McKinleyville Transit Study
Final Report

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Prepared for:

Humboldt County Association of Governments & Humboldt Transit Authority

HUMBOLDT COUNTY ASSOCIATION of GOVERNMENTS

RIDE THE BUS HTA HUMBOLDT TRANSIT AUTHORITY

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About the Small Urban, Rural and Tribal Center on Mobility

The mission of the Small Urban, Rural and Tribal Center on Mobility (SURTCOM) is to conduct research and provide leadership, education, workforce development and technology transfer in all transportation-related aspects of mobility for people and goods, focusing specifically on small urban, rural and tribal areas. Member institutions include the Western Transportation Institute at Montana State University, the Upper Great Plains Transportation Institute at North Dakota State University, and the Urban and Regional Planning program at Eastern Washington University. More information about SURTCOM can be found at: http://surtcom.org/.

Disclaimer and Acknowledgments

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1. Executive Summary

The purpose of this project was to provide the Humboldt County Association of Governments ("HCAOG") and Humboldt Transit Authority ("HTA") with guidance to inform future investments in public transportation in and around McKinleyville. This project is also an opportunity to assess aspects of the regional public transportation system and explore affordable and innovative investments to improve public transportation offerings. The primary motivation for this project was an interest in assessing an investment in fixed route transit service within McKinleyville, similar to what is available in the City of Eureka via the Eureka Transit Service and the City of Arcata via the Arcata & Mad River Transit System.

Over the course of this study, the research team evaluated planning documents, conducted public outreach, and analyzed existing conditions and services. Two themes emerged from our review of planning documents: 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. The research team collaborated with the project's Public Outreach lead, Colin Fiske of the Coalition for Responsible Transportation Priorities, to conduct public outreach throughout the course of the project. The public submitted more than 40 comments via the project website between October 2020 and June 2021, and provided numerous additional comments during committee, stakeholder, and public meetings. Public comments provided helpful insight into McKinleyville's transit needs (including service both within McKinleyville as well as between McKinleyville and other parts of Humboldt County); identified areas of improvement for current transit service; and offered feedback on different service types for new local transit service. A survey conducted online between May 26, 2021 and June 25, 2021, was designed as an opportunity for the general public to provide feedback on the project team's draft analysis and recommendations. The survey responses suggested a higher level of confidence in the fit of flexible transit for the McKinleyville community, with 78% of survey respondents indicating they thought flexible transit would work well in McKinleyville, compared to 39% for fixed transit. Flexible transit was also the transit improvement most commonly ranked 1 (most preferred), while fixed transit was the transit improvement most commonly ranked 4 (least preferred). Using weighted averages of transit improvement rankings, flexible transit was the most preferred transit improvement for McKinleyville, followed by expanded Dial-a-Ride ("DAR"), expanded RTS, and fixed transit.

We reviewed existing conditions for HTA services, key trip generators, sociodemographic indicators, built environment measures, and economic activity, with the purpose of contextualizing the McKinleyville community in relation to its peer communities and Humboldt County as whole. Taken together, our review of existing conditions suggests that reaching fixed transit ridership levels in McKinleyville comparable to Arcata and Eureka could be challenging in the near-term.

We produced cost and trip estimates for three types of intracity transit service investments: fixed route, DAR demand response, and microtransit demand response. No matter the service type, new intracity (local) transit service would cost in the range of $300,000 to $400,000 for a 1-2

vehicle system and $600,000 to $800,000 for a 3-4 vehicle system. As a result, McKinleyville and Humboldt County face the following decisions: 1) is there a willingness to support at least a 1-2 vehicle system for dedicated transit service within McKinleyville? and, 2) if so, what transit service characteristics should be prioritized for this dedicated transit service?

We reviewed key tradeoffs for the transit service types in terms of capacity, access burden, and customer satisfaction and quality of life impacts, as well as their ability to support the guiding principles we identified in the course of the study.

Given that our review of existing conditions indicated it may be challenging to achieve the load factors present for the Arcata and Eureka fixed route systems, we recommend that McKinleyville and Humboldt County introduce new intracity transit with a 1-2 year flexible transit service in the form of microtransit. This will provide an opportunity to introduce public transportation to the general public for travel within McKinleyville, and also serve as a tool to study the market for public transportation and assess whether fixed route service could be introduced in the future. In addition to intracity transit service investments, Humboldt County may consider additional transit service investments, such as improvements to RTS and subsidies or coordination for carpooling and vanpooling.

As efforts surrounding the McKinleyville Town Center and the realization of the community's transition away from serving as a "bedroom community" continue, transit service adjustments, including the ability to implement fixed route transit should be considered. In particular, land use changes leading to greater density are likely to support increased demand for public transportation within McKinleyville.

2. Overview

The purpose of this project is to provide the Humboldt County Association of Governments ("HCAOG") and Humboldt Transit Authority ("HTA") with guidance to inform future investments in public transportation in and around McKinleyville. This project is also an opportunity to assess aspects of the regional public transportation system and explore affordable and innovative investments to improve public transportation offerings.

Impact of the COVID-19 Pandemic

This study occurred during a period of restricted travel and social distancing due to the COVID-19 pandemic. As a result, the research team was unable to conduct site visits to McKinleyville, and all meetings were held and attended virtually.

The primary motivation for this project was an interest in assessing an investment in fixed-route transit service within McKinleyville, similar to what is available in the City of Eureka via the Eureka Transit Service and the City of Arcata via the Arcata & Mad River Transit System. McKinleyville leaders have expressed the desire to transition away from serving as a "bedroom community"; development of the McKinleyville Town Center is considered an integral component to the realization of the community vision for a unique identity (Planning and Building Department, 2017, 2021). Fixed route transit in the McKinleyville Town Center area has been suggested as a mechanism to catalyze and support this area as a community focal point.[1] This is consistent with one of the common goals – stimulus of economic activity and influence on land use development – of public transportation systems; additional core goals include provision of social service and resource-efficient transport (Polzin, 2018).

Over the course of this study, the research team evaluated planning documents and existing conditions and services, identified community values and guiding principles, met with community leaders and interested citizens, and collected information about the latest innovations in public transportation service through interviews with public officials and vendors from around the country.

This final report offers an assessment of public transportation service investments within McKinleyville, as well as practical guidance for future transit investments to support McKinleyville's community vision. It is also intended to serve as a useful foundation for ongoing consideration of opportunities to adjust and expand regional public transportation services throughout Humboldt County. **Figure 1** summarizes the timeline for this study.

[1] The McKinleyville Town Center survey included a series of questions regarding priorities for transportation-related efforts surrounding improving pedestrian and bicyclist safety, providing routes for pedestrians and bicyclists, providing safe equestrian access, accommodating more vehicles, addressing vehicle speed and roadway safety, and providing adequate vehicle parking (Planning and Building Department, 2020). Unfortunately, a question devoted to public transportation was not included.

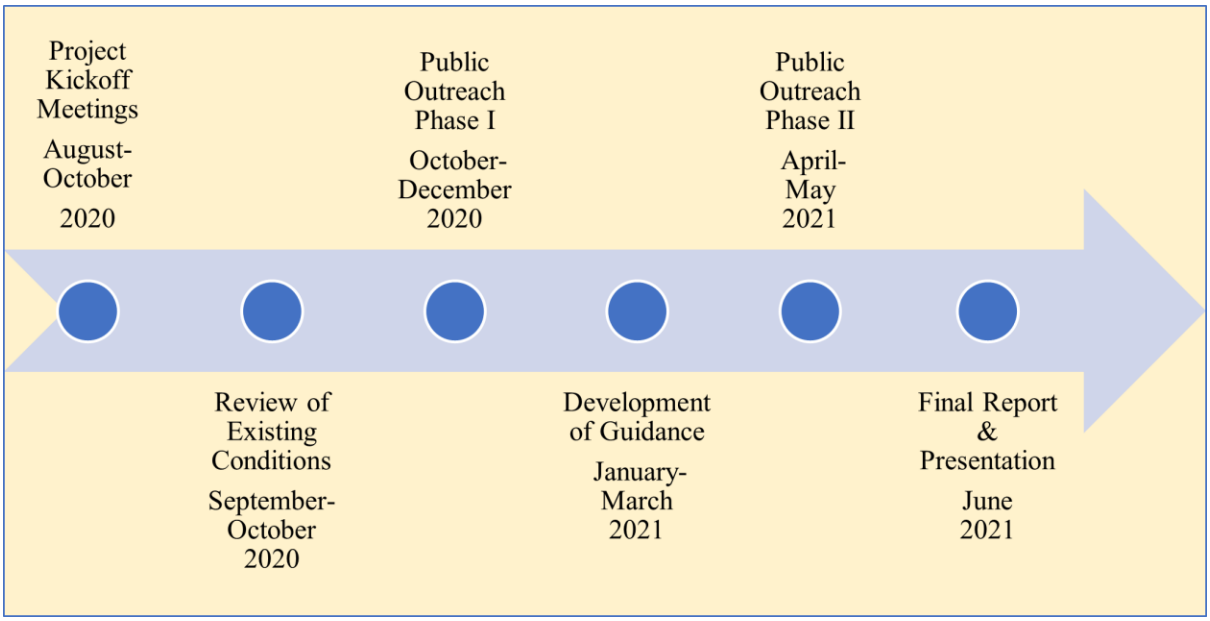


Figure 1. Project Timeline

3. Key Concepts

This section provides a brief overview of key concepts that guide planning and analysis of public transportation and is primarily based upon information provided in the Transportation Research Board's Transit Capacity and Quality of Service Manual (Transit Cooperative Research Program, 2013).

3.1. Density

Public transportation ridership is influenced by a number of factors, such as access to private vehicles and sociodemographics, "but the density of land uses along the line [or across the service area] is a basic requirement" (Transit Cooperative Research Program, 2013). Density – of people and households, housing units, and jobs – is a way of measuring the concentration of activity. As a result, measures of density are indicative of the number of potential transit riders; dispersed development makes it more difficult for transit service to connect people with employment, commercial centers, and services in a competitive travel time (Transit Cooperative Research Program, 2013).

> "…among readily available measures, density is [the] one that best predicts the intensity of ridership that will arise from a service investment" Walker (2013).

Guidance on the minimum density needed to support a particular type and frequency of transit service depends on a number of factors, including willingness to subsidize service. "Where population densities exceed about 1,000 persons per square mile and where there is some linear pattern to trip demand," transit planners generally look to incorporate fixed elements into transit service (Transit Cooperative Research Program, 2013).

3.2. Productivity

The productivity of a transit service is typically measured in terms of ridership and defined as passenger trips per revenue hour (Transit Cooperative Research Program, 2013). The National Transit Database Annual Agency Profiles include standard reporting on unlinked trips per vehicle revenue hour as part of a group of "Service Effectiveness" measures (Federal Transit Administration, 2019). Productivity is influenced by density, as described above, as well as service design; it is negatively correlated with (or inversely related to) the size of the service area (Transit Cooperative Research Program, 2013).

Productivity as measured by ridership is a critical transit performance measure; it influences transit service design and viability, as well as long-term financial sustainability. Additional transit performance measures relate to service availability and delivery, safety and security, maintenance, economic and environmental impacts, capacity, and comparative travel times (Transit Cooperative Research Program, 2013).

3.3. Fixed Versus Flexible Transit

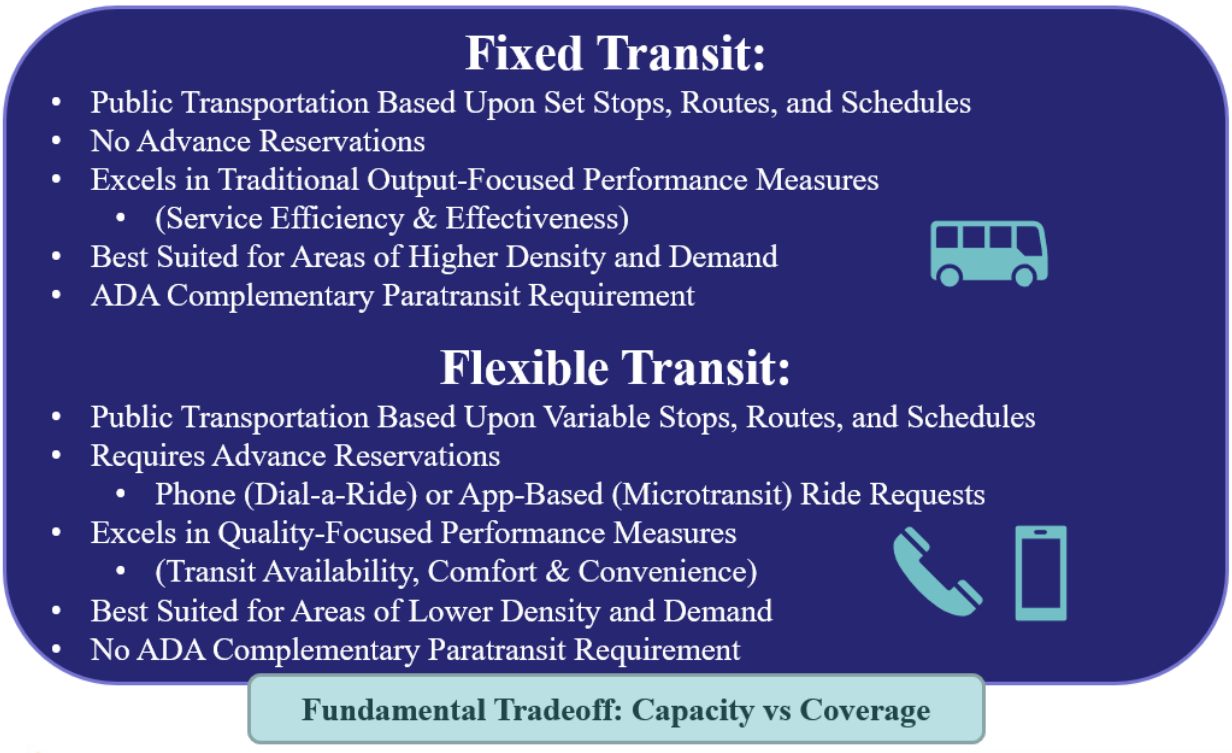
Transit services may be categorized by the degree to which they maintain fixed versus flexible characteristics (**Note:** Graphic created by WTI based upon a synthesis of information presented in the Transit Capacity and Quality of Service Manual (2013).

Figure *2*). The key concepts of density and productivity, discussed above, covary with these categories. Fixed transit is characterized by repetitive, set, and specific stops, routes, and schedules. As a result, fixed transit does not require passengers to make a ride request or advance reservation. This type of service is typically associated with higher density areas and maintains higher productivity as measured by ridership. The provision of complementary paratransit is required for fixed transit under the Americans with Disabilities Act. Flexible transit is characterized by a lack of fixed stops, routes, and schedules. As a result, passengers need to make ride requests or advance reservations via phone (Dial-a-Ride or DAR) or mobile application (termed "microtransit"). This type of service is typically associated with lower density areas and maintains lower productivity.

Fixed transit service design entails a tradeoff between routes that maximize ridership and routes that bring service within reach of a larger share of the community, but this tradeoff is also relevant for fixed versus flexible transit as well. Fixed transit in general allows for higher ridership, while flexible transit excels at offering coverage to a higher share of the community.

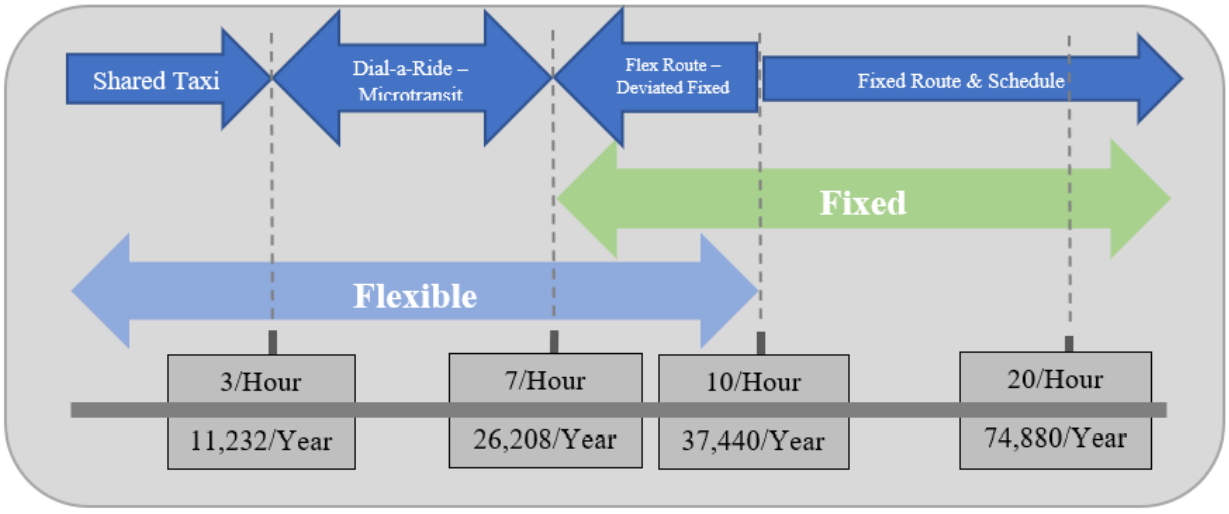
The cost per vehicle mile and per vehicle hour tends to be higher for fixed transit, but lower per trip due to higher ridership (Mattson & Mistry, 2020). As a result, transit agencies tend to provide fixed transit only when a given ridership threshold is met and the service is deemed warranted. The risk of providing fixed transit in low ridership areas is that productivity will be low, costs will remain relatively high, and coverage will be limited; in other words, the service will not excel in any measure of performance.

In recognition of the need for guidance to determine when to implement fixed versus flexible transit, the Transit Capacity and Quality of Service Manual compiled information from transit agencies with experience implementing flexible services "as strategies to provide cost-effective transit in lower density areas" (2013). In general, these transit agencies seek to "right size" the service based on ridership, and they maintain flexible services until productivity reaches a level where fixed service is justified. For example, the Dallas Area Rapid Transit system uses the productivity thresholds presented in **Figure 3** to guide its service investments. Below three riders per hour, shared taxis are considered the best fit. Between three and seven riders per hour, demand response transit in the form of Dial-a-Ride or microtransit is considered the best fit. Between seven and ten riders per hour, elements of flexible and fixed transit may be combined. Beyond ten riders per hour, fixed transit is generally adopted, with larger vehicles used when ridership reaches twenty riders per hour.



Note: Graphic created by WTI based upon a synthesis of information presented in the Transit Capacity and Quality of Service Manual (2013).

Figure 2. Summary of Key Characteristics of Fixed and Flexible Transit



Note: Graphic created by WTI based upon information presented for the Dallas Area Rapid Transit system (Transit Cooperative Research Program, 2013, Exhibit 2-26 DART Criteria for Fixed-Route and DRT Service). Riders per hour translated into annual estimates by WTI based upon 12 revenue hours per day, 6 days of service per week, and 52 weeks of service per year.

Figure 3. Sample Spectrum of Flexible and Fixed Transit Services In Relation to Ridership

4. Planning Documents

To become familiar with the McKinleyville and Humboldt County context for transit service planning, we reviewed several relevant planning documents. The following documents provided critical information for this study:

- McKinleyville Community Plan (2017, as amended)
- HCAOG Humboldt County 2017-2022 Transit Development Plan (2017)
- HCAOG Mobility-on-Demand Strategic Development Plan (2020)
- HCAOG 20-Year Regional Transportation Plan – VROOM (Variety in Rural Options in Mobility) (2017)

Across these documents, two key themes emerged. First, there is strong interest in improving the Humboldt Transit Authority's Redwood Transit System ("RTS") via streamlining the route, introducing feeder service, and adding express service between Humboldt County's largest communities. Second, there is recognition that McKinleyville could use its own service, separate from the RTS. Currently, RTS is functioning as both a local bus within McKinleyville and a commuter bus for the region; however, it is difficult to simultaneously conduct both service types well.

4.1. McKinleyville Community Plan

The McKinleyville Community Plan includes a commitment to twelve Ahwahnee Principles (Planning and Building Department, 2017), adapted from the Local Government Commission's fifteen Ahwahnee Principles for Resource-Efficient Communities (2021). The Ahwahnee Principles "provide a blueprint for elected officials to create compact, mixed-use, walkable, transit oriented developments" and to "break the cycle of sprawl" through what has become known as Smart Growth and New Urbanism (Local Government Commission, 2021). While all of the interconnected Ahwahnee Principles have relevance for McKinleyville's future, the following principles have particular bearing on this study:

- As many activities as possible should be located within easy walking distance of transit stops;
- The community should have a center focus that combines commercial, civic, cultural, and recreational uses; and
- Streets, pedestrian paths, and bike paths should contribute to a system of fully-connected and interesting routes to all destinations. Their design should encourage pedestrian and bicycle use by being small and spatially defined by buildings, trees and lighting; and by discouraging high speed traffic (Planning and Building Department, 2017).

Consistent with the Ahwahnee Principles, the McKinleyville Community Plan describes a goal of accommodating "growth in the McKinleyville area" while supporting safe and convenient "multi-modal circulation throughout the community" as well as progress on the establishment of a Town Center (Planning and Building Department, 2017).

4.2. 2017-2022 Transit Development Plan

In a section devoted to goals, objectives, and policy, the 2017-2022 Transit Development Plan recognizes that public transportation entails "continually balancing the trade-offs between goals" as well as "a responsibility to provide the public with transparent information" on spending and performance (LSC Transportation Consultants, 2017). As a result, "an adopted set of goals and performance standards helps to communicate the values of the transit program to other organizations, to the public, and to the organization staff" and thereby meets this responsibility for transparency. The plan proposes goals, objectives, and measures for transit providers in Humboldt County:

- Goal: Safety
  - Objective: Safe Operations
    - Measure: Limit Preventable Accidents (i.e., Crashes and Collisions)
- Goal: Quality
  - Objective: Timely Operations
    - Measure: No Early Departures and No Late Departures past 5 Minutes
- Goal: Effectiveness
  - Objective: Effective Operations
    - Measure: Meet Minimum Targets for Passengers per Hour
- Goal: Efficiency
  - Objective: Efficient Operations
    - Measure: Meet Minimum Farebox Recovery Targets
    - Measure: Minimize Subsidy per Passenger Trip

In addition, the plan supports the streamlining of RTS, recognizing that "the disparity between the ridership levels and daily runs both north of McKinleyville and south of Rio Dell indicates that…there could be cost savings with relatively low impact on ridership if runs were shortened" (LSC Transportation Consultants, 2017).

4.3. HCAOG Mobility-on-Demand Strategic Development Plan

To "shepherd the development and advancement of MoD strategies and potential pilot projects," the recently developed Mobility-on-Demand Strategic Development Plan (IBI Group, 2020) outlines the following four Guiding Principles, along with accompanying measures and evaluation criteria:

- Principle: Reduce Greenhouse Gas Emissions
  - Measures and Evaluation Criteria
    - Reduce Single-Occupancy Vehicles
    - Reduce Vehicle Miles Traveled per capita
- Principle: Increase Transit Effectiveness
  - Measures
    - Increase Overall Ridership
    - Reduce Travel Times

        - Increase Riders per Service Hour or Service Mile
    - Evaluation Criteria
        - Overall Cost
        - Effectiveness and Efficiency
        - Level and Quality of Service
        - Organizational Issues and Ease of Implementation
        - Technical and Political Risk
- Principle: Contribute to Regional Economic Development
    - Measure
        - Offer Additional Transit/Mobility Service
- Principle: (Support) Equitable Access
    - Measure
        - Provide Reliable, Convenient Access for the Transportation-Disadvantaged Population
    - Evaluation Criteria
        - Socio-Economic Factors
        - Civil Rights Implications

In addition, the plan supports the streamlining of RTS by replacing the deviation to the California Redwood Coast – Humboldt County airport as well as the segment of service north of McKinleyville with "Personal Mobility On Demand" service capable of 15-minute response times for requests to RTS stops.

4.4. 20-Year Regional Transportation Plan – VROOM (Variety in Rural Options in Mobility) (2017)

Finally, among the proposed projects for public transportation included in the most recently adopted 20-year regional transportation plan is the addition of feeder bus lines to McKinleyville and Fortuna to connect to RTS. The timeframe is listed as 2023-2033 with an estimated annual cost of $538,000 (Humboldt County Association of Governments, 2017).

5. Public Outreach

The research team collaborated with the project's Public Outreach lead, Colin Fiske of the Coalition for Responsible Transportation Priorities, to conduct public outreach throughout the course of the project. The follow list highlights the project team's public outreach efforts.

- A project website with background information, a question/comment form, and project updates;
- A press release to local media in September 2020;
- A project discussion with District 5 Supervisor Madrone in October 2020;
- An effort by local advocates to collect information from houseless and at-risk individuals in October 2020;
- A presentation and discussion at the October 2020, April 2021, and May 2021 McKinleyville Municipal Advisory Committee meetings;
- A series of small group discussions with individuals identified as community leaders and stakeholders in December 2020, as well as January and February 2021;
- Two follow-up discussions with these community leaders and stakeholders to present initial findings and solicit feedback on the final report draft in June 2021;
- Meetings with the transit staff of the Yurok Tribe in February 2021 and the Blue Lake Rancheria in March 2021;
- A public survey asking about the potential fit of different transit service options, available online and open May 26-June 25 2021;
- A presentation and discussion at the June 2021 HCAOG Social Services Transportation Advisory Council and HCAOG Technical Advisory Committee meetings;
- A public meeting to present initial findings and solicit feedback on the final report draft in June 2021;
- A presentation and discussion at the June 2021 HCAOG Board of Directors meeting.

5.1. Written Comments and Discussion at Public Meetings

The public submitted more than 40 comments via the project website between October 2020 and June 2021, and provided numerous additional comments during committee, stakeholder, and public meetings. Public comments provided helpful insight into McKinleyville's transit needs (including service both within McKinleyville as well as between McKinleyville and other parts of Humboldt County); identified areas of improvement for current transit service; and offered feedback on different service types for new local transit service. Themes from the written public comments and meeting discussions are summarized below; see

Appendix 1. Written Comments for more detail.

5.1.2. McKinleyville Built Environment and Infrastructure

- Central Avenue is dangerous for pedestrians and bicyclists due to poor infrastructure and high-speed traffic.
- McKinleyville is not a densely built community and service should reflect this (e.g., prioritizing service in areas of higher density and providing options for those far from current transit routes).
- McKinleyville is designed for automobiles and getting around town without one is difficult.

5.1.3. Regional Transportation Needs

- There is a need for local transportation within McKinleyville as well as regional transportation connecting McKinleyville to surrounding communities.
- Many areas east and west of the RTS line are underserved by transit, including Fieldbrook.
- The California Redwood Coast-Humboldt County Airport in McKinleyville is an important destination and should be adequately served by transit.
- Humboldt State University deserves better transit options, particularly given its recent challenges with parking.
- Integrating bus passes amongst different regional services would be helpful.

5.1.4. HTA Redwood Transit System ("RTS")

- Transit service within McKinleyville should support existing fixed route service.
- Transit service should offer competitive trip times and convenient frequencies.
- Transit stops should be easier to access by walking and biking.
- There is a need for increased frequency and/or express service on RTS from McKinleyville to Arcata and Eureka.
- Currently, RTS is trying to be both a regional system and a local service within McKinleyville, but it does not do particularly well at either.
- Eliminating deviations within McKinleyville would streamline the RTS route and lead to more frequent service.
- There is a need for longer service hours on Friday and Saturday nights as well as basic service on Sundays, but it's hard to justify running fixed route buses for small numbers of riders.
- People with children would rather not ride the bus.
- The lack of adequate bicycle and E-bike storage on buses is an issue.

5.1.5. HTA Dial-a-Ride ("DAR") Service

- Needing to call ahead to reserve a ride is a barrier to using the system.
- Rides can be long and costly.

- Dial-a-Ride is only helpful for those with no other transportation options.

5.1.6. Introducing Local Fixed Transit in McKinleyville

- A fixed route loop within McKinleyville could serve as a feeder to the RTS trunk line.
- Poor infrastructure (especially along Central Avenue) would make introducing fixed route service difficult.
- Fixed route service often performs poorly in dispersed areas such as McKinleyville.
- Central Avenue, McKinleyville Avenue, School Road, Sutter Road, and Hiller Road were all identified as potential candidates for a fixed route.

5.1.7. Introducing Local Flexible Transit in McKinleyville

- Microtransit could facilitate first and last mile connections to RTS.
- Microtransit could appeal to a broad audience: seniors who are used to Dial-a-Ride, the disabled community, and people who are less enthusiastic about taking a fixed route bus
- Microtransit vehicles must be ADA accessible.
- There are safety concerns for both passengers and drivers in 1-on-1 situations in microtransit vehicles.

5.1.8. Additional Topics

- There is interest in complementary mobility options such as bikesharing, carsharing, and vanpooling.
- A strong marketing campaign will be necessary to inform the public about new mobility offerings and attract new riders.
- Better availability of information (via advertising, posters in bus stops and bus stations, and smartphone apps) would increase ridership.
- Fare-free transit could be a way to make transit more competitive with single-occupancy vehicle ("SOV") use.
- There is interest in utilizing zero emission transit vehicles and reducing emissions.
- Transit service partnerships with private vendors should entail commitments to good working conditions for drivers and high safety standards.
- As an unincorporated community, McKinleyville must rely on County-level planning, processes, and funding.
- There are multiple ways to define the boundary of McKinleyville.

5.2. Surveys

The project team's Public Outreach lead led the deployment of two surveys. The first was conducted in October 2020 and targeted houseless and at-risk members of the community. A total of 16 responses were received. The survey contained one question: 1) How often do you ride the bus? The survey respondents rode the bus in the following frequencies:

- Often: 5 responses (31%)
- Sometimes: 7 responses (44%)

- Never: 2 responses (13%)
- No Response: 2 responses (13%)

The survey also provided an option for open comments. Respondents shared comments related to challenges accessing the bus, service hours (early morning, late night, and Sunday service) and frequency, express service, fares, reliability, and experiences with operators. See **Appendix 2. Survey Responses** for more detail.

The second survey was conducted online between May 26, 2021 and June 25, 2021, and was designed as an opportunity for the general public to provide feedback on the project team's draft analysis and recommendations (as presented in public meetings and a draft final report made available on the project's website). Versions of the survey were provided via the project website in English and Spanish. A total of 38 responses were received (35 in English and 3 in Spanish). Respondents were asked whether they thought a new fixed route or microtransit service would work well in McKinleyville as well as how often and how close to their homes a new service would have to run for them to use it. There was also an opportunity for respondents to submit open-ended comments at the end of the survey. A full script of the survey and more detail are provided in **Appendix 2. Survey Responses**.

Most of the survey respondents (64%) are McKinleyville residents, while 17% work in McKinleyville and nearly a third do other activities such as shopping, dining, socializing, and accessing services. As a result, we feel confident the survey sample is comprised of individuals familiar with traveling in and around McKinleyville and Humboldt County.

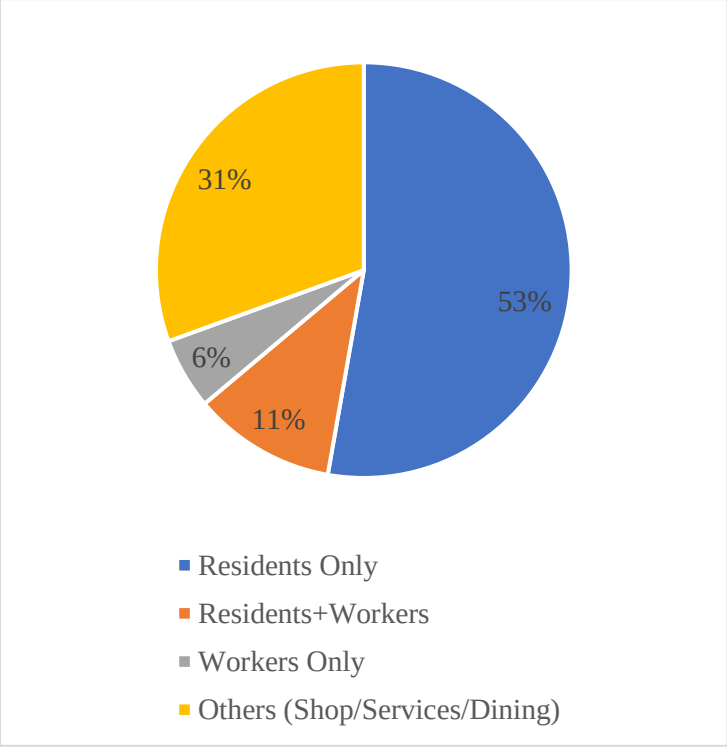
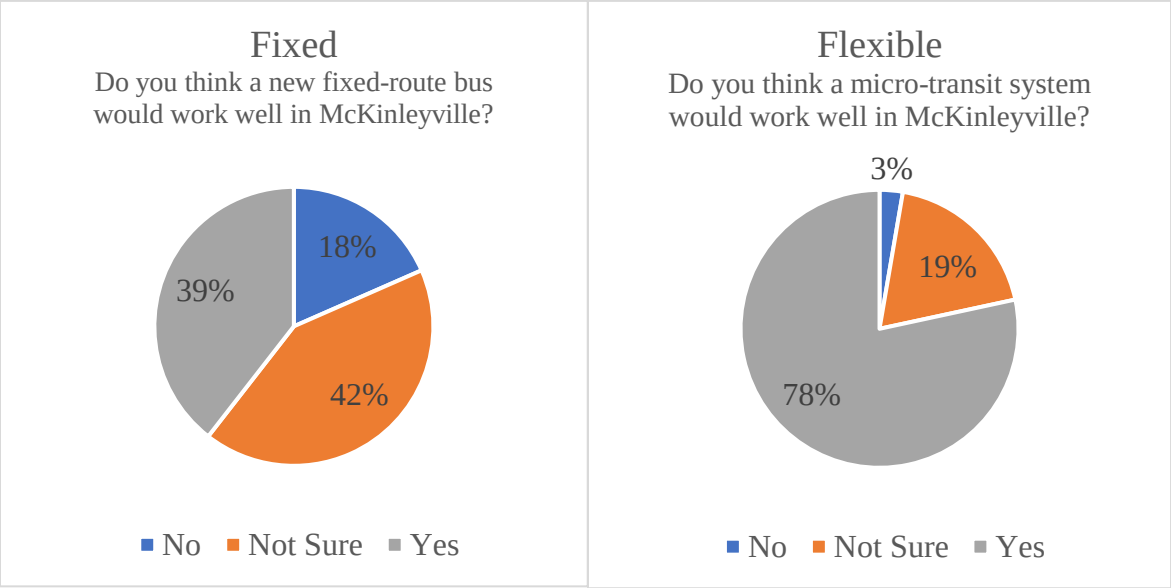


Figure 4. Survey Respondents by Residential, Work, and Other Activities in McKinleyville

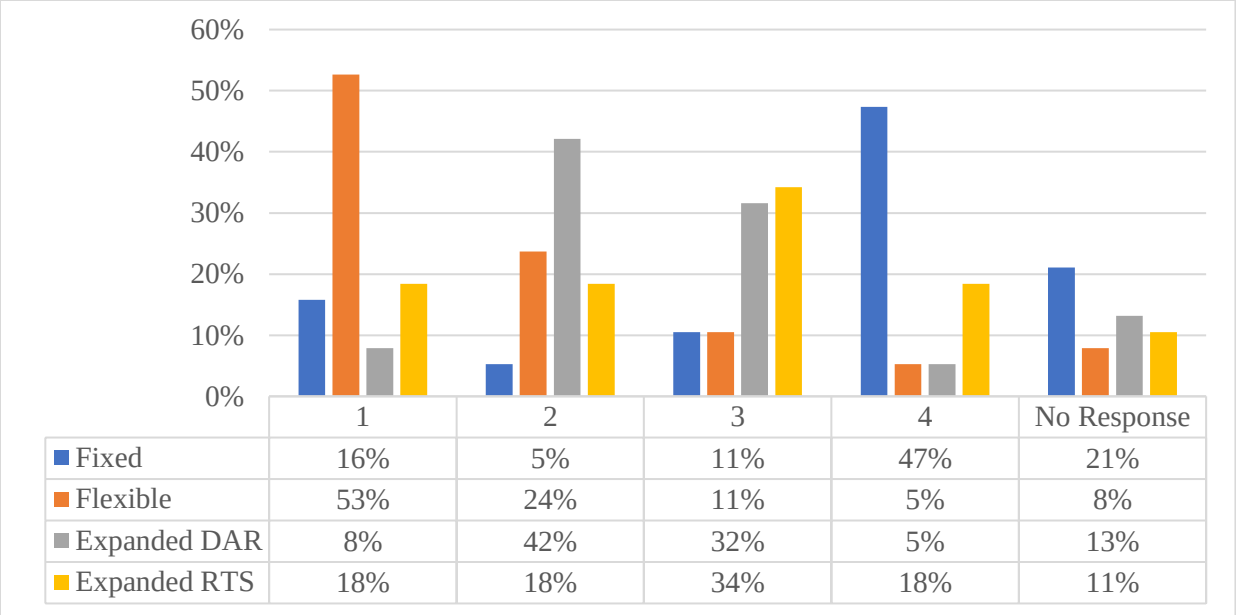
The survey provided an opportunity to gain feedback from the public regarding how well fixed versus flexible transit would work in McKinleyville. First, the survey asked about these service types separately. As summarized in **Figure 5**, 78% of survey respondents thought flexible transit would work well in McKinleyville, compared to 39% for fixed transit. This may be interpreted as a higher level of confidence in the fit of flexible transit for the McKinleyville community.



Notes: Compiled by WTI. Total for flexible transit excludes 1 missing response.

Figure 5. Survey Responses Regarding Fixed and Flexible Transit Working Well in McKinleyville

The survey also provided an opportunity to rank potential transit improvements in McKinleyville, from 1 (most preferred) to 4 (least preferred) (**Figure 6**). Flexible transit was the transit improvement most commonly ranked 1, while fixed transit was the transit improvement most commonly ranked 4 (least preferred).



	1	2	3	4	No Response
Fixed	16%	5%	11%	47%	21%
Flexible	53%	24%	11%	5%	8%
Expanded DAR	8%	42%	32%	5%	13%
Expanded RTS	18%	18%	34%	18%	11%

Figure 6. Survey Responses Regarding the Ranking of Potential Transit Improvements

Another way to evaluate these responses is through a weighted average of the rankings. Using this approach (and excluding non-responses from the total), the weighted average ranking is 3.1 for fixed transit, 1.7 for flexible transit, 2.4 for expanded DAR, and 2.6 for expanded RTS, with lower weighted averages more preferred. By this measure, flexible transit is the most preferred transit improvement for McKinleyville, followed by expanded DAR, expanded RTS, and fixed transit.

In addition, the survey collected information about the proximity of transit stops and wait times (**Figure 7**). A combined 70% would need to be able to access a fixed or flexible bus stop within a quarter of a mile or less. Another 22% would be willing to use a transit stop up to a half mile away. Only 8% of the survey sample would be willing to use transit regularly with a stop over a half mile away. These responses help to identify the “transit-sheds” or buffers around stops that could feasibly capture regular riders.

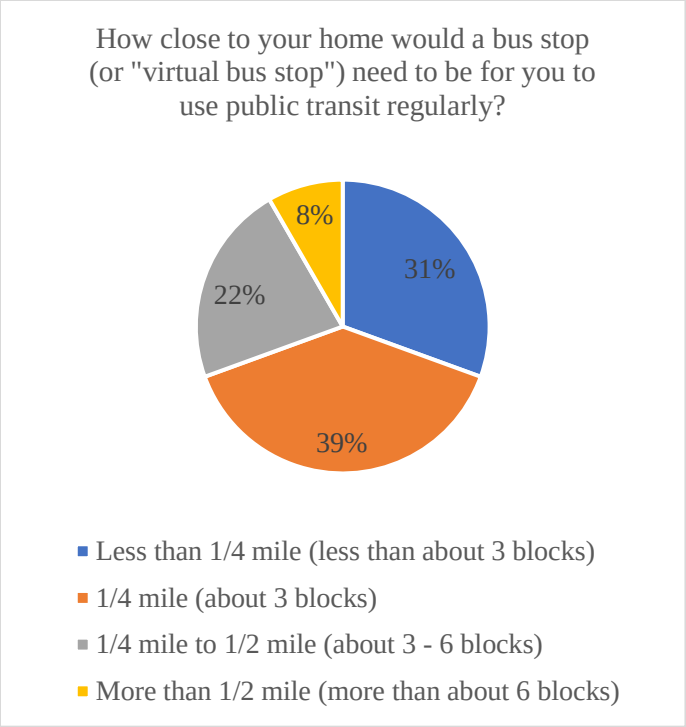
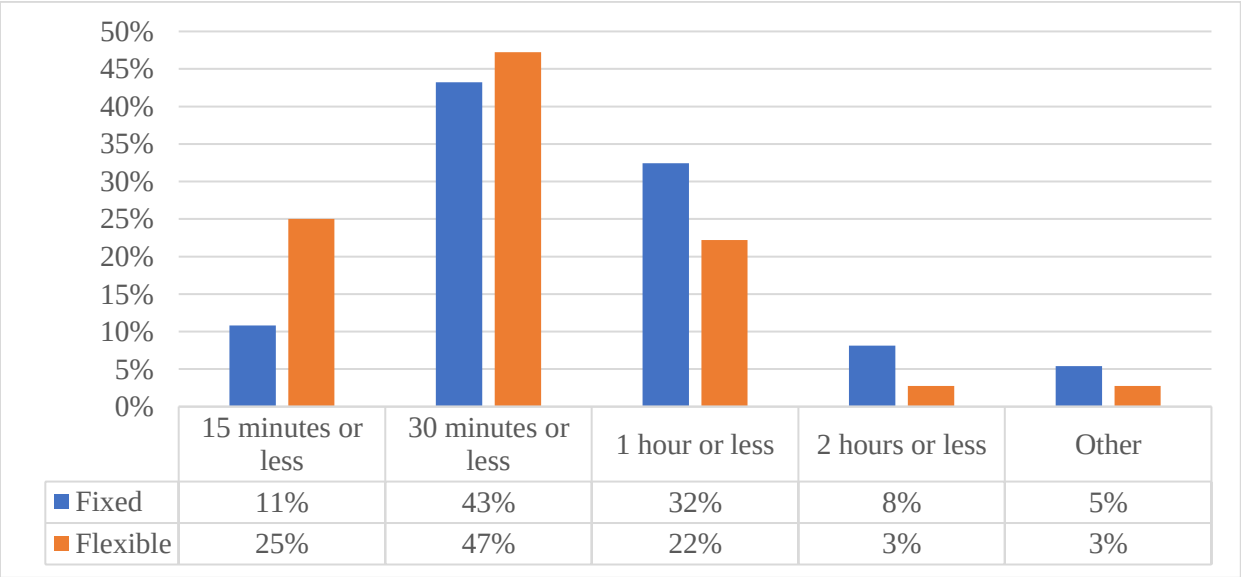


Figure 7. Survey Responses Regarding Proximity of Transit Stops for Regular Use

In terms of wait times, there was a higher tolerance for waiting for fixed than flexible transit (**Figure 8**). About a quarter of respondents would need a flexible service like microtransit or ridehailing to arrive within 15 minutes or less, compared to just 11% for fixed transit. A combined 54% of respondents would need fixed transit within 30 minutes to be a regular rider compared to 73% for flexible transit.



	15 minutes or less	30 minutes or less	1 hour or less	2 hours or less	Other
Fixed	11%	43%	32%	8%	5%
Flexible	25%	47%	22%	3%	3%

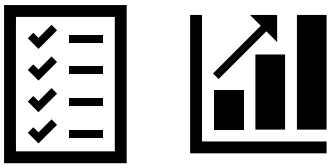
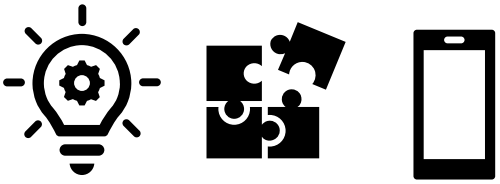
Figure 8. Survey Responses Regarding Wait times for Regular Use

Overall, the results of the second survey suggest a preference for introducing new flexible transit over fixed transit, or making adjustments to current transit offerings. Proximity and wait time preferences indicate that regular ridership in McKinleyville will be built through service that is convenient to access and relatively frequent or responsive to ride requests.

6. McKinleyville Guiding Principles for Public Transportation

Guiding principles serve a critical purpose in feasibility studies and assessments of public resource investments, because they provide context-sensitive orientation for the analysis. Based on the planning documents and public outreach, the research team distilled the following six McKinleyville Guiding Principles for Public Transportation (**Table 1**). We sought to consider these principles in the assessment of potential transit investments for McKinleyville and accompanying guidance for public transportation in Humboldt County more generally.

Table 1. McKinleyville Guiding Principles for Public Transportation

Contribute to McKinleyville's Community Vision & Unique Identity 	Complement the Regional Public Transportation System 
Offer Convenient, Connected, Accessible, & Context-Appropriate Service 	Support the Ahwahnee Principles, Smart Growth, and Sustainability, Including Electrification & Multimodal Integration 
Achieve High Performance in Measures of Efficiency and Effectiveness 	Support Innovation Informed by Peers & Best Practices 

7. Existing Conditions

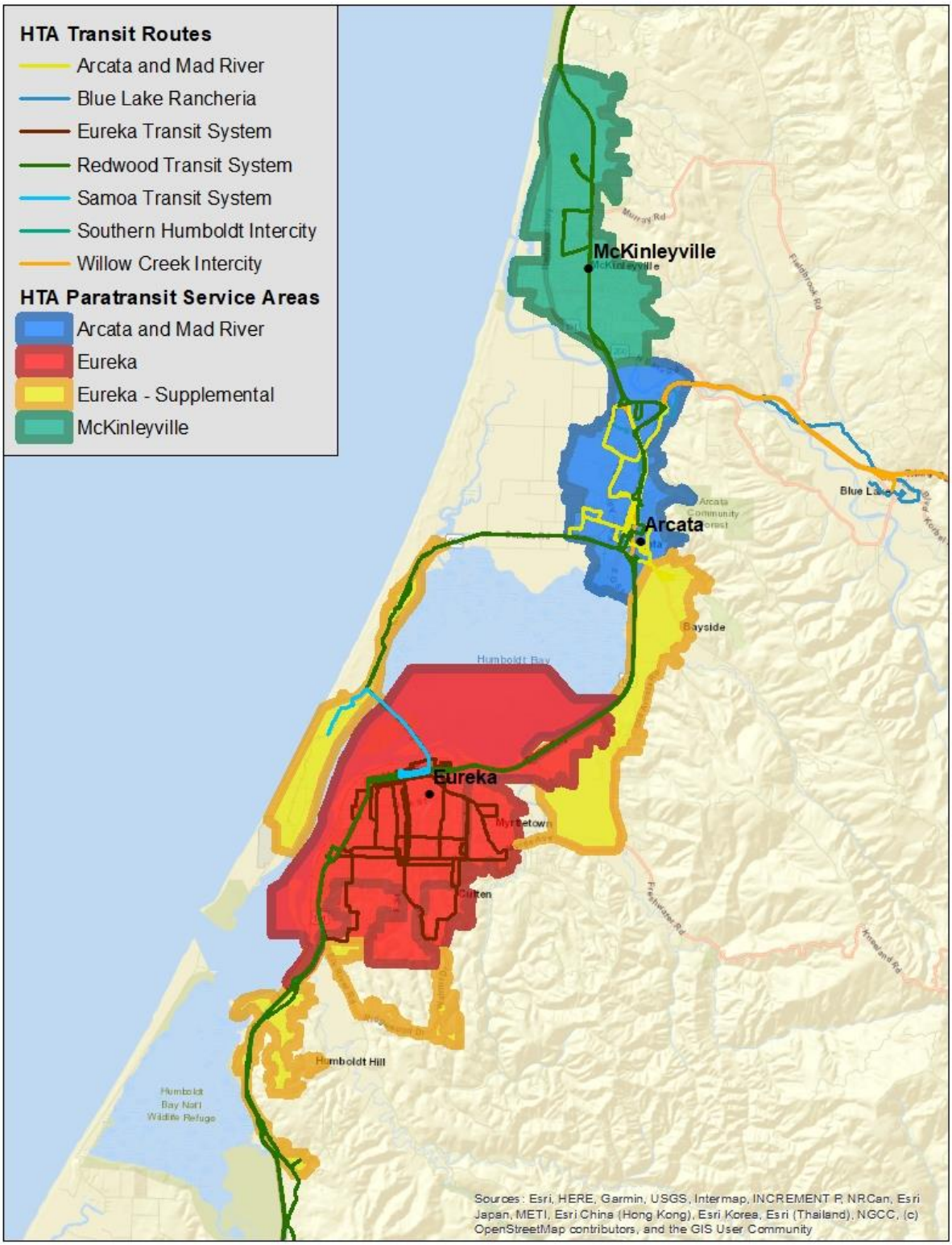
As described above, the primary motivation for this project was an interest in assessing an investment in fixed-route transit service within McKinleyville, similar to what is available in the City of Eureka via the Eureka Transit Service and the City of Arcata via the Arcata & Mad River Transit System. We reviewed existing conditions to inform our assessment, which has two primary components (technical feasibility and financial viability) and one overall goal (likelihood of success).

The success of a transit service depends on several factors. Typically, performance measures of productivity and costs (e.g. total ridership, ridership per hour, cost per vehicle hour, cost per trip) are important aspects of judging a service's level of success. Additional measures surrounding customer satisfaction and quality of life improvements (e.g., providing access) are also important to consider.

Our review of existing conditions focused on measures that are themselves likely to have an impact on the factors indicative of transit service success. In particular, we reviewed current public transportation service, key trip generators, core sociodemographic indicators associated with the demand for public transportation (i.e., population density, the share of the community who is older, in poverty, or disabled, and the share of households with limited access to private vehicles), measures of the built environment (i.e., walkability and roadway density), and measures of the economy (e.g., total firms, retail sales, and net job flows).

7.1. Humboldt Transit Authority

The Humboldt Transit Authority ("HTA") offers two types of public transportation in McKinleyville: 1) Redwood Transit System ("RTS") fixed commuter service between Trinidad and Rio Dell, with several stops in McKinleyville; and 2) Dial-a-Ride ("DAR") flexible shared-ride service for individuals unable to use the fixed system due to a disabling condition. The RTS offers service across a 12-hour window on weekdays at hourly headways and across an 11-hour window on Saturdays at 3-hour headways. Adult cash fares are currently $2.10 in-town and otherwise $3.50. DAR offers service across a 13-hour window on weekdays and a 9.5-hour window on Saturdays. DAR trips cost $3 within a single zone, $6 across two zones, and $9 across three or more zones. **Figure 9** provides a map of RTS and DAR services as well as additional fixed transit routes within Humboldt County.



Note: Map created by WTI using data for transit services provided by HTA and an ESRI basemap.

Figure 9. Map of HTA Transit Routes and Dial-a-Ride Service Areas

We reviewed sample datasets for RTS and DAR provided by HTA upon request: 1) the RTS boarding/alighting ("on/off") tabulations by stop for 2019; and 2) the DAR trips with origins or destinations in McKinleyville for October-December 2019. As a result, these sample datasets represent travel prior to the onset of the COVID-19 pandemic.

7.1.1. RTS On/Off Tabulations by Stop for the McKinleyville Area

Table 2 summarizes tabulations for 2019 RTS boardings at stops in the McKinleyville area, organized by route order from north to south. Most of the RTS stops in the McKinleyville area follow Central Avenue, except for a horseshoe-shaped deviation west for the Murray Road, McKinleyville High School, and Railroad Drive stops. All but two stops have average daily and hourly boardings below the RTS average for all stops. The two busiest stops in McKinleyville (at the Shopping Center and School Road) are along Central Avenue in the commercial core of the community. In terms of RTS as a whole, the busiest stops are Bayshore Mall (15 miles south of McKinleyville), HSU Library Circle (5 miles south of McKinleyville), Arcata Transit Center (6 miles south of McKinleyville), and the College of the Redwoods (23 miles south of McKinleyville).

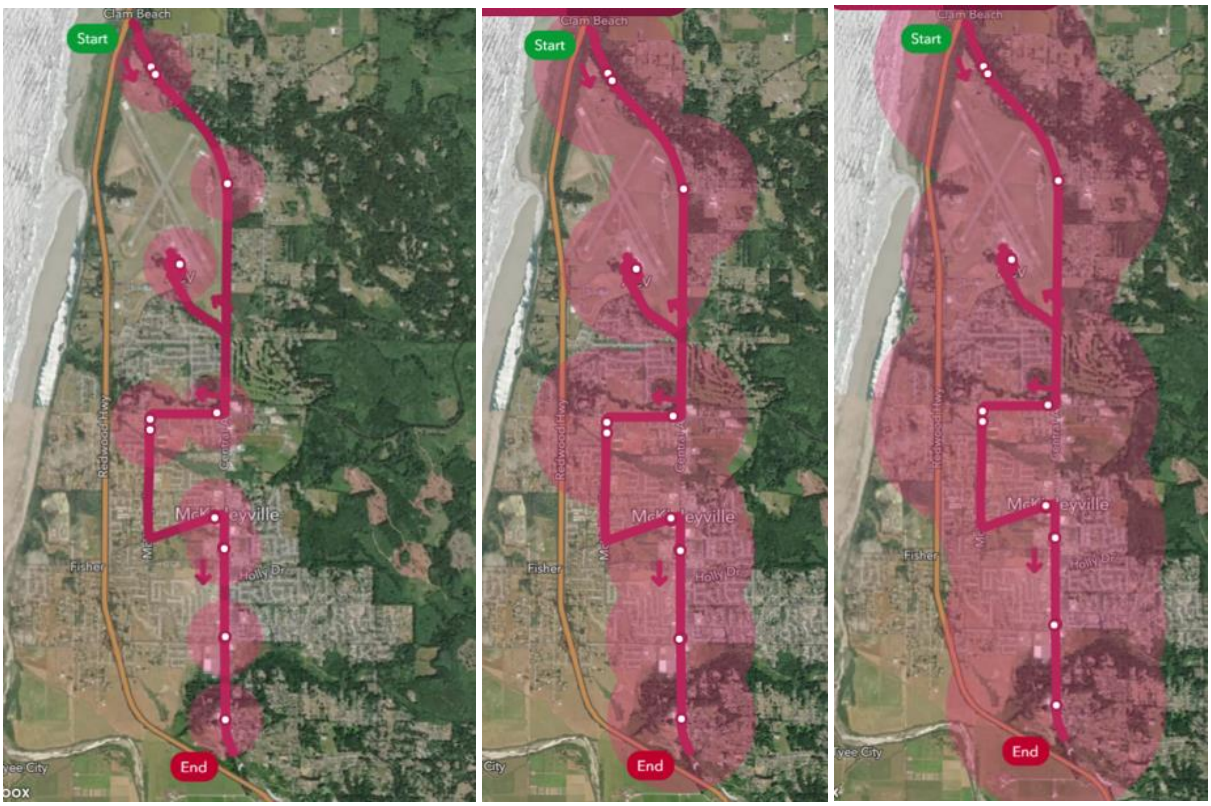
Table 2. Tabulations of RTS Boardings by Stop for the McKinleyville Area

	Boardings	
Stop Name	**Average Daily Total**	**Average Hourly Total**
McKinleyville Area Stops		
Clam Beach Road	4	0.3
Grange Road	4	0.3
Airport Terminal	9.5	0.8
Murray Road	19	1.5
McKinleyville High School	19	1.5
Railroad Drive	14	1.1
McKinleyville Shopping Center	52	4.3
School Road	51	4.3
Bella Vista Ave	5	0.4
McKinleyville Area Average	***19***	***1.6***
RTS Average (All Stops)	***28***	***2.3***
RTS Minimum	0	0
RTS Maximum	180	15

Note: Compiled by WTI using data for 2019 provided by HTA upon request. Totals combine northbound and southbound stop locations. Average hourly totals are based on 12 hours of service.

For further context, we reviewed the population surrounding the RTS stops in the McKinleyville Area using three buffer sizes. Approximately 2,800 people live within a quarter mile of the McKinleyville area RTS stops, while approximately 6,800 live within a half mile and 9,700 live within three-quarters of a mile (**Figure 10**). As discussed above, our May-June 2021 survey

suggests 70% of McKinleyville residents would need to be within a quarter mile or less of a bus stop to use it regularly, while an additional 22% would be willing to use a stop as far as a half mile away (see **Figure 7** in Section 5.2 above).



Note: Prepared for WTI by request by HCAOG Associate Regional Planner Stephen Luther using the Remix software, which utilizes the American Community Survey as source data. From left to right, the three images represent 0.25-, 0.50-, and 0.75-mile buffers around each RTS stop.

Figure 10. Population Concentrations Around RTS Stops in the McKinleyville Area

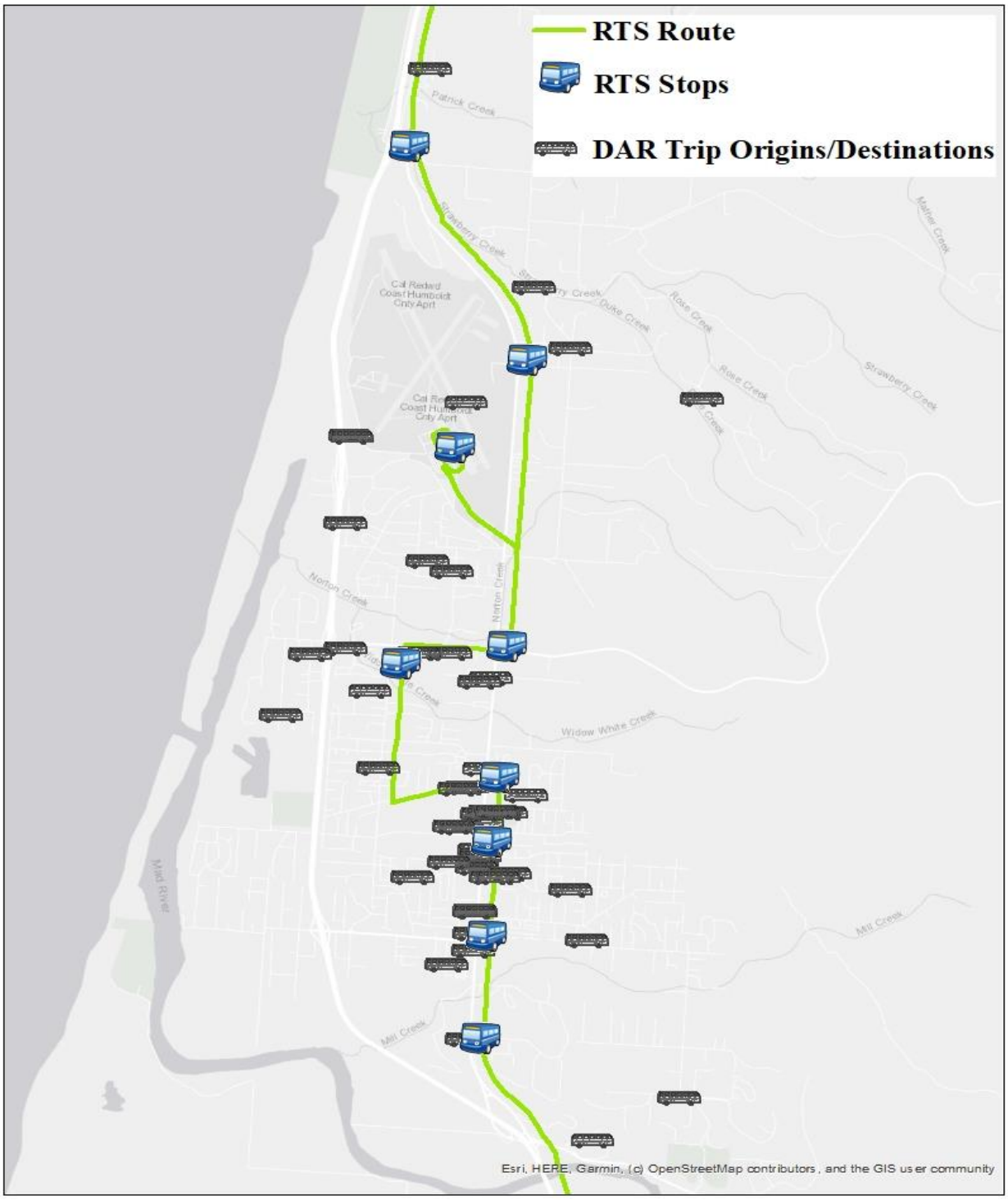
7.1.2. DAR Trips in McKinleyville

Table *3* summarizes DAR trips with origins and/or destinations in McKinleyville for October-December 2019. During this time period, 160 trips both started and ended within McKinleyville, for a daily average of 1.7 trips. Meanwhile, 188 trips either started or ended in Eureka, for a daily average of 2.2, and 68 trips either started or ended in Arcata, for a daily average of 0.8. During this time period, 42 unique individuals originated trips within the McKinleyville service zone, and 44 individuals ended trips within the McKinleyville service zone. **Figure 11** provides a map of October-December 2019 DAR trip origins and destinations, along with the RTS routes and stops for the McKinleyville area. Many DAR trips start or end in locations near the busiest RTS stops (the Shopping Center and School Road) in McKinleyville.

Table 3. Tabulations of DAR Trips with Origins and/or Destinations in McKinleyville

Origin	Destination	Total Trips (Oct-Dec 2019)	Daily Average
McKinleyville	McKinleyville	160	1.7
McKinleyville	Arcata	33	0.4
McKinleyville	Eureka	89	1.0
McKinleyville	Bayside	1	0.0
Arcata	McKinleyville	35	0.4
Eureka	McKinleyville	99	1.1

Note: Compiled by WTI using data for October-December 2019 provided by HTA upon request.



Note: Map created by WTI using data for transit services provided by HTA and an ESRI basemap. Map depicts the geographic distribution of DAR trips, but not the frequency of trips starting or ending at each location.

Figure 11. Map of RTS Route and Stops and DAR Trip Origin/Destination Locations within the McKinleyville Area

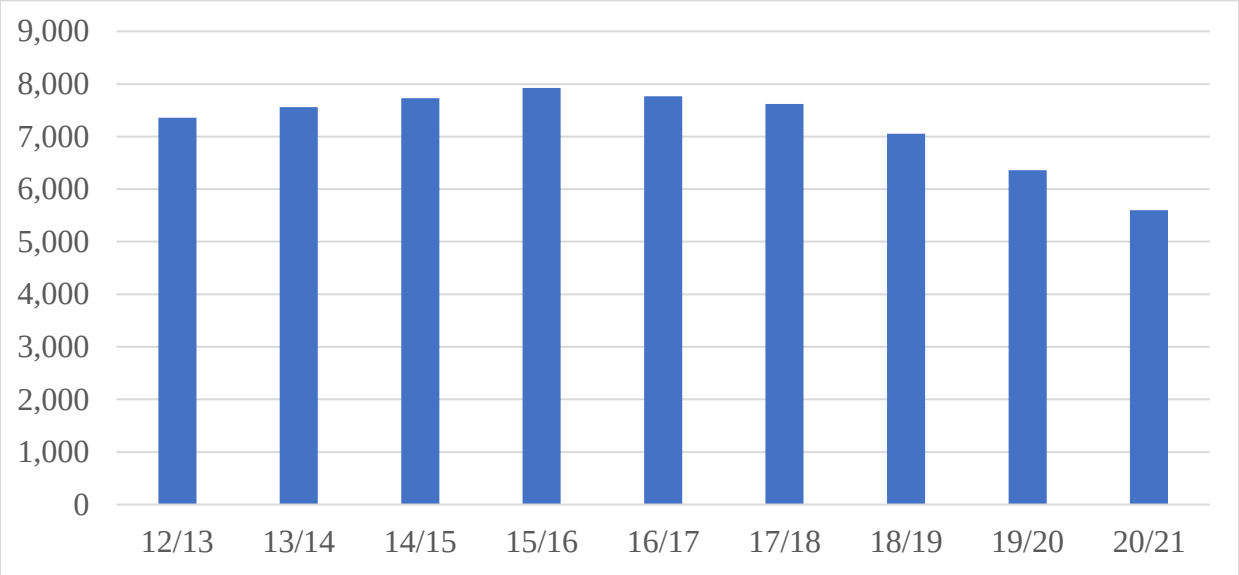
7.2. Key Trip Generators

We also reviewed information about key trip generators in Humboldt County to provide further context for the analysis. In particular, we reviewed information for Humboldt State University ("HSU"), major employers in Humboldt County, and the California Redwood Coast-Humboldt County Airport (formerly Arcata-Eureka Airport).

7.2.1. Humboldt State University

Two recent reports provided helpful information for understanding HSU's role in Humboldt County: 1) the HSU Parking Market Demand Study (Fisher, 2018); and 2) the HSU Commuter Survey and Status of Programs to Reduce Carbon Emissions (Office of Sustainability, 2020). In addition, we compiled data on student enrollment and faculty employment levels provided by HSU Institutional Research, Analytics and Reporting (https://irar.humboldt.edu/).

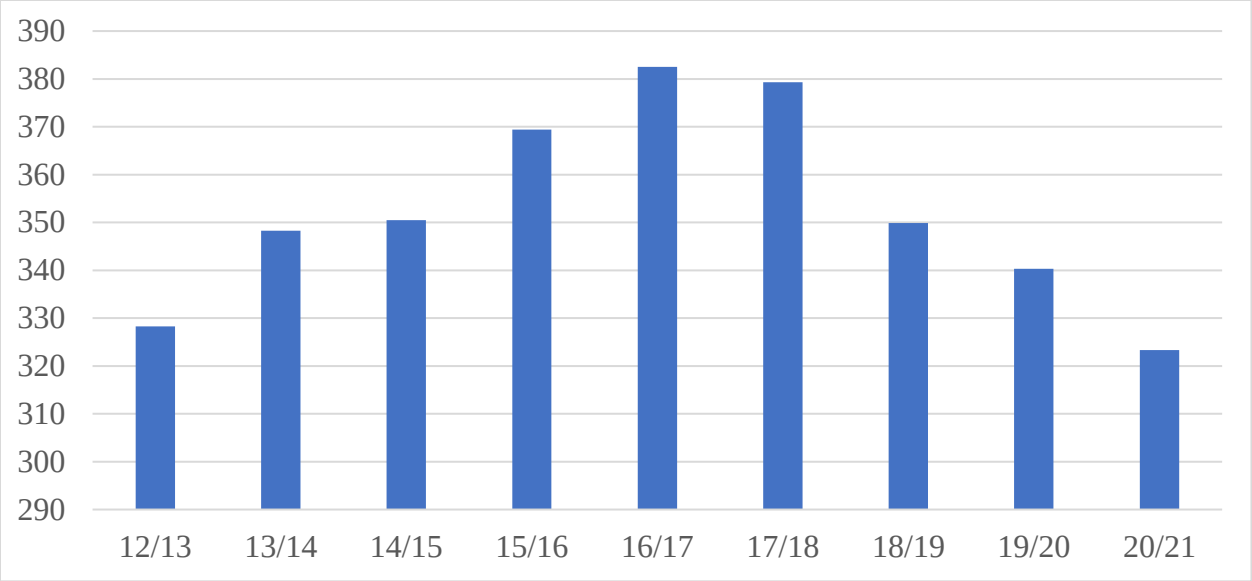
Since the 2012-2013 academic year, student enrollment (**Figure 12**) has ranged between a low of 5,599 (2020-2021) and a high of 7,922 (2015-2016). During that same time period, full-time equivalent faculty (**Figure 13**) ranged from 323 (2020-2021) to 383 (2016-2017). While HSU student enrollment and faculty employment have declined in recent years, it is possible these trends could reverse if HSU becomes California's third designated polytechnic university.[2]



Note: Compiled by WTI using data from the HSU Institutional Research, Analytics and Reporting (https://irar.humboldt.edu/).

Figure 12. HSU Student Enrollment Between the 2012-2013 and 2020-2021 Academic Years

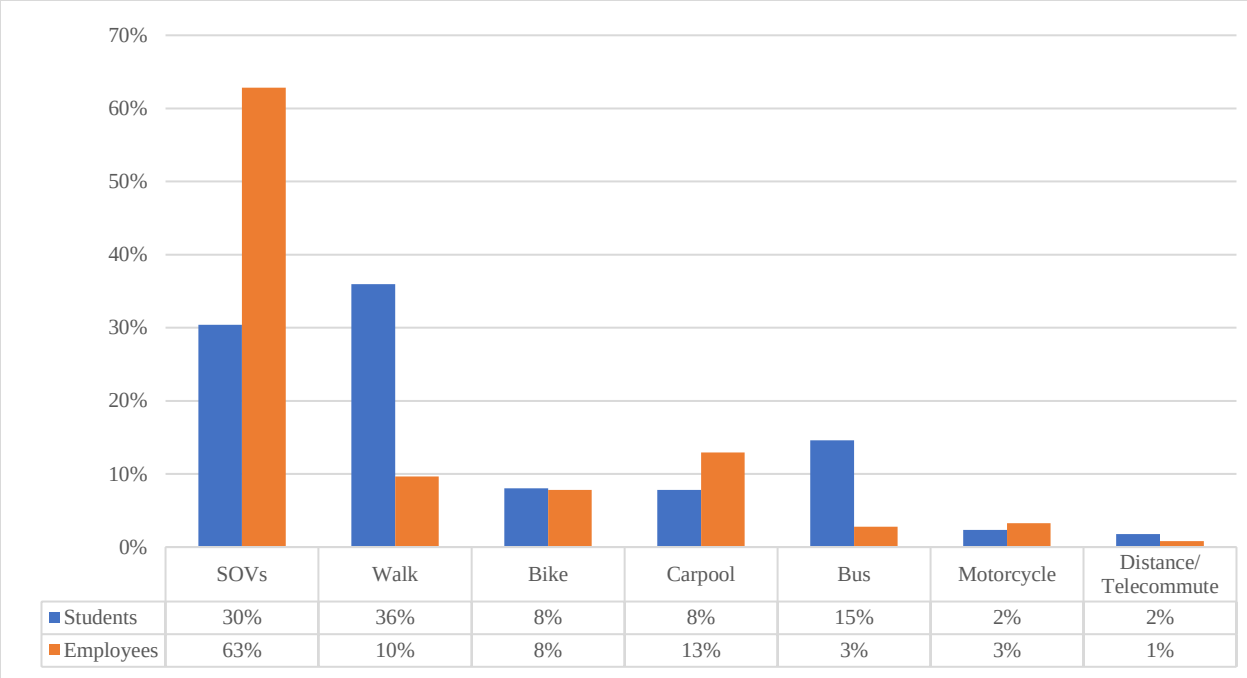
[2] For more information, see: https://www.humboldt.edu/polytechnic.



Note: Compiled by WTI using data from the HSU Institutional Research, Analytics and Reporting. Totals represent Full-Time Equivalent Faculty (https://irar.humboldt.edu/).

Figure 13. HSU Faculty Levels Between the 2012-2013 and 2020-2021 Academic Years

Most students are full-time, with a three-year average across Fall 2018-Fall 2020 of 90%. Meanwhile, most students also live off campus, with a three-year average across Fall 2018-Fall 2020 of 79%. Together, this suggests a need for student commuting to campus. In a 2019-2020 survey (inclusive of students living on campus), nearly half of all students reported a commute distance of one mile or less; the average student commute was 4.24 miles. Meanwhile, the average faculty commute was 6.27 miles and the average staff commute was 8.93 miles. Data collected on commute modes for the 2017-2018, 2018-2019, and 2019-2020 academic years indicate that most students walk (36% three-year average) or drive (30% three-year average) to campus, while most employees drive (63% three-year average) or carpool (13% three-year average) (**Figure 14**).



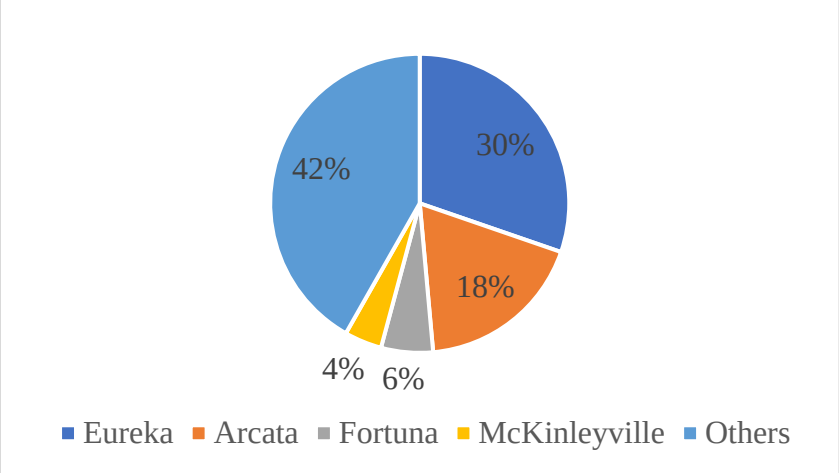
	SOVs	Walk	Bike	Carpool	Bus	Motorcycle	Distance/ Telecommute
Students	30%	36%	8%	8%	15%	2%	2%
Employees	63%	10%	8%	13%	3%	3%	1%

Note: Compiled by WTI using a three-year average for the 2017-2018, 2018-2019, and 2019-2020 academic years based on data presented in the HSU Commuter Survey and Status of Programs to Reduce Carbon Emissions (Office of Sustainability, 2020).

Figure 14. Primary Commute Mode Share for HSU Students and Employees

7.2.2. Major Employers

As compiled in the 2017-2022 Transit Development Plan (LSC Transportation Consultants, 2017), employment in Humboldt County is concentrated in Eureka and Arcata; just 4% of Humboldt County residents work in McKinleyville (**Figure 15**).



Note: Graphic created by WTI using information presented in the 2017-2022 Transit Development Plan (LSC Transportation Consultants, 2017). Original source data are from the Census Bureau's 2010 Longitudinal Employer-Household Dynamics dataset.

Figure 15. Employment Distribution of Humboldt County Residents

Table 4 summarizes the major industries and their locations for Humboldt County. McKinleyville is not currently a major employment hub.

Table 4. Major Industries and Employment Hubs for Humboldt County

Major Industries	Locations
Casinos	Arcata
Forestry	Blue Lake
Greenhouses	Eureka
Government	Korbel
Higher Ed	Trinidad
Hospitals	
Retail/Grocers/Department Stores	
Schools	
Trucking	

Note: Table compiled by WTI using information presented in the 2017-2022 Transit Development Plan (LSC Transportation Consultants, 2017). Original source data is from the Census Bureau's 2010 Longitudinal Employer-Household Dynamics dataset.

7.2.3. Airport

The California Redwood Coast-Humboldt County Airport (formerly Arcata-Eureka Airport, referred to hereafter as "Airport") offers commercial, passenger, and freight service. It experienced a decline in enplanements in the past decade (Humboldt County Association of Governments, 2017, Table Aviation-1 California Redwood Cost Airport Enplanements 2009-2015). The airport is currently served by HTA's RTS as well as Amtrak passenger rail. As mentioned above, the Airport's RTS stop experiences about 9.5 boardings per day. This stop has been critiqued as a route deviation from Central Avenue that slows down commuter service and gets relatively low use; as mentioned above, the Mobility-on-Demand Strategic Development Plan suggested streamlining the RTS route by replacing the deviation to the Airport with Personal Mobility On Demand (IBI Group, 2020).

7.3. Sociodemographic Indicators

Humboldt County has an estimated population of 135,768 spread across 3,567 square miles. As summarized in **Table 5**, there are 37 Census Designated Places (CDPs) within Humboldt County, which together have a combined total population of 114,392 (about 84% of the entire Humboldt County population). Of those 37 CDPs, 21 have an estimated population under 1,000, 12 have an estimated population between 1,000 and 5,300, and 4 have an estimated population over 10,000 (**Figure 16**). For our analysis, we focused on comparing McKinleyville (16,612) with the other 3 largest CDPs in Humboldt County: Fortuna (12,117), Arcata (18,050), and Eureka (27,020).[3]

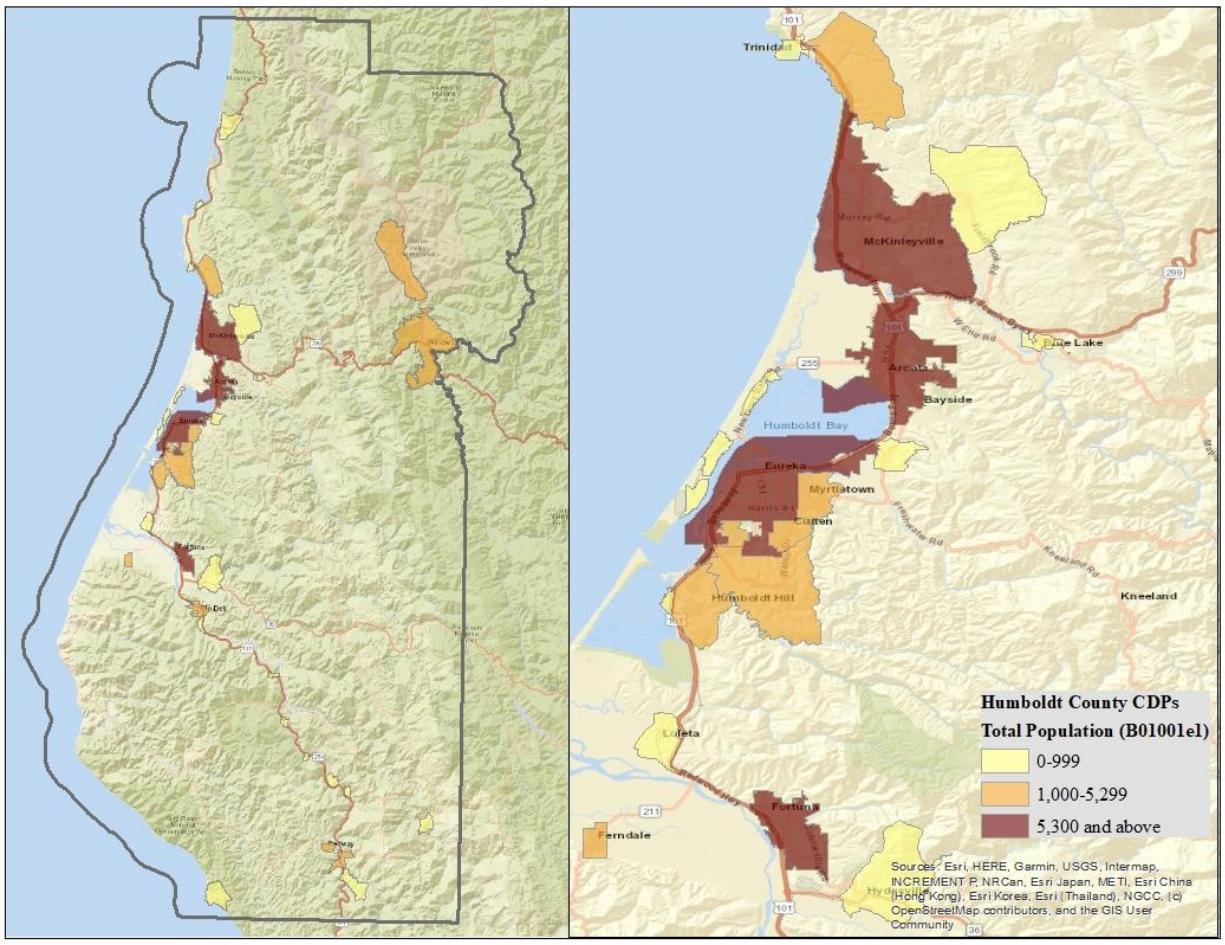
[3] This report contains slight variations in total population estimates due to differences between the Census Bureau's 2014-2018 and 2015-2019 American Community Survey 5-Year Estimates.

Table 5. Total Population Estimates for Humboldt County Census Designated Places

CDP Name	Population	CDP Name	Population
Myers Flat	-	Westhaven-Moonstone	1,084
Redcrest	23	Garberville	1,126
Phillipsville	72	Redway	1,199
Blue Lake	118	Ferndale	1,365
Fairhaven	145	Willow Creek	1,539
Alderpoint	157	Bayview	2,617
Benbow	161	Cutten	3,029
Weott	271	Pine Hills	3,146
Trinidad	272	Rio Dell	3,382
Samoa	284	Hoopa	3,573
Orick	296	Humboldt Hill	4,268
Fields Landing	325	Myrtletown	5,290
Shelter Cove	501	Fortuna	12,117
Scotia	602	***McKinleyville***	***16,612***
Miranda	672	Arcata	18,050
Loleta	676	Eureka	27,020
Indianola	686	**Subtotal**	114,392
Manila	834	**Outside CDPs**	21,376
Fieldbrook	921	**Humboldt County Total**	135,768
Hydesville	978		
Big Lagoon	981		

Notes: Prepared by WTI using the American Community Survey 2014-2018 5-Year estimates for total population (B01001e1 in Table X01 Age and Sex) provided in the Census Bureau's TIGER/Line with Selected Demographic and Economic Data product, which combines geospatial and sociodemographic information (U.S. Census Bureau, 2014-2018).

Whenever possible, we used the most recent estimates. However, the latest version available of the Census Bureau's TIGER/Line with Selected Demographic and Economic Data product relies on the 2014-2018 estimates.



Notes: Prepared by WTI using the American Community Survey 2014-2018 5-Year estimates for total population (B01001e1 in Table X01 Age and Sex) provided in the Census Bureau's TIGER/Line with Selected Demographic and Economic Data product, which combines geospatial and sociodemographic information (U.S. Census Bureau, 2014-2018).

Figure 16. Map of Total Population for the Census Designated Places within Humboldt County

Table *6* summarizes core sociodemographic indicators associated with the demand for public transportation for the four largest CDPs in Humboldt County, as well as the county as a whole. Overall, McKinleyville has lower population density (827 persons per square mile) than Arcata (1,998), Eureka (2,869) and Fortuna (2,544), but higher than the county as a whole (38).[4] Meanwhile, the share of the population aged 65 and over in McKinleyville (15.0%) is lower than the share in Eureka (17.6%) and Fortuna (19.0%) as well as the county as a whole (17.3%), but higher than in Arcata (11.3%). McKinleyville has the highest median income ($54,614) of the four largest CDPs, and its level is higher than the county median income ($48,041) as well. Meanwhile, the share of the population below the poverty level (17.3%) is lower than the shares in Arcata (38.0%) and Eureka (20.0%) as well as the county as a whole (20.1%), but higher than the share in Fortuna (16.9%).[5] The share of the population with a disability (16.8%) in McKinleyville is similar to the share in the county as a whole (16.5%), but higher than the share in Arcata (10.4%) and lower than the shares in Eureka (17.8%) and Fortuna (20.4%). McKinleyville generally has the highest levels of private vehicle ownership among the four largest CDPs; 6.1% of households do not own a private vehicle, while 30.7% own one vehicle, for a combined total of 36.9% of households. Meanwhile, the combined totals for zero- and one-vehicle households are 50.1% in Arcata, 52.2% in Eureka, and 39.4% in Fortuna, as well as 40.8% for the county as a whole.

[4] We used the Census Designated Place boundary for McKinleyville, in order to be able to utilize standardized sociodemographic data from the Census Bureau's American Community Survey.

[5] In most parts of the U.S., income is negatively associated with the demand for public transportation, while poverty is positively associated. A few exceptions occur in some of the largest metropolitan areas where congestion and parking costs push more middle- and high-income earners to seek out alternatives to driving.

Table *6* summarizes one additional measure, primary commute mode shares.[6] McKinleyville has the highest combined (drove alone and carpooled) reliance on private vehicles for commuting (92.9%), compared to 66.7% in Arcata, 82.2% in Eureka, and 87.4% in Fortuna, as well as 82.0% for the county as a whole.

While the specific marginal effect of each of the indicators compiled in

[6] While not a sociodemographic indicator like the other measures in the table, it is an important existing condition relevant to the overall contextualizing of McKinleyville in relation to the rest of the county.

Table *6* is difficult to isolate, taken together, these sociodemographic indicators suggest the current demand for public transportation in McKinleyville is likely to be lower than in Arcata and Eureka, and possibly Fortuna as well.

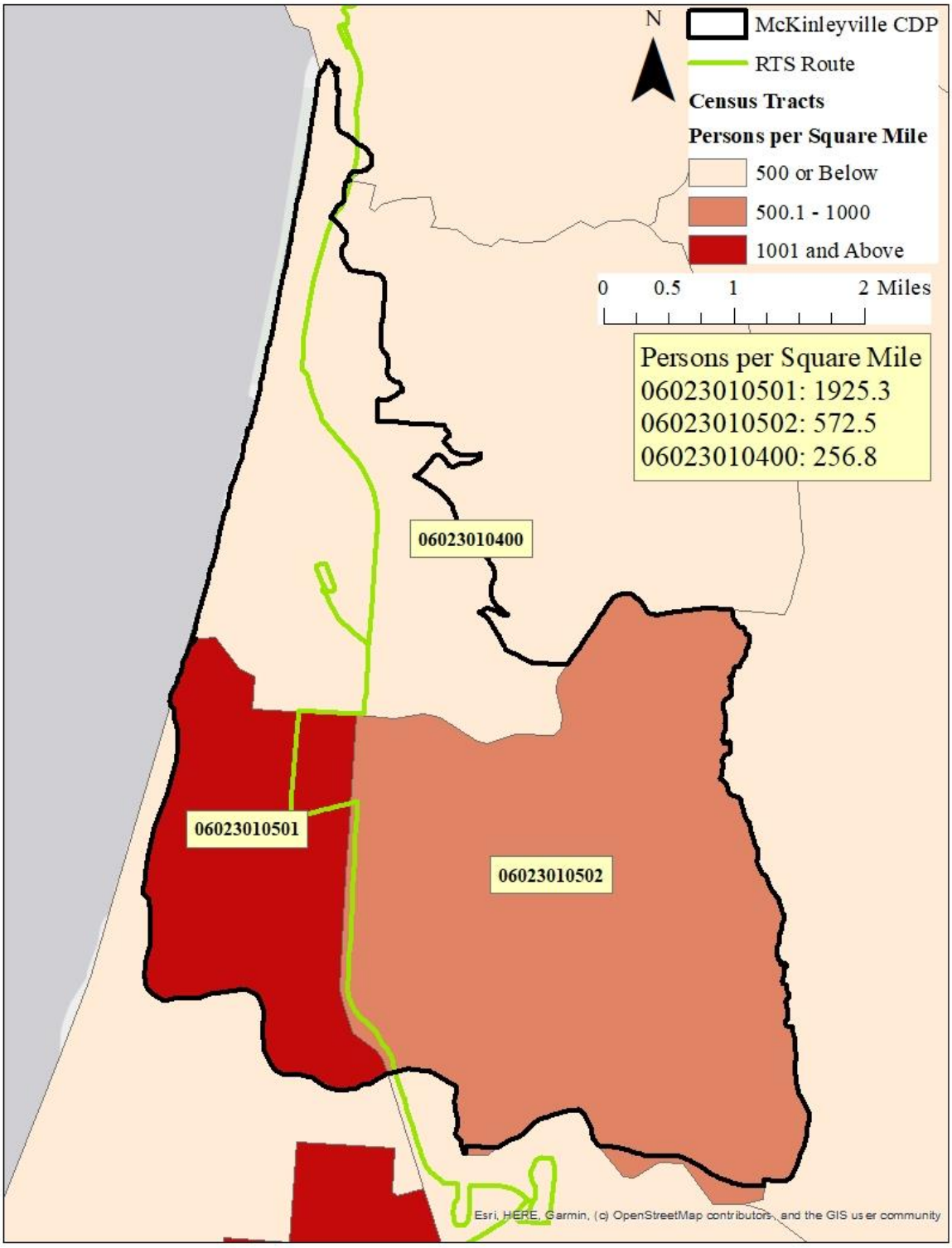
For further context, **Figure 17** maps population density for the McKinleyville area by Census Tract. The McKinleyville Census Designated Place boundary covers three Census Tracts, with Census Tract 06023010400 spanning beyond the McKinleyville boundary. While one of the Census Tracts, 06023010501, has a population density (1,925.3 persons per square mile) above the general threshold (1,000 persons per square mile, see Section 3.1 above) for fixed transit, the other two have population densities well below.

Table 6. Sociodemographic Indicators for Humboldt County, Arcata, Eureka, Fortuna, and McKinleyville

	Humboldt	Arcata	Eureka	Fortuna	McKinleyville
Population	135940	18178	26966	12210	17208
Margin of Error		30	43	47	1034
Coefficient of Variation		0.10	0.10	0.23	3.65
Reliability		High	High	High	High
Households	54679	7155	11606	4769	6618
Margin of Error	795	415	511	258	259
Coefficient of Variation	0.88	3.53	2.68	3.29	2.38
Reliability	High	High	High	High	High
Area (Square Miles)	3,567	9.1	9.4	4.8	20.8
Area (Acres)	2,282,880	5824	6016	3072	13312
Population Density (Persons per Square Mile)	38	1,998	2,869	2,544	827
Household Density (Households per Acre)	0.02	1.23	1.93	1.55	0.50
Age					
Under 18 years	26137	1816	5091	2865	3922
Share of Population	19%	10%	19%	23%	23%
Margin of Error	108	337	506	292	381
Coefficient of Variation	0.25	11.28	6.04	6.20	5.91
Reliability	High	High	High	High	High
18 to 24 years	17340	6743	2435	1067	2313
Share of Population	13%	37%	9%	9%	13%
Margin of Error	190	553	498	278	527
Coefficient of Variation	0.67	4.99	12.43	15.84	13.85
Reliability	High	High	Medium	Medium	Medium
65 years and over	23518	2063	4748	2324	2586
Share of Population	17%	11%	18%	19%	15%
Margin of Error	77	277	329	289	303
Coefficient of Variation	0.20	8.16	4.21	7.56	7.12
Reliability	High	High	High	High	High
Median Income - Households	$48,041	$35,506	$42,890	$46,193	$54,614
Margin of Error	$1,798	$4,415	$3,275	$4,919	$4,773
Coefficient of Variation	2.28	7.56	4.64	6.47	5.31
Reliability	High	High	High	High	High
Poverty Status in the Past 12 Months (Percent)	20.1	38	20	16.9	17.3
Margin of Error	1.3	4.4	2.9	3.3	6.4
Coefficient of Variation	3.93	7.04	8.81	11.87	22.49
Reliability	High	High	High	High	Medium

	Humboldt	Arcata	Eureka	Fortuna	McKinleyville
Disability Status (Percent)	16.5	10.4	17.8	20.4	16.8
Margin of Error	0.7	1.9	2.3	3.2	2.4
Coefficient of Variation	2.58	11.11	7.85	9.54	8.68
Reliability	High	High	High	High	High
Household Vehicles (Percent)					
0	7.4	10	12.1	6.2	6.1
Margin of Error	0.8	2.6	2.8	2.5	2.4
Coefficient of Variation	6.57	15.81	14.07	24.51	23.92
Reliability	High	Medium	Medium	Medium	Medium
1	33.4	40.1	40.1	33.2	30.7
Margin of Error	1.5	4	3.6	4.5	4.2
Coefficient of Variation	2.73	6.06	5.46	8.24	8.32
Reliability	High	High	High	High	High
Primary Commute Mode Share (Percent)					
Car, Truck, or Van	82	66.6	82.2	87.5	92.9
Margin of Error	1.2	4.5	2.9	3.3	3
Coefficient of Variation	0.9	4.1	2.1	2.3	2.0
Reliability	High	High	High	High	High

Notes: Compiled by WTI using the following tables from the American Community Survey 2015-2019 5-Year Estimates (U.S. Census Bureau, 2015-2019): Population (B01003); Households (S1101); Seniors (S0101); Median Income (S1903); Poverty Status (S1701); Disability Status (S1810); Household Vehicles (B08201).



Note: Map created by WTI using population data at the Census Tract level from the 2014-2018 American Community Survey (U.S. Census Bureau, 2014-2018). The RTS route is provided as a spatial frame of reference. The Census Designated Place boundary for McKinleyville splits across Census Tract 06023010400.

Figure 17. Map of Population Density for the McKinleyville Area by Census Tract

7.4. Built Environment

In this section, we present built environment measures from four different data sources, with a focus on comparing McKinleyville to Arcata, Eureka, and Fortuna.

7.4.1. Residential, Employment, Road Network, and Pedestrian Network Density

We used the U.S. EPA's Smart Location Database ("SLD") to compare several measures of density across the four largest CDPs in Humboldt County. This database was developed to enable consistent comparison of "indicators of the commonly cited 'D' variables that have been shown in the transportation research literature to be related to travel behavior" (Smart Growth Program, 2014). While the SLD relies on the 2010 Decennial Census, it remains a useful source for comparable data across several variables. **Table 7** summarizes four measures of density for the four largest CDPs in Humboldt County. McKinleyville has the lowest residential, employment, road network, and pedestrian-oriented network density of the four largest CDPs in Humboldt County.

Table 7. Measures of Density for Census Designated Places in Humboldt County

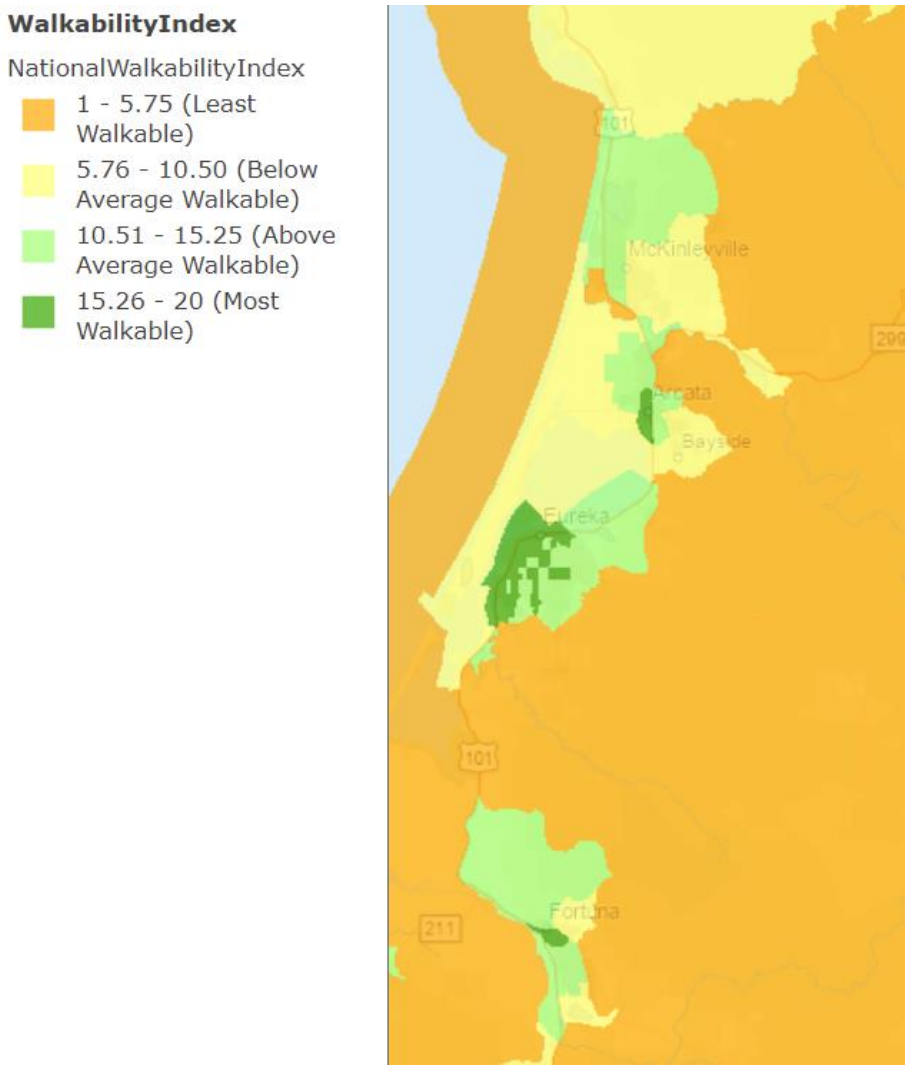
	Residential Density	Employment Density	Road Network Density	Pedestrian-Oriented Network Density
Arcata	1.4	1.7	10.4	7.0
Eureka	3.3	2.2	18.4	15.7
Fortuna	1.4	0.9	9.8	7.1
McKinleyville	0.8	0.4	7.7	5.4

Notes: Prepared by WTI using the U.S. EPA's Smart Location Database (SLD). The SLD is prepared at the Census Block Group Level using the 2010 Decennial Census. These tabulations incorporate the database values for any Block Group contained wholly or in part within the boundaries of the Census Designated Places. Residential density is measured as housing units per acre on unprotected land. Employment density is measured as jobs per acre on unprotected land. Road network density and pedestrian-oriented network density are based on data from NAVTEQ. Density averages have been rounded to the nearest tenth.

7.4.2. Walkability

We reviewed three different sources to assess "walkability" – a term which refers to the ease with which individuals can walk between origins and destinations.

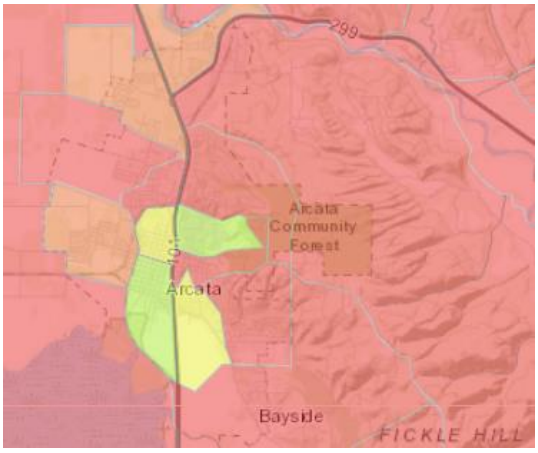
The U.S. EPA's National Walkability Index (Smart Growth Program, 2021a) compiles indicators of walkability, including employment and housing mixes, and pedestrian-oriented intersection density, at the Census Block Group level. **Figure 18** presents this index in map form for the area spanning from Fortuna to McKinleyville; while Arcata, Eureka, and Fortuna each contain at least one Block Group in the "Most Walkable" category, McKinleyville does not.



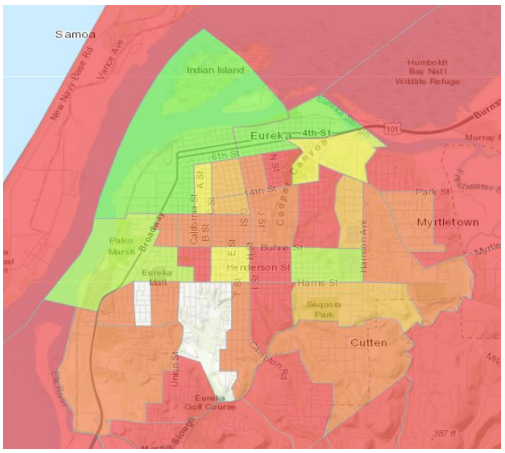
Note: Collected by WTI from the U.S. EPA's National Walkability Index (Smart Growth Program, 2021a).

Figure 18. Snapshot of the National Walkability Index for the Area Spanning Fortuna to McKinleyville

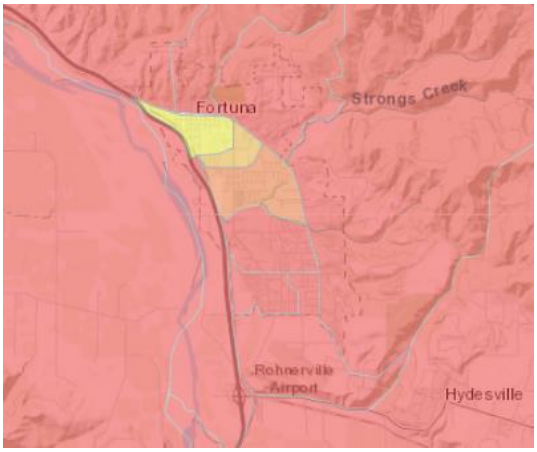
We also reviewed the U.S. EPA's Smart Location Calculator to compare the travel environments in Arcata, Eureka, Fortuna, and McKinlevyille areas. This online database allows users to look up the Smart Location Index score for an address, and also provides a map of scores at the Census Block Group level. This index combines measures of commute mode-share, vehicle miles traveled, and workplace accessibility via transit (Smart Growth Program, 2021b), so it is not directly focused on walkability – but provides a useful visualization for factors relevant to this measure. **Figure 19** reproduces the maps for these four areas of Humboldt County. Eureka is the area with the highest scores; McKinleyville is the only one of the four without any Block Groups scoring in the "Good" range.



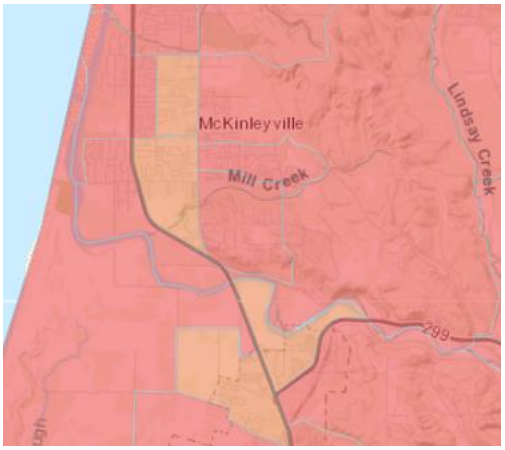
Arcata



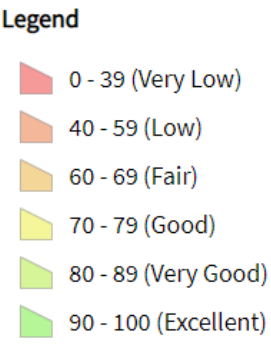
Eureka



Fortuna



McKinleyville

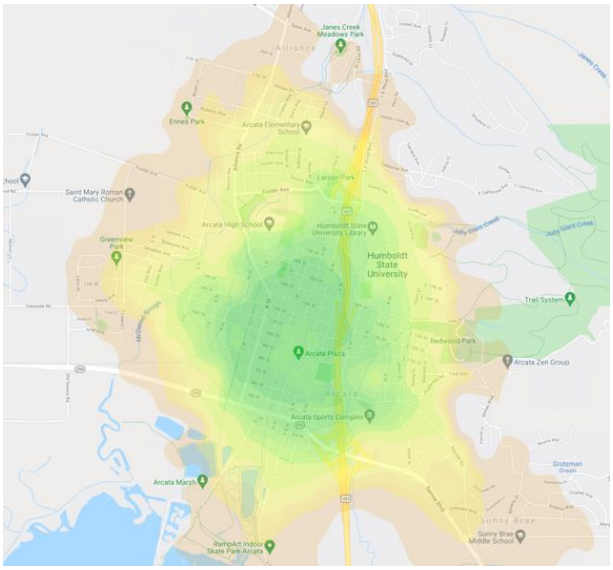


Note: Collected by WTI from the U.S. EPA's Smart Location Calculator webmapping tool (Smart Growth Program, 2021b).

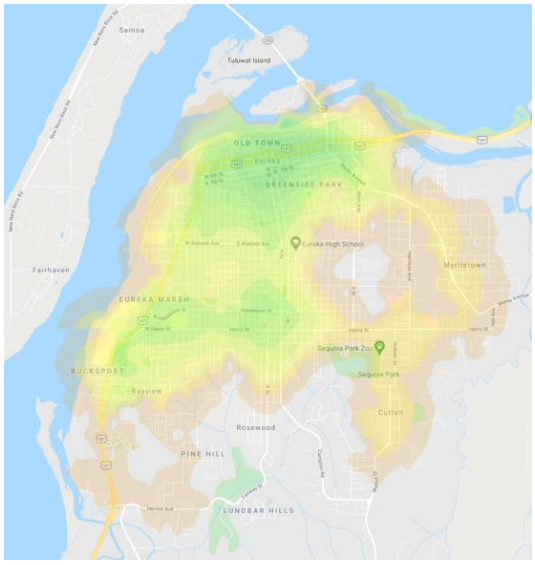
Figure 19. Snapshots from the U.S. EPA's Smart Location Calculator for Arcata, Eureka, Fortuna, and McKinleyville

We also reviewed maps from the Walk Score website, which uses a proprietary formula to measure walkability. Eureka and Arcata are both large enough to receive overall community

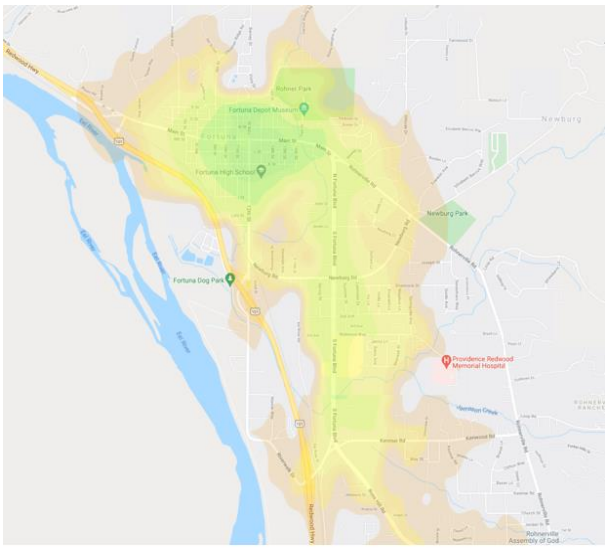
WalkScores (64 - Somewhat Walkable and 47 - Car-Dependent, respectively); Fortuna and McKinleyville are not scored at the community level. **Figure 20** reproduces maps for these four areas of Humboldt County; Arcata and Eureka have more areas of high walkability than Fortuna and McKinleyville.



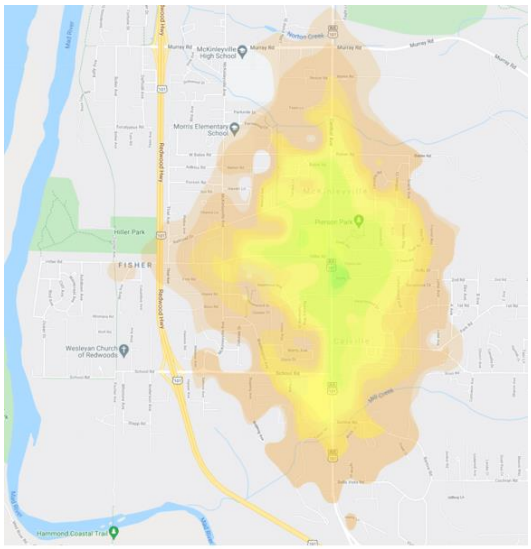
Arcata



Eureka



Fortuna



McKinleyville

Note: Collected by WTI from the Walk Score © webmapping tool (Walk Score, 2021).
Figure 20. Maps of the Walk Scores © for Arcata, Eureka, Fortuna, and McKinleyville.

7.5. Economic Activity

We used multiple Census Bureau data products to compare measures of economic activity across the four largest CDPs in Humboldt County.

7.5.1. Total Firms and Retail Sales

We reviewed information compiled by the U.S. Census Bureau on total firms and retail sales within the four largest CDPs in Humboldt County. McKinleyville has fewer total firms (1,500) than Arcata (1,957) and Eureka (2,627), but more than Fortuna (824). Meanwhile, retail sales ($124,236) are lower in McKinleyville than in Arcata ($169,546), Eureka ($971,317), and Fortuna ($162,406) (**Table *8***).

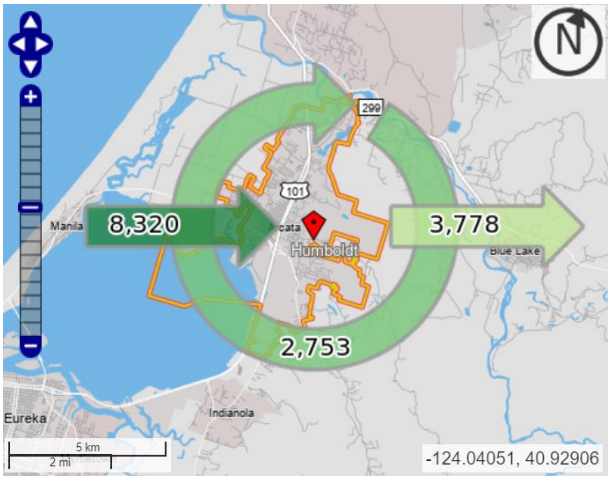
Table 8. Total Firms and Retail Sales for Humboldt County, Arcata, Eureka, Fortuna, and McKinleyville (2012)

	Humboldt County	Arcata	Eureka	Fortuna	McKinleyville
Total Firms	12,821	1,957	2,627	824	1,500
Total Paid Employees	30,144	7,959	11,476	2,233	2,131
Total Retail Sales	$1,759,201	$169,546	$971,317	$162,406	$124,236

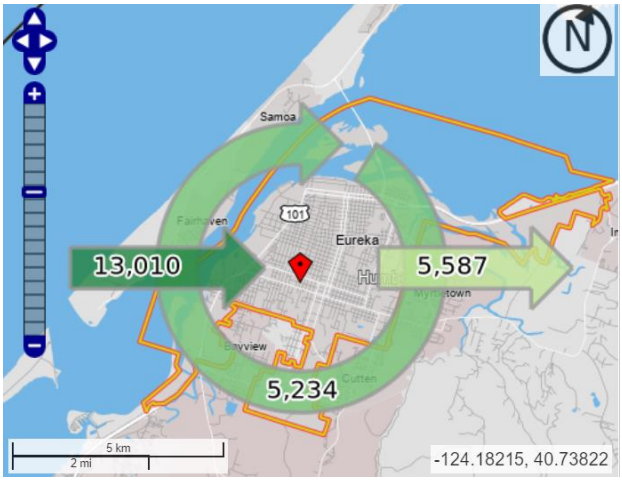
Note: Compiled by WTI using data organized for the Census Bureau community profiles. Source data are as follows: Total Firms (2012 Survey of Business Owners, Table SB1200CSA01); Paid Employees (2012 Economic Annual Survey, Table SB1200CSA01); Retail Sales (2012 Economic Census, Table EC1200A1). To our knowledge, these are the most recent available datasets at the level of Census Designated Places.

7.5.2. Net Job Flows

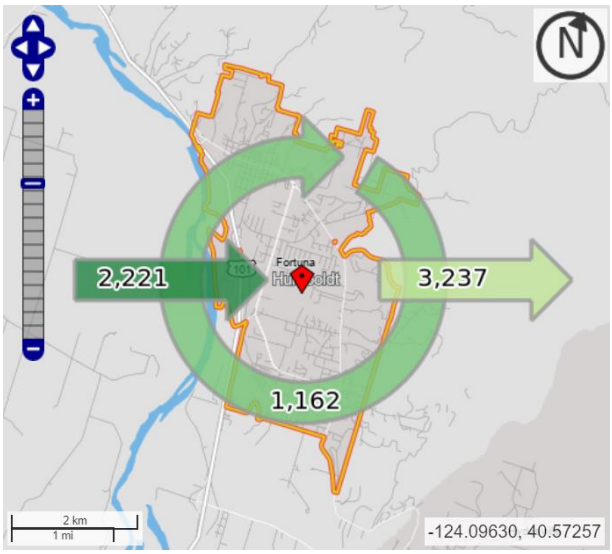
We reviewed the net job flows compiled by the U.S. Census Bureau's Center for Economic Studies for Arcata, Eureka, Fortuna, and McKinleyville (2018). This provides further context for the employment densities reviewed in **Table 7** above, and provides insight regarding regional travel flows. Among these four areas, Arcata (4,542) and Eureka (7,423) have postive net job flows while Fortuna (-1,016) and McKinleyville (-4,043) have negative net job flows (**Figure 21**).



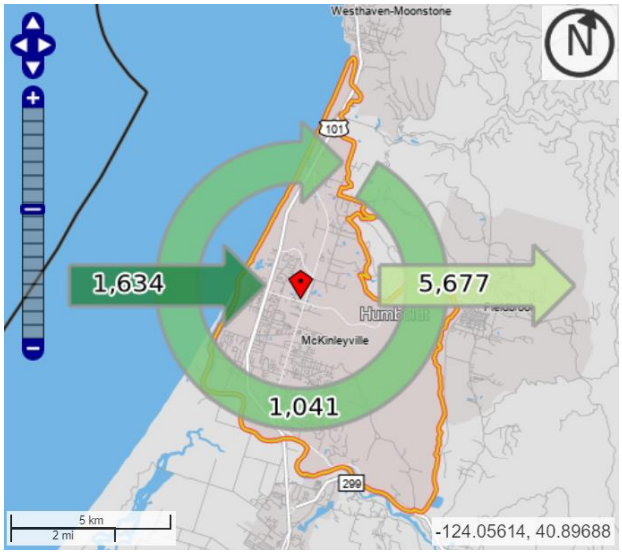
Arcata (Net of 4,542)



Eureka (Net of 7,423)



Fortuna (Net of -1,016)



McKinleyville (Net of -4,043)

Note: Collected by WTI from the Inflow/Outflow report for all jobs for 2018 (the latest available data) from the OnTheMap tool offered by the U.S. Census Bureau's Center for Economic Studies (2018). From left to right, the dark green arrows represent incoming workers (i.e., those who live elsewhere but come to place for work), the circular arrows represent workers who both live and work in a place, and the light green arrows represent outgoing workers (i.e., those who live in a place but work elsewhere)

Figure 21. Net Job Flows in Arcata, Eureka, Fortuna, and McKinleyville

7.6. Synthesis

Our review of existing conditions, including current transit service, key trip generators, sociodemographic indicators, built environment measures, and economic activity focused on contextualizing the McKinleyville community in relation to its Humboldt County peers, Arcata,

Eureka, and Fortuna, with regard to measures that are likely to have an impact on transit service success. Taken together, our review of existing conditions suggests that the demand for public transportation is likely to be lower in McKinleyville than in Arcata and Eureka. As a result, reaching ridership levels in McKinleyville comparable to Arcata and Eureka could be challenging. In the next section, we review transit service investment options.

8. Transit Investments

"Transit investment is reflective of a society's values" (Volinski, 2018).

In this section, we provide our assessment of an investment in new intracity (local) fixed route transit service within McKinleyville. To do this, we used averages for key productivity performance measures from McKinleyville's closest transit peers, the Arcata & Mad River Transit System and Eureka Transit Service. However, as our review of existing conditions indicated, it may be challenging to achieve demand for public transportation in McKinleyville comparable to the levels currently seen in Arcata and Eureka. As a result, while new intracity fixed route transit service would be technically feasible to introduce in the near-term, its financial viability is more uncertain. Therefore, we also offer alternative transit investments to consider.

Achieving the overall goal of successful transit service investments in McKinleyville is premised on alignment with the guiding principles identified in **Table 1**, and measured by productivity performance as well as customer satisfaction and quality of life improvements. To this end, we identify tradeoffs for consideration in weighing transit service investment options.

8.1. Transit Service Types

When considering new public transportation investments, it can be helpful to consider the spectrum of public transportation services (see Section 3.3 above). This spectrum spans flexible to fixed service and includes variations in characteristics such as frequency or response times, ease of access, spatial coverage, and per trip costs. Not all services are realistically available in all places; population size and density as well as resource availability and community values influence the types of services that may be suitable.

> "Since Mobility on Demand services are expected to grow in significance, public transit agencies should actively seek opportunities to engage with them in order to keep transit being attractive to a wider population[. . .] Faced with many uncertainties, public transit needs to develop a vision for its future and look for creative ways to improve the service quality and operation efficiency in order to stay competitive" (Yan, Zhao, Han, Van Hentenryck, & Dillahunt, 2019).

- **Flexible**
  - **Taxi Voucher or Ridehailing Subsidy** programs are an approach to public transportation based upon partnership with one or more traditional taxi companies or ridehailing companies characterized by an effort to group rides when possible (e.g., Lyft Line, Uber Pool). Subsidies may either be set as a fixed amount per trip (variable cost for the rider) or as a variable amount per trip (fixed cost for the rider). Providers include Lyft, Uber, and local taxi companies.
  - **Demand Response Transit with Traditional Technology (e.g., Dial-A-Ride)** is an approach to public transportation based upon service provided across a defined

service area and set service hours characterized by an effort to group rides when possible. Subsidies are typically set at a variable amount per trip (fixed cost for the rider). Service is typically accessed by telephone or email, and operations (scheduling and dispatching) is relatively labor-intensive (i.e. more manual inputs and assessments). Humboldt Transit Authority currently offers this service to individuals with verified mobility needs.

- **Demand Response Transit with Technology Platform Upgrade (Microtransit Software as a Service)** is an approach to public transportation based upon service provided across a defined service area and set service hours characterized by an effort to group rides when possible. Subsidies are typically set at a variable amount per trip (fixed cost for the rider). Service is typically accessed by an app or website, and operations (scheduling and dispatching) rely on licensed technology platforms that use algorithms, making it less labor-intensive. Providers include Routematch by Uber, Via, TransLoc, and several other companies.
- **Demand Response Transit with Turnkey/All-in-One Vendor Operation (Microtransit Transportation as a Service)** is an approach to public transportation based upon service provided across a defined service area and set service hours characterized by an effort to group rides when possible. Subsidies are typically set at a variable amount per trip (fixed cost for the rider). Service is typically accessed by an app or website, and operations (scheduling and dispatching) rely on licensed technology platforms that use algorithms, making it less labor-intensive. Additionally, a vendor operates all aspects of the service, requiring less public staff time (limited to contract oversight and service evaluation and adjustment recommendations). To the best of the research team's knowledge, Via is the only domestic provider of this option.

- **Fixed**
  - **Flex Route/Deviated Fix** is an approach to public transportation based upon incorporation of some flexibility in stops and/or routes. Subsidies are typically set at a variable amount per trip (fixed cost for the rider). Service is typically accessed by an online or paper schedule and travel to pickup/dropoff locations that may include some variability. Agencies typically employ all operations staff (managers, drivers, maintenance). Service adjustments to routes and stops are typically bounded and ensure overall adherence to a set schedule. Additionally, complementary paratransit service provision is required under the Americans with Disabilities Act for persons whose disabilities prevent them from using the fixed route system (within ¾ mile along and at either end of a fixed route) (National Rural Transit Assistance Program, 2020).
  - **Fixed Route Transit with Complementary Paratransit** is an approach to public transportation based upon service provided along set routes during a set schedule. Subsidies are typically set at a variable amount per trip (fixed cost for the rider). Service is typically accessed by an online or paper schedule and travel to a fixed

pickup/dropoff location (i.e., bus stop). Agencies typically employ all operations staff (managers, drivers, maintenance). Service adjustments to routes and schedules are relatively infrequent. Additionally, complementary paratransit service provision is required under the Americans with Disabilities Act for persons whose disabilities prevent them from using the fixed route system (within ¾ mile along and at either end of a fixed route) (National Rural Transit Assistance Program, 2020).

Based upon the existing conditions in McKinleyville, we focus the following assessment on three of these options: fixed route transit with complementary paratransit, demand response transit with traditional technology, and demand response transit with a technology platform upgrade.

8.2. Transit Ridership and Cost Scenarios

The average American takes 1,231 person trips per year (Federal Highway Administration, 2018), or about 3.3 trips per day. Based on estimated total populations (U.S. Census Bureau, 2015-2019) and this national average for trip-making, Arcata residents generate approximately 22,377,118 total annual person trips, while Eureka residents generate 33,195,146 total annual person trips and McKinleyville residents generate 21,183,048 total annual person trips.[7]

Table 9. Estimates for Total Population and Total Annual Person Trips in Arcata, Eureka, and McKinleyville

	Total Population	Total Annual Person Trips
Arcata	18,178	22,377,118
Eureka	26,966	33,195,146
McKinleyville	17,208	21,183,048

Note: Compiled by WTI using the American Community Survey 2015-2019 5-Year Estimates for total population (U.S. Census Bureau, 2015-2019, see Table B01003) and the national average for annual number of trips per person as derived from the 2017 National Household Travel Survey (Federal Highway Administration, 2018, see Table 10a).

According to the 2019 Transit Agency Profiles (Federal Transit Administration, 2019), the Arcata & Mad River Transit System provided a total of 165,536 trips while the Eureka Transit Service provided a total of 203,489 trips. Based on the estimated total populations of Arcata and Eureka provided in **Table 9**, this translates into a transit mode share (share of total annual person trips taken by public transportation) of 0.74% for Arcata and 0.61% for Eureka. Assuming the average of these transit mode shares (0.68%) could be achieved in McKinleyville, it would yield an estimated 143,278 total annual transit trips (based on 21,183,048 total annual trips, as shown in **Table 9**).[8]

[7] While our review of existing conditions included comparisons with Fortuna, in this section we focus on Arcata and Eureka as these communities offer intracity fixed route transit service.

[8] Given our review of existing conditions in the previous section, this is likely to be a best-case estimate.

In 2019 (Federal Transit Administration, 2019), the Arcata & Mad River Transit System ran a total of 6,646 vehicle revenue hours at a cost per vehicle hour of $123.52 and a rate of 24.9 trips per vehicle hour. Meanwhile, the Eureka Transit Service ran a total of 14,271 vehicle revenue hours at a cost per vehicle hour of $77.28 and a rate of 14.3 trips per vehicle hour. Assuming the average of these trips per vehicle hour (19.6) could be maintained in McKinleyville, a total of 7,310 vehicle revenue hours would be required to meet the estimated 143,278 total annual transit trips. Using the average cost per vehicle hour of the Arcata and Eureka transit systems ($100.40), the 7,310 vehicle revenue hours would generate total annual operating expenses of $733,935.89. This in turn would yield an average trip cost of $5.12.

By comparison, 7,310 vehicle revenue hours of Dial-a-Ride demand response service would cost approximately $84.48 per vehicle hour,[9] generating total annual operating expenses of $619,727.47. Given an estimated 2.1 trips per vehicle hour, this would generate an estimated 15,351 total annual trips (for a 0.07% transit mode share), at a cost per trip of $40.37.

Meanwhile, 7,310 vehicle revenue hours of microtransit demand response service would cost approximately $90.65 per vehicle revenue hour (using the Dial-a-Ride demand response cost per vehicle hour as the base plus an estimated marginal cost of $5.87 per hour for microtransit software installation and subscription), generating total annual operating expenses of $662,627.47. Given an estimated 3.4 trips per vehicle hour, this service would generate an estimated 24,854 total annual trips (for a 0.12% transit mode share), at a cost per trip of $26.66.

The Arcata & Mad River Transit System operates 3 vehicles at maximum service, while the Eureka Transit Service operates 4 vehicles at maximum service (Federal Transit Administration, 2019). If a more modest investment of 1-2 vehicles at maximum service were considered for McKinleyville, estimates could be based upon half as many annual vehicle hours.

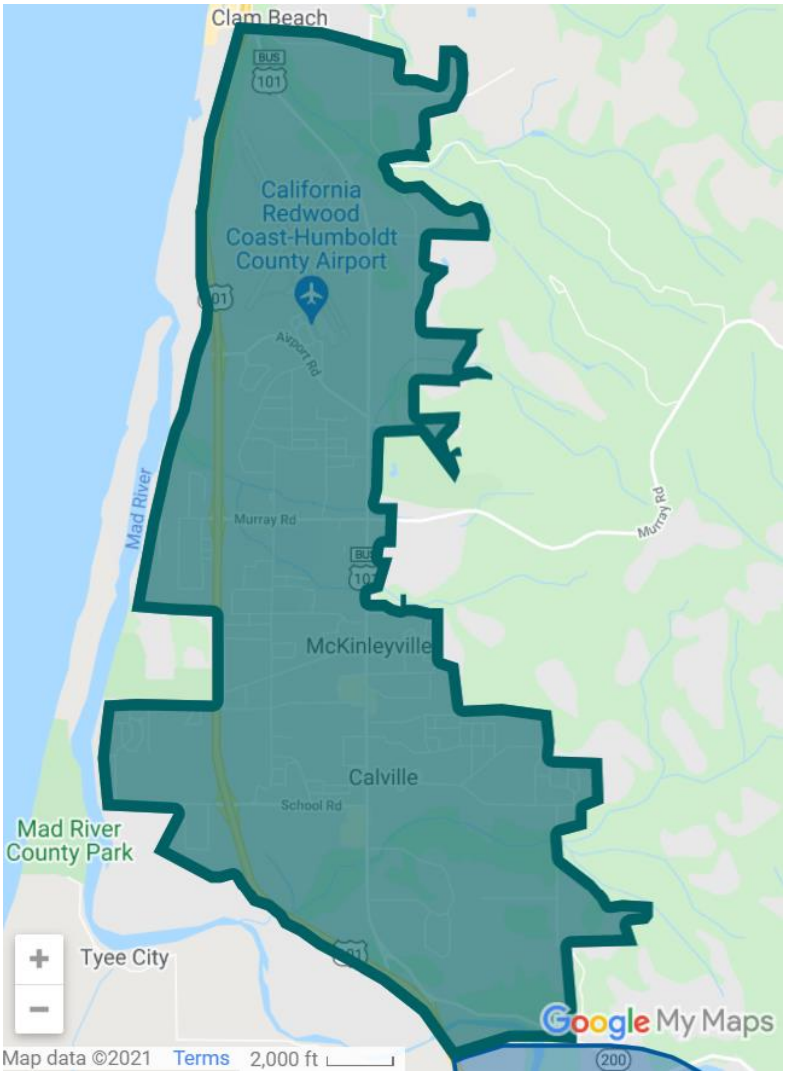
[9] The Dial-a-Ride demand response cost per hour and trips per hour levels are based on the 3-year 2018-2020 average for HTA's Dial-a-Ride service, as reported in the Comparative Performance Activity Reports prepared by HTA and obtained by request.

Table *10* summarizes our estimates for new intracity transit service in McKinleyville across key performance measures. As the fixed route estimates are based on averaging performance measures for the Arcata & Mad River Transit System and Eureka Transit Service, they should be considered best-case (i.e., optimistic or upper-end) performance estimates.

Table 10. Summary of Fixed Route, Dial-a-Ride Demand Response, and Microtransit Demand Response Estimated Costs and Ridership for McKinleyville

	Annual Vehicle Hours	Cost Per Vehicle Hour	Annual Total Operating Expenses	Total Annual Trips	Trips Per Vehicle Hour	Cost Per Trip
Fixed Route	7,310	$100.40	$733,935.89	143,278	19.6	$5.12
Dial-a-Ride Demand Response	7,310	$84.78	$619,727.47	15,351	2.1	$40.37
Microtransit Demand Response	7,310	$90.65	$662,627.47	24,854	3.4	$26.66
Fixed Route	3,655	$100.40	$366,967.94	71,639.16	19.6	$5.12
Dial-a-Ride Demand Response	3,655	$84.78	$309,863.74	7,675.62	2.1	$40.37
Microtransit Demand Response	3,655	$90.65	$331,313.74	12,427.20	3.4	$26.66

Notes: Compiled by WTI using the following data sources. The fixed route average cost per vehicle hour and trips per vehicle hour were based upon the 2019 average for the Arcata & Mad River Transit System and Eureka Transit Service as reported in the National Transit Database's 2019 Annual Agency Profiles (Federal Transit Administration, 2019). The Dial-a-Ride demand response average cost per vehicle hour and trips per vehicle hour were based upon the 3-year average for 2018-2020 for HTA's existing Dial-a-Ride service. The microtransit demand response cost per vehicle hour was based upon the sum of the HTA Dial-a-Ride 3-year average cost per hour and an estimate (based on industry research) of the hourly marginal cost for microtransit software subscription and installation. Because one-time installation costs spread over a longer time period would reduce the hourly marginal cost of microtransit software, the $90.65 estimate could be considered conservatively high. The microtransit demand response trips per vehicle hour value of 3.4 is based upon the average of the range (2.3 to 4.5) reported for a simulation in a recent TCRP synthesis report on microtransit (Transit Cooperative Research Program & Volinski, 2019, see Table 2). The costs for fixed route service are estimated with the assumption of remaining within the existing Dial-a-Ride service zone currently provided by HTA for McKinleyville (**Figure 22**). A fixed route service traveling outside this zone would need to also expand the provision of complementary paratransit, in accordance with ADA requirements.



Note: Collected by WTI using the webmap available from HTA (https://hta.org/dial-a-ride/).

Figure 22. HTA Dial-a-Ride Zone for McKinleyville

Overall, the key takeaway from these ridership and cost estimates is that – regardless of the service type – new intracity (local) transit service would cost in the range of $300,000 to $400,000 annually for a 1-2 vehicle system and $600,000 to $800,000 annually for a 3-4 vehicle system. As a result, McKinleyville and Humboldt County face the following decisions: 1) is there a willingness to support at least a 1-2 vehicle system for dedicated transit service within McKinleyville? and, 2) if so, what transit service characteristics should be prioritized for this dedicated transit service?

8.3. Transit Service Tradeoffs

"Specialized [paratransit or demand-responsive] services struggle to be efficient in terms of capital and operating expenditures per passenger trip or passenger mile due to the lower density of demand and the need for providing curb-to-curb services or special accommodations" (Polzin, 2016).

"When considering a change, understand that the concepts of passenger transportation and logistics still apply and most of all productivity matters" (Hosen, 2021).

In this section, we summarize the key tradeoffs across the service types reviewed above. Fixed route transit has significantly more capacity (i.e., seats available) than either type (Dial-a-Ride or microtransit) of demand response transit. As a result, if relatively high load factors (i.e., share of available seats in use) can be achieved, fixed route service achieves much higher productivity (e.g., higher trips per hour, lower cost per trip). However, the access burden for fixed route transit is often much higher than demand response transit. Typically, fixed route entails trips that offer varying levels of convenience, depending on the proximity to fixed stop locations of the trip's origin and destination. Adherence to a fixed schedule also entails a burden on riders in terms of adjusting their daily routines to fit the service. All these factors together can make fixed route transit highly efficient, but also can make for a stressful experience for customers – especially in low-density, low-walkability communities like McKinleyville.

In contrast, both Dial-a-Ride and microtransit demand response transit have significantly lower capacity than fixed route transit. As a result, they have limited capacity to impact transit mode share, and it is essentially impossible for demand response transit to achieve the productivity and efficiency measures produced by fixed route transit. Trips per hour are much lower than fixed route service, and because vehicle cost per hour does not differ that much from fixed route service, costs per trip tend to be much higher. However, in low density areas where fixed route service may have a difficult time achieving high load factors, the difference in productivity – and related measures such as emissions per passenger – between fixed route and demand response transit begins to erode.

In addition, demand response transit offers a qualitatively different public transportation experience, because individual riders have more control over when they travel. One of the key differences between Dial-a-Ride and microtransit demand response service is that Dial-a-Ride typically requires advance reservations of a day or more ahead, while microtransit offers the "on demand" experience of real-time ride requests (with wait times in the 10-30 minute range). Recent public microtransit deployments have therefore been achieving relatively high levels of customer satisfaction. Investments in both fixed route and demand response transit have the potential to positively impact quality of life, especially for the sociodemographic groups discussed above in Section 7.3 and **Table *6*** (older adults, persons with disabilities, persons in poverty, and households with limited access to private vehicles).

Table *11* summarizes our assessment of the key transit service tradeoffs discussed in this section, as well as a qualitative assessment of the ability of each service type to support the Guiding Principles noted earlier in **Table 1**.

Table 11. Qualitative Descriptions of Key Transit Service Tradeoffs & Capacity with Guiding Principles

	Fixed Route	Dial-a-Ride Demand Response	Microtransit Demand Response
Capacity	High	Low-Medium	Low-Medium
Access Burden	High	Low	Low
Customer Satisfaction & Quality of Life	Medium-High	Low	High
Contribute to McKinleyville's Community Vision & Unique Identity	High	Low	Medium-High
Offer Convenient, Connected, Accessible, & Context-Appropriate Service	Low-Medium	Medium	Medium-High
Achieve High Performance in Measures of Efficiency and Effectiveness	Medium-High	Low	Low-Medium
Complement the Regional Public Transportation System	High	Low-Medium	Medium-High
Support the Ahwahnee Principles, Smart Growth, and Sustainability, Including Electrification & Multimodal Integration	High	Low-Medium	Low-Medium
Support Innovation Informed by Peers & Best Practices	Low-Medium	Low	Medium-High

Note: Compiled by WTI based on industry research and project experience.

8.4. Conclusions

"While envisioning the future of their transit systems, transit operators need not only to seek creative approaches to improve operation efficiency and adjust its service models, but also to carefully evaluate the preferences among their constituents" (Yan et al., 2019).

"Technology enables improved logistics for these services and potentially enables a spectrum of service providers to be engaged in paratransit services, in which economies of scale and spectrum of vehicles and service providers can more optimally match the unique needs of various travel markets" (Polzin, 2016).

We have offered ridership and cost estimates for transit service investments in McKinleyville. All the service types noted are technically feasible to introduce and operate, and they offer a similar range in terms of total annual operating expenses. As a result, one of the key outstanding questions for McKinleyville and Humboldt County community members and leaders to consider is the characteristics of transit service most valued. The likelihood of success can be measured by ridership, but also access burdens, customer satisfaction, and quality of life impacts.

Our review of existing conditions has indicated that it may be challenging to achieve the load factors present for the Arcata and Eureka fixed route systems in the near-term. As a result, we recommend beginning with an investment in flexible transit for McKinleyville. Out of the two types of demand response service, we feel the marginal cost for microtransit software is worth the improvement over Dial-a-Ride demand response service. As a result, we recommend that

McKinleyville and Humboldt County consider a 1-2 year pilot to introduce intracity (local) microtransit demand response service to McKinleyville. A microtransit pilot will provide an opportunity to introduce public transportation to the general public for travel within McKinleyville, and also serve as a tool to study the market for public transportation and assess whether fixed route service could be introduced in the future. As efforts surrounding the McKinleyville Town Center and the realization of the community's transition away from serving as a "bedroom community" continue, transit service adjustments may be considered. In particular, land use changes leading to greater density are likely to support increased demand for public transportation within McKinleyville.

While the purpose of this project was to analyze options for intracity (local) public transportation options within McKinleyville, it is apparent that people not only travel within the community, but that the community is an origin and destination for many regional trips. Therefore, whatever intracity transit service is implemented in McKinleyville, connectivity to regional transportation services remains important. Therefore, in addition to intracity (local) transit service investments in McKinleyville, Humboldt County may consider these transit service investments:

- Redwood Transit System Improvements
    - Reduced headways (half-hour frequencies)
    - Streamlining of the route (consider eliminating the route deviations off of Central Avenue for both the Airport and Murray Road/McKinleyville Avenue/Railroad Drive horseshoe)
    - Express McKinleyville-Arcata-Eureka runs
- Carpool subsidies (e.g., daily or monthly cash transfers or gift cards);
- Vanpool implementation (e.g., coordination with large employers, such as Humboldt State University).

In summary, McKinleyville and Humboldt County may wish to pursue a multi-pronged strategy to address both intracity and intercity/regional transportation challenges, and maintain a willingness to evaluate performance and reconsider transit investments over time.

It has been said that the best way to predict the future is to invent it (Volinski, 2018).

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Appendix 1. Written Comments

Week of October 5th, 2020

Convenient bike carriers on busses
Hiller to School route would be convenient
Dow's Prairie route also
Seniors would benefit from on demand transit, like municipal Uber?

I believe jitney service would be ideal for the stretch between Trinidad, the airport, and Arcata downtown. Pay drivers to operate minivans or even high-mpg cars that can carry three passengers, and provide on-demand service to any intersection in McK rather than operate on a fixed route. The bus model does not work well in an area with a dispersed population. I would be interested in seeing a price comparison between the hourly bus service and a couple of jitneys.

I live in Trinidad and would do more business in McKinleyville if the bus service were more frequent.

I would use public transit more often to travel to Arcata (Humboldt State) and Eureka, but the current routes take 45 minutes or more to get to the HSU campus and only come every other hour. I would love to see more routes that are more direct to popular stops which would also hopefully mean the routes would come more often.

I do not presently use public transit but as I age (I am already a senior citizen), I may make more use of this service. I live in the Dows Prairie area and would like to know that a bus stop may be more convenient for that area. At this time, as far as I know, the bus does not stop close to that area. There is a stop on Murray by Central and then downtown or at the airport.

Currently, Mckinleyville is dramatically underserved in public transportation. The only large transportation link is the town currently houses the county Airport. To me, the airport should become a large intermodal service hub that provides not only local bus service within Mckinleyville, but also regional services (north bound to Crescent City, and southern services to Arcata and Eureka). I would like to see a similar bus service in Mckinleyville as Arcata's Mad River transit or Eureka's ETS. By changing to this level of service, this would allow the Redwood Transit Service to move away from local in town services and become more focused on intercity county services. I would like RTS to become a spine service that connects the cities, with each large town having a localized within town bus service. This would change the service into becoming a more rapid transit system, where as areas of mckinlyville currently un served could have access to bus services. Areas needed is school road, hiller road, all of mckinlyville ave, and up sutter and on the eastern side of central. By having local in town bus service this would reduce the number of vehicles on an already congested and deadly central ave.

I would love to see buses go between Arcata and McKinleyville later on Friday and Saturday nights (once an hour, until bars close, from the Plaza to Central Ave.). This would reduce the occurrences of drunk driving in our community.

Connectivity to bike routes and having bike storage available at transit stop would be great. having early am express bus for morning commuters to "major" employment centers eg county offices

I am very interested in using bus services as soon as COVID-19 is reduced to 0 cases per day for a month. The bus goes past my home several times per day. I Hope buses will have hand sanitizer dispensers on board and masks required for passengers, (provide masks for riders who

do not have one). Maintain Plexiglas between driver and passengers that has hinges to open/close if driver needs to exit or move. Have a cleaning person riding with driver to sanitize handrails, etc. throughout the day. This would ensure more safety and security for both passengers and driver. Thank you for doing this study.

This is the first time I've lived in a town and could even consider public transportation... I will be looking into our current system and keep you posted with feedback.. I will tell you as someone new to the area, I haven't been able to find a good local area map that shows beaches/parks/trails/services or ways to get there! And as an aging person, I will be looking at mobility (walker?) and security (lighting/cameras?) issues... Thanks for doing this!

We truly do need more public transit, especially for students and others without access to vehicles. I know a few people who currently use this in McKinleyville. However, there is also an awful lot of trepidation, fear actually, of harassment and lack of safety because local homeless individuals use the but stop benches as 24/7 shelters. This is a much broader issue than just policing the but stops. I would love to see the transit authority engage in discussions with our homeless advocates as they struggle to find a solution. It is only going t get worse as evictions increase. The woods surrounding McKinleyville are full of campers because these folks have no place else to go.

Consider adding a bus loop, through Fieldbrook, to the current routes.

Thank you for working on this. I think the system we have already is pretty adequate.

Even when I was 20 years younger and didn't have a problem walking, it was difficult to get to a bus stop. I just checked Google and it's listed as a 45 min walk from my house on 5523 Dow's Prairie to the nearest bus. A half mile of that is a very steep, winding road with no shoulders. I haven't even tried local transit for years. I'm not very hopeful of a solution, but I'm writing this because lack of transit service has always been a problem here, moreso as I get older (I'm 74).

Develop transits hub at pierson mall, large empty lease areas. Great for town center

Week of October 12th, 2020

I am a senior citizen, live in west McKinleyville, have an all-electric vehicle coupled with rooftop solar, bicycle to town for most shopping, and rarely ride the bus. I would probably ride the bus if there were connector routes between the Hammond Trail area and Central Ave, or if the buses had mechanized lifts for loading heavy bicycles
Otherwise, having more affordable senior housing options close to bus route would help
I'd like more protected bike lanes, especially between McKinleyville, Arcata, Eureka, and Trinidad. Also need more DC fast charging stations along 101 between Crescent City and Garberville Greater public information campaigns about electric vehicles, rooftop solar, electric bicycles and tricycles for seniors would help promote county emissions reductions

I currently live in lower Fieldbrook, and know from having driven for the A1AA Volunteer Driving Program that there are many individuals who can’t drive or don’t have cars in the area here. It seems about six years ago or so that was quite a bit of questionnaire and surveying going on about this topic ... Not sure who disseminated and collected the info, but maybe it could be hunted up. Also, ask the A1AA, Tess Martín, coordinator, as she might have input. Of course, this deals with seniors. Schools might also have input, both public and private, K-12 and colleges.

While working at the Holiday Inn in McKinleyville, I have had to adjust my work schedule to allow me to travel to and from my home near HSU in Arcata. This means I am unable to work on weekends, as the bus does not go to the airport stop on Saturday until much later than my shift would start, and I have no way of transporting myself at all on Sundays. I have no issues traveling to Eureka on weekdays since the RTS travels every half hour, but going to McKinleyville is somewhat of a nightmare because of infrequent times. I understand that it makes sense to send busses out only as much as they are needed, but it would be very helpful if busses ran more frequently during weekdays, and especially more frequently on Saturdays, and if there was an active route on Sundays. My one other comment has to do with mask policies—they aren't being enforced. Every other time I ride the bus there is someone on board who has their mask pulled down. I don't feel comfortable being exposed to others in a closed space like that, but very rarely does the driver attempt to enforce the mask policy. As a matter of fact, half of the time I'm on the bus the bus driver themself is not wearing a mask, possibly because they feel safe behind the plexiglass barrier, but it doesn't provide a good example for passengers.

Seems like there should be access to the west side of McKinleyville. It is already a food desert (limited grocery stores and other retail.)

The social services building on Heartwood and Safeway should be a priority.

I travel McKinleyville Ave from Murray to School and Central from Murray to Bella Vista. A bus going N/S between Clam Beach and Bella Vista would be great. Even better would be a bus continue to Valley E/W. with 4 trips a day to Blue Lake via Fieldbrook,
People don't take buses much anymore,

Hi, Shotl is a DRT (on demand) solution for rural and low density areas that may improve significantly the ridership and reduce the waiting times by having the buses not following a fixed itinerary. We would be more than happy to get in touch and share options.

I live near Boyd & Guintoli in Arcata. I go to several businesses on Central Ave...banks, Grocery Outlet, pet shop, etc. My family lives off McKinleyville Ave on Boss St. I am aging and not able to walk distances any more. So a bus on McKinleyville Ave would help. Thank you!

Week of October 19th, 2020

My intention is to use public transportation. My professed values indicate that I would be a public transportation user. Alas, I am not. Walking distance from my home on Azalea Avenue to a Central Avenue bus stop adds significant Time to transportation efforts. If a stop on Azalea or east Sutter were installed I would Hope that I would then be able to break my car habit and switch to regular use of public transportation.

I would like to see smaller public transportation options (e.g vans) provide access to "the last mile" areas west and est of Central Ave.

I wish the rides didn't stop in arcata on the way to MCk. I was stranded at the HSU campus and giuntoli a few times and it was super lame. Also the last run isn't always good if you wan to head into Arcata for music or a movie and then you can't get home. I live in Mckinleyville and work in Eureka so a convenient fast shuttle would be swell, a simple 101 run, not meandering across arcata. It would also be great to have a run out to Big Bar so one could go rafting or camping and ride the bus back.

Week of October 26th, 2020

I live on the West side of 101, off School Rd. The bus used to stop at Roger's Market. When I take a class (I'm retired.) at HSU I have to walk to Central Ave for the bus. I see other HSU students walking there too. It's too bad you can't offer services to all the houses past Roger's Market and come up School Road.
In the future more HSU students would rent in this area if the bus was more convenient.
Thanks for asking.

Ways to get to the bus stops, express service to Arcata, Eureka, etc.

Too many stops in Arcata.

Whenever practical, my priorities would be more safe routes for bicyclists & pedestrians, fast charging for electric vehicles, electric shuttles from eastern and western neighborhoods to the central bus routes, and electric buses with mechanical lifts for bicycles.
A dream list, for sure!

Bus hubs in downtown McKinleyville, like most rural areas, are hard to access for those who live at a distance from them and have disabilities, and even those able who are living too far, or on hilly streets with no safe bike lane, to connect. Azalea Road is one example: blink while either driving or biking and you might wind up stuck in a ditch.

I'd love to keep track of this going forward. Thank you for your efforts on our behalf.

Week of November 9th, 2020

1. The public transportation system serving McKinleyville (inter and intra) should be competitive with private automobile use. Moving commuters during peak hours from McKinleyville to Arcata in 15 minutes and 30 minutes to Eureka would offer a service that competes with the private automobile. Further incentives to ride transit such as subsidized to free fares would be an added bonus in persuading people to forgo their cars.
2. Understand the demographics of McKinleyville including specific population sub-groups (seniors, disabled, students, low-income etc.) most likely to benefit from a public transportation system. Mapping census data at the block or tract level shows where these groups reside within McKinleyville. For example, the 2019 Census Quick Facts for McKinleyville shows an 18% poverty rate, 15% seniors and 12.6% of residents under 65 with a disability. Physically, economically and socially disadvantaged people need diverse mobility options: walking and bicycling for local travel, public transit for longer trips, and pick-up services (ridesharing, dial-a ride, mobility-on-demand etc.) when necessary.
3. A thorough origin-destination analysis would determine the kind of trips people take (work, shopping, school, recreation, medical, personal etc.) within McKinleyville and neighboring destinations. This information could be obtained via on-board surveys, passive online surveys and from actively soliciting this information via pop-up tables at public locations, walk audits, home visits and email blasts.
4. Almost all transit trips begin and end at the origin, usually one’s home. Research has shown that people are usually willing to walk a 1/4 to 1/2 mile or bicycle up to 3 miles to a bus stop (FHA, 2020). These first/last mile connections should cater to users of all ages and abilities. This is accomplished by offering a network of separated bike and ped infrastructure that compliments public transit.
5. Safety, comfort and convenience are vital to inspire people to walk and bike to transit stops. User safety is increased by designing separated sidewalks and bicycle lanes that incorporate intersection modifications, priority traffic signals, traffic calming, bike parking facilities and

onboard bike racks, traffic education for users and traffic law enforcement where needed.
6. Increasing the proportion of trips accomplished by walking, biking and transit would help meet the active transportation goals of regional agencies in meeting California's Greenhouse Gas (GHG) and Vehicle Mile Travelled (SB 743) reduction goals. Planning for and meeting these state goals greatly improves the chances of transit agencies, Regional Planning Agencies and counties to successfully compete for much needed grant funding.
7. Multi-agency collaboration (transit agency, Regional planning agency, County, Tribal Governments, Caltrans etc.) is key to creating a complimentary multi-modal bike, ped and transit network that serves the needs of all users.
8. Understand the challenges inherent in creating complimentary bike, ped and transit multi-modal networks include right-of -way issues, impacts on other travel modes, jurisdictional issues, limited funding and site-specific physical challenges.

McKinleyville has been an underserved public transit area. At the same time we have some of the more desirable space to be developed, so the underserved needs will continue to grow. I have lived here 24 years and have witnessed continued discussion on how to handle community growth including transit.

Week of November 16th, 2020

Our community has many areas that are unpaved, or don't have safe walking and rolling capacity - no sidewalks or paths or shoulders. I really like the idea of a free on-demand service that would greatly improve conditions for our most vulnerable population.

I can get to work on the bus from McKinleyville to Alder Grove Industrial Park, with about .75 miles to walk or bike on either end. I lack confidence there will be enough room to haul my e-bike, and its pretty expensive to travel about 5 miles. Ditto for going to Eureka for the dentist and such, though going further for the same $, this trip also takes a long time, sometimes ending up going through Manila, and requires a transfer to Eureka bus, more time and expense and figuring out connections the night before is frequently daunting. Riding the bike seems quicker, easier, cheaper, and provides more autonomy at this point. I'm in my 60's and hope mass transit improves before I retire. I don't own a vehicle.

Week of November 23rd and 30th, 2020

https://philadelphia.cbslocal.com/2014/04/17/jitneys-provide-new-cheaper-way-to-travel-on-atlantic-city-boardwalk/
McKinleyville needs one of these travelling in a circle around town and intersecting with the county bus within 5 minutes of arrival. In my dream—the one where a train or monorail or something runs between Eureka and Arcata with a coffee bar in the morning and a cocktail bar in the evening, and with a bicycle car, of course, each community would have jitneys connecting with the through-county busses which would run MUCH more frequently.

Week of December 7th, 2020

Redwood Transit buses sometimes only run to HSU in Arcata. they should at least extend in to Valley West or McKinleyville shopping center.
ideally a new bus transit service within Mckinleyville would connect to RTS routes and to Mad River Hospital and to Valley West where it could link with the Arcata bus routes.
there is also some need for transit out to Fieldbrook and back.

Week of December 14th, 2020

Please work with HSU to bring augment student ridership services up to speed. The University has same specific need that may be out of the ordinary. These include extra buses for school starts and finishes. Night classes. Students that must get to work in other than Arcata. Buses for performances at the theater. Furthermore, the school and students are hampered by a severe lack of paid parking, so mass transit should be a solution that the community and the students can rely on.

Week of January 25th, 2021

- Evening & weekend schedules don't serve people who work, and students who take classes and work; also access to recreation – both outdoor/nature, and indoor (shows, culture)
- Students get frustrated about lack of access to cheap goods/groceries (e.g., Winco in Eureka)
- On-demand service would be really helpful for access to specific locations, and for people who work "abnormal" hours or increased hours/frequency for fixed-route it's hard to run fixed-route transit for small numbers of people on off-hours, but there is still a need for service
- Advertising is really important, so students can know about whatever service is available
- Extra frequency is important
- Extra bike racks on buses is important
- Frustration with information/customer service to be able to understand/access information about the route; sometimes bus drivers won't help if asked and people feel mistreated/treated rudely. Improving rider experience could help recruit more riders.
- Need information both on paper/in person on buses/stations, as well as online/apps
- Students working and taking classes are not well served by the existing system; especially evenings and weekends
- Other folks ("choice" riders) would use transit if marketing and customer service were done really well; focus on environmental impacts, ease/convenience

Week of April 30th, 2021

I ride my bike for local trips but would like trips further south to Eureka and Beyond to be a public transportation ride. They need to go later in the evening so I can get home. Faster travel times would be an enticement. Lower fares likewise.

Owner of CPA business in Airport Business park, senior citizen, homeowner since 1977 in Mckinleyville and recent board member of Mckinleyville community services district. There has been an emphasis in our community by a small group of our young able bodied bike riders who wish to rid our city of autos. Our population is made of many older less energetic folks and I would like to speak for many of them that can't make meetings. Many of us drive or are unable to walk or bike long distances. I am sure you are aware over 10,000 cars a day use Central Avenue and the bike riders constantly complain about their safety on Central Avenue. Please consider the idea to have no bikes or bus stops on Central Avenue except a small bus that trolls the Avenue side streets to take folks to the bus stops that would be on the parallel to Central Avenue Street; Mckinleyville Avenue. Having Central Avenue bike and bus free and bikes and busses using Mckinleyville Avenue and side streets to get to town business would greatly enhance the safety in our town and accommodate a very large population of older auto drivers. A

small trolley bus would also be handy to get folks from one end of town to the other and could be combined with free transportation services for disabled and older folks. Thank you for your time.

Week of May 24th, 2021

i already responded to your survey, but i live on Fieldbrook Road in lower Fieldbrook... and am interested in buses ... or rides... that would travel along this road, maybe connecting directly with Blue Lake, Arcata and McKinleyville... as well as with the new and extensive walking paths and trails around here. Right now i drive, but would love to not have to drive to get anywhere. Also, i'm getting up there in age, so i know i won't be able to drive forever.

Week of May 31st, 2021

Questions:
How to integrate the existing RTA Route with the Town/City Route.
Town/City Route
How many routes are needed? What % of the population will use each route?
What is the physical make up for the Town/City? This will address the style or flow for the route ("figure 8", two way or combination of both).
Transit service, trip frequency or times/schedule
Lighting for street and shelters
Shelters
Frequency, location and maintenance of stops
Employers
How many of their employees will need to take the bus?
What are the hours of operation?
Do they need a park and ride?
Existing RTA/HTA Route
What is the logical point for RTA/HTA Route to meet the Town/City Route?
Frequency, location and maintenance of stops
Lighting for street and shelters
What is the physical make up for the Town/City? This will address the style or flow for the route ("figure 8", two way or combination of both).
What is the protocol for addressing anything that interferes with passenger pick up (Change in route, schedule, stop or fare)?
Since Social Service workers or case management workers would have an idea of the schedule or needs of residents who require their services, their input is needed. I believe there is a way to address transportation needs of residents without violating HIPPA law. Do you agree? Do you have an emergency evacuation plan in place for the Town of McKinleyville?
vehicles for the micro-transit program should be zero-emission, and there should be some working condition protections for the drivers.

I think a more useful definition of McK might look more like the map on page 36 of the McK Community Plan https://humboldtgov.org/DocumentCenter/View/65033/McKinleyville-Community-Plan-as-amended-by-General-Plan-2017-PDF. We'd probably want to include the coastal zone (which was excluded from the plan), but I think the northern, eastern and southern boundaries are useful.

Week of June 7th, 2021

Thanks for doing the study and asking for comments. I live in Westhaven and shop in McKinleyville as well as in Trinidad and Arcata. I occasionally use the library in McKinleyville

and my optometrist is there. I'm not sure that your core assumption is true (yet): it seems to me that McKinleyville is still very much a bedroom community, with the vast majority of residents commuting elsewhere. This is just an impression. However, if true it would probably indicate there is not enough of a in situ community to use public transport options. There are definitely in community activities: the library, senior center,Hammond Trail, the ball fields and dog park and playground at Hiller Park. But it is hard to see access to them becoming largely through public transit. Basically I don't think I am your intended audience.

I strongly suggest there be a local. transit system. This will deal with isolation and help with people being independent, mobile, and stay connected with family and friends in their community.

As an interested community member, I have paid attention to the presentations by you and the Western Transportation Institute. I have been impressed by the effort the has been taken and I do not want to diminish the time and expertise this study has involved. I think, though, that the study may have a 2 flaws. One the we have discussed previously, the complete absence of HSU's impact on the transit services of McKinleyville and two, the absence of existing travel destinations of the McKinleyville population. First, I know that HSU was not very responsive to your request for participation. But HSU must be a significant factor in this study. The report hides the fact that HSU students are a significant transportation issue not just to Arcata but to McKinleyville as well. Table 3. Sociodemographic Indicators for Humboldt County identifies over 65 but not under 25, that is HSU students, many who live and commute to HSU. *"Meanwhile, the share of the population aged 65 and over in McKinleyville (15.0%) is lower than the share in Eureka (17.6%) and Fortuna (19.0%) …, but higher than in Arcata (11.3%)."* **Arcata's is lower because of HSU.** Arcata's population is 18000 but student population of HSU is 8000, many of these are counted within Arcata's population. Furthermore, in a recent Times Standard article, Dr. Jackson notes *"HSU's enrollment would double within seven years, and then continue to grow. We would add new programs, meaning hiring new faculty and staff. New construction of academic buildings, lab facilities, and student housing would add hundreds of local jobs. We would extend our operations even further into local communities and work even more closely with them…HSU's enrollment would double within seven years, and then continue to grow. We would add new programs, meaning hiring new faculty and staff. New construction of academic buildings, lab facilities, and student housing would add hundreds of local jobs."* Pointedly he says "*We would extend our operations even further into local communities … Humboldt State is already, without this additional investment, **the largest employer in Humboldt County**. We have an estimated economic impact of $459 million in regional industry activity annually. So if the state makes this investment to quickly double our size, the ripple effect throughout the North Coast would be enormous".* Yet, the Western Transportation Institute's report does not seem to take this factor or other HSU factors into account. Two, It is probable, even with Arcata's inflated population numbers, that McKinleyville will become the second largest population center in Humboldt county after the recent census is counted. While, I am pleased that McKinleyville is attempting to identify itself as more than a "bedroom community" it will take a generation to recognize McKinleyville as a destination in and of itself. In the meantime, destinations outside of McKinleyville are important. I was disappointed that there was not a graphic of where the existing population goes for services. I know in my case if my travel itinerary were mapped it would go from Pierson's hardware (if I couldn't find what I needed at the local Ace or Thomas' hardware) to Henderson Center, the County Planning office on Harris, the medical offices near St. Joes, to Target and Costco. Also, Arcata destinations such

as the farmer's market, my doctor, barber and Mad River health services. I thought a heat map of a representative sample of all McKinleyville residents (over 65, under 25 and in between) of their destinations would have been an imperative. It may have also been helpful if there had been anecdotal experience of the consultants actually using the existing transportations services. Although, this may not have been representative during the Covid mandates. The pandemic has probably changed many of my own transportation needs, many of which will last after Covid. These include: having groceries delivered from Safeway and Costco, drugs being ordered on-line, virtual doctor visits, and many more. Worldwide high speed internet has been a change agent in business. Universal internet access will change consumer transportation needs as well. Finally, I was a little disappointed when a discussion of the new Health and Social Services Center in McKinleyville was mentioned at the recent meeting. When this center was first mentioned, a couple of years ago before ground breaking, I wondered if the transportation issues were factored in its location. The fact that this facility came as a surprise to the consultants somewhat discounted their study.

Week of June 21st, 2021

Excellent report. While reducing vehicle miles traveled, a goal of the McK General Plan, is most dependent on the type of development in the community, I agree that the micro-transit model is worth pursuing. Ease of use is a significant plus.

How about going through Fieldbrook valley from 299 to McKinleyville twice a day, once early and once late.

Include FIELDBROOK in the routes for the transit plans.

With the county's recent support of Railbanking from Willits to Eureka and Humboldt Bay, Arcata, Samoa, and Blue Lake, thereby preserving easements along the existing rail corridor. Further consideration of preserving the rail corridor In McKinleyville would be in the best interest for possible future transit options. At one time railroad tracks ran across the Mad River Bridge north into McKinleyville, up Railroad Street to Central Avenue continuing north along this commercial corridor. With these preserved easements it would be possible to re-establish rail transit from Eureka to the Arcata Airport at the north end of McKinleyville. I strongly suggest that as part of this Transit Study that funds be set aside to create a supplemental study of costs/benefits of establishing an electric rail transit system from Eureka to McKinleyville. Furthermore, parts of this rail corridor could also be built up as a levee to protect Eureka and Arcata from future sea level rise along Humboldt Bay.

Appendix 2. Survey Responses

How often do you ride the bus?	Comments
-	Need more buses to Eureka
-	Hard to get to the bus
Never	[no comments]
Never	I have a panic disorder nad cannot ride the bus with others
Sometimes	Ignored by bus driver in wheelchair (thinking just homeless and don't want ride)
Sometimes	[make buses] free
Sometimes	Discounts for seniors and vets.
Sometimes	No complaints. Not frequent enough (earlier and later).
Sometimes	Not convenient. Too far to main line.
Sometimes	A space for service dogs to lay down that is off the floor and comfortable.
Sometimes	Not enough buses; hard to get to the main line
Often	No buses on Sunday - can't get to church. Driver have bad attitude. Not every bus comes to McKinleyville so don't cut the later bus cuz people need to get home from work. Keep at least one early and late run.
Often	Schedules more available. Cost (some can't pay). Stay on schedule - don't leave early. Sometimes drivers are irritable, disrespectful. Ask bus drivers what are their needs.
Often	Light rail system. More often. Sometimes no money.
Often	1 more later bus.
Often	Doing a great job. On time/always room.

Notes: Survey of houseless and at-risk members of the community (October 2020). Special thanks to coordination and collection by Colin Fiske, Johnny Calkins, and Nezzie Wade.

The survey script and open comments for the May-June 2021 survey are below. Special thanks to coordination and collection by Colin Fiske.

McKinleyville Transit Study Survey

The draft McKinleyville Transit Study report is available now for public comment. You can view the full report at www.mckinleyvilletransitstudy.com. The report considers multiple possible ways to improve public transit in McKinleyville, including setting up a new "micro-transit" system, adding a new traditional bus route, and increasing the frequency of the existing Redwood Transit Service bus route.

This brief survey should take less than 5 minutes to complete. It will help us better understand how local residents feel about the various possibilities for public transit improvement. If you live or work in McKinleyville, or visit frequently for other reasons, we invite you to fill out this survey. Thank you for your participation!

What do you do in McKinleyville? Check all that apply.

- [ ] Live there
- [ ] Work there
- [ ] Other:

How close to your home would a bus stop (or "virtual bus stop") need to be for you to use public transit regularly?

Choose

How often would a bus need to come to a stop near you for you to use public transit regularly?

Choose

How quickly would a micro-transit or ride-hailing vehicle need to come after you ask for it for you to use the system regularly?

Choose

A traditional ("fixed-route") bus runs along a predetermined route at regular intervals. This kind of transit service works well in areas where there is a high demand for public transit. Do you think a new fixed-route bus would work well in McKinleyville?

- ◯ Yes
- ◯ No
- ◯ Not sure

A micro-transit system allows users in a designated area to call for a vehicle when they need it - kind of like a public Uber or Lyft. Users are then assigned nearby "virtual bus stops" for pick up and drop off. This kind of transit service works well in areas where there is a relatively low demand for public transit. Do you think a micro-transit system would work well in McKinleyville?

- ◯ Yes
- ◯ No
- ◯ Not sure

Please rank the following potential transit improvements in McKinleyville from 1 (most preferred) to 4 (least preferred).

	1	2	3	4
A new bus route	◯	◯	◯	◯
A micro-transit system	◯	◯	◯	◯
Expanded Dial-a-Ride service for people with certain disabilities	◯	◯	◯	◯
More frequent service on the existing Redwood Transit System route	◯	◯	◯	◯

What other thoughts or ideas do you want to share about how to improve public transit in McKinleyville?

Your answer

What other thoughts or ideas do you want to share about how to improve public transit in McKinleyville?
energy efficient would be great
Without knowing where a fixed route would potentially be it makes it hard to say that that transit service would be of any benefit.
it seems most commuters with cars are not interested in taking the bus. Therefore transit improvements should focus on those who cannot drive or without cars. Thus, dial-a-ride or micro-transit might be the best system
Make McKinleyville more bike friendly! Given the distance for many of us to the nearest bus stop, being able to safely bike there would make also make public transit more accessible.
It is a city and deserves better transit services
I don't think there is enough demand to support regular pubic transit in Mack.
Expanded service on the existing line is important for folks coming in from Trinidad or destinations south of McK
Redwood transit takes too long to go very far, and service is infrequent and ends too early. I would like also to haul my e-bike along, and worry about people taking my bike off the front of the bus. It is heavy for me to lift also, not sure how to remedy that.
Ore service frequencies to Trinidad
Empty the trashcans out at the bus stops more frequently and street sweep the bike lanes.
1. Connect McKinleyville with Westhaven/Trinidad and with Arcata/Blue Lake/Fieldbrook. 2. Calling a car to go to the bus stop is more polluting than just driving one's own car to the bus stop unless we have electric cars.
I don't currently use public transporation but might in the future. If I go back to work in Arcata. I live near an existing bus stop/near the airport. The existing last bus time made it impossible for my son to use public transpo when he attended CR. If there was one later time on weeknights for students attending CR that would be helpful.
Would like to see marketing around different use cases (real people or proxies) i.e. a person living along Ocean Drive could get microtransit service to connect to RTS mainline and get to Eureka in about X minutes, saving this amount of money on gas. Also promote use of transit among youth
I teach on the College of the Redwoods campus, and have multiple students who commute via bus to that campus. They complain about the very long public transit time to get to campus (about 1 1/2 hours one way). I would suggest a micro-transit system or direct bus line to bring college students directly to CR campus on weekdays.
McKinleyville neighborhoods along the west side of US Hwy 101 (e.g., areas along Fischer Ave, Hiller Rd, Ocean Drive, School Rd, etc.) need more public transportation options and connections to existing routes.
Since I do not use transit or live in McKinleyville, there are none at this time.
Offer transit from places like bars to people's residence in and to McK.
E/bike rentals, maybe with karts
Build out for stops at Mky and Murray Rds. Signs that are in LARGE PRINT so they can be seen at night without glasses. Speaker that would announce arrival times for low-vision.

What other thoughts or ideas do you want to share about how to improve public transit in McKinleyville?
Please ensure that service is available on weekends in addition to weekdays until at least 9:00 PM.
Dial-A-Ride is not very realistic for many users. It is expensive and you can only choose a large window of time for your ride. A micro transit vehicle with a wheelchair life (like a public Uber than can transport wheelchair users) would be absolutely incredible! It would open doors for people with mobility issues who would like to use public transportation!
Well, I know that there are transportation services offered by Area One Agency on Aging Volunteer Drivers and by Redwood Village (?), For those of legal age without vehicles or the ability to drive. The city should contact these groups to try to coordinate service.
Ads [announcements?] in other languages; Spanish and others
Do you have actual feedback to support your data or statistics?
Run through Fieldbrook
A perfect storm of environmental, economic and health crises should have everyone outraged over ongoing sprawl compounding unfunded infrastructure liabilities that could be spent on public transportation.

Notes: Survey of the general public (May-June 2021). Special thanks to coordination and collection by Colin Fiske.