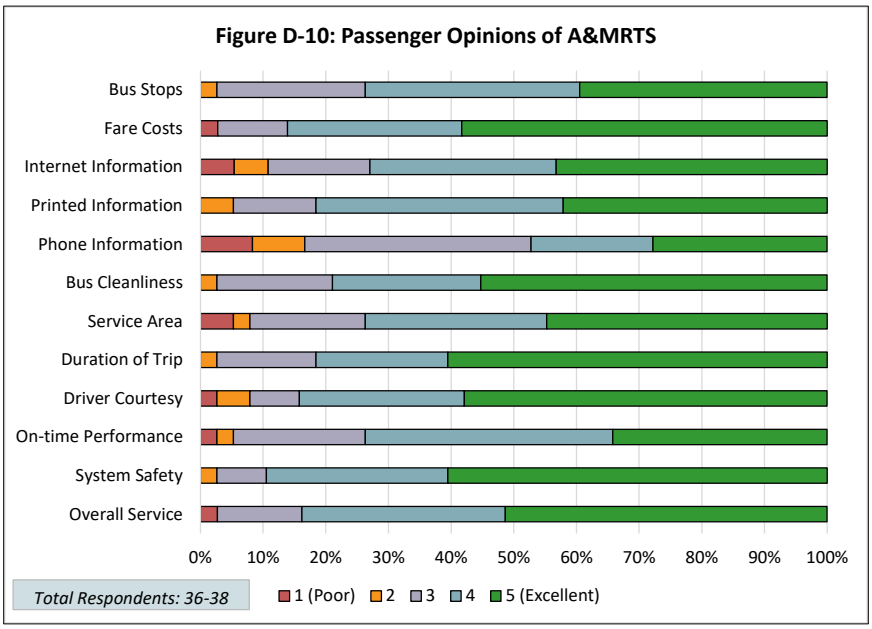


Figure D-10: Passenger Opinions of A&MRTS



were phone information and service area (both 3.8), and on-time performance and bus stops (both 3.9). In all, 74 percent of the rankings provided by RTS passengers were either a 4 or 5, indicating generally good perceptions.

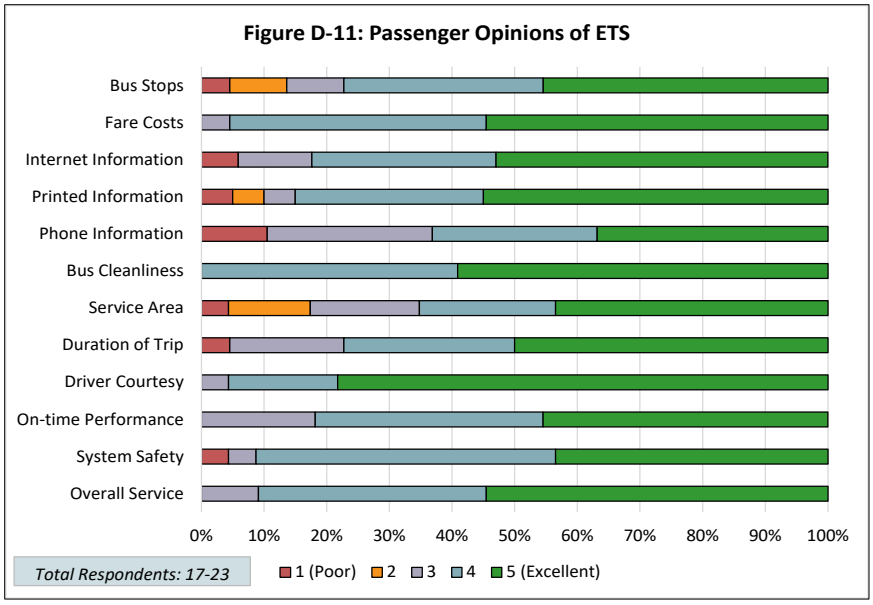


Figure D-11: Passenger Opinions of ETS

For A&MRTS, the highest ranked characteristic was also system safety (4.5), followed by the cost of fares and trip duration (both 4.4. The lowest ranked A&MRTS service characteristic was the phone information services (3.5). The next lowest ranked service characteristics were the on-time performance and internet information (both 4.0). 77 percent of the total responses were either a 4 or 5, once again indicating that A&MRTS passengers are generally satisfied with the service.

ETS passengers had the most positive perceptions of driver courtesy (4.7), bus cleanliness (4.6), and fare costs, while they had more neutral opinions on the ETS's phone information (3.8), service area (3.9), and bus stops (4.0). As with RTS and A&MRTS, ETS passengers overall have good opinions on the service; 84 percent of the total rankings were either a 4 or a 5.

The ten passengers who evaluated SHI had the most neutral views comparatively, with only 72 percent of answers being a 4 or 5. The highest ranked SHI features were the trip length (4.6) and driver courtesy (4.3), while the lowest ranked features were the bus stops (3.5), and the service area and phone information (both 3.6). The six passengers who evaluated Fortuna Transit had excellent perceptions of the service, with almost every feature being ranked an average of 5.

Considering all of the services, the features consistently ranked highly were system safety, driver courtesy, trip length, and fare costs. The features most consistently ranked low were phone information, service area, and on-time performance. As previously noted, these results were generated from small samples of passengers, however they can prompt discussion about potential service improvements which could improve the travel experience for passengers.

Q18, Q20, Q21, Q22, Q23, & Q24. Demographics of Survey Respondents (161 -166 Responses)

Table D-7 provides an overview of the surveyed passengers' demographics. The most common demographic groups represented by the respondents were adults between the ages of 18 to 34 years old (31 percent), people who live in Arcata or Eureka (72 percent), students (51 percent), non-wheelchair users (98 percent), and people without their driver's license (58 percent). Six people indicated that their primary language is not English (four speak Spanish, one speaks Swahili, and one speaks Thai), but only one of these people said that this makes it harder for them to use the bus.

Table D-7: Demographics of Survey Respondents

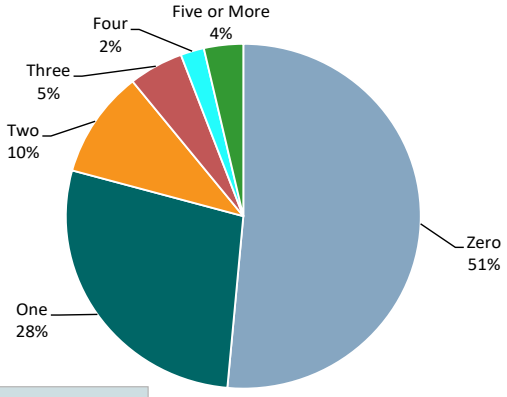
		#	%
Age			
Younger than 18		5	2%
18 - 34 Years		71	31%
35 - 54 Years		31	14%
55 - 64 Years		16	7%
65 - 74 Year		12	5%
75 Years or Older		6	3%
	Total	141	100%
Community of Residence			
Arcata		62	44%
Eureka		40	28%
Fortuna		8	6%
McKinleyville		7	5%
Sunny Brae		6	4%
Rio Dell/Scotia		3	2%
Greenview		2	1%
Blue Lake		1	1%
Cutten		1	1%
Fields Landing		1	1%
Hoopa		1	1%
Miranda		1	1%
Samoa		1	1%
Stafford		1	1%
Willow Creek		1	1%
Other Humboldt Locations		5	4%
	Total	141	100%

		#	%
Employment Status			
Employed Full-Time		30	20%
Employed Part-Time		41	27%
High School Student		24	16%
Cal Poly Humboldt Student		31	21%
College of the Redwoods Studen		11	7%
Other Student		11	7%
Homemaker		1	1%
Retired		24	16%
Unemployed		12	8%
Unable to Work		16	11%
Disabled		1	1%
	Total	150	100%
Wheelchair Usage			
Yes, Passenger has Wheelchair		3	2%
No Wheelchair		133	98%
	Total	136	100%
Driver's License Status			
Yes, has Driver's License		61	42%
No Driver's License		83	58%
	Total	144	100%

Q19. Number of Vehicles Available per Household (140 Responses)

Whether or not someone has access to a vehicle is an indicator of potential transit dependency. 51 percent of the surveyed passengers live in home with no vehicles (Figure D-12), or "zero-vehicle households." The distribution of zero-vehicle households across Humboldt County is discussed further in Chapter 2 of the main report and in Appendix A. 28 percent of the surveyed passengers live in homes with access to only one vehicle.

Figure D-12: Number of Working Vehicles Available at Passengers' Households



Total Respondents: 140

Q25. Top Ideas for Service Improvements (105 Responses)

The final survey question asked passengers to describe the service improvements they would most like to see. Table D-8 shows the top service improvements overall, as well as the percentage of passengers on each service who requested said improvement. The most popular improvements among the passengers were to have later service hours (24 percent), implement more Sunday service options (16 percent), and have earlier service hours (10 percent). The most popular service improvements on each respective service were as follows: RTS passengers most requested later service (28 percent), A&MRTS passengers most requested Sunday service (31 percent), ETS passengers most requested Sunday service, more frequent service, and better information (7 percent each), SHI passengers most requested earlier service (33 percent), and Fortuna Transit passengers most requested later service (60 percent).

Some of the other comments provided by the respondents that are worth noting include that students at both Cal Poly Humboldt and College of the Redwoods said they would benefit from both later services so they could take the bus home after later classes or studying. Other passengers specifically asked for later service on Friday and Saturday nights. Many passengers asked for either more frequent service, earlier service, later service, or Sunday service because they would like to be able to ride the bus to work but are unable to do given the constraints of the current transit schedules.

Table D-8: Most Requested Service Improvements

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

Appendix E

HUMBOLDT COUNTY TDP – STAKEHOLDER INTERVIEWS

Appendix E

HUMBOLDT COUNTY TDP STAKEHOLDER INTERVIEWS

INTRODUCTION

For a Transit Development Plan (TDP) to be effective, it needs to address the mobility needs of residents in the study area. Local stakeholders, such as elected officials, social service program directors, business owners, and citizens at large, can provide insight into transportation issues that are impacting various demographic groups. To learn more about the mobility needs and barriers in Humboldt County that should be considered in this TDP, twenty-two (22) stakeholders were invited to participate in an interview, of which fourteen (14) participated. Interviews were prefaced that they would be confidential, and therefore takeaways from the interviews are grouped generally by topic.

Stakeholder Participants – Familiarity with Public Transit

Most of the stakeholders who were interviewed had a thorough understanding of public transit in Humboldt County through either their professional or personal experiences. Some of the participants, however, answered questions on behalf of their constituents and were less familiar with the services, instead offering opinions based on the experiences of their clientele.

Who Should be Served by Humboldt County Public Transit Systems

- Nordic farm on the Samoa Peninsula, which will be a magnet for other industries.
- Offshore wind farm/Harbor assembly & maintenance.
- Housing development in Cutten (though no accommodations for transit in plans).
- College of the Redwoods and Cal Poly Humboldt students. It would be great as the student population grows that they could not have a car.
- People who choose not to have a car, who can't afford a car, or who have physical limitations that prohibit them from driving.
- People who choose the bus for environmental or other reasons.
- Retirees, climate refugees are moving here.
- McKinleyville is appealing to tourists since it's closer to RNP and beaches, and has the airport.
- [Public transit]'s critical for the quality of life for a lot of people—allows them to function, get to appointments, shopping.
- People assume it's for students, homeless, people with DUIs. It would be great to change that perception, so it attracts choice riders.
- Large employers need to be brought in to allow their employees to get to work/school by transit: Cal Poly Humboldt, Fish Farm, Co-op (large employer).
- Students, seniors, youth, and disabled.
- Everybody should be served, but realistically, it's the transit dependent.
- College of the Redwoods and Cal Poly Humboldt.
- Should make transit more attractive so it's not just for transit dependent.

- Everyone, but by different modes.
- Everybody who wants to or needs to. Those with the highest needs, but that is a very widespread, diverse group.
- Climate conscious may choose it more.
- Aging baby boomers—who have never taken transit and have to be taught—like my dad who had Alzheimer's.
- More people with increased cost of living, inability to afford driving a car, stagnant economy.
- Cal Poly Humboldt students, faculty, staff.
- Everybody. It's a need that's growing, especially with the cost of fuel, owning a vehicle.
- All the public, and students.
- Everybody, both long term and short term [residents].
- Everyone who wants to use it.
- Focus should be on elderly and people with physical conditions limiting use.
- Everyone. There will continue to be an increase in individuals that will not be able to transport themselves due to health issues, aging, inability to drive, or lack of a car.

Primary Transit Issues

- Need to identify the actual goal of the TDP—is it to increase ridership, or meet mobility needs?
- Health care is difficult to access. Long wait for appointments (especially going south to out-of-area appointments).
- For the senior population and people with disabilities, accessibility is an issue. Many [seniors and persons with disabilities] cannot get to the closest public transportation on their own.
- The public say they want more stops, times, days, hours of service, but when implemented, the ridership doesn't support it. There's a disconnect between requests and use.
- Skilled drivers and finding drivers: the salary is decent, but still hard to attract.
- Lack of frequency.
- Hours/frequency are major issues.
- Frequency, safety at stops (transients, lighting); bus stops too far from need.
- As Cal Poly Humboldt grows, there will be demand for a Park-n-Ride (in Eureka or Arcata).
- Need express services to Cal Poly Humboldt; from Arcata, Eureka, McKinleyville, direct to campus with few stops
- Aging population.
- Arcata and Eureka hospitals are not well served by transit.
- Biggest issue—people are prejudiced against riders and have a perception that riders are homeless or have DUIs.
- RTS not bad in terms of stops, direct service. However, there is 1.14 miles between the 4th/B and B & Hawthorne stops, which is too far.
- Not convenient.

- With the increase in fuel prices, maybe we can get more people on buses. But Humboldt County residents are used to single occupancy vehicles. Hard to change the mindset.
- Can't offer 10-minute service.
- JPA – everyone wants multiple stops in their communities, but that slows down service.
- Express service was recommended in last plan, but people threw a fit, so it didn't work. You need to offer something else if you're taking service away (thus microtransit).
- Fuel, cost of doing business, driver wages all increasing. To meet these increased costs leaves nothing for improving operations.
- Funding from feds is for capital, and zero-emissions buses in particular. No operations funding.
- Transit has to be competitive in terms of time efficiency and comfort.
- Lack of funds.
- Eastern Humboldt County is very limited in medical services, groceries. People need to get from Orleans to Willow Creek for services. YTTS will be offering new service to help these people.
- Low density, scattered communities with long distances between (hard to serve).
- Lack of infrastructure (first/last mile issues).
- Need to look at alternative technologies. Cell phone reception is weak, so that limits some technologies.
- Cooperation/collaboration with Tribes. Caltrans is not that useful to tribes. Not all tribes can manage transit. Important to include tribes in public participation.
- Not enough frequency.
- Not enough stops. In the north/south continuum, a lack of stops. Like McKinleyville, for example—very few stops and far apart. We need to address first/last mile issues.
- Frequency and hours (span) of service.
- Culturally "better off" people assume it's for carless, poor, young, "others"
- Association with the bus as being for certain people. City council candidates were asked if they had ever ridden the bus—and they hadn't. Changing perceptions should be part of the leaders' roles.
- People don't like to use transit because they have the perception that it's not clean. We need to reinforce the idea that it is—like with our new electric buses.
- People still fear getting sick on the bus—there's a stigma.
- Land use: To get the choice riders, we need frequency. For frequency, we need density. Better coordination between land use and transportation planning.
- Funding. HTA does a phenomenal job with resources they have, but the constraints are real.
- Fundamental issue is funding. HTA does a really good job with what they have, but the farebox rules and landscape make it challenging.
- Insufficient funding, which is related to the status. City council unwilling to increase funding for earlier, later services. Assume people aren't using for work, so no need to start earlier, end later. Leads to poor funding.

- Taking a bus from Arcata to Eureka is an excruciatingly long ride. If you try to combine it with biking (and walking), that's limited by bike racks on buses, safe parking for bikes, and safe infrastructure to get around.
- Frequency is limited. If you miss the bus, the next one isn't for a while
- In McKinleyville, the bus only serves the center. McKinleyville has poor pedestrian and bicycle infrastructure, so it's difficult to get to stops. At stops, there's a lack of bike locks/lockers.
- COVID had a huge impact on ridership. How, as a collective body, do we renew interest in public transit? Ridership is returning, but very slowly.
- It takes a long time to get around by transit. If someone misses a bus, they have to wait a long time for another. And transit takes much longer than cars, so there's no incentive unless they have to use transit or choose to for environmental reasons.
- How do you move people from cars to buses?
- We get requests for "late night service", weekends, and earlier.
- Climate destination—also creating growth. How do we develop the infrastructure?

Effectiveness – How Well are Humboldt County Transit Services Meeting Needs

- Buses aren't full. Is that an indication of a lack of demand, or a lack of service to meet the demand?
- Grateful that transit is there. The challenge is overcoming the hurdles due to timing, length of travel on buses. People generally only use it when they have to because it's not convenient.
- HTA is dedicated to meeting needs and does a fantastic job with resources. But the goals for meeting needs are conflicting: frequency versus coverage.
- In certain ways, [the transit services are] doing really well. But it's not at a point where it's drawing choice riders. It's a last option.
- For social services, doing great for the money available, but it's not frequent enough and doesn't have service from outlying areas that connect to the core.
- Current modes don't serve people well, but in large part because of funding mechanisms and how things are done.
- Behind the scenes, there's a lot going on. SSTACs are proactive. The McKinleyville plan to start transit is great. People are excited about that.
- Not well because the routes serve a main corridor (in Arcata) and people have to walk too far.
- As housing has grown, routes have not adjusted. The TDP needs to look at routing.
- Overall, well (in terms of DAR). [The DAR} serves a much larger area than the ADA dictates we should serve, so it goes above and beyond.
- [Need] express service to Cal Poly Humboldt.

Strengths of Humboldt County Public Transit Systems

- HTA/Redwood Transit System has a clear goal of trying to get frequency up.
- Greg Pratt has a vision, dedication. (Strong leadership)

- Good service at certain times of the day between Eureka and Arcata.
- Well used by students and to an extent, commuters.
- HTA does a good job coordinating/keeping up with the times in terms of how people pay for fares, get information about routes.
- Planning effort for the downtown Eureka hub has been very positive.
- HTA did a really good job rolling with the punches through COVID.
- Electronic ticketing.
- HTA director! He works with Mendocino, others to build a better system
- Glad we have transit. Heck of a lot better than nothing.
- Strength is in leadership. Greg Pratt has taken the bus and is an excellent advocate. Did a great job with the Earth Center planning—integrated planning.
- Planners are doing well. Younger people excited about mode shift.
- It's great to see transit planning and problem solving at the grass roots level; if an issue comes up, the agencies put their heads together and work on solutions.
- 30-minute headways between College of the Redwoods and Arcata.
- Intercity is performing well. Southern Humboldt Intercity and Willow Creek Intercity services meet farebox ratios.
- Tying communities together.
- Regional pass.
- Yurok has a rideshare program from McKinleyville to Klamath.
- Credit card readers soon to be installed. Tap on, tap off will help a certain demographic.
- Coordination with northern counties: Del Norte to Humboldt; Humboldt to Lake.
- RTS Strengths:
    - Drivers are awesome
    - Management is receptive to concerns
    - Affordable fares (though made the suggestion to have available for sale at stores, not just at the transit office and on buses)
    - Simple for the most part, somewhat frequent, serves a large area
    - Symmetry—takes as long to go as to come
- ETS Strengths
    - Great drivers
    - Reliable (on time)
    - Scheduled so buses meet at the transfer center at the same time.
- Relationships and coordination; HTA is sensitive to concerns of Cal Poly Humboldt.
- Good drivers and reliable funding.
- A lot of work has been done on route efficiency and route management.

Weaknesses of Humboldt County Public Transit Systems

- Not enough buses (service). Too slow.
- Constant conundrum of choosing between coverage and frequency.
- Coverage vs efficiency—don't envy management for trying to figure it out.
- People don't use it now due to a lack of frequency. Long term, we need more funding to increase frequency to draw more riders.
- In the [Unmet Transit Needs] process, many of the requests ultimately do not meet the bureaucratic definition of unmet needs, so people feel like they're screaming into the void, and that's frustrating.
- If there's a new development, people might ask for service, but to do so would take away from something else.
- The general public have mostly never used transit.
- Some routes not maximized; Eureka has been long-known to have a poorly designed route system. Arcata similarly has poor routes.
- Arcata has hourly service—same as 1979.
- RTS Mainline—north of McKinleyville & south of Fortuna are poorly served. Creating some sort of local service that connects to the Mainline seems like the needed direction. For example, McKinleyville study called for an on-demand service that would feed into the RTS route instead of the RTS trying to provide local service.
- Duplication—why yellow school buses AND public transit?
- Design of buses could be better (as in Australia—even in rural areas; common storage area, nice seats, can see out windows).
- Infrastructure is weak, but that is the role of the cities and counties, not transit agencies.
- Lake County identified stops, facilities in a large plan and then were able to get funding for those—Humboldt needs to do similarly.
- Amtrak Arcata to Martinez—the stop is in back of a Denny's.
- Very capable and dynamic agencies with strong leadership (Greg, James, …) Just need more funding and help. HTA has hired the Schatz institute for technological advice. It's great to have that expertise, but it's expensive. Smaller rural areas don't have that.
- Stigma attached to riding.
- Eureka Transit Service - Loop system means you may get someplace in 10 minutes, but 50 minutes to get back. RTS is twice/hour, but Eureka only meets it 1x/hr.
- Travel time.
- Dial-a-Ride is structurally off. Eureka is paying for trips to Arcata that should not be complementary. There's a premium service—rider pays $3, Eureka pays $7, Arcata pays nothing? Need to look into it. Takes an hour and a half to provide one trip to Arcata, whereas 15 could be provided locally in Eureka.
- Serving Manila takes an extra 8 minutes from the RTS route. Should serve with microtransit.
- Look at past unmet needs, and address those.

- RTS weaknesses:
  - Not very frequent outside of the Arcata/Fortuna corridor or in off-peak hours.
  - Limited hours.
  - Lack of systems maps on buses or at stops. Newcomers arriving at the airport have no information about taking the bus. Maps should be at the airport, mall, CPH campus, etc.
  - The county library is a couple of blocks from the route and requires people to cross 4th and 5th (Highway 101), meaning they must go a few blocks for a crosswalk. Lots of patrons are elderly, disabled.
- ETS weaknesses:
  - Infrequent service.
  - HATE the purple route.
  - Lack of symmetry. Can get to the hospital quickly, but it's super long to get home.
  - Confusing routes.
- A&MRTS has confusing routes which double back on themselves.
- Poor frequency, need improved access (safe stops), there is no Sunday service, and coverage in Arcata doesn't serve residential areas well (outdated).
- Difficult to recruit drivers, especially because of the pandemic and drug testing requirements. Also, difficult to recruit volunteers for volunteer driver programs.

Pros and Cons of Branding all Transit Systems in Humboldt County Under One Name and Logo

- Not convinced it's an absolute benefit, but from passenger perspective, being on one system feels more seamless.
- From a business perspective, there could be an economy of scale (if the systems were actually integrated).
- Makes sense in the long run.
- It would be great! One system of payment especially.
- Yes, if they have a unified fare system.
- Arcata and Eureka have loop routes which don't really complement the HTA services. If better coordination could come out of mutual branding, that would be worthwhile.
- It's long been discussed. It would be helpful.
- It would be an opportunity to address the cultural perception of transit and address the connectivity.
- Yes [it would be beneficial]. HTA and Eureka are already integrated. Not sure why Arcata isn't.
- It's confusing to new people and would be beneficial, but ultimately, it's word of mouth that gets information out there. Branding only takes you so far.
- Simplifies for riders. Not just branding, but regional passes.

- [HTA] uses wraps and advertises. Only A&MRTS doesn't advertise, and they have the bright scheme. Still, [the transit agencies] could put the Ride Humboldt logo on the side [of the buses] and then people know they can tap their pass or credit card.
- Not necessarily. One payment is already available. Having individual systems gives you a better sense of where the buses go, what area they serve. Color branding might be good so buses could be used interchangeably for various systems if a bus breaks down.
- [The success of a regional pass system] depends on how its presented and laid out so everyone has an equal say. Need to consider different funding sources (e.g., Tribal funding).
- Depends on perception and marketing.
- Not against it. It may be beneficial for those who use multiple services and would like a more streamlined experience. But not sure that should be the #1 priority for funding. Don't think it will increase ridership.
- Having the branding under one name/logo can be beneficial, especially if the information for those transit systems will be all in one place for clients to access.

Changes that will Impact the Need for Public Transit in the Humboldt County in the Short-Term Future

- Cal Poly Humboldt has been given an increase in funding. This increase in funds will lead to an increase in students and an increase in the need for transportation for those students.
- As Cal Poly ramps up with increasing students/faculty, that will drive a lot of demand.
- In 2023, Cal Poly Humboldt will be adding 1,000 beds in Valley West, with just 310 parking spaces.
- Increase in students.
- Obvious—Cal Poly growth.
- Ability to provide housing in Arcata [for Cal Poly Humboldt] is limited, so [housing] will likely go other places, and that distance will create a need for / opportunity for transit.
- The 60+ population is supposed to grow exponentially, adding to the number of older adults requiring transportation services.
- Earth Center—the theory is incredible. It will be interesting to see if that changes transit use.
- Reduced parking may force people to choose transit, or walking.
- Gen Z doesn't like to own cars. Better services could attract these riders.
- Yurok is growing…building more homes; just built 8 homes and a community center on Tule Creek Road (near tribal offices).
- YTTS starting service from Orleans to Hoopa. YTTS would love Hoopa to start their own service.
- Even without Cal Poly Humboldt, there will be pressures which will increase the need for transit. Climate refugees, unaffordable driving.
- Both aging and younger people are more likely to use transit in the future.
- Increase in affordable housing.

- McKinleyville Town Center Plan will include graduated care senior living facility, which the town lacks now.
- Cal Integrated Travel Project – working on developing ride tracking, technology.
- Demand will change based on what is presented. Traditional bus service has been declining for 8+ years. HTA will be testing some on-demand microtransit.
- County of Humboldt planning is placing projects in locations not conducive to transit (Samoa peninsula, Old Arcata Road). Sprawl is a problem to serve.
- Zero emissions initiatives.
- Trinidad may start services.
- Charters—opportunity for special event transportation? Reggae on the River, etc.? Could serve a need and bring in revenue.
- Caltrans has a goal to serve National Parks. What are the coordination opportunities for that?
- Uber in Humboldt County is really expensive—close to $25 from Arcata to Eureka. Maybe Humboldt County could establish a program similar to "Pay-your-Pal" in Lake County.
- Need bus lanes, HOV lanes, protected bike lanes (City of Eureka is resistant).
- Scotia Lodge, new businesses may drive desire for more transit
- Westwood area is growing.
- Open Door Clinic in the Sunset area is being built with limited parking. Where will employees and patients park?
- Cutten housing w/lack of amenities.
- Demand will change as supply changes. We don't have enough supply, and until we do, there will be no change in demand. There's been hardly any change since 1979. No bus to Ferndale, no service on Old Arcata Road (used to be), lack of quality shelters. We need smaller vehicles. When all of that changes, demand will change.
- Climate plan promotes infill development. All new housing is to be in transit accessible areas.
- Increased density should generate more support by HTA/HCAOG.
- Indianola housing; developer has suggested putting in a bus stop is enough.
- Many plans (County plan, McKinleyville Town Center, Gateway Plan, parking plan in Eureka, etc.); there's opportunity for a coordinated effort to improve all facets.
- Climate refugees, Cal Poly, investment in Arcata—more people, more pressures. Arcata won't be able to meet all of the needs, so they will spread to other communities.
- It's exciting to see the Earth Center, hydrogen buses.
- There should be greater connectivity to other modes. Eureka isn't safe for bikes and pedestrians, but the opportunities to improve that are there. It's flat, a grid system, and wide roads. H Street near the high school, for example, there are three lanes, with parking on both sides of the road. There could easily be a dedicated bike lane and reduced parking.
- HCAOG is representative of all communities, and as such, it should do more to encourage coordination among the cities/county, be an advocate for integrated planning.

CONCLUSIONS

While the comments provided by stakeholders cover a range of topics of issues, a few key themes were evident across the interview. These themes include:

Who Should be Served: Stakeholders acknowledged that ideally public transit should be able to be used by everyone in the community. There should be a focus on meeting the needs of Cal Poly Humboldt students, College of the Redwood students, seniors, and persons with disabilities. Although transit services should be for everyone, the stakeholders also acknowledged that due to current service frequencies and routes, the people riding the bus are mostly those with no other choice.

Primary Transit Issues: Many of the stakeholders mentioned that current transit hours, frequency, and service areas do not allow many people to take advantage of these services, making increasing ridership difficult. Some also mentioned the conflicting goals of designing transit services which are frequent but also provide enough coverage to the region given limited resources. Stakeholders expressed the need to help residents with first/last mile solutions. Limited funding was also cited as an issue preventing the implementation of service improvements. Also mentioned was overcoming the prevalent stigma people have against public transit to encourage more people to ride the bus.

Effectiveness: The stakeholders overall thought that the various Humboldt County public transit operators are doing well given the resources they have, however they believe that services are inadequate due to low levels of funding and political support.

Strengths: Transit leadership and regional coordination efforts were cited as some of the strongest aspects of the local transit network. Stakeholders also spoke highly of the electronic ticketing systems and the plans for the new Earth Center.

Weaknesses: Some of the primary weaknesses mentioned by stakeholders were current transit frequency, travel time, and service areas. Safety at bus stops was also mentioned as a concern. Stakeholders were also aware that limited funding opportunities obviously impacts the service upgrades that are possible.

Branding: The stakeholders interviewed overwhelmingly agreed that branding all of the transit systems in Humboldt County under one name and logo would ultimately be beneficial, helping to improve the passenger experience and help those less knowledgeable about existing services feel capable of trying to ride the bus. However, many mentioned that branding should not be the prioritized over other issues.

Future Demand: According to the interviewed stakeholders, the key trends that will influence transit demand in Humboldt County are the expansion of Cal Poly Humboldt, the region's growing senior adult population, and new housing developments across the region. Stakeholders emphasized that new developments should consider transit and projects which increase density should be prioritized.

Appendix F

PUBLIC WORKSHOP LIVE POLLING RESPONSES

Appendix F

PUBLIC WORKSHOP LIVE POLLING RESPONSES

POLLING RESPONSES

This Appendix visually presents the results of the live polling questions conducted at the second public workshop for the *Humboldt County Transit Development Plan* (TDP) update, which primarily discussed the alternatives evaluation detailed in Chapters 7 through 10 of this study. All attendees were able to participate in the polls, either through Zoom or by writing down their responses on paper. After the workshop, the online and paper answers were summed. For each question, attendees were instructed to indicate all of the alternatives they thought should be included in the TDP. This means that when analyzing the results, a greater number of selections indicates the alternative was more popular among the workshop attendees.

The first poll asked about the Redwood Transit System (RTS) alternatives, the second asked about the Eureka Transit Service (ETS) and Willow Creek (WC) alternatives, the third asked about the Arcata & Mad River Transit System (A&MRTS) alternatives, and the fourth asked about the Fortuna Transit and McKinleyville alternatives. The results are included on the following pages.

Figure F-1: Preferred RTS Alternatives

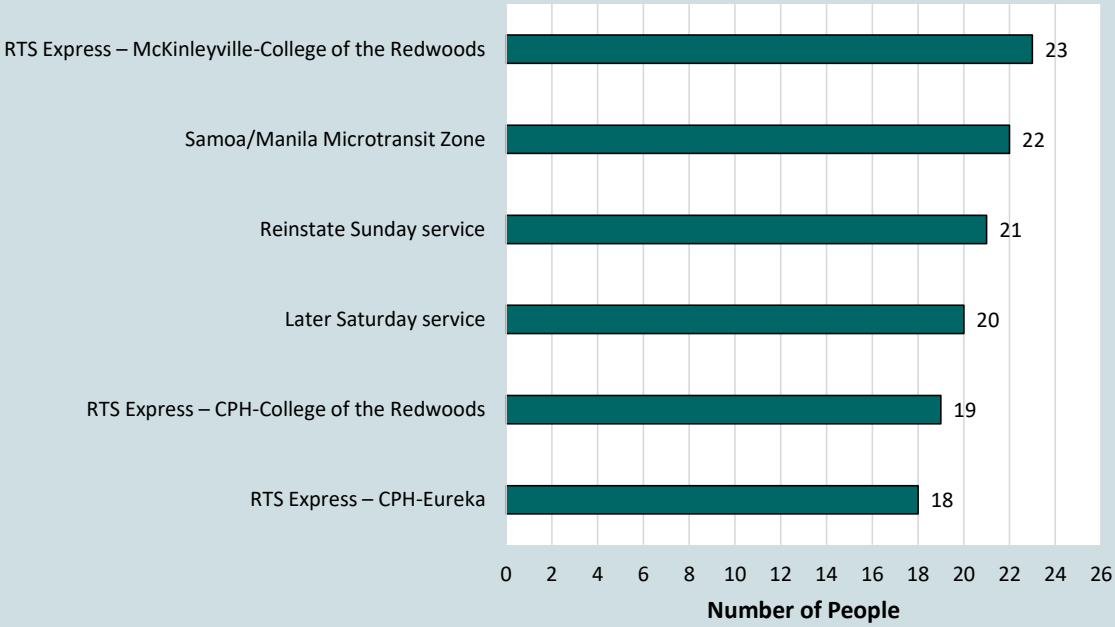


Figure F-2: Preferred ETS and WC Alternatives

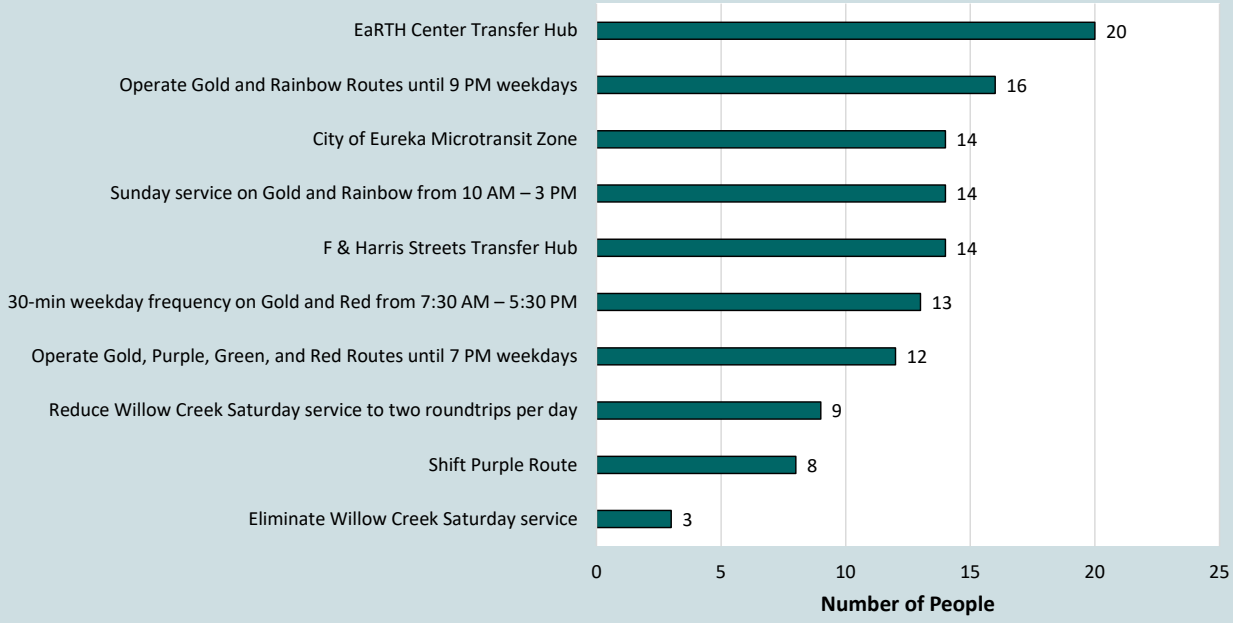


Figure F-3: Preferred A&MRTS Alternatives

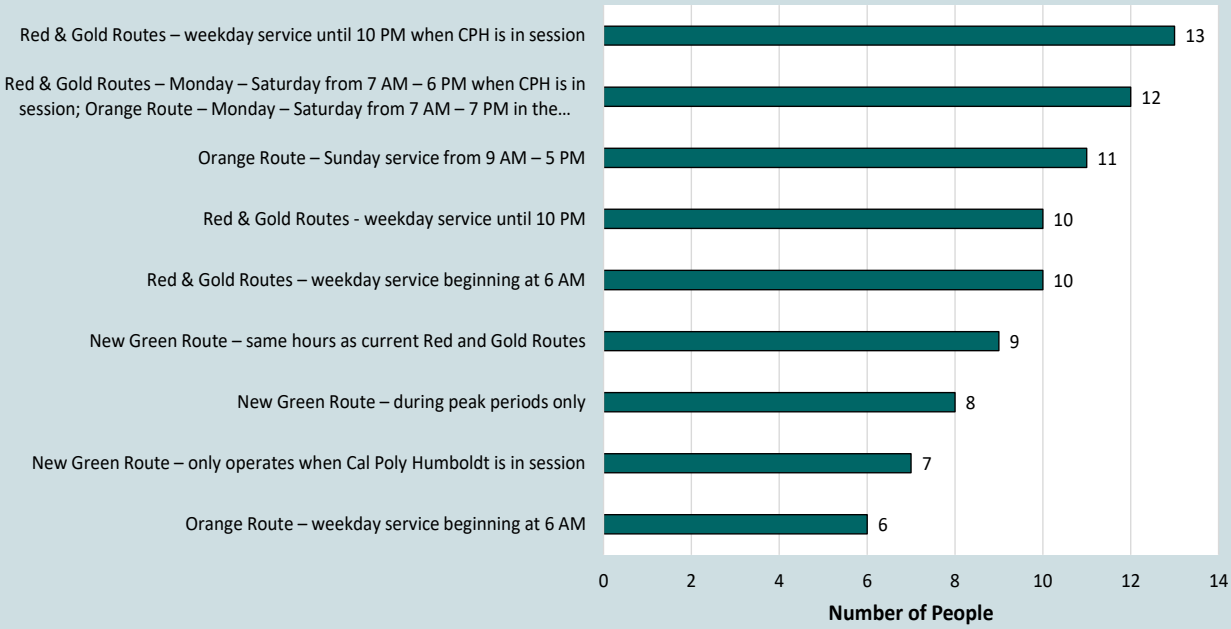
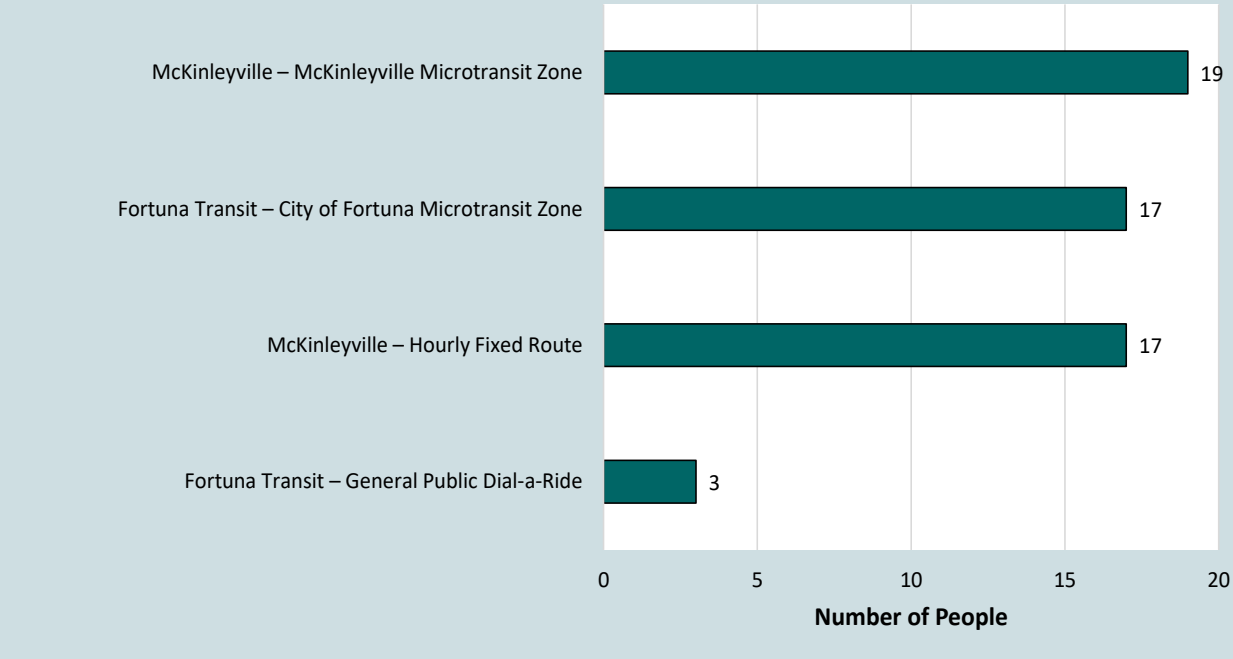


Figure F-4: Preferred Fortuna Transit and McKinleyville Alternatives



Appendix G

EXAMPLES OF MICROTRANSIT SERVICES

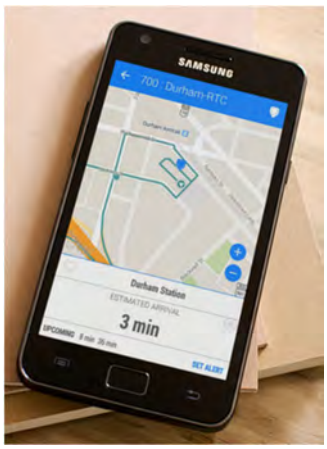
Appendix G

EXAMPLES OF MICROTRANSIT SERVICES

MICROTRANSIT PEERS REVIEW

Technological advancements and changing travel patterns in the wake of the COVID-19 pandemic have led many transit agencies across the United States (US) to embrace new forms of transit, one of which has been "microtransit." This appendix reviews the concept of microtransit before discusses policies, operations, and performance of peer microtransit programs in suburban to mid-size cities in California and Nevada.

The Concept of Microtransit Service



Over the last several years, the concept of "microtransit" has seen increasingly widespread application in communities of all sizes. The goal of microtransit is typically to provide transit service to an area not served efficiently by fixed routes within a short response time. Microtransit achieves this by applying app-based technology developed for transportation network companies such as Uber and Lyft. Passengers will typically use an app downloaded on their smartphone or computer to request a ride. The app's routing algorithm assigns the ride request to a specific driver/vehicle, then the passenger is provided with an estimated service time. Fares are typically handled through the app.

To ensure equitable accommodation, the majority of transit agencies using microtransit technology also have an option for passengers to request rides directly by phone call. Even with this exception, most rides are assigned without the need for manual dispatching. Unlike traditional dial-a-ride services, there is no need for a 24-hour-or-more advance reservations. As microtransit is a shared-ride service, multiple passengers may be on the vehicle at the same time. Requirements of the Americans with Disabilities Act (ADA) may be met by ensuring that a sufficient number of accessible vehicles are available to serve those who require special accommodations.

Background and Policies of Peer Microtransit Services

LSC Transportation Consultants, Inc., researched microtransit programs operated by transit agencies in suburban to mid-size cities in California and Nevada. These programs are listed in Tables 1 and 2. These programs were established between February 2018 (Sacramento Regional Transit's SmART Ride service) and April 2020 (City of Napa On-Demand). The City of Napa's On-Demand program, operated by Vine Transit, was the only microtransit service analyzed established specifically in response to the pandemic. Other peer transit services in California planning to implement microtransit in 2023 include Woodland (Yolobus), Fairfield (FAST Transit), and Placer County (Placer County Transit).

All of the peer microtransit services analyzed in this study have evolved since their initial pilot phases, with most of the transit agencies having either expanded or modified the service zones based on popularity and changing transportation needs during the COVID-19 pandemic. Passengers are only able to request rides between two destinations within the same microtransit zone, therefore modifying microtransit zones is an important process that may encourage or limit ridership.

Most of the programs analyzed provide curb-to-curb service, however the SmART Ride service provides either curb-to-curb service or corner-to-corner service depending on the zone. When rides are limited to a single service zone, passengers get to locations in other zones by requesting rides to central transfer points where they are able to transfer to a fixed route or different microtransit service.

There are a lot of possible vendors for microtransit technology and software, and the number of options continues to grow as the market expands. The vendors used by the microtransit programs discussed in this study include Transloc, Via, and Spare. Other microtransit technology vendors include The Routing Company (TRC), Goin, and TripSpark.

Microtransit Peers Operations Summary

Table 1 presents a review of recent or projected operations data for the microtransit services in the Cities of Hanford, Napa, and Sacramento, California, and for Washoe County, Nevada. Statistics for the individual zones are provided for the FlexRide and SmART Ride services. The peer microtransit zones vary in size from 6 to 35 square miles. These zones cover areas of varying populations and population densities; the populations living in the service areas range from 16,200 (City of Napa) to 203,000 (Franklin SmART Ride Zone). Some of these zones, such as the Downtown SmART Ride Zone, cover areas which are also served by fixed route buses. Others, such as the FlexRide Zones, cover areas with no fixed route service.

Schedule information is summarized in Table A1. The daily hours vary by service, and in some instances by zone, however it is worth noting that all of the peers offer microtransit throughout the entire “9 to 5” workday. Weekend microtransit service is provided by Vine Transit and Washoe RTC.

The operations data reflects the substantial ridership that can be served by a microtransit program and provides context for the number of vehicles needs for certain levels of service. For instance, the Rancho Cordova, Arden/Carmichael, and Elk Grove SmART Ride Zones all had two vehicles operating at peak hours to provide just upwards of 10,000 passenger-trips in Fiscal Year (FY) 2021-22. Average daily ridership ranged from 40 passenger-trips in the suburban cities of Carmichael and Elk Grove (Sac RT) to 144 passenger-trips in the dense, urban Downtown SmART Ride Zone.

Microtransit Peers Performance Summary

Performance indicators are useful tools for assessing and comparing different-sized transit services. Table A2 presents a summary of the peer microtransit programs’ performance based on the operations data contained in Table A1. As seen in Table A2, the average number of square miles per peak vehicle was 0.32 and the average number of residents per peak vehicle was 10,922. While these

values obviously vary by agency, the data can still be used to inform calculations on how many vehicles may be needed to meet demand in microtransit zones in other cities.

The productivity of a transit service is often assessed by calculating the number of passenger-trips carried per vehicle revenue hour. On average, the peer microtransit zones carried 3.11 passenger-trips per hour, slightly more than the average, traditional dial-a-ride service, which typically carries 1 to 2 passengers per hour. The most productive microtransit zones analyzed were the Rancho Cordova and Folsom SmART Ride Zones and the Sparks-Spanish Village FlexRide Zone (all over 3.35 passenger-trips per hour).

The cost efficiency of a transit service can be greatly affected by not only fare revenue generated by ridership, but also by contract rates with transit operators and by whether or not the microtransit passengers are "co-mingling" with other transit passengers. "Co-mingling" refers to instances when microtransit, dial-a-ride, or non-emergency medical transportation passengers share a vehicle on their ride. However, based on dividing the total program cost by the considering just the available data, the most cost-efficient service analyzed was the City of Napa On-Demand service ($52.17 per vehicle revenue hour).

Conclusions

Microtransit is a new and evolving type of public transportation service that is surging in popularity across the US as transit agencies adapt to new travel conditions post-pandemic. Microtransit is often implemented in areas that are not served effectively with fixed routes to provide increased coverage in a more cost-effective manner. Passengers can schedule rides using app-based technology similar to what is used for Uber or Lyft to get where they need to go within the specified microtransit zone.

LSC collected data on microtransit programs being operated by transit agencies in small- to mid-size cities across California and the western US to help inform similar-sized providers who may be considering implementing microtransit in the future. Each microtransit program obviously differs, however the data consistently demonstrates the capacity for these services to carry a substantial amount of ridership, even in areas still served by fixed routes. It is important for transit agencies to consider how their unique community compares to those reviewed in this peers analysis when designing a microtransit service as well as peer microtransit data for upcoming fiscal years, as data for FYs 2022-23 and 2023-24 will more accurately reflect the "new normal" demand for transit in the post-pandemic era.

Table G-1: Microtransit Peer Review - Service Summary

Providers	Service Area (Sq. Mi.)	Service Area Population	Fixed Routes in Microtransit Zone?	Hours of Operation	Vehicle Revenue Hours	Vehicle Revenue Miles	Peak Vehicles in Operation	Ridership	Operating Days	Average Daily Ridership
City of Napa On-Demand [1]	6.0	16,200	Yes	M - F: 7AM - 5:30PM Sat: 7:30AM - 5:30PM	11,867	113,367	6	25,787	308	84
FlexRide - Washoe RTC										
North Valleys Zone [2, 3]	13.3	40,564	No	M - F: 5:30AM - 11PM Sat - Sun: 6:20AM - 9PM	8,038	133,932	5	18,837	365	52
Somersett Verdi Zone [2, 3]	9.8	35,200	No	M - F: 5:30AM - 11PM Sat - Sun: 6AM - 10:30PM						
Sparks-Spanish Springs Zone [2]	13.1	21,100	No	M - F: 5:30AM - 11PM Sat - Sun: 6AM - 10:30PM	9,410	152,305	5	36,256	365	99
SMART Ride[5] **(SacRT)**										
Citrus Heights Zone	35.9	58,496	Partial	M - F: 6AM - 9PM	12,700	--	6	34,544	254	136
Franklin Zone	14.0	203,000	Partial	M - F: 7AM - 7PM	6,782	--	4	20,320	254	80
Gerber Zone	10.0	105,800	No	M - F: 7AM - 7PM	3,581	--	2	10,414	254	41
Rancho Cordova Zone	6.9	52,600	Partial	M - F: 7AM - 7PM	5,842	--	3	30,988	254	122
Downtown/ CSUS Zone	7.7	43,100	Yes	M - F: 6AM - 9PM	12,014	--	6	36,576	254	144
Natoma/N. Sac Zone	15.1	52,300	Yes	M - F: 7AM - 7PM	7,290	--	4	21,590	254	85
Arden/ Carmichael Zone	15.0	72,200	Partial	M - F: 7AM - 7PM	3,581	--	2	10,160	254	40
Folsom Zone	27.9	72,900	Yes	M - F: 7AM - 7PM	4,775	--	3	16,002	254	63
Elk Grove Zone	26.4	76,100	No	M - F: 7AM - 7PM	3,581	--	2	10,160	254	40
Peer Zone Average	15.5	65,351	NA	NA	7,455	133,201	4	22,636	277	82

Note 1: FY 2021-22 data. Data sourced from Napa Short Range Transit Plan 2023-2028 and staff. Per staff, with fixed route ridership returning, hoping to reduce peak vehicles to 4 in FY 2022-23.

Note 2: Data sourced from RTC Washoe staff.

Note 3: North Valleys and Somersett Verdi Zones marketed separately, but internally managed with shared vehicles and drivers. Operating statistics include both.

Note 4: Statistics are projections for Hanford Zone FY 2022-23 performance. Data sourced from Transit Manager.

Note 5: SmaRT Ride is a service provided by Sacramento Regional Transit. Data sourced from SacRT Short-Range Transit Plan FY 2022-2027 and SacRT staff.

Table G-2: Microtransit Peer Review - Performance Analysis

Providers	Peak Vehicles per Sq Mile	Square Miles per Peak Vehicle	Population per Peak Vehicle	Vehicle-Hours of Service per 1,000 Population	Annual Ridership per Capita	Psgrs per Revenue Mile	Psgrs per Revenue Hour	Cost per Vehicle-Hour of Service [1]	Cost per Passenger-Trip [2]
City of Napa On-Demand	1.0	1.0	2,700	733	1.59	0.23	2.17	$52.17	$24.01
FlexRide - Washoe RTC									
North Valleys & Sommerset Verdi Zone	0.2	4.6	15,153	106	0.25	0.14	2.34	$67.43	$28.77
Sparks-Spanish Springs Zone	0.4	2.6	4,220	446	1.72	0.24	3.85	$67.43	$17.50
SMART RT									
Citrus Heights Zone	0.2	6.0	9,749	217	0.59	--	2.72	$155.04	$57.00
Franklin Zone	0.3	3.5	50,750	33	0.10	--	3.00	$155.04	$51.74
Gerber Zone	0.2	5.0	52,900	34	0.10	--	2.91	$155.04	$53.32
Rancho Cordova Zone	0.4	2.3	17,533	111	0.59	--	5.30	$155.04	$29.23
Downtown/ CSUS Zone	0.8	1.3	7,183	279	0.85	--	3.04	$155.04	$50.93
Natoma/N. Sac Zone	0.3	3.8	13,075	139	0.41	--	2.96	$155.04	$52.35
Arden/ Carmichael Zone	0.1	7.5	36,100	50	0.14	--	2.84	$155.04	$54.65
Folsom Zone	0.1	9.3	24,300	66	0.22	--	3.35	$155.04	$46.26
Elk Grove Zone	0.1	13.2	38,050	47	0.13	--	2.84	$155.04	$54.65
Peer Zone Average	0.3	3.2	10,922	188	0.52	0.20	3.11	$126.91	$42.24

See Table 1 for data sources and notes.

Note 1: Calculated by total program cost divided by vehicle revenue hours by zone. Peer average is for provider, not zone.

Note 2: Cost by zone is allocated based on the proportion of hours operated per zone. Cost per passenger trip equals the allocated cost per zone divided by passenger trips per zone.

Appendix H

RIDERSHIP FORECASTING METHODOLOGY

Appendix H

RIDERSHIP FORECASTING METHODOLOGY

This appendix explains the methodology used to estimate the ridership impacts of various service alternatives explored in the 2023 Humboldt County Transit Development Plan (TDP). As seen in the data presented in this Appendix, the methodology used varied by the type of service alternative. In all cases, the analysis methodologies were carefully applied to reflect the specific characteristics of the individual service areas and demographics as much as possible.

Table H-1 summarizes the elasticity factors referenced in other analyses. Tables H-2 through H-7 detail how ridership estimates were derived for each service alternative. Tables H-8 through H-12 detail how ridership estimates for the different microtransit and general public dial-a-ride alternatives were used to determine how many vehicles would be required based on demand.

Table H-1: Elasticity Values for Transit Ridership Estimation

Type of Elasticity	Elasticity or Elasticity Range	# of Cases	Source
Fare			
Increase	-0.34	14	Lago, 1991, Forecasting Incremental Ridership Impacts from Bus Route Service Changes
Decrease	-0.37	9	Lago, 1991, Forecasting Incremental Ridership Impacts from Bus Route Service Changes
City Size			
> 1M	-0.24	19	Lago, 1991, Forecasting Incremental Ridership Impacts from Bus Route Service Changes
500K to 1M	-0.3	11	Lago, 1991, Forecasting Incremental Ridership Impacts from Bus Route Service Changes
< 500K	-0.35	14	Lago, 1991, Forecasting Incremental Ridership Impacts from Bus Route Service Changes
Vehicle-Miles			
Systemwide	0.66	6	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services.
Small and Medium Cities, Off Peak	0.82		Lago, Armando M. (1991), Forecasting Incremental Ridership Impacts from Bus Route Service Changes, National Cooperative Transit Research and Development Program, Transportation Research Board, Project 40-2A, page 70
Bus Revenue Miles, Suburban local	0.36		TCRP-95 (2004), Chapter 9, Page 9-14
Headway			
Peak, weekday	-0.37	3	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Off-peak, weekday	-0.46	9	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47; TCRP-95 (2004), Chapter 9, page 9-26.
Weekends	-0.38	4	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Less than 10 minutes	-0.22	7	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
More than 50 minutes	-0.58	10	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47; TCRP-95, Chapter 9, page 9-8.
Small city or suburban	-0.48	8	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
60 minutes, off-peak, choice riders	-0.95		Lago, Armando M. (1991), Forecasting Incremental Ridership Impacts from Bus Route Service Changes, National Cooperative Transit Research and Development Program, Transportation Research Board, Project 40-2A, page 68
30 minutes, off-peak	-0.68		Lago, Armando M. (1991), Forecasting Incremental Ridership Impacts from Bus Route Service Changes, National Cooperative Transit Research and Development Program, Transportation Research Board, Project 40-2A, page 68
Total Travel Time			
Peak (not based on experimental	-1.03	2	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
All hours (not based on experimental data)	-0.92	2	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Choice riders	-0.89		Lago, Armando M. (1991), Forecasting Incremental Ridership Impacts from Bus Route Service Changes, National Cooperative Transit Research and Development Program, Transportation Research Board, Project 40-2A, page 71
In-Vehicle or Ride Time			
Peak	-0.29	9	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Off-Peak	-0.83	1	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Average In-Vehicle Travel Times of 60 minutes	-0.78		Lago, Armando M. (1991), Forecasting Incremental Ridership Impacts from Bus Route Service Changes, National Cooperative Transit Research and Development Program, Transportation Research Board, Project 40-2A, page 74
Non-Work Trip (not based on experimental data)	-0.12	1	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Walk Time			
Peak (not based on experimental	-0.26	1	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Work (Peak)	-0.28	11	Lago, Armando M. (1991), Forecasting Incremental Ridership Impacts from Bus Route Service Changes, National Cooperative Transit Research and Development Program, Transportation Research Board, Project 40-2A, page 77
Off-peak (not based on experimental data)	-0.14	1	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Non-Work (Off-Peak)	-0.17	11	Lago, Armando M. (1991), Forecasting Incremental Ridership Impacts from Bus Route Service Changes, National Cooperative Transit Research and Development Program, Transportation Research Board, Project 40-2A, page 77
Choice/Work	-0.53 -0.71	11	Lago, Armando M. (1991), Forecasting Incremental Ridership Impacts from Bus Route Service Changes, National Cooperative Transit Research and Development Program, Transportation Research Board, Project 40-2A, page 77
Choice/Non-Work	-0.43	11	Lago, Armando M. (1991), Forecasting Incremental Ridership Impacts from Bus Route Service Changes, National Cooperative Transit Research and Development Program, Transportation Research Board, Project 40-2A, page 77
Wait time			
Peak (bus and rapid rail) (not based on experimental data)	-0.2	4	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Off-peak (bus and rapid rail)	-0.21	1	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Transfer time			
Peak (bus and rapid rail) (not based on experimental data)	-0.4	3	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47
Number of transfers			
Off-peak	-0.59	1	USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47

Table H-2: RTS Service Alternatives Detailed Calculations

Annual Operating Days	
Weekday	254
Sat/Holiday	57
Sunday	52

	Service Calculations							Ridership Methodology		
	RT Route	RT Route	Round Trips	Daily Service		Annual Vehicle Service..			Elasticity Factors	
Service Alternative	Time (Hrs)	Length (Mi)	Per Day	Hours	Miles	Miles	Hours	Methodology	Travel Time	Headway
Express Alternatives										
McKinleyville-CR Express	2.00	25.46666667	6.75	-	14	0	3,556	Elasticity (2)	-0.34	-0.50
Cal Poly-CR Express	1.17	37	11	12.5	407	3,179	103,378	Elasticity (2)	-0.34	-0.50
Cal Poly-Eureka Express	0.67	20	9	5.9	180	1,494	45,720	Elasticity (2)	-0.34	-0.50
RTS Span of Service Alternatives										
Later Weekday Service on RTS - McKnly to Fortuna	4.25	70	2	8.5	140	35,560	2,159	Ratio of evening to daytime ridership in similar systems, applied to existing RTS weekday daytime ridership		
Later Saturday Service on RTS - Valley West to CR	2.00	44	1	2.0	44	2,508	114	Ratio of evening to daytime ridership in similar systems, applied to existing RTS Saturday daytime ridership		
Sunday Service [3]	1.00	15.1	18	18.0	272	14,134	936	Ratio of Sunday to Saturday ridership in similar systems, applied to existing RTS Saturday ridership		
Samoa Microtransit Service										
Microtransit Service	*Estimated Avg Speed (mph)*		20							
Weekday				9.0	180	2,286	45,720	Existing Samoa ridership factored to reflect expanded hours of available service (30% increase), expanded service area population (100% increase) and direct service to downtown destinations (20% increase)		
Saturday				6.0	120	342	6,840			
Total						2,628	52,560			
Eliminate Samoa Transit						-2,006				
Weekday	1.00	7.0	7	7.0	49.0	1,778	12,446	Estimated existing annual ridership based on October 2022 data		
Saturday	1.00	7.0	4	4.0	28.0	228	1,596			
Total						2,006	14,042			
Shift RTS Manila Runs to 101										
Weekday	-0.10	-1.6	9	-0.9	-14.4	-229	-3,658	Loss of existing ridership at Manila RTS stop (800/yr) offset by increase in ridership generated by additional service to stops in east Eureka (1.5 per weekday and 0.75 per Saturday)		
Saturday	-0.10	-1.6	4	-0.4	-6.4	-23	-365			
Total						-251	-4,022			
RCX Service	6.53	320	1	6.5	320.0	1,659	81,280			

Sources: USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47; TCRP-95 (2004), Chapter 9, page 9-26.

Table H-3: ETS Service Alternatives Detailed Calculations

Annual Operating Days	
Weekday	*254*
Sat/Holiday	*57*
Sunday	*52*

	Service Calculations							*Ridership Methodology*			
	RT Route	RT Route	Round Trips	Daily Service		Annual Vehicle Service..				Elasticity Factors	
Service Alternative	**Time (Hrs)**	**Length (Mi)**	**Per Day**	**Hours**	**Miles**	Hours	Miles	**Ridership Element**	**Methodology**	**Travel Time**	**Headway**
ETS Route Realignment Alternatives											
Earth Center Hub Scenario	No Change							All	Elasticity (1)	-0.5	
F & Harris Street Hub Scenario	No Change							All	Elasticity (1)	-0.5	
Shift Purple - Harrison to West/S Streets	No Change							Reduction in Service on Harrison	Elasticity (1)		-0.34
								Increase in Service on West, S	Elasticity (1)		-0.34
								Service to Additional Stops and Transfers at 3rd/H	Review of % ridership at 3rd/H on other routes		
ETS Span of Service Alternatives											
Expand ETS Gold, Purple, Green, Red to 7:00 PM Weekdays (2)											
Gold	1.00	10.4	1	1.0	10	254	2,642	All	Ratio of evening to daytime ridership in similar systems, applied to existing ETS daytime ridership		
Purple	1.00	11.5	1	1.0	12	254	2,921				
Green	1.00	11.8	1	1.0	12	254	2,997				
Red	1.00	11.6	1	1.0	12	254	2,946				
Total						1,016	11,506				
Expand ETS Gold and Rainbow to 9:00 PM Weekdays											
Gold	1.00	10.4	3	3.0	31	762	7,925	All	Ratio of evening to daytime ridership in similar systems, applied to existing ETS daytime ridership		
Rainbow	1.00	12.1	3	3.0	36	762	9,220				
Total						1,524	17,145				
ETS Gold and Rainbow Sundays 10 AM - 3 PM											
Gold	1.00	10.4	5	5.0	52	260	2,704	All	Ratio of Sunday to Saturday ridership in similar systems, applied to existing ETS Saturday ridership		
Rainbow	1.00	12.1	5	5.0	61	260	3,146				
Total						520	5,850				
ETS Gold & Red Every 30 Min. 7:30-5:30											
Gold	1.00	10.4	10	10.0	104	2,540	26,416	All	Elasticity (1)		-0.34
Red	1.00	11.8	10	10.0	118	2,540	29,972		Elasticity (1)		-0.34
Total						5,080	56,388				
ETS Microtransit Service	Average Speed (mph)		13								
Weekdays	5 Hrs/Day 3 vehicles, 6 Hrs/Day 2 vehicles			27.0	351	6,858	89,154	All	Observed ridership per capita in similar cities applied to service area population and factored for population characteristics. Saturday ridership adjusted for observed ETS ratio of Saturday to weekday ridership and for span of Saturday service.		
Saturday/Holidays	6 Hrs/Day 2 vehicles, 2 Hrs/Day 1 vehicle			14.0	182	798	10,374				
Total						7,656	99,528				

2. Sources: USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47; TCRP-95 (2004), Chapter 9, page 9-26.

Table H-4: Willow Creek Service Alternatives Detailed Calculations

Annual Operating Days	
Sat	52

	Service Calculations							Ridership Methodology		
	RT Route	RT Route	Round Trips	Daily Service		Annual Vehicle Service..		Ridership		
Service Alternative	Time (Hrs)	Length (Mi)	Per Day	Hours	Miles	Hours	Miles	Element	Methodology	
Eliminate Saturday Service	2	71.8	-3	(6.0)	(215)	-312	-11,198	All	Existing Saturday ridership	
Reduce Saturday Service to 2 RTs	2	71.8	-1	(2.0)	(72)	-104	-3,733	All	Elasticity Analysis	Elasticity Value (Frequency): -0.34

Table H-5: A&MRTS Service Alternatives Detailed Calculations

Annual Operating Days			
Weekday	254	School Weekdays	160
Sat/Holiday	57	School Sat	43
Sunday	52		

	Service Calculations							Ridership Methodology		
	RT Route	RT Route	Round Trips	Daily Service		Annual Vehicle Service..				Elasticity Factors
Service Alternative	Time (Hrs)	Length (Mi)	Per Day	Hours	Miles	Hours	Miles	Ridership Element	Methodology	Travel Time / Headway
Route Alternatives										
New Green Route 7:21 AM to 5:09 PM weekdays	1	12.8	10	10.0	128	2,540	32,512	Increase in Service Levels in Existing Service Area	Elasticity	-0.34
								Expansion to S. G Street	Per Capita Ridership Rate X Population of Additional Service Area	
								Expansion to St. Louis St.	Population of development in Craftsmans Mall area X 1.5 avg. daily trips to/from campus on school days X 10% transit mode split	
New Green Route 7:21 -11:09 AM & 2:21-5:09 PM	1	12.8	7	7.0	90	1,778	22,758	All	Full day service ridership factored by % of existing ridership in span of service	
New Green Route - While CPH in Session	1	12.8	10	10.0	128	1,600	20,480	All	Full day service ridership factored by % of existing ridership on in session days	
New Green Route 7:21 -11:09 AM & 2:21-5:09 PM While CHP In Session	1	12.8	7	7.0	90	1,120	14,336	All	Full day service ridership factored by % of existing ridership on in session days and by % of ridership in span of service	
Microtransit Service	Average Speed (mph)		13							
Weekdays	6 Hrs/Day 2 vehicles, 5 Hrs/Day 1 vehicle			21.0	273	5,334	69,342	All	Observed ridership per capita in similar cities applied to service area population and factored for population characteristics. Saturday ridership adjusted for observed ETS ratio of Saturday to weekday ridership and for span of Saturday service.	
Saturday/Holidays	9 Hrs/Day 1 vehicle			9.0	117	513	6,669			
Total						5,847	76,011			
Span of Service Alternatives										
Start Weekday Service at 6:00 AM (Orange Route)	1	15.1	1	1.0	15	254	3,835	All	Ratio of 6AM-7AM to daytime ridership in similar systems, applied to existing AMRTS daytime productivity and adjusted by elasticity to reflect 1 route	
Start Weekday Service at 6:00 AM (Red & Gold)										
Red	1	11.5	1	1.0	12	254	2,921	All	Orange Route ridership factored by elasticity to reflect 2 vehicles	
Gold	1	13.8	1	1.0	14	254	3,505			
Total						508	6,426			
Operate Red & Gold til 10:00 PM Weekdays Year round										
Red	1	11.5	5	5.0	58	1,270	14,605	All	Elasticity Analysis (1)	-0.34
Gold	1	13.8	5	5.0	69	1,270	17,526			
Orange	1	15.1	-5	(5.0)	(76)	-1,270	-19,177			
Total						1,270	12,954			
Operate Red & Gold til 10:00 PM Weekdays in Session, Eliminate Out of Session Evening Service										
Red	1	11.5	5	5.0	58	800	9,200	In Session Weekday Evening Ridership	Elasticity Analysis (1)	-0.34
Gold	1	13.8	5	5.0	69	800	11,040			
Orange	1	15.1	-5	(5.0)	(76)	-800	-12,080	Out of Session Weekday Evening Ridership	Existing Out of Session Weekday Evening Ridership	
Total						800	8,160			
Red & Gold In-Session, Orange Out of Session, Sat, Eves										
Red Weekday In Session Evenings	1	11.5	5	5.0	58	800	9,200	In Session Weekday Evenings	Elasticity (1)	-0.340
Gold Weekdays in Session Evenings	1	13.8	5	5.0	69	800	11,040			
Orange Weekdays In Session Evenings	1	15.1	-5	(5.0)	(76)	-800	-12,080			
Red Out of Session Weekdays	1	11.5	-10	(10.0)	(115)	-940	-10,810	Out of Session Weekdays	Elasticity (1)	-0.340
Gold Out of Session Weekdays	1	13.8	-10	(10.0)	(138)	-940	-12,972			
Orange Out of Session Weekdays	1	15.1	10	10.0	151	940	14,194			
Net Change				(5.0)	(51.0)	-140	-1,428			
Sunday Service - Orange Route	1	15.1	8	8.0	121	416	6,282	All	Ratio of Sunday to Saturday ridership in similar systems, applied to existing A&MRTS Saturday ridership	

2. Sources: USDOT (1984), UMTA Technical Assistance Program, Estimating Patronage for Community Transit Services, page 47; TCRP-95 (2004), Chapter 9, page 9-26.

Table H-6: Fortuna Service Alternatives Detailed Calculations

Annual Operating Days	
Weekday	*254*

	Service Calculations							*Ridership Methodology*	
	RT Route	RT Route	Round Trips	Daily Service		Annual Vehicle Service..			
Service Alternative	**Time (Hrs)**	**Length (Mi)**	**Per Day**	**Hours**	**Miles**	Hours	Miles	**Ridership Element**	**Methodology**
General Public Dial-a-Ride (Weekdays 8:00 AM-5:00 PM)	Avg Speed (mph) 8.5								
	Incremental Service Over Existing DAR			1.5	13	381	3,239	All	Review of ridership per capita generated in peer communities that offer general public DAR service (Ft. Bragg, Chowchilla, Corcoran)
General Public Microtransit (Weekdays 8:00 AM-5:00 PM)	Avg Speed (mph) 12.0								
	Incremental Service Over Existing DAR			5.0	60	1,270	15,240	All	Observed ridership per capita in similar communities applied to service area population and factored for population characteristics.

Calculation of Reduction in Existing RTS Runs

	Number of Runs per Day			Per Run Change		Annual Change	
	Weekday	**Saturday**	**Total Annual**	**Miles**	**Veh-Hrs**	**Miles**	**Veh-Hrs**
Long Loop	**6**	**0**	**1524**	**-1.6**	**-0.1333333**	**-2438**	**-203**
Short Loop	**4**	**0**	**228**	**-2.5**	**-0.0833333**	**-570**	**-19**
Total						**-3008**	**-222**
Change in RTS Operating Cost						**-$25,700**	

Table H-7: McKinleyville Service Alternatives Detailed Calculations

Annual Operating Days	
Weekday	254
Sat/Holiday	57
Sunday	52

	Service Calculations							Ridership Methodology	
	RT Route	RT Route	Round Trips	Daily Service		Annual Vehicle Service..		Ridership	
Service Alternative	Time (Hrs)	Length (Mi)	Per Day	Hours	Miles	Hours	Miles	Element	Methodology
Local Fixed Route									
Weekdays	1	9.8	11	11.0	108	2,794	27,381	All	Population in service area X rural daily person-trip rates X 0.5 percent transit mode share X factors for hourly service and for span/days of service. Result checked against typical rural productivity.
Saturday/Holidays	1	9.8	7	7.0	69	399	3,910		
Total						3,193	31,291		
Microtransit	Avg Speed (mph)	15							
Weekdays	1 vehicle over all hours			11	165	2,794	41,910	All	Observed ridership per capita in similar communities applied to service area population and factored for population characteristics. Saturday ridership adjusted for observed ETS ratio of Saturday to weekday ridership and for span of Saturday service.
Saturday/Holidays	1 vehicle over all hours			7	105	399	5,985		
Total						3,193	47,895		

Table H-8: Eureka Microtransit Hourly Ridership and Vehicle Requirements

	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	Total
Hourly Ridership												
Weekday	8	8	7	8	9	10	10	10	11	8	5	94
Saturday			3	4	6	6	6	6	5	3		41
Hourly Vehicle Requirements												
Weekday	2	2	2	2	3	3	3	3	3	2	2	27
Saturday			1	2	2	2	2	2	2	1		14

Table H-9: Arcata Microtransit Hourly Ridership and Vehicle Requirements

	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	Total
Hourly Ridership												
Weekday	0	7	5	7	5	5	5	6	5	6	3	5	59
Saturday	0	0	0	2	2	2	2	2	2	2	2	1	17
Hourly Vehicle Requirements												
Weekday	0	2	2	2	2	2	2	2	3	2	1	1	21
Saturday	0	0	0	1	1	1	1	1	1	1	1	1	9

Table H-10: Fortuna Microtransit Hourly Ridership and Vehicle Requirements

	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	Total
Hourly Ridership												
Existing DAR		3	4	5	4	3	4	5	2	0		30
New Microtransit		2	1	2	2	2	2	2	2	2		16
Shifted Existing RTS Stops No Longer Served		3	2	2	3	3	3	3	3	2		26
Total		8	7	9	9	8	9	11	7	4		
Hourly Vehicle Requirements												
Weekday		2	2	2	2	2	2	3	2	1		18.0
Existing DAR												10.5
Net Change												7.5

Table H-11: Fortuna General Public DAR Hourly Ridership and Vehicle Requirements

	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	Total
Hourly Ridership												
Existing DAR		3	4	5	4	3	4	5	2	0		30
New General Public		1	1	1	1	1	1	1	1	1		7
Total		4	5	6	5	4	5	6	3	1		
Hourly Vehicle Requirements												
Weekday		1	2	2	1	1	1	2	1	1		12.0
Existing DAR												10.5
Net Change												1.5

Table H-12: McKinleyville Microtransit Hourly Ridership and Vehicle Requirements

	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	Total
Hourly Ridership												
Weekday	2	4	3	4	3	3	3	3	3	3	2	33
Saturday			2	2	2	3	2	2	2			14
Hourly Vehicle Requirements												
Weekday	1	1	1	1	1	1	1	1	1	1	1	11
Saturday			1	1	1	1	1	1	1			7

Note: 1 vehicle added on weekdays in 8 AM and 2 PM hours to provide consistent driver schedules.

Appendix I

PUBLIC COMMENTS

PUBLIC COMMENTS

Humboldt County residents and stakeholders were invited to provide feedback throughout the development of the Humboldt County Transit Development Plan (TDP). Key deliverables were made available for public review at the two community workshops and on the HCAOG website. The public was able to contact both HCAOG and LSC Transportation Consultants staff with comments, questions, or concerns regarding the plan findings and proposed alternatives. Comments received by email or written forms are compiled in this Appendix. Input received during organized public outreach efforts (the community workshops, onboard surveys, community survey, etc.) are summarized in other appendices.

Gmail

Claire Hutchinson <claire@lsctrans.com>

Ways to improve eureka transit service

j.bessette@yahoo.com <j.bessette@yahoo.com> Mon, Jun 19, 2023 at 1:36 PM
Reply-To: "j.bessette@yahoo.com" <j.bessette@yahoo.com>
To: "claire@lsctrans.com" <claire@lsctrans.com>

Here are some ways that the Eureka transit service can be improved

Extend weekday service times to 8 or 9 so people who get off work at 8 can catch a bus home

Start doing service to areas like Ridgewood, Westgate,Elk river, the golf course, lumber hills and Mitchell heights

Extend saturday service times and ad another route to the Saturday schedule

Have some form of service on Sunday

Sent from Yahoo Mail on Android

Gmail

Claire Hutchinson <claire@lsctrans.com>

question about headway

Wendy Ring <wring123@gmail.com> Wed, May 17, 2023 at 1:42 PM
To: claire@lsctrans.com

Hi Claire,

Can you please explain how headway would be 15 minutes on the McKinleyville to CR express when the proposed schedule says the buses leave every hour from McKinleyville. Wouldn't it be a 60 minute headway if you have to wait an hour for the bus?

Wendy Ring

Stories of climate action from the bottom up
*with **Cool Solutions Podcast***

Gmail

Claire Hutchinson <claire@lsctrans.com>

question about headway

Claire Hutchinson <claire@lsctrans.com> Wed, May 17, 2023 at 5:31 PM
To: Wendy Ring <wring123@gmail.com>

Hi Wendy.

The “RTS McKinleyville – CR Express” would increase headways in McKinleyville to every 30 minutes (instead of the current 60-minute headways) because the Express would be in *addition* to the current schedule. But it wouldn’t be until you get to Arcata that the headways to CR increase to approximately 15 minutes.
That is why there would be additional operating costs to run the extra bus, as well as initial costs to purchase a new vehicle as well to add to schedule.

Let me know if that makes sense, or if you would like me to explain further.
Best,
Claire
[Quoted text hidden]

Gmail

Claire Hutchinson <claire@lsctrans.com>

question about headway

Wendy Ring <wring123@gmail.com> Thu, May 18, 2023 at 12:45 PM
To: Claire Hutchinson <claire@lsctrans.com>

Thanks Claire. A couple more questions:

Would it be too much to ask for you to add slides for the workshop consolidating the express and "local" schedules for the RTS alternatives? That would be easier for the public to understand.

Do you include dropping some of the current McK stops from the RTS schedule and substituting transfers to a fixed McK route? Speeding up inter-city service is something to consider when comparing the benefits of micro transit vs fixed route in McK.

Why is it more expensive to start the express at CPH than in McK? That seems counterintuitive.

How do you project the number of riders for the different alternatives?

Thanks!

Wendy Ring

Stories of climate action from the bottom up
*with **Cool Solutions Podcast***

[Quoted text hidden]

Gmail

Claire Hutchinson <claire@lsctrans.com>

question about headway

Claire Hutchinson <claire@lsctrans.com> Fri, May 19, 2023 at 12:34 PM
To: Wendy Ring <wring123@gmail.com>
Cc: Selena McKinney <selena@lsctrans.com>

Hi Wendy,

I apologize for this long email! You have asked some good questions, and I wanted to answer them as best as possible.

I have made the attached **sample** combined RTS Local/Express Schedule. I did it for the longest express service being considered, from McKinleyville to College of the Redwoods.
It is important to mention this is just an example. If an Express Service is included in the final TDP, it is possible the RTS schedule may be changed slightly to better distribute the service frequency during the peak morning and afternoon hours. We have already given our presentation to HCAOG, but I will have this PDF schedule ready to display in case others have questions.

At this point, we have not looked at changing the RTS schedule in McKinleyville in order to accommodate transfers from a local McKinleyville fixed route or to speed up intercity service. If it is decided that the McKinleyville fixed route should be included in the final TDP, then that would be the time to more closely analyze the schedule and route to ensure there are easy transfers between RTS and the new fixed route and that the RTS/McKinleyville services are streamlined vs redundant. For transfers and service frequency, the McKinleyville route would be an hourly service, while RTS is way more frequent. That means it is likely the RTS Local schedule would stay as is in McKinleyville to provide more frequent service to key stops. That also means that transfers would not be possible to every RTS bus, but it would be a priority that every McKinleyville Route run has easy transfers. These are details that would be finalized once it is decided whether a McKinleyville fixed route should be pursued.

The CPH-CR Express service is more expensive than the McKinleyville-CR Express service because there would be additional one-way trips, resulting in extra mileage and more fuel costs. As shown in the TDP, the example McKinleyville-CR Express service schedule would result in 14 one-way express trips of 23.5 miles, while the CPH-CR example schedule would result in 22 one-way trips of 18.5 miles. As shown in the TDP, the schedules would result in CPH-CR operating 87 extra miles per day over the McKinleyville Express Route option. These extra miles result in the extra cost.

How we calculate ridership for the alternatives:
- It depends on the alternative. Our baseline, or "status quo", for FY 23-24 was calculated based on current ridership levels and trends.
- If an alternative is eliminating a certain service, we estimate the change in ridership by calculating how many people ride that current service, and subtracting it from the status quo.
- For new services, such as microtransit, we analyzed different peer systems operations data. We then applied statistics (# of rides served/10,000 people in the population) to calculate the estimated demand for the new microtransit service.
- For changes to service frequency or travel time, we use elasticity factors sourced from the US Department of Transportation to estimate how the service change will impact ridership compared to status quo.
- For route realignments, we look at how the travel time would change, and then apply elasticity factors to estimate how the improved travel times would impact ridership. If a route is no longer going to be serving key route segments, we also look at the boarding information along those segments, and subtract that ridership. So, it's a two part process: adding passenger based on improved travel time/frequency, and subtracting riders from segments that have been removed.

Please let me know if you have any additional questions, and I will try my best to answer.
Have a great weekend,
Claire

[Quoted text hidden]

RTS Express Analysis.pdf
118K

Gmail

Claire Hutchinson <claire@lsctrans.com>

supporting local transit

Patrick Carr <nedlud432@gmail.com> Wed, May 24, 2023 at 6:57 PM
To: claire@lsctrans.com

Claire Hutchison
Humboldt County Association of Governments

Hello Ms Hutchison,

I am an Arcata resident and want to convey my support for enhancing bus service in Humboldt County.

I worked for 25 years in Eureka, mostly driving but in the latter years, when my work job moved to Old Town, frequently using the Redwood Transit bus service. (I also was a bicycle commuter for much of that time, when the weather was nice.) Like most people, using the bus was not without sacrifice: the total commute was longer as I had to first find a place to park my car (I live about two miles from the closest southbound stop) then wait for the bus until I finally got under way to Eureka. But I still found using the bus enjoyable for the brief period of total relaxation I experienced on the bus prior to my work day.

I'm quite sure things are going to change in Humboldt, with many more drivers soon taking 101 both directions around Humboldt Bay. This is why I think transit service needs to be expanded, quickly, so that commuters will develop the habit of using bus service, and so that stop locations can be fine-tuned. If we don't build a major bus option along Humboldt Bay, I think we'll begin to see the kind of gridlock driving experience that most urban Californians dread (and that I experienced prior to moving to Humboldt in 1994).

Thanks for your consideration and I hope that HCAOG will support expanded transit service for our county.

Patrick Carr
1704 Virginia Way
Arcata CA 95521

Via email May 24, 2023 Martha Walden <mawalden53@yahoo.com>

As an attendee at the transit workshop, I felt encouraged by the presentations of ways to improve bus service. HCAOG's Regional Transportation Plan calls for doubling ridership by 2025. Seems like the only way to accomplish that would be to focus resources and services on the areas most likely to be used by the greatest number of people. Buses every fifteen minutes on the main route between McKinleyville and College of the Redwoods would entice a lot of people out of their cars, and that's exactly what we need to reduce VMT and greenhouse gases.

The presentations made clear the hard decisions to be made. How to balance the need to efficiently spend your resources with the needs of people who live in areas away from main routes and also reduce greenhouse gases? I do think it's important to think big at this point. In my opinion, the Technical Memo doesn't adequately anticipate the amount of population growth likely to occur in the county. In addition to the rapid expansion of Cal Poly Humboldt, the wind industry is supposed to create three thousand jobs, some of which current residents may be able to fill, but new workers will want to move here. Same for the proposed Nordic Aquafarm. The major infill developments such as Gateway, etc. will occur close to bus routes, and a lot of the people who will want to move to those places are the kind of people who want to take buses.

I've heard of a great idea for funding that I want to support, and that's a vehicle registration fee especially for transit. It would be easier to pass than a tax and who better to contribute to buses than people who are registering their cars?

Thank you.

Martha Walden

Comment from Carol Mone on Transit Development Plan Tech Memo 2, received by email 5/28

Hello,
These comments have been made repeatedly, but if metrics are important, add them in!
Over 2,500 people live north of McKinleyville. Many would like to take the bus to work, take the bus to church, take the bus home after an evening event.
Many people cannot (or do not enjoy) driving after dark.
Many people drink alcohol and should not be behind the wheel immediately afterwards. I would rather share a bus seat with a slightly tipsy person than be in an accident caused by DUI.
The lack of Sunday service affects attendance at Sunday services! Most, but not all, religious services are on Sunday.
In the 20 plus years I lived in Trinidad and worked in Eureka, I always had to drive because the bus schedule did not correspond to my work schedule. (I did carpool with somebody who worked in Arcata though). It is not just getting to the work destination, but also getting home which is important.
And...
Could special bus runs serve events such as Arts Alive on a regular basis to alleviate parking congestion in Eureka?
Thank you!
Carol Mone
Trinidad

June 1, 2023 via email Mark Myslín <mmyslin@gmail.com

Dear Mr. Luther,

I've followed the TDP process with interest, and thank you for the ongoing posting of materials to the HCAOG website and opportunities to participate.

I'm especially interested in the potential restructuring of the Eureka Transit System network. This could be a great way to support HTA's current stated goal of simplifying the rider experience and attracting new ridership.

However, Technical Memorandum #2 does not address the "simplicity" or "ease of use" of the ETS network alternatives. Ideally, this would mean bidirectional, generally linear routes in high-ridership corridors, with headways of 30 minutes or less where possible. In fact, this is exactly what the ETS Line Feasibility Study proposed in 2018. The study presented tradeoffs between coverage and ridership, and scored its alternatives on criteria like symmetry, directness, and simplicity.

I would be interested in seeing these criteria mentioned in Tech Memo #2, and the network alternatives scored accordingly:

- The "Harris and F" alternative seems even more difficult to understand and use than the current network, especially for a new potential rider. Service on the H & I Street couplet is provided by different routes in different directions. On the west side, the Red and Green Routes get close to the downtown business district, but suddenly veer west and turn back south, missing the EaRTH Center and a high density of downtown destinations. There is no service at all to Sunny & Myrtle, the site of an upcoming housing development and eventual Bay to Zoo trail connection.
- The "EaRTH Center" alternative is generally an improvement to the simplicity and symmetry of the network: most of the routes operate (approximately) bidirectional service or couplets in close proximity. With this network, it is easy to transfer to RTS to complete in-town trips (e.g., to Bayshore Mall), especially with the 30-minute headways on RTS and recent fare integrations. In general, I support this alternative for its ease of use.

I would be interested in seeing the three alternatives from the 2018 study included or mentioned. These generally produce higher ridership than loop routes, at the expense of coverage to low-ridership areas. It may be interesting to consider these alternatives plus a microtransit option for outlying areas. This way, high-ridership corridors could receive simpler, more direct, more frequent service, while areas that are less efficient for fixed routes could receive microtransit.

I also wanted to comment on the "Shift Purple Route" alternative. The goal here would be to extend the Purple Route from H & 9th to the EaRTH Center, thus providing

service twice an hour and enabling transfers to RTS. This would be a terrific benefit. (I often need this transfer, and with mobility issues it is difficult to walk the 4 blocks in ~5 minutes to catch the northbound RTS). In principle, I support extending the Purple Route to 3rd & H. There may be multiple ways to accomplish this:

- The "Shift Purple Route" alternative removes the Purple Route from Harrison, and routes it down West Avenue and S Street. This should be considered very carefully, since it would reduce service to Myrtle & Sunny (with housing to be developed there) and eliminate the 1-seat ride from downtown to the hospitals. However, if this alternative is pursued, consider routing the bus south on West, west on 14th, and south on H. This way, the bus can use existing (and soon to be upgraded) stops on H, serve a higher-ridership area, and potentially add a stop in the area of 14th and M (nearby Ross Park).
- An alternative may be to have the Purple Route trade segments with a route that has extra time, so that no service is lost. According to the 2018 study, the Gold Route is early 13% of the time. If this is still the case, consider the following swap:
  - Extend the Purple Route to 3rd and H around :39, arriving at F & Harris around :47. Then route it to 3rd and H via E Street north, then east on 3rd, to 3rd & H, replacing the Gold Route segment and simplifying some turns downtown. E Street north saves the Purple Route a few minutes, potentially enough to offset the extension from H & 9th.
  - At :44, route the Red Route from F & Harris to 3rd & H via the current Purple Route (Harris, S, West, Myrtle, 6th)
  - At :45, route the Gold Route from F & Harris to 3rd & H via the current Red Route (Henderson, California, 7th). This would also create bidirectional symmetry on California (Gold Route northbound and southbound), and on Saturdays, this would result in less redundancy with the Rainbow Route, which operates on I Street just 4 blocks from the Gold Route at about the same time).
  - Times may need to be adjusted by 1-2 minutes to enable transfers from the Purple Route at F & Harris around :45.

To sum up, thank you again for running a transparent and inclusive TDP process. I believe that simpler, bidirectional, linear network alternatives, like those presented in the 2018 study, should be considered in light of the goal of attracting riders. This may be more feasible than ever with the advent of microtransit to cover outlying areas.

I'm looking forward to the next phases of the TDP process.

Mark

September 5, 2023

350 Humboldt
359 Humboldt@gmail.com

Stevie Luther
Humboldt County Association of Governments
611 I Street, Suite B
Eureka, CA 95501

via email: stephen.luther@hcaog.net

RE: Comments on Draft Humboldt County Transit Development Plan

Dear Mr. Luther:

The five-year County Transit Development Plan provides for some very welcome improvements and expansions of service. However, we think greater expansion is appropriate and advisable because Humboldt county will likely see a much larger population increase than what the plan suggests.

Many signs point to strong, imminent population growth as various jurisdictions work to provide much needed housing, much of it in downtown areas where public transit is most appreciated. The rapid expansion of Cal Poly Humboldt is another sign as well as the impending development of several large scale enterprises such as the offshore wind farm and Nordic Aquafarm. Also, the increasing popularity of telework enables more people to move here who are drawn to the coolness of our mild climate as other places become too hot. Perhaps these trends won't accelerate too much during the next five years for the most part, but preparing during this period seems essential.

Besides, increases in transit service would well serve people already here. A substantial investment in increased public transit could go a long way towards breaking the negative cycle—the inconvenience of too few buses discouraging people from riding, and low ridership not justifying more buses on the road.

As a climate advocacy organization, 350 Humboldt looks at public transit primarily through the lens of needed carbon reductions. Two different approaches—both needed—deliver these reductions. One is upgrading HTA's fleet to zero-emissions vehicles. 350 Humboldt endorses HTA's many steps towards the procurement of ZEVs as detailed in the plan and already under way.

The other approach focuses on increasing ridership because even if buses were running on diesel, overall emissions would go down as vehicle miles traveled decreases. We specifically suggest that fifteen minute intervals between buses on a main stem route between McKinleyville and College of the

Redwoods would increase ridership the most. We also support the Green Route all-day service during Cal Poly Humboldt sessions as recommended in the plan.

How to convey riders to the main fixed routes is a hugely important, of course. Microtransit plays a role, yet opposite priorities must be balanced. On the one hand the more people who have access to a bus, the less they drive, which decreases VMT. On the other hand if individual conveyances are required for people who live too far away from the fixed routes, VMT is not reduced, and HTA takes on greater financial responsibility.

However, proposed microtransit service to and from the discrete communities of Samoa, Manila and Fortuna would seem to have great potential for reducing VMT.

Thank you for sharing your expert recommendations for public transit in our area. 350 Humboldt hopes our perspective is helpful.

Sincerely,

350 Humboldt steering committee
Martha Walden
Dan Chandler
Nancy Ihara
Jenifer Pace

CRTP
Coalition for Responsible
Transportation Priorities

May 19, 2023

Stevie Luther
Humboldt County Association of Governments
611 I Street, Suite B
Eureka, CA 95501

via email: stephen.luther@hcaog.net

RE: Comments on Transit Development Plan Technical Memo #2

Dear Mr. Luther:

The Coalition for Responsible Transportation Priorities (CRTP) submits the following comments on the Humboldt County Transit Development Plan (TDP) 2023-28 Technical Memorandum 2: Alternatives Analysis ("Memo").

General Comments

Many factors can be used to predict transit ridership, including residential density, land use mix, and demographic variables such as age, income, disability, and household vehicle access. Zero-car households tend to be particularly reliant on public transit. However, these variables and their relationship to transit ridership can change over time, particularly as land use patterns change and the transit system itself improves. Between the expansion of Cal Poly Humboldt, plans for several new potential employment centers, and ambitious infill development plans, Humboldt County may currently be on the brink of significant population, land use and demographic shifts which will likely change the transit landscape in the near future.

The adopted Regional Transportation Plan for 2022-2042 includes targets to double transit trips by 2025, then double them again by 2030, and again by 2040. In order to meet these ambitious but necessary targets, the system needs to not only serve those who are currently transit-dependent, but also be effective and attractive enough to allow people who could drive a car to choose not to. Among other features, this requires transit service at all times of day and days of the week. Although such service can be a daunting prospect in the short term due to relatively lower ridership levels on off-peak hours and weekends, it is necessary to allow access to many jobs, recreational activities, events, public services (including public meetings), and more. Thus, building long-term ridership may require service expansions that are financially challenging when assessed independently, particularly in the short term.

Additionally, multiple system improvements implemented concurrently can have synergistic effects in terms of increased ridership, particularly when certain service thresholds are crossed (e.g., decreasing headways to roughly 15 minutes or less).

We do not wish to advocate for transit routes which will not succeed, and we acknowledge that predicting ridership is difficult. However, given all of the factors discussed above, we do believe it is problematic to predict ridership based solely on current ridership trends, which the Memo generally does. We ask that, at the least, the TDP take residential and employment density and demographic characteristics of the service areas into account when attempting to predict ridership.

Redwood Transit Service (RTS) Service Alternatives

CRTP continues to support calls for 15-minute headways on RTS between McKinleyville and College of the Redwoods (CR) in order to attract greater ridership in the region's population and employment centers, and we ask that the TDP present this as an alternative.

We also request that later weekday service and Sunday service not be removed from consideration, as the Memo proposes. As noted above, these services are needed for a functional and successful transit system. If fixed-route service isn't financially feasible in the near term, we ask that HCAOG and HTA consider microtransit during these off-peak times.

We support the following specific RTS service alternatives presented in the Memo:

- A McKinleyville-CR express route, to reduce headways and travel times for areas including the population center of McKinleyville and the key destination of CR. Although a shorter express route may better meet certain performance standards, we believe the long-term benefits of including McKinleyville and CR in the route will be substantial.
- Samoa peninsula microtransit service, in place of the current RTS mainline diversion to Manila.
- Sunday service and later Saturday service. We note that both have already been determined to be unmet transit needs that are reasonable to meet, and will therefore be provided soon.

Eureka Transit Service (ETS) Service Alternatives

CRTP supports restructuring ETS service to follow a hub-and-spoke system. We note, however, that the "spokes" of the proposed systems are really still loops, which may have some negative impact on the legibility of the system for riders, particularly new riders.

CRTP does not currently have a position on whether the ETS hub should be at F and Harris Streets or at the future EaRTH Center. However, we note that while F/Harris is more geographically central, the EaRTH Center is located in the area of highest employment and service density, and a hub here would decrease travel times to and from downtown destinations and provide easy transfers to RTS. We also presume that a hub at F/Harris would require construction of a new facility, while the EaRTH Center is already planned and funded.

We find it challenging to evaluate many of the other proposed ETS service alternatives—including extension of service hours, increased frequency, and microtransit—because the Memo evaluates these

proposals in terms of the current route structure, rather than in conjunction with one of the proposed transit hub route structures. In general, however, CRTP supports the maximum extension of service hours and increased frequency that is financially feasible.

CRTP also supports implementing microtransit in Eureka. However, rather than a citywide service which could compete with fixed-route transit, we support a system which fills in gaps in the fixed-route system and potentially replaces fixed routes in lower density parts of the city, allowing the two systems to complement each other rather than compete for ridership.

Willow Creek Service Alternatives
Service from Willow Creek to the coast is a lifeline service that some people rely on for access to jobs, school, services and medical care. We also expect ridership on the Willow Creek service to increase now that the Yurok Tribe is providing fixed-route service connecting to Orleans and Weitchpec. For these reasons, we support the retention of at least some Willow Creek service on Saturdays.

Arcata & Mad River Transit Service (AMRTS) Service Alternatives
CRTP supports the proposed Green Route all-day service, at least while Cal Poly Humboldt is in session. We note that the university increasingly enrolls students in summer session courses as well, and ask that this be considered when determining "in session" dates and times of service. We also support the maximum financially feasible expansion of service hours for AMRTS, particularly given an expected increase in evening classes at the university.

We request an evaluation of microtransit service in lower density, outlying Arcata neighborhoods to complement AMRTS fixed-route service.

Fortuna Service Alternatives
CRTP supports implementing a microtransit service in Fortuna. We believe that this is an appropriate model for providing needed transit service to a community with Fortuna's characteristics, including relatively low density and small population size.

McKinleyville Service Alternatives
CRTP supports microtransit in McKinleyville, based on the findings of the 2021 McKinleyville Transit Study.

Performance Standards
We recognize that performance standards of the types included in the Memo are widely used across the industry. However, the specific numerical standards applied to various routes and services in the Memo appeared to be somewhat arbitrary. We request further elaboration of the reasons for selecting the specific numerical performance standards for each service.

CRTP believes that safety performance should be measured not by the overall number of collisions, but rather by collisions that result in injury or death. Minor collisions, while certainly inconvenient, do not

necessarily correspond to safety risk. We further request that the risk of injury or death while riding transit be compared to the analogous risk while driving or riding in a private vehicle.

Finally, we stress that standards such as passengers per hour and user fee cost recovery, widely used in the transit industry, are almost never applied to streets, highways or other transportation systems. Public transit is in many ways unfairly held to standards that other transportation systems could never meet. We believe that public transit should be viewed as a public good, a civil right, and a key strategy for fighting climate pollution. We further believe that positive externalities of public transit—ranging from benefits to climate to health to local economic activity—should be internalized into metrics whenever possible.

Facilities

CRTP strongly supports additional bike lockers and bike racks associated with transit stops. We request that these improvements be considered not only for ETS, but for all other major transit systems. We also strongly support both the EaRTH Center and the proposed McKinleyville transit hub.

CRTP supports park and rides when appropriate for allowing low-density residential areas improved access to fixed-route transit. However, we do not support building new parking lots near high-demand destinations, as also contemplated in the Memo. Rather, transit should provide service directly to these destinations, or within a walkable radius.

We request consideration of the following additional facility investments:

- Significant upgrades to the Arcata Transit Center to increase multimodal first-mile/last-mile facilities and create a more welcoming environment for riders.
- Systemwide bus stop upgrades, including shelters, benches, digital signs showing bus status, lighting, and other improvements for the comfort and safety of riders.

Funding

We request that downtown parking meters be considered as a potential funding source for local public transit systems.

Thank you for your consideration of our comments.

Sincerely,

Colin Fiske
Executive Director
Coalition for Responsible Transportation Priorities
colin@transportationpriorities.org

August 31, 2023

Stevie Luther
Humboldt County Association of Governments
611 I Street, Suite B
Eureka, CA 95501

via email: stephen.luther@hcaog.net

RE: Comments on Draft Humboldt County Transit Development Plan

Dear Mr. Luther:

The Coalition for Responsible Transportation Priorities (CRTP) submits the following comments on the draft Humboldt County Transit Development Plan 2023-28 (TDP). Many of these comments are similar or related to those in our letter dated May 19, 2023, commenting on TDP Technical Memo #2, and we incorporate those comments by reference.

Ridership Projections

The draft TDP uses existing ridership data as the basis for predicting future ridership changes. Appendix H provides some methodological information, which makes it clear that these predictions are based mainly on elasticity factors derived from an older study of "incremental changes" to transit service. However, as we noted in our May 19, 2023 letter, both the transit system and the surrounding community are likely to undergo substantial—not "incremental"—changes over the planning period. These include changes to community characteristics that are often correlated with transit ridership, including residential density, land use mix, and demographic variables such as age, income, disability, and household vehicle access.

Additionally, as we also noted in our May 19 letter, multiple system improvements implemented concurrently can have synergistic effects in terms of increased ridership, particularly when certain service thresholds are crossed (e.g., decreasing headways to roughly 15 minutes or less). This is particularly important to consider for a community like McKinleyville, with a large population but very limited transit service, which could see multiple substantial improvements in service over the planning period.

Therefore, we repeat our request that the TDP at least take residential and employment density and demographic characteristics of the service areas into account when attempting to predict ridership impacts of service alternatives.

Redwood Transit Service (RTS) Service Alternatives
CRTP continues to support calls for 15-minute headways on RTS between McKinleyville and College of the Redwoods (CR) in order to attract greater ridership in the region's population and employment centers.

We support the draft TDP's recommendation to eventually implement express bus service from McKinleyville to College of the Redwoods. However, we request that this full service not be delayed until FY 2026-27, but rather implemented as soon as funding can be secured.

We also support the recommendation to reinstate RTS Sunday service, along with ETS and AMRTS Sunday service. For the same reason, we request that the TDP also include a recommendation for later evening service on all days. These services are needed for a functional and successful transit system—in other words, to ensure needed mobility for transit-dependent populations, and to make reliance on transit a feasible option for those who could choose car ownership.

Finally, we support the proposed implementation of a microtransit service for the communities of Samoa and Manila. We believe this service will adequately serve demand in these communities, and we therefore request that implementation of the service be combined with a streamlining of the RTS mainline route, so that fixed-route buses can avoid the time-consuming detour to Manila. When combined, these changes will benefit a substantially greater number of riders.

Eureka Transit Service (ETS) Service Alternatives
CRTP supports the recommended restructuring of ETS service to follow a hub-and-spoke system. As we noted in our May 19 letter, however, the "spokes" of the proposed systems are really still loops, which presents some legibility challenges for new riders.

CRTP also supports the recommendation to implement microtransit in Eureka. However, it appears that the recommendation would lead to a citywide service that largely overlaps the fixed-route service in terms of hours and coverage. We reiterate our previous comments that a microtransit system should fill in gaps in the fixed-route system and potentially replace fixed routes in lower density parts of the city, allowing the two systems to complement each other rather than compete for ridership.

Willow Creek Service Alternatives
As we noted in our May 19 letter, service from Willow Creek to the coast is a lifeline service that some people rely on for access to jobs, school, services and medical care. We also expect ridership on the Willow Creek service to increase now that the Yurok Tribe is providing fixed-route service connecting to Orleans and Weitchpec. Therefore, we do not support the recommendation to completely eliminate Saturday service to Willow Creek.

Arcata & Mad River Transit Service (AMRTS) Service Alternatives
CRTP supports the recommended Green Route all-day service, at least while Cal Poly Humboldt is in session. We also reiterate that the university increasingly enrolls students in summer session courses as well, and ask that this be considered when determining "in session" dates and times of service (the draft TDP appears to consider only spring and fall semesters as "in session").

We also support the recommended expansion of early morning and Sunday service. However, we request additional consideration of late-night service as well, particularly given an expected increase in evening classes at the university.

Finally, we appreciate the evaluation of microtransit service in Arcata, which we requested in our May 19 letter, and the recommended implementation of "incremental" microtransit service. However, we note an apparent inconsistency in the ridership projections on p.104 of the TDP. Ridership is first estimated at 59 passenger trips/weekday and 18 trips on Saturdays, which equates to approximately 5 trips per service hour. In the next paragraph, however, the document asserts that only a maximum of 4 trips per service hour can be expected. This inconsistency should be explained or corrected.

Fortuna Service Alternatives
CRTP supports the recommendation of Fortuna microtransit combined with RTS streamlining.

McKinleyville Service Alternatives
CRTP supports proposed implementation of a microtransit service for McKinleyville. We request that implementation of the service be combined with a streamlining of the RTS mainline route, so that fixed-route buses can avoid the current time-consuming loop through McKinleyville. When combined, these changes will benefit a substantially greater number of riders.

Performance Standards
We reiterate the comments from our May 19, 2023 letter regarding performance standards, including:

- Safety performance should be measured not by the overall number of collisions, but rather by collisions that result in injury or death. Risk of injury or death while riding transit should also be considered relative to the same risk while traveling in a private vehicle.
- Positive externalities of public transit—ranging from benefits to climate to health to local economic activity—should be internalized into metrics whenever possible.
- Further justification should be provided for the specific numerical performance standards recommended.
- Standards such as passengers per hour and user fee cost recovery, widely used in the transit industry, are almost never applied to streets, highways or other transportation systems. Public transit is in many ways unfairly held to standards that other transportation systems could never meet. We believe that public transit should be viewed as a public good, a civil right, and a key strategy for fighting climate pollution.
- In order to meet ambitious but necessary regional ridership targets, transit operators will have to implement service expansions that are financially challenging when assessed independently and in the short term.

Until all of these issues are fully addressed, we cannot support the formal adoption of recommended performance standards for local transit operators (see p.175 of the draft TDP).

Facilities

CRTP supports the recommendation for an HCAOG study of bus stop conditions. However, we also note that in many cases no study is needed, and local transit operators should not wait for the results of a study to implement needed improvements.

CRTP continues to support recommendations for both the EaRTH Center and the proposed McKinleyville transit hub. We also appreciate recommendations for certain upgrades to the Arcata Transit Center, which may have been prompted by comments in our May 19 letter. However, we do not support the recommendation for increased fencing and police presence, as this may actually create an uncomfortable and unwelcoming environment for many people. The history and present experience of transit policing in the United States is fraught with unequal outcomes, violence and tragedy. Instead of focusing on exclusionary or punitive measures, we request that the transit center upgrades focus on high-quality public space design and include additional upgrades related to multimodal first-mile/last-mile facilities.

CRTP supports park and rides when appropriate for allowing low-density residential areas improved access to fixed-route transit. However, we do not support building new parking lots near high-demand destinations.

Funding

We reiterate and emphasize our request that downtown parking meters be recommended as a potential funding source for local public transit systems.

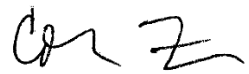
We support the recommendation to consider urbanized area designation as a potential avenue to access more federal funding. We note that while the Eureka "urbanized area" is currently considered to be just under the population threshold of 50,000, this population cluster for all practical purposes also includes Arcata, Fortuna and McKinleyville, comprising a Census-designated "micropolitan area" which far exceeds the threshold.

Going Fare Free

CRTP supports the recommendation to study going fare free as a strategy to help meet ridership goals. However, we note that a fare free strategy should only be implemented if a source of funding can be secured that replaces not only current fare revenues, but also future revenues as ridership grows. Partial fare-free strategies targeted at low-income riders should also be carefully considered.

Thank you for your consideration of our comments.

Sincerely,



Colin Fiske
Executive Director
Coalition for Responsible Transportation Priorities
colin@transportationpriorities.org

Gmail

Stevie Luther <stephen.luther@hcaog.net>

TDP comments

2 messages

Althea Christensen <fayevert@gmail.com> Mon, Sep 4, 2023 at 5:40 PM
To: Stevie Luther <stephen.luther@hcaog.net>

For the Cal Poly - Eureka - CR express routes - I'd like to see them operate on the quarter hours instead of half hours, the schedule as shown in the draft has them leaving CPH at approximately the same time as the regular RTS bus. There could also be shorter travel time if these buses were to stop at the college creek dorms (where I believe AMTRAK stops) instead of at library circle.

I do think it would be better to institute microtransit on Sundays as opposed to fixed route, since people are likely to have different destinations than on weekdays.

I did notice that the ETS route alternative with the EARTH center as hub has an error - the red route can't cross "R" at 3rd street, though the Google satellite map doesn't show this change.

There is a need to maintain bi-directional service on Harrison to St Joe's hospital - people coming from downtown or seniors coming from Silvercrest would not have the ability to reach the hospital without riding the green route all the way around.

I think it is very important to connect McKinleyville to Valley West for transit connections more frequently than current RTS service allows, whether by fixed route or microtransit. The route between them is not walkable.

I'm pretty meh about park and rides. Perhaps just because of the horrible reputation (and even worse walkability) of the Herrick "park and ride", I don't think they'll get much use unless as satellite parking for special events.

there needs to be more transit visibility at the airport.

Stevie Luther <stephen.luther@hcaog.net> Mon, Sep 4, 2023 at 8:04 PM
To: Althea Christensen <fayevert@gmail.com>

Thanks, Althea! I'll take a closer look at these tomorrow and pass on to our consultant team.

[Quoted text hidden]

Gmail

Stevie Luther <stephen.luther@hcaog.net>

Comment on Draft Transit Development Plan

1 message

Wendy Ring <wring123@gmail.com> Fri, Sep 1, 2023 at 7:54 PM
To: stephen.luther@hcaog.net

Thanks for the opportunity to comment on the Draft Transit Plan. While the plan provides some improvements, it falls short of the transformative changes needed to address a climate crisis and meet the Safe and Sustainable Transportation Targets HCAOG set in VROOM, specifically doubling transit trips by 2025, doubling them again by 2030 and again by 2040. In order to achieve these gains in ridership, the transit system must serve not only the non-drivers who currently comprise most of its users, but also a sizable proportion of those who currently drive. This requires a true intercity express with buses every 15 minutes and a streamlined route with travel time shortened by eliminating route diversions to pick up small numbers of passengers, when those areas are slated to be served by microtransit.

A rapid intercity express has broad public support. In the Transit Plan Community Workshop's poll, 78% of participants supported express service between McKinleyville and CR. Verbal commenters repeatedly asked for buses on the express route to come every 15 minutes. In order to achieve the increases in ridership envisioned by VROOM, this express route should begin in 2024. This should be in the 5 year plan, regardless of whether funding is currently available, because its inclusion in the plan increases the competitiveness of grant applications.

Another element of increasing the relative attractiveness of transit is removing the large subsidy given to car owners in the form of free parking in public lots and at public curbs. Parking charges can be a source of revenue for transit expansion. Two other options not mentioned are adding a $10 congestion relief charge to vehicle registration fees, which only requires a simple majority vote as opposed to a sales tax, which requires a 2/3 majority, and establishing a micropolitan area comprised of our larger coastal cities which is eligible for urban status and higher levels of funding.

I am not sure whether this was an error, but the plan shows all current fossil fueled buses owned by Redwood, Eureka, and Arcata Mad River Transit being replaced with hydrogen buses. Hydrogen buses have an extremely high up front cost compared with electric buses and the hydrogen they use will, in the short term, most likely come from fossil gas and be more expensive than electricity. While intercity buses must travel long distances and may require hydrogen, city buses can be electric, saving money that can be used to improve service. The HTA Zero Emission Bus Rollout Plan adopted in June has 50% of planned replacements being electric buses and that plan should be followed.

I have been on many campuses where the universities run their own shuttle buses. HCAOG should give Cal Poly Humboldt the options of either taking full financial responsibility for the new Green Line or operating its own bus along the proposed route instead. The university's expansion will already impose a number of uncompensated burdens on Humboldt County. Diverting resources from transit for long time residents to run a bus route almost exclusively serving university students should not be another.

Sincerely,

Wendy Ring MD, MPH

Bayside Corners, Inc.

P.O. Box 342, Bayside, California 95524
baysidecorners@gmail.com ~ www.baysidecorners.org
707-845-5524

September 4, 2023

Humboldt County Association of Governments
611 I Street, Suite B
Eureka, CA 95501

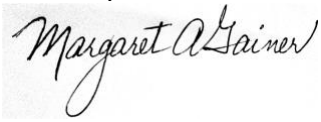
Attention: Stevie Luther, Associate Regional Planner

Thank you for producing an updated Transit Development Plan.
Several years ago, Ali Wrigley-Lee conducted a Walkability Audit of Bayside and last week, I reviewed the Draft Transit Development Plan. Reviewing this data and other Census data confirms our daily life observations of living in Bayside and the Jacoby Creek Valley:
--- Bayside is a gradually aging population.
--- After the County widened, straightened, and smoothed out the surface of Old Arcata Road, motorist speed has increased, so that it feels too unsafe for most pedestrians. For several years, our organization worked on pedestrian, bicycling, and motorist safety and education in Bayside.
--- A gradually increasing number of residents live alone.
--- A significant number of Bayside residents (seniors and under driving age) cannot drive.
--- There is no public transit service provided to this community.

I remember decades ago, the trial period of bus service through Bayside and along Old Arcata Road. The bus service was under-utilized. The schedule may have been difficult for residents to become accustomed to, it was not effectively promoted with the methods needed to foster a regular behavior change, and back then, there was less awareness of how our cars contribute to climate change.

I am writing to urge HCAOG to reconsider. Decades later, the need is greater, a gradually increasing willingness to use alternatives to one person per car, and our organization has been doing grassroots organizing in Bayside-Jacoby Creek Valley since 2007. We can help to foster the new habits needed to maintain bus service in our community.

If you have any questions, we are eager to discuss this with you.
Sincerely,



Margaret A. Gainer, Bayside Corners Board President

Bayside Corners acknowledges that our service area –Bayside and the Jacoby Creek Valley—is on traditional Wiyot territory. We are committed to learning to participate in processes that acknowledge historical atrocities, honor the sovereignty of Native Tribes/Nations, and find ways to develop meaningful relationships and true partnerships with our neighbors of Wiyot ancestry.