Calaveras County Short Range Transit Plan Update

CALAVERAS TRANSIT

Final Report
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Executive Summary

Purpose of Short Range Transit Plan

Calaveras Transit last developed a Short Range Transit Plan (SRTP) in June 2009. The primary purpose of the SRTP is to guide the development of Calaveras Transit services in order to provide improved mobility for Calaveras County residents and visitors over the next five years. More specifically, the SRTP process:

- Provides opportunities for public input into the future of both traditional public transportation services as well as mobility management strategies to enhance mobility options for Calaveras County residents.
- Establishes goals, objectives and performance standards.
- Conducts market research to determine who is currently riding Calaveras Transit buses, how satisfied they are with the services provided, and what the priorities for improvements should be.
- Evaluates the recent performance of existing services.
- Provides service plan recommendations.
- Develops a comprehensive marketing plan for communicating to the public about Calaveras Transit services.
- Establishes a detailed operating and capital financial plan.

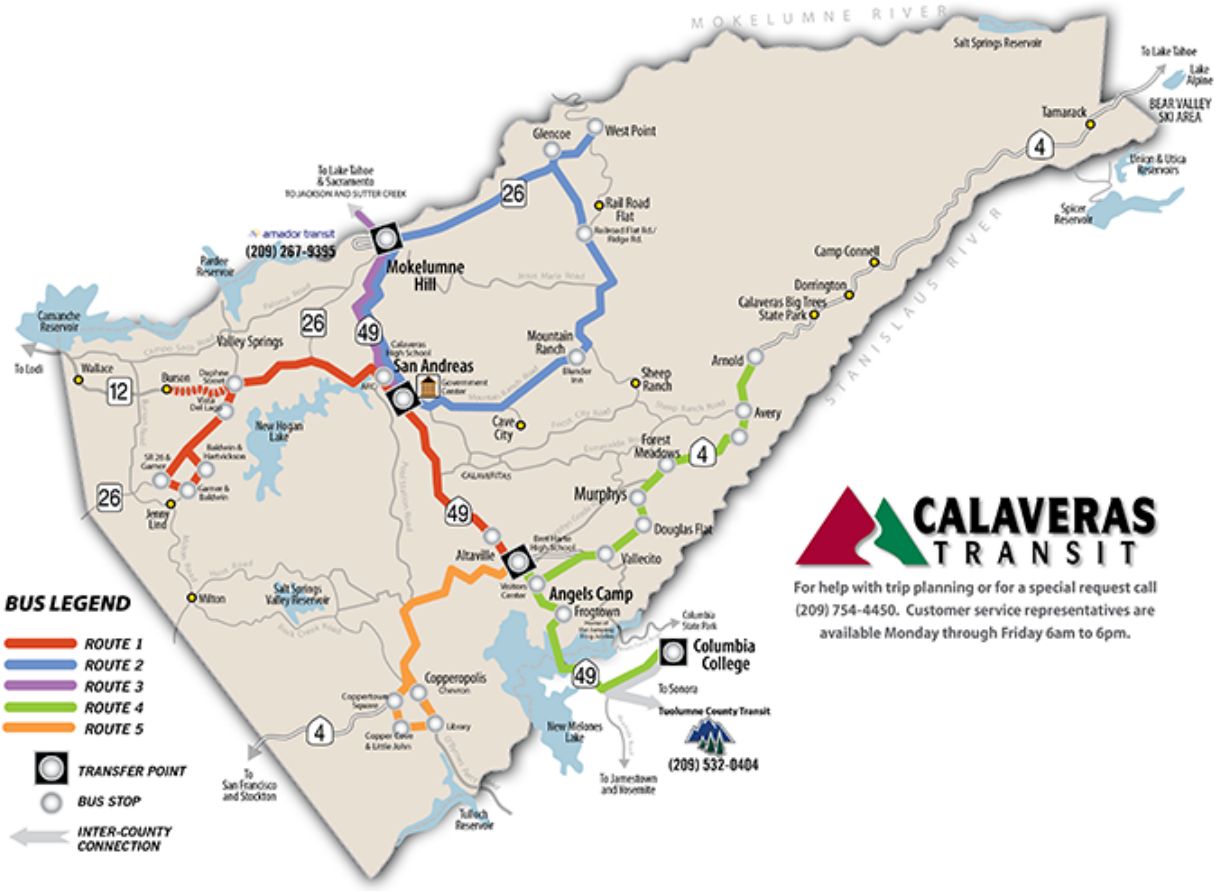
Overview of Calaveras Transit Services

Figure ES-1 on the following page is an overview of the five Calaveras Transit routes. All routes are provided Monday to Friday. Route deviations are available to seniors aged 65 and older and eligible persons with disabilities within 3/4-mile of the regular scheduled route. All deviations are limited and prioritized by reservation. Flag stops are permitted mid-route between designated bus stops. In addition, connections to Amador Transit and Tuolumne County Transit are available on routes to Jackson and Columbia College in Sonora, respectively.

Recent Systemwide Performance

The following performance trends provide important context to the Short Range Transit Plan, which plans for service delivery over the next five years.

Figure ES-1 Overview of Calaveras Transit



The operating cost per vehicle service hour for Calaveras Transit has increased from $69.85 per vehicle service hour in FY 2008/09 to $113.26 in FY 2013/14, based on financial audits of Calaveras Transit costs.[1] The performance of Calaveras Transit is shown in Figure ES-2 from FY 2008/09 to FY 2013/14.

In FY 2008/09, Calaveras Transit was able to provide 15,005 vehicle service hours at a cost of $1,048,090 resulting in a cost per vehicle service hour of $69.85. In FY 2013/14, the total operating cost was $1,094,999, but only 9,668 vehicle service hours could be provided for the same budget at the cost per vehicle service hour of $113.26. The inflation rate between 2009 and 2014 was a total 10.3% during this period, which means had the cost per vehicle service increased at the rate of inflation, it would have increased to $77.04. However, the cost per vehicle service far exceeded the rate of inflation and increased by 62% from $69.85 per vehicle service hour to $113.26.

[1] In reporting on past performance, FY 2013/14 is utilized because this is when the last audited financial figures are available. The financial audit for FY 2014/15 is not available as of this writing.

The primary consequence of the excessive cost escalation of Calaveras Transit is that the Calaveras Transit customers who need public transportation to conduct daily activities have significantly less public transportation services available to them. There is significantly less frequency on the existing routes making the service less convenient or consistent.

Figure ES-2

	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14
	Actual	Actual	Actual	Actual	Actual	Actual
Source	Perf. Audit	Perf. Audit	Perf. Audit	Fiscal Audit	Fiscal Audit	Fiscal Audit
Base Statistics (Annual)						
Ridership	90,834	55,273	60,080	68,067	65,922	69,100
Vehicle Service Hours	15,005	9,248	9,043	8,930	8,739	9,668
Vehicle Service Miles	439,290	274,609	263,345	259,305	263,168	275,850
Fare Revenue	$ 89,326	$ 69,184	$ 59,751	$ 66,572	$ 87,901	$ 101,365
Operating Costs	$ 1,048,090	$ 727,680	$ 831,820	$ 920,533	$ 1,000,691	$1,094,999
Performance						
Passengers/Service Hour	6.05	5.98	6.64	7.62	7.54	7.15
Passenger/Service Mile	0.207	0.201	0.228	0.262	0.250	0.250
Average Fare/Passenger	$ 0.98	$ 1.25	$ 0.99	$ 0.98	$ 1.33	$ 1.47
Farebox Recovery Actual	8.5%	9.5%	7.2%	7.2%	8.8%	9.3%
With TDA Exemptions*	8.5%	9.5%	7.2%	7.3%	9.3%	9.4%
Cost/Vehicle Service Hour	$ 69.85	$ 78.69	$ 91.98	$ 103.09	$ 114.51	$ 113.26
Cost/Service Mile	$ 2.39	$ 2.65	$ 3.16	$ 3.55	$ 3.80	$ 3.97
Cost/Passenger Trip	$ 11.54	$ 13.17	$ 13.85	$ 13.52	$ 15.18	$ 15.85
Subsidy/Passenger Trip	$ 10.56	$ 11.91	$ 12.85	$ 12.55	$ 13.85	$ 14.38

* TDA regulations provide exemptions for service expansions and extensions which are not included in the farebox recovery calculation. Figures for TDA exemptions are from the relevant TDA Performance Audit.

The focus of many Calaveras Council of Governments discussions over the past several years has been on the farebox recovery ratio, which is a qualifying standard set by the Transportation Development Act (TDA). The farebox recovery ratio is the ratio of fare revenues to operating costs, expressed as a percentage. Fare revenues, due to the 2012 fare increase have increased substantially, increasing from $66,572 in FY 2011/12 to $101,365 in FY 2013/14, a 52% increase. The average fare per passenger has increased from $0.98 in FY 2011/12 to $1.47 per passenger in FY 2013/14. The bottom line is that Calaveras Transit passengers have to pay significantly more in fares for far less service.

Existing and Future Transit Needs

A robust outreach effort for the SRTP was coupled with an analysis of Census information and the annual Unmet Transit Needs process. The outreach effort included a survey of 136 existing passengers and interviews with 20 key stakeholders who are knowledgeable about transit needs in Calaveras County. The most important findings of the assessment of transit needs are:

- There is good mix of rider trip purposes but the most common trip was to and from college or school. One third of riders were going to or from college/school, a quarter commuting to or from work, 15% traveling for recreation, 13% shopping and 15% going to social service or medical appointments.
- 84% of Calaveras Transit's riders were dependent on transit for transportation on the day they were surveyed, and many are fully transit dependent.
- 64% of riders have incomes of $15,000 or less. According to the Census, almost 3,800 residents in Calaveras County are low income and likely struggle to keep automobiles operational and fueled.
- According to the Census, there are 2,591 households with a potential deficit in the number of autos in the household. The absence of a vehicle in a household may limit an individual's ability to access employment, medical care, or to complete activities of daily living, especially in areas where public transit or specialized transportation resources are inadequate or inaccessible.
- 90% of riders rated the service as excellent (49%) or good (41%). Those interviewed that the quality of service was excellent.
- Saturday service was the improvement rated as very important by the most riders (57%), while direct service to Sonora was second at 40%.
- The majority of Calaveras Transit ridership is on the system spine between Rancho Calaveras and Columbia College. Almost 60% of trips surveyed both begin and end along the spine. However, the current schedule does not provide consistent service frequencies for those traveling along the spine.
- The number of seniors 75 or older is forecast to increase from 3,814 in 2010 to 5,695 in 2020, an increase of 49%. This significant growth in older adults will require providing public transportation services that are attractive to seniors when they are no longer able to drive.

Goals and Performance Standards

A joint workshop was held on April 28, 2015 among the Calaveras County Board of Supervisors and City of Angels Camp City Council to provide input on the goals and objectives for the 2015 SRTP Update. The input is incorporated into a new recommended mission statement, goals, and performance measures and standards to monitor performance.

The new recommended mission statement is:

> *To provide safe and cost effective public transportation services throughout Calaveras County to serve the mobility needs of residents and visitors who need public transportation.*

The recommended goals and most important performance standards to measure progress towards achieving those goals are:

Goal #1: Provide an effective level of service in response to demonstrated community transit market needs (service effectiveness goal).

Performance Standard: Passengers per vehicle service hour by service type

Recommendation:

Passengers Per Vehicle Service Hour

	Minimum	Target
Service Type		
Systemwide	6.0	9.0
Intercity Fixed Route	4.5	7.0
Regional Fixed Route	9.0	13.0
Feeder Fixed Route	5.0	7.0
Demand Response	3.0	5.0

Status: 7.15 passengers per vehicle service hour systemwide in FY 2013/14

Performance Standard: Ridership, number of passengers who annually board the bus

Recommendation: Minimum standard for ridership is 75,000 annual riders. The desired target standard is to exceed 100,000 annual passengers over the next five years.

Status: 69,100 annual passengers in FY 2013/14

Goal 2: Provide public transportation services that are financially sustainable within existing local, state, and federal funding programs in a cost-efficient manner (service efficiency goal)

Performance Standard: Operating cost per vehicle service hour

Recommendation: Minimum standard of $100 per vehicle service hour systemwide and a target standard of $89 per vehicle service hour. Index for inflation in future years.

Status: $113.26 per vehicle service hour in FY 2013/14

Performance Standard: Subsidy per passenger

Recommendation: Minimum of $13.00 per passenger in FY 13/14 dollars systemwide and target of $10.50 per passenger.

Status: $14.38 per passengers in FY 2013/14

Performance Standard: Farebox recovery ratio

Recommendation: Minimum standard of 10% (TDA requirement) and target standard of 12%.

Status: 9.3% in FY 2013/14

Goal 3: Ensure that all transit programs can be provided at high quality of service (service quality goal)

Performance Standard: On-time performance

Recommendation: For fixed routes that do not have route deviations, no early departures and 90% of all run runs are on-time, defined as one minute early to five minutes late. Target standard is 95% of all runs on time.

For flex-routes, the minimum standard should no early departures with 80% of all runs on-time, defined as one minute early to ten minutes late. The target standard is 85% of all runs on-time.

Status: In 2014 ridecheck, 60% of all runs were on time and 12% were early. Please note that the 2014 ridecheck was from a small sample at the time that Calaveras Transit was in transition. According to the operations vendor for Calaveras Transit has substantially improved since April 2014.

Performance Standard: Vehicle headways (frequency between buses)

Recommendation: Minimum standard on Route 1 spine route is consistent 90-minute service in both directions between Valley Springs and Angels Camp. The target standard is hourly service between Valley Springs and Angels Camp. For feeder service to the spine route, the minimum standard is every three hours and the target standard is every two hours.

Status: Inconsistent service headways on Route 1 and three hour headways on most feeder routes.

Goal 4: Provide safe and convenient transportation services to the residents of Calaveras County for employment, education, and social service by the most cost-effective mobility mode (safe and accessible goal).

Performance Standard: Span of service

Recommendation: Minimum standard is service from 6:00 am to 7:00 pm, and the target standard is from 6:00 am to 8:00 pm.

Status: Route 1 has a span of service from 5:10 am to 7:00 pm and Route 4 extends to 7:35 pm.

Performance Standard: Miles between preventable accidents

Recommendations: The minimum standard should be 100,000 miles between preventable accidents with the target stand of 250,000 miles between preventable accidents.

Status: Not currently reported in Calaveras Transit Performance Reports

Service Monitoring

Calaveras Transit recently transitioned from providing a quarterly performance report to a semi-annual report. This is the recommended frequency for the performance reports.

Not meeting performance standards should trigger a review of performance and the provision of mitigating measures to improve performance above the performance standard.

Once the recommended performance standards are adopted by CCOG Board, the CCOG policies and procedures should be modified such that performance standards are considered in evaluating and approving the TDA claims.

Organizational Assessment

The following are the key features of the existing organizational structure:

- The Calaveras County Board of Supervisors is the governing body for Calaveras Transit. They provide overall policy and management guidance for Calaveras Transit.
- Calaveras Transit is a functional department of the Calaveras County Department of Public Works. A Public Works Analyst is currently serving in the Transit Manager function and reports to the Director of Public Works.
- The Fleet Shop, another section of the Public Works Department, performs maintenance. The Fleet Shop has a Memorandum of Understanding with the Transit Division of the Public Works Department.
- The Department of Public Works contracts with Paratransit Services to provide Calaveras Transit operations, including scheduling and dispatching, drivers, and related safety and training functions.

An organizational assessment was conducted as part of the Transit Maintenance and Organizational Analysis completed in September 2014. A key question is whether the existing organizational structure is capable of achieving the goals and minimum performance standards for the cost and service efficiencies recommended above.

The cost per vehicle service hour has increased significantly under the current organizational structure. The cost per vehicle service hour increased from $69.85 in FY 2008/09 to $113.26 in FY 2013/14. Cost efficiency is very important to being able serve the mobility needs of Calaveras Transit residents. In FY 2013/14, with a budget of $1,094,999, Calaveras Transit was able to provide 9,668 vehicle service hours at cost per vehicle service hour of $113.26. If Calaveras

Transit were able to achieve the peer average of $89 per vehicle service hour, the target standard recommended in Chapter 4, Calaveras Transit would be able to provide 12,303 vehicle service hours. This would vastly improve the mobility options to Calaveras County residents. With an increased supply of vehicle service hours, Calaveras Transit could have significantly increased frequency on productive routes such as Routes 1 and 4, Saturday service, and improved feeder options from outlying areas to the mainline service on Routes 1 and 4 between Valley Springs and Columbia College.

The minimum standard of $100 per vehicle service hour was reviewed and agreed to with Calaveras County staff in March 2015. At the April 28, 2015 joint study session of Calaveras County Board of Supervisors and City of Angels Camp City Council, there were several comments from elected officials that cost efficiency should be in line with peer costs. Peer costs average the target cost per vehicle service hour of $89 per vehicle service hour.

The September 2014 Maintenance and Organizational Assessment made a number of key short-term recommendations that are summarized below in Figure ES-3 on the next page. The purpose of the recommended strategies was to reduce the cost per vehicle service hour so that additional transit services could be provided to Calaveras Transit passengers. The FY 2015/16 budget was pointed to as the opportunity to begin to show a downward trend in the overall cost per vehicle hour.

The budget for FY 2015/16 released in May 2015 for Calaveras Transit had a cost per vehicle service hour of $127.01. An updated budget approved by Calaveras County Board of Supervisors reduced some cost line items and the budgeted operating cost per vehicle service hour was $123.78. This is still considerably higher than the audited $113.26 in FY 2013/14 and the recommended minimum performance standard of $100 per vehicle service hour.

At the September 2014 Calaveras Council of Government meeting where the findings and strategy recommendations below were presented, several CCOG elected officials were willing to give Calaveras County six months to show significant progress in providing more cost-effective service delivery. The 2015/16 Calaveras Transit budget goes in the opposite direction from the findings and recommendation of the September 2014 Maintenance and Organizational Assessment completed as part of the Short Range Transit Plan.

Figure ES-3 Transit Maintenance and Organizational Assessment
Summary of Recommended Strategies

Operator Fixed Costs	Operator Variable Costs	Maintenance Costs	Transit Administration
Renegotiate Contract with Paratransit Services in 2-year extension	Adjust driver wage table	Consider contracting for maintenance	Evaluate division of responsibilities between County and Paratransit Services
Spread fixed cost across more hours: Stockton Intercity and Burson extension		Replace remaining fleet	Take full advantage of Paratransit Services expertise
Feasibility of owned operations and maintenance facility		Hire fleet manager with transit experience	Renewed capital project delivery
		Establish maintenance goals and objectives	Provide prerequisite skills and experience to Transit Manager position

Institutional Options

The following institutional options for governing Calaveras Transit, as presented in September 2014 in the Maintenance and Organizational Assessment Working Paper, are reviewed below:

1. Retain Calaveras County as the transit administrator with a focus on building transit leadership and support.
2. Form a new joint powers authority, creating a Calaveras County Transit Agency for transit administration and contract for maintenance and operations. The governing board would be the same as the Calaveras Council of Governments. This is a governance model that Tuolumne County, Modoc County, and Lassen County, among others, have successfully implemented.
3. Hire a professional transit management firm. Lake Transit in Lake County and Redwood Coast Transit in Del Norte County are two examples of this institutional option.
4. Form a joint powers authority for transit administration and directly hire operations and maintenance personnel. This is the governance model that Amador County and the Eastern Sierra Transit Authority have implemented.
5. Creation of a regional transit authority among Tuolumne, Calaveras, and Amador counties.

These organizational options are reviewed in detail in Chapter 5.

Mobility Management Function

Regardless of the institutional option selected, mobility management should become an increasingly important function of mobility service delivery in Calaveras County. The rationale for mobility management is articulated in the 2014 Coordination Plan:

- It is an organizing strategy for initiating coordinated projects to address mobility gaps of the target groups, providing leadership around these projects.
- It becomes a focal point for getting the right partners to the table to secure additional funds or overcome institutional barriers or promote new services.
- It can help to secure funding, including new funding, through which to implement new mobility projects.

A key element of the Coordinated Plan is to ensure that the priorities put forth in the Coordinated Plan are championed by "interested, willing and able" partners. Fortunately for Calaveras County the stakeholders are very interested parties and are active in their efforts to improve mobility options and transportation coordination at every level within and around Calaveras County. This will be particularly important in meeting the expected 49% growth in older adults in Calaveras County between 2010 and 2020.

Multi-Modal Function

Walking, bicycling, and ridesharing are all viable mobility options in Calaveras County. As reported in the 2014 Coordination Plan, for trips to and from work in Calaveras County according to the Census, carpools make up 10% of the trips and public transit makes up only 1%. Walking represents 3% of the total and bicycling makes up 1%.

The Calaveras Council of Governments is responsible for updating bicycle and pedestrian master plans in Calaveras County. The ability to walk or bicycle to and from bus stops and flag stops is extremely important in considering multi-modal approaches to feeder service opportunities to the Calaveras Transit spine.

Organizational Assessment Conclusion and Recommendation

The primary conclusion is that keeping public transportation with Calaveras County, as a lead agency, will continue to increase costs at a greater rate than estimated inflation. There is a need to change the organizational structure to make Calaveras Transit more cost-effective and responsive to mobility market needs in Calaveras County.

Other counties such as Lassen County, Modoc County, and Tuolumne County have overall lower operating costs per vehicle service hour with contract operations. It is important to carefully consider the steps necessary to bring the cost efficiency standard below the target of $100 per vehicle service hour. In the detailed financial plan in Chapter 6, the Transit First Financial Scenario provides recommendations on how the cost per vehicle service can be reduced to

approximately $92 per vehicle service hour in FY 2017/18. This would require a change in organizational structure.

While several of the options described above have the potential for lowering overall costs, the most viable option would be to form a joint powers authority for a Calaveras Transit Agency. This is an increasing prevalent organizational structure for small rural transit systems. Tuolumne County Transit Agency (TCTA) and Modoc Transportation Agency are peer agencies that have adopted such an institutional structure. Both agencies have formed Joint Powers Agreements among the County and respective cities in their jurisdiction.

Similar to the shared staffing of the Tuolumne County Transit Agency, shared staffing is possible with the Calaveras Council of Governments and the Calaveras Transit Agency. There are a number of reasons why the transition of governance to the Calaveras Transit Agency would benefit the residents of Calaveras County and the existing riders of Calaveras Transit:

- As evidenced by actual results from both Tuolumne County, Modoc County, and Lassen County, the overall cost per vehicle service hour can be significantly lower, resulting in additional service levels with significantly more vehicle service hours supplied for the same budget. This would improve service levels for Calaveras residents and visitors utilize Calaveras Transit.
- Calaveras Council of Governments has strong management leadership that can provide Calaveras Transit the ongoing attention and priority it deserves.
- The mobility management and multi-modal functions of the Calaveras Council of Governments can provide innovative mobility options for the planned feeder service to the Route 1 spine.

A significant amount of CCOG staff time is already dedicated to transit-related activities such as transit planning, coordination, public outreach, and oversight and compliance.

Recommended Service Plan

The recommended service plan is driven by the desire to achieve the goals and target performance standards cited above. Steps necessary to achieve the minimum recommended performance standards for the cost efficiency measures cost per vehicle service hour are dependent on management decisions and organizational leadership. The following recommended service plan assumes that management actions are taken to achieve the cost efficiency minimum performance standards.

The following is an overview of the Calaveras Transit service that could take five years to develop and financially sustain. The service plan envisions seven levels of an integrated spine and feeder transit system:

1. Develop a spine fixed route between Demarest/49 in Angels Camp and Daphne St. in Valley Springs, with buses every hour between 7 am and 6 pm with 90 minute service on the shoulders starting at 5:30 am and ending at 8 pm on weekdays. The spine route is the primary segment of existing Route 1. Saturday service on the spine route would be operated between 8 am and 6 pm with 90-minute service.
2. Provide flex route feeder services to spine Route 1 from Arnold, Rancho Calaveras, and the Sutter Creek Transit Center five days a week, every three hours between 7 am and 6 pm. Flex route requests for a pick-up or drop-off within ¾ mile of the feeder route would only be available to eligible ADA Paratransit individuals. The ridership statistics indicate that these flex-route feeder services to the spine route can operate 5 days a week and achieve minimum performance standards. A hallmark of the service plan is to match service methods and service levels to projected demand levels.
3. Provide five days a week general public Dial-Ride in Angels Camp for local Angels Camp travel, and as a feeder bus to and from the spine and feeder fixed route buses between 8 am and 4 pm. The Dial-a-Ride bus would also serve ADA Paratransit eligible individuals along the spine corridor and would operate 7 am to 8 am and 4 pm to 8 pm only if an ADA Paratransit eligible passenger requests a next day trip. Eligible trips for ADA Paratransit eligible individuals would be origins and destinations within ¾ mile of the spine route 1 between Angels Camp and Valley Springs.
4. Provide general public checkpoint Dial-a-Ride two or three days a week from Copperopolis, Mountain Ranch, Burson and West Point, depending on demonstrated demand. See Chapter 6 for a full description and example of checkpoint Dial-a-Ride.
5. Provide intercity service between San Andreas, Rancho Calaveras and Stockton with two trips per day in each direction. Ideally, this would be expanded to three trips per day in each direction, but is currently not affordable in the five-year financial plan.
6. In partnership with the tourism industry, develop a fixed route service that provides alternatives to driving between hotels and tourist destinations.
7. Provide supplementary volunteer driver mileage reimbursement and taxi vouchers to eligible seniors and individuals with a disability. A budget line item is included in the financial plan.

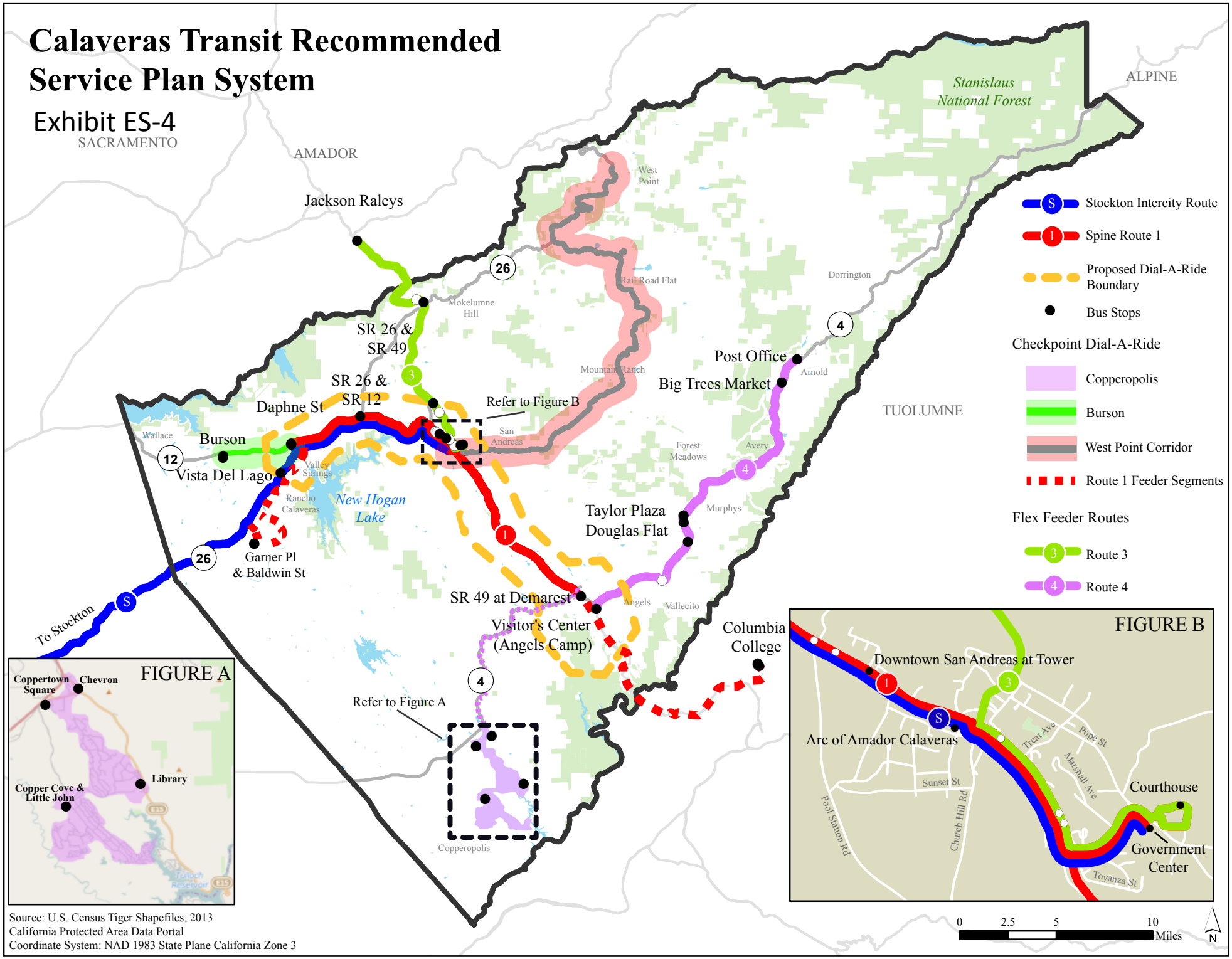
The service plan requires the use of all Local Transportation Funds (LTF) for transit purposes in order to meet the transit needs that are reasonable to meet in Calaveras County. LTF Funds are to be utilized for public transportation if the service meets an unmet need that is reasonable to meet. The spine service improvements to 60-minute service is estimated to generate sufficient ridership and fare revenue to meet the reasonable to meet criteria.

The recommended service plan would have phased implementation in order to ensure that cost efficiencies and ridership projections and resulting fare revenues are achieved.

The recommended service plan is shown in Exhibit ES-4.

Calaveras Transit Recommended Service Plan System

Exhibit ES-4



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System: NAD 1983 State Plane California Zone 3

Marketing Plan

Marketing and passenger information are critical partners to good service planning. Without effective marketing, the best kept service will not enjoy maximum ridership. Conversely, no amount of marketing can sell a service that does not meet passenger's needs.

Calaveras Transit already provides a service that passengers rate as reliable and courteous.

This SRTP includes key strategies for enhancing the convenience and value of the system to both current and potential riders. This chapter will offer marketing strategies to support those service improvements.

Marketing Objectives

The primary goal of the Calaveras Transit marketing program is to increase ridership and productivity of the transit services. In pursuit of this goal, there are four specific objectives which should guide marketing efforts.

Maintain Visibility and Build Awareness of the Transit System and Services

Calaveras Transit has strong visibility for its core services, but awareness for service specifics needs to be strengthened. Continued use of consistent branding on buses and bus stops will help to maintain visibility while outreach efforts will increase awareness.

Enhance Ease of Use of Transit Services

As discussed earlier, students represent a significant target market with 48% of existing ridership, and students result in constant ridership turnover.

Visibility
Branding
Signage

Ease of Use
Passenger Information
Print/Electronic/At Stop

Marketing Partnerships
Community Organizations

Ridership Promotion
Advertising/PR
Targeted Outreach

The goal should be to make the system as easy as possible for novice riders to understand and use. This can be accomplished by providing passenger information that is easy-to-understand and readily available. This information needs to be broadly available through printed materials, on the internet, on smart phones, at bus stops and at key destinations.

Create Marketing Partnerships with Community Organizations

Social service agencies, senior centers and complexes, schools and colleges, medical facilities and other organizations that work with constituents with transportation needs can act as a "sales force" for public transit. By providing these organizations with information and marketing tools, Calaveras Transit can enlist their aid in promoting transit use among their clients and customers, and take advantage of direct feedback for enhancing service effectiveness.

Promote Trial Ridership among High Potential Riders

Marketing of transit services needs to be an on-going effort. It is critical to continually attract new riders to the system, in order to maintain ridership as well as to expand it. This can be accomplished through a combination of community wide promotion such as advertising and public relations and targeted programs focused on high-potential market segments such as college students and low income workers.

Key Marketing Recommendations

There are numerous marketing recommendations in Chapter 9. The following are some of the most important recommendations.

1. *To give the transit system image an "update," implement a more dynamic paint scheme*.

Calaveras Transit has a strong visual brand which is used consistently on vehicles, bus stops, passenger information tools and the website. The name clearly defines the service and service area, and the logo relates to the Calaveras County geography.

The one branding strategy which might enhance the system's visibility and give the image an "update," would be the introduction of a more dynamic vehicle paint scheme, using the logo in a bolder manner. At the right is an example of a vehicle design recently adopted by El Dorado Transit as part of a brand update.

2. *Upgrade passenger guide to provide user-friendly timetables*

When Routes 1A, 1B and the Route 4 leg to Columbia College are combined into a single route with consistent headways, it would the time to redesign the passenger guide to better understand the spine service and the feeder services to and from the spine route.

3. *Increase the availability electronic passenger information*.

The increasing utilization of computers and mobile phones has transformed the way in which many transit riders get information. The on-board survey found that 65% of Calaveras Transit riders access the internet regularly, 75% have a cell phone and 43% have a Smartphone. Providing information that can be readily accessed on a mobile phone as well as a computer or tablet is a critical objective for Calaveras Transit's marketing program. Following are four strategies:

- Increased use of Google Maps and the Google Transit trip planning features
- Redesign website to focus on the user
- Utilize the new AVL system to provide real time transit information
- Provide service alerts

4. Calaveras Transit should conduct targeted marketing to key potential riders.

"Gatekeepers" are individuals or organizations that can provide access to target populations. For example, student services staff at Columbia College is a gatekeeper for its students, while the case workers at Behavioral Health and CalWorks are gatekeepers for their clients. Providing email updates, "training sessions," and facilitating purchases of passes are ways to provide low cost targeted marketing.

The outlying areas of West Point and Copperopolis present particular marketing challenges for Calaveras Transit. It is likely that the nature of service in these areas will be changing and it will be important to communicate those changes to the residents. Outreach channels within these communities are limited, but opportunities include:

- Presentations to service clubs and community groups
- Notices with home delivery meals
- County Social Service Agencies with clients in these areas
- Commission on Aging

5. *Utilize the Mobility Manager in Marketing and Communications*

Calaveras Council of Governments (CCOG) has applied for and received funding to establish a Mobility Management position to develop and promote transportation alternatives within Calaveras County. The Mobility Manager will be in charge of developing additional service

options to compliment Calaveras Transit's fixed route services. These will include a volunteer driver reimbursement program and potentially a taxi subsidy program. In addition, the Mobility Manager will serve a critical communications function.

Financial Plan

The financial plan provides details on the operating and capital costs and revenues from FY 2015/16 to FY 2019/20, based on the discussion and service level recommendations. There is a great deal of uncertainty facing public transportation financing. Three financial scenarios were developed to provide the possible potential outcomes, particularly for operating revenues. The following is the recommended phasing of service improvements and corresponding increases in vehicle service hours, resulting operating costs, operating revenues, capital costs and capital revenues.

Service Supply Phasing

FY 2015/16

- Implement Stockton Intercity Service in December 2015. Adds 1,275 annual vehicle service hours (VSH). Subsequent references to VSH are all annual figures.
- First full year of Burson on demand service. Adds 400 VSH

FY 2016/17

All new service improvements would be implemented in January 2017, six months after the new Calaveras Transit Agency would be initiated.

- Implement consistent 90-minute fixed service on Spine Route 1 in both directions between Valley Springs and Rancho Calaveras. Adds 753 VSH in FY 2016/17 and FY 2017/18.
- Incorporate existing Route 4 segment from Angels Camp to Columbia College as part of Route 1. No net change in VSH.
- Implement Dial-a-Ride service in Angels Camp/ADA Paratransit for Route 1 Corridor. Adds 1,004 VSH in FY 2016/17 and FY 2017/18
- Implement checkpoint Dial-a-Ride in Copperopolis, Mountain Ranch/West Point corridors two days per week. Reduces VSH by 595.

FY 2017/18

- Increase checkpoint Dial-A-Ride service to Copperopolis three days a week. Adds 312 VSH

FY 2018/19

- Implement Saturday service on Route 1. Adds 510 VSH

FY 2019/20

- Implement 60-minute service on spine route during 4-hour peak periods. Adds 1,004 VSH

The recommended phased service plan would increase vehicle service hours from 11,475 in FY 2015/16 to 18,908 in FY 2019/20.

Operating Costs

The May 2015 budget for Calaveras Transit in 2015/16 was a balanced budget, with projected total operating costs of $1,425,764. An amended final budget, adopted by the County Board of Supervisors, reduced the operating costs in FY 2015/16 to $1,389,511. With the recommended phased growth of Calaveras Transit, the overall cost of Calaveras Transit is expected to increase to approximately $1,927,000 in FY 2019/20.

The recommended transition of governance to a new Calaveras Transit Agency is assumed to take place on July 1, 2016. As discussed more in Chapter 5, the Calaveras Transit Agency would be a new joint powers authority with Calaveras Council of Governments Board also sitting as the Calaveras Transit Agency Board. The first year would be a transition year and would include a full-time equivalent transit manager. Since a .5 FTE is recommended for this position between FY 2017/18 and FY 2019/20, this could be a .5 FTE employee of the Calaveras Transit Agency plus a temporary .5 FTE or contract position to help with the Calaveras Transit Agency start-up.

It is assumed the existing vendor contract is extended through June 30, 2017. This provides Calaveras Transit a year to develop an RFP and guide the procurement process with the contract awardee starting on July 1, 2018. The RFP from the Calaveras Transit Agency would be for both operations and maintenance service, with the contract transit manager responsible for marketing plan implementation, community outreach, and operations planning. The procurement process will be market based, and therefore it is not known if the assumptions for the vendor operations fixed cost, operations vendor cost, and maintenance costs will be realized in the contract award. In reality, this will dictate whether or not the additional service improvements including expanding Copperopolis Checkpoint Dial-A-Ride to three days a week, Saturday service on the Spine Route, and 60-minute service are financially feasible.

Based on several cost efficiency actions recommended in the Maintenance and Organizational Assessment, the cost per vehicle service hour would decline to $97.31 in FY 2017/18, when the Transit Manager becomes a 0.5 FTE position. This is below the minimum performance standard of $104.40, indexed for inflation.

Operating Revenues

The recommended service plan depends on Local Transportation Funds (LTF) being utilized exclusively for transit purposes after FY 2015/16. The use of LTF funds for operating purposes almost doubles from $535,638 in FY 2015/16 to $1,063,076 in FY 2019/20. This assumes a 4.5%

annual increase in LTF funds, based on the current of Board of Equalization estimates for LTF growth. Implementation of Saturday service in FY 2018/19 and 60-minute service on the spine Route 1 between Valley Springs and Angels Camp are deliberately in the last two years of the planning horizon because the decision to implement these services will be contingent on whether or not both the cost and revenue assumptions utilized are reasonably accurate and can be financially sustained.

In the May 2015 Calaveras Transit budget for FY 2015/16, the operating revenues matched expected expenses at $1,426,035. The final budget revenues, adopted by the Calaveras County Board of Supervisors, is $1,271,626. There is a need to increase operating revenues to $1,927,313 in FY 2019/20 if the service level recommendations are to be fully implemented. This includes increasing fare revenues from the $130, 283 in the final Calaveras County budget for 2015/16 to $207,003 in FY 2019/20. The steep increase includes higher fares on the Stockton services and improved ridership and therefore higher fare revenues on Route 1.

Capital Expenditures

The desired fleet mix by FY 2019/20 is 11 vehicles which include five larger 28-passenger Class E cutaway buses, three 12 passenger Class C buses, and three Class D minivans for use in Dial-a-Ride services (class C spare can be utilized when larger Dial-a-Ride group trips are made). Most of the fleet would be replaced in FY 2015/16 with eight vehicles procured. The total vehicle procurement including replacement vehicles is expected to be approximately $844,000 over five years. In addition, a bus replacement trust fund is funded at $30,000 per year over the next five years to provide matching funds for future bus procurements.

The second major category of capital expenditures is bus stop improvements, signage and equipment. Almost $370,000 is programmed for bus stop improvement. There is almost $149,000 in safety and security equipment programmed. Calaveras Transit has also budgeted 69,000 in FY 2015/16 for AVL equipment. A total of $648,500 is programmed for equipment and minor facilities.

The recently approved Mobility Manager is an allowable capital expenses, and almost $330,000 is programmed over five years for the Mobility Manager.

The scope and potential cost for a Calaveras Transit Operations and Maintenance Facility is not known. It is recommended that the scope and potential costs be addressed in a future Long Range Transit Study. This would service as initial feasibility study. Subsequent project components and estimated costs would be developed for:

- Preliminary Design
- Land Acquisition
- Final Design and Environmental
- Construction

A placeholder value of $2.4 million is provided in the capital plan until the actual costs are determined.

The five-year capital expenditures, including the placeholder value for the operations and maintenance facility is almost $4.3 million for the five-year period.

Capital Revenues

The majority of revenues for bus procurements and bus stop improvements will be revenues from PTMISEA carried over since FY 2010/11 and subsequent years. Since PTIMSEA has reached its sunset funding, it will no longer be available in FY 2018/19 and FY 2019/20 when vehicle procurements are planned. In those years, FTA 5339 discretionary grants would be utilized for funding with the bus replacement trust fund utilized for matching purposes.

A placeholder grant is included for the Operations and Maintenance Facility. This could be from discretionary FTA 5339 funding, STIP funding or another source of funding approved for facility development in the federal reauthorization bill.

A total of $4.3 million in capital revenues is programmed over the next five years.

Summary

The Short Range Transit Plan provides a blueprint for the development of Calaveras Transit over the next five years. Recommendations are made to make Calaveras Transit a much more efficient operation, enabling phased in service improvements to meet the increasing needs for public transportation in Calaveras County. A new organizational structure, the Calaveras Transit Agency, is recommended in order to provide the necessary leadership to enable Calaveras Transit to achieve its full potential in meeting customer mobility needs in a more cost-effective manner. To provide the necessary revenues for needed expansion of transit services, it is recommended that all applicable Local Transportation Funds be utilized for transit purposes, instead of the current mix of streets and roads and transit purposes. A recommended service monitoring program will use recommended performance standards to ensure that any phased expansion of service is financially sustainable over time.

1. Introduction

Purpose of Short Range Transit Plan

Calaveras Transit last developed a Short Range Transit Plan (SRTP) in June 2009. The primary purpose of the SRTP is to guide the development of Calaveras Transit services in order to provide improved mobility for Calaveras County residents and visitors over the next five years. More specifically, the SRTP process:

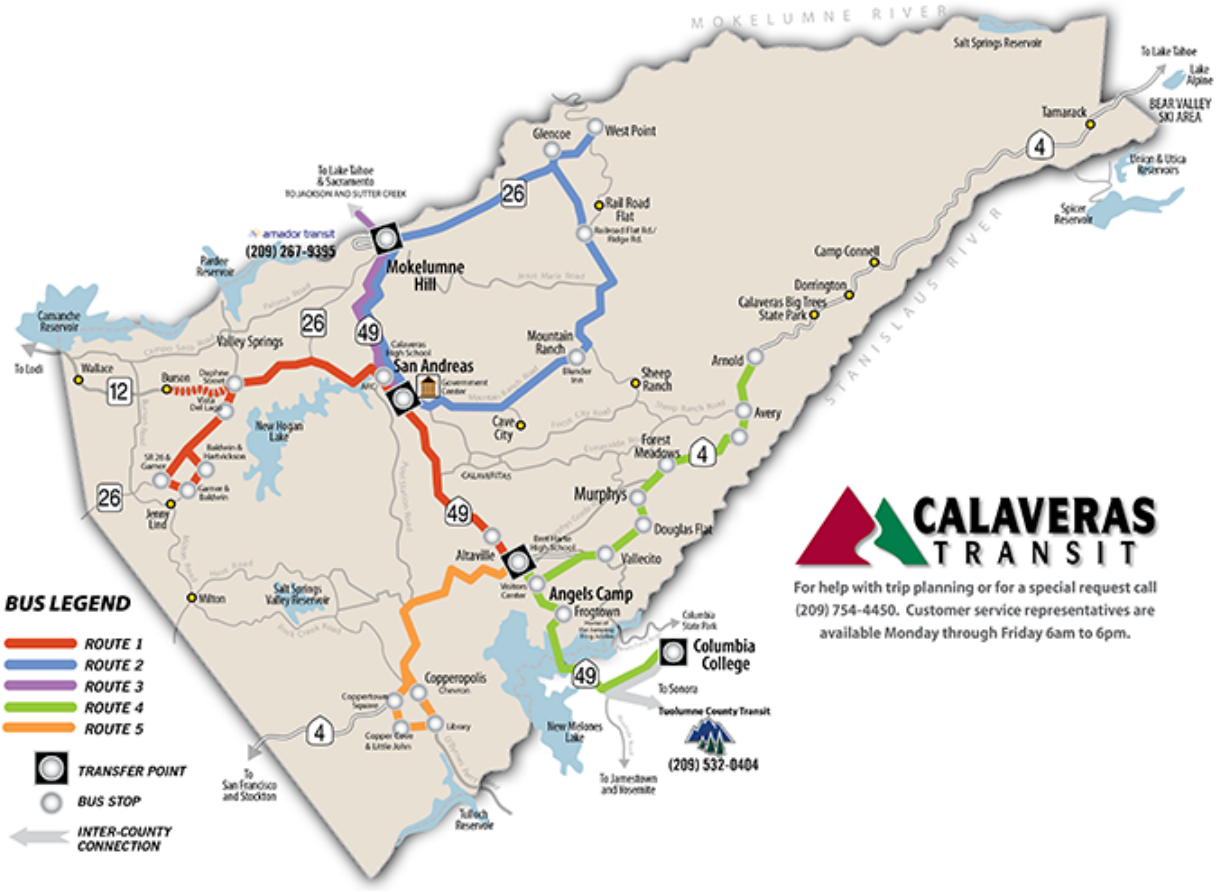
- Provides opportunities for public input into the future of both traditional public transportation services as well as mobility management strategies to enhance mobility options for Calaveras County residents.
- Establishes goals, objectives and performance standards.
- Conducts market research to determine who is currently riding Calaveras Transit buses, how satisfied they are with the services provided, and what the priorities for improvements should be.
- Evaluates the recent performance of existing services.
- Provides service plan recommendations.
- Develops a comprehensive marketing plan for communicating to the public about Calaveras Transit services.
- Establishes a detailed operating and capital financial plan.

The next section of this chapter provides an overview of existing Calaveras Transit services. The third section profiles overall systemwide performance over the past five years. The fourth section provides the key milestones during the two-year planning process. Finally, the last section of the chapter provides an overview of the chapters in Short Range Transit Plan.

Overview of Calaveras Transit Services

Figure 1-1 on the following page is a map of Calaveras Transit routes. The following is a brief overview of the routes. A more detailed evaluation of performance by routes is provided in Chapter 3. All routes are provided Monday to Friday. Route deviations are available to seniors aged 65 and older and eligible persons with disabilities within 3/4-mile of the regular scheduled route. All deviations are limited and prioritized by reservation. Flag stops are permitted mid-route between designated bus stops. In addition, connections to Amador Transit and Tuolumne County Transit is available on routes to Jackson and Columbia College in Sonora, respectively.

Figure 1-1 Calaveras Transit System Map



Route 1 as of May 26, 2015 has two route segments. Route 1A connects Rancho Calaveras, Vista Del Lago, Valley Springs, San Andreas and Angels Camp. Route 1B now connects Burson, Valley Springs, San Andreas and Angels Camp. Service is provided from 5:10 am to 7:35 pm.

Route 2 provides two round trips daily to West Point, Rail Road Flat, Mountain Ranch and San Andreas. A third midday trip is provided from San Andreas to Mountain Ranch and Rail Road Flat and back.

Route 3 provides three round trips starting in San Andreas, to Mokelumne Hill and Jackson. Service is provided from 8:15 am to 4:00 pm.

Route 4 provides five trips to Arnold, Murphys, Angels Camp and Columbia College. Several of the Route 1 buses become Route 4 buses in Angels Camp for the trip to Columbia College. Five trips are also provided from Columbia College to Arnold. Several of the Route 4 buses from Columbia College become Route 1 buses at San Andreas. Service is provided from 5:30 am to 7:32 pm.

Route 5 has two round trips between Copperopolis and Angels Camp. The first round trip between Angels Camp and Copperopolis starts at 5:53 am and returns back to Angels at 6:55 am when it connects to the Route 4 bus to Columbia College. Service is not provided again until 6:00 pm when the bus makes a round trip between Angels Camp and Copperopolis.

Recent Systemwide Performance

The following performance trends provide important context to the Short Range Transit Plan, which plans for service delivery over the next five years. The operating cost per vehicle service hour for Calaveras Transit has increased from $69.85 per vehicle service hour in FY 2008/09 to $113.26 in FY 2013/14, based on financial audits of Calaveras Transit costs. The performance of Calaveras Transit is shown in Figure 1-2 from FY 2008/09 to FY 2013/14.

In FY 2008/09, Calaveras Transit was able to provide 15,005 vehicle service hours at a cost of $1,048,090 resulting in a cost per vehicle service hour of $69.85. In FY 2013/14, the total operating cost was $1,094,999, but only 9,668 vehicle service hours can be provided for the same budget at a cost per vehicle service hour of $113.26. The inflation rate between 2009 and 2014 was a total 10.3% during this period, which means that had the cost per vehicle service hour increased at the rate of inflation, it would have increased only to $77.04. However, the cost per vehicle service far exceeded the rate of inflation and increased by 62% from $69.85 per vehicle service hour to $113.26.

The primary consequence of the excessive cost escalation of Calaveras Transit is that the Calaveras Transit customers who need public transportation to conduct daily activities have significantly less public transportation services available to them. There is significantly less frequency on the existing routes making the service less convenient.

Figure 1-2

	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14
	Actual	Actual	Actual	Actual	Actual	Actual
Source	Perf. Audit	Perf. Audit	Perf. Audit	Fiscal Audit	Fiscal Audit	Fiscal Audit
Base Statistics (Annual)						
Ridership	90,834	55,273	60,080	68,067	65,922	69,100
Vehicle Service Hours	15,005	9,248	9,043	8,930	8,739	9,668
Vehicle Service Miles	439,290	274,609	263,345	259,305	263,168	275,850
Fare Revenue	$ 89,326	$ 69,184	$ 59,751	$ 66,572	$ 87,901	$ 101,365
Operating Costs	$ 1,048,090	$ 727,680	$ 831,820	$ 920,533	$ 1,000,691	$1,094,999
Performance						
Passengers/Service Hour	6.05	5.98	6.64	7.62	7.54	7.15
Passenger/Service Mile	0.207	0.201	0.228	0.262	0.250	0.250
Average Fare/Passenger	$ 0.98	$ 1.25	$ 0.99	$ 0.98	$ 1.33	$ 1.47
Farebox Recovery Actual	8.5%	9.5%	7.2%	7.2%	8.8%	9.3%
With TDA Exemptions*	8.5%	9.5%	7.2%	7.3%	9.3%	9.4%
Cost/Vehicle Service Hour	$ 69.85	$ 78.69	$ 91.98	$ 103.09	$ 114.51	$ 113.26
Cost/Service Mile	$ 2.39	$ 2.65	$ 3.16	$ 3.55	$ 3.80	$ 3.97
Cost/Passenger Trip	$ 11.54	$ 13.17	$ 13.85	$ 13.52	$ 15.18	$ 15.85
Subsidy/Passenger Trip	$ 10.56	$ 11.91	$ 12.85	$ 12.55	$ 13.85	$ 14.38

* TDA regulations provide exemptions for service expansions and extensions which are not included in the farebox recovery calculation. Figures for TDA exemptions are from the relevant TDA Performance Audit.

The focus of many Calaveras Council of Governments discussions over the past several years has been on the farebox recovery ratio. The farebox recovery ratio is the ratio of fare revenues to operating costs, expressed as a percentage. Fare revenues, due to the 2012 fare increase have increased substantially, increasing from $66,572 in FY 2011/12 to $101,365 in FY 2013/14, a 52% increase. The average fare per passenger has increased from $0.98 in FY 2011/12 to $1.47 per passenger in FY 2013/14. Unfortunately, the increase in operating cost per vehicle service hour has had a dampening impact on the increase in the farebox recovery ratio. The bottom line is that Calaveras Transit passengers have to pay significantly more in fares for far less service. Despite a 52% increase in the average fare, the FY 2013/14 farebox recovery ratio (9.3%) is actually slightly less than what it was in FY 2009/10 (9.5%)

Transit Maintenance and Organizational Analysis

Calaveras Council of Governments and County staff recognized the need to evaluate the excessive cost escalation and added an amendment to the Short Range Transit Plan to conduct a "Transit Maintenance and Organizational Analysis." The purpose of this analysis was to determine what cost elements are making Calaveras Transit's operating cost per vehicle service hour substantially higher than some other rural transit services. More importantly, are there

potential changes to how Calaveras Transit is doing business and how services are administered and managed that would reduce Calaveras Transit's cost per vehicle service hour?

The full report on the analysis that was completed in September 2014 is included in Appendix A. The key findings relevant to the Short Range Transit Plan are summarize below.

Key Milestones That Help to Explain Calaveras Transit Cost Escalation

The analysis reported on key milestones that contributed to the excessive cost escalation of Calaveras Transit between FY 2008/09 and FY 2013/14:

- In FY 2008/09, due to the significant reductions in State Transit Assistance (STA) funding, severe service cutbacks, including the elimination of Lodi service, were made reducing the vehicle service hours from 15,005 to 9,248. In FY 2009/10, the full fiscal year after the service reductions were made, the cost per vehicle service hour was $78.69. When STA funding was restored, service levels were not restored.
- In FY 2010/11, Calaveras County made the management decision to move Calaveras Transit maintenance to the County Department of Public Works. A memorandum of understanding was negotiated between the Calaveras County Public Works Fleet Shop and the Calaveras Public Works Transit Division. A management and operations RFP was also sent to prospective bidders to operate and manage Calaveras Transit buses. Paratransit Services was selected and a contract was executed.
- At the beginning of FY 2011/12, the Fleet Shop assumed the maintenance duties for Calaveras Transit and Paratransit Services took over the operations of Calaveras Transit from the previous contractor, MV Transportation. In FY 2011/12, the first full fiscal year that Paratransit Services operated services and Calaveras County provided maintenance service, the cost per vehicle service hour jumped from $78.69 in FY 2009/10 to $103.09 in FY 2011/12.
- In FY 2012/13 service adjustments were made and a $0.25 zone fare was implemented.
- In FY 2012/13, service changes were made such that Route 3 went directly to Jackson instead of providing transfers to Amador Transit in Mokelumne Hill. Route 3 serving Copperopolis became Route 4 and Route 2 terminated service to Mokelumne Hill and provided limited service between San Andreas and West Point. The cost per vehicle service hour was $114.51. This is the basis for analysis since these were the last audited cost figures.
- In FY 2012/13, the full-time Calaveras County Transit Manager departed and was replaced by two different interim contract Transit Managers, Majic Consulting and Scott Dwyer Consulting.
- In FY 2013/14, service on Route 1 was extended to Rancho Calaveras.

- Late in FY 2013/14, the contract for the Interim Transit Manager expired. The Transit Manager function was taken over by the Public Works Analyst.

Peer Comparison of Costs per Vehicle Service Hour

Peer agencies are utilized to illustrate the difference in cost elements compared to Calaveras Transit. The peer information includes data from nine different transit agencies that provide operations and maintenance services for small rural California transit systems. Providing detailed peer cost data for private contractors could potentially be utilized by a vendor to obtain a competitive disadvantage in future bid opportunities. Therefore, only the average costs and the low and high ranges are identified for different cost components. Calaveras Transit is compared to these peer organizations.

Requests for detailed cost information were sent to seven candidate peers. In addition, data was available from an internet search or consultant files for three additional peer agencies. Data was received from a total of nine transit agencies, including Calaveras Transit. The other eight agencies include:

- Sage Stage, Modoc County
- Mountain Area Regional Transit Authority, San Bernardino County
- Gold Country Stage, Nevada County
- Tuolumne Transit, Tuolumne County
- Trinity Transit, Trinity County
- STAGE, Siskiyou County
- Lassen Transit, Lassen County
- Amador Transit, Amador County

Calaveras Transit is one of the smallest rural transit agencies in California with 8,739 vehicle service hours provided in FY 2012/13. At the time of the analysis, only audited cost figures for FY 2012/13 were available and this is the basis year for the analysis. The selection process for peers included only California rural transit systems, since these agencies are all under California's Transportation Development Act requirements. The County population or transit service area was under 60,000. The peers selected provide inter-community transit services. The peers selected all had 22,000 fixed route vehicle service hours or less to be considered a smaller rural transit system.

Figure 1-3 is a summary of the peer comparison of total cost per vehicle service hour for eight peers and Calaveras Transit. For the four agencies that contract for operations, including Calaveras Transit, the average is $85.58 per vehicle service hour with the low being $65.53 per vehicle service hour. For the five directly operated services where the agency directly hires the drivers and other staff, the average cost per vehicle service hour is substantially higher than the peer contract services included in this analysis. The average cost per vehicle service hour is

$101.41 for directly provided services, with the low being $78.52 per vehicle service hour, and the high being $126.39 per vehicle service hour. There is one directly provided transit agency with a higher cost per vehicle service hour than Calaveras Transit, and this is a county managed service with directly provided operations and maintenance services.

Figure 1-3 Peer Comparisons with Calaveras Transit of Cost per Vehicle Service Hour

Type of Service	No. Agencies	Calaveras Transit	Average	Median	Low	High
Contract Services	4	$ 114.51	$ 85.58	$ 81.13	$ 65.53	$ 114.51
Directly Operated	5	N/A	$ 101.41	$ 107.86	$ 78.52	$ 126.39

In FY 2012/13, with contracted operations, Calaveras Transit had a cost per vehicle service hour of $114.51 with the peer average being $85.58 per vehicle service hour. The peer average is slightly above the $77.04 reported earlier if the operating cost per vehicle service hour of $69.85 was inflated at the Consumer Price Index or 10.3% between 2009 and 2014.

2012/13 Calaveras Transit Cost Breakdown

Per the Transportation Development Act guidelines, depreciation and capital expenses are not included in the operating cost per vehicle service hour and they have been excluded. Therefore, in Figure 5-4, the $114.51 does not include $159,643 in depreciation costs in FY 2012/13. The fiscal audit does not provide detailed breakdowns of costs. The consulting team relied on internal cost reports provided by the Calaveras County Department of Public Works for the analysis. In Figure 1-4 the percent of total adds up to 102% due to relatively minor differences in Calaveras Transit internal cost reports. It is normal for internal costs not to exactly match the audited financial figures, and for the purposes of this analysis they were close enough. They provide a reasonable basis for proposing alternative strategies to address increasing operating costs.

Figure 1-4 Breakdown of Operating Cost per Vehicle Service Hour

Main Category of Costs	Cost Per Hour	Percent of Total
Operator Fixed Costs	$ 35.63	31%
Operator variable costs per hour	$ 32.07	28%
Maintenace Cost per hour	$ 19.41	17%
Fuel Cost per hour	$ 15.92	14%
County Administration Cost per hour	$ 13.26	12%
Total*	$ 116.28	102%
Audited Financial Statements	$ 114.51	
* Internal cost reporting does not equal audited numbers, and results in $1.77 difference		

The figure above is a rank-order listing of cost per vehicle service hour for the major cost categories included in this analysis. In the case of Calaveras Transit, 59% of the Calaveras Transit cost is in the operations contract. Maintenance costs are 17% of the total cost, followed by fuel cost per hour at 14%. Calaveras County's administrative costs are 12% of the total. In FY 2012/13, Calaveras Transit contracted for transit management services. Overall, the strategies that would make the most difference in long-term operations costs per vehicle service hour are regarding operator fixed costs, maintenance costs, and administrative costs. The recommended strategies from September 2014 and current status as of late June 2015 are described below.

Operations Fixed Route Costs

In the opinion of the consulting team, the RFP for Operations and Management Services was designed to accommodate a system of 25,000 to 35,000 vehicle service hours with a Dial-A-Ride (DAR) service. It was not designed for a rural transit system with 8,850 vehicle service hours and no separate DAR. The RFP was overly prescriptive and did not enable the proposers to design a staffing plan to meet the needs of Calaveras Transit in a more cost-effective manner.

In discussions with Paratransit Services and Calaveras County, it is obvious that duties and responsibilities for key staff have evolved since the execution of the operations contract. Overall, there is a need to review transit functions performed by Calaveras County and the operations contractor to determine how these functions can be scaled in a more cost-effective manner. During the preparation of this working paper, Calaveras County and Paratransit Services have entered into such discussions to evaluate how transit functions can be scaled in a more cost-effective manner. This was presented to the Calaveras Council of Governments in September 2014. At that meeting, Calaveras Council of Governments members wanted to give Calaveras Transit six months to address this issue. As of July 2015 when this draft SRTP was being prepared, there has been no progress in evaluating the transit functions. The 2015/16 budget approved by the Calaveras County Board of Supervisors exacerbates the problem.

The current operations contract expired on June 30, 2015 with the option for two additional years at the discretion of Calaveras County.

In September 2014 when the analysis was completed, one option was to begin work immediately on a new RFP that would be released likely in January of 2015 and provide greater flexibility for the proposer to develop a staffing plan to meet the performance and service quality standards that Calaveras Transit would like to achieve. Service quality, past performance and cost would all be selection criteria.

A second potential strategy was to renegotiate the contract with the current operations contractor, with the intent of extending the contract for another two years if high service quality and reliability can be maintained at a lower fixed operations cost per vehicle service hour. During the work on this working paper, the County of Calaveras has entered into negotiations with Paratransit Services for a two-year extension of the contract. On September 22, 2015, the

Calaveras County Board of Supervisors approved a 21 month contract extension ending June 30, 2017 for $1,280,961.

The analysis identified duplicative duties being performed among County Transit Manager and Operations Contract Manger. Therefore, as part of either option, Calaveras County would evaluate all transit functions that need to be performed and determine who should perform the functions including what functions should be retained by the governing agency and what functions should be performed by the contractor. One option is to leverage the professional expertise of the current contractor (or competitively determined with another vendor) as part of their General Administration and Support. As of July 2015, the functional analysis has not been completed.

Another important option is for the County to purchase and own the operations and maintenance facility. These costs would be amortized capital costs and not be included in operating costs. This should receive additional analysis in the Long Range Transit Plan requested by County staff that CCOG has included in its Overall Work Program for FY 2015/16.

Maintenance Costs

The maintenance and organization assessment utilized Mr. Halsey King, nationwide expert on maintenance practices to conduct an assessment of Calaveras Transit maintenance practices. The analysis found Calaveras Transit fleet has been adequately maintained and has been able to pass required CHP inspections on a regular basis. The two buses that Mr. Halsey King inspected were properly maintained.

However, the lack of consistent leadership in maintenance practices, policies and procedures should be considered a risk management issue for Calaveras County management. There needs to be consistent management oversight with adopted policies, procedures and standards to ensure that the current safety record is maintained in the long term. This is not only good management practice, but agencies receiving federal funds for transit capital procurements such as buses require adopted goals, objectives, and performance standards in a maintenance plan.

The decision to move the maintenance of Calaveras Transit from a third party vendor to the Fleet Shop did not receive adequate analysis for the costs, staffing, and training requirements. At the time of this report preparation, there are not adequate management information systems in place to monitor and evaluate maintenance costs. Therefore, in FY 2012/13, the data presented for the breakdown of costs, including a breakdown of costs by bus was not readily available and needed to be tabulated independently by Public Works staff. Compared to peers for directly provided maintenance, the average maintenance cost per mile is about the same as the peer average. Overall, the costs of properly maintaining a transit fleet prior to Calaveras County taking on the maintenance program were significantly underestimated.

These strategies are meant for consideration if Calaveras County retains maintenance responsibility. Other institutional arrangements including having the Operations contractor maintain the fleet and the potential for a shared contractor with an adjacent agency are explored at the end of this section under Maintenance Institutional Options.

Recommendations:

1. *Replace the remaining fleet as soon as feasible.*

   A priority should be the replacement of the remaining five vehicles in the Calaveras Transit fleet as soon as possible. Two buses have been delivered. The 32-foot Glaval Legacy Type E-FRT buses are equipped with a Freightliner chassis and Cummins 240 horsepower engines. In addition, the County Board of Supervisors approved two additional 20-passenger El Dorado National Aerotech buses for purchase in August 2014.

   The FY 2015/16 budget includes the purchase of the two buses approved in August 2014, three additional Class C buses for local service, one intercity bus for the Stockton service two minivans, and a maintenance pick-up truck. This recommendation is being implemented.

2. *Hire a Fleet Manager with experience with a public transportation fleet.*

   Transit buses carry passengers and are significantly more regulated by State and Federal authorities than the Road Department and Waste Management fleets. The Fleet Manager should be experienced and knowledgeable about these regulations and required policies and procedures.

   A new fleet manager was hired in late 2014. He is Automotive Service Excellence (ASE)-certified (School Bus Technician Brakes) with experience in bus fleet maintenance. This recommendation has been implemented.

3. *The maintenance budget should include time for mechanic training.*

   The transition of the Calaveras Transit fleet to the Fleet Shop did not include adequate training of the mechanics on transit vehicles. The following are the top priorities for training:

   a. Federal and State Inspection criteria for buses and commercial vehicles
   b. Training in bus electronics maintenance
   c. Wheelchair lifts training and certification
   d. Air conditioning training and certification
   e. Mechanics should have Commercial Driver License (CDL) training and licensing to ensure safe maneuvering of the buses.

4. *Develop detailed maintenance plan goals, objectives, performance standards and policies and procedures*.

   When Calaveras County took over maintenance of Calaveras Transit buses, there was a detailed memorandum of understanding developed between the Public Works Transit Division and the Public Works Fleet Shop. It provides a detailed scope of work.

   There is not a detailed set of goals, objectives and performance standards established for the maintenance of buses. A set of performance standards needs to be developed with corresponding objectives and goals.

   Policies and procedures need to be developed such that the maintenance function has a formalized set of written procedures, for example, in obtaining a part for a routine preventative maintenance procedure or when outside services should be utilized, to name just two examples.

   Vehicles purchased with federal funds are being increasingly scrutinized for asset management practices. Regular preventative maintenance and adhering to Federal maintenance standards is imperative going forward.

   A maintenance plan is a requirement of federal funding for buses. The following is the verbatim section from the FTA 5311 handbook on maintenance (Calaveras Transit is a subrecipient to Caltrans):

   > *Per 49 CFR 37.16-163 and FTA Master Agreement, subrecipients are required to have a maintenance plan. Subrecipients describe their maintenance plan for the FTA funded vehicles, facilities, and facility related equipment within their original program application. The plan should clearly identify the goals and objectives of a maintenance program and establish the means by which such goals and objectives will be attained. In the maintenance plans, periodic reporting, maintenance record review, visual inspections, and maintenance audits should also be addressed.*

5. *Develop more comprehensive maintenance inspection forms.*

   The existing maintenance inspection forms were based on the MV Transportation forms with the interim fleet manager adding OEM maintenance intervals. The forms do not include ancillary components such as fareboxes and wheelchair lifts. A set of stratified inspection forms should be created for each bus type that includes necessary A, B, and C inspections that include each of the bus components. In addition, inspections for wheelchair lifts and air conditioning should be incorporated into the inspection forms.

6. *Implement the VMRS coding system as part of the management information systems.*

   Calaveras Transit should adopt the VMRS coding system that is already included in the CAMS software system it is utilizing. This will enable a more systematic tracking of cost and parts inventory and will help the Fleet Manager with his or her job in maintaining a safe and reliable transit fleet.

The 2012/13 maintenance budget was $165,828. The maintenance budget for FY 2015/16 is $175,000, including a line item for $30,000 for Intercity Bus Maintenance, a bus that will not be delivered until early in the 2015/16 fiscal year. In the peer analysis the average maintenance costs per bus was $16,080, and average for Calaveras Transit was $24,728 for an aging fleet. Budgeting $30,000 for a new bus that will be under warranty is likely double of what the actual costs can be expected in FY 2015/16.

Transit Administration Costs

Up until FY 2005/06, the Calaveras Council of Governments was responsible for the governance and administration of Calaveras Transit.

In shifting to Calaveras County, Transit Administration has the responsibility for the following functions for Calaveras Transit:

- Budgeting
- Grant writing
- Capital Planning and Procurement
- Oversight of Fleet Shop Maintenance MOU
- Oversight/Monitoring/Procurement of Operations Contract
- Federal and State Compliance
- Goals, Objectives, Policies and Performance Standards
- Marketing and Promotion

Up until September 2012, Calaveras Transit had a full-time Transit Manager in the Calaveras Transit Public Works Transit Division. At that time, interim contract management services were retained while Calaveras County recruited for a full-time replacement. A contract for interim transit management was initiated in September 2012. The most recent interim contract was a one-year contract for $50,000 that ended on May 2, 2014. The Public Works Analyst was appointed to provide Transit Administration function in May 2014.

Overall, Calaveras County has struggled to provide consistent leadership in the administration of Calaveras Transit. Decisions such as the specifications in the 2010 RFP for the Operations Contract and significantly underestimating the costs of transit maintenance in transitioning from a private vendor to the Calaveras Fleet Shop have led to a significant increase in the cost per vehicle service hour. The jump in the cost per vehicle hour from $78.69 in FY 2009/110 with

9,248 vehicle service hours the full year before these changes were made to $103.09 in FY 2011/12 with 8,930 vehicle service hours, the first full year of implementation of these two important transitions speaks volumes on the effect of these changes.

On the other hand, decisions to control costs such as hiring an interim transit manager for the Transit Administration function without adequate Public Works leadership led to the lack of capital project delivery including Phase III of the bus shelter program and replacement of buses well over their useful life in a timely manner.

It is apparent that both the FY 2013/14 and FY 2014/15 budgets were prepared without sufficient professional transit management or supervision. The FY 2014/15 adopted budget of $1,021,168 is just $21,000 more than the audited FY 2012/13 expenses even though the Rancho Calaveras service had been added and $76,000 in additional LTF funds were requested in FY 2013/14 specifically for the Rancho Calaveras service. Overall the budgets and TDA claims are confusing and do not provide consistent rationale for substantial increases and decreases in both the budgets and TDA claims.

The 2015/16 budget released in May 2015 was for $1,425,065 for approximately 11,226 vehicle service hours and approximately 290,409 vehicle service miles. It is approximately based on the consulting team estimation because Calaveras Transit did not determine the number of vehicle service hours and miles to be provided as part of the budgeting process. This is $127 per vehicle service hour, a 12% projected increase compared to audited FY 2013/14 figures, despite the implementation of the Stockton Intercity Service. In Chapter 4 of the SRTP, minimum and target standards are recommended for operating cost per vehicle service over the next five years. In Chapter 5, the organizational assessment concludes that a change in organizational structure may be necessary to achieve the performance standards.

Key Milestones During SRTP Process

The Short Range Transit Plan (SRTP) will have been a two-year process by the time the Final SRTP is adopted. This is about 15 months longer than normal. It is due to identification of issues that required additional analysis and the stepwise approach that additional presentations to the Calaveras Council of Governments, Calaveras Board of Supervisors, and City of Angels Camp City Council with the goal of developing a cost-effective means of providing public transportation service delivery in Calaveras County. The following are the key milestones of the work effort.

- December 4, 2013 is when the contract was signed between Mobility Planners LLC and Calaveras Council of Governments to conduct the Short Range Transit Plan.
- A kick-off meeting was held on February 12, 2014 with CCOG, County, and Paratransit Services staff. Team members Cliff Chambers and Selena Barlow rode the buses on all routes except Route 5 to gain insight into the passenger perspective of Calaveras Transit. At that meeting, the five-year Calaveras Transit cost escalation was discussed and the

need for the Transit Maintenance and Organizational Analysis was suggested by CCOG and County staff.

- On March 14, 2014, a contract amendment was executed to conduct the Transit Maintenance and Organizational Analysis.
- In April 2014, an onboard survey and ridecheck was conducted aboard all Calaveras buses.
- In June 2014, a research report on the findings of the stakeholder interviews, focus groups, onboard survey, ridecheck and route assessment was prepared and presented to the Calaveras Council of Governments. This working paper provides the foundation for Chapter 2 on existing and future transit needs.
- In September 2014, the working paper on the Transit Maintenance and Organizational Analysis was completed and presented to the Calaveras Council of Governments on October 1, 2014.
- In November 2014, a contract amendment was executed to have an additional workshop on the Institutional Options for Calaveras Transit.
- On February 4, 2015, the Institutional Options presentation from the Transit Maintenance and Organizational Analysis was presented to Calaveras Council of Governments. The presentation and input received provides the foundation for Chapter 5, Organizational Assessment, Alternatives and Recommendations
- In February 2015, a service alternatives working paper was presented to the Calaveras Council of Governments and was discussed in a conference call with Calaveras County, CCOG and Paratransit Services staff. This working paper provides the foundation for Chapter 6, Calaveras Transit Service Alternatives.
- In February 2015, a goals and performance standards working paper was presented to the Calaveras Council of Government and was discussed in a conference call with Calaveras County, CCOG and Paratransit Services staff.
- In February 2015, a funding scenarios work paper was presented to the Calaveras Council of Governments and was discussed in a conference call with Calaveras County, CCOG and Paratransit Services staff.
- In March 2015, a third contract amendment to the SRTP was executed that provided funding for two workshop to the Calaveras County Board of Supervisors and City of Angels Camp City Council to refine goals, objectives and performance measure, and to receive input to service alternatives and recommendation.
- On April 28 2015, a joint workshop on goal setting was held with the Calaveras County Board of Supervisors and City of Angels Camp City Council. Input received provides the foundation for Chapter 4, Goals, Objectives, and Performance Standards.
- In July 2015, the administrative draft of the Short Range Transit Plan was completed.

Overview of Short Range Transit Plan Chapters

Chapter 2 provides the findings of the market research and service assessment. It also provides demographic information from the 2010 Census and American Community Survey on seniors, individuals with disabilities, and low income and autoless individuals, the target population of public transportation.

Chapter 3 is an assessment of fares and existing services.

Chapter 4 recommends a new mission statement for Calaveras Transit and a new set of goals and performance standards based on input from the April 28 Goal Setting workshop.

Chapter 5 is the organizational assessment and provides organizational alternatives and a recommendation for a new organizational structure for Calaveras Transit.

Chapter 6 provides transit service alternatives and responds to input received during the April 28 Goal Setting Workshop.

Chapter 7 is the financial framework that provides the basis for developing the service plan in Chapter 8. The chapter starts with a review of the financial resources available to Calaveras Transit for operating and capital purposes. Three financial scenarios for operating costs and revenues are provided and provide a basis for determining the amount of services available under the different scenarios. The capital plan also includes needed capital expenditures and revenues over the next five years.

Chapter 8 is the recommended service plan over the next five years. It includes an action plan over the next five years for service improvements. It assumes the new organizational structure recommended in Chapter 5 is implemented.

Chapter 9 is the marketing plan. It provides marketing objectives, an assessment of target markets, current and potential marketing strategies, targeted and systemwide promotion strategies.

Chapter 10 is the operating and capital financial plan for the next five years.

2. Existing and Future Transit Needs

This chapter provides an overview of existing and future transit needs. The chapter provides the following sections:

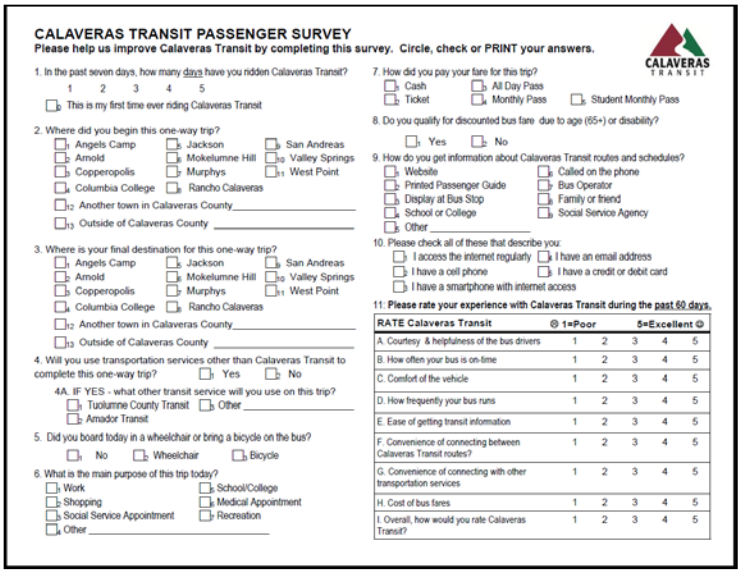
- Passenger Survey Results
- Outreach
- Summary of Unmet Needs Input
- Census and American Community Survey Profile
- Population Growth Estimates

I. Passenger Survey Results

A survey of 136 Calaveras Transit riders was conducted in April 2014. Questionnaires were distributed and collected by trained surveyors on board all Calaveras Transit routes. 100% of trips were surveyed on Routes 1, 3 and 4. The table at the right shows the total number of completed questionnaires collected on each route.

Route	N
Rt. 1 Valley Springs - Angels Camp	63
Rt. 2 Westpoint	1
Rt. 3 Jackson	12
Rt. 4 College/Arnold	58
Rt. 5 Copperopolis	2

The questionnaire, which was reproduced on card stock for easy on-bus completion, is included at the end of this section. The questionnaire was available in both English and Spanish.



CALAVERAS TRANSIT PASSENGER SURVEY

Please help us improve Calaveras Transit by completing this survey. Circle, check or PRINT your answers.

CALAVERAS TRANSIT

1. In the past seven days, how many days have you ridden Calaveras Transit?
1 2 3 4 5
☐6 This is my first time ever riding Calaveras Transit

2. Where did you begin this one-way trip?
☐1 Angels Camp ☐5 Jackson ☐9 San Andreas
☐2 Arnold ☐6 Mokelumne Hill ☐10 Valley Springs
☐3 Copperopolis ☐7 Murphys ☐11 West Point
☐4 Columbia College ☐8 Rancho Calaveras
☐12 Another town in Calaveras County_____
☐13 Outside of Calaveras County _____

3. Where is your final destination for this one-way trip?
☐1 Angels Camp ☐5 Jackson ☐9 San Andreas
☐2 Arnold ☐6 Mokelumne Hill ☐10 Valley Springs
☐3 Copperopolis ☐7 Murphys ☐11 West Point
☐4 Columbia College ☐8 Rancho Calaveras
☐12 Another town in Calaveras County_____
☐13 Outside of Calaveras County _____

4. Will you use transportation services other than Calaveras Transit to complete this one-way trip? ☐1 Yes ☐2 No
4A. IF YES - what other transit service will you use on this trip?
☐1 Tuolumne County Transit ☐3 Other _____
☐2 Amador Transit

5. Did you board today in a wheelchair or bring a bicycle on the bus?
☐1 No ☐2 Wheelchair ☐3 Bicycle

6. What is the main purpose of this trip today?
☐1 Work ☐5 School/College
☐2 Shopping ☐6 Medical Appointment
☐3 Social Service Appointment ☐7 Recreation
☐4 Other _____

7. How did you pay your fare for this trip?
☐1 Cash ☐3 All Day Pass
☐2 Ticket ☐4 Monthly Pass ☐5 Student Monthly Pass

8. Do you qualify for discounted bus fare due to age (65+) or disability?
☐1 Yes ☐2 No

9. How do you get information about Calaveras Transit routes and schedules?
☐1 Website ☐4 Called on the phone
☐2 Printed Passenger Guide ☐5 Bus Operator
☐3 Display at Bus Stop ☐6 Family or friend
☐4 School or College ☐7 Social Service Agency
☐5 Other _____

10. Please check all of these that describe you:
☐1 I access the internet regularly ☐3 I have an email address
☐2 I have a cell phone ☐4 I have a credit or debit card
☐5 I have a smartphone with internet access

11. **Please rate your experience with Calaveras Transit during the past 60 days.**

RATE Calaveras Transit	☹ 1=Poor				5=Excellent ☺
A. Courtesy & helpfulness of the bus drivers	1	2	3	4	5
B. How often your bus is on-time	1	2	3	4	5
C. Comfort of the vehicle	1	2	3	4	5
D. How frequently your bus runs	1	2	3	4	5
E. Ease of getting transit information	1	2	3	4	5
F. Convenience of connecting between Calaveras Transit routes?	1	2	3	4	5
G. Convenience of connecting with other transportation services	1	2	3	4	5
H. Cost of bus fares	1	2	3	4	5
I. Overall, how would you rate Calaveras Transit?	1	2	3	4	5

This section of the report will detail the findings of the survey, both for the overall sample and on each of the major routes (1, 3 and 4). Keep in mind that the data for Route 3 is based on only 12 riders.

Due to extremely low passenger volumes on Routes 2 and 5, they are not included in the analysis.

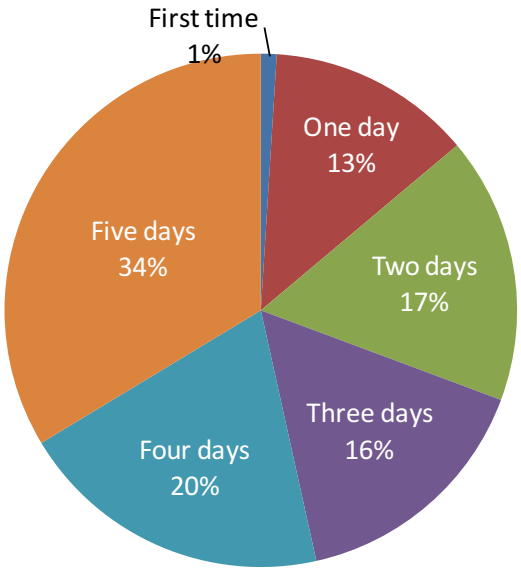
Usage Characteristics

Figure 2-1 Frequency of Use

Frequency of Use

Calaveras Transit's ridership includes a mix of regular and occasional riders. Just over half (54%) of riders say they ride four or five days a week. The other 46% are evenly divided between one, two and three days per week. Only one rider intercepted was riding for the first time.

Route 4 which serves Columbia College has the highest percentage of five day a week riders - 57%.

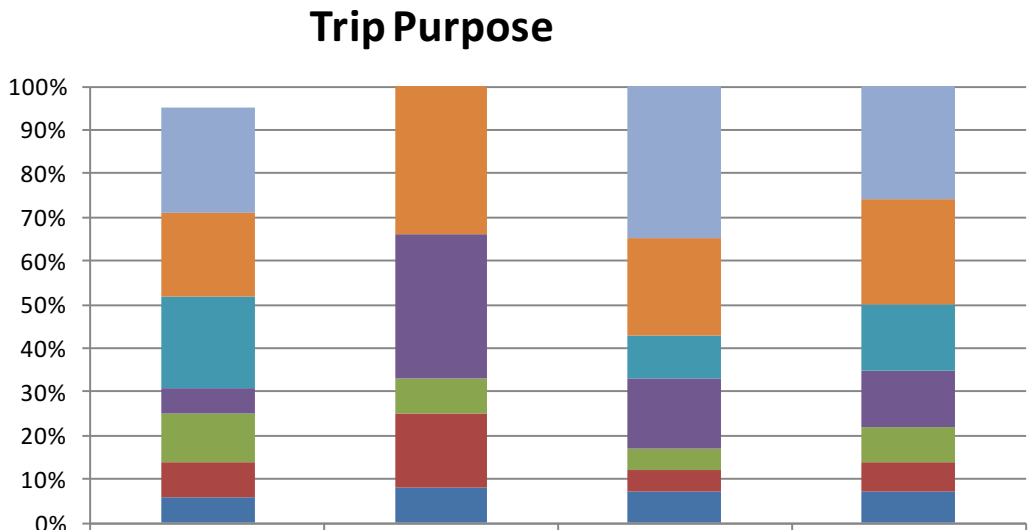


Origins and Destinations

Riders were asked what community they were coming from and going to. A complete origin-destination matrix will be utilized for the service review and strategies. Key findings from these questions include:

- 49% of all trips represented in the survey either begin or end in San Andreas.
- 39% of all trips either begin or end in Angels Camp.
- 28% of trips surveyed begin or end at Columbia College.
- 18% of trips surveyed begin or end in Valley Springs.
- 14.3% of trips surveyed begin or end in Murphys.
- 11.9% of trips surveyed begin or end in Arnold.

Figure 2-2 Trip Purpose



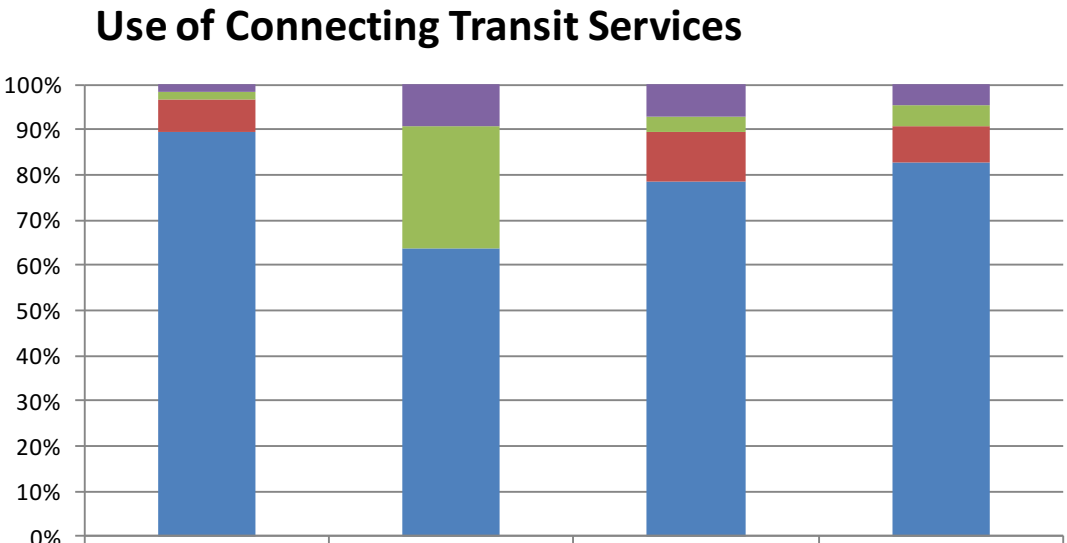
	Rt. 1	Rt. 3	Rt. 4	Total
School/College	24%	0%	48%	32%
Work	19%	50%	22%	24%
Recreation	21%	0%	10%	15%
Shopping	6%	33%	16%	13%
Social Service Appt	11%	8%	5%	8%
Medical Appt	8%	17%	5%	7%
Other	6%	8%	7%	7%

Trip Purpose

Calaveras Transit serves a mix of trip purposes. One third of riders were going to or from college/school, a quarter commuting to or from work, 15% traveling for recreation, 13% shopping and 15% going to social service or medical appointments.

Commute trips to school or college was the most common trip purpose on Routes 1 and 4 which dominate Calaveras Transit's ridership, while work and social service trips dominate the ridership on Route 3.

Figure 2-3 Use of Connecting Transit Services



	Rt. 1	Rt. 3	Rt. 4	Total
Tuolumne County Transit	2%	9%	7%	5%
Amador Transit	2%	27%	4%	5%
Other/Not Specified	7%	0%	11%	8%
None	89%	64%	79%	83%

Connecting Transit Services

Ten percent of riders said that they transfer to either Tuolumne County Transit or Amador Transit. Eight percent said they transfer to another service – most specified a private vehicle.

Riders on the Jackson route are the most likely to transfer – with 36% saying they do so.

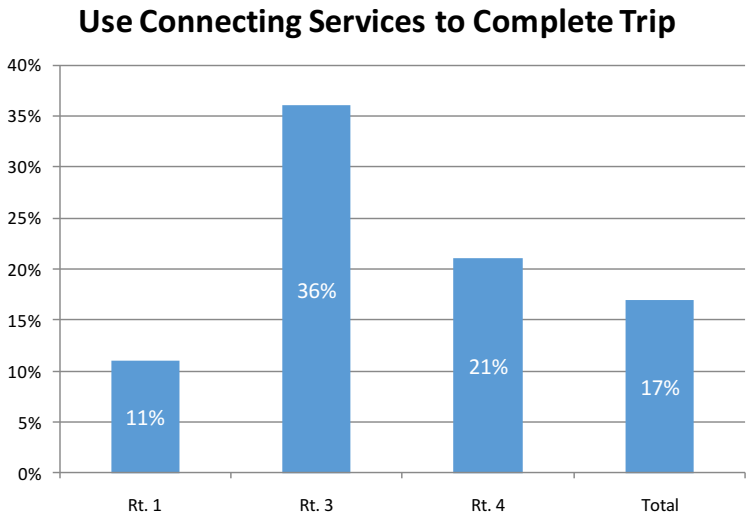
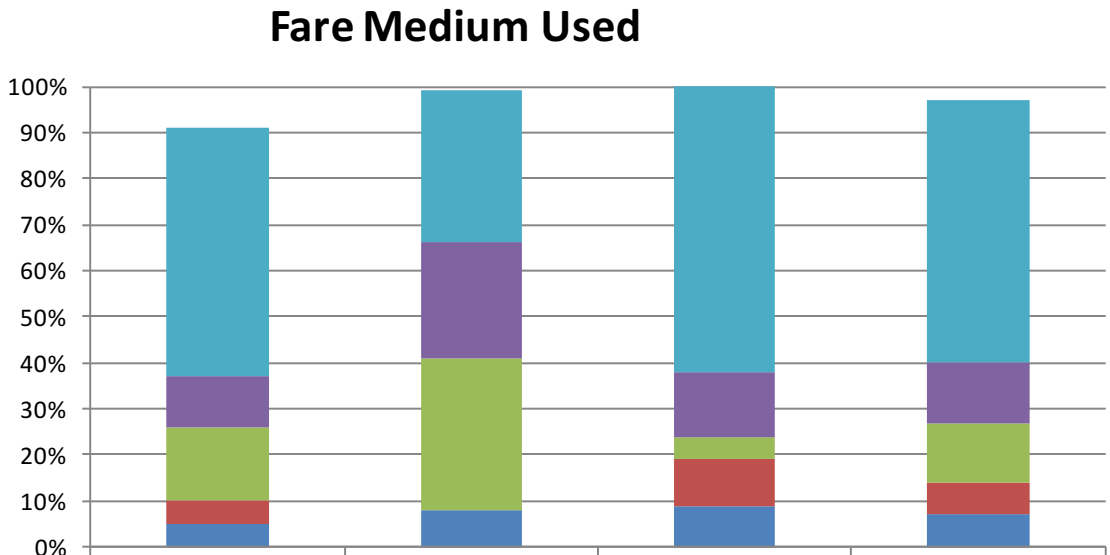


Figure 2-4 Fare Medium



	Rt. 1	Rt. 3	Rt. 4	Total
Cash	54%	33%	64%	57%
Ticket	11%	25%	14%	13%
Monthly Pass	16%	33%	5%	13%
Student Monthly Pass	5%	0%	10%	7%
All Day Pass	5%	8%	9%	7%

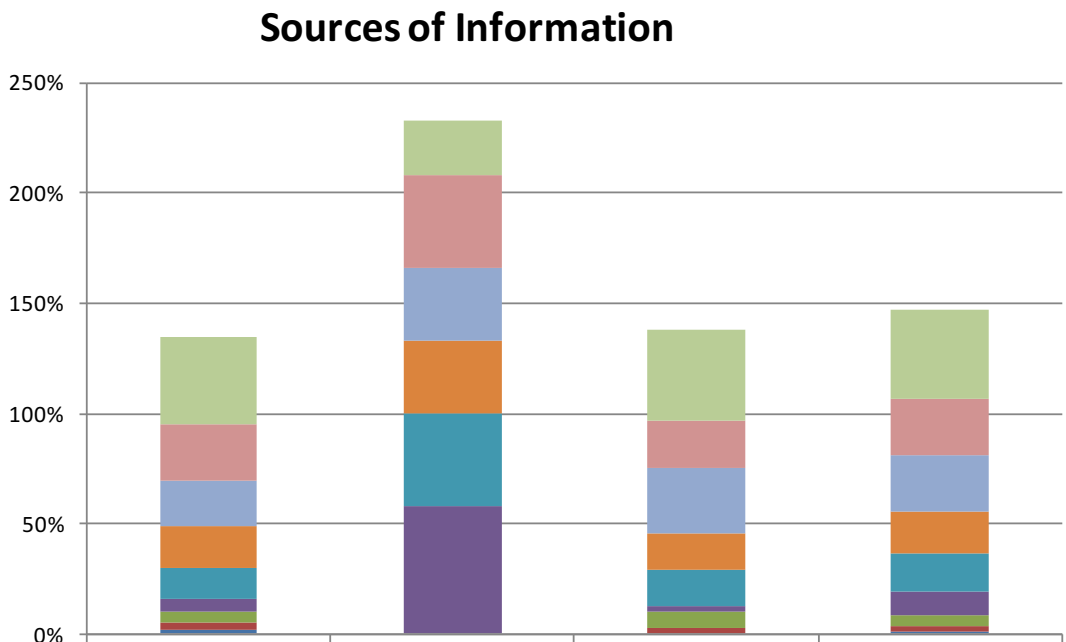
Fare Medium Used

Most riders pay their fare in cash, however this varies significantly from route to route. Route 4 riders are the most likely to use cash (64%), while Route 3 riders are least likely to (33%).

Tickets and monthly passes are each used by 13% of riders surveyed, while the Student Monthly Pass and All Day Pass are each used by 7% of respondents.

Use of Communications and Technology

Figure 1 Sources of Information



	Rt. 1	Rt. 3	Rt. 4	Total
Website	40%	25%	41%	40%
Phone	25%	42%	22%	26%
Passenger Guide	21%	33%	29%	25%
Family or Friend	19%	33%	17%	19%
Display at Stop	14%	42%	16%	18%
Bus Operator	6%	58%	3%	10%
School or college	5%	0%	7%	5%
Other	3%	0%	3%	3%
Social Service	2%	0%	0%	1%

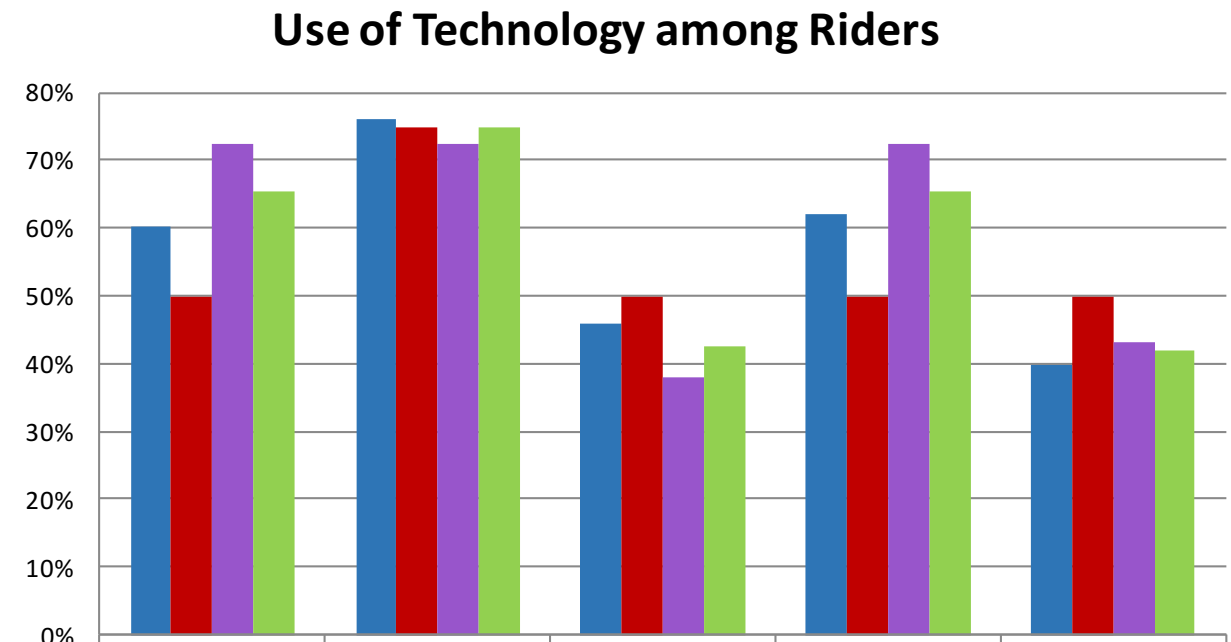
Sources of Information

Forty percent of riders say they rely on the Calaveras Transit website as a source of information, while 26% say phone, 25% passenger guide and 18% display at bus stop. Twenty nine percent say they get information verbally from family and friends (19%) or the bus driver (10%).

Sources of info vary by route. Route 1 and 4 riders are the heaviest website users, while Route 3 riders cite multiple information sources with the bus operator being the most mentioned.

Only one rider said they get information from a social service agency.

Figure 2-6 Use of Technology Among Riders



	Access internet regularly	Have cell phone	Have smart phone with internet	Have email address	Have credit or debit card
Rt. 1	60%	76%	46%	62%	40%
Rt. 3	50%	75%	50%	50%	50%
Rt. 4	72%	72%	38%	72%	43%
Total	65%	75%	43%	65%	42%

Use of Technology

Two thirds of Calaveras Transit riders access the internet regularly and have email addresses. Three quarters have cell phones – many of those smart phones with internet access (43%).

Interestingly, while Route 4 riders are most likely to be online, they are less likely to have a smart phone.

Forty-two percent of riders have a debit or credit card.

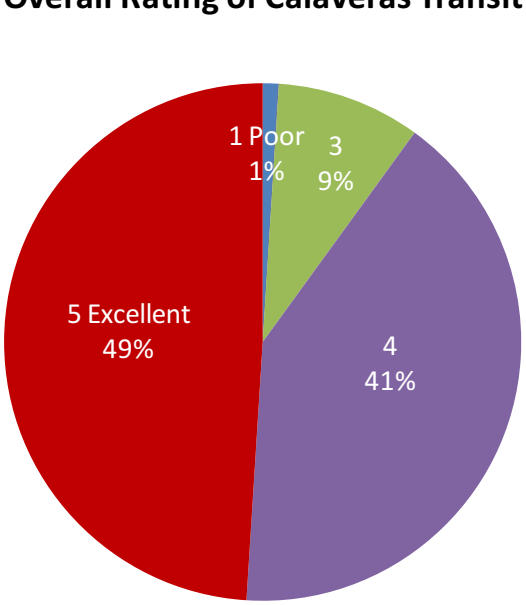
Customer Satisfaction

Overall Service Rating

As shown below, riders were asked a variety of questions about how they would rate Calaveras Transit Service. A five point rating scale was used with 5 being Excellent and 1 being Poor.

Asked "Overall, how would you rate Calaveras Transit?" – nine out of ten respondents rated the service as excellent (49%) or good (41%). Nine percent gave it a neutral rating (3) and 1 respondent rated it as poor.

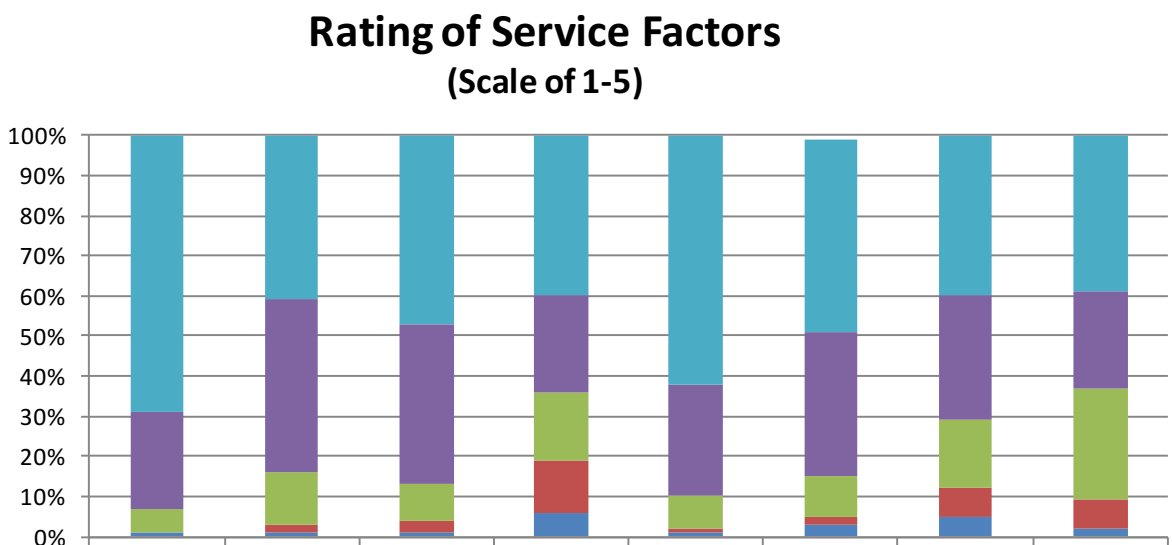
Figure 2-7 Overall Service Rating



11: **Please rate your experience with Calaveras Transit during the past 60 days.**

RATE Calaveras Transit	☹ 1=Poor				5=Excellent ☺
A. Courtesy & helpfulness of the bus drivers	1	2	3	4	5
B. How often your bus is on-time	1	2	3	4	5
C. Comfort of the vehicle	1	2	3	4	5
D. How frequently your bus runs	1	2	3	4	5
E. Ease of getting transit information	1	2	3	4	5
F. Convenience of connecting between Calaveras Transit routes?	1	2	3	4	5
G. Convenience of connecting with other transportation services	1	2	3	4	5
H. Cost of bus fares	1	2	3	4	5
I. Overall, how would you rate Calaveras Transit?	1	2	3	4	5

Figure 2-8 Rating of Service Factors



	Courtesy of Drivers	On-Time	Comfort of Vehicles	Frequency of Service	Ease of Getting Info	CT Connects	Connects with Other Systems	Cost of Bus Fare
5 Excellent	69%	42%	47%	40%	63%	48%	40%	39%
4	24%	43%	40%	24%	28%	36%	31%	24%
3	6%	13%	9%	17%	8%	10%	17%	28%
2	0%	2%	3%	13%	1%	2%	7%	7%
1 Poor	1%	1%	1%	6%	1%	3%	5%	2%

Service Ratings

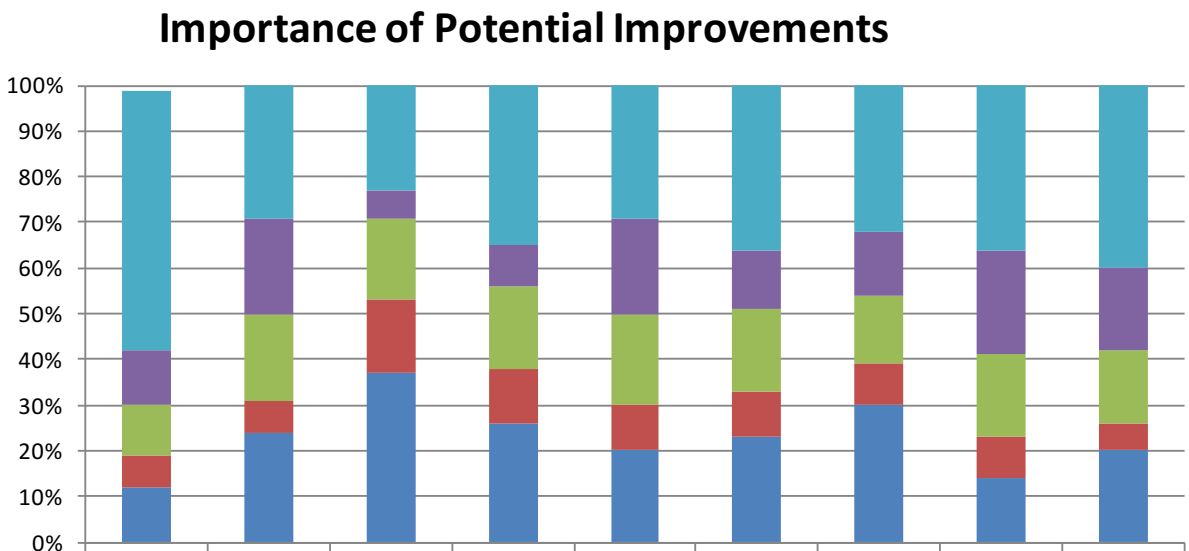
All aspects of service were rated as good or excellent by a majority of riders.

The service factors rated most highly are driver courtesy and ease of getting information. These received excellent ratings from 69% and 63% of riders respectively. Most other service factors received "excellent" ratings from 40+ percent of riders.

While ratings are quite high, there are small but significant minorities who rated certain aspects of service as needing improvement:

- 19% rated frequency of service as poor (1-2)
- 12% rated connections with other systems as poor (1-2)

Figure 2-9 Potential Improvements



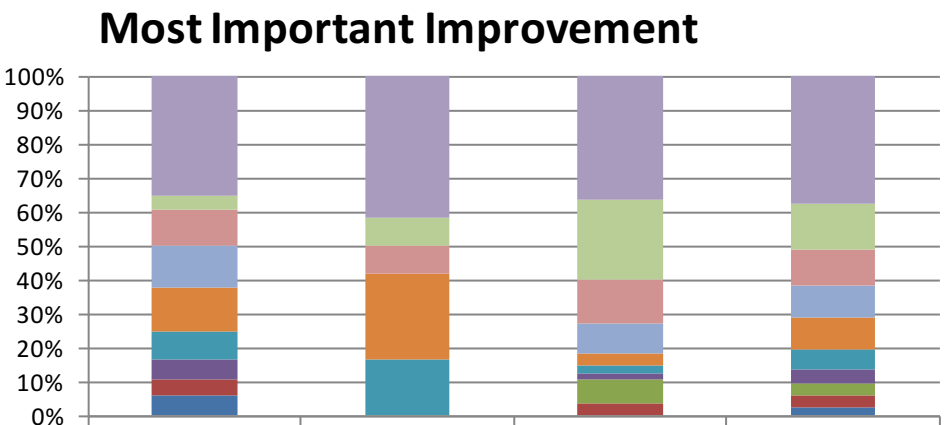
	Saturday Service	More Seating	Sutter Creek	Stockton	Local Angels Camp	Local San Andreas	Local Murphys	Shelters	Sonora
5 Very important	57%	29%	24%	35%	30%	36%	32%	36%	40%
4	12%	21%	6%	9%	21%	13%	14%	23%	18%
3	11%	19%	18%	18%	20%	18%	15%	18%	16%
2	7%	7%	16%	12%	10%	10%	9%	9%	6%
1 Not importqnt	12%	24%	37%	26%	20%	23%	30%	14%	20%

Potential Improvements

Riders were asked to rate the importance of several potential service improvements on a scale of 1 to 5. The chart above shows the distribution of responses for each improvement tested.

Saturday service was the improvement rated as very important by the most riders (57%), while direct service to Sonora was second at 40%. Service to Sutter Creek to connect with Amador Transit to Sacramento received the least number of very important ratings (24%).

Figure 2-10 Most Important Improvement



	Rt. 1	Rt. 3	Rt. 4	Total
Saturday Service	35%	42%	36%	37%
More seating	4%	8%	24%	14%
Sonora	10%	8%	13%	11%
Shelters	13%	0%	9%	9%
Stockton	13%	25%	4%	9%
Local San Andreas	8%	17%	2%	6%
Another Calaveras Comm	6%	0%	2%	4%
Local Murphy's	0%	0%	7%	3%
Local Angels Camp	4%	0%	4%	3%
Sutter Creek	6%	0%	0%	3%

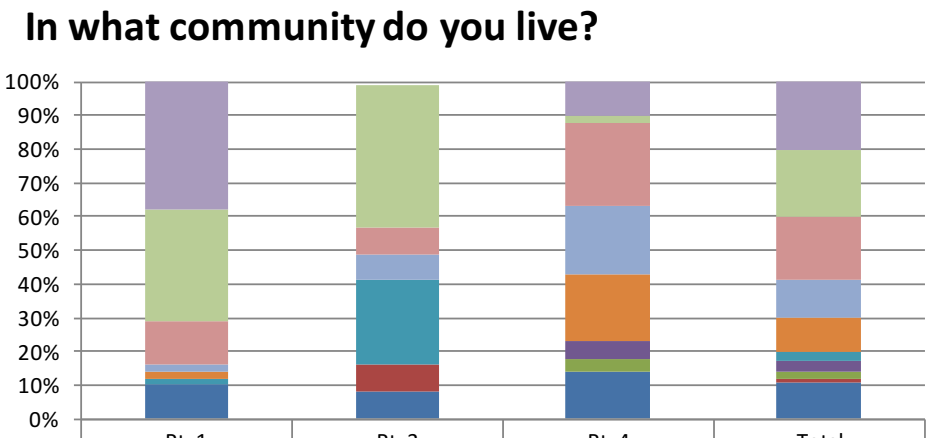
Most Important Improvement

Respondents were also asked if they could have only one of the improvements, which one they would choose. The chart above reflects the responses by route and in total.

Saturday service is by far the most desired improvement (37%), followed by more seating capacity to avoid overcrowding (14%). There are variations between the routes. On Route 3 to Jackson, Saturday service and service to Stockton are the top choices. While on Route 4 which serves the college, seating capacity is considered most important by 24% of respondents.

Demographics of Ridership

Figure 2-11 Community of Residence

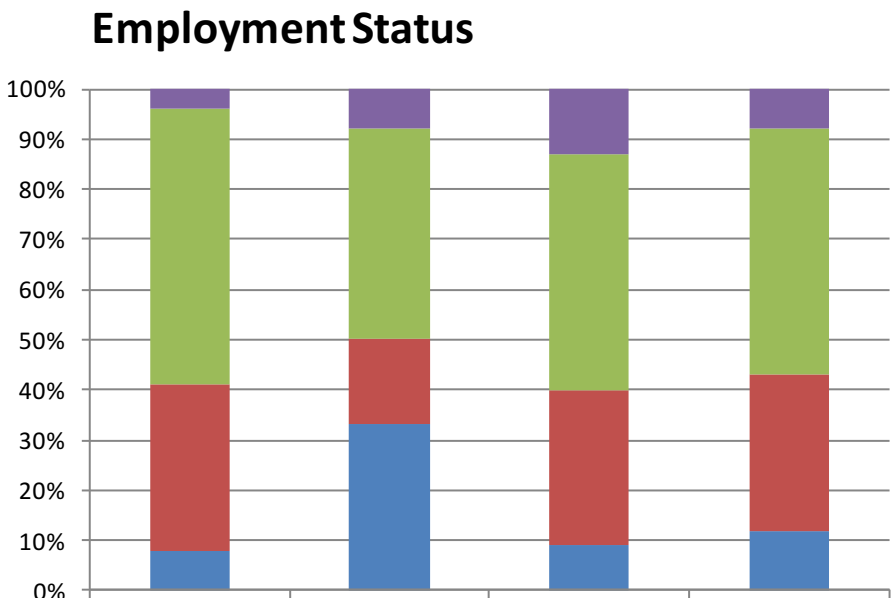


	Rt. 1	Rt. 3	Rt. 4	Total
Valley Springs/Rancho Calaveras	39%	0%	11%	21%
San Andreas	33%	42%	2%	20%
Angels Camp	13%	8%	25%	19%
Arnold	2%	8%	20%	11%
Murphys	2%	0%	20%	10%
Mockelumne Hill	2%	25%	0%	3%
Copperopolis	0%	0%	5%	3%
West Point	0%	0%	4%	2%
Jackson	0%	8%	0%	1%
Another town in Calaveras County	10%	8%	14%	11%

Community of Residence

Respondents were asked in what community they live. The three largest groups, representing about 60% of riders, live in Valley Springs/Rancho Calaveras (21%), San Andreas (20%) and Angels Camp (19%). Smaller groups live in Arnold (11%) and Murphys (10%).

Figure 2-12 Employment Status

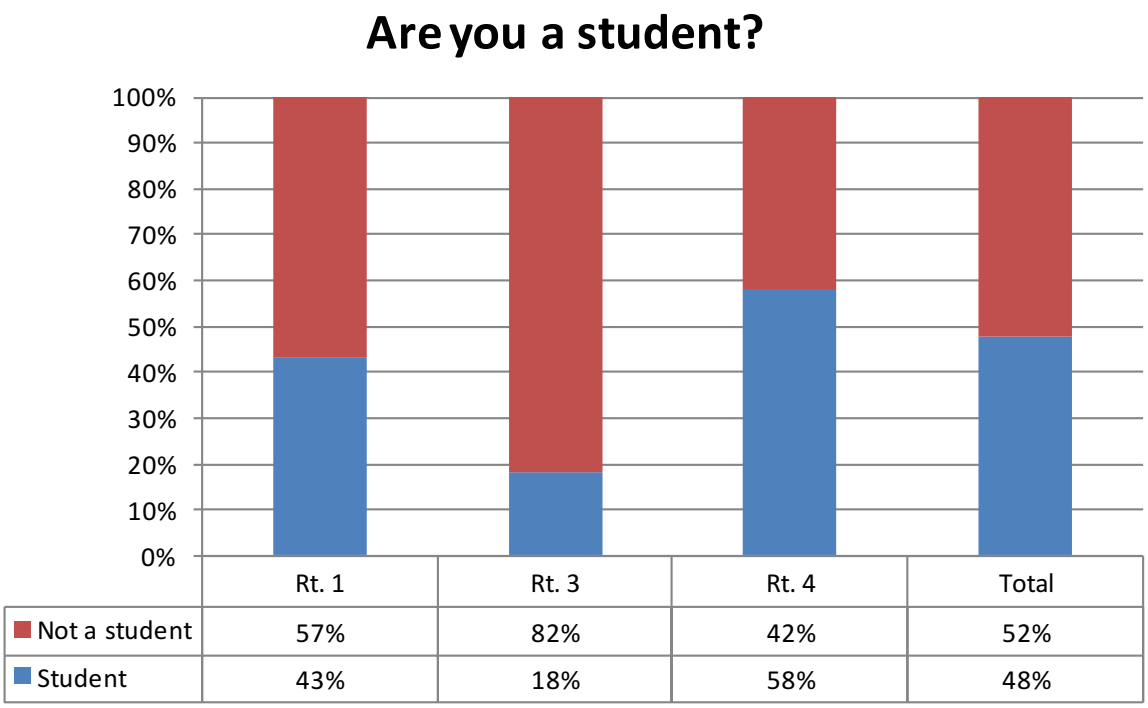


	Rt. 1	Rt. 3	Rt. 4	Total
Retired	4%	8%	13%	8%
Not employed	55%	42%	47%	49%
Employed part time or seasonally	33%	17%	31%	31%
Employed full time	8%	33%	9%	12%

Employment Among Riders

Just over forty percent of riders say they are employed – 12% full time and 32% part time or seasonally. Eight percent of riders are retired, and the other 49% are not employed. Route 3 to Jackson has a higher percentage of employed riders, but remember this is a very small sample.

Figure 2-13 Student Status



	Rt. 1	Rt. 3	Rt. 4	Total
Not a student	57%	82%	42%	52%
Student	43%	18%	58%	48%

Students Among the Ridership

Almost half of the riders surveyed (48%) said they were students. On Route 4 which serves the college, 58% of those intercepted were students.

Asked where they attend school, 70% of the students said Columbia College. Hence the college appears to contribute about a third of Calaveras Transit's ridership.

Other students include San Andreas High School (14%), Bret Harte High School (7%) and a few middle school students.

Where do you attend school or college?
(Asked of the 48% that are students)

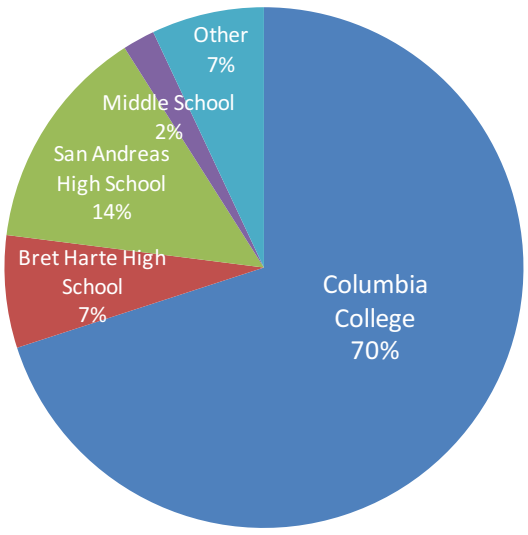
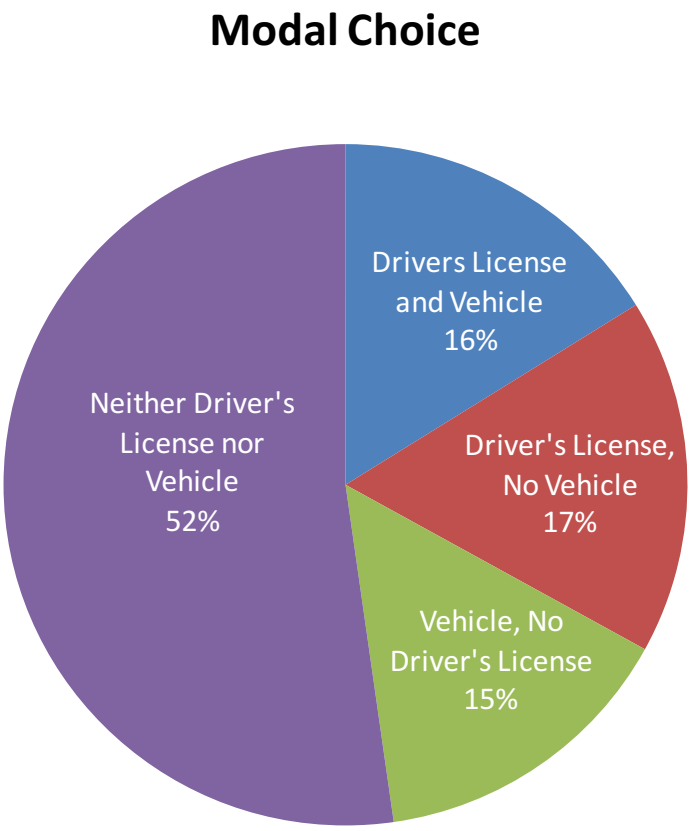


Figure 2-14 Modal Choice



Modal Choice

Riders were asked two questions to gauge their modal choice: if they have a driver's license and if a vehicle was available for the trip on which they were intercepted. The pie chart above breaks the ridership into four groups.

Sixteen percent of riders said they have a driver's license and had a vehicle available – hence they had the choice of driving.

More than half (52%) had neither a driver's license nor a vehicle available. Seventeen percent had a driver's license but no vehicle, while 15% had a vehicle but no driver's license. Hence most of Calaveras Transit's riders (84%) were dependent on transit for transportation on the day they were surveyed, and many are fully transit dependent.

Figure 2-15 Income

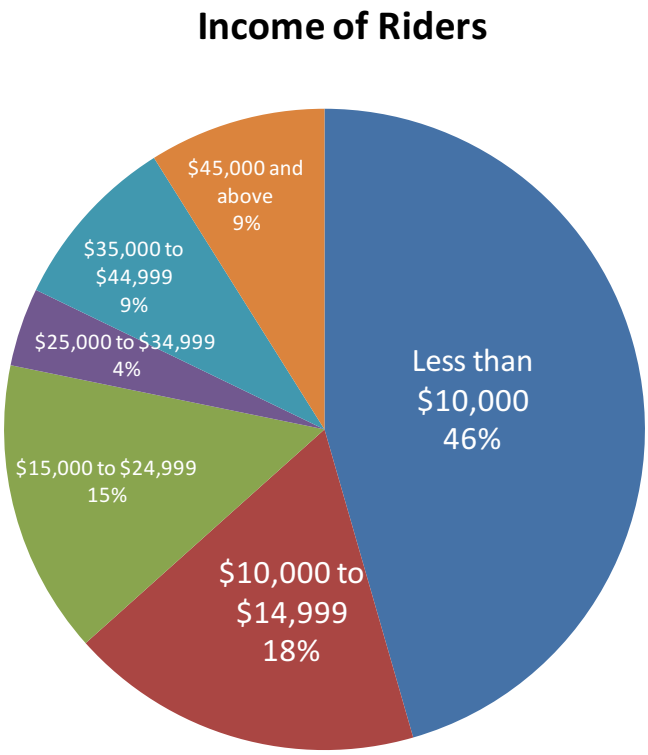
Income and Ethnicity

The survey asked riders about their annual household income. The pie chart at the right shows the distribution of responses for the total sample.

Most riders have household incomes of under $15,000 (64%) – reflecting a transit dependent population. However, 18% live in households with incomes of $35,000 or more.

Asked about their ethnicity, most riders consider themselves Caucasian/White (67%). Thirteen percent said they are Hispanic/Latino and much smaller numbers fall into other groups.

While the questionnaire was offered in Spanish, only one rider completed it in Spanish. The ridership appears to be largely English speaking.



II. Outreach Summary

To collect information from the broader community, an extensive outreach effort was implemented. The outreach included the following elements:

- In-depth individual interviews and with small groups of stakeholder were conducted with approximately 20 stakeholders including COG board members, staff of the various jurisdictions within Calaveras County, social service agency managers and a Columbia College representative.
- Interviews and focus groups with potential riders including:
  - Students at Columbia College
  - Residents at San Andreas Apartments
  - Human Services clients
- Informal interviews with riders and drivers on board Calaveras Transit buses.
- Review of extensive stakeholder input from the recent Coordinated Plan effort.

This section will summarize the key issues raised during these conversations.

Stakeholders Interviewed

Calaveras COG

COG Board Members

Calaveras County Public Works

City of Angels Camp

Paratransit Services

Employment Services

Behavioral Health

Public Heath

Area 12 Agency on Aging

Common Ground Senior Services

Catholic Charities

Columbia College

The narrative below is what we heard from stakeholders. In a few cases there is a need to respond to provide proper context or suggest how the issue is addressed in the Short Range Transit Plan. These are responses are included below as *italics.*

Image and Awareness

Those interviewed, both passengers and stakeholders, were very pleased with the current quality of Calaveras Transit service. They noted that this has not always been the case. Paratransit Services appears to have significantly improved both on-time performance and passenger relations.

Driver courtesy was the highest rated aspect of service and several of the survey comments were compliments to the bus operators.

While most stakeholders were generally aware of the Calaveras Transit route structure and said that buses are highly visible, many were not aware of specifics. For example some were unaware of the flex stop capability.

Role of Transit in Calaveras County

According to at least one board member, the mission of Calaveras Transit should be to have a "reasonable transit system to meet reasonable needs." Another board member said, "the mission of Calaveras Transit should be to serve those with physical and mental limitations as well as those who cannot afford automobiles." There was general consensus among key stakeholders that serving the transportation disadvantaged is a priority, and that Calaveras County does have significant pockets of low income residents. *A new mission statement is recommended in Chapter 4.*

Providing a minimum level of scheduled services to places like West Point is considered important "so that people served by social service clients cannot utilize lack of transportation as an excuse not to participate in programs such as job training." There was also a general perception that West Point includes a significant pocket of poverty and that lifeline service is critical for the residents.

Key Ridership Segments

Columbia College Students

Columbia College has about 3,600 students, of whom 15-20% live in Calaveras County. Based on the on-board survey sample, students commuting to Columbia College make up about a third of Calaveras Transit's ridership. An informal focus group was conducted with several students on campus, as well interviews with students riding the bus to Columbia College.

Those who use the bus say that it is reliable, affordable and that the drivers are great. Some say they simply couldn't afford the commute from Calaveras County to the college without the bus.

The concerns of both existing users, and those of students who live in Calaveras but don't ride the bus, relate primarily to scheduling and capacity. They note that the buses need to better

coincide with class times and that there need to be more trips during the day – both for convenience and to address overcrowding on key trips. Specific comments included:

- The earliest classes are at 8 AM and "most" classes are over by 6 PM. The service needs to cover that span.
- The last bus (5:20 PM) is always overcrowded, there needs to be a later bus both to accommodate later classes and to provide more capacity. The early morning bus is also often overcrowded.
- There is a long gap during the day when there is no return trip. The 11:05 AM bus to Angels Camp does not connect with a bus to San Andreas until after 1 PM.
- Several non-rider students said they would prefer to ride the bus to save on gas and avoid driving in snow, however the schedule is "awkward" and simply doesn't meet their needs.

Individuals Served by Social Services

Individuals served by Calaveras County's Health and Human Services Agency make up a significant share of transit ridership. These agencies provide transit passes and tickets to the people they serve in order to provide access to program activities.

- Behavioral Health serves 800 individuals. They provide regular monthly passes to 6-8 clients, and distribute 500 single ride tickets per year to others.
- Employment Services has about 400 individuals actively seeking employment, while CalWorks may have as many as 2000 individuals altogether. They purchase Calaveras, Tuolumne and Amador transit passes for the people they serve.

These stakeholders believe that public transit is critical to their clients and services. However, they noted a number of limitations of the current system.

Behavioral Health

- Behavioral Health purchases "disabled" tickets for the people they serve who are "severely mentally ill". However, drivers sometimes don't want to accept the tickets because the users don't have a disability that is visually apparent. They suggested that a different color ticket/pass for the people they serve might be issued. They also noted that the 9 page disability application is more than the people they serve can handle (they have to fill it out for them) and wonder if a letter from them regarding the persons needs could be substituted. *A recommended fare policy to address this issue is included in Chapter 8 under Fare Policy.*
- Coming into San Andreas for an appointment or class can be an "all day event" if the person has to come in from an outlying area. The people served by Behavioral Health

often don't have the money to "eat out" if they have to stay in town all day. They give them tickets for lunch at the senior center.

- Behavioral Health provides quite a lot of transportation themselves, but often "maxes out" their resources. Their first choice is to have the people they serve ride the bus where they can schedule appointments around the bus schedule if needed.

Employment Services

- They have concentrations of people they serve in Valley Springs, Angels Camp and San Andreas. A few in Arnold and West Point. For those who live in West Point and Copperopolis, transportation may be a just cause for not participating in the program.
- Many people live a long way off the route. A walk of ½ mile to a mile is difficult for those with children. This is particularly true in Copperopolis and West Point. The Stakeholder did know about flag and flex stops and tells the people she serves.
- Lack of weekend service makes it impossible for the people they serve to use transit for part-time fast food or retail jobs which require weekend shifts.
- No service to the Food Bank on Pool Station Road. It is one mile past the transit office, but the bus does not go there.
- Most of the people they serve go to Columbia College for training. There is a need for a later bus so that students can get all of their classes on 2-3 days per week.

Seniors

A number of stakeholders interviewed represented the senior population of Calaveras County which is a growing segment (23% of the population is 65+). While there are significant transportation needs among the seniors, one stakeholder noted that, "Most seniors just aren't going to take fixed route buses." She felt that Dial-a-Ride service is needed in Valley Springs, San Andreas and Angels Camp to get seniors to their destination or to the bus stop for a longer trip.

AAA funds senior transportation service in Amador, Tuolumne and Mariposa Counties. They recently went through their RFP process and did not have an application for Calaveras County.

The AAA representative liked the idea of demand response service for West Point, possibly with a different destination on different days (San Andreas one day, Jackson another, etc.). *Service alternatives for low demand areas are included in Chapter 6, and a new mode of service is West Point is recommended in Chapter 8.*

Service Gaps and Enhancements

Overcrowding on trips to Columbia College

Both the first morning bus to Columbia College and the last return bus often experience overcrowding. This issue was raised by students on campus, was the topic of several comments on the survey, and was experienced firsthand by the consultants during their field observations. According to students and drivers, the last bus (5:20 PM) is often a standing load. There needs to be a later bus both to accommodate later classes and to provide more capacity.

Spine Route from Rancho Calaveras and Columbia College

The majority of Calaveras Transit ridership is on the system spine between Rancho Calaveras and Columbia College. Almost 60% of trips surveyed both begin and end along the spine.

However, the current schedule does not provide consistent headways for those traveling along the spine. Service to Rancho Calaveras is only provided every three hours in each direction.

Connections from Route 4 to Route 1 are quite busy for the most of the day. However, the Route 4 bus from Columbia College arrives to the SR 49 and Demarest stop at 11:40 am and the bus to San Andreas has left at 11:15 am. There is not another bus until 1:10 pm to the Government Center in San Andreas.

Overall, ridership is quite good along the spine from Rancho Calaveras to Columbia College. In the next phase of the project, alternatives will be explored to improve connections and provide more consistent headways for those traveling along the spine.

No service to Food Bank

Calaveras Transit does a good job of serving most of the key destinations within the County. The one exception we heard about from several sources is the lack of service to the Food Bank which is located on Pool Station Road about a mile beyond the transit office. This is a critical destination for low income individuals. The social service providers said that they sometimes make an exception to their own rules to take people there because it is such an important need.

Traditional fixed route services to the food bank have been tried several times in the past. In the Public Transit-Human Services Transportation Coordinated Plan, interviews with the Resource Connection found that it took 20 minutes for intake and it was not feasible to have fixed route bus serve the food bank. Other service alternatives are explored in Chapter 6 and a new Dial-A-Ride service for ADA Paratransit individuals is recommended in Chapter 8. However, mobility solutions may be best addressed by mobility management solutions, also provided in both Chapters 6 and 8.

Intercity Connections

Several stakeholders mentioned the importance of connections to Sonora, Stockton, and Jackson/Sutter Creek for connections to Sacramento. The connections were perceived as important for various types of trips:

- For out of county medical appointments in Jackson, Sonora and Stockton. According to stakeholders, there are a limited number of primary care doctors and very few specialists within Calaveras County. There is no local birthing facility, hence many women go out of county for OB/GYN care. Out of town appointments with medical specialists was described by one gatekeeper as a "huge issue," though transit service was not necessarily perceived as the best solution.

  It was noted that West Point residents are most likely to go to Jackson or Stockton due to proximity, but other areas of the County may "orient" to other cities.

- For shopping in neighboring counties. Shopping opportunities were described as limited in Calaveras County.
- For Columbia College Students. Columbia College students currently use Tuolumne County Transit service to go into Sonora during breaks. "Direct service to Sonora would be handy."

In the on-board survey, 40% of respondents said that service to Sonora is "very important," and 35% said service to Stockton is very important, while only 24% felt as strongly about service to Sutter Hill. There were several volunteered comments about the desire to reinstate the service to Lodi and also a few requests for service to Modesto.

On April 29, 2014, the Calaveras County Board of Supervisors accepted the Calaveras Transit Intercity Service Feasibility Study as complete. The study recommended intercity bus service between Calaveras County and Stockton. The Board of Supervisors also authorized the submission of a Federal Transit Administration 5311(f) grant application to pay for the proposed service.

III. Summary of Unmet Needs Input

Every year, the Calaveras Council of Governments (CCOG) prepares an Unmet Needs Findings Report. As required by the Transportation Development Act, CCOG must annually identify any unmet transit needs that may exist in Calaveras County. Among the requirement of the Unmet Transit Needs assessment is to solicit public input on unmet transit needs in a public hearing. If needs are found, a further determination must be made as to whether or not those needs are reasonable to meet. The purpose of this section is to summarize the public input and key findings over the past two years. The Short Range Transit Plan considers the unmet transit needs as one important input to both existing and future transit needs.

FY 2013/14 Unmet Transit Needs Process and Findings

For FY 2013/14, in an effort to reach as many residents of Calaveras County as possible, two public hearings and one community meeting were held:

- Public Hearing, March 5, 2013, City of Angels Camp City Council Meeting
- Public Hearing, March 6, 2013, Calaveras Council of Governments Board Meeting
- Community Workshop, March 7, 2013, Murphys Faith Lutheran Church

In addition to published notices, the announcements were placed on Calaveras Transit vehicles, announced on the CCOG website, and emailed to community social service agencies. Further input was gathered in the form of written or verbal communication from members of the community. A *Request for Public Comments* form was circulated by the CCOG, Calaveras Transit staff and buses, CCOG website, social service agencies and at public hearings and community meetings.

There were 82 survey forms/written requests submitted and seven (7) individuals who provided comments at the public meetings (hearings and workshop). Of the survey forms received, approximately 10 did not provide sufficient information, or no request was made. The remaining comments were grouped together with a common response, indicating the number of requests for each comment. There were 18 Unmet Transit Needs, three (3) of which were determined Reasonable to Meet.

The full definitions of what constitutes an unmet transit need and what is reasonable to meet is provided in Appendix A. In summary, an unmet transit need is defined as public transit or specialized transportation services not currently provided for persons within Calaveras County who have no reliable, affordable, or accessible transportation for necessary trips. Necessary trips are defined as those trips which are required for the maintenance of life, education, access to social service programs, health, physical and mental well-being, including trips which serve employment purposes. Minor operational improvements and future transportation needs are not included.

The reasonable to meet criteria in summary include:

- **Financial feasibility:** Must be within available TDA financial resources and doesn't impact the 10% farebox recovery requirement.
- **Cost effectiveness:** Must demonstrate that sufficient ridership and fare revenue potential exist to meet farebox revenue requirement. The cost per passenger must be reasonable for the type of service provided.
- **Community acceptance:** There is sufficient public support for the proposed transit service.

- **Equity:** The proposed transit service would benefit the general public or elderly and disabled population as a whole.
- **System impact:** Demonstration to the CCOG Board that the proposed service combined with existing service will allow the system to meet or exceed key performance standards.
- **Operational Feasibility: T**here are adequate paved roadways and turnouts that can safely accommodate transit vehicles.
- **Availability of Service Provided:** A qualified contractor is available to provide the service.

After consideration of all comments received during the Unmet Transit Needs process, CCOG recommends addressing three (3) unmet transit needs that are potentially reasonable to meet: 1) providing fixed route public transit service to Rancho Calaveras; 2) adding midday fixed route runs to Vista Del Lago during the weekdays; and 3) adding a midday fixed route run to Valley Springs from San Andreas. Calaveras Transit will use all the necessary Local Transportation Funds to meet this need. These service improvements were full implemented by Calaveras Transit in FY 2014/15.

There were several other recommendations that are very relevant to the five-year planning horizon of the Short Range Transit Plan:

> *Service to the West Point area and neighboring communities continues to be an unmet transit need each year. Currently Calaveras Transit provides two trips a day Monday through Friday to these communities, offering a deviated fixed route service. The fixed route service has not proven cost effective or financially feasible given the low ridership and travel distance to this area. In addition, route deviations (from the main highway/road) in these remote locations are many times not operationally feasible for transit vehicles to access given the mountainous terrain and unpaved and narrow driveways. The CCOG strongly encourages the County to continue working with the Social Services Transportation Advisory Council (SSTAC) to explore alternative transportation service options to this area.*
>
> *Transit service to Copperopolis is limited due to historically low ridership on the route serving this community. Currently Calaveras Transit provides two trips a day Monday through Friday from Copperopolis to the transfer stop in Angels Camp. According to the 2010 Census, Copperopolis had over 3,500 residents and was one of the fastest growing communities in the county, with a rate of six percent growth per year for the past decade. Given the growing population, Calaveras Transit should assess the demand in Copperopolis and seek additional service to this area when determined feasible.*

FY 2014/15 Unmet Transit Needs Process and Findings

In an effort to provide several opportunities to provide input, two Public Hearings were held at the following dates and locations:

- Public Hearing, March 5, 2014, Calaveras Council of Governments Board Meeting, Board of Supervisors Chambers
- Public Hearing, March 18, 2014, City of Angels Camp City Council Meeting, Angels Camp Fire Station

In addition to published notices, the announcements were also placed on Calaveras Transit vehicles, announced on the CCOG website, and emailed to community social service agencies. See Appendix D for announcements and proof of publication.

Further input was gathered in the form of written or verbal communication from members of the community. A *Request for Public Comments* form was circulated by the CCOG, Calaveras Transit staff and buses, CCOG website, social service agencies and at public hearings.

Community outreach was also conducted through the Coordinated Public Transit-Human Services Transportation Plan update process and the Calaveras Transit Intercity Service Feasibility Study, and both were completed in 2014.

There were 17 survey forms/written requests submitted, one (1) individual who provided comments at a public hearing, and 45 signatures for a service to the Burson area. Of the survey forms received, two did not provide sufficient information, or no request was made. The remaining comments were grouped together with a common response, indicating the number of requests for each comment. There were four (4) Unmet Transit Needs, one of which was the service to Burson that was determined Reasonable to Meet after further analysis by Calaveras Transit staff.

The service request to Burson was considered an unmet transit need as Calaveras Transit does not currently serve this highly transit-dependent community. The SSTAC worked with Calaveras Transit to determine whether it met the criteria to be considered reasonable to meet. It was determined that based on the high proportion of transit-dependent individuals, demand for service from the community, and the ability to integrate transit connections along Route 1, this service request is reasonable to meet. On-demand service to and from Burson three times a day in each direction was implemented on May 26, 2015.

IV. Census and American Community Survey

Per Public Utilities Code Section 994401.5, an annual assessment is required, as part of the annual Unmet Transit Needs Findings Report, to determine the size and location of groups likely to be transit-dependent or transit-disadvantaged. Transit dependency is generally defined as dependency on public or private transportation services by persons that are either unable to operate a vehicle, or do not have access to a vehicle for personal use. This data is important to this analysis because studies have shown that age and income have a high correlation with automobile usage and transit dependency.

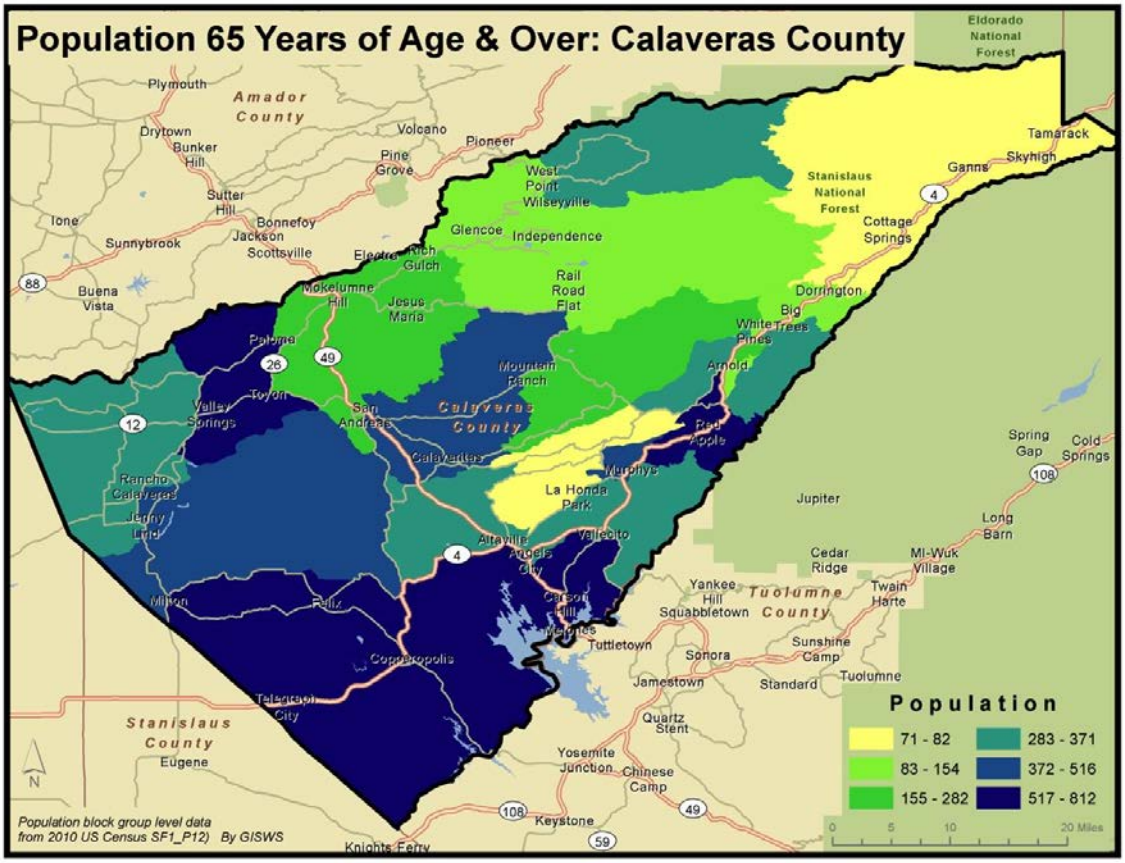
In June 2014, the *Calaveras County 2014 Coordinated Public Transit-Human Services Transportation Plan* (Coordinated Plan) prepared by AMMA Transit Planning was adopted by the Calaveras Council of Governments. In that report, there is a detailed demographic profile provided of transportation disadvantaged populations. For reader convenience, key portions of the demographic profile are repeated verbatim below.

In 2012, Calaveras County's total population was estimated to be 45,507, representing a 12.2% increase from the 2000 Census which reported a total of 40,554 persons.

Older Adults

While the County's overall population grew by 12%, the proportion of persons over the age of 65 grew by 34.3%, almost triple the national growth rate for older adults. This represented an increase of 2,500 individuals in this age group in the past decade. With regard to income, the proportion of older adults at 100% of the Federal poverty levels increased from 1.1% to 1.5% of the County's overall population, a modest increase given the difficult economic times of this past decade. However the number of older adults in poverty increased by 50% from 452 to over 700 persons, and includes 7% of all seniors. While other seniors may be above Federal poverty income thresholds, many struggle with modest fixed incomes that can impact their transportation choices. This, coupled with the functional slowing of older adults, means they often decrease and in some cases cease driving. Income levels and functional abilities of older residents each have important implications for changes and improvements to Calaveras County's transportation. The distribution of seniors 65 and older is shown in Figure 2-16 below.

Figure 2-16 Population 65 Years of Age and Over

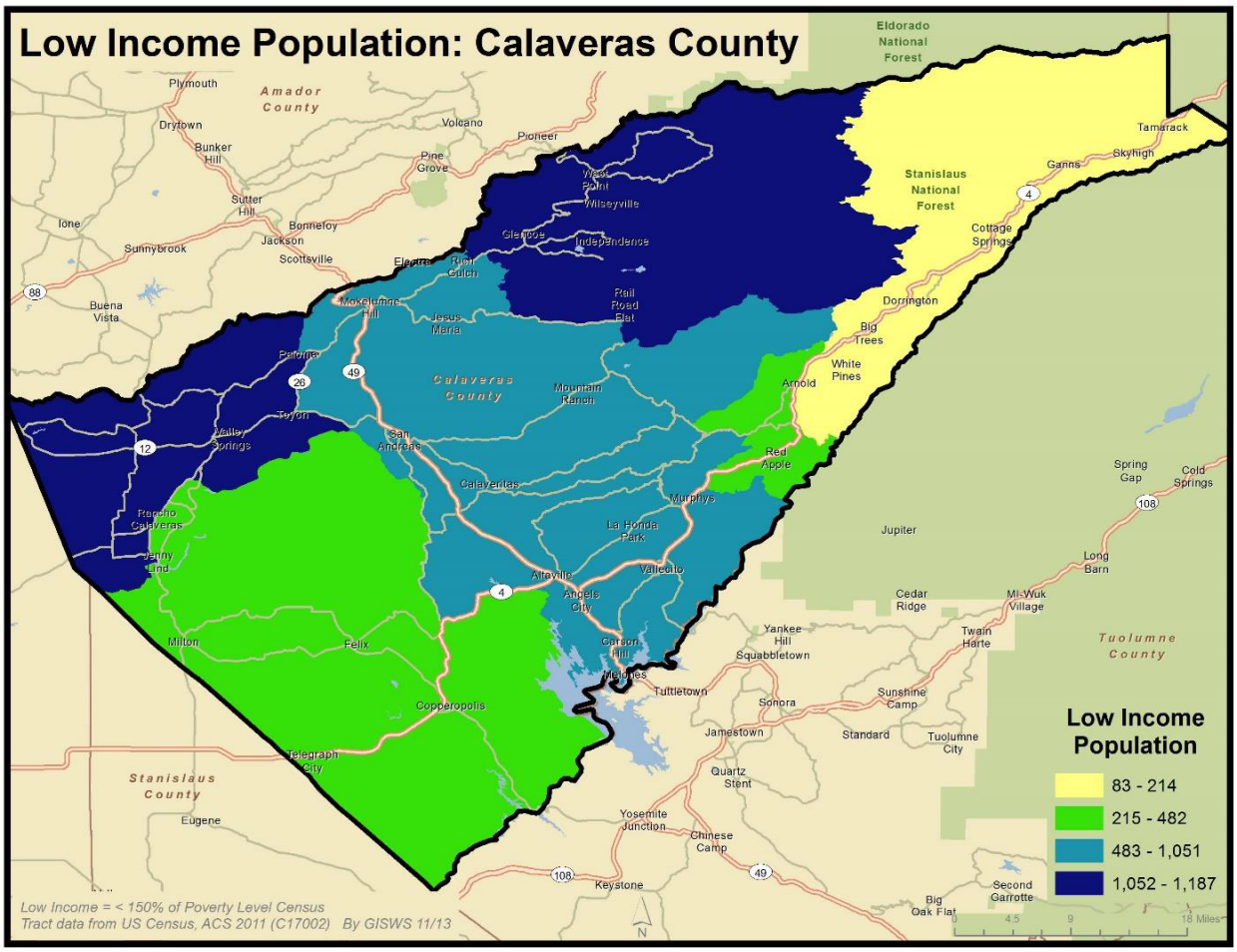


Persons of Low-Income

Low-income persons are reporting incomes at or below the Federal poverty level that varies by household size; those who are making less than 150% of the Federal poverty level, or less than $17,235 for a single person and less than $35,325 for a family of four. The 150% threshold for poverty levels is in line with the definition of poverty for FTA's Job Access and Reverse Commute Program. Although this program has not gone forward under MAP-21 legislation, this is nonetheless a useful determinate for low-income populations.

The number of low-income individuals increased during this timeframe by about 300, however, the percent of the County's total population that are low-income remained the same. The number of low income individuals is 3,100 persons. The distribution of the low income population is shown in Figure 2-17 below.

Figure 2-17 Low Income Population in Calaveras County



Among older adults, as noted above, lowest income persons age 65 and older increased modestly, to 1.6% of the County's residents. These may be seniors who are aging-in-place on fixed-income.

Together, almost 3,800 individuals likely struggle to keep vehicles operational and fueled, and will be more reliant upon public transportation and specialized transportation options.

Persons with Disabilities

The U.S. Census Bureau has changed the way in which it captures citizens' disability status; wherein now the data from the 2000 Census cannot be compared to the most current available data from the 2012 ACS. The ACS estimated 4,200 persons have some type of disability, representing 9.2% of the County's population. Individuals with difficulties walking are estimated to be 5.0% of County's population, over 2,300 individuals.

Because of changes in how the Census reports disabilities, it isn't possible to directly compare and report change. However, among adults, almost 2,300 report ambulation difficulties – 5% of the County's population, and among older adults, just over 2,000 report ambulation difficulties – 4.5% of the County's population. In combination, these 4,300 individuals are almost 10% of the county's population. When coupled with other physical disabilities, including hearing or vision impairments, cognitive difficulties, self-care difficulty and independent living difficulty, the overall count of unique individuals is 4,179 adults and 3,123 older adults. These 7,302 persons are almost one-in-six County residents, with many likely to have some level of transportation dependency, at least for some trips at some times.

Auto Ownership

While American Community Survey data shows that the majority of households have access to at least one vehicle, four percent or almost 700 households do not. Most of the households with no available vehicle are one-person and two-person occupied households.

The numbers of households with just one car available is quite significant. There are 1,330 2-person households, 285 3-person households and 291 4+ persons households with just one car available to the household. Collectively, there are 2,591 households with a potential deficit in the number of autos in the household. The absence of a vehicle in a household may limit an individual's ability to access employment, medical care, or to complete activities of daily living, especially in areas where public transit or specialized transportation resources are inadequate or inaccessible.

Census Review Summary and Implications

A review of Census data for Calaveras County reveals a substantial increase in the numbers of older adults in the past decade. This indicates that many residents are either aging in place or moving to Calaveras for retirement; however, many services such as medical are located out-of-

county. In a county as vast as Calaveras, this adds to the strain on the public transportation system to serve far reaching locations. In addition, fixed-route transit service in many cases may not be appropriate for individuals. Greater densities of the population are located in the western portion of the County, including the Valley Springs and Copperopolis areas, as well as the areas north and east between Murphys and Arnold. However, the data in this Section illustrate that the transit-dependent population is not concentrated in one small area or around community centers; instead these population groups are dispersed throughout the county. In addition, the areas where there are higher concentrations of transit-dependent individuals are the areas of lowest population density. Persons with disabilities are generally well-distributed around the lower two-thirds of the County, with pockets in Valley Springs, San Andreas, Murphys and Arnold. Persons of low-income have not significantly increased in proportion since the 2008 Coordinated Plan, now at 1.6%, but have increased in raw numbers, reflecting the County's overall 12.2% population growth. Other groups of interest to this Plan include veterans and Miwok Tribal members living in Calaveras County. Public transit systems in rural areas contribute to improving safety, travel, the environment, economic opportunity, and responses to demographic change. In the broader context, transportation is an essential component of rural economic development and quality of life considerations for Calaveras County. The low density and geography of the county, in conjunction with the variety of transportation needs and expectations previously discussed, call for a flexible and integrated response.

The Community Transportation Association (CTAA) Winter/Spring 2014 Publication's article *Trends Analysis: How Changing Rural Demographics Impacts Rural Transit*, further emphasizes the increasing population of older adults and low-income individuals across rural America. These population and demographic dynamics have had the effect of increasing the rural demand for transit and mobility options. It also has the impact of challenging economics for rural communities, making developing local match money more problematic. The article continues to conclude:

> "That services will need to be adapted to meet changing population demographics and emerging transportation demand. This adaptability will never be more central to the success of rural public transportation than in the coming years as mobility services are developed to address the trends highlighted in this article. Concepts like mobility management and ride sharing will have a central role in both creating transportation solutions and responding adroitly to a changing landscape. So, too, will technology that will empower both providers and customers. If history serves as an indicator of the future, than it will be the innovativeness, flexibility and adaptability that will lead rural public transportation through this quickly changing landscape and allow these systems to continue to play the key role they play every day across America."

V. Population Projections

The California Department of Finance Demographics Unit included the following projections for overall employment growth between 2010 and 2015. As shown in Figure 2-18 below, the population of Calaveras County is projected to grow from 45,654 in 2010 to 51,415 in 2025.

Figure 2-18 Population Increase 2010-2020

Year	Population
2010	45,464
2015	49,923
2020	48,957
2025	51,415

Source: California Department of Finance

Figure 2-19 below shows a breakdown of expected population increases by age category between 2010 and 2020. The aging of the population is particularly pronounced in Calaveras County. The number of seniors 65 and over is expected to increase by over 45% between 2010 and 2020. The number of young people below 17 is expected to decline by 7% or more.

Figure 2-19 Population Increase by Age Category

Age Category	2010	2020	% increase 2010-2020
0-4	*1,985*	*1,844*	*-7.1%*
5-17	*6,903*	*6,404*	*-7.8%*
18-24	*2,922*	*3,329*	*13.9%*
25-64	*24,151*	*23,135*	*-4.2*
65-74	*5,879*	*8,550*	*45.4%*
75-84	*2,825*	*4,253*	*50.5%*
85+	*989*	*1,442*	*45.8%*

Source: California Department of Finance

A significant implication for the Short Range Transit Plan is that the growth in seniors will require providing public transportation services that are attractive to seniors. Communications to seniors will also be increasingly important and this is addressed in Chapter 9, Marketing Plan.

3. Existing Fares, Services and Performance

This chapter provides a review of existing fares and public transportation services on five routes and then provides a review of performance.

I. Fares

Existing Fares

Calaveras Transit's fare structure is composed of three base fare categories: regular, students and discounted. The Calaveras Transit fare media consist of cash, ticket books, and passes. Discounted fares are available for seniors aged 65 and older and eligible persons with disabilities. Students are excluded from the discounted fare; however, monthly passes are available for students at a discounted rate of $45.00. Figure 3-1 shows the breakdown of fares:

Figure 3-1 Existing fares

Price Breakdown	Regular	Students	Discounted
One-Way Travel	$2.00	$2.00	$1.00
Ticket Book (15 tickets)	$28.00	$28.00	$14.00
All-day Pass	$5.25	$5.25	N/A
Monthly Pass	$60.00	$45.00	$40.00
Children Under 6	Free*	Free*	Free*

* With fare paying adult

In September 2012, the County Board of Supervisors (Resolution 2012-100) amended Calaveras Transit's fare policy by implementing a distance-based zone fare system, raising senior eligibility from 55 to 65 years of age, and lowering the eligibility age for children to ride free from 8 years to 6 years. Fares for all-day and monthly passes and tickets booklets were increased. For example, the all-day pass fare increased from $4.00 to $5.25, and the 15 ticket books (regular and discounted) increased from $26.00 and $10.00 to $28.00 and $14.00, respectively. The monthly passes (student and discounted) increased from $40.00 and $30.00 to $45.00 and $40.00, respectively.

Given its regional nature, the transit system's service area is divided into seven zones:

Zone 1: Between San Andrea and Valley Springs
Zone 2: Between San Andreas and Jackson
Zone 3: Between San Andreas and West Point
Zone 4: Between San Andreas and Angels Camp
Zone 5: Between Angels Camp and Copperopolis
Zone 6: Between Angels Camp and Arnold
Zone 7: Between Angels Camp and Columba College

Passengers traveling within one zone are required to pay the base fare. Passengers wishing to travel into another zone are required to pay an additional $0.25 per zone.

Fare Assessment

The September 2012 fare adjustment had both positive and negative impacts. A primary objective of the fare increase was to increase the farebox recovery ratio above the TDA required 10%. Due to cost increases between FY 2011/12 and FY 2012/13, while the farebox ratio adjusted for service improvements excluded from calculations of farebox recovery, the farebox recovery increased from 7.3% to 9.4% in FY 2013/14, below the desired goal. However, in terms of fare revenues and the average fare, the fare increase was huge success, increasing fare revenues from $66,572 in FY 2011/12 to $101,365 in FY 2012/13. During the same time period, the average fare increased from $0.98 per passenger to $1.47 per one-way trip in FY 2013/14[1]. The fare increase was primarily responsible for a decrease in ridership from 68,067 in FY 2011/12 to 65,922 in FY 2012/13. Ridership rebounded in FY 2013/14 to 69,100. Due to the high transit dependency of Calaveras Transit, the fare increase could be considered inelastic in terms of ridership response. This means that while the fare increase had a slight short-term ridership impact, those who need public transportation are willing to pay the fare necessary to travel on Calaveras Transit.

II. Description of Routes

Route Overview

Calaveras Transit operates five fixed routes, with deviation upon request for persons with disabilities and persons 65 years and older, who cannot access regular fixed route service. Calaveras Transit can deviate three-quarters of a mile from the regular fixed route. Calaveras Transit routes are described below:

[1] For Routes 1 and 4 there has been double counting of passengers from Angels Camp to Columbia College when passengers stay on the bus and do not transfer. When corrected, the elimination of double counting will increase the average fare per passenger.

Route 1: Travels between Valley Springs/Rancho Calaveras, San Andreas, and Angels Camp, originating and terminating in San Andreas. As a result of the 2013/14 Unmet Transit Needs Findings, this Route was extended in October 2013 to serve Rancho Calaveras.

Route 2: Travels from San Andreas to West Point and back, stopping in Mountain Ranch, Rail Road Flat, and Glencoe.

Route 3: Travels from San Andreas to Jackson and back, stopping in Mokelumne Hill.

Route 4: Originates in Angels Camp, travels to Arnold via Highway 4 with stops in Avery, Forest Meadows, Murphys, and Douglas Flat, returns to Angels Camp, then travels to Columbia College via Highway 49.

Route 5: Originates in Angels Camp, operates a loop in Copperopolis and returns to Angels Camp.

Figure 3-2 Overview of Routes

Route	Round Trips	Headways	Span of Service* (Monday-Friday)	Comments
1: Rancho Calaveras-Valley Springs-San Andreas-Angels Camp, Routes 1A & 1B	9	45 to 80 minutes	5:10 AM – 7:55 PM	Service to Rancho Calaveras is only offered every other trip (5 daily roundtrips). May 26, 2015 started On-Demand service to Burson.
2: San Andreas-Mountain Ranch-Railroad Flat-West Point	3	4.5 to 9.5 hours	5:40 AM – 8:35 PM	Midday run does not go to West Point, travels from San Andreas to Railroad Flat and Mountain Ranch.
3: San Andreas-Mokelumne Hill-Jackson	3	2.5 to 4 hours	8:15 AM – 4:00 PM	Connects with Amador Transit in Jackson.
4: Arnold-Murphys-Angels Camp-Columbia College	5	3 to 3.5 hours	5:30 AM – 7:32	Connects with Tuolumne Transit at Columbia College.
5: Angels Camp-Copperopolis	2	12 hours	5:53 AM – 7:02 PM	Includes two one-way trips to start passenger pick-ups.

Source: CCOG Unmet Transit Needs Report for FY 2014/15, updated for Routes 1A and 1B and Burson On-Demand Service.

III. Route by Route Assessment

For Routes 1, 3 and 4, there is enough passenger activity to provide information on key boarding and alighting activity as well as schedule adherence. Routes 2 and 5 did not have sufficient activity to warrant a performance evaluation of schedule adherence. The data for the on-board survey and schedule adherence are from the April 2014 on-board survey.

It should be noted that the on-time performance data collection in April 2014 is from a small sample and according to the contract vendor for Calaveras Transit operations is not representative of current conditions. Overall, there is a need for GPS tracking devices on the buses with an AVL system that enables ongoing electronic monitoring of schedule adherence on-board the buses. The AVL system required is addressed in Chapter 10 Financial Plan.

Routes 1 and 4 are presented first, because Route 1 buses often become Route 4 and vice versa on several runs during the day at the SR 49 and Demarest stop in Angels Camp. Therefore, a passenger on Route 1 boarding in Valley Springs can stay on the bus and the bus turns into Route 4 on some runs and continues to Columbia College. This is known as interlining a bus, and it was successfully implemented to make service more convenient for passengers. In talking with passengers and drivers, both are generally unaware of the route numbers and they simply know which buses go to directly to Columbia College and vice versa from the SR 49 and Demarest transfer location.

Route 1 Rancho Calaveras/Burson-San Andreas-Angels Camp

Key On-board Survey Findings

- Route 1 had a wide mix of trip purposes with 24% on board for trips to school/college, 21% for recreation and 19% for work.
- The majority (54%) utilize cash fares and only 16% utilize a monthly pass.
- 76% of Route 1 passengers have a cell phone and 46% of passengers have a smart phone with Internet on the phone.
- Most important improvement was Saturday service (35%) followed by more bus shelters (13%) and service to Stockton (13%).

Key Boarding and Alighting Activity

As shown in Figure 3-3, the SR 49 & Demarest stop was the top boarding location in the northbound (NB) direction from Angels Camp to Rancho Calaveras, by a large margin. In the southbound (SB) direction from Rancho Calaveras to Angels Camp, ARC and Government Center tied for the top boarding locations.

Please note that there has been double counting of ridership on Routes 1 and 4. If a passenger boards a bus in Valley Springs to Columbia College, on several runs in each direction the same

bus continues in Angels Camp as Route 4 to Columbia College. The changing of the same bus from Route 1 to Route 4 is known as interlining the bus. This was a positive scheduling decision because it provides passengers with a convenient one seat bus from their origin to destination. However, when the change was made, evidently Calaveras Transit did not make the necessary changes to comply with the definition of a passenger. TDA definitions of a passenger are each time a passenger boards the bus. Calaveras Transit has been counting the passenger once when the person boards (which is correct) and then double counts the passenger who stays on the bus when it turns into Route 4, counting them as a second "transfer" passenger (which is not correct). The figures from the ridecheck are correct, but the overall ridership figures for Route 1 and 4 include double counting and the actual passenger count is inflated by an undetermined amount. It is the responsibility of Calaveras transit to correctly report ridership correctly to the TDA auditors and the National Transit Database.

Figure 3-3 Route 1 Key On-Boarding and Alighting Locations

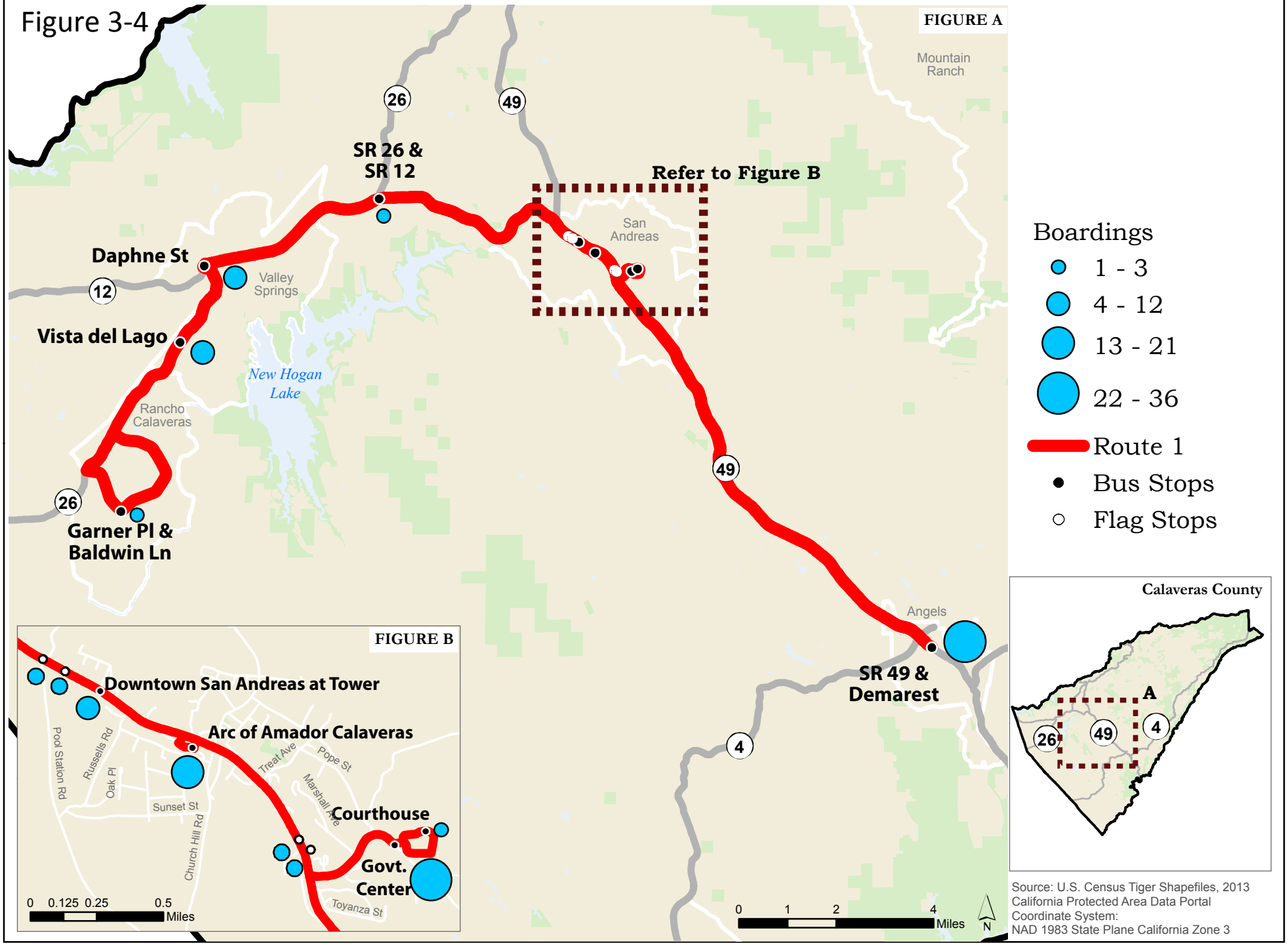
BUS STOP	Route*	Total On for Route	Total Off for Route	Total On/Off Activities for Route
Busiest Boarding Location Locations				
SR 49 & Demarest Transfer Stop	1NB	25	0	25
ARC	1NB	8	0	8
Downtown San Andreas at Tower	1NB	7	0	7
Government Center (Depart)	1NB	4	2	6
Flag stop (Treats)	1NB	3	1	4
Flag stop (San Andreas Post Office)	1NB	2	2	4
ARC	1 SB	11	2	13
Government Center (Depart)	1 SB	11	0	11
Flag stop (b/w San Andreas Post Office - ARC)	1 SB	8	4	12
Vista Del Lago	1 SB	8	0	8
Daphne St.	1 SB	5	3	8
Flag stop (Sierra Gas Station)	1 SB	4	3	7
Flag stop (b/w Daphne St - San Andreas Post Office)	1 SB	3	3	6
San Andreas Post Office	1 SB	2	1	3
Busiest Alighting Locations				
Flag stop (Blue House)	1NB	0	12	12
SR 49 & Demarest Transfer Stop	1 SB	0	11	11
Government Center (Arrive)	1NB	0	8	8
Flag stop (San Andreas Apartments)	1NB	1	6	7

***** *1NB goes from Angels Camp to Rancho Calaveras; 1SB goes from Rancho Calaveras to Angels Camp*

Figure 3-4 provides a map of the boarding volumes at key bus stops on Route 1. There is significant flag stop activity on Route 1. A flag stop is where there is not a designated bus stop, but the passenger flags the driver down (waves or her arms) to stop in a safe location for the bus to stop. During the onboard survey there were 109 boardings and 85 alightings on Route 1. 24% of the boardings were at flag stops and 60% of the alightings were at flag stops.

Calaveras County: Route 1 Total Boardings

Figure 3-4



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System:
NAD 1983 State Plane California Zone 3

Schedule Adherence

During the one-day ridecheck, there were a total of 58 timepoints on Route 1 Southbound and 40 timepoints on Route 1 Northbound checked for schedule adherence. A bus is considered on time if the bus is up to 5 minutes late or 1 minute early, which accounts for time synchronization differences. Overall, Route 1 Southbound was 60% on time in the northbound direction and 65% on time in the southbound direction. The data is summarized in Figure 3-5.

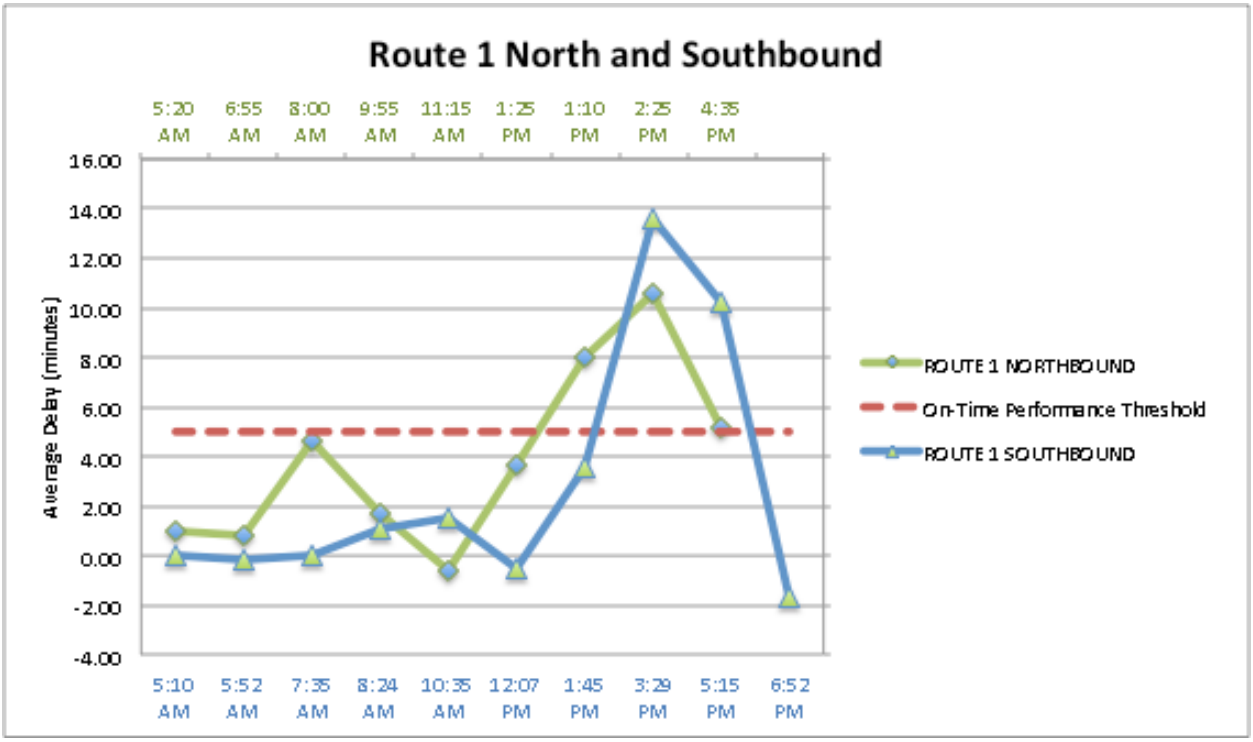
Figure 3-5 Route 1 Schedule Adherence

Schedule Adherence Route 1 Southbound	TOTAL	%
Total Sampled	58	
On Time (1 min. before to 5 min. after)	35	60%
Early (>1 minute)	7	12%
Late (>5 minutes and <= 15 minutes)	13	22%
Missed (>15 minutes)	3	5%

Schedule Adherence Route 1 Northbound	TOTAL	%
Total Sampled	43	
On Time (1 min. before to 5 min. after)	28	65%
Early (>1 minute)	2	5%
Late (>5 minutes and <= 15 minutes)	11	26%
Missed (>15 minutes)	1	2%

As shown in Figure 3-6, schedule adherence was quite good doing most of the day except during the mid-afternoons. On this one-day sample, the 2:25 Northbound Route 1 bus left SR 29 and Demarest 8 minutes late and arrived in Valley Springs 15 minutes late. It stayed behind schedule and left Rancho Calaveras 21 minutes behind schedule, then made up some time and was 11 minutes behind schedule when arriving back to SR 49 and Demarest.

Figure 3-6 Route 1 Schedule Adherence By Time of Day



Overall Route 1 Performance

Ridership on Route 1 is very strong and has increased by 13% over the past three years. Impressively, the productivity is 10.6 passengers per hour, which is considered exemplary for an intercity rural route[2]. Overall farebox recovery is 12%. Despite keeping the overall vehicle service hours and miles relatively flat with strong ridership growth, the substantial increases in overall Calaveras Transit costs has had a negative impact on Route 1 cost performance.

Despite a 54% increase in fare revenue over the past three years, the subsidy per passenger trip increased by 7%. Normally when you have strong ridership growth and a 36% increase in the average fare, one would expect to see a substantial decline in the subsidy per passenger trip. The Route 1 cost performance accents the need to take steps to control costs.

[2] As discussed earlier, part of the strong ridership is the double counting of passengers when passengers board at Columbia College on Route 4; when they stay on the bus and continue as a Route 1 passenger, they are counted as a transfer, which is double counting the single passenger on the bus.

Figure 3-7 Route 1 Performance[3]

Route 1	FY 2010/11	FY 2011/12	FY 2012/13	Pct Change
Base Statistics (Annual)				FY 10/11-12/13
Ridership	27,813	31,039	31,492	13%
Vehicle Service Hours	3,076	3,119	2,961	-4%
Vehicle Service Miles	98,565	97,053	95,969	-3%
Fare Revenue	$ 27,508	$ 30,408	$ 42,311	54%
Operating Costs	$ 285,292	$ 322,301	$ 353,294	24%
Performance				
Passengers/Service Hour	9.04	9.95	10.64	18%
Passenger/Service Mile	0.282	0.320	0.328	16%
Average Fare/Passenger	$ 0.99	$ 0.98	$ 1.34	36%
Farebox Recovery	9.6%	9.4%	12.0%	24%
Cost/Service Hour	$ 92.74	$ 103.33	$ 119.32	29%
Cost/Service Mile	$ 2.89	$ 3.32	$ 3.68	27%
Cost/Passenger Trip	$ 10.26	$ 10.38	$ 11.22	9%
Subsidy/Passenger Trip	$ 9.27	$ 9.40	$ 9.87	7%

Route 4 Arnold-Angels Camp-Columbia Collegel

Route 4 is a companion route to Route 1. It provides service on two legs. The first leg is between Arnold and Angels Camp. The second leg is between Angels Camp and Columbia College. Operationally, a number of the runs on Route 1 continue from Angels Camp as Route 4. In fact, passengers and many drivers have no awareness of the route numbers. They know the origin and destination of the bus. Likewise, many of the Route 4 buses from Columbia College become a Route 1 bus at SR 49 and Demarest.

Key Onboard Survey Findings

- Almost half (48%) of the trips on Route 4 were for school/college, followed by 22% for work.
- Route 4 that serves Columbia College has the highest percentage of five day a week riders – 57%.
- Just 7% of Route 4 passengers connect with Tuolumne County Transit at Columbia College.
- Route 4 has the highest utilization of cash fares with 64% and lowest number of monthly passes with just 5%.
- Route 4 passengers are the most technologically advanced with 72% accessing the Internet regularly and 72% having a cell phone (38% have a smart phone with internet).

[3] As explained above, the ridership numbers include an undetermined amount of double counting of passenger on Route 1.

- Most important improvements were Saturday service followed by more seating on the buses.
- Stakeholders and riders both noted that it is normally standing room only on the last bus in afternoon from Columbia College.

Boarding and Alighting Activity

As indicated in Figure 3-8, Columbia College is the key activity center on Route 4. Many passenger boardings destined to Columbia College transfer at the SR49 and Demarest transfer location.

There is also significant activity at several flag stops on Route 4 as indicated in the table below. Between the SR49 and Demarest stop and Douglas Flat, there were 7 alightings in the SB direction and two boardings and 4 alightings in the NB direction.

Figure 3-8 Key Route 4 Boarding and Alighting Locations

BUS STOP	Route*	Total On for Route	Total Off for Route	Total On/Off Activities for Route
Busiest Onboarding Locations				
Columbia College (Depart)	4NB	38	0	38
SR 49 & Demarest Transfer Stop (Depart)	4NB	19	0	19
Visitor's Center	4NB	4	0	4
Flag stop (Columbia College area)	4NB	3	1	4
Flag stop (b/w Visitors Center - Douglas Flat)	4NB	2	5	7
Flag stop (bridge across from San Andreas Mobile Home Park)	4NB	2	4	6
Big Trees Market	4NB	2	4	6
Douglas Flat	4NB	2	0	2
SR 49 & Demarest Transfer Stop (Depart)	4SB	12	0	12
Taylor Plaza	4SB	9	1	10
Big Trees Market	4SB	5	0	5
Flag stop (b/w Demarest - Douglas Flat)	4SB	4	14	18
Visitors Center	4SB	4	0	4
Flag stop (b/w Taylor Plaza - Avery)	4SB	3	0	3
Flag stop (b/w Big Trees Mkt - Arnold Post Office)	4SB	2	0	2
Flag stop (b/w Murphy's - Taylor Plaza)	4SB	2	0	2
Busiest Alighting Locations				
SR 49 & Demarest Transfer Stop (Arrive)	4NB	0	30	30
Taylor Plaza	4NB	0	12	12
Murphy's Pharmacy	4NB	0	6	6
Columbia College (Arrive)	4SB	0	40	40
Flag stop (b/w Demarest - Douglas Flat)	4SB	4	14	18
SR 49 & Demarest Transfer Stop (Arrive)	4SB	0	7	7

*4NB is from Columbia College to Arnold and 4SB is from Arnold to Columbia College

As shown in Figure 3-9, 62% of the passengers have an origin or destination along the Route 1 corridor. Only 14% are located along the Route 3 corridor. In the next phase of the project, a service alternative to be evaluated will be to have a single route along the spine from Rancho Calaveras to Columbia College. It is important to note that individuals do come from other communities including West Point (1), and several other unidentified communities in Calaveras County. These individuals are likely dropped off at a Calaveras County bus stop.

When looking at the origin-destination patterns for trips to Columbia College, almost 2/3 of the demand originates from Route 1 communities. The following are the origin-destination pairs by route. The totals include trips origins and destinations in either direction to or from Columbia College. For this one-day sample, there were 37 individuals who reported a trip origin or destination to Columbia College. This is out of 136 passengers surveyed or 27% of the survey sample. While the sample is quite small, it is quite indicative of where passengers come from.

Figure 3-9 Columbia College Origin-Destinations

To/From Columbia College

Route 1 Communities	Number	Percent
Valley Springs	7	19%
San Andreas	7	19%
Angels Camp	9	24%
Subtotal	23	62%
Route 4 Communities		
Murphy's	2	5%
Arnold	3	8%
Subtotal	5	14%
Route 5 Community		
Copperopolis	2	5%
Other Communities	7	19%
Total	37	100%

Figure 3-11 is a map of the key boarding locations on Route 4. Aside from the significant boardings at both Columbia College and the SR49 & Demarest transfer location, what stands out in the map is the lower level of boarding activity in Arnold itself. There is significantly more activity in Murphys' Taylor Plaza area.

Schedule Adherence

On the one-day ridecheck there were a total of 47 timepoints checked in the southbound direction between Arnold and Columbia College and 46 in the northbound direction between Columbia College and Arnold. Overall, buses were on time more than two-thirds of the time. About 15% of the timepoints were more than 15 minutes late in the southbound direction.

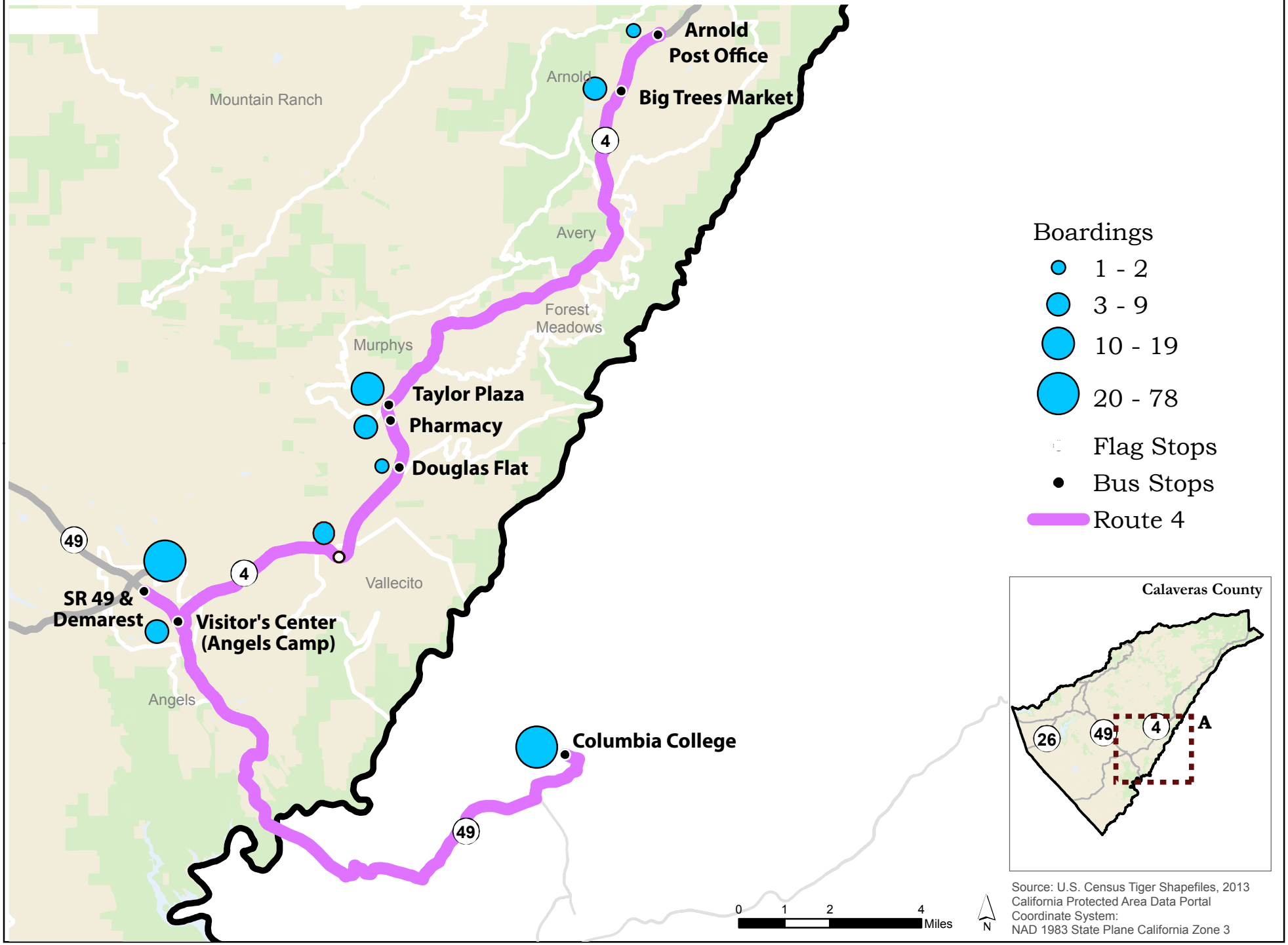
Figure 3-10 Route 4 Schedule Adherence

Route 4 SB (Arnold to Columbia College)	TOTAL	%
Total Sampled	47	
On Time (1 min. before to 5 min. after)	32	68.09%
Early (>1 minute)	2	4.26%
Late (>5 minutes and <= 15 minutes)	5	10.64%
Missed (>15 minutes)	7	14.89%

Route 4 NB (Columbia College to Arnold)	TOTAL	%
Total Sampled	46	
On Time (1 min. before to 5 min. after)	33	71.74%
Early (>1 minute)	3	6.52%
Late (>5 minutes and <= 15 minutes)	7	15.22%
Missed (>15 minutes)	3	6.52%

Calaveras County: Route 4 Total Boardings

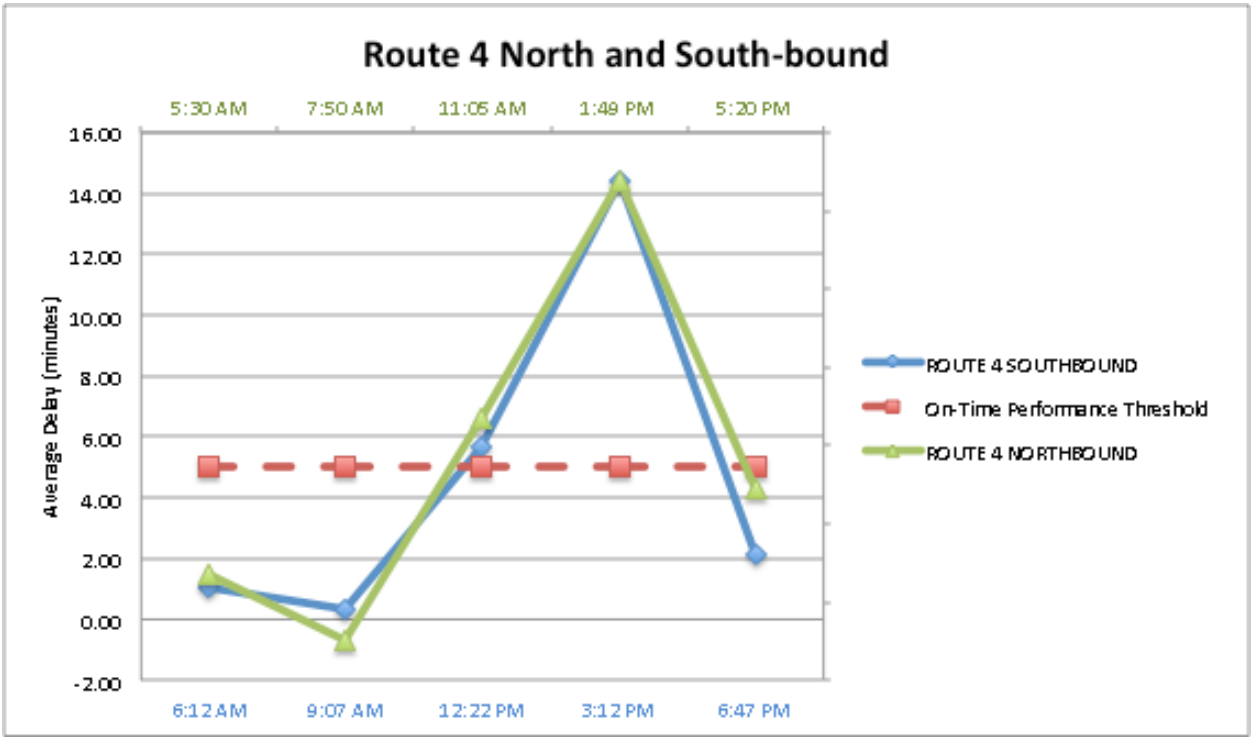
Figure 3-11



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System:
NAD 1983 State Plane California Zone 3

Route 4 was on time for four of the five runs in each direction, but was significantly behind schedule in the mid-afternoon in both the southbound and northbound directions. Route 4 northbound was on time departing from Columbia College at 1:50 pm and SR 49 and Demarest at 2:24 pm. A wheelchair boarding at the Visitor's Center caused the bus to be 18 minutes late at Douglas Flat.

Figure 3-12 Route 4 Schedule Adherence by Run



When the bus left Arnold it was 23 minutes behind on the return trip southbound and dropped the wheelchair passenger off at a flag stop before arriving at SR49 and Demarest 18 minutes late. The last run was surveyed on a different date and was on time. More analysis is needed in the next phase of the project to determine the average wheelchair boarding and alighting time. The single data point of 18 minutes due to one wheelchair boarding at first glance is excessive. Strategies to improve boarding and alighting of wheelchairs will be addressed in the next phase of the project.

Route 4 Performance

Figure 3-13 provides a summary of Route 4 performance over the past three years. Ridership has been fairly constant with just a 4% increase over three years. The average fare per passenger increased from $0.99 to $1.33, resulting in a 39% increase in fare revenue. With such a significant increase in fare revenues, one would expect a significant increase in the farebox recovery ratio. However, due to a 25% increase in the cost per vehicle service hour, the farebox ratio only increased from 8.4% to 9.2%.

Figure 3-13 Route 4 Performance

Route 4	FY 2010/11	FY 2011/12	FY 2012/13	Pct Change
Base Statistics (Annual)				FY 10/11-12/13
Ridership	24,673	27,875	25,655	4%
Vehicle Service Hours	3,229	3,274	3,272	1%
Vehicle Service Miles	87,445	86,103	89,650	3%
Fare Revenue	$ 24,430	$ 27,707	$ 34,069	39%
Operating Costs	$ 292,131	$ 324,668	$ 371,377	27%
Performance				
Passengers/Service Hour	7.64	8.51	7.84	3%
Passenger/Service Mile	0.282	0.324	0.286	1%
Average Fare/Passenger	$ 0.99	$ 0.99	$ 1.33	34%
Farebox Recovery	8.4%	8.5%	9.2%	10%
Cost/Service Hour	$ 90.48	$ 99.17	$ 113.50	25%
Cost/Service Mile	$ 3.34	$ 3.77	$ 4.14	24%
Cost/Passenger Trip	$ 11.84	$ 11.65	$ 14.48	22%
Subsidy/Passenger Trip	$ 10.85	$ 10.65	$ 13.15	21%

Increased costs has resulted in the cost per passenger trip on Route 4 to increase from $11.84 in FY 2010/11 to $14.48 in FY 2012/13.

Route 3 San Andreas-Mokelumne Hill-Jackson

Route 3 provides three round trips between San Andreas' Government Center and Jackson's Raley store. Route 3 to Jackson started in July 2012. Previously, Route 2 served the segment between the San Andreas Government Center and Mokelumne Hill.

Key Onboard Survey Findings

- No trips on Route 3 were for school or college. However, 50% of the passengers surveyed utilized Calaveras Transit for a trip to work. Route 3 had 17% of the trips for medical appointments; double that of any other route.
- While is not surprising that 27% of passengers connect with Amador Transit in Jackson, it is surprising that Route 3 passengers have the highest use of connections with Tuolumne County Transit with 9%.
- Route 3 has the highest utilization of monthly pass use, with 33%. This is double the number of other routes.
- Most important improvement was Saturday service (42%), followed service to Stockton (25%) and local San Andreas service (17%).

Boarding and Alighting Activity

As indicated in Figure 3-14, the activity level for Route 3 is significantly lower than Routes 1 and 4. The most activity occurs at the end stops. The Government Center has the most boardings, while Jackson Raleys has the most alightings. Figure 3-15 is a map of the key boarding locations on Route 3.

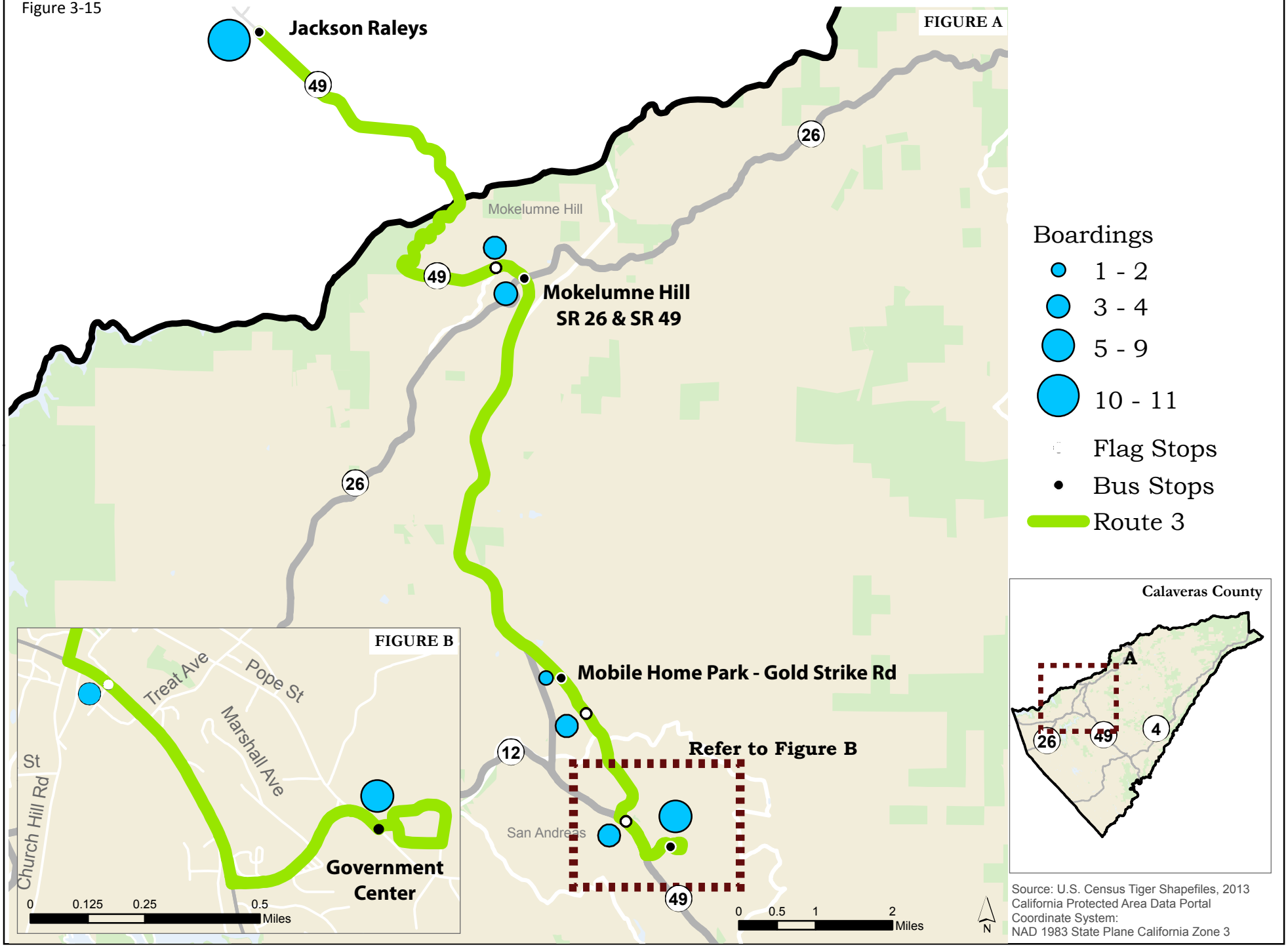
Figure 3-14 Key Route 3 Boarding and Alighting Locations

*3NB is San Andreas to Jackson and 3SB is from Jackson to San Andreas

BUS STOP	Route	Total On for Route	Total Off for Route	Total On/Off Activities for Route
Busiest Boarding Locations				
Government Center	3NB	5	0	5
Flag stop (b/w Govt Center - San Andreas High School)	3NB	3	0	3
Flag stop (b/w San Andreas High School - Mobile Home Park)	3NB	2	0	2
Flag stop (b/w Mokelumne Hill - Jackson Raleys)	3SB	4	0	4
Jackson Raleys	3SB	3	0	3
Busiest Alighting Locations				
Jackson Raleys	3NB	0	8	8
Mokelumne Hill - SR 26 & SR 49	3NB	0	2	2
Government Center	3SB	0	4	4
Flag stop (b/w San Andreas High School - Mobile Home Park)	3SB	1	3	4
Flag stop (b/w Govt Center - San Andreas High School)	3SB	0	2	2

Calaveras County: Route 3 Total Boardings

Figure 3-15



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System:
NAD 1983 State Plane California Zone 3

Schedule Adherence

On the one-day ridecheck there were a total of 15 timepoints checked in each direction. Schedule adherence is excellent on this route, with 93% on time in the northbound direction, and 80% on time in the southbound direction. The remaining buses were between 5 and 15 minutes late.

Figure 3-16 Key Route 4 Schedule Adherence

Route 3 NB (San Andreas to Jackson)	TOTAL	%
Total Sampled	15	
On Time (1 min. before to 5 min. after)	14	93.33%
Early (>1 minute)	0	0.00%
Late (>5 minutes and <= 15 minutes)	1	6.67%
Missed (>15 minutes)	0	0.00%

Route 3 SB (Jackson to San Andreas)	TOTAL	%
Total Sampled	15	
On Time (1 min. before to 5 min. after)	12	80.00%
Early (>1 minute)	0	0.00%
Late (>5 minutes and <= 15 minutes)	3	20.00%
Missed (>15 minutes)	0	0.00%

Route 3 was generally on time for all three runs in each direction.

Figure 3-17 Route 3 Schedule Adherence by Run

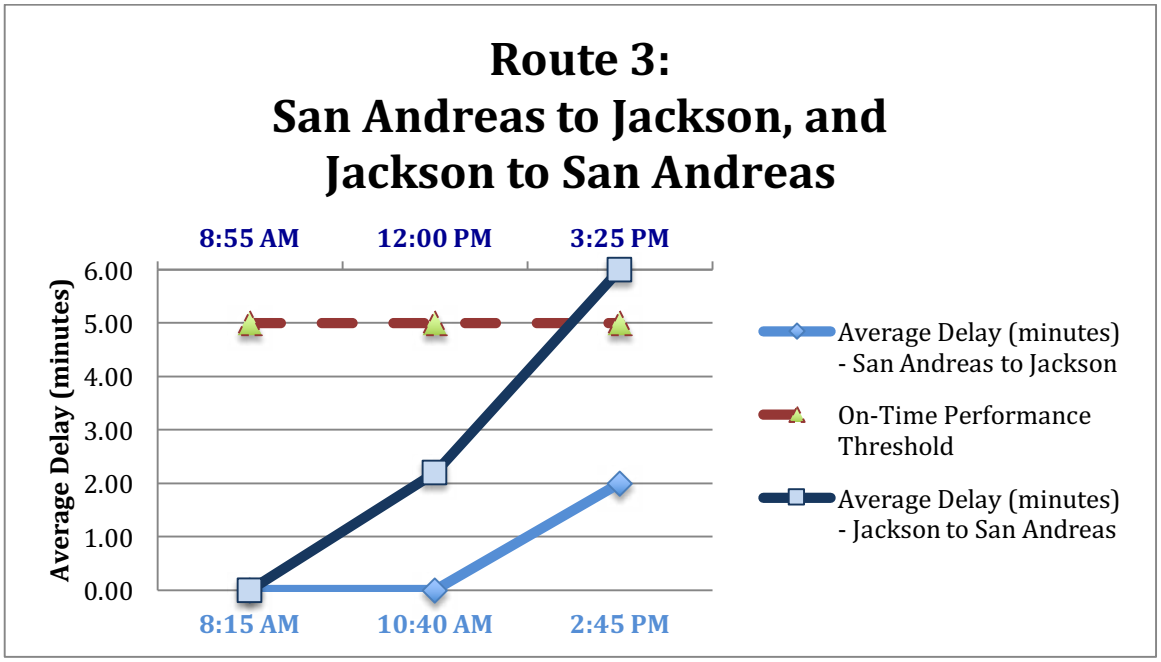


Figure 3-18 shows a summary map for boardings of Routes 1, 3, and 4.

Routes 2 and 5

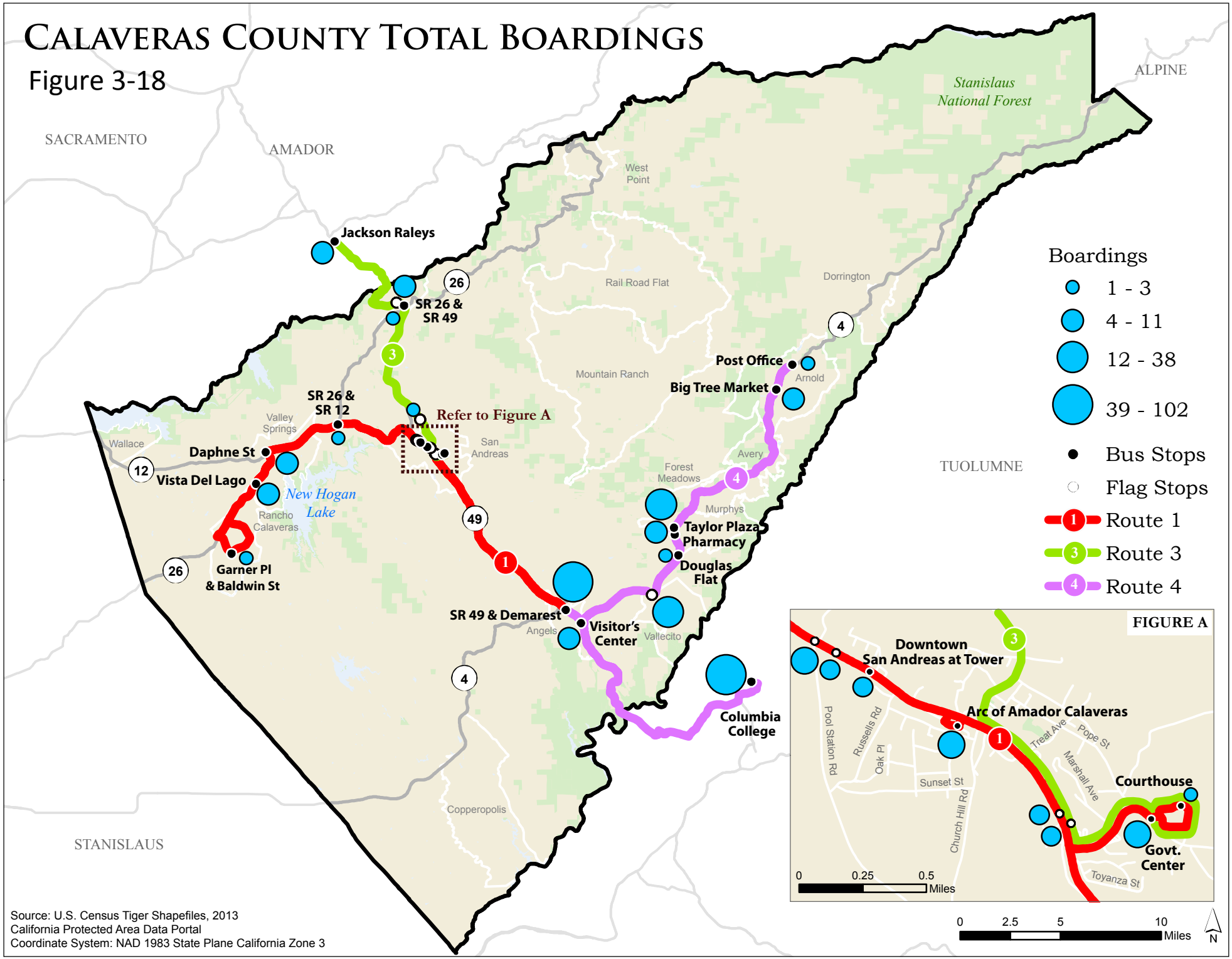
As indicated earlier, there was only 1 passenger surveyed on Route 2 and only two passengers on Route 3. Due to low ridership levels, it's not possible to provide the type of analysis on the onboard survey results, boarding and alighting counts and maps that were provided for Routes 1, 3, and 4. The focus below for Routes 2 and 5 is recent performance.

Route 2 Westpoint-San Andreas

Route provides 2 round trips between the Government Center in San Andreas and West Point. The first run starts in West Point at 5:40 am to San Andreas. There are no other morning buses from West Point. There is a 3:30 pm bus from Railroad Flat to San Andreas at 3:30 pm. The last bus departs West Point to San Andreas at 7:35 pm. From San Andreas, a bus departs at 2:55 pm and terminates at Railroad Flat Road & Ridge Road at 3:30 pm. The only bus that goes from San Andreas to West Point departs the San Andreas Government Center at 6:25 pm.

Calaveras County Total Boardings

Figure 3-18



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System: NAD 1983 State Plane California Zone 3

Route 2 used to provide a link between San Andreas and Mokelumne Hill. Therefore, the comparative performance data since FY 2008/2009 is not comparable to the existing service. The following are some of the key performance statistics for FY 2012/13:

- Ridership levels are very low, with a total of 3,206 for all of FY 2012/13. This is an average of almost 13 one-way passenger trips daily. In the second quarter of FY 2013/14 (the last quarter of passenger activity available), there was an average of just 11 passenger trips per day.
- Route 2 ridership was just 2.9 passengers per hour for FY 2012/13. In the second quarter of FY 2013/14, productivity was just 2.3 passengers per hour.
- The cost per passenger was $40.50 in FY 2012/13. In the second quarter of FY 2013/14, the cost per passenger was $44.92.
- The fare revenues for Route 2 were $4,420, in FY 2012/13. The farebox recovery ratio was just 3.4%. In the second quarter of FY 2013/14, the farebox recovery ratio was 3.2%.

Route 5 Copperopolis-Angels Camp

Route 5 serves Copperopolis on two round trips a day between the SR49 and Demarest Transfer Center and Copperopolis. The first bus departs from O'Byrnes Ferry Rd. at 6:14 am and arrives at SR 49 & Demarest Transfer Stop at 6:55 am. This enables passengers to transfer to Route 4 for a trip to Columbia College. This is the only morning trip from Copperopolis. The only other trip from Copperopolis to Angel's Camp is at 6:21 pm. From Angels Camp to Copperopolis, a bus departs at 5:43 pm and not again until 6:00 pm.

Overall, Route 5 ridership is the lowest of all Calaveras Transit routes with just 2,539 total passengers or an average of about 10 one-way trips per day, which equates to about 5 persons a day travelling to and from Copperopolis. The following are the key performance indicators:

- Passengers per vehicle service hour was 4.4 passengers per vehicle service hour in FY 2012/13, but dropped to 2.8 passengers per hour in the second quarter of FY 2013/14.
- The cost per passenger trip was $26.79 for the full fiscal year in FY 2012/13 and increased to $36.24 in the second quarter of FY 2013/14.
- Fare revenue in FY 2012/13 was $3,505 and the farebox recovery ratio was 5.2%.

4. Goals and Performance Standards

This chapter provides the goals, objectives, and performance standards chapter for the Calaveras Transit SRTP Update.

The goals, objectives, and performance measures, and performance standards have not been updated since the 2003 SRTP Update. Outdated performance standards have been utilized for the quarterly performance reports, at least through the second quarter of 2015, twelve years since the adoption of the performance standards.

A joint workshop was held on April 28, 2015 among the Calaveras County Board of Supervisors and City of Angels Camp City Council to provide input on the goals and objectives for the 2015 SRTP Update. The input is incorporated into a new recommended mission statement, goals, and performance measures and standards to monitor performance.

This chapter utilizes the 2003 adopted goals, objectives and performance standards as a foundation and recommends or discusses several potential changes in order to make the performance standards a useful service monitoring tool.

I. Background

2003 SRTP Goals and Performance Standards

In the 2009 Short Range Transit Plan Update, it referenced three primary goals with related objectives established in the previous 2003 SRTP:

Goal 1: Equity – Ensure Mobility for the Residents of Calaveras County

- Objective: Improve transit accessibility

Goal 2: Provide Effective Public Transit to Meet the County's Transportation Needs

- Objective: Provide reliable transit service
- Objective: Maximize service effectiveness
- Objective: Transit service consistent with County goals
- Objective: Provide high level of service satisfaction

Goal 3: Efficiency: Provide Efficient Service

Objective: Increase revenue while minimizing subsidy per passenger trip

For each of the 2003 goals, there were one to four performance measures recommended. In addition, there were performance measures recommended for performance tracking after 2005:

- Operating Cost Per Passenger: $10.95
- Farebox Recovery Ratio: 12.0%
- Passengers/Vehicle Service Hour: 4.0
- Passengers/Vehicle Service Mile: 0.15

It is not clear from either the 2003 or 2009 SRTP updates how other performance measures would be reviewed, how the performance measures would be monitored, and what the process would be for updating the performance standards based on changing conditions. The 2009 SRTP did not update any of the performance standards. In FY 2013/14, the following was the actual performance of Calaveras Transit for these four indicators:

- Operating cost per passenger: $15.85
- Farebox recovery ratio: 9.3%
- Passengers per vehicle service hour: 7.15
- Passengers per vehicle service mile: 0.25

In the First Quarter 2014/15 Performance Report, in the summary text, it states: "Average Passengers per Vehicle Service Hour (VSH) was 6.28; exceeding the goal of 3.25 passenger per VSH." 3.25 passengers per VSH was for the first six months of the 2003 SRTP time frame and is out of date, but it still being cited as the performance standard for systemwide passengers per vehicle service hour.

According to the adopted 2003 performance standards, Calaveras Transit is significantly above the productivity standards for passengers per vehicle service hour and mile, but well below the efficiency standard for operating cost per passenger and farebox recovery ratios. For an elected official, this does not provide meaningful information on how well Calaveras Transit is doing, and what the implications of the performance are.

It is important in the 2015 SRTP update to relate goals, objectives, performance standards, and performance measures to how performance will be tracked, monitored, and adjusted for inflation and changing conditions in the future. More importantly, the performance measures and standards should provide a meaningful tool for the Transit Manager, the Board of Supervisors, and the Calaveras Council of Governments in monitoring and tracking the performance of Calaveras Transit. The purpose of the April 28, 2015 joint workshop with the Calaveras Board of Supervisors was to receive input on how to make the goals, objectives and performance standards an ongoing useful tool in monitoring performance.

Current Performance Monitoring

Calaveras Transit has historically had three major types of performance monitoring:

1. Quarterly reports to CCOG Board
2. Annual State Controller report
3. Triennial performance audits

Quarterly Report

The quarterly reports are intended to provide a snapshot of Calaveras Transit performance with comparisons systemwide to the same quarter in the previous year.

The quarterly report includes a comparison with the previous quarter for the following performance indicators both systemwide and for individual routes:

- Total Ridership
- Average Daily Ridership
- Passengers Per Vehicle Service Hour
- Passengers Per Vehicle Service Mile
- Operating Cost Per Passenger
- Subsidy Per Passenger
- Farebox Recovery Ratio

In the past, the quarterly reports have only been presented to the Calaveras Council of Governments and have not been submitted to the Calaveras County Board of Supervisors, who is the transit operator. There have been issues with the quarterly performance reports, for example, information in the FY 2013/14 quarterly reports were not completely accurate and were pulled from the Calaveras Board of Supervisors agenda.

Total expenditures, fuel costs and total fare revenue is also provided at the systemwide level. A review of the first quarter budget to actual for FY 2014/15 reveals that operating expenditures are likely below actual expenditures for the quarter. For example, there are no costs entered into Acct. 5301, for reimbursement for County services, which includes time spent on Calaveras Transit by the Public Works Analyst.

Recommendation: Provide a semi-annual performance report to both the Calaveras Council of Governments and Calaveras County Board of Supervisors in 2015/16 and 2016/17 certified by the County Auditor. There was consensus on the semi-annual report at the April 28, 2015 Goal Setting Workshop. The Council of Government Transportation Development Act (TDA) Guidebook also requires semi-annual reports in order to track performance and provide recommendations based on TDA statutes and regulations.

State Controller Report and Triennial Performance Audit

Every year, Calaveras Transit is required to submit a State Controllers Report. This includes information needed to calculate the required TDA Performance Measures:

- Farebox recovery ratio (fare revenues/operating costs with some exceptions)
- Operating cost per passenger
- Operating cost per vehicle service hour
- Passengers per vehicle service hour
- Passengers per vehicle service mile

Every three years, the Transportation Development Act requires a performance audit of Calaveras Transit. During the three-year audit period, the following performance measures are required to be shown at the systemwide level:

- Farebox recovery ratio (fare revenues/operating costs with some exceptions)
- Operating cost per passenger
- Operating cost per vehicle service hour
- Passengers per vehicle service hour
- Passengers per vehicle service mile
- Vehicle service hours per employee

The Transportation Development Act defines passengers as passengers boarding the bus. This is how passenger counts are to reported. Calaveras Transit made a positive service change was to enable passengers to continue on the spine from Rancho Calaveras to Columbia College without having to transfer buses. As noted in Chapter 3, when making the change in FY 2012/13, passengers are counted once when they board Route 1 in Valley Springs, for example, and counted again when the bus changes from Route 1 to Route 4 continuing to Columbia College. The same double counting occurs in the opposite direction. It is not known how the double counting has affected passenger counts. The information presented below is based on the reported passenger counts. The performance standards recommended in this chapter may need to be adjusted based on actual passenger counts.

Title VI Performance Standards

On June 17, 2014, Calaveras Transit adopted a Title VI plan that included the following performance standards:

- Vehicle load standard
- Vehicle headway standard
- On-Time Performance Standards
- Vehicle Assignment Policy
- Transit Amenities Policy

II. Recommended Mission Statement, Goals, and Performance Standards

Recommended Mission Statement

Based on the April 28, 2015 Goal Setting workshop, the following is the recommended mission statement for Calaveras Transit:

To provide safe and cost effective public transportation services throughout Calaveras County to serve the mobility needs of residents and visitors who need public transportation.

Recommended Goals

1. Provide an effective level of service in response to demonstrated community transit market needs (service effectiveness goal).
2. Provide public transportation services that are financially sustainable within existing local, state, and federal funding programs in a cost-efficient manner (service efficiency goal).
3. Ensure that all transit programs can be provided at high quality of service (service quality goal).
4. Provide safe and convenient transportation services to the residents of Calaveras County for employment, education, and social service by the most cost-effective mobility mode (safe and accessible goal).

Recommended Performance Monitoring Framework

The following are recommended enhancements for the monitoring framework for Calaveras Transit:

1. The 2009 Short Range Transit Plan included a long list of performance standards and measures that were adopted as part of the 2003 SRTP, but not updated. The Calaveras Title VI program adopted by the Calaveras Board of Supervisor In June 2014 required the adoption of five performance standards, many of which were not included in the previous SRTPs.

   The following provides the performance measures that are required by either Title VI or the Transportation Development Act. The recommended frequency of when the Calaveras County Board of Supervisors and Calaveras Council of Government review the performance standard is semi-annually. This was the consensus at the April 28 Goal Setting workshop.

Required by Transportation Development Act in the State Controller report and Triennial Performance Audit:

- Farebox recovery ratio
- Operating cost per passenger
- Operating cost per vehicle service hour
- Passengers per vehicle service hour
- Passengers per vehicle service mile (every three years: Triennial Performance Audit)
- Vehicle service hours per employee (every three years: Triennial Performance Audit)

Required by Title VI Program:

- Vehicle load (every three years in annual report)
- Vehicle headways
- On-time performance
- Service availability standard (every three years: annual report)
- Vehicle assignment policy (every three years: annual report)

Optional and Recommended:

- Miles between road calls
- Percent of preventive maintenance inspections completed on time
- CHP Terminal inspection result
- Miles between preventable collisions
- Subsidy per passenger
- Average daily weekday ridership
- Total ridership (systemwide and by route, quarterly and annual report)

2. The 2009 SRTP provided a single measure for a performance standard. It is recommended that the adopted 2015 SRTP include a minimum performance standard and a target performance standard. A target performance standard is what Calaveras Transit would strive to achieve over a five year period. A minimum standard is the floor of what would be considered acceptable performance. For example, a systemwide target standard for passenger per vehicle service hours might be 9 passengers per hour when considering less productive evening service. A minimum standard might be 6 passengers per hour. This framework provides a range of performance between the minimum and target standard. The format for the minimum and target standards received favorable affirmation at the April 28 2015 Goal Setting Workshop.

3. The 2009 SRTP did not distinguish performance standards among different service types. There is a significant different in service productivity along the spine between Valley Springs

and Columbia College and other services. The new intercity service to Stockton is a different service type. Performance standards by service type and systemwide are recommended in Chapter 4.

Based on input from the April 28, 2015 Goal Setting workshop, the emphasis should be on the achievement of systemwide performance standards. The review by service type should receive secondary consideration.

4. Not meeting performance standards should trigger a review of performance and provide mitigating measures to improve performance above the performance standard. A preliminary process is suggested below under the performance standards for discussion by Calaveras County and CCOG staff.

5. Once the recommended performance standards are adopted by CCOG Board, the CCOG policies and procedures should be modified such that performance standards are considered in evaluating and approving the TDA claims.

Recommended Performance Standards by Goal

For each goal, a limited set of performance standards are recommended for ongoing monitoring. For each performance standard, the definition, data requirements and sources, recent performance, and recommended performance standard is provided.

1. Service Effectiveness Goal

Provide an effective level of service in response to demonstrated community transit market needs.

Recommended Performance Standard (Required by TDA): Passengers per Vehicle Service Hour

Definition: The number of passengers divided by vehicle service hours. A vehicle service hour is when a bus is operating in revenue service, when the vehicle is available for passengers to pay a fare.

Data Requirements and Sources: Ridership and vehicle service hours are regularly compiled and reported by Calaveras Transit based on monthly reports from Paratransit Services.

Recent Performance: Passengers per vehicle service hour is an excellent performance measure to track on a quarterly basis and annual basis. In general, if the trend is more productivity measured by passengers per vehicle service hour, then normally farebox recovery goes up, and cost per passenger declines. A negative trend in passengers per vehicle service hour typically indicates an overall negative trend in performance.

Figure 4-1 provides passengers per vehicle service hour performance between FY 2010/11 and FY 2013/15. High gas prices resulted in increased ridership and productivity in FY 2011/12, increasing to a peak of 7.6 passengers per hour.

Figure 4-1 Passengers Per Vehicle Service Hour Recent Performance

	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14
Systemwide	6.64	7.62	7.54	7.15
Route 1	9.04	9.95	10.64	8.45
Route 2	2.90	3.64	2.89	1.85
Route 3	N/A	N/A	3.68	5.97
Route 4	7.64	8.51	7.84	8.23
Route 5	2.45	3.55	4.43	4.33

Performance Standard Recommendations: Figure 4-2 shows the preliminary recommendations for passengers per vehicle service hour systemwide and for each route and service type.

Figure 4-2 Recommended Performance Standard for Passengers Per Vehicle Service Hour

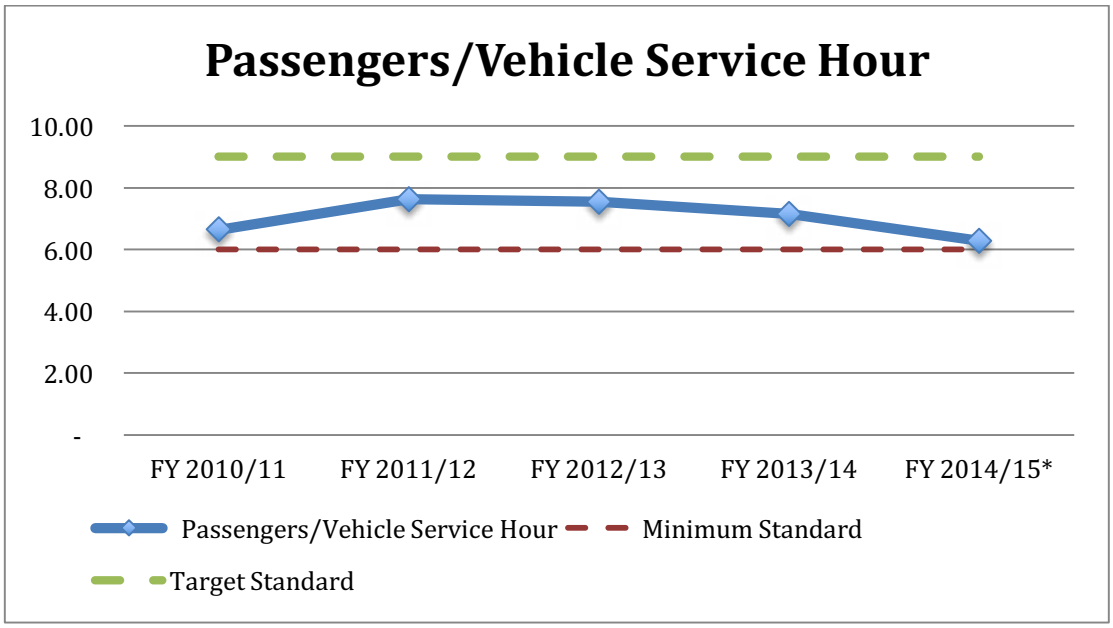
Passengers Per Vehicle Service Hour

	Minimum	Target
Service Type		
Systemwide	6.0	9.0
Intercity Fixed Route	4.5	7.0
Regional Fixed Route	9.0	13.0
Feeder Fixed Route	5.0	7.0
Demand Response	3.0	5.0

Figure 4-3 shows the systemwide trend of passengers per vehicle hour with the minimum and target standard shown. Over the past five years, productivity peaked in FY 2011/12 at 7.6 passengers per hour, and was 6.3 passengers per vehicle service hour in the first quarter of FY 2014/15. The recent decline in productivity has brought passengers per vehicle service hour almost to the proposed minimum standard. Service improvement alternatives to improve

service along the spine are being made to improve systemwide passengers per vehicle service hour on a trend toward the target standard of 9.0 passengers per hour[1].

Figure 4-3 Systemwide Passengers Per Vehicle Service Hour Minimum and Target Standards



* First quarter 2014/15 quarterly report.

Taking actions to improve the systemwide passengers per vehicle service hour will help to improve the farebox recovery ratio and reduce the operating cost per passenger. In simple terms, the more passengers on the bus in an hour means more fare revenue, which helps to increase the farebox recovery ratio, and the cost of operating the bus for an hour is divided by more passengers, thereby lowering the operating cost per passenger.

If systemwide or individual routes do not meet passengers per vehicle service hour minimum standards in a particular fiscal year, then the Annual Report will suggest mitigating measures to improve productivity. This could include:

- Targeted marketing strategies to improve ridership on the route or systemwide overall
- Eliminating unproductive route segments
- Changing the fixed route to a demand response service if performance cannot exceed 3.5 passengers per vehicle service hour.

[1] The productivity standards are based on existing ridership statistics that include double counting of passengers on Routes 1 and 4. It may be necessary to adjust the standards after ridership figures are collected without the double counting of passengers.

- Reducing the number days per week the service operates

Recommended Performance Standard: Ridership

Definition: The number of passengers who board the bus.

Data Sources: Ridership is regularly compiled and reported by Calaveras Transit based on monthly reports from Paratransit Services.

Recent Performance: In FY 2008/09 reached a peak in ridership with 90,834 passengers. Ridership is highly correlated to service supply, the number of vehicle service hours provided. When the service cutback occurred, when the number of vehicle service hours decreased from just over 15,000 to 9,248 in FY 2009/10, ridership dropped to 55,273 in FY 2009/10. Ridership has increased at a higher rate than service supply since then, and reached 69,100 in FY 2013/14.

	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14
Ridership	90,834	55,273	60,080	68,067	65,922	69,100
Vehicle Service Hours	15,005	9,248	9,043	8,930	8,739	9,668

Recommended Performance Standard: The recommended minimum standard for ridership is 75,000 annual riders. The desired target standard is to exceed 100,000 annual passengers over the next five years.

2. Service Efficiency Goal

Provide public transportation services that are financially sustainable within existing local, state, and federal funding programs in a cost-efficient manner.

Recommended Performance Standard (Required by TDA): Operating Cost Per Vehicle Service Hour.

The operating cost per vehicle service hour is a good measure of overall cost efficiency.

Definition: Calaveras Transit annual operating costs divided by the annual vehicle service hours.

Current Monitoring and Reporting: The cost per vehicle service hour is currently reported both quarterly and annually at the systemwide and route level.

It is preferable to report audited operating costs and revenues as part of the annual report on performance. There is too much lag in accounting for operating costs and transit pass sales to provide an accurate profile on a quarterly basis.

Recent Performance: The overall California Consumer Price Index has increased by 9.5%, including fuel costs, over the past five years. Figure 4-4 shows that the cost per vehicle service hour has increased from $69.85 per vehicle service hour in FY 2008/09 to $113.26 in FY 2013/14, an increase of 62%.

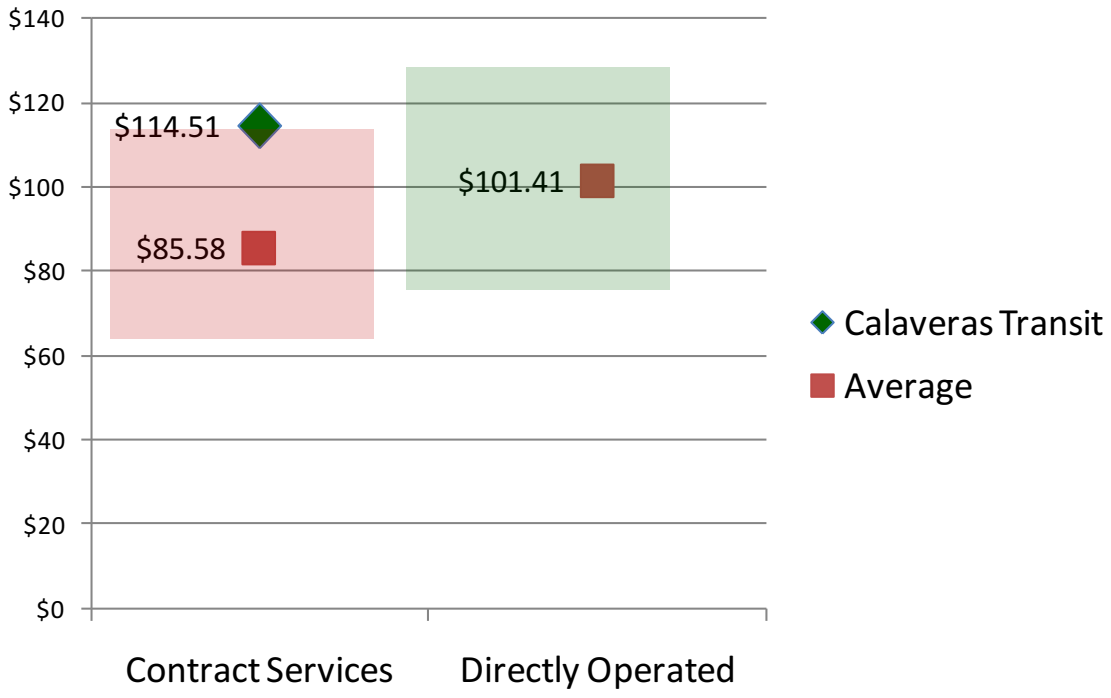
Figure 4-4 Calaveras Transit Cost Per Vehicle Service Hour Historical Performance

	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14
	Actual	Actual	Actual	Actual	Actual	Draft
Source	Perf. Audit	Perf. Audit	Perf. Audit	Fiscal Audit	Fiscal Audit	Fiscal Audit
Cost/Vehicle Service Hour	$ 69.85	$ 78.69	$ 91.98	$ 103.09	$ 114.51	$ 113.26

Discussion: The issue of cost escalation and potential strategies to reduce the cost per vehicle service hour were discussed in significant detail in the Transit Maintenance and Organizational Analysis, amended on September 23, 2014. It was discussed with the CCOG Board in September 2014 with a follow-up discussion on institutional options in February 2015. It was discussed again at the April 28, 2015 Goal Setting Workshop. There were several elected officials who wanted to be "in line with peer costs."

A peer review of 9 rural transit systems was provided in the Transit Maintenance and Organizational Analysis, included as Appendix A. Figure 4-5 is a summary chart that was utilized in the presentations at the three elected official workshops. Calaveras Transit is a hybrid of contract services (operations) and directly operated service (maintenance where mechanics are County employees).

Figure 4-5 Peer System Ranges of Cost Per Vehicle Service Hour FY 2012/13



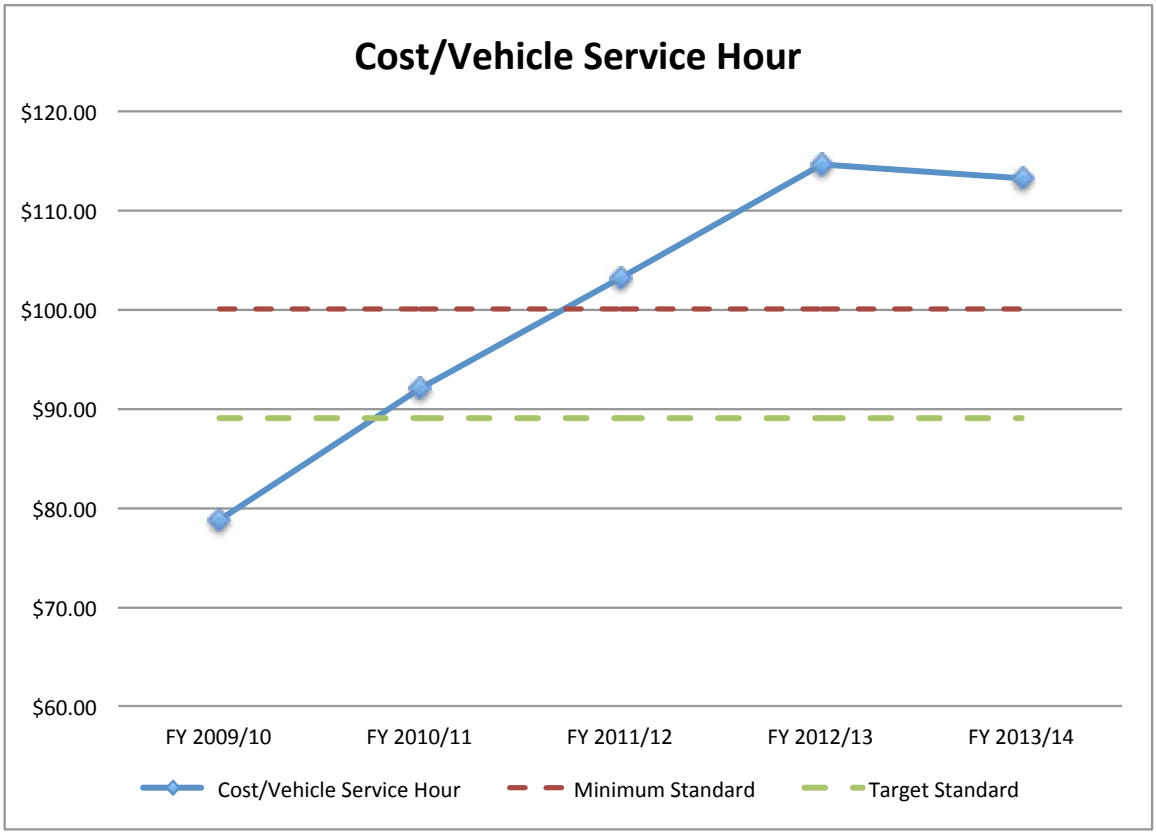
Calaveras County contracts for operations of the service, but directly operates maintenance. Directly operated is when the County hires mechanics and supervision of the fleet. For

contracted services, the average cost per vehicle service hour was $85.58 in FY 2012/13 per vehicle service hours. For the nine small California rural transit systems evaluated, directly operated services are an average of $16 per vehicle service hour higher than contracted services.

Recommendations for Performance Standard: The preliminary recommendation for the cost per vehicle service hour is a minimum standard of $100 per vehicle service hour in FY 2015/16 and a target standard of $89 per vehicle service hour. The figure should be adjusted annually based on the California Consumer Price Index.

The $89 per vehicle service target standard is the average for small rural transit in the peer analysis based on FY 2012/13 data, adjusted for inflation for 2015. As shown in Figure 4-6, in FY 2009/10, Calaveras Transit was below the target standard in actual dollars. In 2015 dollars, the FY 2009-10 cost of $78.69 would be slightly below the target standard at $87.22 per vehicle service, adjusted to 2015 dollars. Over the past five years, the cost per vehicle hour has escalated at a very steep rate and in FY 2013/14 was $113.26. This is significantly above the recommendation for a minimum standard of $100 per vehicle service hour for FY 2015/16.

Figure 4-6 Cost per Vehicle Service Hour Minimum and Target Standards (Actual Dollars)



In the Transit Maintenance and Organizational Analysis completed in September 2014, several strategies were recommended such that the cost per vehicle service hour would be reduced to below the minimum standard of $100 per vehicle service hour at the time of the FY 2015/16 budget. In reviewing the 2015/16 Calaveras Transit adopted budget, the estimated cost per vehicle service hour is estimated at $127.01. This is $27.01 per vehicle service hour above the recommended minimum standard of $100 per vehicle service hour. There are two financial scenarios in Chapter 7 that provide a means for significantly lowering the Calaveras Transit cost per vehicle service hour.

Recommended Performance Standard (Required by TDA): Operating Cost per Passenger

Definition: Total operating costs divided by total passengers

Current Monitoring and Reporting: Cost per passenger is reported on quarterly basis at the systemwide and route level basis utilizing unaudited financial figures. The Triennial Performance audit provides audited financial figures to calculate operating cost per passenger every three years.

Data Requirements and Source: Calaveras produces an unaudited financial summary to date as part of the quarterly report. A review of the FY 2014/15 first quarter report and the first quarter financial data reveals that the data utilized is not completely accurate, as all costs have not been "booked" by the time the quarterly report is presented. This is quite normal for all transit systems.

Calaveras Transit allocates unaudited costs to routes. When audited financial figures are available, the actual cost per passenger systemwide can be calculated. Utilizing a cost allocation model, the fully allocated costs per passenger trip by route can be calculated and is reported below for the type of route.

Recent Performance: Figure 4-7 provides a summary of the cost per passenger trip systemwide and by route since FY 2010/11. There is a stark contrast in the costs per passenger trip, ranging from $10.73 per passenger trip on Route 1 to $62.75 per passenger trip on Route 2 in FY 2013/14. While Route 5 has shown a notable decline in the cost per passenger trip from $37.81 in FY 2010/11 to $26.81 in FY 2013/14, it is $11 above the systemwide average of $15.85. On the other hand, Route 2 has doubled the cost per passenger since FY 2010/11.

Figure 4-7 Cost Per Passenger Trip Recent Performance

Cost Passenger Trip	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14
Systemwide	$13.85	$13.52	$15.18	$15.85
Route 1	$10.55	$10.54	$11.02	$10.73
Route 2	$31.68	$28.06	$39.76	$62.75
Route 3	N/A	N/A	$31.40	$18.53
Route 4	$12.19	$11.83	$14.20	$13.53
Route 5	$37.81	$29.04	$27.01	$26.81

Discussion: Calaveras Transit efforts to improve services, increase ridership productivity, and coordinate with CCOG and social service agencies to provide mobility management options to low demand areas should reduce the operating cost per hour and help to lower the average cost per passenger. However, until services are provided in a more cost effective manner on Routes 2 and 5, it will be difficult to lower the systemwide average to the degree it needs to.

Recommendations for Cost Per Passenger Standards: Figure 4-8 is the preliminary recommendation for costs per passenger. They will need to be adjusted after cost projections and ridership projections are complete, but provide a reasonable range based on the funding scenario assumptions presented in Chapter 7, Financial Plan.

Figure 4-8 Cost Per Passenger Trip Performance Standard Preliminary Recommendations

Cost Per Passenger Trip*

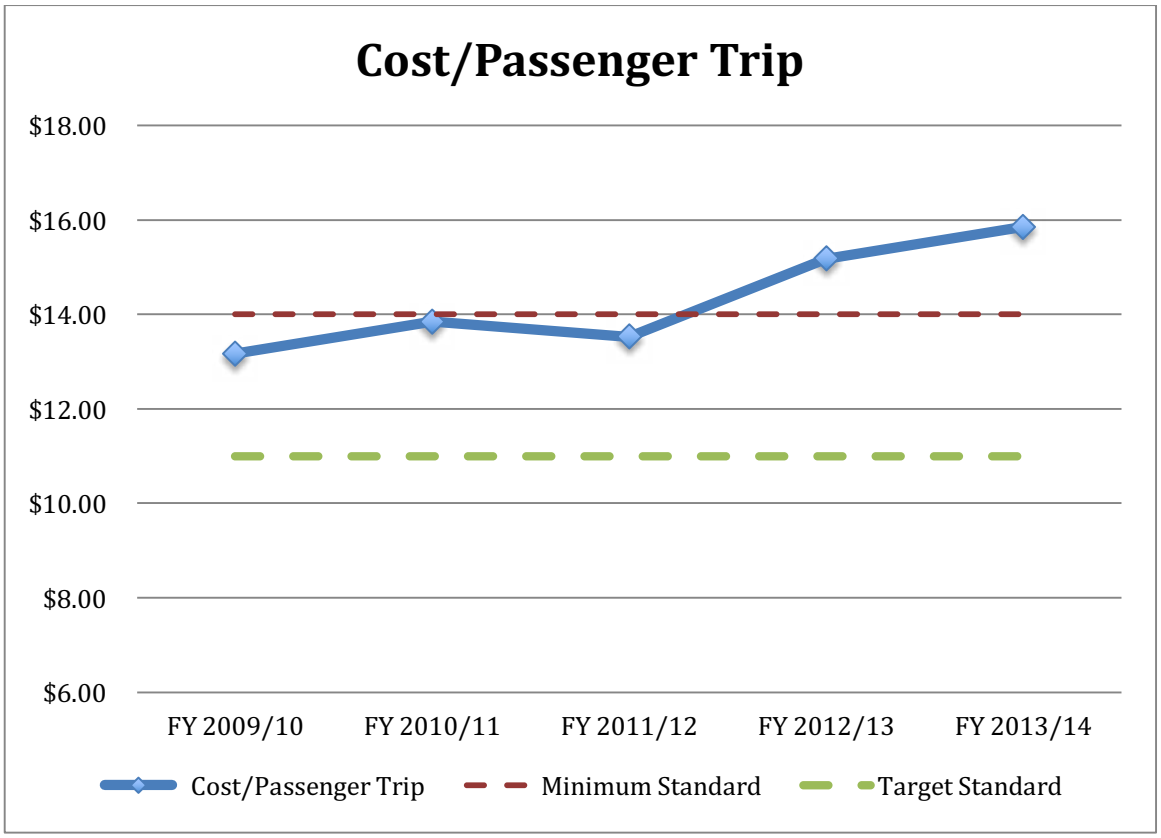
	Minimum	Target
Service Type		
Systemwide	$ 14.00	$ 11.00
Intercity Fixed Route**	$ 36.00	$ 18.00
Regional Fixed Route	$ 12.00	$ 8.00
Feeder Fixed Route	$ 19.00	$ 14.00
Demand Response	$ 32.00	$ 19.00

*Fully allocated costs, 2015 dollars. Needs to be adjusted by California CPI each year.
**Wide range due to new service

The recommended minimum and target standards should be adjusted by the California CPI in order to account for normal cost inflation.

Figure 4-9 below shows the average cost per passenger trip systemwide since FY 2010/11. It is recommended that such a chart be updated as part of the annual report to the Calaveras Board of Supervisors.

Figure 4-9 Cost Per Passenger Trip Performance Standards



*In actual dollars

Recommended Performance Standard: Subsidy Per Passenger

Definition: The total operating costs minus the fare revenues divided by total number of passenger. This is the amount of taxpayer subsidy per passenger required to operate Calaveras Transit.

Data Source: The annual fiscal audit provides the total operating costs and fare revenues collected during the fiscal year. The operations vendor tabulates the number of passengers in its monthly reports.

Recent Performance: Figure 4-10 shows the average fare per passenger, the operating cost per passenger, and the resulting subsidy per passenger trip. The subsidy per passenger is the cost

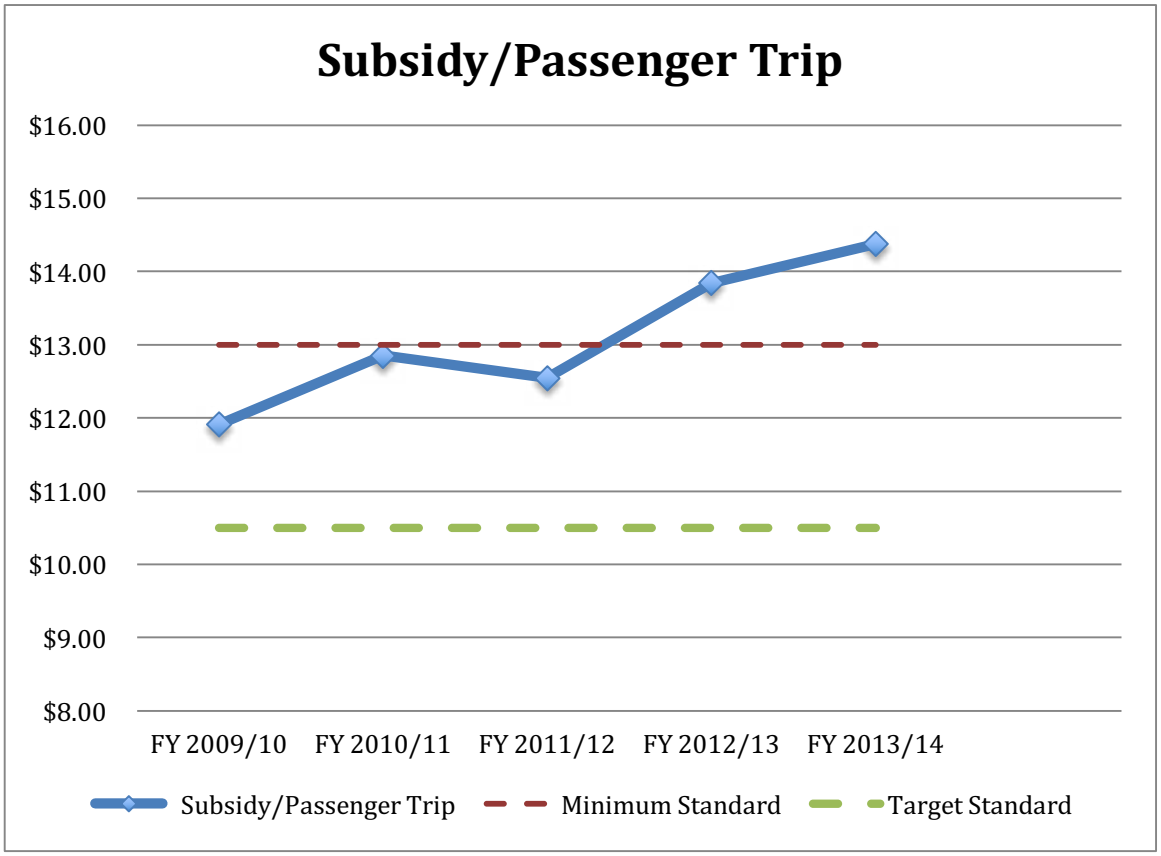
per passenger trip minus average fare per passenger. Despite the significant increase in average fare since FY 2010/11, from $0.99 to $1.47, the cost per passenger has increased at a high rate, meaning that the subsidy per passenger has increase from $12.85 in FY 2010/11 to $14.38 in FY 2013/14.

Figure 4-10 Recent Performance: Subsidy Per Passenger Trip

	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14
Average Fare/Passenger	$ 0.98	$ 1.25	$ 0.99	$ 0.98	$ 1.33	$ 1.47
Cost/Passenger Trip	$ 11.54	$ 13.17	$ 13.85	$ 13.52	$ 15.18	$ 15.85
Subsidy/Passenger Trip	$ 10.56	$ 11.91	$ 12.85	$ 12.55	$ 13.85	$ 14.38

Recommended Performance Standard: The recommended minimum performance standard for subsidy per passenger trip in 2013/14 dollars is $13.00 per passenger trip. The target standard systemwide is $10.50 per passenger trip. This will need to be adjusted for inflation in subsequent years. There will also need to be an adjustment if passenger costs are adjusted based on the recent double counting of passengers on Routes 1 and 4.

Figure 4-11 Subsidy/Passenger Performance Standards



Recommended Performance Standard (Required by TDA): Farebox Recovery Ratio

Definition: Proportion of fare revenues to operating costs, expressed in percentages.

TDA Requirement: The Transportation Development Act only requires the calculation of the farebox recovery ratio at the systemwide level. There are no requirements at the route level.

Data Source: The annual fiscal audit provides the actual farebox recovery ratio systemwide based on audited operating costs and revenues. In order to accurately calculate the farebox recovery ratio by routes, there would need to be an accurate means of allocating costs by route and demand response services. To the consultant's knowledge Calaveras Transit has not formally adopted a cost model that would be required to estimate costs by route and demand response services. Such a cost model and the methodology for updating the cost model can be provided in the Financial Plan. Fare revenues by route are a combination of fares collected from the farebox and monthly pass sales that need to be allocated to routes based on ridership proportions. A methodology for allocating fare revenues by route could also be included in the Financial Plan if so desired.

Recent Performance: Figure 4-12 provides a summary of farebox recovery ratios systemwide from FY 2009/10 though FY 2013/14.

Figure 4-12 Recent Farebox Recovery Ratio Systemwide*

	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14
	Actual	Actual	Actual	Actual	Draft
	Perf. Audit	Perf. Audit	Fiscal Audit	Fiscal Audit	Fiscal Audit
Farebox Recovery	9.5%	7.2%	7.2%	8.8%	9.3%

*Does not include allowable TDA exclusions for route extensions

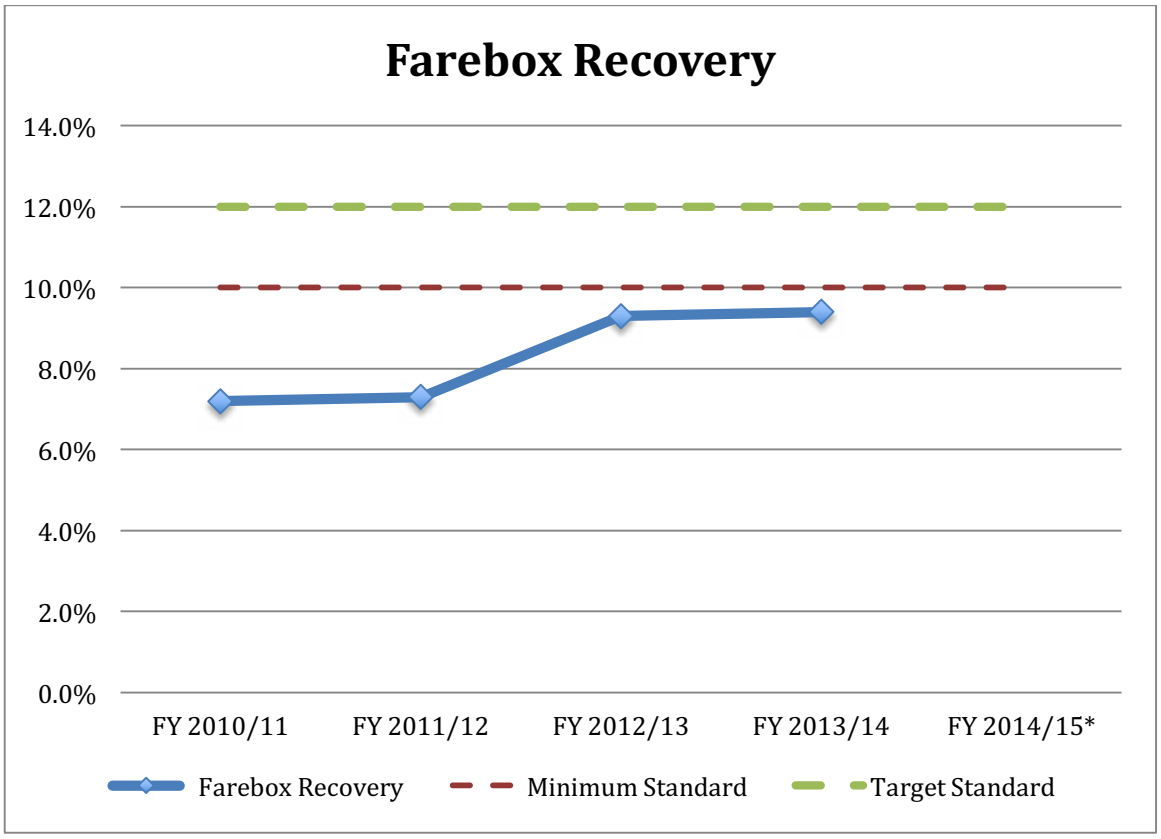
Discussion: The Transportation Development Act has a minimum requirement of a 10% farebox recovery ratio. The figures above do not include allowable TDA exclusions for recent route exclusion to Jackson. In FY 2013/14, there was $89,670 in allowable cost exclusions for the extension of service to Rancho Calaveras. With $8,097 in fare revenue exclusions, the actual farebox recovery ratio was slightly higher at 9.38% with the exclusions. As discussed earlier, fare revenues increased from $69,184 in FY 2009/10 to $101,365 in FY 2013/14. The cost escalation discussed previously has kept the farebox recovery ratio below 10%.

Recommended Performance Measures: The minimum farebox recovery would be 10% and with the Stockton Intercity service and increased ridership along the spine, the target would be a farebox recovery ratio of 12%.

As Figure 4-13 below indicates, the systemwide farebox recovery ratio was below the minimum farebox recovery ratio of 10% over the past four fiscal years. As Calaveras Transit implements

strategies to mitigate cost escalation issues, implements service improvements recommended in the SRTP, and implements service to Stockton with a higher average farebox recovery ratio, the farebox ratio should climb above 10% in FY 2015/16 with the target being a farebox recovery ratio of 14%. The reason the target is 14% is that it provides a significant cushion above the 10% minimum in order to avoid fare increases.

Figure 4-13 Systemwide Farebox Recovery



* Audit figures not available for FY 2014/15

3. Service Quality Goal

Ensure that all transit programs can be provided at high quality of service

Recommended Performance Standard: On-Time Performance Standard

Definition: The definition of on-time performance is when a bus is from one minute early to five minutes late at a scheduled timepoint in the schedule. A late bus is from 6 minutes late to 14 minutes late at a timepoint. A missed run is when the bus is 15 minutes or more late at a timepoint.

The Title VI Performance Standards adopted by Calaveras Transit include the following standards:

- Calaveras Transit endeavors to operate with no early departures before the time shown in the schedule brochure.
- Ninety percent of all runs are on time (defined as one minute early to 5 minutes late). Target standard is 95 percent of all runs on time.

The Title VI adopted standard in second bullet item above should only be applicable to fixed routes with no route deviations. For flex-routes, the minimum standard should no early departures with 80% of all runs on-time, defined as one minute early to ten minutes late. The target standard is 85% of all runs on-time.

Data Requirements and Source Data: Data can be collected in a ridecheck by a Calaveras Transit supervisor on a random basis. The 2014 data was collected by the consulting team.

Recent Performance: From the April 2014 ridecheck conducted during the passenger on-board survey, below is the Route 1 schedule adherence performance. Overall performance was well below the 90% minimum standard for on-time performance, and there were 9 observations of buses departing early from a stop.

Figure 4-14 On-Time Performance Routes 1

Schedule Adherence Route 1 Southbound	TOTAL	%
Total Sampled	58	
On Time (1 min. before to 5 min. after)	35	60%
Early (>1 minute)	7	12%
Late (>5 minutes and <= 15 minutes)	13	22%
Missed (>15 minutes)	3	5%

Schedule Adherence Route 1 Northbound	TOTAL	%
Total Sampled	43	
On Time (1 min. before to 5 min. after)	28	65%
Early (>1 minute)	2	5%
Late (>5 minutes and <= 15 minutes)	11	26%
Missed (>15 minutes)	1	2%

It should be noted that the on-time performance data collection in April 2014 is from a small sample and according to the contract vendor for Calaveras Transit operations is not representative of current conditions.

Recommend Performance Standard: Vehicle Headway Standards

Definition: The frequency of service expressed in minutes or trip per day.

Title VI Headway Standards: The Title VI report includes a summary table of the existing daily round trips, headways and spans of service. These are not standards. The following are recommended minimum and target standards.

Recommended Performance Standards: The minimum standard on the Route 1 spine route should be a consistent 90 minute service in both directions from Valley Springs to Angels Camp. The target standard is recommended at hourly service between Valley Springs and Angels Camp.

For feeder service to the spine route, the minimum standard is every three hours and the target standard is every two hours.

Recommended Performance Standard: Miles Between Mechanical Roadcalls

Definition: The vehicle service miles between the time when a bus needs to be taken out of revenue service due to a mechanical roadcall.

Reporting and Data Source: This information is typically reported in monthly reports by the service contractor. The data is, however, not currently reported in the Calaveras Transit quarterly reports.

Discussion: This is an important service reliability standard and is normally correlated to maintenance practices. While vehicle breakdowns were not an issue that surfaced during stakeholder interviews, if the information is regularly reported, it would provide a good indicator that vehicles are being properly maintained and service is not being disrupted by bus breakdowns. This has been an issue in other rural transit systems.

Recommendation: The recommended target standard is 20,000 miles between roadcalls and the minimum standard is 15,000 miles between roadcalls.

Recommended Performance Standard: Transit Amenities Policy

Title VI Performance Standard: Systemwide, bus stops should be provided at locations serving 5 or more passengers per day, and shelters should be provided at locations serving 10 or more passengers per day.

Discussion: The Title VI performance standard is a reasonable performance standard.

4. Safe and Accessible Goal

Provide safe and convenient transportation services to the residents of Calaveras County for employment, education, and social service by the most cost-effective mobility mode

Recommended Performance Standard: Span of Service Standard

Definition: When Calaveras first starts service in the morning and the evening.

Existing Span of Service: Route 1 has a span of service from 5:10 am to 7:00 pm and Route 4 extends to 7:35 pm.

Recommendation: Minimum standard is service from 6:00 am to 7:00 pm, and the target standard is from 6:00 am to 8:00 pm.

Recommended Performance Standard: Miles Between Preventable Accidents

Definition: Vehicle service miles between an accident that was preventable by a Calaveras Transit driver.

Reporting and Data Source: This information is typically reported in monthly reports by the service contractor. To the consultant's knowledge, this has not been regularly reported in the Calaveras Transit Quarterly reports.

Discussion: This is an important asset management standard and is normally correlated to driver training and contractor management. While vehicle accidents were not an issue that surfaced during stakeholder interviews, if the information is regularly reported it would provide a good indicator that driver training and contractor management is being diligent in avoiding preventable accidents.

Recommendation: The minimum standard should be 100,000 miles between preventable accidents with the target stand of 250,000 miles between preventable accidents.

5. Organizational Assessment

This chapter reports on the organizational assessment that was conducted as part of the Transit Maintenance and Organizational Analysis completed in September 2014. The chapter starts with a review of the existing organizational structure. Recommended strategies from the Transit Maintenance and Organizational Analysis are then presented. The organizational options presented in the September 2014 Maintenance and Organizational Analysis are then discussed. The chapter then reviews the importance of incorporating mobility management capabilities into the organizational structure especially to provide innovative multimodal feeder services from low demand areas of Calaveras County to the main spine of service from Valley Springs to Angels Camp. This assessment was an amendment to the Short Range Transit Plan Scope of Work. Finally, the chapter recommends a change in organizational structure in order to provide Calaveras Transit service in more cost-effective and market responsive manner.

Purpose of Organizational Assessment

The organization structure should enable the ongoing achievement of the mission of Calaveras Transit: *To provide safe and cost effective public transportation services throughout Calaveras County to serve the mobility needs of residents and visitors who need public transportation.*

As shown earlier in Chapter 2, Paratransit Services, the contract operator, is currently providing safe and reliable public transportation services, given the financial resources available.

A key question is whether the existing organizational structure is capable of achieving the minimum performance standards for the cost and service efficiencies recommended in Chapter 4. As discussed in Chapter 1, the cost per vehicle service hour has increased significantly under the current organizational structure. The cost per vehicle service hour increased from $69.85 in FY 2008/09 to $113.26 in FY 2013/14. Cost efficiency is very important to being able serve the mobility needs of Calaveras Transit residents. In FY 2013/14, with a budget of $1,094,999, Calaveras Transit was able to provide 9,668 vehicle service hours at a cost per vehicle service hour of $113.26. If Calaveras Transit were able to achieve the peer average of $89 per vehicle service hour, the target standard recommended in Chapter 4, Calaveras Transit would be able to provide 12,303 vehicle service hours. This would vastly improve the mobility options to Calaveras County residents. With an increased supply of vehicle service hours, Calaveras Transit could have significantly increased frequency on productive routes such as Routes 1 and 4, Saturday service, and improved feeder options from outlying areas to the mainline service on Routes 1 and 4 between Valley Springs and Columbia College.

The minimum standard of $100 per vehicle service hour was reviewed and agreed to with Calaveras County staff in March of 2015. At the April 28, 2015 joint study session of Calaveras

County Board of Supervisors and City of Angels Camp City Council, there were several comments from elected officials that cost efficiency should be in line with peer costs. Peer costs average the target cost per vehicle service hour of $89 per vehicle service hour.

Overview of Existing Organizational Structure

An organization chart of Calaveras Transit is shown in Figure 5-1. It is adapted and updated from an organization chart provided by Calaveras County with additional input from Paratransit Services.

- The Calaveras County Board of Supervisors is the governing body for Calaveras Transit. They provide overall policy and management guidance for Calaveras Transit.
- Calaveras Transit is a functional department of the Calaveras County Department of Public Works. A Public Works Analyst is currently serving in the Transit Manager function and reports to the Director of Public Works. Additional historical information on the administration function and costs is provided in Section 6.
- The Fleet Shop, another section of the Public Works Department, performs maintenance. The Fleet Shop has a Memorandum of Understanding with the Transit Division of the Public Works Department. A more detailed description and analysis of this function is provided in the Maintenance section later in Section 5.
- The Department of Public Works contracts with Paratransit Services to provide Calaveras Transit operations, including scheduling and dispatching, drivers, and related safety and training functions.

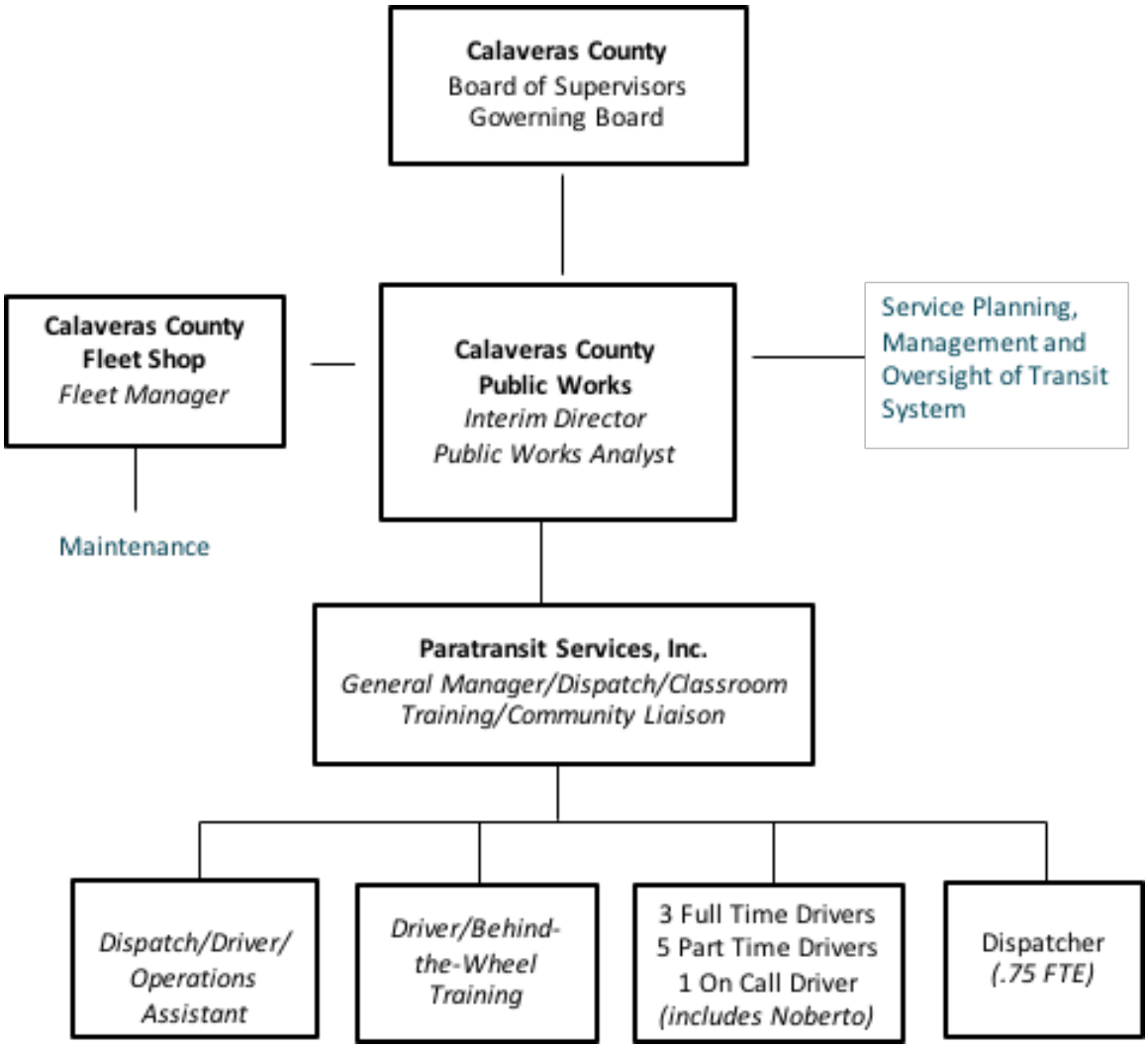
Historical Background

Up until FY 2005/06, the Calaveras Council of Governments was responsible for the governance and administration of Calaveras Transit.

In shifting to Calaveras County, Transit Administration has the responsibility for the following functions for Calaveras Transit:

- Budgeting
- Grant writing
- Capital Planning and Procurement
- Oversight of Fleet Shop Maintenance MOU
- Oversight/Monitoring/Procurement of Operations Contract
- Federal and State Compliance
- Goals, Objectives, Policies and Performance Standards
- Marketing and Promotion

Figure 5-1 Calaveras Transit Organization Chart



Up until September 2012, Calaveras Transit had a full-time Transit Manager in the Calaveras Transit Public Works Transit Division. At that time, interim contract management services were retained while Calaveras County recruited for a full-time replacement. The most recent interim contract was a one-year contract for $50,000 that ended on May 2, 2014. A Public Works Analyst was appointed to provide Transit Administration function in May 2014.

September 2014 Conclusion on Transit Administration

In the Maintenance and Organizational Assessment, the following summary conclusion was made in September 2014:

> *Overall, up until the last six months, Calaveras County has struggled to provide consistent leadership in the administration of Calaveras Transit. Decisions such as the specifications in the 2010 RFP for the Operations Contract and significantly underestimating the costs of transit maintenance in transitioning from a private vendor to the Calaveras Fleet Shop have led to a significant increase in the cost per vehicle service hour. The jump in the cost per vehicle hour from $78.69 in FY 2009/110 with 9,248 vehicle service hours the full year before these changes were made to $103.09 in FY 2011/12 with 8,930 vehicle service hours, the first full year of implementation of these two important transitions speaks volumes on the effect of these changes.*
>
> *On the other hand, decisions to control costs such as hiring an interim transit manager at an annual cost of $50,000 vastly underfunded the Transit Administration function leading to the lack of capital project delivery including Phase III of the bus shelter program and replacement of buses well over their useful life in a timely manner.*
>
> *It is apparent that both the FY 2013/14 and FY 2014/15 budgets were prepared without sufficient professional transit management or supervision. The FY 2014/15 adopted budget of $1,021,168 is just $21,000 more than the audited FY 2012/13 expenses even though the Rancho Calaveras service has been added and $76,000 in additional LTF funds were just requested in FY 2013/14 specifically for the Rancho Calaveras service. Overall the budgets and TDA claims are confusing and do not provide consistent rationale for substantial increases and decreases in both the budgets and TDA claims.*

The September 2014 maintenance and organization assessment made a number of key recommendations that are summarized below:

Figure 5-2 Transit Maintenance and Organizational Assessment
Summary of Recommended Strategies

Operator Fixed Costs	Operator Variable Costs	Maintenance Costs	Transit Administration
Renegotiate Contract with Paratransit Services in 2-year extension	Adjust driver wage table	Consider contracting for maintenance	Evaluate division of responsibilities between County and Paratransit Services
Spread fixed cost across more hours: Stockton Intercity and Burson extension		Replace remaining fleet	Take full advantage of Paratransit Services expertise
Feasibility of owned operations and maintenance facility		Hire fleet manager with transit experience	Renewed capital project delivery
		Establish maintenance goals and objectives	Provide prerequisite skills and experience to Transit Manager position

The purpose of the recommended strategies was to reduce the cost per vehicle service hour so that additional transit services could be provided to Calaveras Transit passengers. The FY 2015/16 was pointed to as the opportunity to begin to show a downward trend in the overall cost per vehicle hour.

FY 2015/16 Budget Implications

The Calaveras Transit 2015/16 budget is for $1,425,925 in expenditure and revenues. According to Calaveras County, the budget did not include an analysis of how many vehicle service hours by route would be provided. Assuming that the Stockton intercity service is implemented in September 2015, there would be approximately 11,225 vehicle service hours provided. This is $127.01 per vehicle service hour for the Calaveras Transit budget. This compares to the last audited cost per vehicle service hour of $113.26.

The 2015/16 Calaveras Transit budget goes in the opposite direction from the findings and recommendation of the September 2014 Maintenance and Organizational Assessment completed as part of the Short Range Transit. As discussed above, several Calaveras Council of Government members were willing to give Calaveras County six months to show significant progress in providing more cost-effective service delivery.

The bottom line is that the 2015/16 Calaveras Transit budget continues the cost escalation issues since Calaveras County has taken over the administration of Calaveras Transit. A key recommendation of the Short Range Transit Plan is to develop an organizational structure that provides more cost-effective service delivery. After reviewing the institutional options below, a recommended transition to a new organizational structure is provided at the end of this section.

Institutional Options

The following institutional options for governing Calaveras Transit, as presented in September 2014 in the Maintenance and Organizational Assessment Working Paper, are reviewed below:

1. Retain Calaveras County as the transit administrator with a focus on building transit leadership and support.
2. Form a new joint powers authority, creating a Calaveras County Transit Agency for transit administration and contract for maintenance and operations. The governing board would be the same as the Calaveras Council of Governments. This is a governance model that Tuolumne County, Modoc County, and Lassen County, among others, have successfully implemented.
3. Hire a professional transit management firm. Lake Transit in Lake County and Redwood Coast Transit in Del Norte County are two examples of this institutional option.
4. Form a joint powers authority for transit administration and directly hire operations and maintenance personnel. This is the governance model that Amador County and the Eastern Sierra Transit Authority have implemented.
5. Creation of a regional transit authority among Tuolumne, Calaveras, and Amador counties.

The peer review below provides several examples of how transit administration can be organized. In providing objective alternatives, positive examples of how the particular institutional arrangement has worked well are provided.

Retain Calaveras County as Governing Authority

The Calaveras County Board of Supervisors has been the governing body of Calaveras Transit during the time period from FY 2008/09 to FY 2012/13 when the cost per vehicle service increased from $69.88 per vehicle service hour in FY 2008/09 to $114 per vehicle service hour in FY 2012/13.

During this time period, Calaveras Transit management made a series of decisions that have led to the higher cost structure that resulted in Calaveras Transit having an average of $29 in costs per vehicle hour higher than the average of peers who have contracted operations.

There has been significant turnover in the leadership and management of the Department of public works during the past five years.

Trinity Transit in Trinity County is a good example of a peer agency where management and leadership in the Department of Public Works has worked and the system is thriving. Trinity Transit directly hires drivers as County employees and Fleet Shop provides maintenance. The Transit Manager was promoted to that position from an analyst position within the Department. The Transit Manager on a part-time basis has thrived and the system has thrived in terms of ridership growth. The Transit Manager has learned on the job by attending training sessions and attending the twice a year CalACT conference, the industry association for small urbanized and rural transit systems. Trinity Transit has been successful in obtaining FTA 5311 (f) monies for key routes and ridership has responded impressively. Among the recent accomplishments:

- Trinity Transit ridership has almost doubled since FY 2008/09. Most of this ridership growth has occurred on the Redding and Down River intercity routes.
- Trinity Transit costs for operating five day a week service has increased by more than double, increasing from $215,012 in FY 2008/09 to $523,851 in FY 2012/13. Services were increased from two and three days a week to five days a week service, and the increase in service supply explains most of the cost increase.
- The whole system has excellent bus stop signs and new shelters have been installed. Four new buses were procured for expansion and replacement of buses.
- The average fare per passenger has increased from an average of $2.42 in FY 2008/09 to $4.94 per passenger in FY 2012/13.
- Farebox recovery for the four routes is 14%, well above the 10% requirement for rural transit services. If the first eight months hold true for the rest of the fiscal year, the farebox recovery systemwide could exceed 15%.
- The cost per vehicle service hour increased from $97.03 in FY 2011/12 to $108.38 in FY 2012/13, based on audited costs for FY 2012/13. This is a 12% increase in one fiscal year. Recent bus replacements and other management steps have reduced the cost per vehicle service hour to $99.25 in FY 2013/14. Additional steps including the retirement of the highest paid driver and reduction of unproductive hours reduced the cost per vehicle service hour to $95 per vehicle service hour in FY 2014/15.

The increase in operating cost per vehicle service hour was also of concern to Trinity Transit and they are also taking steps to address the cost escalation issue. Trinity Transit is a directly operated service and all drivers and mechanics are Trinity County employees. They have made a conscious decision to pay drivers quite well to retain hard to recruit drivers. County overhead costs do keep overall costs higher than the average of other contracted peer systems. As will be

discussed later, the five directly provided service peers operated by counties are an average of $16 per vehicle service hour more than the four agencies where operations are contracted.

If the recently assigned Public Works Analyst is going to be the part-time manager similar to Trinity Transit, it is important to devote financial resources to training and participation in industry conferences. This needs to be coupled with support and leadership from the new Public Works Director in the project delivery in Phase III of the bus shelter program, vehicle replacement, adequate staffing and training and policy guidance of the Fleet Shop, and a streamlining of management functions between Calaveras County and Paratransit Services.

There are very feasible means of realizing cost efficiencies if the policy decision is to retain Calaveras County as the administrator of Calaveras Transit. In Chapter 7, the County Efficiency Scenario 7 provides the potential outcomes of cost efficiencies under county administration. In this scenario, the strategies recommended in the Maintenance and Organizational Analysis as summarized in Figure 5-2 above would be fully implemented.

Form a Joint Powers Authority for a Calaveras Transit Agency

This is an increasing prevalent organizational structure for small rural transit systems. Tuolumne County Transit Agency (TCTA) and Modoc Transportation Agency are peer agencies that have adopted such an institutional structure.

Both agencies have formed Joint Powers Agreements among the County and respective cities in their jurisdiction. A review of both joint powers agreements revealed that the documents are almost identical. Both provide contracted operations and maintenance services.

The joint powers authority (JPA) in California is governed by Government Section 6500 et seq. In adjacent Tuolumne County, the members of the Joint Powers Authority are Tuolumne County and the City of Sonora. In Calaveras County, it would be Calaveras County and the City of Angels Camp.

The purpose of the joint powers agreement is recited verbatim as it spells out in concise terms what the agency does:

"If the Tuolumne County Transportation Council determines that the Members have transit needs which can be reasonably met, it is the intention of the Members that the Agency formed hereby shall be the entity by which said needs may be met. The specific purpose of this Agreement is to exercise the common powers of the Members by the formation of a joint powers agency with full power and authority to own, operate, and administer a public transportation system within the boundaries of the County of Tuolumne, which Agency shall be the means by which transit needs of the Members may be met. The Agency will provide the policy direction and general oversight of the public transportation system."

The JPA does not have the power to tax, but lists eight specific powers it does have. The most important as relevant to Calaveras County are the power to 1) employ agents and employees and to contract for professional services; 2) acquire, convey, construct, manage, maintain, and operation buildings and improvements; and 3) make and enter into contracts, including labor and employment contracts.

The governing body is such that four directors are appointed by the Members and a fifth director is appointed by a majority of the other four directors. Importantly, the TCTA board members are the same as appointed to the Tuolumne County Transportation Council.

The TCTA Board establishes an annual budget. It establishes procedures and policies to ensure competitive prices for purchase of goods and services. A particularly relevant provision is "Particularly in the purchase of equipment, including buses, the board may consider the design, maintenance and operating costs, and other similar factor in determining the most suitable equipment and need not purchase equipment having the lowest initial cost."

The preliminary performance audit for Tuolumne Transit for general services (not including specialized services and comparable to Calaveras Transit) was $91.55 per vehicle hour, up almost 13% from FY 2011/12. For all Tuolumne Transit services, including specialized services that Calaveras Transit does not operate, the cost per vehicle service hour was $74.76 per vehicle service hour.

Tuolumne County Transportation Commission and Tuolumne County Transit Agency share 6 full time equivalent staff as shown in Figure 5-3.

Figure 5-3 Tuolumne County Staffing

	TCTC Budget		Transit Budget		
Position/Title	FY13/14	FY14/15	FY13/14	F14/15	**FTE**
Executive Director	75%	75%	25%	25%	1
Senior Administrative Analyst	75%	75%	25%	25%	1
Senior Transportation Planner	50%	50%	50%	50%	1
Transportation Planner I	70%	80%	30%	20%	1
Staff Services Analyst		20%	100%	80%	1
Department Support Technician	75%	75%	25%	25%	1
Total Full-Time Equivalents (FTEs)	*3.45*	*3.75*	*2.55*	*2.25*	*6*

The administrative cost per vehicle service hour for Tuolumne County is $12.51 compared to $13.26 per vehicle service hour for Calaveras Transit. The administrative labor cost for Tuolumne Transit is $8.29 per vehicle service hour compared to $9.12 for Calaveras Transit.

Tuolumne County operates specialized services that Calaveras Transit does not operate and therefore has a higher number of overall vehicle service hours.

Modoc County has a very similar governance structure as Tuolumne County. However, four staff persons staff both the Modoc Transportation Commission and the Modoc Transportation Agency (Transit). The Operations Manager is the supervisor, but also drives the bus when a backup is needed. Modoc Transportation Agency has one contract for drivers and a second private contract with a maintenance vendor in Redding where one of the routes has a final destination; buses are swapped out for preventative maintenance as needed. Modoc Sage Stage has an overall administrative budget of $108,000 that includes the salary and benefits of Transit Manager who performs a variety of duties including driving occasionally. The administrative cost per hour is not comparable to Calaveras Transit. Modoc's Sage Stage service has an operating cost per vehicle service hour of $70.72 per vehicle hour.

In Chapter 7, three financial scenarios are developed that compare the costs with continued Calaveras County transit administration and a new Calaveras Transit Agency. The County Efficiency Scenario, where Calaveras County fully implements the recommendations of the Maintenance and Organizational Assessment has an operating cost per vehicle service hour in FY 2017/18 of $103.70 compared to the FY 2015/16 budget of $127.01. In Chapter 10, the recommended financial plan that includes implementation of the Calaveras Transit Agency projects an operating cost per vehicle hour of $97.31 in FY 2017/19

The Calaveras Transit Agency based on the peer comparison of Modoc Sage Stage and Tuolumne Transit has the potential for lower operating costs per vehicle service hour than the Calaveras County transit administration, even with full implementation of the maintenance and organizational assessment recommendations.

Hire a Professional Transit Management Firm

On an interim basis, Calaveras County hired outside vendors, Majic Consulting and Scott Dwyer, to provide transit management services. Although hiring a Transit Management firm is more common with much larger transit agencies, it has been very successfully implemented in Lake and Del Norte counties. One Transit Manager with many years of professional transit management experience independently contracts with both agencies.

The Transit Manager contract in Lake County is between the Lake Transit Authority and an independent contractor. The scope of work specifies a part-time contract position with an annual level of effort of 1,200 applied professional hours. The contract Transit Manager is responsible for overseeing the contract with Paratransit Service that provides both operations and maintenance services throughout Lake County. The Transit Manager resides in Visalia, CA and regularly travels to Lake County for Board meetings and other business. Lake Transit operates 38,350 vehicle service hours at an operating cost per vehicle service hour of $63.96.

Due to the large number of vehicle service hours, Lake Transit was not included as a peer to Calaveras Transit.

The organizational structure in Lake County is quite unusual. The Lake County Area Planning Council, the Regional Transportation Planning Agency, is also staffed by a contract management firm. The contract Executive Director also serves as the Executive Director of the Lake Transit Authority, a Joint Powers Authority. She spends 5% of her time as Executive Director. For all intents and purposes, the contract Transit Manager is the one who performs all transit administration functions.

The Lake Transit example works well because the Transit Manager has extensive transit management experience and expertise. He has been a long-time leader in the rural transit industry field and has been on the CalACT Board, the industry association, for many years.

If Calaveras Transit were to find the right Transit Manager with experience equivalent to the Transit Manager in both Lake and Del Norte Counties, it might be possible to duplicate the success of both agencies. The key is finding the right contractor who will have sufficient longevity in Calaveras County on a part-time basis to make this option a viable one. In order to attract the right candidate, a part-time contract in the neighborhood of $60,000-$70,000 would be required.

Form a Joint Powers Authority and Directly Administer, Operate and Maintain Transit Services

Amador Transit was formed through a Joint Powers Agreement between Amador County and its five incorporated cities of Jackson, Sutter Creek, Ione, Plymouth and Amador City. Amador Transit is an independent entity with its own administrative staff, directly hired drivers and directly hired mechanics. The Board of Directors is the same as the Amador County Transportation Commission and board meetings start after the ACTC Board meetings.

According to the recent Performance Audit, Amador Transit "staff consist of 20 permanent employees: General Manager, Maintenance and Facilities Supervisor, Facilities Maintenance Technician, Facilities Maintenance Work, Mechanic, Operations Supervisor, Mobility Manager, Office Manager, two part-time Dispatchers, a Road Supervisor and 13 part-time Drivers." The General Manager is responsible for administration of all operations and personnel and reports to the Amador Transit Board.

Amador Transit had a cost of $107.86 per vehicle service hour in FY 2012/13. It is the median of five peer small rural transit agencies that provide directly operated services. Five of the nine peers utilized for Calaveras Transit were directly provided transit services with the agency directly providing administration, driver, and maintenance wages. On average, the peer cost for five directly provided services was approximately $16 higher than the average of transit agencies with contract operations.

The purpose of this working paper is to develop strategies to reduce the overall cost per vehicle service hour. Due to generally higher costs associated with directly provided services, this institutional option is a strategy not recommended for Calaveras Transit.

Form a Regional Transit Authority among Tuolumne, Calaveras and Amador Counties

In this institutional alternative the three counties and incorporated cities could also form a joint powers authority to operate transit services among the three agencies.

In this alternative there would be a single Transit Manager and the overall transit administrative cost could have the potential of being lower. Calaveras Transit currently operates service into both counties. A multi-county transit authority service has the potential of providing more streamlined inter-county services.

The most successful recent example of a new joint powers authority between more than one county was the formation of the Eastern Sierra Transit Authority (ESTA). The consulting team for this analysis prepared ESTA's first Short Range Transit Plan. The cities of Bishop and Mammoth Lakes and counties of Inyo and Mono are part of the joint powers authority. All four entities strongly believed there were both cost and service level benefits in working together for transit service delivery. ESTA operates local, intercity and inter-regional services. It also provides service on behalf of the Mammoth Ski Area and in the summers operates specialized service to the Devils Postpile. In FY 2012/13, services were operated at a very cost effective $69.12 per vehicle service hour. However, they operate 56,739 vehicle service hours.

One of the pre-requisites for forming such a joint powers authority is that there needs to be compelling benefits for each party to move to this institutional structure. Discussions have not been held with management and elected officials in Amador County and Tuolumne County to determine if there is consensus that such compelling benefits exist. If the CCOG Board determines that there are compelling benefits for Calaveras County in joining such a tri-County transit JPA, then both counties can be formally contacted to proceed with a further inquiry.

During stakeholder interviews with elected officials in Calaveras County and key staff members, there were different opinions expressed about the potential benefits of a tri-County transit authority. Some elected officials expressed the importance of connections to both Tuolumne and Amador counties. The coordination of fare and schedule connections could be improved if there were a joint powers authority. Some elected officials pointed out that the concept of share contracting or shared services were great in concept, but difficult politically. The example of the CalFire dispatch center where both Jamestown and Angels Camp wanted the dispatch center was utilized as practical example of the potential barrier. Another elected official felt that the 3-county JPA was attractive and had the potential of significant economies of scale. One key staff representative felt there were significant potential benefits. Another key staff

representative was adamantly opposed to the idea, feeling that Calaveras County would not only lose local control, but would likely receive the "short end of the stick" in resource allocation. Overall, within Calaveras County there is not currently a consensus that a Tri-County Transit Authority has enough benefits to outweigh the loss of local control over transit operations.

There are very practical barriers to such a potential tri-county joint powers authority. Amador Transit directly provides transit service by hiring its drivers and mechanics. It has just opened a new transit administration and maintenance facility in Sutter Creek. In Tuolumne County, they also have contract operations with a different contractor and an array of specialized services.

Mobility Management Function

Regardless of the institutional option selected, mobility management should become an increasingly important function of mobility service delivery in Calaveras County. The rationale for mobility management is articulated in the 2014 Coordination Plan:

- It is an organizing strategy for initiating coordinated projects to address mobility gaps of the target groups, providing leadership around these projects.
- It becomes a focal point for getting the right partners to the table to secure additional funds or overcome institutional barriers or promote new services.
- It can help to secure funding, including new funding, through which to implement new mobility projects.

A key element of the Coordinated Plan is to ensure that the priorities put forth in the Coordinated Plan are championed by "interested, willing and able" partners. Fortunately for Calaveras County the stakeholders are very interested parties and are active in their efforts to improve mobility options and transportation coordination at every level within and around Calaveras County. Many of these agency representatives have been identified through this Coordinated Plan process.

These partnerships can be developed to provide innovative means of providing access to improved services along the Calaveras Transit "spine," from Valley Springs to Angels Camp where connections are available to Arnold, Stockton, Columbia College, Jackson, West Point and Copperopolis.

Innovative service delivery to the spine was an encouraged outcome at the April 28 Goal Setting Workshop by the Calaveras Board of Supervisor and the City of Angels Camp City Council. Mobility management is a means of providing mobility options in low demand areas such as West Point and Copperopolis where five day a week traditional fixed route service has been very cost ineffective.

Based on the recommendations of the 2014 Coordination Plan, the Calaveras Council of Governments submitted a grant application for Federal Transit Administration (FTA) 5310 for $94,000 for funding a mobility management position. The grant application includes a succinct description of the Mobility Management Position.

> *The project includes the development of a Mobility Management position through the Calaveras Council of Governments (CCOG), as well as the development of a driver reimbursement program. The objective of the Project is to coordinate and expand transportation services provided throughout the region in order to improve overall mobility, with near-term improvements for older adults and persons with disabilities.*
>
> *Currently, there is not a Mobility Management position within the County; therefore, the grant will provide the opportunity to develop the position to provide seamless coordination between human service agencies and service providers. Subsequent to grant award and execution of the Standard Agreement, the CCOG will solicit interested third party contractors through a competitive process. The grant would fund a full year of Mobility Management and related activities performed by the third party contractor. Based on the schedule provided for this program, it is anticipated the project will begin in February of 2016 after a Standard Agreement is executed, and will end by September 30, 2017.*
>
> *A mobility management function within the CCOG would be coordinated with the CCOG's roles in promoting alternative modes of transportation and providing public outreach and education. The Mobility Manager will bring together key community leaders, transportation service providers, planning organizations, and other stakeholder organizations within the region. A critical task will be to build "partnerships" that will serve as the basis for the future "coordination" of essential transit services. The Project will include the development and distribution of information that explains how to utilize the available resources in meeting diverse travel needs. The Mobility Manager will also serve the general public through conceptualization, planning, developing and operating programs that respond to demand and need.*

The grant application has been approved by Caltrans and the Standard Agreement is under way.

The Mobility Manager will be in a unique position of being able to develop and deliver mobility options in low demand areas such as enhancements to the volunteer driver reimbursement program currently operated the Volunteer Center. One important partnership will be with Common Ground, who also received a FTA 5310 grant to purchase two minivans and a small bus, computer software and fund a transportation coordinator position. The prospect of providing a user-side subsidy taxi program could also be explored as part of the family of mobility options promoted by the mobility management position.

At the April 28 Goal Setting Workshop, there was discussion of how Calaveras Transit might handle tourism transportation. The Visitors Bureau in late June 2015 discussed with CCOG staff a recreational/tourism weekend route that would operate Saturdays and Sundays, and maybe Friday evenings to extend existing service on Friday. The desire is for a route to originate in Angels Camp stopping at the hotels and World Mark in Greenhorn Creek, then traveling through historic downtown Angels Camp, then to downtown/Main Street Murphys as the main destination. Other potential stops could be wineries located off Highway 4 between AC and Murphys and the Moaning Cavern in Murphys.

The service would be open to the public and published as a seasonal route. Fares would be charged, potentially at a higher rate than the regular routes. The service could be operated utilizing existing buses with special wrap since it wouldn't be conflicting with existing service hours. This is a very good illustrative example of what a Mobility Management position could do: develop new partnership for needed mobility options, with new funding sources bundled with existing funding sources.

Multi-Modal Function

Walking, bicycling, and ridesharing are all viable mobility options in Calaveras County. As reported in the 2014 Coordination Plan, for trips to and from work in Calaveras County according to the Census, carpools make up 10% of the trips and public transit makes up only 1%. Walking represents 3% of the total and bicycling makes up 1%.

In more urbanized areas, the proliferation of Lyft and Uber points to the growing popularity of the growing economy. In some form, it is likely that some form of similar ridesharing option will become available to Calaveras County residents over the next five years. More traditional carpool and vanpools already have significant market penetration in Calaveras County, and efforts should be made to nurture the further development of ridesharing options. The Mobility Manager position cited above would be a reasonable means for exploring ways for providing both formal and informal ridesharing options.

The Calaveras Council of Governments is responsible for updating bicycle and pedestrian master plans in Calaveras County. The ability to walk or bicycle to and from bus stops and flag stops is extremely important in considering multi-modal approaches to feeder service opportunities to the Calaveras Transit spine.

Summary Conclusion

The current organizational structure and lack of ongoing management consideration on the cost structure of public transportation with Calaveras County as the lead agency provides a cost trend that is detrimental to the mobility needs of Calaveras Transit residents. The cost per vehicle service hour has skyrocketed from $69.85 in FY 2008/09 to $113.26 in FY 2013/14. Despite a number of recommended strategies in September 2014 that should have reduced the cost per vehicle service hour, the budgeted cost per vehicle service hour is $127 in FY 2015/16. This is nine months after the September 2014 recommended strategies to address the cost per vehicle hour escalation.

The primary conclusion is that keeping public transportation with Calaveras County, as a lead agency, will continue to increase costs at a great rate than estimated inflation. There is a need to change the organizational structure to make Calaveras Transit more cost-effective and responsive to mobility market needs in Calaveras County.

Recommendation

Other counties such as Lassen County, Modoc County, and Tuolumne have overall lower operating costs per vehicle service hour with contract operations. Over the next year, it is recommended that other organizational options receive a more detailed evaluation on the prospect for lowering the operating costs per vehicle service hour to below the target of $100 per vehicle service hour. In Chapter 7, the Transit First Financial Scenario provides recommendations on how the cost per vehicle service can be reduced to approximately $92 per vehicle service hour in FY 2017/18. This would require a change in organizational structure.

While several of the options described above have the potential for lowering overall costs, the most viable option would be to form a joint powers authority for a Calaveras Transit Agency. This is an increasing prevalent organizational structure for small rural transit systems. Tuolumne County Transit Agency (TCTA) and Modoc Transportation Agency are peer agencies that have adopted such an institutional structure. Both agencies have formed Joint Powers Agreements among the County and respective cities in their jurisdiction.

Similar to the shared staffing of the Tuolumne County Transit Agency, shared staffing is possible with the Calaveras Council of Governments and the Calaveras Transit Agency. There are a number of reasons why the transition of governance to the Calaveras Transit Agency would benefit the residents of Calaveras County and the existing riders of Calaveras Transit:

- As evidenced by actual results from both Tuolumne County, Modoc County, and Lassen County, the overall cost per vehicle service hour can be significantly lower, resulting in additional service levels with significantly more vehicle service hours supplied for the same budget. This would improve service levels for Calaveras residents and visitors utilize Calaveras Transit.

- Calaveras Council of Governments has strong management leadership that can provide Calaveras Transit the ongoing attention and priority it deserves.
- The mobility management and multi-modal functions of the Calaveras Council of Governments can provide innovative mobility options for the planned feeder service to the Route 1 spine.

A significant amount of CCOG staff time is already dedicated to transit-related activities such as transit planning, coordination, public outreach, and oversight and compliance.

6. Service Plan Alternatives

In Chapter 3, the performance of existing services was evaluated. In Chapter 4, goals and performance standards are recommended. This chapter considers the existing and future transit needs and provides service alternatives that could potentially address the transit needs and achieve the recommended performance standards. The service alternative context is described, and the estimated cost or savings is given based on a cost model utilizing FY 2013/14 data. The next chapter provides three very different financial scenarios that determine which service alternatives are appropriate and feasible. After the details of the financial scenarios are provided in Chapter 7, the recommended service plan is provided in Chapter 8.

At the April 28, 2015 Board Workshop, there was interest in cost effective service delivery alternatives in low demand areas outside the primary service spine between Valley Springs and Columbia College. Potential service delivery models associated with implementation of a mobility management grant are explored. One of the objectives of the mobility management program would be to provide alternative service delivery methods for service to an enhanced spine service on Route 1 between Valley Springs and Angels Camp.

Therefore, this chapter on service alternatives is a resource for considering service changes based on available financial resources. This includes service reductions that could be necessary for the financial scenario where funding levels cannot support existing and recently implemented service extensions to Rancho Calaveras and Burson. It includes service changes that have a neutral effect on vehicle service hours and miles, but could help to build ridership and additional fare revenues. Finally, many of the service improvements advocated by passengers and key stakeholders, such as Saturday service and more consistent service along the spine between Valley Springs and Columbia College, will require additional service levels and would require additional financial resources.

Therefore, the working paper on service alternatives is divided into three main sections:

I. Service Reductions or Replacement with Alternative Service Delivery

II. Service Hour and Service Mile Neutral Actions that Improve Efficiency

III. Service Expansions

The focus of the service alternatives working paper is on general public transit services available to all residents of Calaveras County. The Coordinated Public Transit-Human Services Transportation Plan included several mobility management strategies targeted at older adults and persons with disabilities. Such services are supplemental to general public transit services.

I. Service Reductions/Replacement

Service Performance in Low Demand Areas

Calaveras Transit is operating service five days a week to low transit demand areas including Mountain Ranch-West Point, Copperopolis, and between Valley Springs and Rancho Calaveras. Chapter 3 reported very poor performance on Routes 2 and 5 in FY 2012/13 and FY 2013/14. According to the mid-year FY 2014/15 quarterly report (where the operating costs are potentially understated), the following was reported on performance on Routes 2 and 5:

- Route 2 had a cost per passenger trip of $76.28, 1.41 passengers per vehicle service hour, and farebox recovery ratio of 2.08%. Performance declined substantially from the previous comparable mid-year report in FY 2013/14.
- Route 5 averaged just 8 passengers per day, the productivity was 3.94 passengers per vehicle service hour, the cost per passenger was $27.24, and the farebox recovery ratio was 5.66%.

Comprehensive data is not available on Rancho Calaveras to Valley Springs, but ridership volumes were quite low when the April 2014 passenger survey was conducted. However, according to recent data collection by Paratransit Services in March 2015, the ridership between Rancho Calaveras and Valley Springs has improved substantially to about 10 daily boardings.

The current schedules for Routes 2 and 5 are not conducive to being successful. According to key stakeholders, the existing schedules are the result of previous service reductions and now have one early morning round trip and one early evening round trip five days a week. There is an additional trip midday on Route 2 but only as far as Railroad Flat Rd.

On Route 5, based on the April 2014 passenger survey, there were a couple of passengers on Route 5 at the 6:14 am run that connected with Route 4 to Columbia College. However, a Columbia College student needs to wait until 6:00 pm for the return trip.

In the morning, there is also a 5:53 am run from SR 49 & Demarest to Copperopolis. This is a "deadhead" run that is in revenue service on the schedule. Nobody ever utilizes that particular run according to a key stakeholder.

Service Alternatives for Routes 2 and 5

There are an array of alternatives that would reduce overall Calaveras Transit costs, improve overall systemwide productivity and increase farebox recovery ratios:

1. Eliminate Route 2 and/or 5 based on performance statistics not meeting minimum standards.

2. Improve service levels and operate improved Route 2 and 5 fixed route service two days a week instead of five days a week.
3. Replace the fixed route service five days a week with general public demand response service two days a week with a three-hour window in the morning and a three hour window in the afternoon.
4. Replace the fixed route service five days a week with checkpoint Dial-a-Ride service two days a week.
5. Supplement options #2, 3 or 4 with user-side taxi service to eligible individuals. Options for how this might work are provided.
6. Provide a volunteer driver subsidy program for low demand areas.

Each of these alternatives is discussed in more detail below.

1. Eliminate Routes 2 and 5

In this alternative, both Routes 2 and 5 would be discontinued based on the declining performance statistics since FY 2012/13. This alternative would not provide any mobility alternatives in the communities of Copperopolis, Mountain Ranch, and West Point. Elimination of Route 2 would reduce Calaveras Transit costs by $87,500 and the elimination of Route 5 would reduce Calaveras Transit costs by $40,749. The marginal cost savings of eliminating both Routes 2 and 5 fixed route services is $128,627. This is the marginal cost savings and assumes that County administrative costs and Paratransit Services fixed costs for operating Calaveras Transit are not reduced.

This is not a viable alternative as elected officials at the April 28th 2015 Board Workshop clearly stated that there was a need to provide some level of mobility options to all areas of Calaveras County. This would include increased coordination with human and social service agencies in providing options.

2. Improve Service Levels but Operate Routes 2 and 5 two days a week

In this alternative, service would be operated two days a week with a single bus operating three round trips daily during the midday along the existing Routes 2 and 5 alignments. The bus would make three round trips between 9 am and 3 pm on the existing routes. This would provide convenient service with a choice of three trips inbound and three trips outbound to make medical appointments, run errands, shop or conduct other business and return back to Mountain Ranch, West Point, or Copperopolis within a reasonable time frame. In order to avoid transfers, a sub-alternative would have the bus circulate in San Andreas for Route 2 and in Copperopolis on Route 5.

On Route 5, service would operate on Mondays and Wednesdays starting at approximately 9 am from Copperopolis and would meet the 9:55 am Route 4 run to Columbia College and the 9:55

am and 11:15 am Route 1 northbound runs to the Government Center. The schedules would be designed to meet the Route 1 southbound trip arriving at SR 49 and Demarest at 1:09 pm and 2:24 pm. This schedule would enable Copperopolis residents to make shopping or social service agency trips to both Angels Camp and San Andreas with a reasonable trip back to Copperopolis during the midday. The schedule would not be conducive for Columbia College students since the service is only operating two days week.

On Route 2, service would operate on Tuesdays and Thursdays starting at approximately 9 am and connect with the Route 1 buses to Angels Camp at 9:35 am and 10:55 am. Passengers heading to Valley Springs would have to wait for the 10:15 am and 11:35 am Route 1 northbound buses. The Route 1 northbound bus arrives from Angels Camp to the Government Center during the midday at 10:15 am, 11:35 am, 1:30 pm and 2:45 pm. The schedule would be written such that the last bus to West Point would not depart until after the 2:45 pm bus from Angel Camp arrives. The bus would only operate the last run to West Point if there were a passenger on board from San Andreas returning to Mountain Ranch or West Point.

The proposed midday schedule would enable West Point and Mountain Ranch residents to schedule social service agency and shopping trips to both San Andreas and Angels Camp with a reasonable early afternoon return trip. It would not serve the after school student trips back to West Point that Route 2 currently serves.

The primary benefit of this alternative could be increased ridership, as it provides convenient midday service two days a week. This alternative would save Calaveras Transit approximately $26,000 when compared to operating existing Routes 2 and 5 five days a week.

A potential additional alternative if future ridership demand warrants would be to operate the service three days a week. However, that would require additional financial resources.

3. Provide General Public Dial-a-Ride Service Two Days a Week

In this alternative, general public Dial-a-Ride service would replace fixed route service in the areas currently served by Routes 2 and 5 two days a week between 9 am and 3 pm. The reason service is limited to two days a week is to reduce vehicle service hours and miles compared to the existing five day a week fixed route service. This would better match existing demand levels. Dial-A-Ride service would be available for pick-ups and drop-offs with the first pick-up at 9 am and the last pick-up at 2:30 pm. Service would be provided Wednesdays and Fridays in the Copperopolis community and Tuesdays and Thursdays in the Mountain Ranch and West Point communities. A sub-alternative would be to provide Dial-a-Ride for after school sports trips from Mountain Oaks Schools when school is in session.

There are three primary functions of the Dial-a-Ride service as proposed. The first is for trips within the communities – for example, origins and destinations within Copperopolis. The second primary function would be to mimic the function of the current fixed route. Route 2

provides service from/to West Point and Mountain Ranch to/from San Andreas. In San Andreas, passengers can conduct their business or transfer to Route 1 in both directions, with transfers to and from existing Routes 1 and 4 being the third function.

The general public Dial-a-Ride service to and from Copperopolis would enable riders to conduct business in the City of Angels Camp or to transfer to Route 1 northbound to San Andreas and Valley Springs, Route 4 to Columbia College, or connections to Tuolumne Transit. The Copperopolis Dial-a-Ride boundary would essentially be the Copperopolis community and all of Angels Camp. The Dial-a-Ride boundary to West Point would be accessible via roads that feed into the existing route 2, within a one-mile radius as a general guideline. For general public Dial-a-Ride service along the San Andreas-Mountain Ranch and West Point corridor, service would be provided with an accessible minivan. Depending on passenger volumes, utilization of an accessible minivan could also be possible for the general public Dial-a-Ride service to Copperopolis.

Dial-a-Ride reservations would need to be made the day before in order to guarantee a trip. For example, for a trip to or from Copperopolis to Angels Camp on Tuesday, the reservation would need to be made on Monday. Same-day trip reservations would only be on a space available basis.

Fares for Dial-a-Ride service are typically twice the general public fare for fixed routes. Therefore, the fares would typically be $4.00 for one-way travel for the general public and $2.00 for discounted fares. However, since the Dial-a-Ride service is limited to two days a week, the CCOG Board would have the option of retaining the $2.00 fare for the General Public and $1.00 for discounted fares. A transfer policy would need to be established.

The Dial-a-Ride service would be open and available to the general public. This requires different licensing for drivers, but Paratransit Services is very experienced with this type of service and licensing requirements in other communities they serve.

The service would only be operated when there is an advanced reservation for a pick up and drop off.

The demand response service two days a week in Copperopolis and Mountain Ranch/West Point corridor would provide a savings of $67,000 compared to the status quo for Routes 2 and 5. This assumes there would be no increased dispatch costs since dispatchers currently provide coverage for flag stops and flex stops.

4. Provide Checkpoint Dial-a-Ride Service Two Days a Week

Instead of operating on a fixed route and fixed schedule with flexible stops for older adults and persons with disabilities under the status quo, in this alternative the bus would serve fixed scheduled stops at designated times and provide Dial-a-Ride service for the general public at

other times between 8:45 am and 3 pm two days a week.[1] An accessible minivan would be utilized in service and would be available within one mile of the existing Route 2 for the general public, with the service area well beyond the existing stops in Copperopolis. Figure 6-1 provides an illustration of the geography that the checkpoint Dial-a-Ride service could serve for the Route 2 and 5 corridors.

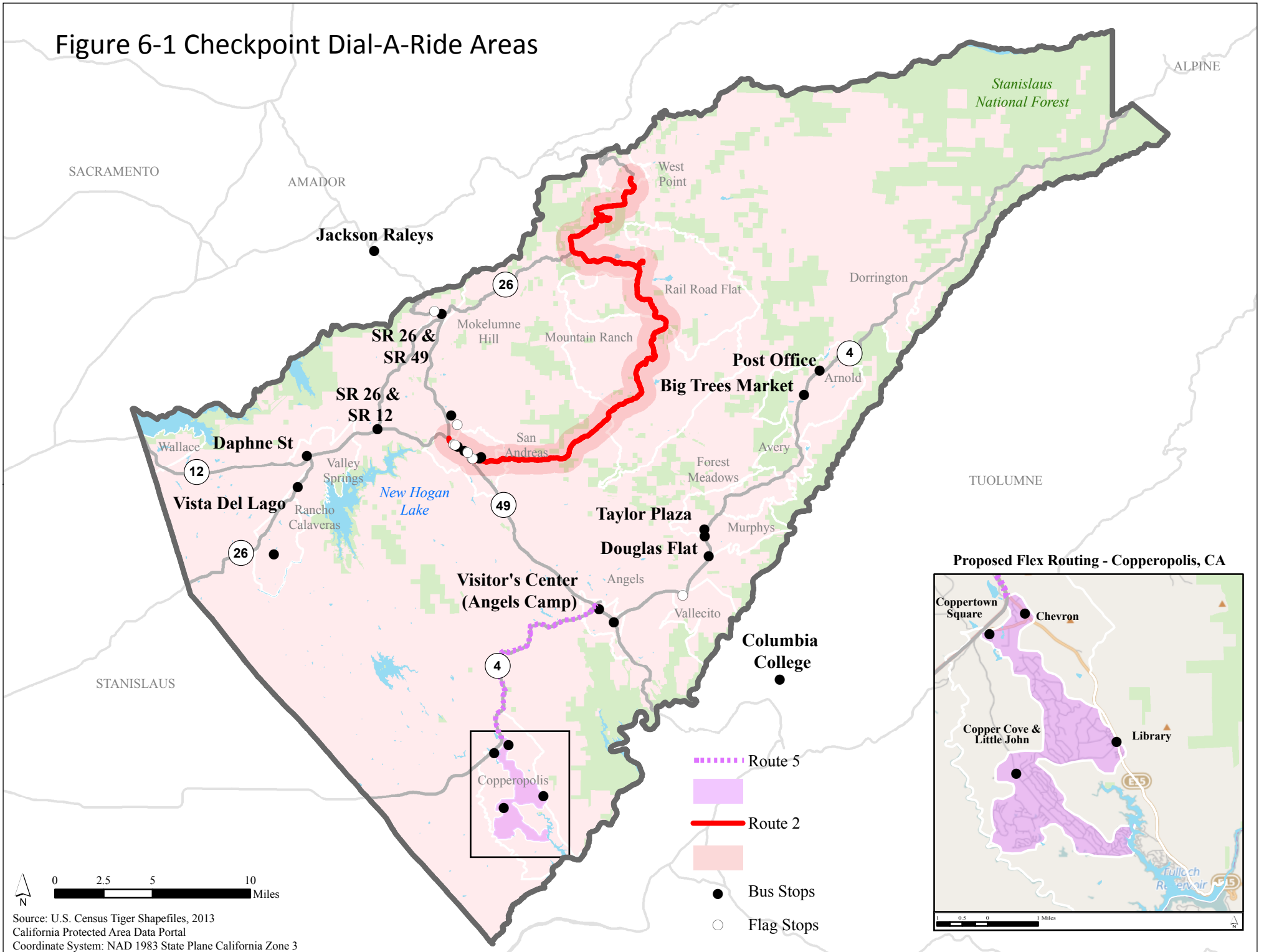
The following is a description of how the checkpoint Dial-a-Ride service would operate between Copperopolis and Angels Camp on a sample Tuesday. The Dial-a-Ride bus would pick up passengers in Copperopolis at 8:45 am, make a scheduled stop at O'Brynes Ferry Rd. at 9:00 am, pick up a passenger at home near the Copper Library at 9:10 am, wait at the Copper Library for a scheduled stop (for passengers without reservations) at 9:15 am, make another scheduled stop at Copper Cove and Little John Rd. at 9:22 am, pick up another passenger at home and then proceed for a fourth scheduled stop at Copper Town Square at 9:34 am before proceeding to SR 49 and Demarest, arriving at 9:50 am. A couple of the passengers choose to transfer to the Route 1 northbound bus at 9:55 am. It also picks up passengers arriving from Route 1 southbound at 9:54 am who want a Dial-a-Ride drop off in Angels Camp or to continue to Copperopolis. The other passengers from Copperopolis choose to be dropped off at another destination in Angels Camp.

The bus then has reservations for drop-offs and pick-ups within the Copperopolis community between 10:30 and 11:30 am. After the driver has a lunch break, scheduled stops are made at the existing Route 5 stops and the bus heads back to Angels Camp, arriving to Demarest and 49 at 1:05 pm where it drops off passengers wanting to take the 1:10 pm Route 1 northbound bus to the San Andreas Government Center. It would also pick up passengers arriving on the southbound Route 1 bus at 1:09 pm. The Dial-a-Ride bus would drop off passengers at destinations in Angels Camp and pick up anyone for a trip to Copperopolis. The buses would then drop off passengers at the four scheduled existing stops in Copperopolis and drop off and pick up passengers in the Copperopolis area.

The bus would then return to Angels Camp arriving at 49 and Demarest at approximately 2:45 pm., picking up waiting passengers who arrived on Route 1 southbound from San Andreas at 2:24 pm. The bus would drop off and pick up passengers in Angels Camp with a destination in Copperopolis, return to Copperopolis on its last run serving the existing scheduled stops and other Dial-a-Ride drop off locations with advanced reservations within Copperopolis, and would terminate service after dropping off the last passenger at approximately 3:45 pm.

[1] The technical term for this service type is checkpoint Dial-a-Ride. It would likely be branded with another name if this option was selected.

Figure 6-1 Checkpoint Dial-A-Ride Areas



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System: NAD 1983 State Plane California Zone 3

The advantage of the checkpoint Dial-a-Ride service is that passengers can either show up at the designated bus stop the same day for service without a reservation, or make an advanced reservation the previous day for a Dial-a-Ride trip. The checkpoint Dial-a-Ride bus can be scheduled to pick up and drop off passengers at their home, or drop them off at their destination within the designated checkpoint Dial-a-Ride service area.

The checkpoint Dial-a-Ride would have less cost savings than the demand response service because all runs need to be operated to provide the checkpoint service as designated stops. The checkpoint Dial-a-Ride option operated two days a week would have a cost savings of $39,000 compared to operating the status quo routes 2 and 5.

A sub-alternative would be to extend service such that the bus would pick up passengers meeting the 4:34 pm Route 1 southbound bus from San Andreas. This would enable more trips to and from San Andreas, and would likely be cost neutral compared to the status quo.

Service Alternatives for Rancho Calaveras and Burson

Comprehensive data on productivity between Rancho Calaveras and Valley Springs is not available. The present Route 1 schedule has five trips from Rancho Calaveras to Angels Camp and five trips from Angels Camp to Rancho Calaveras. In April 2014, in a one day sample of ridership collected on board the buses, there was just one boarding for the five round trips to Rancho Calaveras. In a sample of March 2015 ridership (a sample of 1,657 boardings on all routes over about a week), there were 10 daily boardings. If this small sample holds true, then the service between Valley Springs meets the minimum performance standard of five passengers per hour. Longer term data collection and additional marketing efforts is needed to determine if the Rancho Calaveras to Valley Springs segment should be continued as 5 passengers per vehicle service hours is the minimum standard recommended for a fixed route feeder route.

The service extension to Burson, according to the 2014/15 unmet needs report and calculated from Burson resident survey responses, was calculated by the Calaveras County Department of Public Works to have 4,435 annual transit trips generated from Burson. Service implementation will test the market and the service needs to be monitored on a regular basis to determine the actual annual ridership generation. However, based on experience elsewhere, Burson is also likely in the category of low demand service area.

An on-demand service to Burson was implemented in late May 2015 that requires passengers to make reservations two hours in advance of the trip to receive service. The service is too new to determine how ridership is being generated. Since this is a demand response service, in order for the Burson service to continue, it should average 3 passengers per vehicle service hour.

The alternatives presented below are a contingency in case the projected ridership and farebox recovery goals are not achieved for both Rancho Calaveras and Burson. It generally takes at least one year to generate sufficient ridership on a new route segment as evidenced by the recent progress made on the route segment between Rancho Calaveras and Valley Springs.

The following are alternative actions that the County Board of Supervisors can take if Rancho Calaveras and the Burson route segments do not meet minimum performance standards. The actions would reduce Calaveras Transit costs, improve productivity of Route 1, and improve the overall farebox recovery ratio.

The options are similar to the action proposed for Routes 2 and 5. They are presented separately as the CCOG Board and the Calaveras Board of Supervisors should consider them separately.

5. Eliminate Ranchos Calaveras and Burson Runs

In this alternative the five runs to and from SR 26 and Garner Pl. are eliminated if they do not meet minimum performance standards in the future. The marginal cost savings for eliminating the Rancho Calaveras runs would be approximately $50,414 annually, again assuming no change to contractor fixed costs.

It is soon to tell about the Burson service, as the service was recently implemented. If the demand response service does not meet minimum performance standard of three passengers per vehicle service hour after one year in service, then Calaveras Transit should consider eliminating the Burson service.

Based on input from the April 28 2015 Board Workshop, eliminating service to areas in Calaveras County is not a viable alternative, as elected officials would like to see some level of cost-effective mobility options provided throughout Calaveras County.

6. Replace Rancho Calaveras Runs with General Public Dial-a-Ride Two Days a Week

In this alternative, a Dial-a-Ride bus would operate between 10 am and 4 pm two days a week in the greater Rancho Calaveras area. The Dial-a-Ride bus would be scheduled such that it would meet the 10:35 am, 12:30 pm, and 1:45 pm Route 1 southbound runs from Daphne Street to Angels Camp. It would meet the 10:35 am, 1:45 pm and 3:20 pm Route 1 northbound runs from Angels Camp. Passengers transferring to and from Route 1 with advanced reservations made by the previous day would have first priority. Trips within Rancho Calaveras made with advanced reservations would be a second priority and would be provided when feeder service to and from Rancho Calaveras is not operated. Same day reservations would be accommodated on a space available basis. Service would be operated on Tuesdays and Thursdays. This alternative would provide a $19,000 annual savings compared to the status quo.

7. Replace Rancho Calaveras Runs with On-Demand Service

In this alternative, the segment between Valley Springs and Rancho Calaveras would be replaced with an on-demand service, similar to what is being operated between Valley Springs and Burson. Riders would need to call two hours in advance to be picked up in Rancho Calaveras at a designated stop or to return from Valley Springs to Rancho Calaveras.

Alternative Service Delivery Methods

The following are meant to supplement public transportation services. They could be important complementary service if services are reduced to two days a week in the Copperopolis and West Point areas.

8. Volunteer Driver Program

The 2014 Calaveras County Public –Transit Human Services Coordination Plan chronicled the existing volunteer driver program managed by the Volunteer Center:

> The Volunteer Center sponsors a volunteer transportation program for Calaveras County residents. For residents in need of rides to medical appointments, the grocery store, post office, etc., volunteers are reimbursed for mileage. Reimbursement is funded through private donations and Volunteer Center general funds. Approximately 350 individuals are registered to receive transportation through the program. The Center provides mostly medical-related trips through the use of volunteer drivers using private vehicles. The center is delivering approximately 1,500 annual trips.
>
> The Volunteer center has also organized a Carpool-to-Dialysis program. Efforts are made by clinic and Volunteer Center staff to coordinate appointments and organize carpools. Additionally, in response to potential public emergencies, the Volunteer Center is working with communities to design and replicate a disaster emergency preparedness plan with local citizens trained to provide aid to their neighbors prior to the arrival of Red Cross and/or County services. This plan includes evacuation transportation.

The Coordinated Plan recommended the following strategy to address mobility in low demand areas:

> "Consider service alternatives in areas with limited or no existing service such as Volunteer Driver, Trip Trans, and alternative vehicles."

The Calaveras Council of Government was recently awarded a Mobility Management grant to implement several strategies to implement the Coordinated Plan. Part of the budget and work scope for the Mobility Manager will be to "develop driver reimbursement programs to support and expand upon existing volunteer driver programs." A deliverable of the grant is "Driver Reimbursement Program Implementation Plan."

In many rural areas around the United States organized driver volunteer driver programs have been implemented to provide mobility options for residents living in areas without good public transportation services.

9. User-Side Subsidy Taxi Program

A user-side subsidy program would involve a contract between Calaveras Transit and one or more local taxi companies. In this service delivery model, the eligible passenger is provided a voucher that provides a discount for a taxi trip that the person needs to make. A 50% discount is very typical such that the passenger pays for 50% of the cost and Calaveras Transit pays 50% of the cost. The vouchers typically limit how much in public subsidy a person can utilize in a particular month or quarter, such as $75 per month. Some programs are open to the general public and others are only available to seniors and persons with disabilities. The ideal user-side subsidy program would be to provide a taxi trip as a feeder service to from the spine route between Valley Springs and Angels Camp. It would be ideal in low demand areas where a traditional fixed route or Dial-a-Ride service cannot meet minimum performance standards.

10. Common Ground Senior Services Silver Streak Transport –

Common Ground Senior Services, Inc. is a private non-profit agency formed in 2000 in an effort to assist vulnerable individuals with living independently. Services include, but are not limited to, providing nutritional needs, home modification projects, information/referrals, and transportation. Common Ground is the provider of the home-delivered Meals on Wheels program, and provides dinning at congregate and restaurant sites. Through the home modification program, the agency installs grab bars, railings, and other household items necessary to keep vulnerable populations safe within their homes. The agency works in collaboration with other similarly interested groups who are engaged in complimentary activities. The agency provides opportunities for individuals to receive services and participate in activities that will enhance their dignity, and encourage their continued involvement in the community.

Common Ground Senior Services now offers transportation through the Silver Streak Transportation Program to older adults, persons with disabilities, veterans, and low-income individuals for non-emergency medical, dental, and behavioral health appointments, in addition to grocery shopping and pharmacy trips. The service will be demand-responsive and will supplement and support fixed-route transit services offered by Calaveras Transit. Transportation services are for those who are not physically or mentally capable of utilizing traditional means of transportation such as public transit. Those that are income eligible will be accommodated for all types of medical assistance transportation. Priority will be given to those needing wheelchair accessibility over those needing to pick up prescriptions. The Program is donation-based.

Currently, the Silver Streak Transportation Program is limited to in-county transports; however, once funding is secured the transportation options will include out-of-county medical appointments, pharmacy and dental visits. This will also include medical appointment transports from Calaveras County to both Amador and Tuolumne Counties. Additionally, once a month out-of-county group medical transports will be scheduled for out-of-county VA Hospitals and Doctor's Hospital in Modesto. Based on request, additional once-a-month group trips could also be scheduled.

Common Ground was recently awarded in 2015 a FTA Section 5310 grant for both capital and operating to support the Silver Streak Transport program in Calaveras County. The grant will fund the acquisition of two vans, one small bus, and computer and software equipment. The grant will also fund a transportation coordinator position for two years.

II. Cost Neutral Actions

1. Combine Route 1 and Route 4 Segments to Columbia College into a Single Route

Service between Valley Springs and Angels Camp on Route 1, continuing to Columbia College on Route 4, is the spine of the Calaveras Transit system. Based on the on-board survey of passengers only 15.7% do not have either an origin or destination on the spine. The majority of trips, 50.2%, have both an origin and destination along this spine. The remaining one-third of Calaveras Transit trips has either an origin or destination along the spine.

Columbia College is the primary trip attractor of the Calaveras Transit system with 27% of all transit trips going to or from Columbia College. For origins and destinations to Columbia College, 62% come from Route 1 communities.

There is heavy utilization of flag stops on the Route 1 portion of the spine service. During the on-board survey there were 109 boardings and 85 alightings on Route 1. 24% of the boardings were at flag stops and 60% of the alightings were at flag stops.

Only 60% of Route 1 trips were considered to be on-time, up to five minutes late at a timepoint. Schedule adherence is good for the most of the day, but degrades during the afternoon.

There are several issues with the existing schedule along the spine:

- Passengers and drivers alike do not relate to the route numbers. Both know which runs operate along the spine and in practice most think of it as a single route. The driver schedules (commonly called driver paddles) provide direct service in a one seat ride from Valley Springs to Angels Camp where the Route 1 bus becomes the Route 4 bus to Columbia College. Regular passengers only know this as the bus that goes to Columbia College. In riding the buses in April 2014, this was also true of a Calaveras Transit driver.
- There is significant overcrowding on the last bus that leaves Columbia College at 5:20 pm. The bus is often at crush loads when Columbia College is in session. The bus before this departs at Columbia College at 1:49 pm.
- There is a lack of midday service from Columbia College to San Andreas. The 11:05 am bus departs Columbia College and arrives at the SR 49 and Demarest stop at 11:40 am. The Route 1 bus to San Andreas does not depart until 1:10 pm. This discourages use of the service from Columbia College during the midday.
- In the focus group in San Andreas and in stakeholder interviews, both complained about the lack of consistent service between Angels Camp and Rancho Calaveras. This is in part because in the northbound direction between Angels Camp and Rancho Calaveras, the 8:25 am, 1:10 pm and 7:35 pm runs terminate at the Government Center, four runs

terminate at SR 26 & 12, three runs operate from Angels Camp to Rancho Calaveras, and three runs operate from the Government Center to Rancho Calaveras. From the passenger perspective, they would like a more consistent schedule serving the same stops. The existing schedule is confusing and difficult to remember.

- In the opposite direction between Rancho Calaveras and Angels Camp, the service between SR 26 and Garner Pl. in Rancho Calaveras and Daphne St. in Valley Springs is quite consistent between 6:15 am and 5:15 pm when all runs service the San Andreas Post Office, Government Center, Courthouse and 49 & Demarest. It is recognized that there is less demand from Rancho Calaveras, and there should be fewer runs that serve that area.

Overall, from the customer perspective, the objective would be to have more consistent service on a single route in both directions between Valley Springs and Columbia College.

This cost neutral action is to have Route 1 extend to Columbia College, replacing the Route 4 segment between Angels Camp and Columbia College. In effect, this is how drivers operate the bus, and the action simply reflects the way service is operated. The communication in the passenger guide and on the Calaveras Transit website would reflect how the service is actually operated along a single route to Columbia College. The passenger guide would be changed to reflect the route and schedule that is actually operated by Calaveras Transit drivers. For new passengers to the system, it will make it a more easily understood system.

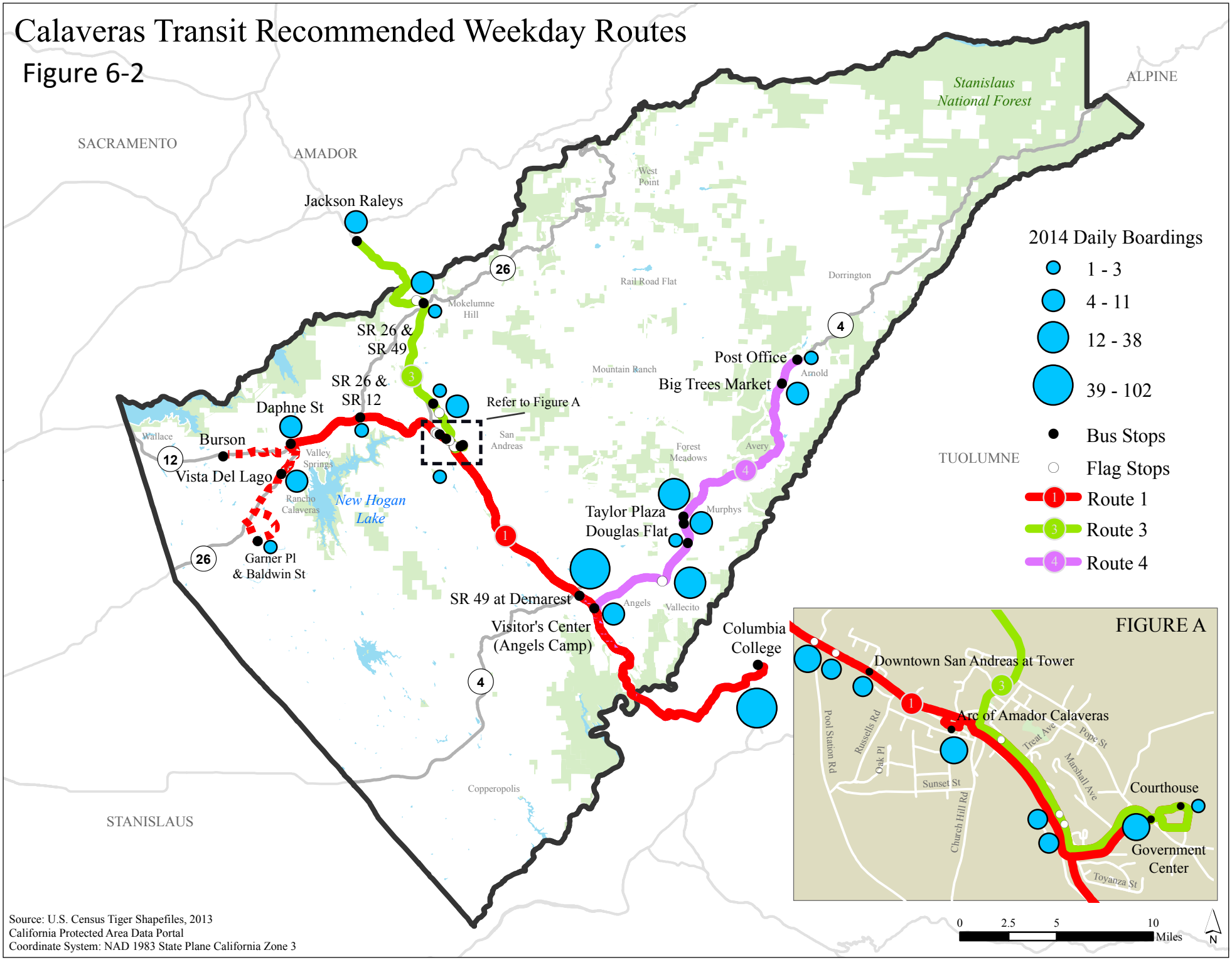
It would make Route 4 more similar to existing Routes 2, 3, and 5, routes that feed into the mainline Route 1. Therefore Route 3 would be between Arnold and Angels Camp. Figure 6-2 is an illustrative map of this alternative.

Figure 6-3 is how the schedule would look with the consolidated Route 1 services from Rancho Calaveras and Burson to Columbia College. While this layout would need to be enhanced graphically and should be viewed at a larger size, it demonstrates the basic concept of a single schedule for the entire core route.

The change will help to build ridership without additions to the operating budget.

Calaveras Transit Recommended Weekday Routes

Figure 6-2



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System: NAD 1983 State Plane California Zone 3

Figure 6-3 Illustrative Route 1 Schedule

	Core Route - From Valley Springs/Burson to Angles Camp/Columbia College											
Burson	SR12 / Burson Rd *OD					10:42 AM		2:02 PM				5:22 PM
Valley Springs	SR26 & Garner Place	—	5:49 AM	—	8:44 AM	—	12:24 PM	—	3:44 PM	—	6:59 PM	—
	Garner Place & Baldwin Street	—	5:52 AM	—	8:47 AM	—	12:27 PM	—	3:47 PM	—	7:02 PM	—
	Baldwin Street & Hartvickson Lane	—	5:55 AM	—	8:50 AM	—	12:30 PM	—	3:50 PM	—	7:05 PM	—
	Vista Del Lago	—	6:00 AM	—	8:55 AM	—	12:35 PM	—	3:55 PM	—	7:10 PM	—
	Daphne Street (Depart to San Andreas)	—	6:15 AM	7:40 AM	9:00 AM	10:50 AM	12:40 PM	2:10 PM	4:05 PM	—	7:15 PM	5:30 PM
San Andreas	San Andreas Post Office	—	6:30 AM	7:55 AM	9:15 AM	11:05 AM	12:55 PM	2:25 PM	4:20 PM	—	7:30 PM	5:45 PM
	Gold Strike Group Home & ARC	—	—	—	9:20 AM	—	—	—	—	—	—	—
	Government Center (Arrive)	—	6:35 AM	8:00 AM	9:35 AM	11:10 AM	1:00 PM	2:30 PM	4:25 PM	—	7:35 PM	5:50 PM
	ZONE CHANGE		-		-	-		-	-			-
	Government Center (Depart to Angels Camp)	5:10 AM	6:35 AM	8:15 AM	9:35 AM	11:10 AM	1:00 PM	2:30 PM	4:25 PM	—	—	5:50 PM
	Courthouse	5:11 AM	6:36 AM	8:16 AM	9:36 AM	11:11 AM	1:01 PM	2:31 PM	4:26 PM	—	—	5:51 PM
Angels Camp	SR49 / Demarest Transfer Stop (Arrive)	5:29 AM	6:54 AM	8:34 AM	9:54 AM	11:30 AM	1:20 PM	2:50 PM	4:44 PM	—	—	6:10 PM
	ZONE CHANGE											
	SR 49 / Demarest (Depart to College)	—	7:00 AM	—	9:55 AM	—	1:20 PM	—	4:45 PM	—	—	—
	Visitors Center	—	7:02 AM	—	9:57 AM	—	1:22 PM	—	4:47 PM	—	—	—
College	Columbia College (Arrive)	—	7:35 AM	—	10:30 AM	—	1:55 PM	—	5:20 PM	—	—	—
	Core Route - From Columbia College/Angels Camp to San Andreas/Val -											
College	Columbia College (Depart to Angels Camp)	—	—	—	7:55 AM	—	11:00 AM	—	2:05 PM	—	5:30 PM	—
Angels Camp	SR 49 / Demarest Transfer Stop (Arrive)	—	—	—	8:30 AM	—	11:35 AM	—	2:40 PM	—	6:05 PM	—
	ZONE CHANGE											
	SR49 / Demarest Transfer Stop (Depart)	—	7:00 AM	—	8:35 AM	9:55 AM	11:35 AM	1:20 PM	2:40 PM	4:15 PM	6:10 PM	7:40 PM
San Andreas	Government Center (Arrive)	—	7:20 AM	—	8:55 AM	10:15 AM	11:55 AM	1:35 PM	3:00 PM	4:35 PM	6:30 PM	8:00 PM
	ZONE CHANGE											
	Government Center (Depart to Valley Springs)	5:20 AM	7:20 AM	8:15 AM	—	10:15 AM	11:55 AM	1:35 PM	3:00 PM	4:55 PM	6:30 PM	—
	Courthouse	5:21 AM	7:21 AM	8:16 AM	—	10:16 AM	11:56 AM	1:36 PM	3:04 PM	4:56 PM	6:31 PM	—
	ARC & Gold Strike Group Home	—	—	—	—	—	—	—	3:05 PM	—	—	—
	Downtown San Andreas Credit Union	5:25 AM	7:25 AM	8:20 AM	—	10:20 AM	12:00 PM	1:40 PM	3:20 PM	5:00 PM	6:35 PM	—
Valley Springs	Daphne Street	5:40 AM	7:40 AM	8:35 AM	—	10:35 AM	12:15 PM	1:55 PM	3:35 PM	5:15 PM	6:50 PM	—
	SR26 & Garner Place	5:49 AM	—	8:44 AM	—		12:24 PM	—	3:44 PM	—	6:59 PM	—
Burson	SR12 / Burson Rd *OD	—	—	—	—	10:42 AM	—	2:02 PM	—	5:22 PM	—	—

— No Service to this Location on this trip

Burson Service is On-Demand. You must call to request a pickup.

2. Replace Rancho Calaveras with Checkpoint Dial-a-Ride Service Two Days a Week

In this alternative, checkpoint Dial-a-Ride would be operated between Ranchos Calaveras and Valley Springs on Tuesdays and Thursdays. The checkpoint Dial-a-Ride service would operate in two different modes to provide passenger flexibility in making a spontaneous trip the same day and to provide Dial-a-Ride service from a broader area of Rancho Calaveras. To illustrate how this service would operate, passengers could make reservations to be picked up at their homes in Ranchos Calaveras starting at 7:30 am. The bus would then stop at 8:24 am at SR 26 and Garner, the same as the existing schedule. The bus would then operate as a fixed route bus making the three other scheduled stops before arriving at Daphne St. at 8:50 am. The Dial-a-Ride bus would meet the Route 1 fixed route bus that would depart Daphne St. southbound to San Andreas and Angels Camp at 8:55 am, allowing passengers to transfer from the checkpoint Dial-a-Ride bus to the fixed route bus. Other passengers on board the bus could be dropped off at any destination in Valley Springs.

The checkpoint Dial-a-Ride bus would then pick up and drop off passengers with advanced reservations anywhere within the Valley Springs and Rancho Calaveras area. However, it would only take reservations until it would meet the 10:35 am Route 1 southbound bus at Daphne St. It would transfer passengers picked up in Rancho Calaveras or Valley Springs that want to transfer to the 10:35 am southbound bus to San Andreas and Angels Camp. The checkpoint Dial-a-Ride bus also accepts transfers from the Route 1 northbound passenger with a final destination not within walking distance of a Valley Springs stop or Rancho Calaveras destination.

The bus would then pick up and drop off passengers with advanced reservations for Dial-a-Ride service in the Rancho Calaveras area. The bus would make a scheduled stop at 12:07 pm at SR 26 and Garner Place, making the four other scheduled stops on the existing Route 1, arriving at Daphne St. at 12:30 pm and transferring passengers to the Route 1 northbound bus that departs from Daphne St. at 12:30 pm.

The checkpoint Dial-a-Ride bus would then pick up passengers at SR 26 and 12, and continue in Dial-a-Ride mode with service origins and destinations within Valley Springs and Rancho Calaveras until meeting the Route 1 northbound bus at SR 26 and SR 12 at 3:20 pm. The last time the checkpoint Dial-a-Ride bus would pick up passengers from Route 1 northbound would be at 3:20 pm, dropping off passengers at five scheduled stops arriving at Baldwin & Hartvickson at 3:40 pm, then dropping off passengers at other locations in Rancho Calaveras based on advanced reservations.

This schedule is illustrative and more detailed schedules would be developed if this alternative were selected for further consideration. It would be cost neutral compared to the status quo.

3. Add Midday Run on Route 1 from Angels Camp to San Andreas

This cost neutral action would add an additional run between Angels Camp and San Andreas at approximately 11:45 am.

To make this action cost neutral, the 5:20 am run from the Government Center to Baldwin and Hartvickson Ln. would be eliminated. This is essentially a "deadhead" run that is in revenue service to get to Rancho Calaveras. When operating in revenue service, it brings down passenger productivity and lowers the farebox recovery ratio. The contract with Paratransit Services is for vehicle service hours operated, and this run had no passengers during the April 2014 survey.

4. Provide More Consistency on Route 1

As described above, the schedule in the southbound direction on Route 1 works quite well. This alternative would make cost neutral schedule changes to match the northbound schedule with the southbound schedule to provide easily understood two-way trips.

There are some simple steps that would add more consistency to Route 1 while making the service improvements cost neutral:

1. Continue the 8:25 am and 1:10 pm runs to SR 26 and SR 12, combining with the run starting from the Government Center at 1:25 pm (minor scheduling adjustment required).

2. Eliminate the 7:35 pm run from SR 49 and Demarest to the Government Center.

3. Eliminate the 6:52 pm run from SR 26 to the Government Center if route monitoring finds this run averages 3 or less passenger boardings per day.

III. Service Expansion Alternatives

These service alternatives would require additional financial resources.

1. Provide Consistent 90 Minute Frequencies on Route 1

This alternative increases Route 1 service to a consistent every 90 minutes between Valley Springs and Angels Camp.

Right now, the schedule intervals for Route 1 vary from 1 hour and 15 minutes to two hours southbound between Daphne St. in Valley Springs and SR 49 & Demarest in Angels Camp. Additional vehicle service hours would be added so that the schedules are consistent and make every stop in each direction every 90 minutes. This would provide a service improvement to the core spine Route 1 between Valley Springs and San Andreas.

The marginal cost for this service improvement is estimated at $103,100 in FY 2016/17.

2. Increase service to Columbia College when in session

In many transit systems, there is a schedule that is operated when a major trip generator such as Columbia College is in session and a separate schedule when a college trip generator is not in session.

Between Angels Camp and Columbia College on existing Route 4, the service interval is approximately every 3 hours. The current schedule does allow for connections with Tuolumne Transit, which departs Columbia College every three hours between approximately 10 am and 7 pm. The schedules are not coordinated and passengers transferring or arriving at Columbia College at 10:33 am need to wait until 12:54 pm when the Tuolumne Transit's bus departs to Sonora. An upgrade in the schedule should have a first priority of coinciding with Columbia College class starting and ending times, with a second priority of connecting with Tuolumne Transit.

There are currently four runs per day to Columbia College from Angels Camp. This service improvement would add two additional runs between Angels Camp and Columbia College when Columbia College is in session.

It is recognized that the implementation of service between San Andreas, Valley Springs, Rancho Calaveras and Stockton to Delta College may shift the community college demand away from Columbia College. An alternative strategy would utilize these resources to add another run to Stockton and Delta College.

The marginal cost of adding two runs to Columbia College when school is in session would be $24,000 annually.

3. Provide 60 minute service between Valley Springs and San Andreas with feeder service every two hours

This alternative would provide very convenient hourly service on weekdays in both directions between Valley Springs and Angels Camp. If possible, the hourly service would be scheduled such that each stop would be on "clock headways" which means, for example, that the bus between Valley Springs and Angels Camp would be scheduled to depart at each stop at the same time each hour. For instance, in San Andreas, the bus might stop at the Government Center at :10 after the hour. As discussed in previous chapters, the majority of trip on Calaveras Transit are along the Route 1 spine route. This increased service level would provide very convenient service to a majority of passengers. This alternative is very consistent with the discussions at the April 28 Goal Setting meeting where there was an expressed desire to strengthen the spine route and provide feeder service to the spine.

In this alternative, service would be provided every two hours to and from Columbia College, providing more consistent and frequent service to Columbia College. The current practice of interlining buses from Route 1 to Route 4 would be continued here, so that essentially every other bus from Valley Spring to Angels Camp would continue to Columbia College.

Route 4 service to Arnold would also be every two hours, enabling timed transfer to Route 1 in Angels Camp. However, to increase passenger convenience, similar to Columbia College, buses arriving in Angels Camp as a Route 4 bus would be interlined and would become a Route 1 bus with a one seat ride to Angels Camp, San Andreas and Valley Springs. This would increase passenger convenience and eliminate having transfer buses in Angels Camp when they are going to San Andreas or Valley Springs. However, eliminating transfers also reduces the number of passenger trips counted.

Service to Rancho Calaveras would be provided every three hours, with on-demand service to Burson also every three hours. This is approximately the same service level as exist today.

The combined marginal costs for increased service levels on the spine Route 1 all year round with clock headways between Valley Springs and Rancho Calaveras, and two hour service to both Columbia College and Arnold is estimated at $325,818 in FY 2015/16.

4. Add a community Dial-a-Ride service in Angels Camp

This alternative would add a community Dial-a-Ride service within the city limits of Angels Camp. This would provide minimum lifeline service for all Angel Camp residents. Passengers would be guaranteed a trip if they called one day in advance and requests for same day service would be on a space and availability basis.

The Angels Camp Dial-a-Ride service would operate 8 hours a day, either from 9 am to 5 pm or 8 am to 4 pm on weekdays only based on local input. Angel Camp residents would be able to make a reservation for a trip to and from a destination within the city limits of Angels Camp.

They could also make a reservation to transfer from the Dial-a-Ride to Route 1 or Route 4 at the Demarest Transfer Stop. Likewise a reservation could be made from Route 1 or Route 4 to home with the Dial-a-Ride bus meeting the fixed route bus at the Demarest Transit Center. The feeder function to and from the spine route is consistent with the service objectives articulated by the City of Angels Camp City Council and Calaveras Board of Supervisors at the April 28 Goal Setting workshop.

Paratransit Services currently has dispatchers on staff for flex route and flag staff calls. There are no additional fixed costs assumed for this alternative. Therefore, the marginal cost of a one-bus Dial-a-Ride service for the general public in Angels Camp would be approximately $100,000 annually.

5. Add Saturday Service

All Calaveras Transit routes operate only Monday to Friday. No Saturday service on any routes is currently provided.

Most of the market research input on Saturday service came from input on the on-board survey. Riders were asked to rate the importance of several potential service improvements on a scale of 1 to 5. Saturday service was the improvement rated as very important by the most riders (57%).

In the on-board survey, passengers were asked to list their most important improvement. Saturday service was by far the most desired improvement with 37% stating it was their most important improvement.

Saturday service was by the most important improvement on Routes 1, 3 and 4.

Peer Review of Saturday Service

Most small rural transit systems only operate Monday to Friday, similar to Calaveras Transit. Amador Transit, Modoc Sage Stage, Siskiyou STAGE and Trinity Transit operate only on Monday to Fridays. Trinity Transit was recently awarded a FTA 5311 (f) grant to operate Saturday service the first Saturday of the month.

In the review of potential Saturday options, it was mentioned that Tuolumne Transit offers Saturday service with Dial-a-Ride service only. Fixed routes only operate Monday to Friday, similar to Calaveras Transit.

Gold Country Stage in Nevada County operates a limited schedule on Saturdays on five of their routes plus a special Saturday route. Weekday operating hours for their mainline route between Grass Valley and Nevada City are between 6:15 am and 8:15 pm. On Saturdays, service is offered between 7:30 am and 5:00 pm. Saturday had been eliminated during the Great Recession, but was recently reinstated.

For Lassen Rural Bus, the main Susanville Route operates on weekdays between 7 am and 7 pm. On Saturday, service is reduced from 8 am to 4 pm.

Other rural transit systems do operate Saturday service but they typically operate substantially more vehicle service hours than Calaveras Transit currently operates.

The Mountain Area Regional Transit Authority (MARTA) operates Saturday and Sunday service on a single route that serves Big Bear Lake. Intercity services to San Bernardino operate on Saturdays on one route and both Saturdays and Sundays on a second route. Local routes in the Lake Arrowhead and RIM area of their service area operate only Monday through Friday.

Lake Transit in Lake County is a larger rural transit system and is not considered a peer system, but Lake Transit does operate Saturday service. In Clearlake, Saturday service is offered between 6:00 am and 7:00 pm on some routes. They operate late evening service until 11 pm and this is not available on Saturdays. Intercity routes around the Lake operate on most runs, but a few select routes are not operated on Saturdays.

Saturday Service Considerations

There are a number of potential considerations for Saturday service based on experience in other rural communities. They include:

By Existing Route: Saturday service on all routes or just routes with sufficient weekday ridership including Routes 1, 3 and 4. Routes 2 and 5 currently have very little weekday ridership and exhibit low productivity. As reported in the Research Report, Routes 2 and 5 had less than 3 passengers per hour at the end of the second quarter of 2013/14. The major generator for Route 4 is Columbia College. A review of the Fall 2014 Class Schedule for Columbia College shows very limited class schedules on Saturdays and demand would be very low on the Route 4 Segment from Angels Camp to Columbia College.

By New Routes: Some transit system operate different routes on Saturdays that appeal to recreation and shopping trips. A different route on Saturdays for Calaveras Transit could be more productive than simply operating the existing routes.

By Span of Service: The same span of service as weekday service or shorter hours than weekday service. Many transit systems expect lower demand on Saturdays, starting later and ending earlier on Saturdays. A service that begins at 9:00 am and ends at 4:00 or 5:00 pm is not unusual for Saturday service in many rural and small urbanized areas. Some transit systems operate only the first Saturday of the month when ridership demand is the highest.

Service Frequencies: Some transit agencies have less frequency on Saturdays than on weekdays.

Saturday Dial-a-Ride: On Saturdays, Tuolumne Transit only operates Dial-a-Ride service. Tuolumne Transit also offers Dial-a-Ride service on weekdays which makes such Saturday

service viable. In its current configuration, Dial-a-Ride for Saturday service is not recommended for Calaveras Transit.

Calaveras Transit Saturday Alternatives

Taking the above into account, six distinct alternatives for Saturday service were evaluated at the sketch planning level. Sketch planning means determining the approximate route length and span of service without detailed field testing, run-cutting, or providing a detailed schedule. Therefore, actual vehicle service hours and vehicle service miles could vary by 10-15% from what the sketch planning estimate is. In the cost estimates, Paratransit Services fixed costs would increase due the need for dispatching coverage and supervision on Saturdays.

Operate All Existing Routes on Saturday

This alternative would operate all existing routes six days a weeks with the schedules the same as weekday service. The annual cost for this alternative would be $166,000 for 51 Saturdays a year. This includes additional costs for dispatching and supervision.

Operate Three Routes Saturday from 8 am to 5 pm

In this alternative, Saturday service would be operated on existing routes 1, 3 and 4 with a reduced time span between 8 am and 5 pm. Fewer routes would have Saturday service due to the low weekday ridership on Routes 2 and 5. Runs that start after 4 pm would be eliminated on Saturdays. This alternative would operate service to Columbia College on Saturdays. Tuolumne County Transit does not provide Saturday service to Columbia College. The marginal cost of this alternative is $117,000.

Operate A Single Saturday Route between Rancho Calaveras and Arnold

In this alternative, Saturday service would be operated on a single route between Rancho Calaveras and Arnold between 8:00 am and 6:00 pm. The single route between Rancho Calaveras and Arnold connects a majority of origins and destinations along the spine to Angels Camp with continuing service to Arnold. Based on the existing schedule, two buses would operate at frequencies of about every 2 hours and 15 minutes, enabling a 10 minute driver break at the end of the run. This would be the lowest cost Saturday alternative at an annual cost of $101,000.

Two Route Saturday Service

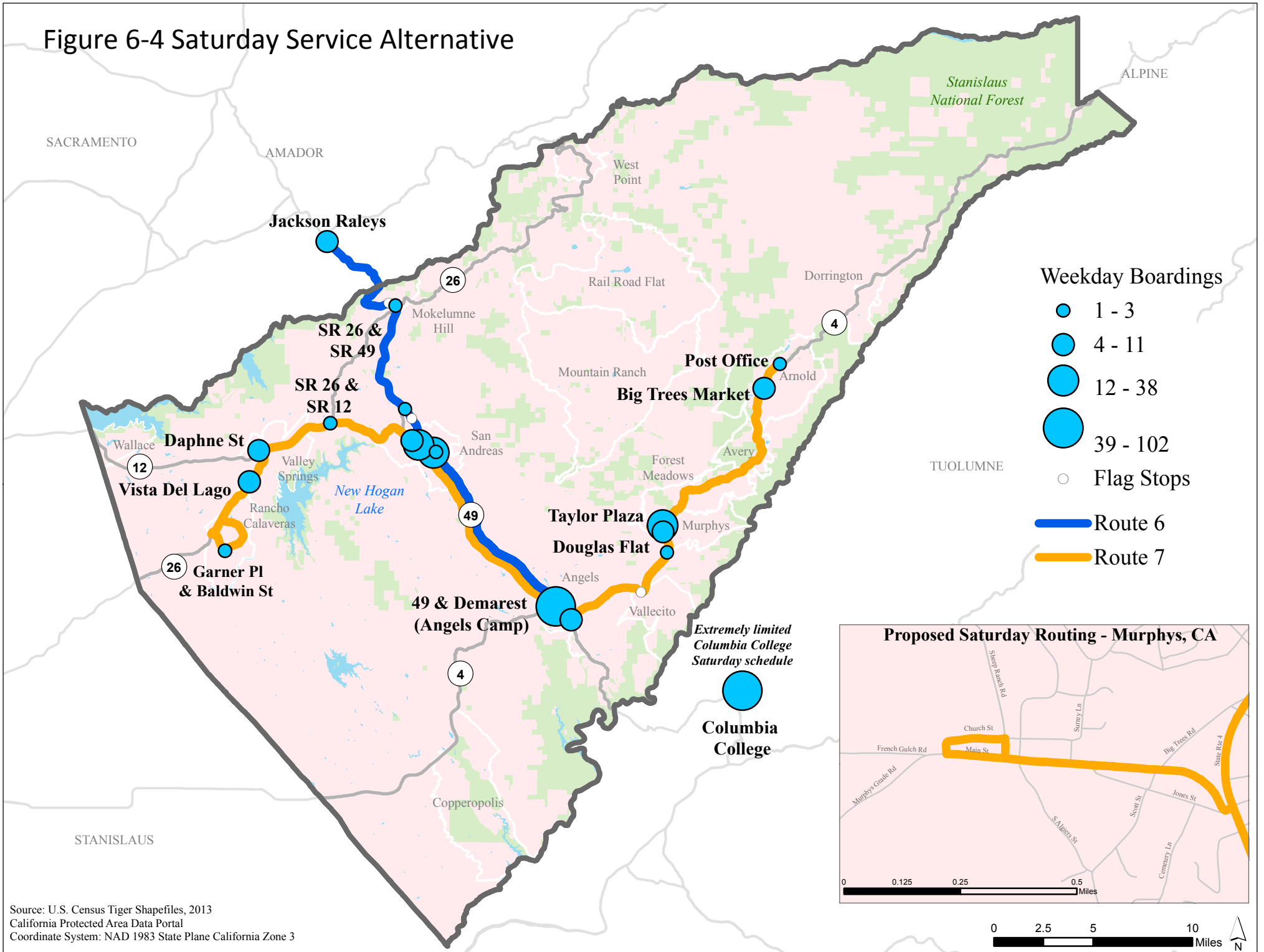
This alternative would have two routes both operating approximately every 2 hours and 30 minutes in each direction from 8 am to 6 pm. One route would be between Jackson's and Angels Camp. A second route would be between Rancho Calaveras, an extension into Murphys from Route 4, and Arnold.

The Rancho Calaveras to Arnold Saturday route would operate 4 times in each direction for a total of 8 runs with two buses. The Jackson to Angels Camp Saturday route would also run 4 times in each direction for a total of 8 runs. In order to coordinate transfers and enable driver breaks, service would be offered every 2 hours and 30 minutes, subject to more detailed route testing and scheduling. Between San Andreas and Angels Camp, service would be approximately every one hour and 15 minutes approximating existing service levels on weekdays. The preliminary annual cost for this Saturday alternative would be approximately $127,000. The routing is shown in Figure 6-4.

Saturday Dial-a-Ride with Two Buses

In this alternative, service would be operated in a Dial-a-Ride manner with two buses operating in distinct service areas from 9 am to 5 pm. One bus would serve the Arnold to Angels Camp area. A second bus would serve the Valley Springs to San Andreas area. Trips would be restricted to the two service areas. With two buses, trips would not be possible between San Andreas and Angels Camp.

Figure 6-4 Saturday Service Alternative



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System: NAD 1983 State Plane California Zone 3

With two vehicles, there would not be sufficient coverage for trips to and from any location within the Calaveras Transit service area. Such runs would typically have 1-2 passengers on board the bus and would be more like a taxi service.

The marginal costs of adding a two bus Dial-a-Ride service for eight hours each Saturday, including additional vendor dispatch service on Saturdays would be approximately $73,253.

Saturday Dial-a-Ride with Four Buses

In this alternative passengers would be able to make a reservation between any location to any other location within the Calaveras Transit service area on a first come first served basis with the reservation being made by 3 pm on Friday. Same day service would be on a space and availability basis; an attempt to increase productivity on the 4 vehicles would start the day with trip routing manifests, and the dispatcher would try and insert same trip requests as feasible.

The marginal cost of adding a four bus Dial-a-Ride service for eight hours each Saturday, including additional vendor dispatch service on Saturdays, would be approximately $114,000.

6. Extend Route 3 to Sutter Creek Transit Center

At present, although it is not advertised, riders on Route 3 to Raley's can request a flex stop to the Sutter Hill Transit Center. Passengers can also connect to the Amador Transit shuttle between Jackson and the Sutter Hill Transit Center. The Sutter Hill Transit Center is roughly four miles or 10 minutes from the Jackson Raley's. When the Calaveras Transit Intercity Service Feasibility Study was being conducted in 2013, Calaveras Transit was receiving about two requests a week to make the deviation to Sutter Hill.

To access downtown Sacramento or the Sacramento International Airport, Calaveras County residents must take Calaveras Transit Route 3 at 2:50 pm from San Andreas and request a deviation to the Sutter Hill Transit Center. From there, Amador Transit Sacramento routes depart at 3:30 pm to downtown Sacramento. A short walk and passengers can board the Yolo Bus at 5:05 pm for arrival at the airport at 5:30 pm.

According to the Calaveras Intercity Bus Study, Amador Transit is considering applying for FTA 5311(f) grant funds to operate additional run(s) to Sacramento.

Several stakeholders mentioned the importance of direct service to Sutter Creek for connections to Sacramento. The connections were perceived as important for various types of trips:

- Out of county medical appointments in Jackson and Sacramento. According to stakeholders, there are a limited number of primary care doctors and very few specialists within Calaveras County. There is no local birthing facility, hence many women go out of county for OB/GYN care. Out of town appointments with medical specialists was described by one gatekeeper as a "huge issue," though transit service was not necessarily perceived as the best solution.

- Shopping in neighboring counties. Shopping opportunities were described as limited in Calaveras County.

The cost of extending all the existing runs to the Sutter Hill Transit Center would be approximately $26,000 annually. This probably only make sense if Amador Transit is successful in a future FTA 5311(f) grant application for additional runs to Sacramento.

7. Financial Framework

The purpose of this chapter is to provide a financial framework for determining the potential supply of public transportation services for Calaveras Transit over the next five years. The chapter first reviews the operating and capital revenues that can be utilized by Calaveras Transit for transit purposes. Three financial scenarios provide a range of possible financial outcomes. These scenarios provide a range in the potential supply of public transportation services to meet the transit needs identified in Chapter 2. The financial scenarios focus on a reasonable range of operating cost and revenue assumptions and how available financial resources may be utilized. This chapter provides the financial framework for the recommended service plan in Chapter 8. Chapter 10 then provides the recommended financial plan for the recommended service plan.

I. Operating and Capital Revenues

This section describes the operating and capital revenues utilized by Calaveras Transit and many other California rural transit agencies. Factors that may influence the use of these revenue sources over the next five years are discussed. In the three financial scenarios, there are different assumptions utilized for some of the revenue sources and these are documented later in this chapter.

The following is a review of the operating and capital revenue funding sources. The vast majority of operating and capital revenues in the Calaveras Transit budget are:

- Farebox Revenues
- Local Transportation Fund (LTF)
- State Transit Assistance (STA)
- Federal Transit Administration 5311
- Federal Transit Administration 5311 (f)
- Proposition 1B PTMISEA and CalOES

Farebox Revenues

Farebox revenues are a product of ridership and the average fare per passenger. The average fare per passenger is the result of the fare structure for Calaveras Transit. In FY 2012/13 when service adjustments were made, a $0.25 zone fare was implemented. Fare revenues are also the numerator for determining the farebox recovery. The minimum farebox recovery is 10%.

Over the past five years, ridership has increased from 55,273 in FY 2009/10 to 69,100 in FY 2013/14. The average fare per passenger has increased from $0.99 in FY 2009/10 to $1.47 in FY

2013/14[1]. Fare revenues over the next five years will depend on the ridership response to service improvements and the fare structure.

The farebox recovery ratio was 9.5% in FY 2009/10 and was 9.3% in FY 2013/14. This is despite the almost 50% increase in the average fare and a 25% increase in farebox revenues. As discussed in significant detail in the Transit Maintenance and Organizational Analysis Working Paper, the flat farebox recovery ratio is primarily the result of the escalation in the cost per vehicle service hour that increased from $69.89 in FY 2008/09 to $113.26 in FY 2013/14, a 44% increase. Based on the Calaveras Transit operating budget for FY 2015/16, the operating cost per vehicle service hour is forecast to be $127.01. This is likely to have a negative impact on the farebox recovery ratio, despite the increase in the fare revenues and average fare due to the fare increase.

There are several factors that will influence the average fare in the future. The most significant is that the intercity service to Stockton will be implemented. In most intercity services funded by FTA 5311 (f) funding, the average fare and farebox recovery is higher than the local and regional services, and can help to increase the overall farebox recovery ratio systemwide. In the Intercity Feasibility Study Financial Plan, the study assumes that the new Stockton service will generate $43,700 in farebox revenues with a service annual cost of $158,000 in FY 2015/16. This is a farebox recovery ratio of 27.6%. The average fare per passenger would be $4.32. The intercity service to Stockton is expected to be implemented in September 2015 according to the Calaveras County Department of Public Works. The assumptions utilized in the Stockton Intercity Bus Study are utilized in the financial scenarios later in this chapter.

Transportation Development Act Funds[2]

The Transportation Development Act (TDA) was signed by the Governor on November 4, 1971 and became effective July 1, 1972. Several bills have amended the TDA over time. The TDA provides two major sources of funding for public transportation: the Local Transportation Fund (LTF) and the State Transit Assistance Fund (STA). STA funds are discussed in the next section of this chapter. These funds provide a dedicated revenue source to local jurisdictions for the development and support of public transportation and to encourage regional public transportation coordination.

TDA funds are administered by the Calaveras Council of Governments (CCOG), as the designated Regional Transportation Planning Agency (RTPA). The California Department of Transportation (Caltrans), Division of Mass Transportation provides program oversight and ensures local planning agencies complete annual financial audits, triennial performance

[1] FY 2013/14 figures are utilized as this is last approved fiscal audit.

[2] Background information on TDA funds are quoted verbatim from the annual "Unmet Transit Needs Findings Report."

audits, and an annual Unmet Transit Needs Report and Findings, as required for participation in the TDA program. Allocations are made to counties based on population, taxable sales, and transit performance.

The flow and utilization of TDA monies is complicated but it's important to note that the legislative intent in providing the ¼ cents sales tax was that public transportation uses would be the first priority. As stated in Public Utilities Code 99222, the legislative intent for the use of TDA funds (both LTF and STA funds) are as follows:

> (a) It is in the interest of the state that funds available for transit development be fully expended to meet the transit needs that exist in California.
>
> (b) Such funds are expended for physical improvement to improve the movement of transit vehicles, the comfort of the patrons, and the exchange of patrons from one transportation mode to another.

Local Transportation Funds (LTF)

LTF funds are derived from ¼ cents of the sales tax. LTF revenues are therefore dependent on the sales tax revenues generated in the Calaveras County economy.

In the May 2015 FY 2015/16 budget, $535,638 in LTF funds are budgeted for operating purposes, 37.6% of the total operating budget. Another $53,850 in LTF funds are budgeted for capital purposes, about 5.4% of the capital budget. In the final 2015/16 budget, the amount of LTF operating funds projected to utilized for transit in FY 2015/16 was reduced from $535,638 to $443,769.

Each year, the amount of tax collected in each county is returned by the State Board of Equalization via the respective county's designated Regional Transportation Planning Agency (RTPA). The RTPA administrative responsibilities include the following:

1. Apportionment – The determination of each area's anticipated share of LTF,
2. Allocation – The discretionary action which designates funds for a specific purpose to claimants within the area, and
3. Payment – The distribution of LTF funds as authorized by allocation instructions issued by the RTPA.

The CCOG is the designated RTPA for Calaveras County. Within this area lie two eligible claimants: Calaveras County and the City of Angels Camp (the only incorporated city in Calaveras County). In Calaveras, the County is the transit operator and files a transit claim for LTF and STA funds.

The TDA does allow some flexibility on the use of excess LTF if not fully utilized to fund public transportation services and supporting activities. When all transit needs that are

reasonable to meet are met with existing services, the City and County may submit a claim for the excess LTF to fund streets and roads projects, as well as bicycle and pedestrian projects.

In January 2015, the Auditor-Controller released the projections for the Local Transportation Fund for FY 2015/16. In FY 2013/14, there was a total of $792,487 in new LTF revenues for Calaveras County, and $429, 506 was allocated to Calaveras Transit. There was also a fund balance of $290,524. In FY 2014/15, there is $840,351 in projected LTF funds available, and $195,622 allocated to Calaveras Transit, with a fund balance of $635,035. In FY 2015/16, there is a projected $886,694 in new LTF funds, based on a 5.5% growth in sales tax revenues from the Board of Equalization.

Figure 7-1 Calaveras Transit LTF Utilization

	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14
	Actual	Actual	Actual	Actual	Actual	Actual
Base Statistics (Annual)						
Ridership	90,834	55,273	60,080	68,067	65,922	69,100
Vehicle Service Hours (VSH)	15,005	9,248	9,043	8,930	8,739	9,668
Vehicle Service Miles	439,290	274,609	263,345	259,305	263,168	275,850
Fare Revenue	$ 89,326	$ 69,184	$ 59,751	$ 66,572	$ 87,901	$ 101,365
Operating Costs	$ 1,048,090	$ 727,680	$ 831,820	$ 920,533	$ 1,000,691	$1,094,999
LTF Availability and Claim						
Annual Total Available	$ 702,982	$ 652,834	$ 691,273	$ 740,388	$ 780,583	$ 792,587
Transit Claim	$ 633,449	$ 550,000	$ 333,143	$ 295,723	$ 569,245	$ 429,506
Streets & Road-County	$ -	$ -	$ 173,345	$ -	$ 253,155	$ 133,812
Streets & Road City	$ -	$ -	$ 15,941	$ -	$ 23,094	$ 12,182
LTF Utilization Statistics						
Transit Claim % Total Avail.	90%	84%	48%	40%	73%	54%
Transit Claim % Op. Costs	60%	76%	40%	32%	57%	39%

Figure 7-1 shows the base statistics for Calaveras Transit along with the utilization of LTF funds between FY 2008/09 and FY 2013/14. In FY 2008/09 and FY 2009/10 during the Great Recession, Calaveras Transit was utilizing all of its LTF monies for transit purposes and no monies were claimed for streets and road purposes. In FY 2010/11, after vehicle service hours had been drastically reduced from 15,005 vehicle service hours in FY 2008/09 to 9,043, only 48% of the LTF funds were utilized for transit purposes. LTF funds represented only 40% of the operating revenues for Calaveras Transit, compared to 60% in FY 2008/09.

As Figure 7-1 indicates, sales tax revenues gradually recovered in Calaveras County between FY 2009/10 and FY 2013/14. While vehicle service hours were significantly reduced in FY 2009/10, the utilization of LTF funds for transit purposes was still just 54% of what was available.

There are several factors that influence the utilization of LTF monies for transit purposes. The annual unmet transit needs process has had findings of unmet needs that are reasonable to meet for services to Rancho Calaveras and Burson the past two fiscal years. This will increase

the costs for Calaveras Transit, but the preliminary numbers for 2014/15 for the Transit Claim when Rancho Calaveras was in operation was just $181,191 out of $846,305 or 21% of what was available. While this is partially due to carryover of LTF funds from the previous year, the bottom line is that there are sufficient LTF funds available for services that are unmet transit needs that are reasonable to meet. Two of the scenarios presented below utilize more LTF monies for transit purposes to implement an improved spine and feeder system for Calaveras Transit.

A second important factor influencing LTF funding is the economy. The availability of LTF funds peaked in FY 2007/08, when $924,427 was available for transit purposes. When the Great Recession hit, the LTF funds dropped to $702,982 in FY 2008/09. Since then, LTF funds have gradually increased, but are still below what was available in FY 2007/08. The sensitivity to economic turndowns and LTF funding is one of the reasons why CCOG established a 10% reserve account, which would help to bridge gaps in funding when the inevitable next recession hits.

The Board of Equalization makes sophisticated projections for increases in LTF funding availability, but different assumptions for LTF growth are utilized in the three scenarios to bracket the possible outcomes.

A third factor is the political will to utilize all LTF monies for transit purposes. Several rural counties in California have made such a decision, and are essentially "transit first" counties. One of the financial scenarios makes the assumption that all LTF funds are utilized for transit purposes.

State Transit Assistance (STA) Funds

The second source of funding of TDA funding is State Transit Assistance (STA) Funds. STA was originally derived from the statewide sales tax on gasoline and diesel fuel. On March 22, 2010, STA funds were restored under a new legislative package known as the "gas tax swap." Designed to be revenue neutral, the tax swap replaces the sales tax on gasoline, and increases the sales tax on diesel fuel to partially supplement STA funds. Now STA funds come solely from the statewide sales tax on diesel fuel. Therefore, STA revenue to the region depends on diesel fuel prices and diesel consumption.

STA is a formula driven allocation based on *population* and *revenue*. The STA funds are appropriated by the Legislature to the State Controller's Office. The Office then allocates the tax revenue, by formula, to planning agencies. Statute requires 50% of STA funds be allocated according to population and 50% be allocated according to operator revenues from the prior fiscal year.

STA funds can be utilized for operating or capital transit purposes only. While STA funding had been on a roller coaster ride for several years prior to 2010, the gas tax swap in March 2010 and subsequent legislation guaranteed the STA share of the Public Transportation Account (STA) be

50 percent of sales tax on diesel fuel revenues. Proposition 22 restricted the use of fuel excise tax for transportation purposes. Importantly it also prohibited borrowing from the fuel excise tax revenues. The following are the STA revenues utilized by Calaveras Transit from the financial audits:

FY 2011/12: $242,096

FY 2012/13: $249,815

FY 2013/14: $241,487

In the FY 2014/15 Calaveras Transit Budget, there is $228, 398 (reduced to $217, 247 in budget amendment no. 2) in STA funds budgeted. This is consistent with other rural areas that are expecting to receive fewer STA funds the last fiscal year and this fiscal year. In the FY 2015/16 budget STA funding is $225,810.

The primary factor that influences STA funding levels is the consumption of diesel fuel in California. According to the California Energy Almanac, diesel fuel consumption has been in a decline since 2009, although more recent 2014 and 2015 data is not available.

Federal Funding

Federal Transit Administration 5311

Section 5311 is a non-urbanized area formula funding program. This federal grant program provides funding for public transit in non-urbanized areas with a population fewer than 50,000 as designated by the Bureau of the Census. FTA apportions funds to states for rural areas and Caltrans administers the funds in California. The operating assistance allows for a maximum of 55.33% federal share. FTA 5311 funds can be utilized for either operating or capital purposes.

The FY 2015/16 Calaveras Transit budget for FTA 5311 is $256,520.

The primary factor that influences the level of FTA 5311 is the federal reauthorization. Prior to 2003, federal reauthorization of funding for transit for a six-year period received bipartisan routine support. The following is an excellent synopsis of trends over more than a decade from the CEO of the American Public Transportation Association:

> *"….since the expiration of TEA-21 in 2003, we have had 24 short-term extensions, a little more than four years authorization under SAFETEA-LU, and a bit more than two years under MAP-21. More recently, federal transit funding has grown only minimally, from $10.231 billion in FY 2009 to $10.692 billion in FY 2014. The uncertainty of recent federal authorizing laws and anemic growth of the federal transit program have made it nearly impossible for the industry to keep the system in a state of good repair, replace the aging infrastructure and fleets, and address the growing demand for service."*

At this writing there is significant uncertainty in how the most recent reauthorization will turn out and what this will mean for FTA 5311 funding. While rural transit funding through the FTA 5311 program has been reliable in the past, even during the 24 short-term extensions, there is no guarantee that federal funding to support rural transit operations will continue at the same levels. The general assumption is that FTA 5311 funding will continue over the next five years.

FTA 5311 funds can be utilized for either operating or capital purposes. FTA 5311 regulations allow for the capitalization of preventative maintenance costs. One of the financial scenarios utilizes this option as was recommended in the Maintenance and Organizational Analysis.

Federal Transit Administration 5311 (f)

The purpose of FTA 5311 (f) funding is to provide supplemental financial support for rural intercity transportation services. Caltrans administers FTA 5311 (f) funds. The current guidelines adopted in California have a criterion of intercity services that have a one-way route length of 50 miles or more. However, the federal authorizing legislation does not have such a stipulation and emphasizes "program goals of providing a 'meaningful connection' to the national intercity bus network." Calaveras Transit will provide these meaningful connections in Stockton.

FTA 5311 (f) is grant based funding for both operating and capital purposes. Calaveras County was successful in its grant application to receive $59,600 in Federal FTA 5311 (f) operating funds and $126,000 for a bus. The local match for capital for FTA 5311 (f) is 20%.

Federal Transit Administration 5339

The Federal Transit Administration (FTA) Section 5339 (Bus and Bus Facilities Program) is a new formula program that provides funding for capital projects to replace, rehabilitate, and purchase buses and bus-related equipment, and to construct bus-related facilities. This program was established under Moving Ahead for Progress in the 21st Century (MAP-21), replacing the previous Section 5309 discretionary program established under the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

In order to receive Section 5339 funding, projects must have a significant impact on desirable long-term outcomes for improving and maintaining California's buses and bus facilities so that the State's public transportation systems are in good physical condition and successfully accomplish their performance objectives.

Caltrans administers the FTA 5339 program for rural areas. According to the Caltrans website, bus-related facilities were not eligible for funding in the last funding cycle but may be available in future cycles.

FTA 5310

With the release on June 6, 2014 of new Section 5310 program guidance (FTA C 9070.1G), there are substantive changes in project eligibility and in the processes for application for Section 5310 funding.

Funds can be provided for capital or for operating projects that support overall program purpose. The new regulatory guidance provides grant funding for capital and operating projects that address one of four areas:

1. Public transportation projects for seniors and persons with disabilities where public transportation is insufficient, inappropriate or unavailable.

2. Public transportation projects that go beyond the Americans with Disabilities Act (ADA) requirements.

3. Public transportation projects that improve access to fixed route and decrease reliance on complimentary paratransit.

4. Alternative transportation projects that assist seniors and persons with disabilities.

The 5310 circular enables mobility management as an eligible application to the Section 5310 program as a capital expense. CCOG submitted a successful application for a Mobility Manager. The Mobility Manager will oversee new partnerships to enhance mobility options in Calaveras County including a volunteer mileage reimbursement program. Such mobility options are reviewed in some detail in Chapter 6.

Toll Credits

The FTA 5311 (f) operating grants require a 44.67% local match. Caltrans has allowed transit agencies to utilize Toll Credits for local match purposes. Officially referred to as Transportation Development Credits, the funds are derived from revenues generated by toll authorities within California. The Federal Highway Administration oversees determination of the transportation development credits. For Calaveras and other transit agencies it means that the Toll Credits provide the local match, meaning that 100% of the net project cost (after fare revenues are accounted for) is provided.

Recent correspondence from Caltrans has indicated that the Toll Credits will be available for transit funding local match through at least 2015/16. In part, continuation of the Toll Credit program is dependent on the federal reauthorization of transportation funding. In normal times, federal reauthorization occurs every six years, and Congress is currently debating a short-term extension of federal transportation funding. The Intercity Feasibility Study assumed that Toll Credits would continue and utilized Toll Credits as matching funds. One of the financial scenarios assumes the use of Toll Credits as matching funds and two of the scenarios do not include this assumption.

Low Carbon Transit Operations Program (LCTOP)

The Low Carbon Transit Operations Program (LCTOP) is one of several programs that are part of the Transit, Affordable Housing, and Sustainable Communities Program established by the California Legislature in 2014 by Senate Bill 862. The LCTOP was created to provide operating and capital assistance for transit agencies to reduce greenhouse gas emission and improve mobility, with a priority on serving disadvantaged communities. Approved projects in LCTOP will support new or expanded bus or rail services, expand intermodal transit facilities, and may include equipment acquisition, fueling, maintenance and other costs to operate those services or facilities, with each project reducing greenhouse gas emissions. In FY 2014/15, Calaveras County was allocated $14,549. Calaveras has proposed a "green tickets" program to utilize the LCTOP monies.

Proposition 1B PTMISEA

As approved by the voters in the November 2006 general election, Proposition 1B enacts the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006. Statewide, this is a $19.925 billion state general obligation bond that is meant to fund high priority projects. The final appropriation of program funds was made in the FY 2014-15 State Budget. There were 16 different programs under Proposition 1B, and two directly benefit Calaveras Transit for transit purposes. One is called The Public Transportation Modernization, Improvement, and Service Enhancement Account Program (PTMISEA) which provides funding for capital procurements of all type including vehicle acquisitions, bus stop improvements and facility improvements. The 2015/16 Calaveras Transit Budget ha $643,106 in FY 2010/11 allocations for bus stop improvements and vehicle acquisitions and another $266,100 in FY 2014/15 allocations for additional bus stop improvements.

Proposition 1B CalOES

The Transit System Safety, Security, and Disaster Response Account of Proposition 1B, commonly referred to as CalOES, can be utilized for safety and security projects. Calaveras Transit has $20,000 in FY 2011/12 and FY 2012/13 allocations with a total balance of $148,726 in CalOES funds available.

Other Potential Funding Sources

There are two other funding sources that other rural transit agencies sometimes utilize, if applicable, for capital procurements.

The State Transportation Improvement Program (STIP) is the biennial five-year plan adopted by the California Transportation Commission for future allocations of certain state transportation funds for state highway improvements, intercity rail, and regional highway and transit improvements. The Regional Transportation Improvement Program (RTIP) prepared by the Calaveras Council of Governments is a prioritized program of proposed state or federally funded transportation project which CCOG would like to see funded through state or federal programs.

All projects with Federal funding need to be included in the RTIP. CCOG could include vehicle replacements or include facility improvements into the RTIP for funding approval as part of the STIP. As an example, in the past this has been utilized by the Eastern Sierra Transit Authority

The purpose of the CMAQ Program is to fund transportation projects or programs that will contribute to attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide, and particulate matter. All projects and programs eligible for CMAQ funds must come from a conforming transportation plan and a Federal Transportation Improvement Program (FTIP) or the Federal Statewide Transportation Improvement Program (FSTIP) in areas without a Metropolitan Planning Organization (MPO) such as Calaveras County. CMAQ funds are jointly administered by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The formula for distribution of funds considers an area's population by county and the severity of its ozone and carbon monoxide problems within the nonattainment or maintenance area, with greater weight given to areas that are both carbon monoxide and ozone nonattainment/maintenance areas. With the recent adoption of federal transportation authorization with MAP-21 some of the CMAQ programming provisions have been revised including some "expanded authority to use funds for transit operations." There are a number of both operating and capital projects that could be eligible for funding including vehicle purchase, public education and support of eligible operating expenses.

II. Financial Scenarios

Three financial scenarios have been developed to help bracket the potential financial outcomes over the next five years. For each scenario, assumptions are made about operating costs and operating revenues for Calaveras Transit. At the end of this section of the report, a summary of the financial scenario implications is provided, and these are utilized to provide the recommended service plan in Chapter 8 and the financial plan in Chapter 10.

The following are the three scenarios:

1. Budget Trends Scenario: This financial scenario is essentially the status quo scenario and carries forward budget trends over the past five years to the next five years.

2. County Efficiency Scenario: This financial scenario assumes that the strategies recommended in the Maintenance and Organizational Assessment are fully implemented by the Calaveras County Department of Public Works.

3. Transit First Scenario: This financial scenario assumes that all available TDA monies are utilized for public transportation purposes with an aggressive schedule for service improvements and a change in transit management from Calaveras County to a new Joints

Powers Authority, the Calaveras Transit Agency, following the organizational model utilized in Tuolumne and Modoc counties.

Budget Trends Scenario

This financial scenario carries forward the budget trends since FY 2008/09 when the cost per vehicle service hour increased from $69.85 to the 2015/16 budget that is estimated at $127.01 per vehicle service hour. The budget trend since FY 2009/10 has kept the supply of public transportation relatively constant in terms of vehicle service hours and vehicle service miles. This scenario carries forward these budget trends over the next five years.

Service Supply

The service supply in the Budget Trends Scenario is relative flat as shown in Figure 7-2, with 11,226 vehicle service hours provided in FY 2015/16 and 11,342 provided in FY 2019/20.

Figure 7-2 Budget Trends Scenario: Service Supply in Vehicle Service Hours

	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
	Budget	Budg. Trnd.	Budg. Trnd.	Budg. Trnd.	Budg. Trnd.
Route 1	4,277	4,277	4,277	4,277	4,277
Route 2	1,316	1,316	1,316	1,316	1,316
Route 3	946	624	624	624	624
Route 4	3,134	3,134	3,134	3,134	3,134
Route 5	528	624	624	624	624
Stockton Intercity	1,026	1,368	1,368	1,368	1,368
Total	11,226	11,342	11,342	11,342	11,342
Service Changes					
Rancho Calaveras					
Stockton Intercity	1026	342			
Burson Extension	400				
Routes 2/5 2 days/week		(595)			

The following are the primary changes in the service in the Budget Trends Scenario.

FY 2015/16

- Intercity service to Stockton is estimated to start in September 2015. Vehicle service hours are adjusted from the Intercity Service Feasibility Study to reflect the estimated costs.
- A full year of Burson as a demand response service is assumed in vehicle service hours for Route 1 in FY 2015/16.
- The Stockton Intercity Service is scheduled for implementation in September 2015. The additional 342 vehicle service hours in FY 2016/17 are for the Stockton Intercity service full year of operation.

- Routes 2 and 5 are reduced to two days a week, but with convenient morning, midday and late afternoon service on the two days a week.

The Budget Trend Scenario keeps service levels constant and the supply of public transportation service as measured in vehicle service hours remains flat at 11,342 vehicle service hours.

Operating Costs and Key Assumptions

The Budget Trends Scenario carries forward the operating costs from the past several years, pivoting from the May 2015 FY 2015/16 budget. For the operations vendor fixed cost, the Calaveras Transit budget for 2015/16 includes $80,910 for Partransit Services for the Intercity Service without distinguishing between fixed and variable costs. With 11,226 vehicle service estimated to be operated in FY 2015/16, including 1,026 Stockton intercity service vehicle service hours, the operations vendor variable cost is estimated to be $381,794, and after the fuel costs are estimated, the operations vendor fixed cost is estimated at $381,010 as shown in Figure 7-3. In FY 2015/16, the rest of the budget is verbatim from the May 2015 FY 2015/16 budget.

Figure 7-3 Budget Trends Scenario: Estimated Operating Costs

	FY 2015/16 Budget	FY 2016/17 Budg Trends	FY 2017/18 Budg Trend	FY 2018/19 Budg Trend	FY 2019/20 Budg Trend
Operations Vendor Fixed Cost	$ 381,010	$ 381,785	$ 393,240	$ 405,036	$ 417,173
Operations Vendor Variable Cost	$ 381,794	$ 396,643	$ 416,475	$ 428,970	$ 441,839
Transit Manager Salary and Benefits	$ 107,701	$ 113,086	$ 118,740	$ 124,677	$ 130,911
Maintenance	$ 175,000	$ 192,944	$ 202,591	$ 212,721	$ 223,357
Fuel and Oil	$ 179,002	$ 186,883	$ 186,883	$ 196,227	$ 206,039
Marketing	$ 16,236	$ 17,048	$ 17,900	$ 18,795	$ 19,735
Minor Equipment	$ 118,967	$ 59,484	$ 61,268	$ 64,331	$ 67,548
A-87	$ 25,427	$ 26,698	$ 27,499	$ 28,874	$ 30,318
Reimbursable to County/Agency Support	$ 35,562	$ 37,340	$ 39,207	$ 41,167	$ 43,226
Other Costs	$ 5,065	$ 5,318	$ 5,584	$ 5,863	$ 6,157
Total Costs	$ 1,425,764	$ 1,417,229	$ 1,469,390	$ 1,526,664	$ 1,586,302
Key Assumptions					
Vehicle Service Hours	11,226	11,342	11,342	11,342	11,342
Vehicle Service Miles	306,042	316,302	316,302	316,302	316,302
Operating Cost Per Vehicle Service Hour	$ 127.01	$ 124.95	$ 129.55	$ 134.60	$ 139.86
Minimum Standard Indexed for Inflation	$ 100.00	$ 102.00	$ 104.04	$ 106.12	$ 108.24
Target Standard Indexed for Inflation	$ 90.00	$ 91.80	$ 93.64	$ 95.51	$ 97.42
Operating Cost Per Vehicle Service Mile	$ 4.66	$ 4.48	$ 4.65	$ 4.83	$ 5.02
Fuel Cost Per Mile	$ 0.56	$ 0.59	$ 0.62	$ 0.65	$ 0.68
Contract variable cost	$ 34.01	$ 34.97	$ 36.72	$ 37.82	$ 38.95
Contractor fixed annual costs	$ 33.94	$ 33.66	$ 34.67	$ 35.71	$ 36.78
Direct Provided Maint. cost per mile	$ 0.56	$ 0.61	$ 0.63	$ 0.65	$ 0.67

The final budget was recently adopted and is forecast at $1,389,511. This would lower the operating cost per vehicle service hour from $127.01 to $123.78 in FY 2015/16. The most significant dollar value reductions in final budgeted costs were in maintenance from $175,000 to $147,500 and for fuel and oil from $179,002 to $161,900.

In subsequent years, the average increase for contract variable costs and fixed costs are inflated at 3% per year, after a 5% increase the first full year of the new vendor contract. Maintenance costs are shown at peer average for directly provided maintenance at $0.61 and increased on a per unit basis for inflation. This should be achievable in FY 2016/17, with a mostly new fleet in operation.

The Transit Manager remains at 1.0 FTE in this scenario, and salary and benefits rise at 5% per year with the assumption of higher than average increases in fringe benefits and payroll taxes. The rest of the cost line items increase at normal rates of inflation.

The assumptions in this scenario result in an increase in the cost per vehicle service hour from $127.01 in FY 2015/16 to almost $140.00 per vehicle service hour in FY 2019/20. This continues the cost escalation trend in the cost per vehicle service hours since FY 2008/09.

LTF and STA Fund Allocations

In this scenario, the new LTF monies are expected to increase at 3%, below the 5.5% estimated by the Board of Equalization for FY 2015/16.

After LTF monies are taken off the top, and costs continue to escalate, there are fewer and fewer monies left over for streets and roads purposes. By FY 2019/20, there is only $25,000 per year available for streets and road purposes, as shown in Figure 7-4. This is the last year that allocations for streets and roads purposes would be possible.

In the Budget Trends Scenario all available STA monies are utilized for operating purposes. The scenario continues the status quo with no monies set aside for a capital reserve fund. It is expected that STA funds will decrease in the short-term, but will increase by $5,000 per year starting in FY 2016/17.

Figure 7-4 Budget Trends LTF and STA Allocations

Budget Trends Scenario	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Unapportioned Fund Balance	$ 635,037	$ 337,578	$ 182,661	$ 87,884	$ 25,796
1/4 cents sales tax new	$ 884,194	$ 910,720	$ 938,041	$ 966,183	$ 995,168
Interest	$ 2,000	$ 1,063.17	$ 575.28	$ 276.78	$ 81.24
Total LTF Available	$ 1,521,231	$ 1,249,361	$ 1,121,277	$ 1,054,343	$ 1,021,045
Minus prior year obligations	$ (216,058)				
Actual LTF available	$ 1,305,173	$ 1,249,361	$ 1,121,277	$ 1,054,343	$ 1,021,045
LTF Allocations					
Off the Top					
Bike and Peds 2%	$ 17,684	$ 18,214	$ 18,761	$ 19,324	$ 19,903
CCOG Admin 5 year average	$ 160,485	$ 165,299	$ 170,258	$ 175,366	$ 180,627
LTF Operating Reserve (10%)	$ 3,789	$ 2,653	$ 2,732	$ 2,814	$ 2,899
Available for annual allocation	$ 1,123,216	$ 1,063,194	$ 929,526	$ 856,840	$ 817,617
Transit Operating	$ 535,638	$ 655,534	$ 691,642	$ 731,044	$ 771,622
Streets and Road	$ 250,000	$ 225,000	$ 150,000	$ 100,000	$ 25,000
STA Apportionment	$ 210,000	$ 205,000	$ 210,000	$ 215,000	$ 220,000
STA Operating	$ 210,000	$ 205,000	$ 210,000	$ 215,000	$ 220,000
STA Capital Reserve*					

* This scenario has no capital reserve, which follows the status quo

Operating Revenues and Key Assumptions

The operating revenues in 2015/16 are those utilized in the County's May FY 2015/16 budget. In subsequent years there are a few adjustments made as shown in Figure 7-5:

1. Local fares are based on estimated ridership and average fare for different types of service by plan year. Therefore, the FY 2015/16 fares of $148,004 would decline to $134,500 in FY 2016/17 in this scenario based on ridership estimates and remain fairly flat to FY 2019/20. As it turns out, the final 2015/16 budget received after the draft SRTP was prepared reduced the fare revenues in 2015/16 to $130,283. No fare increase is assumed.
2. FTA 5311 (f) revenues are based on 55.33% of the estimated net cost of the Stockton Intercity service. Since the FY 2015/16 budget does not include toll credits as local match, this scenario also does not include toll credits as a local match.
3. LTF funds are utilized to balance the revenues with estimated costs by plan year. After fares and other funding sources are subtracted, LTF funds are utilized to provide enough revenue to balance the cost and revenue budget.
4. Federal funding of public transportation is assumed to continue at historical funding levels, and is increased at 3% per year.

Figure 7-5 Budget Trend Scenario: Operating Revenues by Plan Year

	2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Budget Trend Scenario	**Budget**	**Budg Trends**	**Budg Trend**	**Budg Trend**	**Budg Trend**
Fare Revenue					
Total fares	$ 148,004	$ 134,527	$ 134,920	$ 135,313	$ 135,706
Local and State					
Local Transportaton Fund	$ 535,638	$ 655,534	$ 691,642	$ 731,044	$ 771,622
State Transit Assistance	$ 225,810	$ 205,000	$ 210,000	$ 215,000	$ 220,000
LCTOP	$ 14,549	$ 14,985	$ 15,435	$ 15,898	$ 16,375
PTMISEA-minor equip.	$ 119,038				
County Reimbursement	$ 53,850	$ 55,466	$ 57,129	$ 58,843	$ 60,609
Toll Credits*					
Advertising	$ 15,000	$ 20,000	$ 20,400	$ 20,808	$ 21,224
Other Local Revenue	$ 1,236	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Subtotal Local and State	$ 965,121	$ 951,985	$ 995,607	$ 1,042,593	$ 1,090,830
Federal					
FTA 5311	$ 256,520	$ 264,216	$ 272,142	$ 280,306	$ 288,716
FTA 5311 (f) Intercity	$ 56,530	$ 66,501	$ 66,720	$ 68,451	$ 71,050
Subtoal Federal	$ 313,050	$ 330,717	$ 338,863	$ 348,757	$ 359,766
Total	$ 1,426,175	$ 1,417,229	$ 1,469,390	$ 1,526,664	$ 1,586,302

* This scenario assumes no toll credits because the County 2015/16 budget does not include toll credits.

County Efficiency Scenario

The County Efficiency Scenario assumes that the strategies recommended in the Maintenance and Organizational Working Paper are fully implemented, and County transit management is as efficient as possible.

Service Supply

In this scenario, there are more vehicle service hours operated for the Stockton Intercity service than originally estimated in the Stockton Intercity Study. The adjustment is made based on assigning some of the anticipated deadhead hours into vehicle service hours, with an annual total of 1,700 vehicle service hours per year.

As shown in Figure 7-6, the County Efficiency Scenario enables three important improvements to Calaveras Transit:

1. Upgrading Spine Route 1 service between Valley Springs and Angels Camp to consistent 90 minute service in both directions between 6:00 am and 8:00 pm.
2. Implementation of a single bus dial-a-ride (DAR) as a) complementary ADA Paratransit Service for ADA eligible individuals; b) feeder service in Angels Camp to and from the Spine Route 1; and c) local DAR trips for origins and destinations within Angels Camp.

3. Saturday service on Spine Route 1, Routes 3 and 4.

Figure 7-6: County Efficiency Scenario: Service Supply in Vehicle Service Hours

	FY 2015/16 Budget	FY 2016/17 Efficiency	FY 2017/18 Efficiency	FY 2018/19 Efficiency	FY 2019/20 Efficiency
Route 1	4,277	5,783	5,783	6,701	6,701
Route 2	1,316	624	624	624	624
Route 3	946	1,229	1,229	1,535	1,535
Route 4	3,134	3,134	3,134	3,440	3,440
Route 5	528	624	936	936	936
Angels Camp DAR			2,008	2,008	2,008
Stockton Intercity	1,275	1,700	1,700	1,700	1,700
Total	11,475	13,094	15,414	16,944	16,944
Service Changes					
Route 1 to 90 minutes		1,506			
Reconfigured 2 and 5*		(595)			
Stockton Intercity	1,275	425			
Burson Extension	400				
Angels Camp DAR			2,008		
Saturday Service 1,3,4				1,530	
Additional Run Stockton				Not affordable	

* Routes 2 and 5 to two days a week, three round trips per day.

Operating Costs and Key Assumptions

The County Efficiency Scenario has several important key assumptions that enable the expansion of Calaveras Transit services

1. The operations vendor fixed cost is inflated at 3% annual costs over the FY 2013/14 fixed cost, with the exception of adding $25,000 in FY 2017/18 to accommodate Saturday dispatching for Saturday operations. It is assumed that the contract vendor has sufficient slack capacity in its fixed costs to accommodate the increased service levels.
2. Calaveras County reduces the 1.0 FTE Transit Manager to 0.5 FTE. This assumes the same management staffing as small transit operations of peer transit agencies. It also assumes the continued training of the existing Transit Manager or hiring of a new Transit Manager with prerequisite skills of budgeting, contract management, regulatory compliance and board relations.
3. Most equipment is capitalized and only procurements below $5,000 are included in minor equipment.

Figure 7-7 County Efficiency Scenario: Operating Costs

	FY 2015/16 County Trends	FY 2016/17 Efficiency	FY 2017/18 Efficiency	FY 2018/19 Efficiency	FY 2019/20 Efficiency
Operations Vendor Fixed Cost	$ 381,010	$ 349,079	$ 374,079	$ 374,079	$ 385,301
Operations Vendor Variable Cost	$ 381,794	$ 457,906	$ 566,011	$ 634,637	$ 647,329
Transit Manager Salary and Benefits	$ 107,701	$ 55,466	$ 57,130	$ 58,844	$ 60,609
Maintenance	$ 175,000	$ 223,301	$ 246,145	$ 282,045	$ 290,506
Fuel and Oil	$ 179,002	$ 216,286	$ 243,042	$ 283,897	$ 298,092
Marketing	$ 16,236	$ 16,723	$ 17,225	$ 17,742	$ 18,274
Minor Equipment	$ 118,967	$ 24,000	$ 24,720	$ 25,462	$ 26,225
A-87	$ 25,427	$ 26,190	$ 26,976	$ 27,785	$ 28,618
Reimbursable to County/Agency Support	$ 35,562	$ 36,629	$ 37,728	$ 38,860	$ 40,025
Other Costs	$ 5,065	$ 5,217	$ 5,373	$ 5,535	$ 5,701
Total Costs	$ 1,425,764	$ 1,410,796	$ 1,598,428	$ 1,748,884	$ 1,800,682
Key Assumptions					
Vehicle Service Hours	11,475	13,094	15,414	16,944	16,944
Vehicle Service Miles	310,999	366,067	391,763	435,827	435,827
Operating Cost Per Vehicle Service Hour	$ 127.01	$ 107.74	$ 103.70	$ 103.21	$ 106.27
Minimum Standard Indexed for Inflation	$ 100.00	$ 102.00	$ 104.04	$ 106.12	$ 108.24
Target Standard Indexed for Inflation	$ 90.00	$ 91.80	$ 93.64	$ 95.51	$ 97.42
Operating Cost Per Vehicle Service Mile	$ 4.58	$ 3.85	$ 4.08	$ 4.01	$ 4.13
Contract variable cost	$ 34.01	$ 34.97	$ 36.72	$ 37.45	$ 38.20
Fuel Cost Per Vehicle Service Mile	$ 0.56	$ 0.59	$ 0.62	$ 0.65	$ 0.68
Direct Provided Maint. cost per mile (peer ave	$ 0.56	$ 0.61	$ 0.63	$ 0.65	$ 0.67

As mentioned previous, the final FY 2015/16 budget reduced the projected operating costs to $1,389,511.

With the above key assumptions and increased vehicle service hours with expanded services, Calaveras Transit is able to operate at $103.70 per vehicle service hour in FY 2017/18, below the recommended minimum target standard, adjusted for inflation of $104.04. In both FY 2018/19 and FY 2019/20, Calaveras Transit are also below the minimum performance standard for cost per vehicle service hour. While the implementation of Angels Camp DAR has a negative effect on farebox recovery ratio, in FY 2019/20 under this scenario, the farebox recovery ratio is estimated at 10.0%.

LTF and STA Allocations

In the County Efficiency Scenario, more LTF funding is required and LTF funding for Streets and Roads is discontinued after FY 2017/18.

This scenario assumes that new LTF funding in Calaveras County increases at 3% per year, below the current Board of Equalization estimate.

This scenario assumes that $30,000 per year is set aside for a capital reserve matching fund. Therefore the allocations for STA operating are reduced by $30,000 per year. Figure 7-8 shows the LTF and STA Allocations over the five year planning horizon for the County Efficiency scenario.

Figure 7-8 County Efficiency Scenario: LTF and STA Allocations

County Efficiency Scenario	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Unapportioned Fund Balance	$ 635,037	$ 416,527	$ 412,865	$ 350,962	$ 249,133
1/4 cents sales tax new	$ 884,194	$ 910,720	$ 938,041	$ 966,183	$ 995,168
Interest	$ 2,000	$ 9,107	$ 9,380	$ 9,662	$ 9,952
Total LTF Available	$ 1,521,231	$ 1,336,354	$ 1,360,287	$ 1,326,806	$ 1,254,252
Minus prior year obligations	$ (216,058)				
Actual LTF available	$ 1,305,173	$ 1,336,354	$ 1,360,287	$ 1,326,806	$ 1,254,252
Allocations					
Off the Top					
Bike and Peds 2%	$ 17,684	$ 18,568	$ 19,125	$ 19,699	$ 20,290
CCOG Admin 5 year average	$ 160,485	$ 165,299	$ 170,258	$ 175,366	$ 180,627
LTF Reserve (10%)	$ 4,610	$ 4,421	$ 2,785	$ 2,869	$ 2,955
Available from annual alloc.	$ 1,127,005	$ 1,152,486	$ 1,170,903	$ 1,131,742	$ 1,053,336
Transit	$ 460,478	$ 614,622	$ 769,942	$ 882,609	$ 899,539
Streets and Roads	$ 250,000	$ 125,000	$ 50,000	$ -	$ -

STA Apportionment	$ 210,000	$ 205,000	$ 210,000	$ 215,000	$ 220,000
STA Operating	$ 180,000	$ 175,000	$ 180,000	$ 185,000	$ 190,000
STA Capital Reserve	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000

Operating Revenues

The County Efficiency Scenario is based on a couple of key assumptions compared to the Budget Trends Scenario as shown in Figure 7-9:

1. The County Efficiency Scenario is able to utilize Toll Credits for local match for the Stockton Intercity service.
2. STA funds are reduced by $30,000 per year for a capital reserve fund.
3. Fare revenues increase substantially due to both increased service supply and ridership.
4. Local advertising revenues on buses and in bus shelters increases by $5,000 per year.

Figure 7-9 County Efficiency Revenues by Plan Year

County Efficiency Scenario	2015/16	2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Fare Revenue	**Budget**	**Efficiency**	**Efficiency**	**Efficiency**	**Efficiency**
Total fares	$ 148,044	$ 145,253	$ 157,128	$ 171,445	$ 180,961
Local and State					
Local Transportaton Fund	$ 535,638	$ 614,622	$ 769,942	$ 882,609	$ 899,539
State Transit Assistance	$ 225,810	$ 175,000	$ 180,000	$ 185,000	$ 190,000
LCTOP	$ 14,549	$ 14,985	$ 15,435	$ 15,898	$ 16,375
PTMISEA-minor equip.	$ 119,038				
County Reimbursement	$ 53,850	$ 55,466	$ 57,129	$ 58,843	$ 60,609
Toll Credits**		$ 53,754	$ 53,931	$ 55,330	$ 57,431
Advertising	$ 15,000	$ 20,000	$ 25,000	$ 30,000	$ 35,000
Other Local Revenue	$ 1,236	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Subtotal Local and State	$ 965,121	$ 934,827	$ 1,102,437	$ 1,228,681	$ 1,259,954
Federal					
FTA 5311	$ 256,520	$ 264,216	$ 272,142	$ 280,306	$ 288,716
FTA 5311 (f) Intercity	$ 56,350	$ 66,501	$ 66,720	$ 68,451	$ 71,050
Subtotal Federal	$ 312,870	$ 330,717	$ 338,863	$ 348,757	$ 359,766
Total	$ 1,426,035	$ 1,410,796	$ 1,598,428	$ 1,748,884	$ 1,800,682

**Based on Calaveras Intercity Feasibility Study

Transit First Scenario

In this financial scenario all LTF monies are utilized for transit purposes, starting in FY 2015/16. The scenario assumes that the administration of Calaveras Transit transitions to a new governing entity and organizational structure.

Service Supply

Figure 7-10 is a summary of the Transit First Scenario service supply showing the estimated vehicle service hours over the five year period.

Figure 7-10 Transit First Scenario: Service Supply in Vehicle Service Hours

	FY 2015/16 County Budg.	FY 2016/17 Transit First	FY 2017/18 Transit First	FY 2018/19 Transit First	FY 2019/20 Transit First
Route 1	4,277	9,036	9,036	9,954	9,954
Route 2	1,316	624	624	624	624
Route 3	946	1,229	1,229	1,433	1,433
Route 4	3,134	1,130	1,130	1,334	1,334
Route 5	528	624	936	936	936
Angels Camp DAR			2,008	2,008	2,008
Stockton Intercity	1,275	1,700	1,700	1,700	1,700
Total	11,475	14,343	16,663	17,989	17,989
Service Changes					
Reconfigured Route 1*		4,759			
Reconfigured 2 and 5*		(595)			
Stockton Intercity	1,275	425			
Burson Extension	400				
Angels Camp DAR			2,008		
Saturday Service 1,3,4				1,530	
Route 5 to 3 days/week			312		
Additional Run Stockton				Not Affordable	

*60 minute service between Valley Springs and Angeles Camp; 120 minute service to Columbia College; 180 minutes service to Rancho Calaveras and Burson

** Routes 2 and 5 to two days a week, three round trips per day. Budget includes

The following are the Transit First Scenario service supply changes:

FY 2015/16

- Intercity service to Stockton is estimated to start in September 2015. Vehicle service hours are adjusted from the Intercity Service Feasibility Study to reflect the estimated costs.
- A full year of Burson as a demand response service is assumed, and then transitions to a checkpoint Dial-A-Ride from FY 2016/17

FY 2016/17

- Route 1 is reconfigured with the following features:
  - 60-minute service between Valley Springs and Angels Camp
  - Scheduling is meant to have clock headways such that a Route 1 might arrive at the Government Center from Angels Camp at :10 after the hour and from Valley Springs at :40 after the hour. Service would be balanced in each direction and would serve all stops.
  - Route 1 would continue to Columbia College every two-hours.
  - Route 1 service to Rancho Calaveras and Burson every three hours.
- Route 4 becomes a feeder route to Route 1, with service every two hours.

- Route 3 has service to Jackson every two hours, with an extension to Sutter Creek possible depending on scheduling constraints.
- Route 2 and 5 are reduced to two days a week, but with convenient morning, midday and late afternoon service on the two days a week.

The budget includes additional subsidy money for volunteer driver reimbursement and subsidized taxi service for additional mobility options from Copperopolis and West Point areas. These would service as feeders to the 60-minute spine route.

FY 2017/18

- A new community Dial-A-Ride service is provided to the residents of Angels Camp from 8:00 am to 4:00 pm. The community Dial-A-Ride would serve both intracommunity trips and serve as feeder to the 60-minute service on Route 1.
- Route 5 to Copperopolis in this scenario has a positive ridership reaction two days a week service with convenient morning, midday and afternoon service and service is increased to three days a week.

FY 2018/19

Saturday service is introduced from 8:00 am to 4:00 pm on Routes 1, 3 and 4. This was the most important service improvement for passengers based on the passenger survey.

Operating Costs and Key Assumptions

In the Transit First Scenario, the recommended strategies from the maintenance and organizational assessment are fully implemented. A new governing entity takes over governance in order to address cost escalation issues in FY 2016/17.

The operations vendor fixed cost is maintained at FY 2013/14 levels and increased for inflation. All operations functions are incorporated into the operations vendor. Since dispatchers are already in place, no additional costs for the Angels Camp DAR are assumed. When Saturday service is added in FY 2018/19, an additional $25,000 in operations vendor fixed costs are assumed. The vendor assumes responsibility for maintenance in FY 2016/17 and the peer average maintenance cost per vehicle service mile is assumed. Start-up equipment costs for this transition are treated in the Capital Plan that is further detailed in Chapter 10.

The operations vendor variable costs are inflated at 3% per year. Based on the maintenance and operations assessment, no reduction in wage rates are assumed.

The Transit Manager position is assumed to be full-time for the first year of transition, but is reduced to a 50% position in subsequent years. Contract compliance and grant writing, and

board relations are primary functions of the transit manager. Overhead support is assumed at approximately $37,000 per year and inflated each year.

Per FTA 5311 regulations, preventive maintenance costs are capitalized starting in FY 2016/17, and the 5311 monies revenues for operating reflect this reduction in maintenance operating costs.

Figure 7-11 Transit First Scenario Operating Costs

Operating Costs: Transit First Scenario	FY 2015/16 County Trends	FY 2016/17 Transit First	FY 2017/18 Transit First	FY 2018/19 Transit First	FY 2019/20 Transit First
Operations Vendor Fixed Cost	$ 381,010	$ 349,079	$ 359,551	$ 384,551	$ 396,087
Operations Vendor Variable Cost	$ 381,794	$ 501,571	$ 611,862	$ 673,764	$ 687,239
Transit Manager Salary and Benefits	$ 107,701	$ 110,000	$ 55,000	$ 56,650	$ 58,350
Maintenance*	$ 175,000	$ 111,973	$ 122,626	$ 137,488	$ 141,613
Fuel and Oil	$ 179,002	$ 245,539	$ 274,122	$ 313,314	$ 328,980
Marketing	$ 16,236	$ 30,000	$ 20,000	$ 25,000	$ 30,000
Mobility Management Subsidy		$ 15,000	$ 18,000	$ 21,000	$ 24,000
Minor Equipment	$ 118,967	$ 23,735	$ 24,000	$ 25,000	$ 25,000
A-87	$ 25,427	$ -			
Governing Agency Support-Overhead	$ 35,562	$ 36,629	$ 37,728	$ 38,860	$ 40,025
Other Costs	$ 5,065	$ 5,000	$ 6,000	$ 7,000	$ 8,000
Total Costs	$ 1,425,764	$ 1,428,526	$ 1,528,888	$ 1,682,626	$ 1,739,294
* FTA 5311 Capitalize Preventive Maintennance Costs Starting in FY 2016/17					
Key Assumptions					
Vehicle Service Hours	11,226	14,343	16,663	17,989	17,989
Vehicle Service Miles	310,999	406,287	431,983	470,233	470,233
Operating Cost Per Vehicle Service Hour	$ 127.01	$ 99.60	$ 91.75	$ 93.54	$ 96.69
Minimum Standard Indexed for Inflation	$ 100.00	$ 102.00	$ 104.04	$ 106.12	$ 108.24
Target Standard Indexed for Inflation	$ 90.00	$ 91.80	$ 93.64	$ 95.51	$ 97.42
Operating Cost Per Vehicle Service Mile	$ 4.58	$ 3.52	$ 3.54	$ 3.58	$ 3.70
Contract variable cost	$ 34.01	$ 34.97	$ 36.72	$ 37.45	$ 38.20
Fuel Cost Per Vehicle Service Mile	$ 0.58	$ 0.60	$ 0.63	$ 0.67	$ 0.70
Contract Maintenance cost per VSM	$ 0.56	$ 0.55	$ 0.57	$ 0.58	$ 0.60

As shown at the bottom of the Figure 7-11 above, the operating cost per vehicle service hour decreases to $91.75 in FY 2017/18, which enables Calaveras Transit to achieve the target standards inflated for inflation of $93.64.

The shift in operational cost structure enables an increase in vehicle service hours by more than 5,000 vehicles service hours with just an increase of $100,000 in costs between FY 2015/16 and FY 2017/18.

LTF and STA Fund Allocations

The Transit First Scenario assumes that the service supply needs described above are all unmet needs that are reasonable to meet and all LTF monies start to be utilized for transit purposes in FY 2016/17.

The ¼ cent sales taxes are assumed to increase at 5% per year based on current forecasts. Interest accumulation is assumed at 1% per year, which is higher than currently, but historically below average.

The five-year average for the CCOG Administrative costs are assumed to be the five-year average over the past five years and increased at 3% per year.

The current policy for LTF operating reserves is assumed to increase from 10% to 20% of the annual allocation; therefore $20,000 per year is set aside to increase the operating reserve.

There is a significant front-end capital purchase in FY 2015/16, and therefore it is necessary to put aside some funding in a capital reserve fund to at least provide matching funds. A $30,000 set aside in STA funds per year over the five year SRTP planning horizon would accumulate $150,000 in funds that could be utilized to match CMAQ, STIP, FTA 5311(f) (for intercity service) or other funding source established in the hoped for 6-year federal reauthorization.

Figure 7-12 shows how LTF and STA funds are allocated over the next five years. The amount of LTF funds allocated for transit doubles from the budgeted amount of $535,000 in FY 2015/16 to $1,002,000 in FY 2019/20. The new LTF monies continue to grow at the rate of 5.5% per year. Streets and Roads allocations are discontinued starting in FY 2016/17 and all monies are utilized for transit purposes.

Figure 7-12 Transit First LTF and STA Allocations

Transit First Scenario	**FY 2015/16**	**FY 2016/17**	**FY 2017/18**	**FY 2018/19**	**FY 2019/20**
Unapportioned Fund Balance	$ 635,037	$ 421,367	$ 348,937	$ 239,742	$ 54,191
1/4 cents sales tax new	$ 884,194	$ 928,404	$ 956,256	$ 984,943	$ 1,014,492
Interest	$ 2,000	$ 9,284	$ 9,563	$ 9,849	$ 10,145
Total LTF Available	$ 1,521,231	$ 1,359,054	$ 1,314,755	$ 1,234,535	$ 1,078,828
Minus prior year obligations	-216058				
Actual LTF available	$ 1,305,173	$ 1,359,054	$ 1,314,755	$ 1,234,535	$ 1,078,828
LTF Allocations					
Off the Top					
Bike and Peds 2%	$ 17,684	$ 18,568	$ 19,125	$ 19,699	$ 20,290
CCOG Admin 5 year average	$ 160,485	$ 165,299	$ 170,258	$ 175,366	$ 180,627
LTF Operating Reserve 20%)	$ 20,000	$ 20,000	$ 20,000	$ 20,000	
Available for annual app	$ 1,107,005	$ 1,155,187	$ 1,105,372	$ 1,019,470	$ 877,911
Transit Operating	$ 535,638	$ 806,250	$ 865,629	$ 965,279	$ 1,002,338
Streets and Road	$ 150,000				
STA Apportionment	$ 210,000	$ 205,000	$ 210,000	$ 215,000	$ 220,000
STA Operating	$ 180,000	$ 175,000	$ 180,000	$ 185,000	$ 190,000
STA Capital Reserve	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000

While this scenario is feasible over the first four years of the planning horizon, it is not financially sustainable starting in FY 2019/20. The expansion of service is at too aggressive of a pace. This is an important consideration in the recommended service plan in the next chapter.

Operating Revenues and Key Assumptions

Exhibit 7-13 shows the estimated operating revenues under the Transit First Scenario.

The total fares utilize average fare for the existing routes, with Route 1 adjusted downward to account for increased service levels. It is not known how the double counting of existing trips on Routes 1 and 4 will affect the average fare, but it should actually increase if the double counting is accounted for.

The Intercity Feasibility Study assumptions are utilized for both fares and include the use of Toll Credits for matching funds for FTA 5311(f) funding. If Toll Credits turn out not to be available, then some of the service supply service improvements in FY 2017/18 would need to be re-evaluated.

State Transit Assistance funds are forecast to decrease in the short run, but should begin to increase back to recent levels by FY 2019/20.

Figure 7-13 Transit First Scenario Operating Revenues

Fare Revenue	2015/16 Budget	2016/17 Transit First	FY 2017/18 Transit First	FY 2018/19 Transit First	FY 2019/20 Transit First
Total fares	$ 148,044	$ 157,125	$ 172,091	$ 188,697	$ 192,633
Local and State	$ -				
Local Transportaton Fund	$ 535,638	$ 806,250	$ 865,629	$ 965,279	$ 1,002,338
State Transit Assistance	$ 225,810	$ 175,000	$ 180,000	$ 185,000	$ 190,000
LCTOP	$ 14,549	$ 15,000	$ 15,450	$ 15,450	$ 15,450
PTMISEA-minor equip.	$ 119,038				
County Reimbursement	$ 53,850				
Toll Credits**		$ 53,754	$ 53,931	$ 55,330	$ 57,431
Advertising	$ 15,000	$ 20,000	$ 25,000	$ 30,000	$ 35,000
Other Local Revenue	$ 1,236	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Subtotal Local and State	$ 965,121	$ 1,071,005	$ 1,141,011	$ 1,252,060	$ 1,301,219
Federal	$ -				
FTA 5311*	$ 256,520	$ 133,894	$ 149,285	$ 142,118	$ 145,689
FTA 5311 (f) Intercity	$ 56,350	$ 66,501	$ 66,501	$ 99,752	$ 99,752
Subtotal Federal	$ 312,870	$ 200,395	$ 215,787	$ 241,870	$ 245,441
Total	$ 1,426,035	$ 1,428,526	$ 1,528,888	$ 1,682,626	$ 1,739,294

* In FY 2016/17, 50% of maintenance costs are capitalized for maintenance.

**Based on Calaveras Intercity Feasibility Study

Summary of Financial Scenario Implications

The three financial scenarios provide a reasonable range of financial outcomes over the next five years. The Budget Trend Scenario and County Efficiency Scenario assume that the Calaveras County Public Works continues to manage Calaveras Transit. The Transit First Scenario assumes that the Calaveras Transit Agency administers Calaveras Transit. Figure 7-14 summarizes the supply of the public transportation services that is feasible, the operating costs, ridership forecasts, and fare revenue estimates from the three scenarios. Estimated performance standards for the three scenarios are projected.

Figure 7-14 Summary of Financial Scenarios

	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Base Statistic				
Vehicle Servics Hours				
Budget Trends	11,342	11,342	11,342	11,342
County Efficiency	13,094	15,414	16,944	16,944
Transit First	14,343	16,663	17,989	17,989
Operating Costs				
Budget Trends	$ 1,417,229	$ 1,469,390	$ 1,526,664	$ 1,586,302
County Efficiency	$ 1,410,796	$ 1,598,428	$ 1,748,884	$ 1,800,682
Transit First	$ 1,428,526	$ 1,528,888	$ 1,682,626	$ 1,739,294
Fare Revenues				
Budget Trends	$ 134,527	$ 134,920	$ 135,313	$ 135,706
County Efficiency	$ 145,253	$ 157,128	$ 171,445	$ 180,961
Transit First	$ 157,125	$ 172,091	$ 188,697	$ 192,633
Ridership				
Budget Trends	67,941	67,837	67,734	67,630
County Efficiency	71,652	74,930	87,669	90,004
Transit First	82,397	90,944	102,628	105,172
Performance Statistics				
Cost Per Vehicle Service Hour				
Budget Trends	$ 124.95	$ 129.55	$ 134.60	$ 139.86
County Efficiency	$ 107.74	$ 103.70	$ 103.21	$ 106.27
Transit First	$ 99.60	$ 91.75	$ 93.54	$ 96.69
Passengers Per Vehicle Service Hour				
Budget Trends	5.99	5.98	5.97	5.96
County Efficiency	5.47	4.86	5.17	5.31
Transit First	5.74	5.46	5.71	5.85
Farebox Recovery Ratio				
Budget Trends	9.5%	9.2%	8.9%	8.6%
County Efficiency	10.3%	9.8%	9.8%	10.0%
Transit First	11.0%	11.3%	11.2%	11.1%

The implications of the above table are substantial. The most important conclusions are the following:

Calaveras Transit has the financial resources to provide significantly more vehicle service hours than it is currently providing. The implementation of the Stockton service and scaling back Routes 2 and 5 to two day a week service will increase vehicle service hours to about 11,350. Under the County Efficiency Scenario which essentially fully implements the recommendations of the Maintenance and Organizational Analysis, under County management, the number of vehicle service hours could increase to almost 17,000 vehicle service hours. This includes upgrading the spine route between Valley Springs and Angels to consistent 90-minute service, implementing a new Dial-A-Ride service, and Saturday services on Routes 1, 3 and 4. The revamped service structure to a spine and feeder service would significantly improve service to Calaveras County residents who rely on public transportation for their mobility needs. It retains mobility services to most areas of Calaveras County, but on a significantly more cost efficient basis. The Transit First Scenario indicates that a new Calaveras Transit Agency has the capability of providing even more service with almost 18,000 vehicle service hours, including 60-minute service along the spine between Valley Springs and Angels Camp during peak periods.

The operating costs of the three scenarios in FY 2016/17 are almost identical at about $1.4 million. As discussed in great detail in previous pages, the breakdown and allocation of costs vary significantly in each of the three scenarios. In the County Efficiency and Transit First scenarios, strategies to reduce costs as identified in the Maintenance and Organizational Assessment are fully implemented to bring the cost structure in line with peer averages. There are many difficult management decisions required, but under both scenarios, costs can be allocated significantly more efficiently than in the Budget Trends scenario, the status quo.

Expanding service to provide more convenient service for the customer with more cost effective service delivery will lower the operating cost per vehicle service hour significantly in both the County Efficiency and Transit First scenarios. In FY 2017/18, when all the cost-efficiency measures have been fully implemented and new operations or operations and maintenance contracts are in place, the Budget Trends scenario has the operating cost per vehicle hour at $129.55 while the County Efficiency Scenario is able to lower the cost per vehicle hour to $103.70. The Transit First Scenario is even more cost-effective at $91.75 per vehicle service hour. It is recognized that the scenarios are based on a series of assumptions that are well documented above. The purpose of the scenarios is to show the feasible range of what the possible financial outcome could be under different management decisions. The main differences in costs are explained in contract operations fixed costs and the overall management costs of Calaveras Transit. As discussed in significantly more detail in the Maintenance and Organizational Assessment that is included in Appendix A, there is a significant amount of slack capacity in the current operations contract to accommodate new services including the Stockton Intercity service, a new dial-a-ride service, a new checkpoint Dial-A-Ride feeder service in

Copperopolis, Mountain Ranch and West Point. Both the County Efficiency and Transit First scenarios assume that the contractor fixed costs only increase at the rate of inflation with the only exception being adding additional contractor fixed costs a Saturday dispatcher when Saturday services are implemented. A second key variable are the cost and benefits of a full-time Transit Manager. With a full-time contract manager, in both the County Efficiency and Transit First scenarios, the Transit Manager transitions to a .5 FTE position responsible for contractor administration, grants, compliance, and Board relations. In the Budget Trends Scenario, the County Transit Manager remains a full-time position over the five-year planning horizon, and the contractor fixed costs continue to escalate based on the 2015/16 budget. In both the County Efficiency and Transit First scenarios, the cost efficiency savings are utilized for additional services for the Calaveras Transit customer.

In the Transit First Scenario, Calaveras Transit is able to increase ridership to reach the annual 100,000 passenger trip threshold. This is primarily a function of increased vehicle service hours that generate additional ridership. In the County Efficiency Scenario, it is forecast that ridership should be able to increase substantially to 90,000 annual passengers over a five-year period. It should be noted that the systemwide productivity as measured in passengers per vehicle service hour in the both the County Efficiency and Transit First scenarios is lower than the Budget Trends Scenario. There are two primary explanations for this. The first is that the recommended new Dial-A-Ride service that is implemented in the two scenarios has lower productivity than the existing fixed route service, bringing down systemwide productivity. The second reason is that it is quite typical to see a short-term drop in productivity when service improvements like the consistent 90-minute and 60-minute service implemented in the two scenarios. In the short-term, the demand elasticity is typically at 50% of the ridership for each new vehicle service hour, but should slowly climb to reach the average productivity along the spine between Valley Springs and Angels Camp. The elimination of double counting along the spine and then connecting to Columbia College will reduce overall productivity. Finally, across all scenarios, the longer distance Stockton service is expected to have lower passengers per vehicle service hour than the existing Calaveras Transit service, and this will reduce overall productivity compared to the systemwide productivity in FY 2014/15.

Finally, the farebox recovery ratio in the Transit First Scenario in FY 2017/18 is expected to be 11.3% compared to 9.2% for the Budget Trends Scenario. All scenarios are dependent on the achievement of ridership and farebox recovery projections for the Stockton Intercity service. In the County Efficiency and Transit First scenarios, the expected low farebox recovery of the new Dial-A-Ride service has a dampening effect on the farebox recovery ration. However, if the Stockton Intercity service is successful, and the ridership response to the improved service level on the spine is reasonable, then increasing fares will not be necessary during the five year planning horizon. In particular, if the Stockton service does not achieve the average fare as projected, there would likely be a need to increase fares by FY 2018/19.

One key conclusion of the scenario development is that the use of LTF monies for streets and roads purposes will most likely no longer be possible at end of the five year planning horizon. Figure 7-15 below shows the amount of LTF funds that are utilized for transit and streets and roads purposes over the five-year planning horizon by scenario. In the Budget Trends Scenario, the maximum amount of the money for streets and roads is utilized. Due to cost increases however, the need for the utilization of streets and roads purposes gradually declines to just $25,000 per year in FY 2019/20. In the County Efficiency Scenario, there is streets and roads monies available in the first three years of the planning horizon, but with the implementation of Saturday service in FY 2018/19, there is no longer money available for streets and roads. In the Transit First scenario, the policy would be to utilize LTF monies for only transit purposes after the current fiscal year.

Figure 7-15 Transit And Streets and Roads Claims by Scenario

Budget Trends Scenario	**FY 2015/16**	**FY 2016/17**	**FY 2017/18**	**FY 2018/19**	**FY 2019/20**
Transit	$ 535,638	$ 655,534	$ 691,642	$ 731,044	$ 771,622
Streets and Road	$ 250,000	$ 225,000	$ 150,000	$ 100,000	$ 25,000
County Efficiency Scenario					
Transit	$ 460,478	$ 614,622	$ 769,942	$ 882,609	$ 899,539
Streets and Roads	$ 250,000	$ 125,000	$ 50,000	$ -	$ -
Transit First Scenario					
Transit	$ 535,638	$ 831,325	$ 815,411	$ 981,275	$ 1,015,594
Streets and Road	$ 150,000	$ -	$ -	$ -	$ -

In the recommended service in the next chapter, a balanced approach was selected in expanding service such that the recommended changes in organizational structure and cost efficiency could take place before expanding service that might not be sustainable if the cost efficiency assumptions are not achieved in reality. The Transit First Scenario should be thought of as a longer term vision, and while most elements are possible in the short-term, full implementation of the scenario would be financially risky and is not recommended for implementation over the next five years. The recommendations in the service plan in the next chapter are based on ensuring long-term financial sustainability of Calaveras Transit.

8. Recommended Service Plan

The following is the recommended service plan between FY 2015/16 and FY 2019/20 for Calaveras Transit. Chapter 7 provided the feasible financial framework with the three financial scenarios. Because the financial scenarios are based on a series of financial assumptions also documented in Chapter 7, a conservative stepwise approach is utilized to improve Calaveras Transit's service delivery. The pace of service improvements would likely be altered if the Calaveras Council of Governments and Calaveras Board of Supervisors decides to keep the management of Calaveras Transit with the Calaveras County Department of Public Works.

The recommended service plan is driven by the desire to achieve the goals and target performance standards provided in Chapter 4. Steps necessary to achieve the minimum recommended performance standards for the cost efficiency measures cost per vehicle service hour are dependent on management decisions and organizational leadership. The following recommended service plan assumes that management actions are taken to achieve the cost efficiency minimum performance standards. As illustrated in Chapter 7, both the "County Efficiency" and "Transit First" financial scenarios are able to achieve the minimum performance standards over the five-year planning horizon if recommended management actions are taken as discussed in previous chapters.

Recommended Spine/Feeder Route System Vision

The following is an overview of the Calaveras Transit service that could take five years to develop and financially sustain. The service plan envisions seven levels of an integrated spine and feeder transit system:

1. Develop a spine fixed route between Demarest/49 in Angels Camp and Daphne St. in Valley Springs, with buses every hour between 7 am and 6 pm with 90 minute service on the shoulders starting at 5:30 am and ending at 8 pm on weekdays. The spine route is the primary segment of existing Route 1. Saturday service on the spine route would be operated between 8 am and 6 pm with 90-minute service.
2. Provide flex route feeder services to spine Route 1 from Arnold, Rancho Calaveras, and the Sutter Creek Transit Center five days a week, every three hours between 7 am and 6 pm. Flex route requests for a pick-up or drop-off within ¾ mile of the feeder route would only be available to eligible ADA Paratransit individuals. The ridership statistics indicate that these flex-route feeder services to the spine route can operate 5 days weeks and achieve minimum performance standards. A hallmark of the service plan is to match service methods and service levels to projected demand levels. Ideally, the feeder flex routes would operate every two hours, but this is not financially sustainable over the next five years.

3. Provide five day a week general public Dial-Ride in Angels Camp for local Angels Camp travel, and as a feeder bus to and from the spine and feeder fixed route buses between 8 am and 4 pm. The Dial-a-Ride bus would also serve ADA Paratransit eligible individuals along the spine corridor and would operate 7 am to 8 am and 4 pm to 8 pm only if an ADA Paratransit eligible passenger requests a next day trip. Eligible trips for ADA Paratransit eligible individuals would be origins and destinations within ¾ mile of the spine route 1 between Angels Camp and Valley Springs.
4. Provide general public checkpoint Dial-a-Ride two or three days a week from Copperopolis, Mountain Ranch, Burson and West Point, depending on demonstrated demand. See Chapter 6 for a full description and example of checkpoint Dial-a-Ride.
5. Provide intercity service between San Andreas, Rancho Calaveras and Stockton with two trips per day in each direction. Ideally, this would be expanded to three trips per day in each direction, but is currently not affordable in the five-year financial plan.
6. In partnership with the tourism industry, develop a fixed route service that provides alternatives to driving between hotels and tourist destinations.
7. Provide supplementary volunteer driver mileage reimbursement and taxi vouchers to eligible seniors and persons with disabilities. This was discussed in Chapter 6, but is not included in the service plan in this chapter. A budget line item is included in the financial plan in Chapter 10.

Chapter 7's financial scenarios demonstrated that service types 1 through 5 above are all financially feasible within the next five years. The service plan requires the use of all Local Transportation Funds (LTF) for transit purposes in order to meet the transit needs that are reasonable to meet in Calaveras County. LTF Funds are to be utilized for public transportation if the service meets an unmet need that is reasonable to meet. The spine service improvements to 60 minute service is estimated to generate sufficient ridership and fare revenue to meet the reasonable to meet criteria.

Expansion of the intercity service to Stockton beyond the two round trips daily to be implemented in September 2015, the tourism route and taxi voucher program may need additional funding commitments in order to be financially sustainable.

Service Plan Priorities

The following are the priorities for developing public transportation service in Calaveras County. The recommended priorities provide guidance to Calaveras Transit management in working towards the achievement of the service plan vision articulated above.

Spine Route 1 Priorities

Achieving 60-minute regular weekday bus service between Valley Springs and Angels Camp is the top priority for service development of Calaveras Transit. However, this is only achievable if cost efficiency minimum performance standards are achieved and sustained. The

recommended phasing plan is to implement 90-minute service while the recommended organizational change is being implemented in order to ensure that the projected cost efficiency benefits are realized before embarking on the 60-minute service during peak demand periods. This also includes a new contract with an operations and maintenance vendor to operate Calaveras Transit when the fixed and variable costs are known over a five-year period. For service consistency and reliability along the spine, it is recommended that Route 1 between Valley Springs and Angels Camp operate on a fixed route and fixed schedule basis, meaning that the spine would require ADA Complementary Paratransit service which is addressed below.

It is recommended that consistent 90 minute service along the spine Route 1 between Valley Springs and Angels Camp be implemented in FY 2016/17. If cost efficiencies are indeed realized based on the assumptions in Chapter 7, then service on the spine between Angels Camp and Valley Springs would be upgraded to every 60 minutes during four hours of the peak period of demand in FY 2018/19. Saturday service on the spine route would be implemented in FY 2018/19.

The following are priorities for the spine route or Route 1 between Valley Springs and Angels Camp:

1. 60-minute fixed route bus weekday service between Valley Springs and Angels Camp
2. 90-minute fixed route bus service between Valley Springs and Angels Camp
3. Status Quo weekday service between Valley Springs and Angels Camp
4. Saturday service between Valley Springs and Angels Camp operated in a flex-route manner

Spine Extension to Columbia College Priorities

Service between Angels Camp and Columbia College is currently provided four times daily. A single seat ride on Routes 1 and 4 is currently available from Valley Springs to Columbia College on all four trips in the southbound direction and on three of the trips in the northbound direction. It is recommended that the segment to and from Columbia College from Angels Camp, currently Route 4, be renamed as part of Route 1 because this how the bus is operated and how regular riders understand the operation of the system. It shifts vehicle service hours from Route 4 to Route 1.

The current schedule between Angels Camp and Columbia College operates essentially every three hours in both directions, with five trips provided daily in each direction. As noted earlier in Chapter 3, there currently is some overcrowding of buses to Columbia College. The long-term vision is to have buses operate every two hours to Columbia College in the morning and every two hours in the afternoon from Columbia College when classes are in session. When Columbia College is not in session, it still is important to connect to the Tuolumne Transit at Columbia College and the status quo schedule works well for this.

There has been speculation that once the twice daily service to Stockton and Delta College is implemented, it could diminish the ridership to and from Columbia College. The hypothesis by some is that more community college students living in Valley Springs and Rancho Calaveras without access to a car will choose to attend Delta College rather than commuting to Columbia College. The potential ridership dynamics of enrollment in Delta versus Columbia College is not known at this time, and will only be known after the new Stockton service is in place for a full year or more. The following service options were considered:

1a. Provide two service runs between Angels Camp and Columbia College when school is in session, or if ridership response to Delta College is greater

1b. Add a third run between Delta College and Valley Springs

2. Keep the status quo schedule on Routes 1 and 4

It is the recommendation to keep the status quo schedule between Angels Camp and Columbia College at this time. The hypothesis is that the Stockton service to Delta College will reduce demand to Columbia College enough to reduce the need for service expansion to Columbia College. This could be re-evaluated after ridership data is available after the Stockton Intercity service is in place for over a year.

Exhibit 8-1 shows the spine Route 1 with extensions to Columbia College and Rancho Calaveras at less frequency than the spine route between Valley Springs and Angels Camp. The service between Valley Springs and Rancho Calaveras would be operated as a flex-route as it is currently operated.

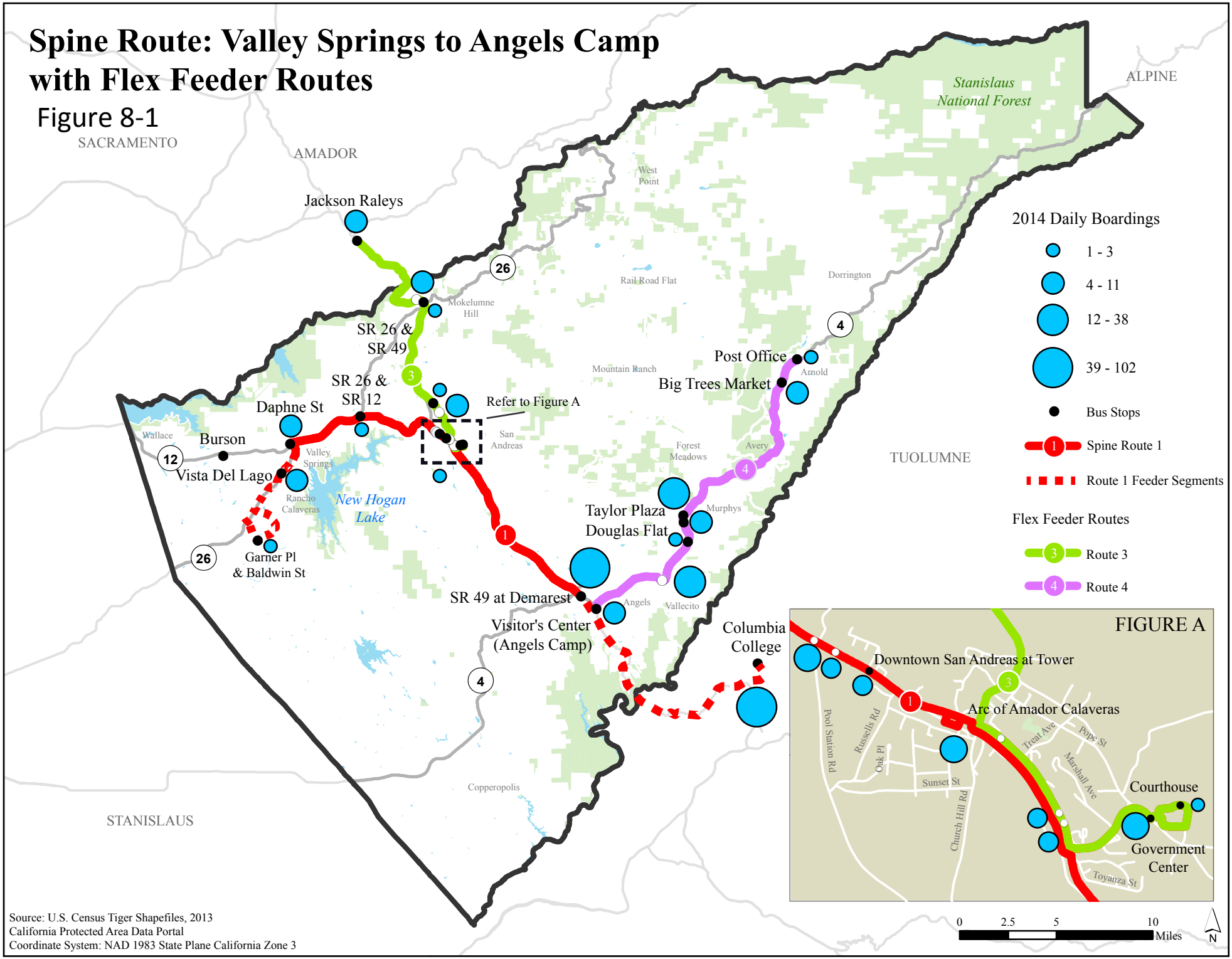
Dial-a-Ride and ADA Paratransit Service

A new Dial-a-Ride service is recommended for implementation in FY 2016/17. The Dial-a-Ride would serve four functions in the following priority order:

1. Provide required Complementary ADA Paratransit service to the upgraded consistent 90 minute service on Route 1 between Valley Springs and Columbia College. This requires that a Dial-a-Ride service be provided for origins and destinations within ¾ mile of the route during the same hours as Route 1 is operated. Reservations are required for "next day service," which means that an ADA Paratransit eligible individual must make a reservation in advance up to 5:00 pm for service the next day. This enables the dispatcher to schedule the advanced reservations and enable the two other priorities for the Dial-a-Ride service to be accommodated. Reservations up to 7 days in advance are recommended. Reservations by ADA Paratransit individuals would receive priority. Chapter 6 provides more details on the requirements of Complementary ADA Paratransit.

Spine Route: Valley Springs to Angels Camp with Flex Feeder Routes

Figure 8-1



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System: NAD 1983 State Plane California Zone 3

2. Next day advanced reservations for general public Dial-a-Ride within the City limits of Angels Camp for feeder service to the Demarest and 49 transfer center for connections to Route 1 and Route 4.
3. The third priority would be advanced reservations for next day trip for origins and destinations within the City of Angels Camp.
4. Same day service within the City of Angels Camp on a space available basis.

Requiring advanced reservations and scheduling trips in advance enables greater productivity. Allowing same day service on a space available basis allows dispatchers to fill seat when they can.

Flex-Route Feeder Services

Three flex-route feeder services are recommended for five day a week service. Route 4 currently has service to and from Arnold and Columbia College. The service plan recommendation is have Route 4 be a feeder flex route between Arnold and Angles Camp on weekdays. Service between Arnold and SR 49 & Demarest are currently operated 5 times a day between 6:12 am and 7:32 pm. Buses operate approximately every three hours. The vision would be to operate service every two hours on weekdays with timed transfers to and from the spine Route 1, serving every other Route 1 trip as well as destinations in Angels Camp. The vision for two hours service is not affordable in five-year financial plan and is therefore not recommended in the service plan.

On weekends, if a partnership with the tourism industry turns out be feasible, a special weekend route with better service to Murphy's and Angels Camp tourist destinations could be designed to serve this market segment.

Route 3 provides services between San Andreas and Jackson. It operates three times a day in each direction with two trips in the morning and one mid-afternoon trip from the Government Center to the Jackson Raleys, and from the Jackson Raleys once in the morning and twice in the afternoon. The 10:40 am run from the Government Center arrives to Raleys at 11:15 and does not depart until Noon (the driver takes a lunch break), enabling passengers to grocery shop for 45 minutes before departing back to the Government Center. The vision is to extend this route to the Sutter Creek Transit Center, where better connections are available to Amador Transit, including the intercity connection to Sacramento and the Sacramento Airport. The extension of service was not sustainable financially compared to the priorities of implementing Saturday service on the Spine route and improving service levels on the Spine Route to 60 minutes during peak demand periods

The extension of Route 1 service to Rancho Calaveras is provided five times a day in each direction on a flex-route basis. Service is provided on irregular intervals, but is provided approximately every three hours. Over a five-year period, ridership growth may or may not justify increasing the frequency. The five-year vision is that ridership demand levels increase

such that service every two hours is provided. However, ridership trends do not justify additional service levels and the average three hour service level is recommended to be retained over the next five years.

Checkpoint Dial-a-Ride Feeder in Low Demand Areas

Checkpoint Dial-a-Ride services two days a week would be provided to the low demand areas of Copperopolis, Mountain Ranch, West Point and Burson if warranted and if it achieves minimum performance standards for the current on-demand service. A full description of the checkpoint Dial-a-Ride concept was detailed in Chapter 6.

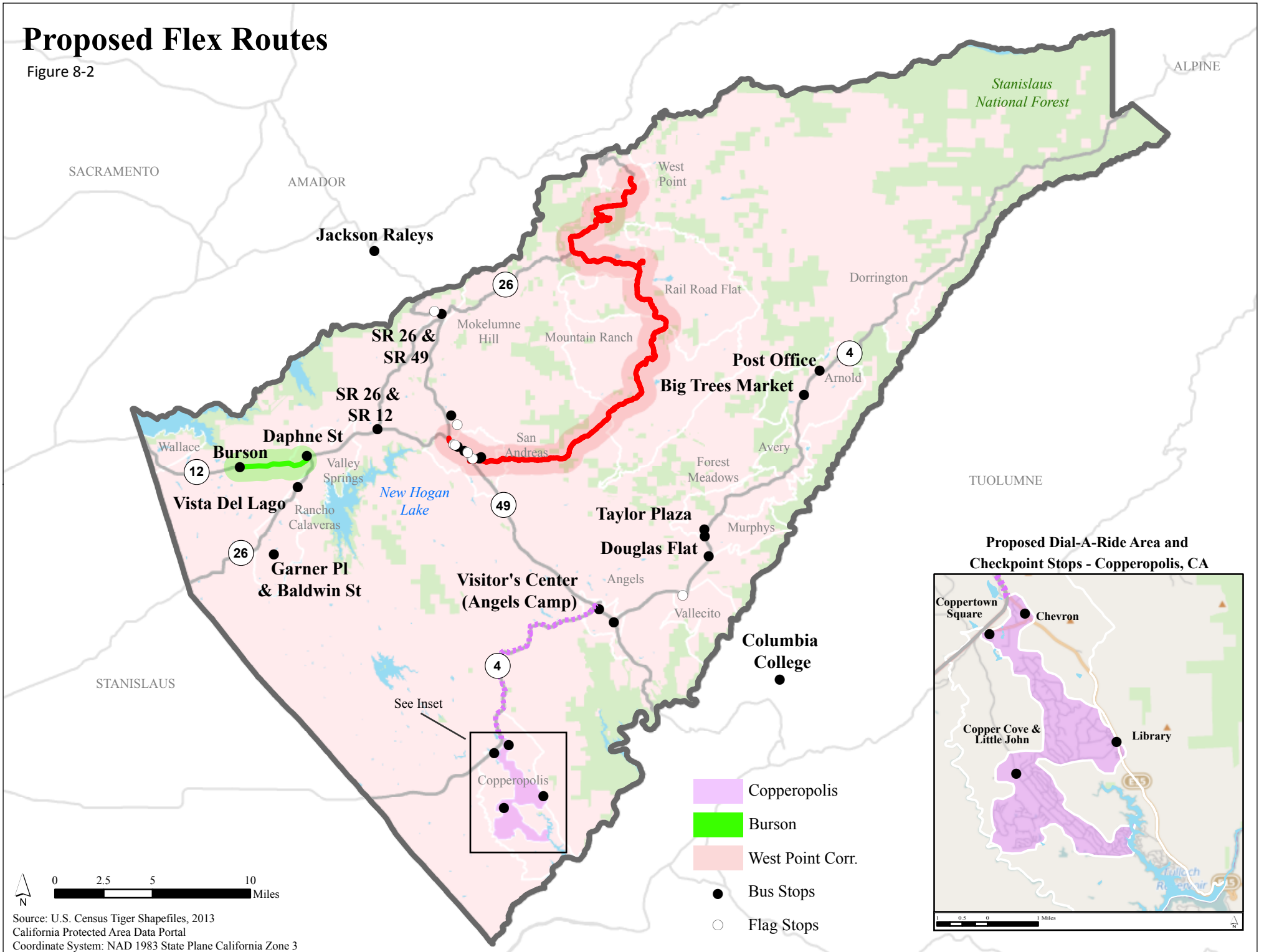
It is recommended that Routes 2 and 5 transition to a checkpoint Dial-a-Ride two days a week in FY 2016/17. Three trips in each direction would serve regular bus stops on a regular schedule in each direction in the morning, midday and early afternoon, similar to the current schedule from the Government Center to Jackson. The schedule would allow passengers to make convenient shopping, errand, medical, or recreational trips from the outlying areas to San Andreas in the case of Mountain Ranch and West Point, and Angels Camp in case of Copperopolis. Passengers could also take the first morning bus and utilize the spine route to take care of business and then return on the last bus.

With a Checkpoint Dial-a-Ride, the bus stops at bus stops within 10 minutes of a scheduled time, but also are able to pick up passengers on a Dial-a-Ride basis within a defined area. The proposed checkpoint Dial-a-Ride area for the checkpoint service is shown in Figure 8-2.

The financial plan does not include a checkpoint Dial-a-Ride for Burson based on the early reports of extremely low ridership. However, this could easily change with increased promotion.

Proposed Flex Routes

Figure 8-2



Proposed Dial-A-Ride Area and Checkpoint Stops - Copperopolis, CA

Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System: NAD 1983 State Plane California Zone 3

A system map is shown in Figure 8-3 and shows the spine route 1, flex feeder routes 3 and 4, and checkpoint Dial-a-Ride feeder services from low demand areas of Cooperopolis, Mountain Ranch, and West Point to the Spine. The proposed Dial-a-Ride service area is also shown as a ¾ mile buffer on Route 1 from Valley Springs and the City limits of Angles Camp.

Fare Policy

Based on the financial scenarios, there is not a need to increase fares in either the County Efficiency or Transit First Scenarios. The recommended service plan described above is estimated to keep the farebox recovery ratio above the minimum 10% farebox recovery with the existing fares through FY 2019/20. This is further documented in Chapter 10.

There is a need to establish a fare for the proposed checkpoint Dial-A-Ride that would replace Routes 2 and 5 as well as the Dial-A-Ride service for City of Angels Camp residents and ADA Paratransit individuals. For the two day a week checkpoint dial-a-ride services to Copperopolis and West Point, since these feeder services would replace Routes 2 and 5, the fare policy should keep fares equivalent to the existing flex-route service, with cash fares being $2.00 for a one-way trip for regular fares and $1.00 for discounted fares. The same 15-ride ticket books would also be available.

For the Dial-A-Ride and ADA Paratransit Service, ADA Paratransit regulations allow up to twice the base cash fare, allowing a fare up to $4.00 for a local one-way trip and up to $0.50 for a zone change. Dial-A-Ride is a premium service picking people up at the curb of their origin and dropping individuals at the curb at the destination end. It is more expensive to operate. For City of Angels Camp residents, the Dial-A-Ride option is essentially feeder service. It will be important to keep fares generally reasonable to enable sufficient ridership. The recommended cash fare for the Dial-A-Ride is $3.00 for the general public and $1.50 for seniors 65 and older and ADA Paratransit eligible individuals. For zones requiring multiple zone for ADA Paratransit individuals, the zone fare would be $0.35 per zone. 15-ride ticket books would be sold for $42 for the general public and $21 for ADA Paratransit eligible individuals and seniors 65+.

As discussed earlier in Chapter 2, there is a need to adopt a policy of accommodating individuals with hidden disabilities. If the individual is eligible for ADA Paratransit services, then the individual should be able to purchase a 15-ride ticket book or monthly pass at the discounted rate. Cash fares would be accepted for flex-routes at the discount rate when the passenger shows the driver an ADA Paratransit eligibility card. Since there are many individuals with hidden disabilities who may not be eligible for ADA Paratransit, It recommended that Calaveras Transit develop a partnership with agencies such as the County Department of Behavioral Health. The partnership would enable the social service agency to conduct the necessary screening on who is eligible for discount passes. The details on how authorization is provided should be developed in simple memorandum of understanding. Ideally, Calaveras Transit would provide the tickets and passes on a consignment basis to the social service agency. Therefore, if

the Department of Behavioral Health wanted to purchase 100 ticket books, they would be issued to Department of Behavioral Health on a consignment basis. The details of payment would be addressed in the Memorandum of Understanding. The Memorandum of Understanding could also specify that individuals sign an agreement with the social service agency that the ticket books or passes are only to be utilized by individuals issued the ticket books and they are not transferrable. This is only an example, as the Memorandum of Understanding Is the mean to be flexible to adapt to the needs of the social service agency and the individuals they serve.

Service Plan Phasing and Action Plan

The following is the recommended phasing for the service plan. Adjustments in timing will likely need to be made based on the difference in projected costs compared to actual costs if the recommendation to change the recommended management from the Calaveras County Department of Public Works to the Calaveras Transit Agency is adopted.

FY 2015/16

- Implement Stockton Intercity Service
- Evaluate first full year of Burson Service to determine whether it's reaching minimum performance standards for a Dial-a-Ride service.
- Collect data on Route 1/4 ridership to eliminate passenger double counting. Adjust minimum and target performance standards accordingly.
- Monitor performance

FY 2016/17

- Implement consistent 90 minute fixed service on Spine Route 1 in both directions
- Incorporate existing Route 4 segment from Angels Camp to Columbia College as part of Route 1
- Implement Dial-a-Ride service in Angels Camp/ADA Paratransit for Route 1 Corridor
- Implement checkpoint Dial-a-Ride in Cooperopolis, Mountain Ranch/West Point corridors two days per week. Evaluate whether there is sufficient ridership to continue service to Burson as checkpoint Dial-a-Ride.
- Introduce Dial-a-Ride/ADA Paratransit/Checkpoint fares
- Rewrite Calaveras Transit schedule and develop run cuts to integrate existing Flex Routes 3 and 4 feeder service into Spine Route 1. Integrate checkpoint Dial-a-Ride schedule to ensure seamless transfers with the spine route.
- Implement Volunteer Driver mileage reimbursement program
- Monitor performance

FY 2017/18

- Increase checkpoint Dial-A-Ride service to Copperopolis three days a week.

- Monitor performance minimum performance standards

FY 2018/19

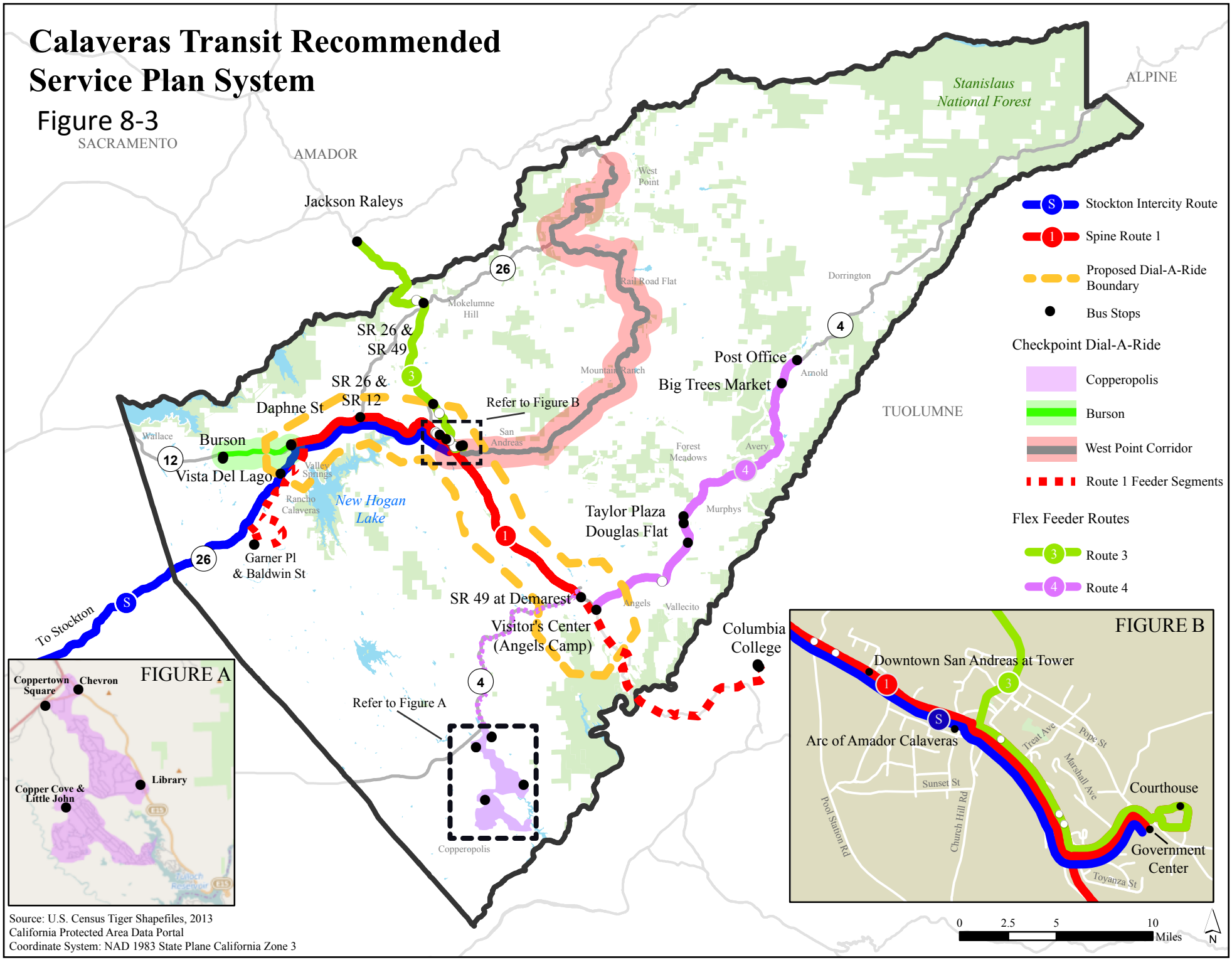
- Implement 60 minute service on Spine route between Angels Camp and Valley Springs during four peak periods
- Implement Saturday service on Route 1
- Monitor performance

System Map of Recommend Service Plan

Figure 8-3 is a map of the recommended service changes through FY 2019/20

Calaveras Transit Recommended Service Plan System

Figure 8-3



Source: U.S. Census Tiger Shapefiles, 2013
California Protected Area Data Portal
Coordinate System: NAD 1983 State Plane California Zone 3

9. Marketing Assessment and Recommendations

Marketing and passenger information are critical partners to good service planning. Without effective marketing, the best kept service will not enjoy maximum ridership. Conversely, no amount of marketing can sell a service that does not meet passenger's needs.

Calaveras Transit already provides a service that passengers rate as reliable and courteous. This SRTP includes key strategies for enhancing the convenience and value of the system to both current and potential riders. This chapter will offer marketing strategies to support those service improvements.

This market assessment and marketing recommendations for Calaveras Transit are based on the following sources of information:

- Passenger experience review conducted on all routes.
- A review of current marketing tools – specifically Calaveras Transit's on-street presence, signage, passenger guide and website.
- Interviews with stakeholders for key target populations.
- On-board survey of existing passengers.
- Consultant's experience with rural transit systems throughout California and the US.

This chapter is organized into three sections:

- Marketing Objectives
- Target Markets
- Current and Potential Marketing Strategies

Marketing Objectives

The primary goal of the Calaveras Transit marketing program is to increase ridership and productivity of the transit services. In pursuit of this goal, there are four specific objectives which should guide marketing efforts.

Maintain Visibility and Build Awareness of the Transit System and Services

Calaveras Transit has strong visibility for its core services, but awareness for service specifics needs to be strengthened. Continued use of consistent branding on buses and bus stops will help to maintain visibility while outreach efforts will increase awareness.

Enhance Ease of Use of Transit Services

The goal should be to make the system as easy as possible for novice riders to understand and use. This can be accomplished by providing passenger information that is easy-to-understand and readily available. This information needs to be broadly available through printed materials, on the internet, on smart phones, at bus stops and at key destinations.

Create Marketing Partnerships with Community Organizations

Social service agencies, senior centers and complexes, schools and colleges, medical facilities and other organizations that work with constituents with transportation needs can act as a "sales force" for public transit. By providing these organizations with information and marketing tools, Calaveras Transit can enlist their aid in promoting transit use among their clients and customers, and take advantage of direct feedback for enhancing service effectiveness.

Promote Trial Ridership among High Potential Riders

Marketing of transit services needs to be an on-going effort. It is critical to continually attract new riders to the system, in order to maintain ridership as well as to expand it. This can be accomplished through a combination of community wide promotion such as advertising and public relations and targeted programs focused on high-potential market segments such as college students and low income workers.

Target Markets

Students

Students are Calaveras Transit's largest target market. Nearly half (48%) of all riders classify themselves as students. A third (32%) were commuting to or from school when intercepted for the on-board survey.

Columbia College students make up the majority of the student ridership – 70%. Calaveras Transit provides a highly cost effective means of making the long commute form Valley Springs, San Andreas and Angels Camp to the college campus outside Sonora. Enhancements to the college schedule, addressing gaps and improving the span of service would make the service even more attractive to Columbia College students.

Once service to Stockton is initiated, Calaveras Transit's college ridership will likely expand and divide between Delta College and Columbia College. It will be very important to market to both of these populations.

Most other students who currently ride Calaveras Transit are high school students at San Andreas High School (14% of students surveyed) or Bret Harte High School (7%). A few middle school students were intercepted in the survey. For these younger students who likely lack drivers licenses or vehicles, Calaveras Transit can offer independence and access to school and after school activities. If Saturday service is implemented in the future, recreational ridership by young students would offer an additional opportunity.

Workers

Based on the on-board survey, 43% of current riders are employed part time (31%) or full time (12%). A quarter (24%) were on their way to or from work when intercepted for the survey.

Calaveras Transit offers local workers, especially low income, part time workers, an economical and reliable way to get to jobs in San Andreas, Angels Camp, Jackson and soon Stockton. This is a key target market for promoting the service and the monthly pass.

Low Income Families

Most Calaveras Transit riders rely on the bus as their primary mode of transportation. Nearly 80% of riders report household incomes of under $25,000 and most (83%) lack a driver's license, vehicle or

both. Calaveras Transit is a critical service for low income families and individuals that provides them with access to jobs, training, medical and social services and day to day needs. Social service agencies that work with low income persons can help to insure that they are aware of the transit services available and know how to access them.

Senior Citizens

About a quarter of The Calaveras County population is 65 or older – nearly 10,000 individuals - and this age group is growing very rapidly. The 65+ cohort is expected to increase by almost half between 2010 and 2020.

In the on-board survey, about 7% of riders said they were 60 or older, while 8% reported their employment status as retired. Given the terrain in Calaveras County, stakeholders noted that many older seniors are unable to access bus stops and are more likely to be users of Dial-a-Ride or deviated services.

The senior population will be an important target for the new Mobility Manager and for Calaveras Transit as the system evolves.

Persons with Disabilities

Persons with disabilities often rely on public transit as their primary mode of transportation. As with low income families, social service agencies can be highly instrumental in helping to educate individuals they serve who have a disability about how to make maximum use of the transit network.

For example, Behavioral Health provides monthly pass and single ride tickets to their clients who use transit to access regular appointments. They are also an important channel for providing travel training to those with special needs and for providing Calaveras Transit with feedback about how well the needs of persons with disabilities are met.

Inter-county Travelers

Currently Calaveras Transit provides service to Jackson in Amador County where riders can access employment, shopping and medical destinations. In the near future, a new route to Stockton will be added offering access to a far greater range of destinations. This route will appeal to commuters looking for a more pleasant and affordable commute, students wishing to attend Delta College, those needing to reach specialty medical care not available in Calaveras County and longer distance travelers looking to connect to other regional services.

Current and Potential Marketing Strategies

Branding

Continue consistent use of Calaveras Transit branding.

Branding is marketing at its most basic. It is how we identify a service and everything associated with it using a name, logo, and packaging. The objective of branding is to create a unified image in the mind of the potential customer and to create immediate recognition of all facets of the service.

For a transit system, the key elements of its visual brand are its name, logo, vehicle colors, vehicle graphics, bus stop signage and bus stop facilities (shelters, benches, etc.). The vehicles and bus stops are in essence a transit system's "packaging."

Buses and bus stops are a transit system's most visible marketing tools. They are seen by thousands of people every day and are an opportunity to use capital investments to achieve long term communications value.

Calaveras Transit has a strong visual brand which is used consistently on vehicles, bus stops, passenger information tools and the website. The name clearly defines the service and service area, and the logo relates to the Calaveras County geography.

The one branding strategy which might enhance the system's visibility and give the image an "update," would be the introduction of a more dynamic vehicle paint scheme, using the logo in a bolder manner. At the right is an example of a vehicle design recently adopted by El Dorado Transit as part of a brand update.

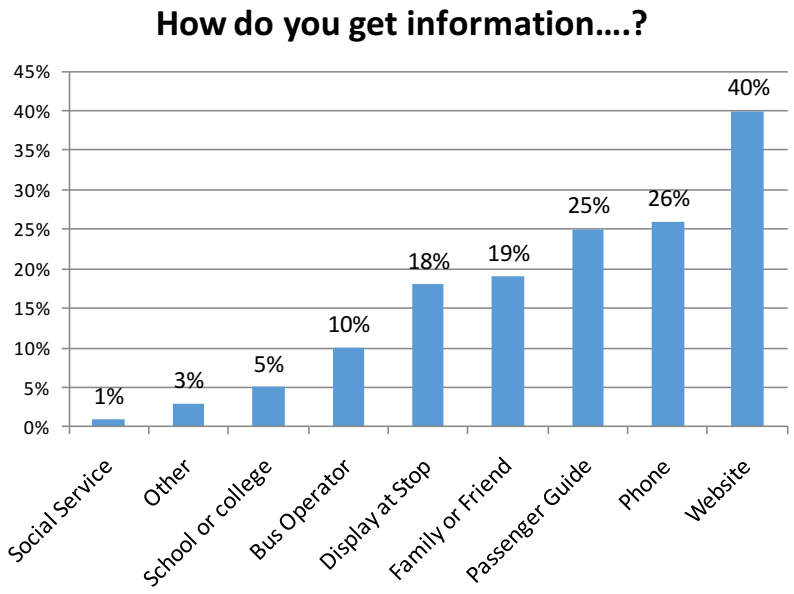
Passenger Information

Enhance ease of use by providing passenger information in a variety of user-friendly, readily available forms.

Passenger information is the "directions" for using public transportation and is the basis of any transit marketing program. Interacting with a system's passenger information tools is often a transit customer's first experience with the system. Ease of planning a trip may determine whether a person goes on to ride the bus.

Calaveras Transit passengers use a variety of information sources to learn about the service. The on-board passenger survey found that the website is the most used passenger information source (referenced by 40% of respondents). However, the phone (26%), passenger guides (25%) and signage at bus stops (18%) are also key information tools for many riders.

This section will outline strategies for enhancing availability of transit information through both electronic and print methods.



User-Friendly Timetables

Reading a bus schedule is often the first hurdle that new transit users must get over before riding the bus. For most first time riders, schedules are confusing. Especially if they require the reader to use multiple schedules to plan a trip requiring transfers. While the availability of Google Transit trip planning helps with this, timetables still serve an important role – both in print and online as they allow a rider to easily see what their options are for making a trip.

There is a distinct difference between the way that Calaveras Transit's routes and schedules are portrayed in the printed and online timetables and the way they actually function. For example, Routes 1 and 4 are combined such that most riders going to Columbia College have a one-seat trip from Valley Springs or San Andrea to the college. However, you must use two different timetables to determine how to get to the college and then it appears that the rider has to transfer (even though they don't). While regular riders have figured this system out, and simply refer to destinations, ignoring the route numbers, new riders are likely to be confused and discouraged from using the service by the apparent complexity.

The SRTP suggests a service design remedy for this: combine the Route 1A, 1B and Columbia College leg of Route 4 into a single route with consistent headways. Even without implementing the service improvements recommended, the schedule can be redesigned to be more user friendly and to clearly shows the rider what options they have for getting from A to B. An example of a combined schedule, using existing schedule times, is shown on the following page. This schedule assumes the same service is being provided as now. If service levels are improved as recommended in Chapter 8, the same schedule format would be utilized to display the improved service levels.

While this layout would need to be enhanced graphically and should be viewed at a larger size, it demonstrates the basic concept of a single schedule for the entire core route.

	Core Route - From Valley Springs/Burson to Angles Camp/Columbia College											
Burson	SR12 / Burson Rd *OD					10:42 AM		2:02 PM				5:22 PM
Valley Springs	SR26 & Garner Place	—	5:49 AM	—	8:44 AM	—	12:24 PM	—	3:44 PM	—	6:59 PM	—
	Garner Place & Baldwin Street	—	5:52 AM	—	8:47 AM	—	12:27 PM	—	3:47 PM	—	7:02 PM	—
	Baldwin Street & Hartvickson Lane	—	5:55 AM	—	8:50 AM	—	12:30 PM	—	3:50 PM	—	7:05 PM	—
	Vista Del Lago	—	6:00 AM	—	8:55 AM	—	12:35 PM	—	3:55 PM	—	7:10 PM	—
	Daphne Street (Depart to San Andreas)	—	6:15 AM	7:40 AM	9:00 AM	10:50 AM	12:40 PM	2:10 PM	4:05 PM	—	7:15 PM	5:30 PM
San Andreas	San Andreas Post Office	—	6:30 AM	7:55 AM	9:15 AM	11:05 AM	12:55 PM	2:25 PM	4:20 PM	—	7:30 PM	5:45 PM
	Gold Strike Group Home & ARC	—	—	—	9:20 AM	—	—	—	—	—	—	—
	Government Center (Arrive)	—	6:35 AM	8:00 AM	9:35 AM	11:10 AM	1:00 PM	2:30 PM	4:25 PM	—	7:35 PM	5:50 PM
	ZONE CHANGE		-		-	-		-	-			-
	Government Center (Depart to Angels Camp)	5:10 AM	6:35 AM	8:15 AM	9:35 AM	11:10 AM	1:00 PM	2:30 PM	4:25 PM	—	—	5:50 PM
	Courthouse	5:11 AM	6:36 AM	8:16 AM	9:36 AM	11:11 AM	1:01 PM	2:31 PM	4:26 PM	—	—	5:51 PM
Angels Camp	SR49 / Demarest Transfer Stop (Arrive)	5:29 AM	6:54 AM	8:34 AM	9:54 AM	11:30 AM	1:20 PM	2:50 PM	4:44 PM	—	—	6:10 PM
	ZONE CHANGE											
	SR 49 / Demarest (Depart to College)	—	7:00 AM	—	9:55 AM	—	1:20 PM	—	4:45 PM	—	—	—
	Visitors Center	—	7:02 AM	—	9:57 AM	—	1:22 PM	—	4:47 PM	—	—	—
College	Columbia College (Arrive)	—	7:35 AM	—	10:30 AM	—	1:55 PM	—	5:20 PM	—	—	—
	Core Route - From Columbia College/Angels Camp to San Andreas/Val -											
College	Columbia College (Depart to Angels Camp)	—	—	—	7:55 AM	—	11:00 AM	—	2:05 PM	—	5:30 PM	—
Angels Camp	SR 49 / Demarest Transfer Stop (Arrive)	—	—	—	8:30 AM	—	11:35 AM	—	2:40 PM	—	6:05 PM	—
	ZONE CHANGE											
	SR49 / Demarest Transfer Stop (Depart)	—	7:00 AM	—	8:35 AM	9:55 AM	11:35 AM	1:20 PM	2:40 PM	4:15 PM	6:10 PM	7:40 PM
San Andreas	Government Center (Arrive)	—	7:20 AM	—	8:55 AM	10:15 AM	11:55 AM	1:35 PM	3:00 PM	4:35 PM	6:30 PM	8:00 PM
	ZONE CHANGE											
	Government Center (Depart to Valley Springs)	5:20 AM	7:20 AM	8:15 AM	—	10:15 AM	11:55 AM	1:35 PM	3:00 PM	4:55 PM	6:30 PM	—
	Courthouse	5:21 AM	7:21 AM	8:16 AM	—	10:16 AM	11:56 AM	1:36 PM	3:04 PM	4:56 PM	6:31 PM	—
	ARC & Gold Strike Group Home	—	—	—	—	—	—	—	3:05 PM	—	—	—
	Downtown San Andreas Credit Union	5:25 AM	7:25 AM	8:20 AM	—	10:20 AM	12:00 PM	1:40 PM	3:20 PM	5:00 PM	6:35 PM	—
Valley Springs	Daphne Street	5:40 AM	7:40 AM	8:35 AM	—	10:35 AM	12:15 PM	1:55 PM	3:35 PM	5:15 PM	6:50 PM	—
	SR26 & Garner Place	5:49 AM	—	8:44 AM	—		12:24 PM	—	3:44 PM	—	6:59 PM	—
Burson	SR12 / Burson Rd *OD	—	—	—	—	10:42 AM	—	2:02 PM	—	5:22 PM	—	—

— No Service to this Location on this trip

Burson Service is On-Demand. You must call to request a pickup.

This core route carries the bulk of Calaveras Transit's ridership. Many passengers would only have to refer to this single schedule. The smaller routes to Arnold, Jackson and other destinations would be shown as individual "feeder" route schedules.

Of course this strategy will require redesigning the existing passenger guide. However, that is a small effort to achieve better communications with existing and new riders.

Electronic Passenger Information

The increasing utilization of computers and mobile phones has transformed the way in which many transit riders get information. The on-board survey found that 65% of Calaveras Transit riders access the internet regularly, 75% have a cell phone and 43% have a Smartphone (the chart on the next page illustrates findings by route).

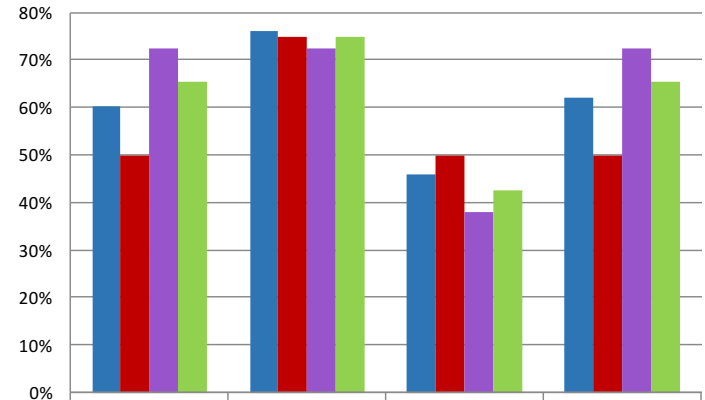
Providing information that can be readily accessed on a mobile phone as well as a computer or tablet is a critical objective for Calaveras Transit's marketing program. Following are four strategies:

Google Maps

Calaveras Transit is part of Google Maps. This allows riders to plan trips using the Google Maps interface that most people are already familiar with for getting driving directions. It offers a number of distinct advantages:

- Provides easy access to Calaveras Transit information on smart phones and tablets as well as on computers.
- Avoids the difficulty that many potential riders have understanding transit schedules to plan trips, particularly those requiring transfers.
- Provides gatekeepers, such as social service and medical personnel, with an easy way to plan and print trip information for their constituents.
- Google Maps will provide a seamless way of coordinating trips between Calaveras Transit and connecting transit operators (such as SJRTD in Stockton) that are already part of Google Transit.

Use of Technology among Riders



	Access internet regularly	Have cell phone	Have smart phone with internet	Have email address
Rt. 1	60%	76%	46%	62%
Rt. 3	50%	75%	50%	50%
Rt. 4	72%	72%	38%	72%
Total	65%	75%	43%	65%

Website

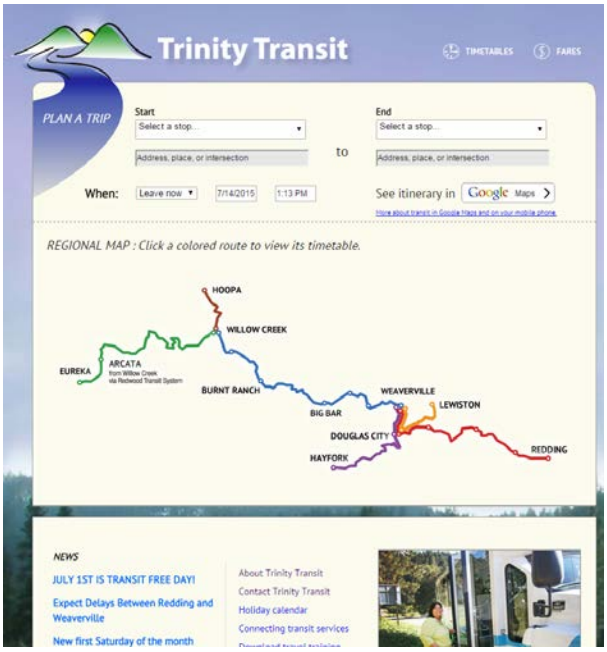
New riders to transit are most likely to turn to the internet for travel information – as they do for information about virtually anything. This is particularly true of younger riders, such as college students, who make up much of Calaveras Transit's ridership base.

Current and potential passengers should be the primary focus of a transit agency's website and they should be able to quickly and easily understand where the system goes and how to plan a trip to their destination. While the current Calaveras Transit website provides all the key information, it does not do so in a manner that is particularly inviting.

Without scrolling, the screenshot at the right shows what potential riders see when they visit Calaveras Transit's home page. It is very text heavy, and uses most of the prime space for information not critical to riders. In order to find out anything about transit service, the user must find and click through the navigation bar at the top.

Calaveras Transit should consider redesigning its website to focus more clearly on the user and to incorporate the following design principles:

- The website can already be accessed from the web domain www.calaverastransit.com. This is excellent. The web address should be included prominently on buses, bus stops, shelters and all passenger information and promotional materials.
- As noted above, current and potential passengers should be the primary focus of the website. Hence the top of the home page – what users see when they get to the website – should be reserved for customer oriented information such as the system map, schedule links and the trip planner. Information of less interest to riders – planning documents, mailing addresses and such – should be included or linked from lower on the page.
- The primary rule of web design is that people don't read web pages - they scan them, looking for links to the specific information they need. Therefore long segments of text are counterproductive. In addition, the need to scroll should be minimized. The user should be able to see what the website has to offer from a glance at the homepage.



- Getting driving directions is one of the most common uses of the internet. Virtually anyone with a computer knows how to use Google maps. Having a trip planner based on Google maps provides a way to plan transit trips that is familiar to potential users and overcomes the barrier of having to interpret schedules. This should be a central element of the home page (not something you have to "find").
- Given that 43% of riders have a smartphone, the website needs to work on mobile as well as desktop platforms (see www.sagestage.com for an example).
- A few examples of websites designed around these principles are shown and listed here:
  - TrinityTransit.org
  - MendocinoTransit.org
  - SageStage.com
  - ElDoradoTransit.com

Real Time Information

Real time information – when will my bus be here? – is the ideal for transit users, especially in areas with low service frequency. Real time info was once available only to large transit systems with significant resources. However affordable AVL technology, such as Calaveras Transit plans to implement, can make real time information available to even small transit agencies. It can then be shared with riders on a smart phone, tablet, computer or even via automated phone or text. Real time information can be integrated into Google Maps or provided via apps such as RouteShout or MyBus. As Calaveras Transit moves forward with AVL implementation, how the information will be shared with riders should be a critical decision factor.

Service Alerts

Traditionally, transit agencies had no way to communicate directly with riders for critical service information – such as bus delays, detours or weather cancellations. Rather, agencies needed to broadcast that information, publishing service alerts in places where riders were likely to see them. Web technology makes it increasingly possible to send this type of information directly to riders. This presents a huge advantage to both riders and agencies. Service alerts sent directly to a rider, through their preferred portal, are more likely to be received in a timely manner. This eliminates the need for riders to remember to seek out information prior to their trip.

Most transit riders would like to be able to receive alerts about service delays or disruptions. Many agencies issue alerts via web postings, email, text message, Facebook or Twitter. Research in several rural environments similar to Calaveras County indicates that the preferred method of receiving alerts is via text message. Since 75% of Calaveras Transit riders have a cell phone this would provide very broad access to the information.

As it updates the web presence, it is recommended that Calaveras Transit establish and maintain an "alert" system that riders could register for on the website.

Information at Bus Stops and Transit Center

Currently, Calaveras Transit provides schedule information displays at bus most bus stops. This practice should be continued, as these displays are used as a key information sources by 18% of riders. They also offer immediate access to information for new or occasional riders and a "reminder" for regular riders.

At major boarding locations such as the SR49/Demarest transfer point, Government Center and Columbia College, the displays could be enhanced to include a system map (with a You are Here sticker), schedules for the routes serving the specific stop and basic fare information.

It is, of course, critical that any information provided at the bus stop be updated and maintained to insure accuracy and readability.

Passenger Information as a Promotional Tool

Community Information Displays and Distribution

Attractive, easy-to-understand transit information can have a promotional as well as educational value. During outreach for this plan, stakeholders responded very positively to the concept of establishing transit information displays at high traffic locations such as Columbia College and social service offices. These displays can provide permanent low-cost advertising for the system and be seen by hundreds of people each week. In addition, they can provide a focus for the distribution of passenger guides.

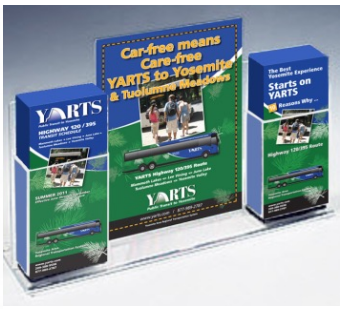
Displays can be created using the graphics from the passenger guides and pre-fabricated display units. There are many styles of displays which can be purchased on line at sources such as:

www.beemak.com www.displays2go.com www.display-world.com

The fixtures can be purchased in small quantities and customized with the addition of a digital print and a supply of Calaveras Transit passenger guides.

Different formats (counter top, wall mounted, free standing, etc) may be needed at different locations. Below are several examples of information display types. Ideally, the displays should:

- Visibly and attractively communicate the Calaveras Transit brand.
- Include the Calaveras Transit system map with a "you are here" designation for specific locations to help readers orient.
- Provide pockets for passenger guide distribution.
- Promote the web-site for additional information, including Google trip planning and (eventually) real-time information.



Keeping the displays updated and replenished with passenger guides should be part of a systematic distribution system for passenger information.

System-Wide Promotion

Use Advertising and Public Relations to Build Greater Awareness of Calaveras Transit's Services

Broad communication strategies such as newspaper advertising, poster campaigns and news releases can be used to build greater awareness about exactly what Calaveras Transit has to offer and how it is being enhanced.

News Calendar

There are a wide variety of no-cost ways in which Calaveras Transit can communicate news about the system to the community and its riders. These include a mix of conventional media (e.g. newspapers), in-house communications (on-board posters, handouts, website posts), partner communications (organization newsletters) and potentially social media (e.g. Facebook).

To maximize the exposure received, while minimizing the staff time required, it is recommended that Calaveras Transit develop a "news calendar" which will drive the content for all of these communications channels.

The news calendar should identify messages to be delivered during each month of the year, as well as the audiences/channels which are relevant for the specific message. For example, relevant topics might include:

- New Stockton Route
- Service changes on core route
- Delivery of new vehicles
- New shelters or other facilities improvements
- Google Transit trip planning
- Introduction of new passenger guides or website
- Tie-ins with national or regional activities such as Earth Day, Dump the Pump Day, Try Transit Week, Veterans Day, etc.

A sample format for the calendar is shown below.

Month	Topic	News Release	E-mail to Stkholders	Community Poster	On-board Poster	Post to Website	Facebook Post

Here is an example of how the news calendar might be used to drive communications efforts.
Example Topic: Launch of New Route to Stockton. Use the same content to create:

- **News Release:** To all local media. Announce the start of the new service. Provide details about pickup locations and times, and highlight destinations served in Stockton. Specifically promote the ability to connect with Amtrak or Greyhound.
- **E-mail to Social Service Stakeholders:** Focus on how this route gives their clients access to jobs, training programs, medical facilities. Amtrak and Greyhound in Stockton. Provide details about the route and schedule, and encourage the use of Google Transit to plan trips that include transfers to SJRTD.
- **Community Poster:** Create an 8 ½" X 11" PDF poster to send along with email – asking stakeholders to post on their bulletin boards.
- **On-board Poster:** Let current riders know that there is how a new route to Stockton, where they can catch it and what destinations are served.
- **Website Posting:** Highlight the new service on the homepage with a link to route and schedule details. (The website is already being used to solicit name suggestions).
- **Facebook Posts:** Post short message about the new route.

Stockton Service Addition

The addition of the new service to Stockton in the fall of 2015 will open up several new markets for potential ridership. Some riders may use it as a commute mode to travel to work or Delta College, while a larger pool can use it for occasional trips to Stockton for shopping, medical appointments or to access longer distance transportation options including Greyhound and Amtrak. It will be important to broadly communicate the new service both to existing and new riders.

Possible communication channels include:

- News Release to all local media
- Newspaper Ads – print and online
- Post Card Mailing to address in Calaveras County
- Poster on Buses
- Posters at high traffic locations within Calaveras County Communities
- Feature on CalaverasTransit.com website
- Direct communication through key stakeholders including:
    - Delta College
    - Medical facilities in Stockton
    - Medical facilities in Calaveras County that refer patients to specialists in Stockton

Core Route Improvement

If Calaveras Transit is able to proceed with the enhancements recommended for the core route from Valley Springs to Columbia College, this will provide an important focus for countywide marketing.

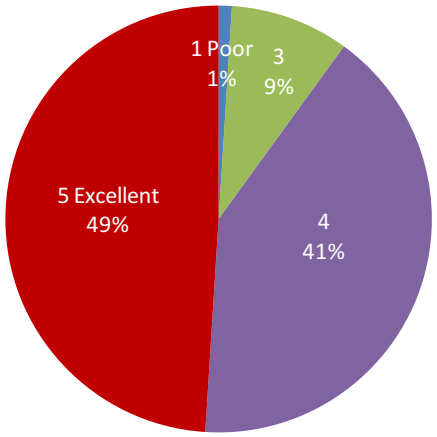
The key objective of broad communications about the core route should be to:

- Clearly communicate the availability of direct (one seat) travel from Valley Springs all the way to Columbia College.
- Communicate the more frequent, more regular schedule of service. For example, every hour from Valley Springs to Angels Camp and every two hours to the college.
- Highlight key destinations served by the route.
- Communicate how the Arnold, Jackson, West Point and Copperopolis routes will serve as feeders to the core route, making travel easier and more predictable systemwide.
- Promote the service as easy to use, reliable and economical.

Testimonial Campaign

Calaveras Transit currently enjoys high satisfaction and a positive image among both riders and stakeholders. This has not always been the case; however, improvements in reliability and driver courtesy in recent years have paid off. The chart at the right shows how passengers intercepted in the on-board survey rated Calaveras Transit overall.

Overall Rating of Calaveras Transit



One way to take advantage of this positive perception is with a testimonial campaign that features real riders who represent the various target markets Calaveras Transit wishes to attract:

- College Students
- Local Workers
- Active Seniors
- Youth
- Young Families

Testimonial ads can be easily created for newspaper and radio. Each ad can feature a single rider talking about why they ride Calaveras Transit and what the benefits are to them. By using real people, the ads will demonstrate that "people like you" are already riding the bus and liking it. The call to action would be "Give Calaveras Transit a Try." Current riders would be inviting new riders to experience the benefits that they have already discovered.

Above is one in a series of testimonial ads used by MBTA in the Morongo Basin. Each ad featured a different "type" of rider.

Targeted Ridership Promotion

When attempting to attract new riders, the more targeted the appeal and information provided, the more likely you are to generate a trial ride. For example a general appeal in a newspaper ad which simply says "Ride the Bus, It's Easy" and provides a web address for more information is much less likely to get a response than a targeted flyer/poster distributed on campus at Columbia College that says "Ride the Bus to Campus - Calaveras Transit comes here X times every day" then provides the exact location of the bus stop and the times when the bus serves the campus, as well as a reference to Google Transit for easy trip planning.

Therefore it is recommended that Calaveras Transit conduct targeted marketing to key potential riders segments and the gatekeepers that can provide access to those segments.

Gatekeeper Outreach

"Gatekeepers" are individuals or organizations that can provide access to target populations. For example, student services staff at Columbia College is a gatekeeper for its students, while the case workers at Behavioral Health and CalWorks are gatekeepers for their clients. These organizations, and particularly their front line employees, are often charged with identifying transportation options for getting their clients to programs, appointments, training, classes, interviews and jobs. As a result, they have the potential to serve as "salespeople" for public transit.

While most stakeholders interviewed during outreach for the SRTP were generally aware of the Calaveras Transit route structure and said that buses are highly visible, many were not aware of specifics of the service. For example some were unaware of the flex stop capability. To capitalize on the potential of gatekeepers to serve as salespeople for Calaveras Transit, it is recommended that the system conduct active outreach to these organizations. This might involve the following efforts:

- Create a simple database that includes the organization, contact person and contact information, including e-mail. These individuals should be provided with regular e-mail updates about changes in transit services, availability of new passenger guides and other updates. When appropriate, e-mails can include an 8 ½" X 11" PDF flyer for printing and posting or distributing to co-workers and/or clients.
- Conduct "training" sessions at meetings of front line staff who need to understand how transit works so they can pass the knowledge on to constituents. These trainings would be most relevant when service changes are made. They should include an overview of the routes and where you can go on transit, how to use the schedules and Google Transit to plan trips, how the real-time information system works (when implemented) and information about paratransit services and other transportation options for those unable to use the fixed route buses.
- Continue to facilitate purchase of passes by these organizations to give or resell to their constituents.

Marketing Partnerships with Gatekeepers

Beyond simply educating gatekeepers about the transit service, the potential exists to actively work with relevant organizations to implement targeted promotional programs to encourage transit ridership among their constituents. Several types of communication channels can generally be accessed through partnerships with gatekeepers:

- Permanent information displays in their facilities – these displays, as described previously, provide long term communications value (unlike an ad that exists for only a day or a week) and they can be customized to provide the information most relevant to the target group.
- Bulletin board posters and flyers – this is a very low cost communications medium which can deliver appeals and information specific to the target group (what seniors and college students want to know is likely different).
- Website links – ask gatekeepers to provide a link to the Lake Transit website as a resource from their own website.
- Inclusion of transit information in orientation packets – schools, social service agencies and medical facilities often provide their new clients/students with packets of relevant information. Ask them to include a targeted flyer in this information that tells the reader how they can use transit to travel to the relevant destination.
- E-mail blasts – some gatekeepers (particularly schools/colleges) communicate with their constituents via email and can distribute transit updates in this way.
- Newsletter Articles – some gatekeepers publish e-mail or hard copy newsletters and can include articles about the evolving transit services.

Targeted Marketing to Students

Because they make up such a large portion of Calaveras Transit's ridership (nearly half), students are a target market of particular interest. The nature of student ridership is that it is constantly evolving as new students reach the age to travel alone or enter college. Hence there needs to be an on-going effort to communicate with three distinct student segments:

- Columbia College Students who represent one third of current riders.
- San Andreas and Bret Harte High School Students who represent about 10% of current ridership.
- Delta College Students who will be a key target market for the new Stockton route.

College and school administrators are the "gatekeepers" that offer Calaveras Transit the greatest potential for marketing partnerships. Such as those described above.

Outreach to West Point and Copperopolis

The outlying areas of West Point and Copperopolis present particular marketing challenges for Calaveras Transit. It is likely that the nature of service in these areas will be changing and it will be important to communicate those changes to the residents.

Outreach channels within these communities are limited, but opportunities include:

- Presentations to service clubs and community groups

- Notices with home delivery meals
- County Social Service Agencies with clients in these areas
- Commission on Aging

The most effective advertising vehicle for reaching these communities would be a direct mail post card delivered to every post office box or household. (The United States Post Office has a low-cost direct mail product called Every Door Direct Mail which allows for the delivery of a flat (post card) to every postal patron within a selected area.)

The post card should be eye-catching so that the resident is engaged and sees Calaveras Transit's message immediately. It should provide an overview of the new services offered within the area and the advantages of the revised service plan (for example, the ability to travel to and from an appointment in San Andreas without having to be gone all day). It should also highlight the potential for riders to use the local service as a feeder to connect with the Core Route for longer trips.

Mobility Manager's Role in Marketing and Communications

Calaveras Council of Governments (CCOG) has applied for and received funding to establish a Mobility Management position to develop and promote transportation alternatives within Calaveras County. The Mobility Manager will be in charge of developing additional service options to compliment Calaveras Transit's fixed route services. These will include a volunteer driver reimbursement program and potentially a taxi subsidy program. In addition, the Mobility Manager will serve a critical communications function.

The COG's application for funding to support the Mobility Management functions states, under goals and objectives:

> *A mobility management function within the CCOG would be coordinated with the CCOG's roles in promoting alternative modes of transportation and providing public outreach and education. The Mobility Manager will bring together key community leaders, transportation service providers, planning organizations, and other stakeholder organizations within the region. A critical task will be to build "partnerships" that will serve as the basis for the future "coordination" of essential transit services. The Project will include the development and distribution of information that explains how to utilize the available resources in meeting diverse travel needs.*

This makes it clear that a critical role of the new Mobility Manager position will be educating gatekeepers and Calaveras County residents about the transportation options that are available – those provided by Calaveras Transit as well as specialized transportation resources. It also highlights the Mobility Managers role in creating "partnerships" to carry out this mission.

Calaveras Transit does not have staff dedicated to the marketing function. It is a role shared by management staff, the COG and the contracted the operations manager. The COG's new Mobility Manager will be an important addition to this function and hopefully will serve as a unifying factor.

The Mobility Manager should take the lead on several of the strategies recommended for Calaveras Transit, particularly:

- Gatekeeper Outreach (page 15)
- Outreach Activities in West Point and Copperopolis (page 16)

10. Financial Plan

The financial plan provides details on the operating and capital costs and revenues from FY 2015/16 to FY 2019/20, based on the discussion and service level priorities recommended in the previous chapters. The financial plan is founded both on known facts as well as projections based on historical precedence. There is a great deal of uncertainty facing public transportation financing. Three financial scenarios were developed to provide the possible potential outcomes, particularly for operating revenues.

The chapter is divided into five sections:

- Service Supply
- Operating Costs
- Operating Revenues
- Capital Costs
- Capital Revenues

Service Supply

The recommended service supply is based on the recommended service plan in Chapter 8. Figure 10-1 provides a summary of the recommended service supply. The following are the key service supply changes over the five-year planning horizon:

FY 2015/16

- Implement Stockton Intercity Service in September 2015. In FY 2016/17, the service supply reflects the full year implementation of the Stockton Intercity Service.
- First full year of Burson on demand service.

FY 2016/17

All new service improvements would be implemented in January 2017, six months after the new Calaveras Transit Agency would be initiated. Figure 10-1 shows the service supply changes in vehicle service hours, with the following service changes recommended:

- Implement consistent 90-minute fixed service on Spine Route 1 in both directions between Valley Springs and Rancho Calaveras.
- Incorporate existing Route 4 segment from Angels Camp to Columbia College as part of Route 1.
- Implement Dial-a-Ride service in Angels Camp/ADA Paratransit for Route 1 Corridor.

Since these three improvements are expected to implemented mid-year, 50% of the service supply changes are in FY 2016/17 and 50% are included in FY 2017/18.

- Implement checkpoint Dial-a-Ride in Cooperopolis, Mountain Ranch/West Point corridors two days per week.

Figure 10-1 Recommended Service Supply

Vehicle Service Hours	FY 2015/16 County Budg.	FY 2016/17 Recommend	FY 2017/18 Recommend	FY 2018/19 Recommend	FY 2019/20 Recommend
Route 1	4,277	5,846	7,414	7,924	8,928
Route 2	1,316	624	2,193	2,193	2,193
Route 3	946	1,229	1,229	1,433	1,433
Route 4	3,134	2,320	1,506	1,710	1,710
Route 5	528	624	936	936	936
Angels Camp DAR		1,004	2,008	2,008	2,008
Stockton Intercity	1,275	1,700	1,700	1,700	1,700
Total	11,475	13,347	16,986	17,904	18,908
Service Changes					
Spine to 90 minutes		753	753		
Route 1 to Col. College		816	816		
Route 4 to Feeder Rt.		(814)	(814)		
Spine, 60 minutes peak					1,004
Reconfigured 2 and 5*		(595)			
Stockton Intercity	1,275	425			
Burson Extension	400				
Angels Camp DAR		1,004	1,004		
Saturday Svc. Route 1				510	
Route 5 to 3 days/week			312		
Additional Run Stockton				Not Affordable	

* Routes 2 and 5 to two days a week, three round trips per day. Budget includes user side taxi subsidy and volunteer driver reimbursement.

FY 2017/18

- Increase checkpoint Dial-A-Ride service to Copperopolis three days a week.

FY 2018/19

- Implement Saturday service on Route 1.

FY 2019/20

- Implement 60-minute service on spine route during 4-hour peak periods.

Operating Costs

Figure 10-2 shows the recommended operating costs between FY 2015/16 and FY 2019/20.

Figure 10-2 Recommended Operating Costs: FY 2016/17 to FY 2019/20

Operating Cost Components	FY 2015/16 Budget	FY 2016/17 Recommend	FY 2017/18 Recommend	FY 2018/19 Recommend	FY 2019/20 Recommend
Operations Vendor Fixed Cost	$ 381,010	$ 349,079	$ 359,551	$ 384,551	$ 396,087
Operations Vendor Variable Cost	$ 381,794	$ 466,745	$ 623,744	$ 670,602	$ 722,371
Transit Manager Salary and Benefits	$ 107,701	$ 110,000	$ 55,000	$ 56,650	$ 58,350
Maintenance	$ 175,000	$ 196,199	$ 240,356	$ 263,015	$ 288,442
Fuel and Oil	$ 179,002	$ 215,118	$ 268,649	$ 299,684	$ 335,038
Marketing	$ 16,236	$ 30,000	$ 20,000	$ 25,000	$ 30,000
Mobility Management Subsidy		$ 15,000	$ 18,000	$ 21,000	$ 24,000
Minor Equipment	$ 118,967	$ 23,735	$ 24,000	$ 25,000	$ 25,000
A-87	$ 25,427	$ -			
Governing Agency Support-Overhead	$ 35,562	$ 36,629	$ 37,728	$ 38,860	$ 40,025
Other Costs	$ 5,065	$ 5,000	$ 6,000	$ 7,000	$ 8,000
Total Costs	$ 1,425,764	$ 1,447,503	$ 1,653,028	$ 1,791,361	$ 1,927,313
Key Assumptions					
Vehicle Service Hours	11,226	13,347	16,986	17,904	18,908
Vehicle Service Miles	310,999	355,949	423,358	449,776	478,892
Operating Cost Per Vehicle Service Mile	$ 4.58	$ 4.07	$ 3.90	$ 3.98	$ 4.02
Contract variable cost	$ 34.01	$ 34.97	$ 36.72	$ 37.45	$ 38.20
Fuel Cost Per Vehicle Service Mile	$ 0.58	$ 0.60	$ 0.63	$ 0.67	$ 0.70
Contract Maintenance cost per VSM	$ 0.56	$ 0.55	$ 0.57	$ 0.58	$ 0.60
Performance Standards					
Operating Cost Per Vehicle Service Hour	$ 127.01	$ 108.45	$ 97.31	$ 100.05	$ 101.93
Minimum Standard Indexed for Inflation	$ 100.00	$ 102.00	$ 104.04	$ 106.12	$ 108.24
Target Standard Indexed for Inflation	$ 90.00	$ 91.80	$ 93.64	$ 95.51	$ 97.42
Farebox Recovery Ratio	10.4%	10.4%	10.8%	10.7%	10.7%
Minimum Standard Indexed for Inflation	10.0%	10.0%	10.0%	10.0%	10.0%
Target Standard Indexed for Inflation	12.0%	12.0%	12.0%	12.0%	12.0%

Figure 10-2 utilizes the May 2015 Calaveras Transit budget for FY 2015/16. The final budget was recently adopted and is forecast at $1,389,511. This would lower the operating cost per vehicle service hour from $127.01 to $123.78 in FY 2015/16. The most significant dollar value reductions in final budgeted costs were in maintenance from $175,000 to $147,500 and for fuel and oil from $179,002 to $161,900.

The recommended transition of governance to a new Calaveras Transit Agency is assumed to take place on July 1, 2016. As discussed more in Chapter 5, the Calaveras Transit Agency would be a new joint powers authority with Calaveras Council of Governments Board also sitting as the Calaveras Transit Agency Board. The first year would be a transition year and would include a full-time equivalent transit manager. Since a .5 FTE is recommended for this position between

FY 2017/18 and FY 2019/20, this could be a .5 FTE employee of the Calaveras Transit Agency plus a temporary .5 FTE or contract position to help with the Calaveras Transit Agency start-up.

It is assumed the existing vendor contract is extended through June 30, 2017. This provides Calaveras Transit a year to develop an RFP and guide the procurement process with the contract awardee starting on July 1, 2018. The RFP from the Calaveras Transit Agency would be for both operations and maintenance service, with the contract transit manager responsible for marketing plan implementation, community outreach, and operations planning. The procurement process will be market based, and therefore it is not known if the assumptions for the vendor operations fixed cost, operations vendor cost, and maintenance costs will be realized in the contract award. In reality, this will dictate whether or not the additional service improvements including expanding Copperopolis Checkpoint Dial-A-Ride to three days a week, Saturday service on the Spine Route, and 60-minute service are financially feasible. The assumptions utilized to estimate the operations and vendor costs are based on the peer analysis of costs conducted for this study.

A second factor that could influence costs are the overhead costs estimated for the Calaveras Transit Agency. The overhead costs are also based on the support services provided by Calaveras County, but other factors identified during the formation of the Calaveras Transit Agency could determine that additional overhead costs are required. The work scope for the Short Range Transit Plan did not include a detailed analysis of what the costs of the Calaveras Transit Agency would be. This should be further refined in the Long Range Transit Study that the Calaveras Council of Governments will be undertaking in FY 2015/16.

The integration of the Mobility Manager function that CCOG recently funded with a FTA 5310 grant and the Transit Manager with the Calaveras Transit Agency has significant potential for helping to increase mobility options for Calaveras County residents. These positions could remain separate, or could be combined in a single position. This will need to be determined by the Calaveras Transit Agency Board and could be studied further in the Long Range Transit Study.

Figure 10-2 includes a line item for a mobility management subsidy that would include additional subsidy for volunteer driver reimbursement and potentially a limited user-side taxi subsidy program. Both should be considered as additional mobility options for a feeder service to Spine Route 1. Such alternative mobility alternatives as feeder services received elected official support at the April 28, 2015 Board Workshop.

Based on the above assumptions, the cost per vehicle service hour would decline to $97.31 in FY 2017/18, when the Transit Manager becomes a 0.5 FTE position. This is below the minimum performance standard of $104.40.

In terms of farebox recovery ratio, the analysis based on the assumptions described above would have a farebox recovery above the 10% farebox recovery ratio for all five years of the planning horizon. If the assumptions utilized in this analysis turn out to be reasonable estimates, then there will not be a need to increase fares during the planning horizon.[1]

Operating Revenues

Operating revenues between FY 2015/16 and FY 2019/20 are shown in Figure 10-3. The recommended service plan from Chapter 8 depends on Local Transportation Funds being utilized exclusively for transit purposes after FY 2015/16.

As shown in Figure 10-3, the use of LTF funds for operating purposes almost doubles from the $535,638 in FY 2015/16 (May 2015 budget) to $1,063,076 in FY 2019/20. This assumes a 4.5% annual increase in LTF funds from the May 2015/16 budget, based on the current of Board of Equalization estimates for LTF growth. Implementation of Saturday service in FY 2018/19 and 60-minute service on the spine Route 1 between Valley Springs and Angels Camp are deliberately in the last two years of the planning horizon because the decision to implement these services will be contingent on whether or not both the cost and revenue assumptions utilized are reasonably accurate. A determination will need to be made in FY 2018/19 as to whether Saturday service is financially sustainable and in FY 2019/20 as to whether 60-minute service during peak periods is financially sustainable based on projected growth rates of LTF funds.

The final 2015/16 budget was released after the draft Short Range Transit Plan was completed. In the final 2015/16 budget, the amount of LTF operating funds projected to utilized for transit in FY 2015/16 was reduced from $535,638 to $443,769.

[1] It is not known how the "Low Carbon Ticket" program in the FY 2015/16 budget will be implemented and what affect it might have on farebox recovery ratio. The current farebox recovery calculations are based on actual fare revenues by cash and multi-ride fare media.

Figure 10-3 Recommended Operating Revenues

Fare Revenue	2015/16 Budgeted	2016/17 Recommend	FY 2017/18 Recommend	FY 2018/19 Recommend	FY 2019/20 Recommend
Total fares	$ 148,044	$ 150,280	$ 178,953	$ 191,845	$ 207,003
Local and State					
Local Transportaton Fund	$ 535,638	$ 709,448	$ 860,062	$ 964,678	$ 1,063,076
State Transit Assistance	$ 225,810	$ 175,000	$ 180,000	$ 185,000	$ 190,000
LCTOP	$ 14,549	$ 15,000	$ 15,450	$ 15,450	$ 15,450
PTMISEA-minor equip.	$ 119,038				
County Reimbursement	$ 53,850				
Toll Credits*		$ 53,754	$ 53,931	$ 55,330	$ 57,431
Advertising	$ 15,000	$ 20,000	$ 25,000	$ 30,000	$ 35,000
Other Local Revenue	$ 1,236	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Subtotal Local and State	$ 965,121	$ 974,202	$ 1,135,443	$ 1,251,458	$ 1,361,957
Federal	$ -				
FTA 5311	$ 256,520	$ 256,520	$ 271,911	$ 279,607	$ 287,302
FTA 5311 (f) Intercity	$ 56,350	$ 66,501	$ 66,720	$ 68,451	$ 71,050
Subtotal Federal	$ 312,870	$ 323,021	$ 338,632	$ 348,058	$ 358,353
Total	$ 1,426,035	$ 1,447,503	$ 1,653,028	$ 1,791,361	$ 1,927,313

*Based on Calaveras Intercity Feasibility Study for service to Stockton

The final 2015/16 budget reduced the total operating revenues from $1.43 million to $1.27 million. Fare revenues dropped from the May 2015 budget figure of $148,044 to $130,283. The County reimbursement figure dropped from $53,850 to $26,925. For the final 2015/16 budget, overall total operating revenues of $1.27 million were less than planned operating expenditures of 1.39 million.

As discussed earlier, the recommended operating revenues includes the fare, FTA 5311(f), and the Toll Credit assumptions utilized in the Intercity Feasibility Study. If the assumption for Toll Credits, for example, turns out not to be a reasonable assumption, this would jeopardize the implementation of Saturday service in FY 2018/19.

The increase of FTA 5311 funding is below long-term historical trends. However, as discussed earlier, the certainty and sustainability of long-term funding for FTA 5311 is dependent on Congress passing a six-year transportation reauthorization bill. At the time of writing, Congress has just made another 3-month extension of MAP-21 through September 2015. The Senate has passed a bipartisan 6-year transportation reauthorization bill, but at this time it is very uncertain as to whether the House will pass a similar bill that the President will sign.

The bottom line is that there is sufficient funding to implement the first several phases of the spine and feeder service through FY 2017/18 if the policy decision is made to utilize all LTF monies for transit purposes after FY 2015/16.

Capital Expenditures

Capital expenditures for Calaveras Transit over the next five years can be categorized into five main categories:

- Vehicle Procurement
- Passenger Amenities
- Equipment and Security
- Mobility Management
- Operations and Maintenance Facility

Vehicle Procurement

Figure 10-4 shows the current fleet as of June 2014 with the two new vehicles shown in the inventory.

Figure 10-4 Existing Fleet Inventory

Bus #	Funding Source	Type	Year	Mileage as of 6/4/14	Seating Capacity*
58	5311	International	2009	236011	24+1, 20+2
59	5310	International	2009	249518	24+1, 20+2
60	5310	International	2009	261723	24+1, 20+2
61	5310	International	2009	250232	24+1, 20+2
62	5310	International	2009	269462	24+1, 20+2
63	5310	Ford	2010	191704	16+2
64	5310	Ford	2010	192002	16+2
65	PTMISEA	Glaval Legacy	2014	New	?
65	PTMISEA	Glaval Legacy	2014	New	?

*regular+w/c

Bus numbers 58 to 64 are all beyond their useful life and need to be replaced. The vehicle replacement schedule and plan should reflect the adopted service plan.

Figure 10-5 shows the recommended fleet mix and size objectives for the five-year service plan recommended in Chapter 8.

Figure 10-5 FY 2019/20 Fleet Mix Objective[2]

Service Type	No Buses	Routes	Fleet Type	Desired Feature	Min. Seating Capacity**	Deisred Fuel
Route 1 Spine	3	Route 1 Spine	Class E	Spine	28	Diesel
Intercity	1	Stockton	Class E	Luggage	18***	Diesel
Feeder Service						
Moderate Demand	2	Routes 3&4	Class C	Standard	12	Diesel
Low Demand	1	Checkpoint DAR	Class D	Standard	5	Gas
Dial-A-Ride	1	Dial--A-Ride	Class D*	Standard	5	Gas
Spare						
High Demand	1	Spine Route	Class E	Standard	28	Diesel
Moderate Demand	1	Feeder Flex Routes	Class C	Standard	12	Gas
Low Demand	1	Dial-A-Ride	Class D	Standard	5	Gas
Total	11					

*Can use Class C spare when reservations necessitate
** Plus two wheelchari positions
*** Based on Intercity Feasibility Study; however other FTA 5311(f) services ofter have a 30 passenger seating capacity

Route 1 Spine service should have a larger Class E cutaway bus as this route will continue to build ridership. The overcrowding at Columbia College currently on the last run may be mitigated by the implementation of Stockton service to Delta College, but this should be offset by consistent 90-minute spine service between Valley Springs and Angels Camp, with additional feeder service options available.

The flex route feeder services on Routes 3 and 4 can have small capacity Class C vehicles, which can have more maneuverability in travelling to and from the route on sometime curvy mountain roads.

Using minivans on both the checkpoint Dial-A-Ride services to Copperopolis, Mountain Ranch, West Point, and possibly to Burson match vehicle size to demand. The minivans can be utilized on most days for the recommended Dial-A-Ride service in Angels Camp and within ¾ mile of the spine Route 1 segments between Angels Camp and Valley Springs, but the spare vehicle flexibility built into Figure 10-5 will enable flexibility when advanced next reservations require a larger vehicle.

Figure 10-6 is a fleet procurement schedule based on the above 5-year fleet objective by plan year.

[2] This is a different fleet mix than proposed in the County 2015/16 budget and is dependent on the adoption of the service plan.

Figure 10-6 Fleet Procurement Schedule[3]

Vehicle Type	Fuel	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 19/20	Total
Class D minivan/accessible sedan	Gas	3				2	5
Class C Small Cutaway		3					3
Class E Large Cutaway					1		1
Class E 35' Cutaway with Luggage	Diesel	1					1
Shop Truck		1					1
Total Vehicle Procurement		8	0	0	1	2	11

Most of the fleet would be replaced in FY 2015/16. The additional large Class E cutaway bus would be needed if the decision is made to implement the 60-minute service along the spine during peak periods. It is projected that two of three minivans would exceed their useful life in FY 2018/19 and would be replaced in FY 2019/20.

Passenger Amenities

Bus Stop Improvements

Improvements to bus stop amenities, including signage, information, benches and shelters are important to passenger convenience and comfort for Calaveras Transit. Basic signage of the bus stops and lack of amenities were prevalent topics during interviews with key stakeholders.

Since the stakeholder interviews were conducted in June 2014, there has continued to be significant progress made to bus shelter and new accessible bus pad installations. In 2010, Phase II of the bus stop improvement program was completed with the installation of one bus shelter and three bus benches. Until just recently, no progress had been made on Phase III of the bus stop improvement program that includes the planned installation of four bus shelters and two bus stop benches. An engineering firm was hired to provide installation and implementation specifications, but the work had not been finalized as of August 2015. The Calaveras Transit 2015/16 includes almost $300,000 for improvement at five additional bus stops. As the new service plan is implemented, the capital budget includes improvements at several additional designated bus stops.

Regular maintenance, replacement and upgrades to bus stop signage and information panels at key bus stops need to be ongoing. $2,500 is included per year for bus stop signage and information panel improvements.

[3] The Calaveras County FY 2015/16 includes the procurement of five Class C buses, and the fleet needs based on the service plan only require three Class C buses. Further discussion is needed on the size of the Intercity bus; with only two trips per day, there could be capacity constraints if the service is successful. Most other intercity services have larger capacity buses to accommodate peak demand.

AVL Equipment

The passenger amenity capital procurement recommendations are intended to provide Calaveras Transit with both a management tool and to increase available information to Calaveras Transit passengers. Calaveras Transit will be developing a detailed RFP for procurement of a suite of technologies that should be fully integrated, professionally installed and tested, with significant knowledge of bus electronic systems. There are several vendors who provide such a suite of technology applications that should be fully integrated to both meet Calaveras Transit management and passenger information needs.

At the heart of the hardware is automatic vehicle location or AVL for short. AVL systems are widely used in the public transportation industry as a way to track where vehicles are located in their respective service areas. In simple terms, AVL has two major parts: 1) geographic positioning systems (GPS) that track the real-time location of the bus and 2) software that displays the location of the buses on a map. AVL is normally accurate to within 30 feet, which is sufficient for transit purposes. The AVL tool enables a number of features that can be integrated with this base technology.

Schedule Performance Tracking is one of the primary features that will benefit both Calaveras Transit management and passengers. At present, there is no way to objectively monitor on an ongoing basis how many buses are on-time, within existing performance standards, or are late causing missed connections. Chapter 3 sets both minimum and target performance standards for schedule adherence and transfer connections. A good schedule performance system will enable Calaveras Transit management to compare the timepoint schedule with when the bus actually departs from each timepoint and provide a daily summary of the percent of timepoints that are on time. It will also enable Calaveras Transit management to ensure that no buses are leaving early from timepoints. The AVL system provides an accurate means of providing on-time performance from a management perspective. As stated earlier, the April 2014 ridecheck was a small sample of schedule adherence. It is recommended that Calaveras implement GPS tracking devices on all buses as soon as possible to provide accurate schedule adherence data on an ongoing basis.

This will also be important for providing passengers with accessing real time information on the location of their bus. This is discussed later in the passenger information paragraph. All buses should be equipped with mobile data terminals that enable real-time performance checks by the drivers, but also two-way messaging with dispatchers. This is essential in operations management by the operations and maintenance contractor.

Automatic Passenger Counting is the second important function for AVL systems. This provides an array of data on both boarding and alightings at every Calaveras Transit stop in the fixed route system. Laser sensors are typically installed above the doorways and electronically count the number of passengers boarding and alighting the bus automatically. The counts are only

automatic when the door is open. Typical systems have 95 percent accuracy, which is acceptable for transit management purposes. It is important that this system be integrated with a Calaveras Transit database of stops and schedules so that management can, for example, monitor if boarding and alighting activity is causing schedule adherence problems.

Stop Annunciation Systems provide ADA compliant onboard stop announcements through both a public address system and visually inside the bus on a LED screen. The system announces stops ahead of time and typically includes an automatic text-to-speech feature that eliminates the need for manually recording the information. The stop annunciation system can also be programmed to provide custom announcements at the three primary transfer centers in the Calaveras Transit systems. Calaveras Transit management can also program in public service announcements as desired that could promote, for example, the purchase of monthly passes.

Dispatching Management becomes an important tool for the operations contractor to utilize the information in real time to manage operations. It provides the capability of managing buses that are significantly off schedule as the dispatcher can visually see how buses are arriving and departing from each stop along the route in real time. If roadwork or accidents are delaying departures, texts can be sent to drivers as to how to avoid the delays and fix schedule problems before missed connections are made.

Real-Time Passenger Information is the final integrated application for the AVL system. Simply put, riders want to know where their bus is, and they want to know it as soon as possible. This information can be provided on desktop, laptop and table computers, flip phones, smart phones, and LED displays at key transfer centers and possibly heavily utilized stops. The system requires that each bus stop sign have an identifying number. At the low tech end, the flip phone user can text or call in their bus stop location and find out when the next bus(es) will arrive at their stop. At the high end, a person with a smart phone or tablet can literally see the progress of the bus on their route as it approaches their stop. At the transfer centers, LED displays will show when the next buses will arrive and depart the transfer center in a real-time manner.

The graphic below from one of the vendors in the industry provides an excellent summary of how the passenger information system works. Calaveras Transit has budgeted $69,000 for an AVL system in FY 2015/16.

Equipment and Security

The Calaveras Transit budget includes a project for bus stop lighting to improve security at key bus stop in FY 2015/16 and FY 2016/17.

In FY 2015/16, the Calaveras County Fleet Shop has requested three top priority items that are include in the recommended capital expenditures in FY 2015/16:

1. Bus maintenance computer diagnostic tools and software
2. King pin press
3. High jack stands to use in conjunction with lift

As discussed earlier, the recommendation is to transition the maintenance of Calaveras Transit from Calaveras County to the operations and maintenance contractor when the new vendor contract award is made. CCOG owns much of the maintenance equipment and much can be transferred from Calaveras County to the Calaveras Transit Agency. However, it is anticipated that there will be additional equipment needs and a placeholder value of $30,000 is included in the capital plan for this transition.

A placeholder value of $5,000 is also included for office equipment for the new Calaveras Transit Agency.

Mobility Management

Mobility Management staffing is treated as a capital expense by FTA 5310 regulations. The Calaveras Council of Government was recently awarded a FTA 5310 Mobility Management grant to implement several strategies of the Coordinated Plan. Part of the budget and work scope for the Mobility Manager will be to "develop driver reimbursement programs to support and expand upon existing volunteer driver programs." A deliverable of the grant is "Driver Reimbursement Program Implementation Plan." In many rural areas around the United States organized driver volunteer driver programs have been implemented to provide mobility options for residents living in areas without good public transportation services. Other mobility management strategies might also include improved Calaveras Transit passenger information, increased carpool and vanpool opportunities, partnerships with the tourism industry for special routes, and a user-side taxi subsidy program. These are explored further in Chapter 6.

Operations and Maintenance Facility

The scope and potential cost for a Calaveras Transit Operations and Maintenance Facility is not know. It is recommended that the scope and potential costs be addressed in the upcoming Long Range Transit Study. This would service as initial feasibility study. Subsequent project components and estimated costs would be developed for:

- Preliminary Design
- Land Acquisition
- Final Design and Environmental
- Construction

Summary of Capital Expenditures By Plan Year

Exhibit 10-7 is a summary of the capital expenditures by plan year. The following are the total five-year expenditures by category:

- Bus procurements: $843,841
- Equipment and Minor Facilities: $536,508
- Mobility Management: $329,588
- Operations and Maintenance Facility (Placeholder Value): $2,430,000
- Bus Replacement Trust Fund: $150,000

The five-year capital expenditures, including the placeholder value for the operations and maintenance facility is almost $4.3 million for the five-year period.

Figure 10-7 Capital Expenditures By Plan Year

	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	5-Year Total
Vehicle Acquisition						
Class E 35 foot with luggage	$ 118,450					$ 118,450
Class C Cutaway	$ 278,534					$ 278,534
Class D minivan/accessible sedan	136,938				102,750	$ 239,688
Class E Large Cutaway				207,169		$ 207,169
Total Vehicle Procurement	$ 533,922	$ -	$ -	$ 207,169	$ 102,750	$ 843,841
Equipment and Minor Facilities						
Bus Stop improvements	294,538		15,000	30,000	30,000	$ 369,538
Bus Stop Signage	2,500	2,575	2,652	2,732	2,814	$ 13,273
Safety/ Security Equipment	20,000	128,726				$ 148,726
Bus/ shop equipment	11,000	30,000				$ 41,000
AVL Equipment	$ 69,000					$ 69,000
Office Equipment/Computers		5,000		2,000		$ 7,000
Subtotal Equipment & Minor Facilites	$ 397,038	$ 166,301	$ 17,652	$ 34,732	$ 32,814	$ 648,537
Mobility Manager (5310)	$ 20,000	$ 74,000	$ 76,220	$ 78,507	$ 80,862	$ 329,588
Operations and Maintenance Facility*						
Land Acquisition			$ 210,000			$ 210,000
Design and Environmental			$ 125,000			$ 125,000
Construction				$ 1,000,000	$ 1,000,000	$ 2,000,000
Subtoal Ops. & Maint. Facility	-	-	335,000	1,000,000	1,000,000	$ 2,335,000
Bus Replacement Trust Fund	30,000	30,000	30,000	30,000	30,000	$ 150,000
Total Capital	$ 980,960	$ 270,301	$ 458,872	$ 1,350,407	$ 1,246,426	$ 4,306,966

* Placeholder values until Long Range Transit Plan is completed

Capital Revenues

Figure 10-8 shows the capital revenues by plan year. The majority of revenues for bus procurements and bus stop improvements will be revenues from PTMISEA carried over since FY 2010/11 and subsequent years. Since PTIMSEA has reached its sunset funding, it will no longer be available in FY 2018/19 and FY 2019/20 when vehicle procurements are planned. In those years, FTA 5339 discretionary grants would be utilized for funding with the bus replacement trust fund utilized for matching purposes.

A placeholder grant is included for the Operations and Maintenance Facility. This could be from discretionary FTA 5339 funding, STIP funding or another source of funding approved for facility development in the federal reauthorization bill.

Figure 10-8 Capital Revenue

Capital Revenues	FY 15-16 Projected	FY 16-17 Projected	FY 17-18 Projected	FY 18-19 Projected	FY 19-20 Projected	SRTP Total
Transportation Development Act	$ 26,190		$ 17,652	$ 34,732	$ 32,814	$ 111,388
State Transit Assistance (STA)	$ 30,000	$ 30,000	$ 30,000	$ 61,075	$ 45,412	$ 196,488
FTA 5310 Mobility Management	$ 16,000	$ 59,200	$ 60,976	$ 62,805	$ 64,689	$ 263,671
Toll Credit Match for MM	$ 4,000	$ 14,800	$ 15,244	$ 15,701	$ 16,172	$ 65,918
FTA 5311(f)	$ 94,760					$ 94,760
FTA 5339 or successor				$ 176,094	$ 87,337	$ 263,431
PTMISEA (Proposition 1B)	$ 790,010	$ 37,575				$ 827,585
CalOES	$ 20,000	$ 128,726				$ 148,726
Grant for Oper & Maint. Facility*			$ 335,000	$1,000,000	$1,000,000	$2,335,000
Capital Revenues Total	**$ 980,960**	**$ 270,301**	**$ 458,872**	**$1,350,407**	**$1,246,426**	**$4,306,966**

* Placeholder value until operations and maintenance facility is completed

Appendix A

Calaveras County
Short Range Transit Plan Update

Transit Maintenance and Organizational Analysis
Working Paper

Administrative Draft Released
July 31, 2014

Amended
September 23, 2014

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Executive Summary

The purpose of this analysis is to determine what cost elements are making Calaveras Transit's operating cost per vehicle service hour substantially higher than some other rural transit services. More importantly, are there potential changes to how Calaveras Transit is doing business and how services are administered and managed that would reduce Calaveras Transit's cost per vehicle service hour?

The performance measure of operating costs per vehicle service hour is utilized throughout this working paper. This is a common measurement in the transit industry to measure cost efficiency of the services provided. It provides a measurement of how much it costs to operate one hour of Calaveras Transit service when the bus is available for passengers to board and pay a fare.

Figure ES-1 provides a breakdown of operating costs per vehicle service hour for Calaveras Transit for FY 2012/13:

Figure ES-1 Breakdown of Cost Per Vehicle Service Hour By Cost Category

Main Category of Costs	Cost Per Hour	Percent of Total
Operator Fixed Costs	$ 35.63	31%
Operator variable costs per hour	$ 32.07	28%
Maintenace Cost per hour	$ 19.41	17%
Fuel Cost per hour	$ 15.92	14%
County Administration Cost per hour	$ 13.26	12%
Total*	$ 116.28	102%
Audited Financial Statements	$ 114.51	
* Internal cost reporting does not equal audited numbers, and results in $1.77 difference		

The operating cost per vehicle service hour for Calaveras Transit has increased from $69.85 per vehicle service hour in FY 2008/09 to $114.51 in FY 2012/13, based on financial audits of Calaveras Transit costs. The increase is significantly more than the inflation rate. This working paper explores the factors for why the cost per vehicle service hour has increased so much and what strategies can help to improve operating efficiencies.

This working paper is part of the contract to prepare a Short Range Transit Plan for Calaveras Transit. It will provide input to the financial plan chapter of the SRTP.

The full working paper in Sections 1 to 7 below provides significant detail on the each of the cost components in Figure ES-1. The body of the report also compares Calaveras Transit to different

peers, recognizing that each transit agency has its own history and set of service parameters such that comparison of peers does not provide an "apples-to-apples" comparison. The focus of this Executive Summary is the range of strategies to address cost efficiencies for each major cost component that Calaveras Transit has control over[1].

There has been significant positive momentum created since the interim Public Works Director assumed control in February 2014, and a Public Works Analyst was appointed to handle the transit management function in May 2014. Since March 2014 when work commenced on this working paper, Calaveras County has taken a significant number of actions to address cost escalation concerns. Many of the potential strategies to address cost structure issues that were discussed in a site visit by the consulting team, in correspondence with Calaveras County and Calaveras Council of Governments (CCOG) staff, and in early administrative drafts of this working paper have either been implemented or are in the process of being implemented. These actions are recognized at the end of each section of this Executive Summary and in the full body of the report.

The following is a discussion of five of the six major cost components for Calaveras Transit. The five cost components are something Calaveras Transit management has control over. The cost of fuel is not included, as Calaveras Transit has no control over fuel costs.

Contract Operator Fixed Costs

The contract operator fixed costs represent 31% of Calaveras Transit costs and is the largest cost component. The FY 2012/13 contract operator fixed cost was $35.63 per vehicle service hour for Calaveras Transit compared to $28.42 for the average of five small rural transit systems including Calaveras Transit. The potential timing of the contract expiration with the current operations contractor and implementation of the FTA 5311 (f) service to Stockton provides opportunities for lowering the contract operator fixed costs.

The current contract with the operations contractor, Paratransit Services expires on June 30, 2015 with the option for two additional years at the discretion of Calaveras County. One option is to begin work now on a new RFP that would likely be released in January of 2015 and provide greater flexibility for the proposer to develop a staffing plan to meet the performance and service quality standards that Calaveras Transit would like to achieve. With the FTA 5311 (f) implementation of intercity service between San Andreas and Stockton, the vehicle service hours would be 12,129. The RFP could specify a new target supply of 12,500[2], compared to the 8,850 in the existing contract. Service quality, past performance and cost should all be selection criteria.

[1] Fuel cost per hour is generally the cost of fuel which Calaveras County has no control over. It is not included in the analysis.

[2] This is a preliminary number. The RFP should reflect the vehicle service hours that are recommended in the Short Range Transit Plan that will be completed and adopted in late 2014.

A second potential strategy is to renegotiate the contract with the operations contractor with the intent of extending the contract for another two years without going out to bid. If Calaveras Transit decides to move forward with implementation of the FTA 5311 (f) grant, a renegotiation would already be required since coupled with the increase of hours to serve Rancho Calaveras, the increase in vehicle service hours will exceed 20%, which is a substantial change according to the existing contract with the operations contractor. If the negotiations result in a revised staffing plan with little or no increased contract operator fixed cost, this could be advantageous to Calaveras Transit.

As part of either option, Calaveras County and/or CCOG should seriously look at all the transit functions that need to be performed and determine who should perform the functions, what functions should be retained by the governing agency and what functions should be performed by the contractor. One option is to leverage the professional expertise of Paratransit Services (or competitively determined vendor) as part of their General Administration and Support. The need for streamlined transit management in Calaveras County is driven by the fact that the combined management costs for Calaveras County and Paratransit Services in FY 2012/13 were $288,092 or $32.97 per vehicle service hour. The combined management costs represented 29% of the total Calaveras Transit budget.

Continuing to build a robust partnership with Paratransit Services to meet community mobility needs is a viable strategy to consider.

A potential longer-term strategy is to purchase the operations and maintenance facility for Calaveras Transit. The building rental costs are currently $4.20 per vehicle service hour.

Recent Calaveras County Actions

Since March 2014 when work on this working paper commenced, there have been several actions taken by Calaveras County that could have a positive effect on the contract operator fixed cost per vehicle service hour:

- Calaveras County and Paratransit Services have entered into negotiations for a two-year contract extension.
- As part of the contract renegotiations, the roles and responsibilities of the Paratransit Services General Manager as well as other fixed cost staff such as dispatchers are being evaluated.
- The Calaveras County Board of Supervisors approved the new intercity route to Stockton.
- In response to an unmet needs finding, Calaveras County is planning to extend service to Burson, adding additional vehicle service hours.

Contract Operator Variable Costs

In FY 2012/13, the contract operator variable costs were $32.07 per vehicle service hour. This is the second highest cost component and represents 28% of the actual FY 2012/13 Calaveras Transit costs. The fully burdened driver wage costs per vehicle service hour is $32.07 for Calaveras Transit compared to $24.84 for peer systems. The average direct wage rate for Calaveras Transit drivers is $13.78 per hour. In a California rural system with a very good cost per vehicle service hour the average wage rate is $10.78 per hour. The higher Calaveras Transit driver wage rate was a conscious decision by Calaveras Transit in order to retain qualified drivers, improve service quality, and avoid the costs of driver turnover.

The current contract with Paratransit Services for contract operator variable costs was based on the RFP prescription that "Drivers shall be paid according to the Driver Compensation Table in Exhibit E."[3] Calaveras County has recently initiated contract negotiations with Paratransit Services to extend their contract by two years. This does provide the opportunity to review and evaluate the Driver Compensation Table. The minimum wage in California increased to $9.00 in July 2014 and will increase to $10.00 in 2016. The evaluation should take this into consideration.

Under this strategy for renegotiating with the operations contactor as described under contract operator fixed costs, negotiations could include the starting hourly rate for new drivers, and subsequent wage rate increases for both new and existing drivers for the two year extension based on market conditions. For the renegotiation, Calaveras Transit could solicit a proposal from the operations contactor for the two-year extension based on market conditions.

If the decision is to issue a new RFP for service commencing July 1, 2015, one option is to set a minimum starting hourly rate for new drivers, and let competitive bidders determine what the wage rate increase should be for both existing and new employees. Existing drivers need to be paid at their existing wage and benefits under a new contract. Evaluation criteria should include demonstrated service quality and driver turnover rates for market rate driver wages. Cost should be just one of several evaluation criteria. As mentioned previously, driver recruitment in rural areas is very difficult and retaining qualified drivers often means paying a higher competitive hourly wage rate.

There are no immediate cost savings in the variable operational costs, which include driver wages and benefits. Since existing driver wages are relatively high compared to peer systems, potential cost savings from this category would take years to realize. However, when the contract is re-bid, it is possible to allow bidders to develop a compensation package for new employees based on market rates. With current training rates at $10.00 for Calaveras Transit drivers, and the minimum wage set to increase to $10.00 per hour in 2016, there is likely very little opportunity for short-term or long term cost savings for this cost component.

[3] The table is included in Section 3 of the full report below.

Maintenance Costs

In FY 2012/13, maintenance costs were $165,828. This is $19.41 per vehicle service hour. Because maintenance costs are mileage based, the most appropriate comparative figure is expressed as maintenance cost per vehicle service mile. For vehicle service miles, the Calaveras Transit cost was $0.64 and the average of five peers that directly provided maintenance was $0.61 per vehicle mile. For the three contract system peers, the average maintenance cost per vehicle service mile was $0.52. Despite a lack of consistent leadership in maintenance practices, and a fleet that is beyond its useful life, the overall maintenance costs in FY 2012/13 were within acceptable norms.

Below are two types of strategies to address the maintenance function in the future. The first set of strategies is meant for consideration if Calaveras County retains maintenance responsibility. The second set of strategies are institutional options that might be considered as alternatives to having Calaveras County maintain the transit fleet.

Strategies if Calaveras County Retains the Maintenance

1. *Replace the remaining fleet as soon as feasible.*

   A priority should be the replacement of the remaining five vehicles in the Calaveras Transit fleet as soon as possible. Two buses are currently on order, and the Calaveras County Board of Supervisors approved an order of two additional buses in August 2014. The County is already taking proactive steps to replace buses as soon as possible. In the future, a more rigorous replacement schedule should be adopted and adhered to.

2. *Hire a Fleet Manager with experience with a public transportation fleet.*

   Transit buses carry passengers and are significantly more regulated by State and Federal authorities than the Road Department and Waste Management fleets. The Fleet Manager should be experienced and knowledgeable of these regulations and required policies and procedures. There are public transportation websites such as *transittalent.com* that can be utilized to attract personnel with transit experience. A new Fleet Manager with bus maintenance experience is starting work for the Fleet Shop on September 22, 2014.

3. *The maintenance budget should include time for mechanic training.*

   The transition of the Calaveras Transit fleet to the Fleet Shop did not include adequate training of the mechanics on transit vehicles. Section 5 on maintenance has five priority areas for training. Calaveras County is taking steps to provide the necessary staffing.

4. *Develop detailed maintenance plan goals, objectives, performance standards and policies and procedures*.

Vehicles purchased with federal funds are being increasingly scrutinized for asset management practices. Regular preventative maintenance and adhering to Federal maintenance standards is imperative going forward. A maintenance plan with specified goals, objectives and performance standards is a requirement of federal funding for buses.

5. *Develop more comprehensive maintenance inspection forms.*

   The existing maintenance inspection forms were based on the MV Transportation forms with the interim fleet manager adding OEM maintenance intervals. The forms do not include ancillary components such as fareboxes and wheelchair lifts. A set of stratified inspection forms should be created for each bus type that includes necessary A, B, and C inspections that include each of the bus components. In addition, inspections for wheelchair lifts and air conditioning should be incorporated into the inspection forms.

6. *Implement the VMRS coding system as part of the management information systems.*

   Calaveras Transit should adopt the VMRS coding system that is already included in the CAMS software system it is utilizing. This will enable a more systematic tracking of costs and parts inventory and will help the Fleet Manager with his or her job in maintaining a safe and reliable transit fleet.

7. *If sufficient funds are available for vehicle replacement in the SRTP, then Calaveras Transit can consider capitalizing preventative maintenance costs.*

   FTA 5311 guidelines allow for preventative maintenance costs to be capitalized. Calaveras should only take advantage of this strategy after vehicle replacement funds are established in the Short Range Transit Plan.

Recent Actions by Calaveras County

During the six-month process of preparing this working paper, Calaveras County has taken the following steps to improve maintenance practices:

- Two replacement buses are being delivered to Calaveras County soon.
- The Board of Supervisors approved two additional bus replacement purchases. The buses will be ordered as soon as Calaveras County receives the go-ahead from the funding source.
- Plans are underway to order three more replacement buses within the next 18 months, including a new intercity bus for the Stockton service.
- Public Works has hired a Fleet Manager who is knowledgeable about bus maintenance. Calaveras County anticipates improvements in maintenance, record-keeping as well as in coordination between management and maintenance.
- Calaveras Department of Public Works is discussing the possibility of contracting out maintenance or moving it back to the operations contractor.

- Calaveras County has been discussing with CCOG the potential of programming planning funds to develop a maintenance and operations facility feasibility plan.
- Additional support to provide necessary equipment training has been planned and will soon be implemented.
- Programming and purchase of the tools and equipment necessary to efficiently support the maintenance division.

Transit Administration

County administrative costs were $13.26 per vehicle service hour and represent 12% of the costs in FY 2012/13. County administrative costs are within reasonable norms. The issue with transit administration is not one of costs, but has more to do with how important decisions are made, issues with capital project delivery, and coordination between the Transit Division and Fleet Shop.

The need for streamlined transit management between Calaveras County and the operations contractor was discussed earlier. Taking advantage of Paratransit Services transit skills and expertise is an important strategy option to consider.

There is a clear need to improve the budgeting and TDA claim process. The budgets over the last two years have been inconsistent and, in the case of FY 2013/14, inflated the costs to operate Calaveras Transit.

Recent Actions by Calaveras County

Since March 2014 when work commenced on this working paper, Calaveras County has initiated the following actions relevant to transit administration:

- Calaveras County staff is meeting with Paratransit Services to better define the transit function roles and responsibilities between the County and Paratransit Services.
- The Public Works Analyst in charge of the transit management function is taking transit management classes at the University of Pacific.
- The Public Works Analyst will be attending an industry conference in late October that has many relevant training and information sessions.
- The Public Works Analyst has been working with the Public Works Business Administrator to "produce a reality-based budget" for when accurate TDA claims can be based.
- Calaveras County has provided a concerted effort to deliver the Bus Stop Improvement Project, bus replacements and other capital needs. A total of $700,000 has been recently programmed for capital improvements.
- Work is underway to update marketing efforts to reach more potential riders.
- Working with a vendor, Calaveras Transit will be including routes and schedules on Google Maps as part of Google Transit and will be launching a new trip planner.

- In concert with Paratransit Services, Calaveras Transit is actively participating in community activities to raise awareness of Calaveras Transit activities.

Up until six months ago, the governance and transit administration of Calaveras Transit by Calaveras County had not received the attention and professional guidance it deserves. There are five different governance and administration options that are utilized by peer agencies for the Calaveras Council of Governments to consider at its October 1st, 2014 workshop.

Institutional Options for Calaveras Transit

There are several different institutional options for transit governance and administration that are discussed in Section 7. These include:

1. Retain Calaveras County as the transit administrator with a focus on building transit leadership and support. As of this writing a new Public Works Director has not been hired.

2. Form a new joint powers authority, creating a Calaveras County Transit Agency for transit administration and contract for maintenance and operations. The governing board would be the same as the Calaveras Council of Governments. This is a governance model that Tuolumne County, Modoc County, and Lassen County, among others, have successfully implemented.

3. Hire a professional transit management firm. Lake Transit in Lake County and Redwood Coast Transit in Del Norte County are two examples of this institutional option.

4. Form a joint powers authority for transit administration and directly hire operations and maintenance personnel. This is the governance model that Amador County and the Eastern Sierra Transit Authority have implemented.

5. Form a regional transit authority among Tuolumne, Calaveras and Amador counties. Eastern Sierra Regional Transit is an example of a joint powers authority of two counties, Inyo and Mono counties.

1. Introduction

This is the second working paper for the Calaveras Transit Short Range Transit Plan. This working paper evaluates the cost structure of Calaveras Transit and suggests a range of strategies to operate Calaveras Transit in a more cost-effective manner.

The performance measurement of operating costs per vehicle service hour is utilized throughout this working paper. This is a common measurement in the transit industry to measure cost efficiency of the services provided. It provides a measurement of how much it costs to operate one-hour of Calaveras Transit service when the bus is available for passengers to board and pay a fare (vehicle service hour).[4]

Recent Performance Trends

The following performance trends provide important context to this working paper. The operating cost per vehicle service hour for Calaveras Transit has increased from $69.85 per vehicle service hour in FY 2008/09 to $114.41 in FY 2012/13, based on financial audits of Calaveras Transit costs. The performance of Calaveras Transit is shown in Figure 1 from FY 2008/09 to FY 2012/13.

Figure 1 Calaveras Transit Performance FY 2008/09 to FY 2012/13

	FY 2008/09	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13
	Actual	Actual	Actual	Actual	Actual
Source	Perf. Audit	Perf. Audit	Perf. Audit	Fiscal Audit	Fiscal Audit
Base Statistics (Annual)					
Ridership	90,834	55,273	60,080	68,067	65,922
Vehicle Service Hours	15,005	9,248	9,043	8,930	8,739
Vehicle Service Miles	439,290	274,609	263,345	259,305	263,168
Fare Revenue	$ 89,326	$ 69,184	$ 59,751	$ 66,572	$ 87,901
Operating Costs	$ 1,048,090	$ 727,680	$ 831,820	$ 920,533	$ 1,000,691
Performance					
Passengers/Service Hour	6.05	5.98	6.64	7.62	7.54
Passenger/Service Mile	0.207	0.201	0.228	0.262	0.250
Average Fare/Passenger	$ 0.98	$ 1.25	$ 0.99	$ 0.98	$ 1.33
Farebox Recovery**	8.5%	9.5%	7.2%	7.2%	8.8%
Cost/Vehicle Service Hour	$ 69.85	$ 78.69	$ 91.98	$ 103.09	$ 114.51
Cost/Service Mile	$ 2.39	$ 2.65	$ 3.16	$ 3.55	$ 3.80
Cost/Passenger Trip	$ 11.54	$ 13.17	$ 13.85	$ 13.52	$ 15.18
Subsidy/Passenger Trip	$ 10.56	$ 11.91	$ 12.85	$ 12.55	$ 13.85

* Based on 6-month data through December 2013

*Revenues divided by total operating costs. TDA regulations provide exemptions for service expansions and extensions which are not included in the farebox recovery calculation here. In FY 2012/13, the TDA farebox recovery was 9.25%.

[4] Operating cost per vehicle service hour is the annual operating cost divided by the annual vehicle service hours operated.

Despite strong ridership and fare revenue growth between FY 2009/10 and FY 2012/13, the sharp rise in operating costs per vehicle hour and vehicle service mile have resulted in an increase in the average cost per passenger trip from $11.54 in FY 2008/09 to $15.18 in in FY 2012/13. With strong ridership growth and fare increases, one would normally see the farebox recovery ratio well above 10%. However, the rise in operating costs has increased at a rate that eclipses the rate of increase in fare revenues.

Purpose of Working Paper

The purpose of this analysis is to determine what cost elements are making Calaveras Transit's operating cost per vehicle service hour substantially higher than some other rural transit services. More importantly, are there potential changes to how Calaveras Transit is doing business and how services are administered and managed that would reduce Calaveras Transit's cost per vehicle service hour? A vehicle service hour is one hour a Calaveras Transit bus is in revenue service and is available to pick-up and drop-off passengers.

Why is this important? If Calaveras Transit were able to reduce the operating cost per vehicle service hour, it may be able to offer residents of Calaveras County significantly higher service levels for the same dollar amount. As described in more detail later, the average of four peer California rural transit agencies with contracted operations was $85.58 per vehicle service hour. In FY 2012/13, the audited operating cost for Calaveras Transit was $1,000,691 with 8,739 vehicle service hours provided. If Calaveras Transit had an average cost per vehicle service hour of $85.58, it could provide 11,693 vehicle service hours for the same budget.

This working paper is meant to be a resource document to help facilitate discussion about the strategies to improve the operational and cost efficiency of the Calaveras Transit System. The working paper serves three important functions:

1) Provides factual information on the existing cost structure issue;
2) Provides factual documentation on the cost structure of peer transit agencies; and
3) Provides potential strategies to lower the operating cost per vehicle service hour.

The information is designed to inform the CCOG Board of the available options that have been utilized successfully in other California rural counties. A recommended approach or package of recommended strategies will not be provided, as this will need to be decided in a broader political context.

There has been significant positive momentum created since the interim Public Works Director assumed control in February 2014, and a Public Works Analyst was appointed to handle the transit management function in May 2014. Since March 2014 when work commenced on this working paper, Calaveras County has taken a significant number of actions to address cost escalation concerns. Many of the potential strategies to address cost structure issues that were discussed in a site visit by the consulting team, in correspondence with Calaveras County and Calaveras Council of

Governments (CCOG) staff, and in early administrative drafts of this working paper have either been implemented or are in the process of being implemented. These actions are recognized at the end of each section of the cost component sections of this working paper.

Organization of Working Paper

The next section provides a historical overview of how Calaveras Transit has been governed and managed over the past ten years. There have been a series of important decisions made that provide relevant context to the profile of costs. An overview of peer costs provides a basis of comparison with Calaveras Transit on overall costs per vehicle service hour. Finally, the section provides a breakdown of the operating cost per vehicle service hour for four major functional areas of transit operations: fixed contract operational cost, variable operational costs, maintenance costs, and transit administrative costs.

These four cost categories provide the basis for sections three to six of this working paper. The fifth major cost category is fuel and is an independent variable dependent on global markets and is not reviewed in this working paper. For each of these sections, historical context is provided, followed by a management review of the functional area. An analysis of FY 2012/13 costs is provided. Each section compares key comparative statistics for the functional area with peer organizations. Key findings on the management review and cost analysis are included. Finally, potential strategies to address the cost issue are formulated for each functional area.

Section 7 provides different institutional options for how Calaveras could be governed and managed in the future.

Section 8 is a summary of the potential strategies that might reduce the cost per vehicle service hour for Calaveras Transit.

Alternative strategies to reduce the cost per vehicle hour are presented. The findings and potential strategies are meant to facilitate discussion among CCOG Board members at the October 1st workshop. Many of the decisions to be made are value judgments, often with political considerations. Recommendations are intentionally not made by the consulting team. Alternative strategies are presented as objectively as possible. The CCOG could direct the consulting team on strategies to be included in the Short Range Transit Plan.

2. Calaveras Transit Organization

Overview of Organizational Structure

An organization chart of Calaveras Transit as of June 2014 is shown in Figure 2. It is adapted and updated from an organization chart provided by Calaveras County with additional input from Paratransit Services.

- The Calaveras County Board of Supervisors is the governing body for Calaveras Transit. They provide overall policy and management guidance for Calaveras Transit.
- Calaveras Transit is a functional department of the Calaveras County Department of Public Works. A Public Works Analyst is currently serving in the Transit Manager function and reports to the Director of Public Works. Additional historical information on the administration function and costs is provided in Section 6.
- Maintenance is performed by the Fleet Shop, another section of the Public Works Department. The Fleet Shop has a Memorandum of Understanding with the Transit Division of the Public Works Department. A more detailed description and analysis of this function is provided in the Maintenance section later in Section 5.
- The Department of Public Works contracts with Paratransit Services to provide Calaveras Transit operations, including scheduling and dispatching, drivers, and related safety and training functions.

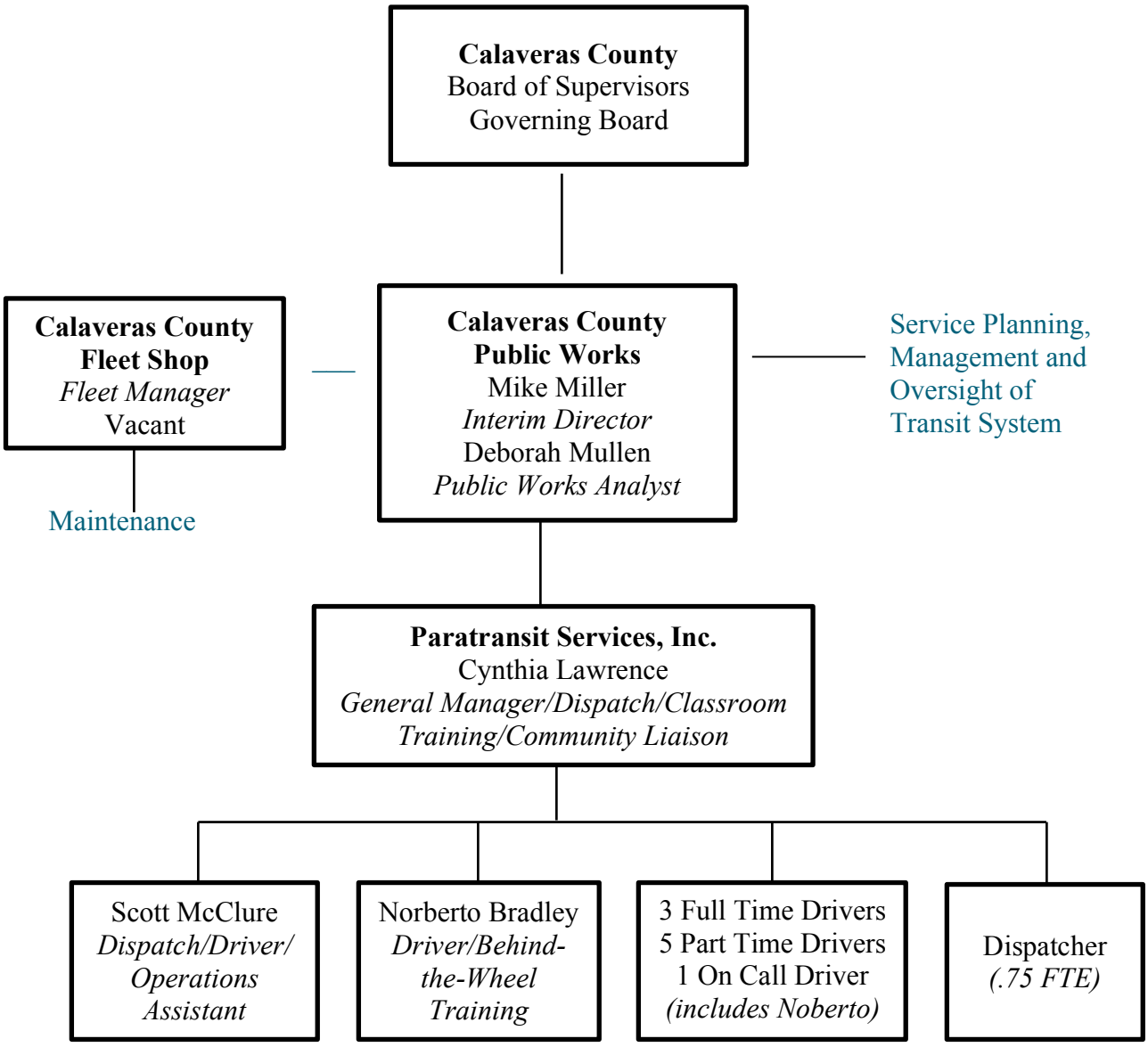
Historical Perspective

The current cost structure of Calaveras Transit is the result of a series of decisions over the past 10 years.

Figure 3 shows a chart of the vehicle service hours and cost per vehicle service with key milestones, or decision points, included. The following are the main events that have influenced the cost per vehicle service hour over time:

- In FY 2002/03, Lodi service was initiated as an extension to an existing local route. In FY 2003/04, service to Lodi was expanded to five days a week.
- In FY 2005/06, Calaveras Transit management and governance moved from the Calaveras Council of Governments to the Calaveras County Department of Public Works. The cost per vehicle service hour was $50.06 in FY 2005/06.
- In FY 2006/07 MV Transportation provided both maintenance and operations under contract to the Calaveras County Department of Public Works. The cost per vehicle service hour was $57.93. In FY 2007/08, the first full fiscal year after the transition to Calaveras County was made, the cost per vehicle service hour jumped to $81.80.

FIGURE 2 CALAVERAS TRANSIT ORGANIZATION CHART



Source: Adapted from Organization Chart Provided By Calaveras Department of Public Works

Figure 3
Historical Context

(CT) CALAVERAS TRANSIT

Operational Trends

- In FY 2008/09, due to the significant reductions in State Transit Assistance (STA) funding, severe service cutbacks including the elimination of Lodi service were made reducing the vehicle service hours from 15,005 to 9,248. In FY 2009/10, the full fiscal year after the service reductions were made, the cost per vehicle service hour was $78.69. When STA funding was restored service levels were not restored.
- In FY 2010/11, Calaveras County made the management decision to move Calaveras Transit maintenance to the County Department of Public Works. A memorandum of understanding was negotiated between the Calaveras County Public Works Fleet Shop and the Calaveras Public Works Transit Division. A management and operations RFP was also sent to prospective bidders to operate and manage Calaveras Transit buses. Paratransit Services was selected and a contract was executed.
- At the beginning of FY 2011/12, the Fleet Shop assumed the maintenance duties for Calaveras Transit and Paratransit Services took over the operations of Calaveras Transit from the previous contractor, MV Transportation. In FY 2011/12, the first full fiscal year that Paratransit Services operated services and Calaveras County provided maintenance service, the cost per vehicle service hour jumped from $78.69 in FY 2009/10 to $103.09 in FY 2011/12.
- In FY 2012/13 service adjustments were made and a $0.25 zone fare was implemented.
- In FY 2012/13, service changes were made such that Route 3 went directly to Jackson instead of providing transfers to Amador Transit in Mokelumne Hill. Route 3 serving Copperopolis became Route 4 and Route 2 terminated service to Mokelumne Hill and provided limited service between San Andreas and West Point. The cost per vehicle service hour was $114.51. This is the basis for analysis since these were the last audited cost figures.
- In FY 2012/13, the full-time Calaveras County Transit Manager departed and was replaced by two different interim contract Transit Managers, Majic Consulting and Scott Dwyer Consulting.
- In FY 2013/14, service on Route 1 was extended to Rancho Calaveras.
- Late in FY 2013/14, the contract for the Interim Transit Manager expired. The Transit Manager function was taken over by the Public Works Analyst.

Peer Comparison of Costs per Vehicle Service Hour

Peer agencies are utilized to illustrate the difference in cost elements compared to Calaveras Transit. The peer information includes data from nine different transit agencies that provide operations and maintenance services for small rural California transit systems. Providing detailed peer cost data for private contractors could potentially be utilized by a vendor to obtain a competitive disadvantage in future bid opportunities. Therefore, only the average costs and the low and high ranges are identified for different cost components. Calaveras Transit is compared to these peer organizations.

Requests for detailed cost information were sent to seven candidate peers. In addition, data was available from an internet search or consultant files for three additional peer agencies. Data was received from a total of nine transit agencies, including Calaveras Transit. The other eight agencies include:

- Sage Stage, Modoc County
- Mountain Area Regional Transit Authority, San Bernardino County
- Gold Country Stage, Nevada County
- Tuolumne Transit, Tuolumne County
- Trinity Transit, Trinity County
- STAGE, Siskiyou County
- Lassen Transit, Lassen County
- Amador Transit, Amador County

Calaveras Transit is one of the smallest rural transit agencies in California with 8,739 vehicle service hours provided in FY 2012/13. The selection process for peers included only California rural transit systems, since these agencies are all under California's Transportation Development Act requirement. The County population or transit service area was under 60,000. The peers selected provide inter-community transit services. The peers selected all had 22,000 fixed route vehicle service hours or less to be considered a smaller rural transit system.

Two of the peer agencies utilized had vehicle service hours that were less than Calaveras Transit. The rest had more vehicle service hours, and the largest peer agency was slightly over 20,000 vehicle service hours.

The following table provides a brief summary of the key operating statistics and population of the peers selected.

Figure 4 Operating Profile of Peer Agencies

Transit Agency	County	Population	Vehicle Service Hours	Vehicle Service Miles	Fleet Size
Calaveras Transit	Calaveras	44,742	8,739	263,168	7
Sage Stage	Modoc	9,686	4,686	119,512	7
Trinity Transit	Trinity	13,526	5,165	147,494	7
Lassen Transit	Lassen	34,895	12,088	239,912	9
Gold Country Stage(1	Nevada	31,000	12,550	235,801	10
MARTA (2)	San Bernardino	35,000	22,000	434,000	16
Tuolumne Transit (3)	Tuolumne	55,365	13,381	201,264	22
STAGE	Siskiyou	44,900	19,394	521,805	11
Amador Transit (4)	Amador	38,091	11,360	223,593	13

(1)Service area is western Nevada County, fixed route
(2) Lake Arrovwhead and Big Bear Lake area of San Bernardino County, fixed route
(3) Generalized services only for vehicle service hours and mile; fleet all services
(4) Report include all services

There was an effort to make "apples-to-apples" comparisons where possible. However, every transit system has its own evolution in the type of service delivery where no other agency operates in the same manner as Calaveras Transit. Therefore, it was not possible to have a pure "apples-to-apples" comparison. Where feasible and when available, fixed route services are separated out since Calaveras Transit does not provide Dial-a-Ride services. However, many transit agencies do not disaggregate all costs for fixed route and demand response services. Therefore, peer comparisons should be treated as general benchmarks and not statistically valid comparisons.

Calaveras is unusual for a small rural transit agency and is unique when compared to other transit agencies operating in similar environments. Operations are provided by a private contract vendor. Maintenance is provided by Calaveras County Department of Public Works.

All of the eight peer agencies either contracted for all operations and maintenance functions or directly provided the service with the agency directly hiring the drivers and mechanics. None of the other eight peer agencies utilized in the analysis have directly provided maintenance services and contracted operations services. Peer comparisons for operations were limited to private contractors as the cost structures for directly operated services are different and are typically higher than private contracted services. In the case of maintenance, the peers are separated out by private contracted and directly operated maintenance services since strategies being reviewed include both contracted and directly provided services.

Figure 5 is a summary of the peer comparison of total cost per vehicle service hour for eight peers and Calaveras Transit. For the four agencies that contract for operations, including Calaveras Transit, the average is $85.58 per vehicle service hour with the low being $65.53 per vehicle service hour. For the five directly operated services where the agency directly hires the drivers and other staff, the

average cost per vehicle service hour is substantially higher than the peer contract services included in this analysis. The average cost per vehicle service hour is $101.41 for directly provided services, with the low being $78.52 per vehicle service hour, and the high being $126.39 per vehicle service hour. There is one directly provided transit agency with a higher cost per vehicle service hour than Calaveras Transit, and this is a county managed service with directly provided operations and maintenance services.

Figure 5 Peer Comparisons with Calaveras Transit of Cost per Vehicle Service Hour

Type of Service	No. Agencies	Calaveras Transit	Average	Median	Low	High
Contract Services	4	$ 114.51	$ 85.58	$ 81.13	$ 65.53	$ 114.51
Directly Operated	5	N/A	$ 101.41	$ 107.86	$ 78.52	$ 126.39

There are a number of factors that help to explain the significant differences in cost per vehicle service hour among the peer organizations reviewed and these will be explored further in Sections 3 to 6. The next section provides a breakdown of the Calaveras Transit costs per vehicle service hour.

2012/13 Calaveras Transit Cost Breakdown

Appendix A provides a breakdown of costs and revenue as provided in the FY 2012/13 fiscal audit. Per the Transportation Development Act guidelines, depreciation and capital expenses are not included in the operating cost per vehicle service hour and they have been excluded. Therefore, in Figure 6 the $114.51 does not include $159,643 in depreciation costs itemized in Appendix A. The fiscal audit does not provide detailed breakdowns of costs. The consulting team relied on internal cost reports provided by the Calaveras County Department of Public Works for the analysis. In Figure 6 the percent of total adds up to 102% due to relatively minor differences in Calaveras Transit internal cost reports. It is normal for internal costs not to exactly match the audited financial figures, and for the purposes of this analysis they were close enough. They provide a reasonable basis for proposing alternative strategies to address increasing operating costs.

Figure 6 Breakdown of Operating Cost per Vehicle Service Hour

Main Category of Costs	Cost Per Hour	Percent of Total
Operator Fixed Costs	$ 35.63	31%
Operator variable costs per hour	$ 32.07	28%
Maintenace Cost per hour	$ 19.41	17%
Fuel Cost per hour	$ 15.92	14%
County Administration Cost per hour	$ 13.26	12%
Total*	$ 116.28	102%
Audited Financial Statements	$ 114.51	
* Internal cost reporting does not equal audited numbers, and results in $1.77 difference		

Figure 6 is a rank-order listing of cost per vehicle service hour for the major cost categories included in this analysis. In the case of Calaveras Transit, 59% of the Calaveras Transit cost is in the operations contract. Maintenance costs are 17% of the total cost, followed by fuel cost per hour at 14%. Calaveras County's administrative costs are 12% of the total.

The following sections provide a more detailed analysis of costs in four of the five categories. The fuel cost per vehicle hour is a function of the global market for fuel and is not included in the analysis.

Each section provides a brief historical context, key findings of a management review, analysis of costs for the cost category, peer comparisons for the costs and a discussion of potential strategies to reduce the cost per vehicle hour for the category.

3. Contract Operator Fixed Costs

In FY 2012/13, the contract operator fixed costs were $311,328, or $35.63 per vehicle service hour, or 31% of the total operating costs for Calaveras Transit. This represents the highest cost of the five functional areas utilized for this analysis. To provide as close to an "apples to apples" comparison as possible, the operator fixed cost elements that are included in the Paratransit Services cost bid are also categorized the same way in the peer comparison.

The operator fixed costs in contract operations such as Calaveras Transit are essentially the fixed cost of operating a transit system irrespective of the number of vehicle service hours or miles operated. They include infrastructure and management costs such as leasing the building, wage and fringe benefits of management and supervision of operations, dispatching and clerical costs, utilities, liability insurance, corporate support, and profit. Vehicle collision/comp insurance in Calaveras Transit's operation contract is included as part of fixed costs while other peers include it in variable costs. The vehicle insurance costs do vary with the number of vehicle in the fleet. However, in order to provide as close to an "apples to apples" comparison as possible, vehicle insurance is included as a fixed cost for all peer comparisons. It should be pointed out that most rural transit systems included in the peer analysis own their operations and maintenance facility and their contract operator fixed costs do not include the current $4.20 per vehicle service hour for building lease costs that are included for Calaveras Transit.

Historical Context

The whole notion of fixed costs is that they don't vary with the service supply in terms of vehicle service hours and vehicle service miles. Therefore, if Calaveras were to operate 15,005 vehicle service hours as it did in 2008/09, the fixed cost per vehicle service hour would theoretically be $20.75 per vehicle service hour instead of the FY 2012/13 cost per vehicle service hour of $35.63. The relationship of fixed costs to service supply is further explored later when peer comparisons are made.

Peer Fixed Operations Costs

Detailed cost information that allowed direct separation of costs was received from four other contracted operations and three additional directly operated services. Of the five contract operator rural systems reviewed, Calaveras Transit had the highest fixed costs at $35.63 per vehicle service hour. The lowest was $22.17 and the average $28.42. This is summarized in Figure 7 below which includes figures for Calaveras Transit and four other contracted services.

Figure 7 Contract Operator Fixed Costs per Vehicle Service Hour

No. Agencies	Calaveras Transit	Average	Median	Low	High
5	$ 35.63	$ 28.42	$ 28.09	$ 22.17	$ 35.63

The lowest contractor fixed cost per vehicle service hour operates slightly over 12,000 vehicle service hours. However, the peer with contracted operations with the highest number of vehicle service hours operates 21,767 vehicle service hours, a significantly higher vehicle hour denominator to divide fixed costs by, but had a fixed cost per vehicle service hour of $28.09. The peer with the lowest number of vehicle service hours provided, and lower than Calaveras Transit, had a fixed contractor cost of $28.40. In the discussion above it was stated that in theory, the higher number of vehicle service hours, the lower the operator fixed cost per vehicle service hour would be. However, in this small sample of peers, that statistical correlation is not demonstrated.

The next section explores other factors that help to explain why Calaveras Transit is highest among the peers evaluated with contract operations.

Management Review

The management review included a review of Calaveras Transit fixed costs in relationship to its small rural transit agency peers. For this analysis, the operations contract RFP was utilized to explore several factors that contribute to the variance in contractor fixed costs per vehicle hour.

Bidders for the operations and management contract were bound by the specifications of the RFP in defining what to include as fixed costs. The Calaveras Transit RFP did not ask bidders to develop a fixed cost staffing plan based on the bidder's experience and the needs of Calaveras Transit. Instead, there were several specifications in the RFP that likely added to the costs.

Dispatching and Clerical Support

The peers with contracted operations all operate Dial-A-Ride service in addition to fixed route transit. In rural transit systems, dispatchers often handle both fixed route and Dial-A-Ride dispatching. In Calaveras County, there is a relatively low volume of advanced calls for flag stops, similar to Dial-a-Ride calls. In the RFP, it states: "The contractor shall provide full-time dispatchers dedicated to facilitating deviation requests, public information, and reporting required for operations during all hours when County provided vehicles are on the road. It is required that the dispatch position be

exclusive and not operated by management at any time…." In the Best and Final Offer, one of the dispatchers was reduced to ¾ time. The requirement for dedicated full-time dispatchers in a very small rural system is an example of staffing specifications that do not provide adequate staffing flexibility.

Operations Manager

The RFP required a full-time on-site Operations Manager for an operation with a specification of operating 8,850 vehicle service hours. In addition, Calaveras County was recruiting for a full-time Transit Manager to replace the Interim Contract Manager up until very recently. While it is not unusual for a RFP to stipulate an on-site full-time Operations Manager, it does not appear that Calaveras County evaluated whether or not two full-time manager positions, an on-site dedicated Operations Manager and a County Transit Manager, were needed.

The current operations contractor, Paratransit Services, has very strong corporate support in its operations. The ability to provide professional transit leadership has helped to significantly improve the image of Calaveras Transit in the community and among the passengers. When the consulting team rode the buses, it was evident that high quality, safe and reliable services were being provided. The costs for the operations contract include general and administrative support services.

The following are two examples of staffing functions and Operations Manager duties at peer agencies. Peer A and B also have annual vehicle service hours of under 10,000 which is similar to Calaveras Transit.

Peer A: The Operations Manager drives buses when necessary, dispatches when necessary, and writes grants, budgets and other duties as necessary. The Operations Manager is an employee of both the joint powers authority agency and the contract vendor. This peer system has fewer vehicle service hours than Calaveras Transit, but has an overall cost per vehicle service hour of $70.72.

Peer B: In this directly operated system with a similar number of vehicle service hours as Calaveras Transit, the Operations Manager is the Lead Driver, and spends half of his/her time on supervision and oversight duties and half of his/her time driving buses. The Operations Manager is supported in the Public Works Department by a .25 FTE who writes grants, prepares budgets, submits compliance reports, etc.

In a small rural transit system, it is very expensive to have both a full-time Transit Manager and a full-time contract Operations Manager. It should be noted that the Transit Manager position at the County was vacant during FY 2012/13, the year of comparison; however, the County did contract with an outside consultant on a part-time basis during that time. In the FY 2014/15 Calaveras Transit budget, a .30 FTE position is being utilized for the Transit Manager function. The strategies discussed below explore ways to have professional transit management in a more streamlined manner.

Other Operational Fixed Costs

There are two significant line items that are not on-site staffing and include:

1. Although collision insurance is included in the operations contractor bid as a fixed operational cost, the insurance cost per vehicle is more of a variable cost than a fixed cost. In reviewing peers, the collision insurance cost is a function of fleet size, safety record, and age of the fleet. A detailed insurance analysis was not conducted as part of this analysis. However, Calaveras Transit when compared to peers is in the middle in terms of insurance cost per vehicle.

2. Most of the peers included in the analysis own their operations and maintenance facility and do not include building rental costs into operational fixed costs. The building rental cost in contract operator PSA was $20,844 and represented about 6.7% of the fixed operation cost and represents $2.38 in overall costs per vehicle service hour. According to Calaveras County, this has recently increased to $36,660 annually. At the current lease cost of $36,660, the cost per vehicle service hour is $4.20 per hour. The building rental cost adds significantly to the fixed operations costs per hour, but eliminating this cost still would make Calaveras Transit on the high end of costs per vehicle hour compared to peers. Purchasing an operations and maintenance facility is a valid strategy, and would have the potential of lowering the operational cost by $4.20 per vehicle service hour at current lease costs in 2014 dollars.

Key Findings of Operations Fixed Cost Management Review

1. *Calaveras Transit has the highest operations fixed cost per vehicle service hour compared to its peers.*

   The average operations fixed cost per vehicle service hour is $28.57 per hour compared to $35.67 for Calaveras Transit. If Calaveras Transit were to achieve the average cost per vehicle service hour, it would need to reduce the cost per vehicle hour by $7.00 per hour. Strategies to achieve this cost savings are addressed later in this section. In addition, Calaveras County is beginning the process of seeking planning funds for an operations and maintenance facility which in the longer term would reduce the contractor fixed costs by $4.20 per vehicle service hour in 2014 dollars.

2. *The Operations and Management RFP does not reflect a staffing plan correlated to the 8,850 annual vehicle service hours provided for in the RFP and contract as the base level of vehicle service hours provided.*

   The requirement for dedicated dispatch staff with no coverage by management staff is indicative of unnecessary prescriptions of staffing levels. In a competitive procurement, it would be better to have prospective operations contractors develop a staffing plan to meet the performance standards that Calaveras County establishes. Safe and reliable operations with good customer

service can be achieved with a multitude of staffing plans that are potentially more cost-effective.

Calaveras County is currently in negotiations with Paratransit Services for a two-year extension of their contract to operate Calaveras Transit. The roles and responsibilities of fixed cost staff are being reviewed as part of that process.

3. *The contractor brings significant professional transit leadership to Calaveras Transit and has improved service quality and customer service in Calaveras County.*

   The overall value of having a professional transit organization provide professional corporate support to a high quality operation is very important. During the research phase of the SRTP, the consulting team rode all routes and was quite impressed with the high quality of service being provided.

Impact of FTA 5311 (f) Funding for Intercity Service to Stockton

The Calaveras Transit Intercity Feasibility Study conducted by LSC recommended intercity service from San Andreas to Stockton via Highway 26, a distance of approximately 40 miles. The service would include two round trips, five days a week (Monday through Friday). The proposed route would include stops in Stockton at the San Joaquin Regional Transit District (RTD) Downtown Transit Center, Amtrak, Greyhound, Kaiser Dameron Hospital, Delta College, Sherwood Shopping Center, and the Kaiser medical office on Hammer and West Lane.

Calaveras County prepared a FTA 5311(f) funding application for both operating and capital assistance. The grant application for operating is for a total project cost of $150,700, with $43,044 expected in fare revenues. This includes 2,379 total hours and 1,284 annual vehicle service hours. The way the grant is priced, it assumes 2,379 hours at an hourly rate of $33.07, the operations variable rate for Year 3 of the Paratransit Services Contract. Effectively, the FTA 5311 (f) grant will add 2,379 vehicle service hours without any increase or adjustment to the operations fixed route costs.

In FY 2013/14, the extension of service to Rancho Calaveras is expected to increase Calaveras Transit to 9,750 vehicle service hours, up from 8,739 in FY 2012/13.

The net effect for the first full year of Stockton Intercity Services is that the grant application assumes no increase in operations fixed cost. Adding 2,379 annual hours to the assumed contract vehicle service hours of 9,750 in FY 2012/13, is 12,129 vehicle service hours. Per the contract with the operations contractor, the combined Rancho Calaveras extension and the San Andreas to Stockton intercity service will exceed a 20% increase above the 8,850 hours specified in the contract. This opens up negotiations between Calaveras County and the operations contractor for the fixed monthly cost. It is not known what the results of that negotiation will be.

For illustrative purposes, if the FY 2014/15 annual fixed operations cost of $329,040 remained the same after the negotiations, the operations fixed cost per vehicle service hour would be $27.12 per vehicle service hour. This is below the peer average presented above of $28.42 per vehicle service hour.

Summary Conclusion of Management Review of Operations Fixed Cost

In the opinion of the consulting team, the RFP for Operations and Management Services was designed to accommodate a system of 25,000 to 35,000 vehicle service hours with a Dial-A-Ride service. It was not designed for a rural transit system with 8,850 vehicle service hours. The RFP was overly prescriptive and did not enable the proposers to design a staffing plan to meet the needs of Calaveras Transit in a more cost-effective manner.

In discussions with Paratransit Services and Calaveras County, it is obvious that duties and responsibilities for key staff have evolved since the execution of the operations contract. Overall, there is a need to review transit functions performed by Calaveras County and the operations contractor to determine how these functions can be scaled in a more cost-effective manner. During the preparation of this working paper, Calaveras County and Paratransit Services have entered into such discussions to evaluate how transit functions can be scaled in a more cost-effective manner. This is discussed in more detail in Section 6 under Transit Administration.

Strategies to Address Operations Fixed Route Costs

The current operations contract expires on June 30, 2015 with the option for two additional years at the discretion of Calaveras County.

One option is to begin work now on a new RFP that would be released likely in January of 2015 and provide greater flexibility for the proposer to develop a staffing plan to meet the performance and service quality standards that Calaveras Transit would like to achieve. Service quality, past performance and cost should all be selection criteria.

A second potential strategy is to renegotiate the contract with the current operations contractor, with the intent of extending the contract for another two years if high service quality and reliability can be maintained at a lower fixed operations cost per vehicle service hour. During the work on this working paper, the County of Calaveras has entered into negotiations with Paratransit Services for a two-year extension of the contract. This is an opportunity to make the operations fixed cost per vehicle service more cost-effective. If negotiations are not successful, then rebidding the contract as suggested above would be the back-up option.

As part of either option, Calaveras County should evaluate all transit functions that need to be performed and determine who should perform the functions including what functions should be retained by the governing agency and what functions should be performed by the contractor. One

option is to leverage the professional expertise of the current contractor (or competitively determined with another vendor) as part of their General Administration and Support.

Another important option is for the County to purchase and own the operations and maintenance facility. These costs would be amortized capital costs and not be included in operating costs.

Section 7 on Institutional Operation further explores the subject of overall transit management under different institutional strategies.

Estimated Range of Potential Cost Savings

The implementation of the San Andreas-Stockton intercity service will reduce the fixed operations cost per vehicle service hour by up to $8.00 per hour. However, this is dependent on the negotiation between the current operations contractor and Calaveras County regarding increases to fixed annual cost based on substantial change to vehicle service hours.

If the negotiations are successful and the $8.00 per vehicle hour reduction in the operations fixed cost is realized, it is unlikely that further reductions in the operations fixed cost per vehicle service hour will be realized until, if and when the operations and maintenance facility is owned by Calaveras County and the lease costs are not included as an expense for the contract operator. The short-term cost per vehicle service hour goal is the average contract operator fixed cost of $28.40 per vehicle service hour of peer agencies.

Recent Actions by Calaveras County

Since March 2014 when work on this working paper commenced there have been several actions taken by Calaveras County that could have a positive effect on the contract operator fixed cost per vehicle service hour:

- Calaveras County and Paratransit Services have entered into negotiations for a two-year contract extension.
- As part of the contract renegotiations, the roles and responsibilities of the Paratransit Services General Manager as well as other fixed cost staff such as dispatchers are being evaluated.
- The Calaveras County Board of Supervisors approved the new intercity route to Stockton.
- In response to an unmet needs finding, Calaveras County is planning to extend service to Burson, adding additional vehicle service hours.

4. Operator Variable Cost

Operator variable costs for our purposes here are driver wages, payroll taxes and benefits. Because the current contractor includes driver workers compensation in its operator variable costs, efforts were made to include these costs in peer comparison. Operator variable costs or fully burdened driver wages per vehicle service hour was $32.07 in FY 2012/13. This is the second highest cost component for Calaveras Transit.

Historical Context

In FY 2006/07 MV Transportation provided both maintenance and operations under contract to the Calaveras County Department of Public Works. According to stakeholder interviews, there was concern about the service quality and driver turnover during this period of time. In February 2011, a management and operations RFP was sent to prospective bidders to operate and manage Calaveras Transit buses.

The RFP that is discussed in the next section is a product of the concern for overall service quality. A significant factor when considering operator variable costs is the difficulty of recruiting and retaining qualified drivers in rural areas. It is very time consuming and costly to hire and train qualified drivers that meet minimum licensing and driving record requirements. In order to retain good drivers, several rural transit agencies have set wages in their RFP in order to avoid driver turnover, and operational issues that go with driver turnover.

Paratransit Services was awarded the contract and started service effective July 1, 2011, the beginning of FY 2011/12.

Management Review

The RFP states “Drivers shall be paid according to the Driver Compensation Table in Exhibit E.” Exhibit E is shown as Figure 8 for reader convenience. The Driver Compensation Table specifies the driver compensation for both employees at the time of the RFP and for future employees during the contract period.

Figure 8

EXHIBIT E
COMPENSATION

DRIVER COMPENSATION TABLE		
Length of Service	**Hourly Rate**	**BTW Training**
Training	$10.00	
6 Months	$10.60	+.50
1 Year	$12.60	+.50
2 Years	$13.23	+.50
3 Years	$13.89	+.50
4 Years	$14.59	+.50
5 Years	$15.03	+.50
6 Years	$15.48	+.50
7 Years	$15.94	+.50
8 Years	$16.42	+.50
9 Years	$16.91	+.50
10 Years	$17.42	+.50

JANUARY 1, 2011 EMPLOYEE PAY RATES		
Position	**Hire Date**	**Hourly Pay Rate**
Operations Assistant	02/01/1999	$15.88
Driver / Dispatcher	08/29/2006	$14.59
Driver	06/19/2002	$16.42
Driver	05/23/2005	$15.03
Driver	09/15/2005	$15.03
Driver	04/05/2007	$13.89
Driver	10/23/2007	$13.89
Driver	04/16/2009	$12.60

In contrast, the following are two examples of RFP provisions from two of the peer agencies that contract for operations.

Peer A:

"All existing employees working for the current contractor for **Name of Agency**, except for the Operations Supervisor, shall be considered for employment and shall be paid, at a minimum, the rate they are currently being paid for salary and benefits. Any new employees shall be paid at an hourly rate beginning at a minimum of $8.00 per hour. All employees shall be considered for a .5 to 1% pay increase once a year, upon completion of one (1) year satisfactory service as documented with an employee evaluation performance review, other pay increase schedules may be considered in lieu of the .5 to 1% a year, but are subject to **Name of Agency** approval."

Peer B:

This peer has a Driver Compensation Table that also specifies that drivers employed must be paid at their current rate and that new employees shall be paid according to the Driver Compensation Table. This peer has a training rate of $8.50 compared to Calaveras Transit at $10.00. The compensation table has a wage rate for Year 2 at $11.29 compared to $13.23 for Calaveras Transit. For Year 5 of employment, the compensation table specifies $13.74 per hour compared to $15.03 for Calaveras Transit. Overall, the driver wages are guided by the specifications of the 2011 RFP issued by Calaveras Transit. The driver wage rates specified are higher than other peer agencies for small rural transit systems for contracted operations services.

The California minimum wage laws have made and will continue to make some of the above peer examples obsolete. As of July 1, 2014, the minimum wage is now $9.00 per hour. Effective January 1, 2016, the minimum wage will be $10.00 per hour.

Peer Analysis

There are two performance indicators in the peer analysis here that require appropriate context. The wages per vehicle service hour are the total wages paid to the drivers divided by the vehicle service hours. Total hours include when the buses operate in revenue service (vehicle service hours), deadheading time (when the bus travels to the start of its first run from the operations facility and returns to the facility at the end of revenue service) and pre- and post-vehicle inspections at the yard before and after the bus is in revenue service. Having the ratio of driver paid hours to vehicle service hours would help to normalize comparison between agencies. Unfortunately, in requesting information from potential peers and the current operations contractor, the ratio of paid hours to vehicle service hours was not something that was readily available and forthcoming. Each potential peer agency was asked to provide platform hours (vehicle service hours and deadhead hours, essentially from the time a bus leaves the operations yard to when it returns to the operations yard). The information was not received from the operations contractor or from other peer agencies. This

is important context because if a system has higher than normal deadheading, then the average direct driver wage cost per vehicle service hour would be higher.

The second performance indicator is the fully burdened driver wage cost per vehicle service hour. This includes driver wages, payroll taxes, and driver benefits. Figure 9 shows that Calaveras Transit is highest among four Northern California small rural transit agencies reviewed for both average direct driver wage cost per vehicle service hour and the fully burdened driver wage costs that include driver payroll taxes, benefits and workers compensation insurance.

Figure 9 Contracted Driver Wage Rates per Vehicle Service Hour

Performance Indicator	No. Agencies	Calaveras Transit	Average	Low	High
Average direct driver wage costs per VSH	4	$ 23.50	$ 18.11	$14.71	$23.50
Fully burdened driver wage costs per VSH	4	$ 32.07	$ 24.84	$21.44	$32.07

What is mostly driving the costs presented in Figure 9 is the average wage paid directly to Calaveras Transit drivers. The direct driver wage rate is not included in Figure 9 because enough valid data points from different contractors was not received. The average direct wage rate for Calaveras Transit drivers is $13.78 per hour. In a California rural system with a very good cost per vehicle service hour, the average wage rate is $10.78 per hour. As discussed earlier, this higher driver wage rate was a conscious decision by Calaveras Transit in order to retain qualified drivers, improve service quality, and avoid the costs of driver turnover.

Strategies for Operator Variable Costs

The sole strategy for addressing operator variable costs is to provide a different specification in the request for proposal for driver wages and benefits. Existing drivers need to be paid their existing wage and benefits under a new contract. What Calaveras Transit has control over are the rate of increase of existing employees, the starting hourly rate for training, wages when the new driver starts operating revenue service, and subsequent wage rate increases based on tenure or performance.

A common strategy is to set a minimum starting hourly rate for new employees, and let competitive bidders determine what the wage rate increase should be for both existing and new employees. The provision should be accompanied by a statement that proposals would be evaluated on demonstrated service quality and driver turnover rates for market rate driver wages. Cost should be just one of several evaluation criteria. As mentioned previously, driver recruitment in rural areas is very difficult and retaining qualified drivers often means paying a higher competitive hourly wage rate. The California minimum wage law of a $10.00 minimum wage in 2016 would minimize any potential cost savings of this option. It should be stressed that this strategy is an option and it is not being recommended.

The other common strategy is a low bid competition for new employees and wage rate increases. There is an abundance of experience with this approach and it typically leads to high driver turnover, less service quality and poor driver morale. This strategy is not recommended.

There are no immediate cost savings in the variable operational costs, which include driver wages and benefits. Since existing driver wages are relatively high compared to peer systems, potential cost savings from this category would take years to realize. However, when the contract is re-bid, it is possible to allow bidders to develop a compensation package for new employees based on market rates recognizing the changes in California's minimum wages. If the contract is re-bid, there may or may be not be savings, but if there are savings, it would be minimal. It is important to stress that there are no short-term savings possible for this cost category.

No actions are anticipated that would affect operator variable costs.

5. Maintenance Review

Historical Background

In 1999, the Calaveras Council of Governments initiated six deviated routes in addition to Dial-a-Ride as Calaveras Transit. During that time frame, a third party contractor provided both operations and maintenance services up until 2011.

Documentation on the decision-making process leading up to the Calaveras Transit maintenance transition from a private contractor to Calaveras County was not available. In the Transportation Development Act performance audit conducted for Calaveras Transit for FY 2007/08 to FY 2010/11, there is a statement on p. 16 of the audit:

"During the Audit period, Calaveras Transit selected a new maintenance contractor during the audit period based on a cost/benefit assessment of maintenance operations. Calaveras Transit concluded that going with Calaveras County Public Works Equipment Service Center would save an average of approximately $30,000 per fiscal year."

The consulting team requested a copy of this benefit/cost assessment cited in the Performance Audit and the written assessment could not be located. According to Calaveras County and Calaveras County Council of Governments staff, there is verbal recollection that it was estimated that the Calaveras County Public Works Fleet Manager said maintenance could be performed for Calaveras Transit for $50,000 per year.

On May 4, 2011, a memorandum of understanding was signed between the Calaveras County Public Works Fleet Shop and the Calaveras County Public Works Transit Divisions. The 40-page document with 12 pages of Exhibits and a scope of work provides details on the term of the MOU (July 1, 2011

to June 30, 2015, unless terminated or modified), the Fleet Shop responsibilities, Transit Division responsibilities, the labor rate of $85.77, and amendment and termination procedures.

On July 1, 2011, the maintenance of Calaveras Transit buses transitioned from MV Transportation to Calaveras County Public Works Fleet Shop.

In 2012, a RFP was released by Calaveras County to have a third party contractor take over maintenance services. There was only one bidder, and the bid was $161,179.

In FY 2012/13, according to cost records provided by Calaveras County, maintenance costs were $169,598.

Management Review

An on-site management review of maintenance practices was conducted by fleet maintenance consultant Halsey King on May 23, 2014. This was a one-day assessment that included:

1. Meetings with management including Mike Miller, Interim Public Works Director; Nancy Culver, Interim Fleet Manager; and Kelly Zahniser, Business Administrator for Public Works.
2. An on-site tour of the maintenance facility led by Nancy Culver.
3. One-on-one meetings with three mechanics and Halsey King.
4. Inspections of two buses by Halsey King.
5. Review of Calaveras Transit Maintenance records.

Organizational Context

The Fleet Shop maintains a total of 250 vehicles for three County Divisions:

- Transit Division (7 vehicles)
- Integrated Waste
- Roads

The staffing for all 250 vehicles includes 4 mechanics and 1 interim Fleet Manager who is normally the Administrative Analyst. Calaveras County is in process of hiring a new Lead Mechanic and a new Fleet Manager.

The fueling for the buses is not provided by the Fleet Shop. Paratransit Services, the Operations Contractor, is responsible for the fueling of the buses.

Figure 10 is a fleet inventory. The five 2009 International Buses are 7-year buses with a useful life of 200,000 miles. The two Ford buses are five-year buses with a useful life of 150,000 miles.

Figure 10 Fleet Inventory

Calveras Transit Fleet Inventory 6/4/14

Bus #	Manufacturer	Model Year	Funding Source	Mileage	Seating Capacity*
58	International	2009	5311	236011	24+1, 20+2
59	International	2009	5310	249518	24+1, 20+2
60	International	2009	5310	261723	24+1, 20+2
61	International	2009	5310	250232	24+1, 20+2
62	International	2009	5310	269462	24+1, 20+2
63	Ford	2010	5310	191704	16+2
64	Ford	2010	5310	192002	16+2

*regular+w/c

Calaveras County has two new buses on order with A-Z bus sales. These Glaval Legacy Type E-FRT buses will be 32-foot buses with a Freightliner chassis, and Cummins 240HP engines. In addition, Calaveras County is seeking approval from the Calaveras County Board of Supervisors in August 2014 to purchase two additional 20-passenger El Dorado National Aerotech buses. For bus procurements, buses are normally ordered in one fiscal year, and it usually takes 9-12 months for delivery and post-delivery inspection and acceptance before the bus is in normal revenue service.

Key Findings of Maintenance Management Review

The following are the key findings of the maintenance management review.

1. *The mechanical conditions of the buses inspected are good overall*.

   The Calaveras Transit fleet has adequately passed the CHP inspections. Mechanics are able to get the resources and tools they need to maintain the buses. The skill level of the mechanics is very good. The Calaveras Transit fleet sample of two buses which the consulting team reviewed were in good mechanical condition despite the age and mileage on the fleet due to the diligence of the interim fleet manager and the skills of the two primary mechanics assigned to primarily maintain Calaveras Transit buses.

2. *There has been significant turnover of the Public Works Director, Fleet Manager, and Transit Manager staffing resulting in a lack of overall leadership for the maintenance program*.

There has been a lack of consistent management in the Fleet Shop. In recent history, there have been four fleet managers. As of May 2014, the lead mechanic position was still open but interviews were being conducted. This has required Shop Fleet personnel to function without professional management oversight. While the Fleet Shop has been functional in the short-term despite this, the lack of oversight and management controls puts Calaveras at risk when buses are being utilized for passenger conveyance.

The decision to bring the fleet maintenance into the County Shop with an estimated cost of $50,000 per year is indicative of the lack of management and oversight. In fact, the actual cost of maintenance of the seven (7) Calaveras Transit buses in FY 2012/13 was more than three times the estimate.

Overall, according to key stakeholders interviewed, the Fleet Shop has been understaffed and the Fleet Shop personnel are essentially left on their own to make the maintenance program work.

3. *The mechanics received insufficient training in transit bus components and maintenance when transitioning maintenance from a third party vendor to the Public Works Fleet Shop.*

   Compared to the Roads and Integrated Waste fleet, the transit maintenance effort is highly regulated due to the transportation of passengers aboard the bus. With the exception of a training session from Ricon, the wheelchair lift vendor, the mechanics received no training on the transit bus electronics, federal and state inspection criteria, air conditioning units, or computer diagnostics.

   The lack of training will likely have a detrimental impact on the costs and efficiency of maintenance operations. As just one example, mechanics have diagnostic equipment, but have not been trained on how to utilize and interpret the results. There is a need for an ongoing training program such that mechanics can keep up to date on the proper maintenance of training.

4. *While the Memorandum of Understanding provided a basic framework and scope of work between the Transit Division and Fleet Shop, there are a lack of goals, objectives, performance standards, and policies and procedures to achieve these goals and objectives.*

   There are no written policies and procedures such that if key maintenance personnel or the Interim Fleet Manager were to leave, that key maintenance practices should be maintained.

5. *The Calaveras County Fleet Shop has not adopted the industry standard to capture and report their maintenance activities.*

   Since the 1970s, the Vehicle Maintenance Report Standards (VMRS) has been utilized by fleet managers to provide a vital communication link between maintenance personnel, computers and management. It is a “universal” language for fleets, original equipment manufacturers (OEMs),

industry suppliers, computers and those individuals whose responsibility it is to specify, purchase, operate and maintain equipment. VMRS is a structured coding system where the user selects the level of coding to be utilized.

The Calaveras Fleet Shop utilizes the Cost Accounting Management System (CAMS) including the VMRS codes, but the County Fleet Managers have chosen not to utilize this important management tool. Therefore, detail cost accounting information is not available for the Fleet Shop maintenance activities.

Mechanics fill out a hand written timesheet for the work performed. Due to multi-tasking, mechanics are often pushed and pulled between assignments and there is no accurate means of determining how long a particular maintenance assignment has taken.

6. *The Fleet Shop does not have a sufficient level of detail for regular maintenance and inspections by bus.*

   The basic checklists were adapted from forms developed by MV Transportation. The Interim Transit Manager adapted these forms based on the OEM standards about a year after Calaveras County took over the maintenance for Calaveras Transit. The checklist does not include components such as the Ricon lift specifications or the fareboxes, for example. A more comprehensive stratified checklist needs to be developed that incorporates all bus systems and components.

Maintenance Cost Evaluation

The 2012/13 fiscal audit does not provide details on the breakdown of maintenance costs. The consulting team is reliant on the data provided by the Calaveras County Department of Public Works. A breakdown of FY 2012/13 maintenance cost was provided by the Business Administrator of the Calaveras County Public Works Department. The breakdown is shown in Figure 11.

Figure 11 Breakdown of Maintenance Cost

Shop Labor	$75,713
Parts	$37,007
Tires	$15,530
Outside Repair*	$35,923
Misc.	$1,654
Total	$165,828

*Excludes engine replacement capital expense

According to Department of Public Works records, in FY 2012/13 there was a total of 882.75 shop hour expended. The shop rate is $85.77.

In order to understand what goes into the shop rate, the consulting team was provided the 2009/10 budget for the fleet shop before the Calaveras Transit fleet was incorporated in the Fleet Shop operations. The following is shown in the budget:

Billable FTEs	6
Productive Rate	0.70
Annual Hours	2,080
Shop Costs	$749,258
Hourly Shop Rate	$85.77

The rate has not been adjusted since FY 2009/10. In FY 2012/13, there were 4 billable FTEs. Billable FTEs are mechanics available to bill time at the rate of $85.77.

Peer Review of Maintenance Costs

Maintenance costs are more directly correlated to mileage based costs than hourly costs. The cost per vehicle service mile is the most common indicator in comparing maintenance costs. In FY 2012/13, the average maintenance cost per vehicle service mile for Calaveras Transit was $0.64 per vehicle service mile.

Figure 12 provides a peer comparison of contract maintenance services and directly operated maintenance services. Because the Calaveras County Fleet Shop performs the maintenance function, Calaveras County is considered a directly provided maintenance service.

For the six peer agencies (including Calaveras Transit) providing directly provided maintenance services in small rural communities, Calaveras Transit was almost the same as the average of $.63 per vehicle service mile, but one peer agency had a total maintenance cost per vehicle service mile of $1.08.

The average of three contracted peer agencies with maintenance services was slightly lower at $.52 per vehicle service mile, with a large range from $0.23 per vehicle service mile for a small rural transit agency that utilizes a repair shop in a small-urbanized area to $.75 for an agency that employs a working maintenance manager and mechanic to maintain vehicles.

Figure 12 Peer Comparisons of Maintenance Costs

	No. Agencies	Calaveras Transit	Average	Low	High
Maintenance Directly Provided					
Maintenance cost per VSM*	6	$ 0.64	$ 0.61	$ 0.36	$ 1.08
Maintenance cost per VSH*	6	$ 19.41	$ 13.57	$ 8.50	$ 21.32
Fully burdened maintenance wages per VSM	3	$ 0.29	$ 0.46	$0.29	$0.76
Annual maintenance cost per bus	6	$ 24,228	$ 16,080	$ 7,642	$ 24,228
Maintenance Contracted					
Maintenance cost per VSM*	3	N/A	$ 0.52	$ 0.23	$ 0.75
Maintenance cost per VSH*	3	N/A	$ 9.57	$ 5.98	$ 11.36
Fully burdened maintenance wages per VSM	2	N/A	$ 0.38	$ 0.35	$ 0.42
Annual maintenance cost per bus	3	N/A	$ 10,166	$ 4,000	$ 15,260

*Vehicle Service Mile **VSH =Vehicle service hour

The annual maintenance cost per bus in the fleet for Calaveras Transit was $24,228.25 per bus. The low maintenance cost per bus in the fleet for peers was $7,641. This peer with the lowest maintenance cost per bus is in a small rural area where the Public Works Department also maintains the fleet and also directly hires all transit personnel. The average of six directly provided maintenance services was $16,080. Calaveras Transit was slightly more than $8,000 per bus higher than the average of six rural transit systems where maintenance is directly provided.

For the three transit agencies that contract for maintenance services, the average maintenance cost per vehicle service mile of $0.52 is lower than directly provided maintenance services at $0.61 per mile. As with the directly provided maintenance provider, there is a significant range from $0.23 per vehicle service mile to $0.75 per vehicle service mile. At the low end, the transit vehicles are maintained by an outside commercial shop in a small-urbanized area that is the destination end of a long rural intercity route. At the high end, the contract maintenance operation has a maintenance manager and mechanic on staff and relatively high maintenance overhead.

While limited data was available on the fully burdened maintenance wages per vehicle service mile, Calaveras Transit was at the low end of this measure. Calaveras Transit utilizes more outside services for major repairs due to its aging fleet, which lowers the directly provided maintenance wages per vehicle service mile.

Overall, Figure 12 has wide variance around the average values for both directly provided and contract maintenance services. The main conclusion is that local circumstances appear to explain the range of maintenance costs. Important factors include the age of the fleet, the degree to which outside maintenance services are provided, maintenance shop staff levels, and maintenance shop overhead rates.

Summary Conclusion of Maintenance Review

The Calaveras Transit fleet has been adequately maintained and has been able to pass required CHP inspections on a regular basis. The two buses that Mr. Halsey King inspected were properly maintained.

However, the lack of consistent leadership in maintenance practices, policies and procedures should be considered a risk management issue for Calaveras County management. There needs to be consistent management oversight with adopted policies, procedures and standards to ensure that the current safety record is maintained in the long term. This is not only good management practice, but agencies receiving federal funds for transit capital procurements such as buses require adopted goals, objectives, and performance standards in a maintenance plan.

The decision to move the maintenance of Calaveras Transit from a third party vendor to the Fleet Shop did not receive adequate analysis for the costs, staffing, and training requirements. There are not adequate management information systems in place to monitor and evaluate maintenance costs. Therefore, in FY 2012/13, the data presented for the breakdown of costs, including a breakdown of costs by bus, was not readily available and needed to be tabulated independently by Public Works staff. Compared to peers for directly provided maintenance, the average maintenance cost per mile is about the same as the peer average. Overall, the costs of properly maintaining a transit fleet prior to Calaveras County taking on the maintenance program were significantly underestimated. However, based on the peer cost information from directly provided maintenance, the bid for contracted maintenance services, and the peer information for contracted maintenance services, the overall maintenance costs are within acceptable norms, especially considering the age of the fleet.

There has not been enough attention paid to regular replacement of buses to avoid future excessive maintenance costs. Only two buses had been ordered at the end of FY 2013/14, even though all buses have exceeded their useful life. Regular replacement of buses on a schedule has not received adequate attention from Calaveras Transit management. If buses had been replaced on a normal schedule, it is very likely that overall maintenance costs would be below average compared to peers.

Strategies to Address Maintenance Findings and Conclusions

These strategies are meant for consideration if Calaveras County retains maintenance responsibility. Other institutional arrangements including having the Operations contractor maintain the fleet and the potential for a shared contractor with an adjacent agency are explored at the end of this section under Maintenance Institutional Options.

1. *Replace the remaining fleet as soon as feasible.*

   A priority should be the replacement of the remaining five vehicles in the Calaveras Transit fleet as soon as possible. Two buses are currently on order, and Calaveras County is seeking approval for ordering two additional buses in August 2014. The County is already taking proactive steps in

replacing buses as soon as possible. In the future, a more rigorous replacement schedule should be adopted and adhered to.

2. *Hire a Fleet Manager with experience with a public transportation fleet.*

   Transit buses carry passengers and are significantly more regulated by State and Federal authorities than the Road Department and Waste Management fleets. The Fleet Manager should be experienced and knowledgeable about these regulations and required policies and procedures. There are public transportation websites such as *transittalent.com* that can be utilized to attract personnel with transit experience.

3. *The maintenance budget should include time for mechanic training.*

   The transition of the Calaveras Transit fleet to the Fleet Shop did not include adequate training of the mechanics on transit vehicles. The following are the top priorities for training:

   a. Federal and State Inspection criteria for buses and commercial vehicles
   b. Training in bus electronics maintenance
   c. Wheelchair lifts training and certification
   d. Air conditioning training and certification
   e. Mechanics should have Commercial Driver License (CDL) training and licensing to ensure safe maneuvering of the buses.

4. *Develop detailed maintenance plan goals, objectives, performance standards and policies and procedures*.

   When Calaveras County took over maintenance of Calaveras Transit buses, there was a detailed memorandum of understanding developed between the Public Works Transit Division and the Public Works Fleet Shop. It provides a detailed scope of work.

   There is not a detailed set of goals, objectives and performance standards established for the maintenance of buses. A set of performance standards needs to be developed with corresponding objectives and goals.

   Policies and procedures need to be developed such that the maintenance function has a formalized set of written procedures, for example, in obtaining a part for a routine preventative maintenance procedure or when outside services should be utilized, to name just two examples.

   Vehicles purchased with federal funds are being increasingly scrutinized for asset management practices. Regular preventative maintenance and adhering to Federal maintenance standards is imperative going forward.

A maintenance plan is a requirement of federal funding for buses. The following is the verbatim section from the FTA 5311 handbook on maintenance (Calaveras Transit is a subrecipient to Caltrans):

> *Per 49 CFR 37.16-163 and FTA Master Agreement, subrecipients are required to have a maintenance plan. Subrecipients describe their maintenance plan for the FTA funded vehicles, facilities, and facility related equipment within their original program application. These items need to be included in the vehicle maintenance plan and facility maintenance plan:*
>
> - *Goals and objectives of the maintenance program.*
> - *Schedule for preventive maintenance.*
> - *Maintenance procedures for wheelchair lifts and other accessibility features.*
>
> *The plan should clearly identify the goals and objectives of a maintenance program and establish the means by which such goals and objectives will be attained. In the maintenance plans, periodic reporting, maintenance record review, visual inspections, and maintenance audits should also be addressed.*
>
> *Language within the Standard Agreement specifically requires subrecipients to maintain equipment while it is in their possession (See Exhibit C, #49). In addition, each subrecipient must have a maintenance plan to maintain ADA accessible features of equipment and facilities. Subrecipients must demonstrate compliance with this policy during the tri-annual on-site monitoring.*

5. *Develop more comprehensive maintenance inspection forms.*

   The existing maintenance inspection forms were based on the MV Transportation forms with the interim fleet manager adding OEM maintenance intervals. The forms do not include ancillary components such as fareboxes and wheelchair lifts. A set of stratified inspection forms should be created for each bus type that includes necessary A, B, and C inspections that include each of the bus components. In addition, inspections for wheelchair lifts and air conditioning should be incorporated into the inspection forms.

6. *Implement the VMRS coding system as part of the management information systems.*

   Calaveras Transit should adopt the VMRS coding system that is already included in the CAMS software system it is utilizing. This will enable a more systematic tracking of cost and parts inventory and will help the Fleet Manager with his or her job in maintaining a safe and reliable transit fleet.

Institutional Options for the Maintenance Function

Historically, maintenance was part of the operations and maintenance contract with MV Transportation. This is a common institutional option, but as shown earlier in the peers, directly provided maintenance services are equally as common. Calaveras County explored the contract option in September 2012 when it released a RFP for Maintenance Service Calaveras Transit. Only one bidder responded. The annual cost in the bidder response is within 10% of what it currently costs Calaveras Transit to maintain the buses. While it might be possible to lower the costs somewhat in a more competitive bid with both operations and maintenance included with a more definitive schedule for bus replacements included in the RFP, based on the peer analysis, it does not appear that this option will cause a significant reduction in the maintenance cost per vehicle service hour or mile. This contracting option also would require significant capital startup costs in order to procure the necessary maintenance shop equipment.

A second option would be to share the maintenance function with a neighboring fleet. There could be some economies of scale if a neighboring transit agency had a satellite maintenance operation in Calaveras County. In this scenario, a mechanic would need to be co-located in the current operations facility that is currently being leased by the operations contractor. The mechanic could have professional leadership and supervision from a maintenance manager responsible for multiple facilities.

Finally, if the intercity bus service to Stockton is implemented as planned, there is the option to have a commercial trucking garage facility maintain the buses in Stockton. This option is being effectively implemented by Sage Stage in Modoc County which also has a fleet of seven vehicles. They rotate buses for preventive maintenance at a maintenance shop in Redding. The maintenance cost per vehicle for Sage Stage is just $0.23 per mile, far below that of dedicated maintenance operations with dedicated maintenance staff. This option may not be viable for Calaveras Transit since the bus being purchased meets funding requirements for luggage racks on the vehicles. The fleet would need to have sufficient back-up vehicles with appropriate equipment to make this work. In the short term at least, it is likely not a viable option.

Overall institutional options to manage, operate, and maintain transit functions, including maintenance are discussed further in Section 7.

Potential Cost Savings from Maintenance Function

Trinity Transit has recently purchased four cutaway vehicles that are similar to the fleet composition of Calaveras Transit. The Fleet Shop in Trinity County also maintains the vehicle. The cost per vehicle service mile is $0.36 per vehicle mile or $9.78 per vehicle service hour. Trinity Transit has the same fleet size as Calaveras Transit. This should be target maintenance cost per vehicle service mile after the fleet is replaced. The minimum performance standard should be $0.52 per mile as the fleet matures.

Preventive maintenance is an eligible capital expense under FTA 5311 guidelines. The maximum federal grant is 88.53% of preventive maintenance expenses with an 11.47% local match. In FY 2012/13 all maintenance costs were included as operational expenses. In the cost breakdown of maintenance expenses provided by Calaveras County, it does not distinguish between preventive maintenance and other maintenance expenses. If the VMRS codes as recommended above are utilized, there will be defensible means of capturing preventive maintenance expenses that can be capitalized. For sake of illustration, in FY 2012/13 if 30% of total costs were preventive maintenance costs, approximately $5.15 of maintenance cost could be capitalized. If this is done, it is important to develop a vehicle replacement fund and plan so that there are sufficient funds available for future vehicle replacement. This will be addressed as part of the financial plan in Short Range Transit Plan.

Recent Actions by Calaveras County

During the six-month process of preparing this working paper, Calaveras County has taken the following step to improve maintenance practices:

- Two replacement buses are being delivered to Calaveras County soon.
- The Board of Supervisors approved two additional bus replacement purchases. The buses will be ordered as soon as Calaveras County receives the go-ahead from the funding source.
- Plans are underway to order three more replacement buses within the next 18 months, including a new intercity bus for the Stockton service.
- Public Works has hired a Fleet Manager who is knowledgeable about bus maintenance. Calaveras County anticipates improvements in maintenance, record-keeping and in coordination between management and maintenance.
- Calaveras Department of Public Works is discussing the possibility of contracting out maintenance or moving it back to the operations contractor.
- Calaveras County has been discussing with CCOG the potential of programming planning funds to develop a maintenance and operations facility feasibility plan.
- Additional support to provide necessary equipment training has been planned and will soon be implemented.
- Programming and purchase of the tools and equipment necessary to efficiently support the maintenance division is underway.

6. Transit Administration

Historical Background

Up until FY 2005/06, the Calaveras Council of Governments was responsible for the governance and administration of Calaveras Transit.

In shifting to Calaveras County, Transit Administration has the responsibility for the following functions for Calaveras Transit:

- Budgeting
- Grant writing
- Capital Planning and Procurement
- Oversight of Fleet Shop Maintenance MOU
- Oversight/Monitoring/Procurement of Operations Contract
- Federal and State Compliance
- Goals, Objectives, Policies and Performance Standards
- Marketing and Promotion

Up until September 2012, Calaveras Transit had a full-time Transit Manager in the Calaveras Transit Public Works Transit Division. At that time, interim contract management services were retained while Calaveras County recruited for a full-time replacement. The most recent interim contract was a one-year contract for $25,000 that ended on May 2, 2014.

The interim Public Works Director has appointed the Public Works Analyst to the Transit Administration function. The FY 2014/15 budget included the Public Works Analyst at a .30 FTE position.

FY 2012-13 Calaveras County Administrative Costs

Internal Calaveras Transit reports provide a good breakdown of administrative costs and these are reported below in Figure 13. Staffing in FY 2012/13 had three different components. The Transit Manager worked for the first 4 months of FY 2012/13. Majic Consulting was retained as the interim Management Contract between September 2012 and April 2013. Scott Dwyer was retained as the contract manager in May 2013. The total administrative labor costs were $79,708 in FY 2012/13. Total administrative costs were $115,835.

Figure 13 Breakdown of Administrative Costs

	FY 2012/13
Administrative Costs	
Management Contracts (9 months)	$ 52,234
Administrative Salary (4 months)	$ 21,983
Adminisrrative Staff benefits (4 months)	$ 5,491
Legal Services	
Office Expenses	$ 420
Printing and Promotion	$ 3,562
Advertising	$ 12,343
PWA	$ 6,363
A-87	$ 12,553
Facility Maintenance	
Other administrative epenses	$ 887
Total Administrative Costs	$ 115,835

In FY 2012/13, the Calaveras County administrative cost was 12% of the total operating cost. The minimum industry standard is to keep administrative cost below 15%. Calaveras County was below this minimum standard in FY 2012/13.

Administration	
Administrative labor cost per vehicle service hour	$ 9.12
Total Administrative cost per vehicle service hour	$ 13.26
Admistration cost as percentage of total cost	12%

Combined Management Costs

In FY 2012/13, Calaveras Transit had management costs that included the Transit Manager salary and benefits for 4 months and the contract transit management contracts for nine months. In addition, the operations contract included a full-time Project Manager salary and benefits in addition to contractor support costs.

The combined management costs for Calaveras County and the current operations contractor in FY 2012/13 were $212,540 or $24.32 per vehicle service hour. The combined management costs represented 21.2% of the total Calaveras Transit budget in FY 2012/13.

Peer Analysis of Administrative Costs

With part-time contract management for 9 months of the year in FY 2012/13, overall Calaveras County administrative costs were $115,835. This is $13.26 per vehicle service hour. For transit peers with contract operations, the cost is below the average as shown in Figure 14. For directly operated service where the agency is the administrator and directly hires drivers and mechanics, the

administrative cost among the three small rural transit agencies reviewed is $29.72 per vehicle service hour.

Figure 14 Total Administrative Costs per Vehicle Service Hour

Type of Service	No. Agencies	Calaveras Transit	Average	Low	High
Contracted Operations	4	$ 13.26	$ 16.64	$ 12.51	$ 23.01
Directly operated	3	N/A	$ 29.72	$ 22.69	$ 40.31

For the percentage of administrative costs to total operational costs, Calaveras County was at the low end at 12%. The three directly operated small rural systems had an average of 25% of administration costs as a percentage of total costs.

Figure 15 Administration Costs as Percentage of Total Cost

Type of Service	No. Agencies	Calaveras Transit	Average	Low	High
Contracted Operations	4	12%	22%	12%	33%
Directly operated	3	N/A	25%	19%	37%

Management Review of Administrative Function

While overall Calaveras Transit administrative costs with Calaveras County was well below average, stakeholder interviews and the results of the cost analysis of the above functions indicate there were several issues with Calaveras County transit administration.

The Transit Manager and Department of Public Works management were responsible for five key transit administration issues.

A. *Specifications in the RFP for the Operations Contract.*

In Section 3 on contractor fixed cost it was concluded that the Operations and Management RFP does not reflect a staffing plan correlated to the 8,850 annual vehicle service hours provided. The prescription for dedicated dispatch staff with no management staff coverage is indicative of prescriptive terms that drove up contractor bids.

In Section 4 on contractor variable costs, the conclusion was that the Transit Manager included a driver compensation table in the Operations RFP that was significantly higher than other small rural transit systems in Northern California. The fully burdened driver wages per vehicle service hour was $32.07 per vehicle service hour compared to average of $24.84 per vehicle service hour for peers and Calaveras Transit.

B. *Decision to move transit maintenance from contract operations to County operations.*

Section 5 on the maintenance function concluded that the decision to move the maintenance of Calaveras Transit from a third party vendor to the Fleet Shop did not receive adequate analysis for the costs, staffing, and training requirements. There are not adequate management information systems in place to monitor and evaluate maintenance costs.

Section 5 also concluded that while the Memorandum of Understanding provided a basic framework and scope of work between the Transit Division and Fleet Shop, there are a lack of goals, objectives, performance standards, and policies and procedures to achieve these goals and objectives.

C. *There has been a lack of capital project delivery for Calaveras Transit since 2010.*

The Research Report provided the following finding:

"There is significant frustration among key stakeholders on the lack of progress in capital project delivery over the past several years. Of significant concern are the bus stop improvements in Phase III as well as plans and implementation of Calaveras Transit vehicle replacement. The interim Public Works Director has recently been taking steps to move the project delivery of transit capital project delivery forward as soon as possible."

There has been a lack of a rigorous bus replacement schedule and capital plan for vehicle replacement of Calaveras Transit buses. While two buses were ordered at the end of FY 2013/14, the entire Calaveras Transit fleet of buses are beyond their useful life and arrangements for vehicle replacement of all vehicles should have been made by now.

In 2010, Phase II of the bus stop improvement program was completed with the installation of one bus shelter and three bus benches. Until just recently, no progress had been made on Phase III of the bus stop improvement program that includes the planned installation of four bus shelters and two bus stop benches. An engineering firm was hired to provide installation and implementation specifications, but the work had not been finalized as of June 2014. As mentioned above, the interim Public Works Director is taking steps to facilitate implementation in FY 2014/15.

D. *There has been a lack of coordination and progress with between the Transit Division and Fleet Shop.*

The lack of communication and coordination between the Transit Division and Fleet Shop started when there was a full-time Transit Manager and did not get resolved during the tenure of the part-time Contract Manager. The maintenance functional review revealed a significant lack of attention by the Transit Division to maintenance needs for Calaveras Transit.

E. The preparation of budgets and TDA claims for Calaveras Transit need professional transit scrutiny and consideration of adequate fund reserves.

Budget files provided by the Interim Transit Manager in February 2014 provide a puzzling sequence of budgeting actions. A budget report as of 8/25/13 does not separate out operations and capital expenditures. The final budget shows total revenues (both operating and capital) of $1,691,237 and expenses of $1,860,142, a shortfall of $168,905. The "cash carry" (on hand cash reserves) calculation states that the fund equity at 6/30/13 is $358,288, less reserves for encumbrances at $182,858, and less reserves for equipment of $6,225, for a cash carry as of 6/30/2013 of $168,905, the same figure in the Net Budget of a negative $168,905.

In January 2014, a letter from Scott Dwyer, Interim Transit Manager, asks for an additional $76,000 in LTF funds based on the County Board of Supervisors budget amendment based on the implementation of service to Rancho Calaveras. The total LTF funds are $429,506.

A second updated budget for FY 2013/14 that shows the final budget for FY 2013/14 "as of 2/5/14" does separate out operating and capital budget revenues and expenses. The total revenue is $1,767,637 and total expenses are $2,119,400, for a deficit of $351,763. The total revenue for operations is $1,075,439 and total expenses are $1,427,202. There is no "cash" carry summary on this budget. However, according to Calaveras County, it is assumed that the adopted budget included the "cash carry" of this amount, which means that the County was able to take from cash reserves to pay for the anticipated budget. For Account 5272 which is for the operations contract, the total budgeted is $763,957. The operator contract for year 3 was $612,748. The Interim Transit Manager was asked about the difference, but his contract had expired and a reply was not received. It is not known why the operations contract amount in the adopted budget is so high.

The fiscal audit for FY 2012/13 states there were $1,160,334 in expenses including $159,643 in depreciation that, according to the Transportation Development Act that governs transit expenditures, is not included in operating expenses. Therefore the net operating expenses are $1,000,691. In FY 2013/14, the expected vehicle service hours, with the increase to Rancho Calaveras are expected to increase from 8,739 to 9,735. This is what the January 2014 request for an additional $76,000 in LTF funds were for. This apparently also included added maintenance and fuel costs. Overall, it is reasonable to conclude from the FY 2012/13 audit and the proposed budget for FY 2014/15 that the FY 2013/14 budget was significantly inflated. The financial audit for FY 2013/14 on actual expenditures will not be completed for several months.

The final approved budget for FY 2014/15 has recommended revenues for operating of $1,016,161 and expenses of $1,021,168. Even though the operations budget has increased contract rates for operator fixed costs, and operator variables the Rancho Calaveras service has been added, the contract cost is $329,040 for fixed cost and $352,854, a total of $681,894, significantly less than the final budget for account 5272 for the Paratransit Services contract the

previous fiscal year. The contract amount for Year 4 is $630,029 according to the best and final offer dated 3/30/11 provided to the consulting team. With the additional Rancho Calaveras hours, the correct budgeted number would be $660,127.

The TDA Claim for Local Transportation Funds (1/4 cents sales tax) submitted by Calaveras County to the Calaveras Council of Governments on July 7, 2014 the TDA Claim for Public Transportation is $145,629, when the adopted budget for FY 2013/14 was $429,506, and the FY 2012/13 amount utilized was $560,069.

According to Calaveras County staff, the County is currently reconsidering both the budgeted amounts and TDA claim for FY 2014/15 at this writing.

Calaveras County should consider the adoption of formal policies for both operating and capital reserves for bus replacements and operating reserves. Retaining earnings of 50% of the operating budget for operating reserves is recommended. This provides a necessary cushion for potential fuel cost increases, insurance cost increases, and fluctuations in Local Transportation Funding due to decreases in sales tax revenue. All three cost categories have seen some significant fluctuations over the past 10 years. Having the retained earnings on hand in a fund balance will avoid having to make service reductions when these fluctuations occur. There also needs to be a consistent policy for vehicle replacements. This will be addressed further in the Financial Plan of the Short Range Transit Plan.

Summary Conclusion on Transit Administration

Overall, up until the last six months, Calaveras County has struggled to provide consistent leadership in the administration of Calaveras Transit. Decisions such as the specifications in the 2010 RFP for the Operations Contract and significantly underestimating the costs of transit maintenance in transitioning from a private vendor to the Calaveras Fleet Shop have led to a significant increase in the cost per vehicle service hour. The jump in the cost per vehicle hour from $78.69 in FY 2009/110 with 9,248 vehicle service hours the full year before these changes were made to $103.09 in FY 2011/12 with 8,930 vehicle service hours, the first full year of implementation of these two important transitions speaks volumes on the effect of these changes.

On the other hand, decisions to control costs such as hiring an interim transit manager at an annual cost of $25,000 vastly underfunded the Transit Administration function leading to the lack of capital project delivery including Phase III of the bus shelter program and replacement of buses well over their useful life in a timely manner.

It is apparent that both the FY 2013/14 and FY 2014/15 budgets were prepared without sufficient professional transit management or supervision. The FY 2014/15 adopted budget of $1,021,168 is just $21,000 more than the audited FY 2012/13 expenses even though the Rancho Calaveras service has been added and $76,000 in additional LTF funds were just requested in FY 2013/14 specifically for the Rancho Calaveras service. Overall the budgets and TDA claims are confusing and do not

provide consistent rationale for substantial increases and decreases in both the budgets and TDA claims.

There has been significant positive momentum created since the Interim Public Works Director assumed control in February 2014, and a Public Works Analyst was appointed to handle the transit management function in May 2014. These actions are described below.

Recent Actions by Calaveras County

Since March 2014 when work commenced on this working paper, Calaveras County has initiated the following actions relevant to transit administration:

- Calaveras County staff is meeting with Paratransit Services to better define the transit function roles and responsibilities between the County and Paratransit Services.
- The Public Works Analyst in charge of the transit management function is taking transit management classes at the University of Pacific.
- The Public Works Analyst will be attending an industry conference in late October that has many relevant training and information sessions.
- The Public Works Analyst has been working with the Public Works Business Administrator to "produce a reality-based budget" for when accurate TDA claims can be based.
- Calaveras County has provided a concerted effort to deliver the Bus Stop Improvement Project, bus replacements and other capital needs. A total of $700,000 has been recently programmed for capital improvements.
- Work is underway to update marketing efforts to reach more potential riders.
- Working with a vendor, Calaveras Transit will be including routes and schedules on Google Maps as part of Google Transit and will be launching a new trip planner.
- In concert with Paratransit Services, Calaveras Transit is actively participating in community activities to raise awareness of Calaveras Transit activities.

7. Institutional Options for Calaveras Transit

Overview of Institutional Options

This final section provides the institutional options for governing Calaveras Transit, including:

1. Retain Calaveras County as the transit administrator with a focus on building transit leadership and support. As of this writing a new Public Works Director has not been hired.
2. Form a new joint powers authority, creating a Calaveras County Transit Agency for transit administration and contract for maintenance and operations. The governing board would be the same as the Calaveras Council of Governments. This is a governance model that Tuolumne County, Modoc County, and Lassen County, among others, have successfully implemented.
3. Hire a professional transit management firm. Lake Transit in Lake County and Redwood Coast Transit in Del Norte County are two examples of this institutional option.
4. Form a joint powers authority for transit administration and directly hire operations and maintenance personnel. This is the governance model that Amador County and the Eastern Sierra Transit Authority have implemented.
5. Creation of a regional transit authority among Tuolumne, Calaveras, and Amador counties.

The peer review below provides several examples of how transit administration can be organized. In providing objective alternatives, positive examples of how the particular institutional arrangement has worked well are provided.

Retain Calaveras County as Governing Authority

The Calaveras County Board of Supervisors has been the governing body of Calaveras Transit during the time period from FY 2008/09 to FY 2012/13 when the cost per vehicle service increased from $69.88 per vehicle service hour in FY 2008/09 to $114 per vehicle service hour in FY 2012/13.

During this time period, Calaveras Transit management made a series of decisions that have led to the higher cost structure that resulted in Calaveras Transit having an average of $29 in costs per vehicle hour higher than the average of peers who have contracted operations.

There has been significant turnover in the leadership and management of the Department of public works during the past five years.

Trinity Transit in Trinity County is a good example of a peer agency where management and leadership in the Department of Public Works has worked and the system is thriving. Trinity Transit directly hires drivers as County employees and Fleet Shop provides maintenance. The Transit Manager was promoted to that position from an analyst position within the Department. The Transit Manager on a part-time basis has thrived and the system has thrived in terms of ridership growth. The Transit Manager has learned on the job by attending training sessions and attending the twice a

year CalACT conference, the industry association for small urbanized and rural transit systems. Trinity Transit has been successful in obtaining FTA 5311 (f) monies for key routes and ridership has responded impressively. Among the recent accomplishments:

- Trinity Transit ridership has almost doubled since FY 2008/09. Most of this ridership growth has occurred on the Redding and Down River intercity routes.
- Trinity Transit costs for operating five day a week service has increased by more than double, increasing from $215,012 in FY 2008/09 to $523,851 in FY 2012/13. Services were increased from two and three days a week to five day a week service, and the increase in service supply explains most of the cost increase.
- The whole system has excellent bus stop signs and new shelters have been installed. Four new buses were procured for expansion and replacement of buses.
- The average fare per passenger has increased from an average of $2.42 in FY 2008/09 to $4.94 per passenger in FY 2012/13.
- Farebox recovery for the four routes is 14%, well above the 10% requirement for rural transit services. If the first eight months hold true for the rest of the fiscal year, the farebox recovery systemwide could exceed 15%.
- The cost per vehicle service hour increased from $97.03 in FY 2011/12 to $108.38 in FY 2012/13, based on audited costs for FY 2012/13. This is a 12% increase in one fiscal year. Recent bus replacements and other management steps have reduced the cost per vehicle service hour to $99.25 in FY 2013/14. Additional steps including the retirement of the highest paid driver will likely reduce the cost per vehicle service hour to $95 per vehicle service hour in FY 2014/15.

The increase in operating cost per vehicle service hour is of concern to Trinity Transit and they are also taking steps to address the cost escalation issue. Trinity Transit is a directly operated service and all drivers and mechanics are Trinity County employees. They have made a conscious decision to pay drivers quite well to retain hard to recruit drivers. County overhead costs do keep overall costs higher than the average of other contracted peer systems. As will be discussed later, the five directly provided service peer operated by counties are an average of $16 per vehicle service hour more than the four agencies where operations are contracted.

If the recently assigned Public Works Analyst is going to be the part-time manager similar to Trinity Transit, it is important to devote financial resources to training and participation in industry conferences. This needs to be coupled with support and leadership from the new Public Works Director in the project delivery in Phase III of the bus shelter program, vehicle replacement, adequate staffing and training and policy guidance of the Fleet Shop, and a streamlining of management functions between Calaveras County and Paratransit Services.

Form a Joint Powers Authority for a Calaveras Transit Agency

This is an increasing prevalent organizational structure for small rural transit systems. Tuolumne County Transit Agency (TCTA) and Modoc Transportation Agency are peer agencies that have adopted such an institutional structure.

Both agencies have formed Joint Powers Agreements among the County and respective cities in their jurisdiction. A review of both joint powers agreements revealed that the documents are almost identical. Both provide contracted operations and maintenance services.

The joint powers authority (JPA) in California is governed by Government Section 6500 et seq. In adjacent Tuolumne County, the members of the Joint Powers Authority are Tuolumne County and the City of Sonora. In Calaveras County, it would be Calaveras County and the City of Angels Camp.

The purpose of the joint powers agreement is recited verbatim as it spells out in concise terms what the agency does:

"If the Tuolumne County Transportation Council determines that the Members have transit needs which can be reasonably met, it is the intention of the Members that the Agency formed hereby shall be the entity by which said needs may be met. The specific purpose of this Agreement is to exercise the common powers of the Members by the formation of a joint powers agency with full power and authority to own, operate, and administer a public transportation system within the boundaries of the County of Tuolumne, which Agency shall be the means by which transit needs of the Members may be met. The Agency will provide the policy direction and general oversight of the public transportation system."

The JPA does not have the power to tax, but specifically lists eight specific powers it does have. The most important as relevant to Calaveras County are the power to 1) employ agents and employees and to contract for professional services; 2) acquire, convey, construct, manage, maintain, and operation buildings and improvements; and 3) make and enter into contracts, including labor and employment contracts.

The governing body is such that four directors are appointed by the Members and a fifth director is appointed by a majority of the other four directors. Importantly, the TCTA board members are the same as appointed to the Tuolumne County Transportation Council.

The TCTA Board establishes an annual budget. It establishes procedures and policies to ensure competitive prices for purchase of goods and services. A particularly relevant provision is "Particularly in the purchase of equipment, including buses, the board may consider the design, maintenance and operating costs, and other similar factor in determining the most suitable equipment and need not purchase equipment having the lowest initial cost."

The preliminary performance audit for Tuolumne Transit for general services (not including specialized services and comparable to Calaveras Transit) was $91.55 per vehicle hour, up almost

13% from FY 2011/12. For all Tuolumne Transit services, including specialized services that Calaveras Transit does not operate, the cost per vehicle service hour was $74.76 per vehicle service hour.

Tuolumne County Transportation Commission and Tuolumne County Transit Agency share 6 full time equivalent staff as shown in Figure 16.

Figure 16 Tuolumne County Staffing

	TCTC Budget		Transit Budget		
Position/Title	FY13/14	FY14/15	FY13/14	F14/15	**FTE**
Executive Director	75%	75%	25%	25%	1
Senior Administrative Analyst	75%	75%	25%	25%	1
Senior Transportation Planner	50%	50%	50%	50%	1
Transportation Planner I	70%	80%	30%	20%	1
Staff Services Analyst		20%	100%	80%	1
Department Support Technician	75%	75%	25%	25%	1
Total Full-Time Equivalents (FTEs)	*3.45*	*3.75*	*2.55*	*2.25*	*6*

The administrative cost per vehicle service hour for Tuolumne County is $12.51 compared to $13.26 per vehicle service hour for Calaveras Transit. The administrative labor cost for Tuolumne Transit is $8.29 per vehicle service hour compared to $9.12 for Calaveras Transit. Tuolumne County operates specialized services that Calaveras Transit does not operate and therefore has a higher number of overall vehicle service hours.

Modoc County has a very similar governance structure as Tuolumne County. However, four staff persons staff both the Modoc Transportation Commission and the Modoc Transportation Agency (Transit). The Operations Manager is the supervisor, but also drives the bus when a backup is needed. Modoc Transportation Agency has one contract for drivers and a second private contract with a maintenance vendor in Redding where one of the routes has a final destination; buses are swapped out for preventative maintenance as needed. Modoc Sage Stage has an overall administrative budget of $108,000 that includes the salary and benefits of Transit Manager who performs a variety of duties including driving occasionally. The administrative cost per hour is not comparable to Calaveras Transit. Modoc's Sage Stage service has an operating cost per vehicle service hour of $70.72 per vehicle hour.

Based on the analysis of peers with joint powers authorities, it does not appear that a change in institutional structure would result in any substantial cost savings.

Hire a Professional Transit Management Firm

On an interim basis, Calaveras County hired an outside vendor to provide transit management services. Although hiring a Transit Management firm is more common with much larger transit

agencies, it has been very successfully implemented in Lake and Del Norte counties. One Transit Manager with many years of professional transit management experience independently contracts with both agencies.

The Transit Manager contract in Lake County is between the Lake Transit Authority and an independent contractor. The scope of work specifies a part-time contract position with an annual level of effort of 1,200 applied professional hours. The contract Transit Manager is responsible for overseeing the contract with Paratransit Service that provides both operations and maintenance services throughout Lake County. The Transit Manager resides in Visalia, CA and regularly travels to Lake County for Board meetings and other business. Lake Transit operates 38,350 vehicle service hours at an operating cost per vehicle service hour of $63.96. Due to the large number of vehicle service hours, Lake Transit was not included as a peer to Calaveras Transit.

The organizational structure in Lake County is quite unusual. The Lake County Area Planning Council, the Regional Transportation Planning Agency, is also staffed by a contract management firm. The contract Executive Director also serves as the Executive Director of the Lake Transit Authority, a Joint Powers Authority. She spends 5% of her time as Executive Director. For all intents and purposes, the contract Transit Manager is the one who performs all transit administration functions.

The Lake Transit example works well because the Transit Manager has extensive transit management experience and expertise. He has been a long-time leader in the rural transit industry field and has been on the CalACT Board, the industry association, for many years.

If Calaveras Transit were to find the right Transit Manager with experience equivalent to the Transit Manager in both Lake and Del Norte Counties, it might be possible to duplicate the success of both agencies. The key is finding the right individual who will have sufficient longevity in Calaveras County on a part-time basis to make this option a viable one. In order to attract the right candidate, a part-time contract in the neighborhood of $60,000-$70,000 would be required. With other required administrative costs, this alternative would likely be equivalent to the administrative costs as proposed in the FY 14-15 Calaveras Transit budget.

Form a Joint Powers Authority and Directly Administer, Operate and Maintain Transit Services

Amador Transit was formed through a Joint Powers Agreement between Amador County and its five incorporated cities of Jackson, Sutter Creek, Ione, Plymouth and Amador City. Amador Transit is an independent entity with its own administrative staff, directly hired drivers and directly hired mechanics. The Board of Directors is the same as the Amador County Transportation Commission and board meetings start after the ACTC Board meetings.

According to the recent Performance Audit, Amador Transit "staff consist of 20 permanent employees: General Manager, Maintenance and Facilities Supervisor, Facilities Maintenance Technician, Facilities Maintenance Work, Mechanic, Operations Supervisor, Mobility Manager, Office Manager, two part-time Dispatchers, a Road Supervisor and 13 part-time Drivers." The General Manager is responsible for administration of all operations and personnel and reports to the Amador Transit Board.

Amador Transit had a cost of $107.86 per vehicle service hour in FY 2012/13. It is the median of five peer small rural transit agencies that provide directly operated services. Five of the nine peers utilized for Calaveras Transit were directly provided transit services with the agency directly providing administration, driver, and maintenance wages. On average, the peer cost for five directly provided services was approximately $16 higher than the average of transit agencies with contract operations.

The purpose of this working paper is to develop strategies to reduce the overall cost per vehicle service hour. Due to generally higher costs associated with directly provided services, this institutional option is a strategy not recommended for Calaveras Transit.

Form a Regional Transit Authority among Tuolumne, Calaveras and Amador Counties

In this institutional alternative the three counties and incorporated cities could also form a joint powers authority to operate transit services among the three agencies.

In this alternative there would be a single Transit Manager and the overall transit administrative cost could have the potential of being lower. Calaveras Transit currently operates service into both counties. A multi-county transit authority service has the potential providing more streamlined inter-county services.

The most successful recent example of a new joint powers authority between more than one county was the formation of the Eastern Sierra Transit Authority (ESTA). The consulting team for this analysis prepared ESTA's first Short Range Transit Plan. The cities of Bishop and Mammoth Lakes and counties of Inyo and Mono are part of the joint powers authority. All four entities strongly believed there were both cost and service level benefits in working together for transit service delivery. ESTA operates local, intercity and inter-regional services. It also provides service on behalf of the Mammoth Ski Area and in the summers operates specialized service to the Devils Postpile. In FY 2012/13, services were operated at a very cost effective $69.12 per vehicle service hour. However, they operate 56,739 vehicle service hours.

One of the pre-requisites for forming such a joint powers authority is that there needs to be compelling benefits for each party to move to this institutional structure. Discussions have not been held with management and elected officials in Amador County and Tuolumne County to determine if

there is consensus that such compelling benefits exist. If the CCOG Board determines that there are compelling benefits for Calaveras County in joining such a tri-County transit JPA, then both counties can be formally contacted to proceed with a further inquiry.

During stakeholder interviews with elected officials in Calaveras County and key staff members, there were different opinions expressed about the potential benefits of a tri-County transit authority. Some elected officials expressed the importance of connections to both Tuolumne and Amador counties. The coordination of fare and schedule connections could be improved if there were a joint powers authority. Some elected officials pointed out that the concept of share contracting or shared services were great in concept, but difficult politically. The example of the CalFire dispatch center where both Jamestown and Angels Camp wanted the dispatch center was utilized as practical example of the potential barrier. Another elected official felt that the 3-county JPA was attractive and had the potential of significant economies of scale. One key staff representative felt there were significant potential benefits. Another key staff representative was adamantly opposed to the idea, feeling that Calaveras County would not only lose local control, but would likely receive the "short end of the stick" in resource allocation. Overall, within Calaveras County there is not currently a consensus that a Tri-County Transit Authority has enough benefits to outweigh the loss of local control over transit operations.

There are very practical barriers to such a potential tri-county joint powers authority. Amador Transit directly provides transit service by hiring its drivers and mechanics. It has just opened a new transit administration and maintenance facility in Sutter Creek. In Tuolumne County, they also have contract operations with a different contractor and an array of specialized services.

Potential Costs Savings with Different Institutional Structures

The preliminary review of potential costs for different institutional options does not reveal any significant administrative cost savings compared to the FY 2014/15 budget for Calaveras Transit for the first four institutional options. More detailed formal discussions and analysis would need to occur with Amador and Tuolumne County to determine if there are significant cost and service delivery benefits with a tri-county joint powers authority. Depending on specific implementation details, the overall administrative costs per vehicle service hour are likely to remain in the range of $12 to $16 per vehicle service hour. In FY 2012/13, the administrative cost per vehicle service hour for Calaveras Transit was $13.26 per hour.

COUNTY OF CALAVERAS
TRANSIT FUND

STATEMENTS OF REVENUES, EXPENSES AND
CHANGES IN NET POSITION

For the Years Ended June 30, 2013 and 2012

	2013	2012
OPERATING REVENUES		
Passenger fares	$ 87,901	$ 67,014
Charter fares		380
TOTAL OPERATING REVENUES	87,901	67,394
OPERATING EXPENSES		
Salaries and benefits	23,142	82,189
Service and supplies	385,762	259,394
Purchased transportation	591,787	578,951
Depreciation	159,643	171,678
TOTAL OPERATING EXPENSES	1,160,334	1,092,212
NET LOSS FROM OPERATIONS	(1,072,433)	(1,024,818)
NONOPERATING REVENUES (EXPENSES)		
Local Transportation Fund	560,069	295,723
State Transit Assistance Fund	249,815	242,096
Federal grants	166,634	166,634
Gain on sale of capital assets	4,490	
Other revenues	4,320	10,655
Interest income	1,347	2,791
State grants		21,055
TOTAL NONOPERATING REVENUES (EXPENSES)	986,675	738,954
NET INCOME (LOSS) BEFORE CAPITAL CONTRIBUTIONS	(85,758)	(285,864)
CAPITAL CONTRIBUTIONS		
PTMISEA	26,977	71,559
Refund of PTMISEA to Calaveras Council of Governments	(30,345)	
NET CAPITAL CONTRIBUTIONS	(3,368)	71,559
CHANGE IN NET POSITION	(89,126)	(214,305)
Net position, beginning of year	871,630	1,085,935
NET POSITION, END OF YEAR	$ 782,504	$ 871,630

The accompanying notes are an integral part of these financial statements.