Yuba Sutter Short Range Transit Plan

Final Plan

Prepared for the

Yuba Sutter Transit Authority

Prepared by

LSC Transportation Consultants, Inc.

Yuba-Sutter Transit Authority
Short Range Transit Plan

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Executive Summary
2015 Yuba Sutter Short Range Transit Plan
Prepared by LSC Transportation Consultants, Inc.

A Short Range Transit Plan (SRTP) study was conducted to assess transit and related transportation issues in Yuba and Sutter Counties and to provide a "road map" for improvements to the public transit program over the upcoming five years. The study included a review of existing transit operations, public outreach, evaluation of alternatives, and preparation of a comprehensive strategy of short-range service, capital, and institutional improvements with a supporting financial and implementation plan.

EXISTING COMMUNITY CONDITIONS

Yuba and Sutter Counties have a combined population estimate of 168,690 (2013). The growth in population in both Yuba and Sutter Counties has outpaced the growth rate in California over the past two decades, and is projected to continue to outpace the statewide growth rate, resulting in a population in 2020 that is 11.5 percent greater than in 2010, and a population in 2035 that is 39.1 percent greater than in 2010. Of the total population, 12.1 percent are youths age 10 to 17, 11.7 percent are elderly age 65 or above, 14.3 percent are persons with disabilities, 18.2 percent are persons living in households below the poverty line, and 6.4 percent are living in households without a vehicle. The elderly population is expected to more than double from 2010 to 2035.

EXISTING YUBA-SUTTER TRANSIT AUTHORITY SERVICES

Yuba-Sutter Transit Authority, operating as Yuba-Sutter Transit, provides public transit service in Yuba and Sutter Counties (as well as commuter service to Sacramento) under a joint powers agreement between Sutter and Yuba Counties and the Cities of Marysville and Yuba City. Yuba-Sutter Transit is directed by an eight-member Board of Directors composed of two elected representatives appointed by each of the four member entities. All of Yuba-Sutter Transit's maintenance and operations are provided through Transdev Services, Inc. under contract with the Yuba-Sutter Transit Authority. Current services can be summarized as follows:

- Local Fixed Routes – Six local fixed routes are operated generally from 6:30 AM to 6:30 PM Monday through Friday and 8:30 AM to 5:30 PM on Saturday. Three routes provide service every 30 minutes and three routes operate hourly. The one-way general public fare is $1.00 with a 50 percent discount available.

- Dial-A-Ride -- Yuba-Sutter Transit provides curb to curb demand response service within the general Yuba City, Marysville, Linda, and Olivehurst area. Priority for DAR service is given to disabled passengers who are unable to use the fixed route as well as to senior passengers. General public passengers traveling to or from locations more than half a mile from a fixed route may use Dial-A-Ride, along with evening service after 6:00 PM. DAR service is offered from 6:30 AM to 9:30 PM on weekdays and 8:30 AM to 5:30 PM on Saturdays. The general public one-way fare is $4.00 during the day and $3.00 after 6:00 PM. Seniors, youth (age 5 – 12), passengers with disabilities and ADA eligible passengers may ride one-way for $2.00 during the day and $1.50 in the evening.

- Rural Routes – Three rural route services are provided. The Foothill Route connects the communities of Brownsville, Oregon House, Willow Glen and Loma Rica to Marysville, twice a day every Tuesday, Wednesday and Thursday. The Live Oak Route travels between Live Oak and Marysville/Yuba City two times a day on Monday, Wednesday and Friday. The Wheatland Route connects Wheatland to Linda and Marysville on Tuesdays and Thursdays, with two round trips per day. The basic one-way fare is $2.00, or $1.00 for discount passengers.

- Sacramento Routes -- Yuba-Sutter Transit provides both peak hour commuter service and mid-day transit service to Sacramento via both SR 99 and 70. It operates nine morning runs (6 via SR 99 and 3 via SR 70) to Sacramento and nine afternoon runs from Sacramento (6 via SR 99 and 3 via SR 70) Monday through Friday. Limited "reverse commute" runs are also available. The one-way fare is $4.00, with a monthly pass available for $128. Three Mid-day Express round trips are also provided. The general public one-way fare is the same as the commuter service, $4.00, but a 50 percent discounted fare is available to seniors, youth, and persons with disabilities.

Annual one-way passenger trips have increased significantly over the organization's 35 year history, reaching 1,279,575 in FY 2013-14. Ridership gains have been posted in every year but one since FY 1990-91. Over 80 percent of Yuba-Sutter Transit ridership occurs on the local fixed routes, followed by 12 percent on the commuter routes, 5 percent on Dial-A-Ride, and less than one percent on rural routes. In terms of the proportion of vehicle service hours by service type, fixed route service operates the greatest proportion of hours (56 percent), DAR represents 27 percent, Sacramento Routes represent 15 percent, while two percent of system vehicle service hours are operated on the Rural Routes.

The operating costs for Fiscal Year 2013-2014 equaled $6,286,800. Operations and maintenance compose the largest element ($4.4 million) followed by fuel and tires at just under $1,000,000, administrative costs at $482,000, insurance expenses at $242,600, and utilities and supplies cost around $111,000 annually.

The revenue sources required to support Yuba-Sutter Transit's administration, operations and maintenance total $6,320,692. The largest source of income for Yuba-Sutter Transit is Federal Transit Administration (FTA) 5307 grant funds for urbanized areas which account for 31.6 percent of the operating budget, followed by Transportation Development Act (TDA) Local Transportation Funds (LTF) funds (29.6 percent of the revenues). Passenger fares account for 22.9 percent of the operating budget, while TDA State Transportation Assistance (STA) accounts for 8.7 percent. Other FTA grant programs such as Section 5311 (for rural areas) and FTA Jobs Access Reverse Commute grant funds compose around 3 percent each of the operating budget. Other operations funding sources include advertising and interest revenues.

While a performance review indicates that the transit services are relatively cost-effective and productive, the SRTP process identified on-time performance as a significant issue. Of all local route runs, 27 percent were found to operate 5 or more minutes behind the published schedule, with the poorest route (Route 5) late 45 percent of the time.

A comparison of Yuba-Sutter Transit with peer systems indicates that the productivity of the Yuba-Sutter Transit local routes is relatively high, productivity on Yuba-Sutter Transit DAR service is also relatively good, the commuter service productivity is relatively low due to the long travel distance and the fact that lower-ridership mid-day service is offered, the farebox return

ratio (23 percent) compares well with the peer systems, and the cost per vehicle-hour of service is 6 percent below the peer average.

As of March 2014, the Yuba-Sutter Transit vehicle fleet consisted of 51 revenue vehicles and 7 non-revenue vehicles. The Yuba-Sutter Transit system serves a total of 283 bus stops.

OTHER TRANSIT PROVIDERS IN YUBA – SUTTER COUNTIES

In addition to Yuba-Sutter Transit, there are several other transportation providers serving the region: American Cancer Society Road To Recovery volunteer program, Pride Industries, Easter Seals Adult Day Program & Fine Arts Program, Head Start, and Colusa County Transit. Also, FREED provides vouchers for Yuba-Sutter Transit fixed route or DAR at discounted prices to persons with disabilities, seniors and low income residents.

SURVEYS

A substantial focus of the study was a series of surveys. **Fixed Route on-board** surveys were conducted to assess ridership patterns and the rider's opinion for each existing Yuba-Sutter Transit existing service. The surveys were distributed onboard as well as available online. All runs were surveyed, resulting in 1,095 valid survey responses. **Yuba College student** surveys were offered online, to consider the transit patterns of student riders as well as their opinion of the service. There were a total of 130 respondents. **Dial-A-Ride onboard surveys** generated responses from 91 individual riders. Onboard surveys were conducted for the **rural routes**, yielding 18 completed surveys. An online **Live Oak** community survey was offered, with 102 residents participating. Finally, a survey for **Sacramento Commuter** riders was conducted online, resulting in a total of 220 respondents.

SUMMARY OF TRANSIT DEMAND

The demand for transit services was evaluated, focusing on commuter demand, college student demand, general public demand, and rural demand. Demand is forecast to increase due to changes in population, fuel price, aging of the population, and growth in transit use among young adults.

YUBA-SUTTER SHORT RANGE TRANSIT PLAN

Service Plan

Local Routes

- Revise Route 2 to Improve On-Time Performance – Route 2 should be revised to eliminate the Washington/Clark/Ainsley loop, instead staying on Gray Avenue, in order to improve the current poor on-time performance on Route 2.

- Revise Route 4A to Serve Linda Rather Than Yuba City – Besides providing better connections for a larger proportion of passengers, this will also reduce in-vehicle travel time and enhance access to the Peach Tree Clinic.

- Peak Tripper Bus Service – As one strategy to address the poor on-time performance of the Local Routes, "tripper buses" should be operated on busy ridership days.

- Extend the Service Day One Additional Hour on Weekdays and Saturday – The service day on all local routes should be extended by one hour on weekdays and Saturdays.

- Implement Yuba College Sutter County Center Shuttle Service – A dedicated half-hourly shuttle should be implemented between the Yuba College Sutter County Center and the Walton Terminal, so long as a student fee election (scheduled for spring of 2016) is successful in generating funds for this service improvement.

- Expand Route 1 and 3 to 20 Minute Service Frequency and Modify Routes 3 and 6 – This set of improvements will increase the frequency on Routes 1 and 3 from 30 minutes to 20 minutes on both weekdays and Saturdays, and revise Routes 3 and 6 to provide service to new neighborhoods (including the Edgewater area south of Yuba College and the Olivetree Senior Apartments), reduce running time, improve passenger safety, and improve on-time performance.

Together, these service improvements will substantially increase the quality of transit service throughout the system, particularly in the Olivehurst and Linda areas. Overall, ridership will increase on the order of 150,000 passenger-trips per year.

Commuter Service

- Implement Earlier SR 99 PM Commuter Run – An earlier afternoon departure will be added to the SR 99 corridor commuter schedule.

Rural Routes

- Expand Live Oak Service to 5 Days per Week and Revise Wheatland Service to 2 Runs per day 3 Days per Week – This will enhance the ability of Live Oak residents to access the Yuba City and Marysville area, expand Wheatland resident's choices regarding days of travel, and avoid the need to purchase an additional bus.

Dial-A-Ride Service

- Expand DAR Service – Annual vehicle-hours should be increased over time by 16 percent, with two additional vans added to peak operations.

- Reduce Dial-A-Ride Service Area – To focus limited resources on those areas that can be most efficiently served, the Dial-A-Ride service area should be reduced (based on a staff review) to exclude areas of low density or that require excessively long trips to serve.

- Gradually Increase the Definition of Senior from 62 to 65 – This will better focus limited resources on passengers with the greatest need. The minimum age will be stepped up in one year increments for each of the next three years.

- Eliminate the General Public Dial-A-Ride Eligibility – Daytime Dial-A-Ride service should be limited to seniors and persons with disabilities only, in order to streamline services and focus them on the populations with greatest need.

Additional Service Enhancements for Consideration – 2020 to 2025

- Half-hourly service on Route 4.

- Additional Commuter Service runs, as needed to address vehicle capacity constraints or changes in commuter demand.

- Additional extension of weekday Local Route service later into the evening.

- Limited Sunday Local Route service.

- Fixed route service to Sutter County Center, replacing the shuttle service.

- Five-day-a-week service on the Foothill Route.

- Rural route service to Plumas Lake.

Capital Improvements Plan

- Transit Fleet Improvements – 18 larger buses and 16 smaller buses will require replacement between 2015 and 2023. In addition, two Dial-A-Ride buses will be purchased for expansion of the program, along with two local fixed route expansion buses. The Dial-A-Ride/Rural Route fleet should be transitioned to low-floor vehicles to improve the ease of entry/exit and to improve passenger and driver safety. In 2017, the Supervisor vehicle (a 1998 model year Dodge Activan) will be replaced.

- Transit Center and Bus Stop Improvements – Key transit centers will be expanded. Focused studies should be conducted to investigate off-street facilities at Alturas/Shasta and North Beale Road. An additional 22 new shelters will be provided at other key bus stops. All bus stops will be provided with new, consistent and attractive signs.

- Transit Operations Facility Improvements -- Ongoing funding of modest improvements to the Transit Operations Facility is included in this plan. This could support installation of solar panels to reduce utility costs and help cut greenhouse gas emissions.

- Advanced Technology -- Real-time Traveler Information systems, Wifi service on Commuter buses, and Computer-Aided Dispatch software.

Management Plan

- Expand Road Supervision -- Additional contractor supervision is recommended to ensure that drivers do not take breaks beyond those required or operate the routes in a manner that adds to on-time performance problems.

- Adopt Updated Goals and Performance Measures -- Revised goals, objectives and standards are recommended for adoption that are more in line with current operating conditions while still providing appropriate incentives to improve services.

- Expand Management Staff by One Position -- One additional staff position is recommended for the management staff, at a junior to mid-range level.

Financial Plan

Operating and administrative costs by the fifth year of the plan will total approximately $8,538,000, which is 15 percent over the base-case cost of $7,445,000. By FY 2019/20, ridership is forecast to equal 1,693,000 one-way passenger-trips per year, which is 328,400 trips (24 percent) over the base case forecast of 1,364,500. The capital costs total $12,591,800 over the five-year period. In addition to passenger fare revenues, this Financial Plan incorporates the following funding sources:

- Yuba College student fees, starting in the Fall 2016 Semester, offset the loss of existing student fares and fund approximately 60 percent of the cost of the Sutter County Center shuttle service.

- Feather River Air Quality Management District funds are used to continue to provide low-cost pass rates.

- FTA 5316 (Jobs Access Reverse Commute) funds are used for operations.

- FTA Section 5307 (Urban Program) is used for operations and the purchase of local route buses.

- FTA Section 5311 (Rural Program) is used for rural operations and the purchase of one commuter bus, reflecting that the Commuter Service serves rural areas.

- FTA Section 5317 (New Freedom) funds are allocated to the North Beale Road improvement program

- FTA 5339 (Formula Capital Program) funds Dial-A-Ride vehicle purchases, along with a portion of the Local Route bus purchases.

- Proposition 1B PTMISEA (Public Transportation Modernization, Improvement, and Service Enhancement Account) Program funds are used for bus purchases.

- Proposition 1B Safety and Security Program funds are used for video monitoring, wifi improvements and bus stop / transit center improvements.

- Low Carbon Transit Operations Program funds are used for transit center and bus stop improvements, along with facility improvements that reduce carbon emissions.

- State Transit Assistance funds are used as funding for transit operations and for bus and van purchases, bus stop improvements, facility improvements, and a new supervisor vehicle.

- Local Transportation Funds are used for transit operation and for budget contingency.

Both the operating financial plan and the capital financial plan are balanced in each of the plan years. While a fare increase is not included in the plan, a fare increase (excluding Commuter Service) may be necessary in FY 2017/18, depending on the results of a student fee election and other financial shifts.

Implementation Plan

Fiscal Year 2015-16

- Revise Route 2 and Route 4A (September), including preparation of new schedules
- Expand Live Oak Service to five days per week, and revise Wheatland service to three days per week (July)
- Revise Dial-A-Ride program to eliminate general public daytime service, reduce service area, revise age definition of senior, and expand capacity (September)
- Conduct passenger surveys and implement earlier SR 99 PM commuter run (September)
- Define specific proposal for Yuba College student fee and hold election (Spring)
- Implement Connect Card, and closely monitor ridership and fare revenue impacts
- Start implementing bus stop and transit center improvements and bus stop sign replacement
- Expand road supervision to help address on-time performance issues
- Fund the North Beale Road project
- Implement the remainder of the on-board and park-and-ride video system

Fiscal Year 2016-17

- Assuming a successful Yuba College student fee election, implement Sutter County Center shuttle service and eliminate fares for Yuba College students on local fixed routes, at the beginning of the Fall Semester
- Extend weekday and Saturday Local Route service by one hour, and trim Evening Dial-A-Ride to start at 7:00 PM
- Implement peak tripper service on Local Routes to improve on-time performance
- Continue implementing bus stop and transit center improvements and bus stop sign replacement
- Implement real-time transit information system
- Establish and fill additional administrative position
- Finalize plans for improvements to Routes 1, 3 and 6
- Review the need for a fare increase
- Purchase new Supervisor van
- Conduct a study of a potential new transit center to replace the current stop at Alturas/Shasta

Fiscal Year 2017-18

- Continue to expand Dial-A-Ride capacity
- Continue implementing bus stop and transit center improvements
- Implement 20-minute service frequency on Routes 1 and 3, along with potential realignment of Routes 3 and 6
- Purchase seven replacement Commuter Service buses
- Conduct study of a potential new transit center at North Beale Road

Fiscal Year 2018-19

- Purchase 11 low-floor Dial-A-Ride vans
- Continue to expand Dial-A-Ride capacity
- Continue implementing bus stop and transit center improvements

Fiscal Year 2019-20

- Purchase 13 buses for Local Fixed Route Service
- Continue to expand Dial-A-Ride capacity
- Continue implementing bus stop and transit center improvements

Chapter 1
Introduction and Key Study Issues

INTRODUCTION

Public transportation is a vital service to many residents of Yuba and Sutter Counties. Transit services provide mobility to residents, including access to important medical, recreational, social, educational and economic services and opportunities. In addition to being important to the quality of life of residents in the region, public transit services assist in the functioning of educational programs, public and private employers, and social service programs throughout the region.

A Short Range Transit Plan (SRTP) study was conducted to assess transit and related transportation issues in the two counties and to provide a "road map" for improvements to the public transit program over the upcoming five years. The intent of this study was to evaluate the specific needs for transit services, as well as to develop plans for improvements and service revisions. This has been accomplished through the review of existing transit conditions and evaluation of operations, as well as through public outreach via onboard surveys, online surveys and community-based meetings. A wide range of alternatives were then evaluated. Additionally, an important element of this study was to identify stable funding sources for operations and capital improvements of transit services. As a whole, this study provides a comprehensive strategy of short-range service, capital, and institutional improvements, with a supporting financial and implementation plan.

This document first presents and reviews the setting for transportation services, including demographic factors and the recent operating history of the public transit service supplied by Yuba-Sutter Transit. A wide range of service, capital, institutional, management and financial alternatives are then discussed. Finally, the resulting plan is presented, including year-by-year implementation and financial strategies.

STUDY ISSUES

This study takes direction from specifically identified study issues surrounding transit in the region. These issues were identified by Yuba-Sutter Transit staff and through the outreach efforts, and include the following:

- **Service Efficiency**: What is the most appropriate service plan to meet the varied transit needs? Are there routing and scheduling changes which could improve efficiency? Are available resources appropriately serving various needs throughout the two counties?

- **Service to New Areas**: With a new Yuba College campus on Onstott Drive, as well as new residential and commercial development in Sutter County, what type of demand will this generate for transit services, and how can new demand best be met?

- **Expansion in Services**: Are there areas already served that warrant expansion in service, such as additional runs or expanded hours of service?

- **Dial-a-Ride Demand Increasing**: How can Yuba-Sutter Transit best respond to increasing demand for Dial-a-Ride services? Should this service, which is the most expensive to

provide, be expanded? Should eligibility for these services be more restrictive so that those who need the service most have the best access?

- **On-time Performance**: Schedule-adherence is an issue on some routes during portions of the day (particularly related to school hours). Many of the routes have timed-transfers, making on-time performance important to all routes. How can scheduling be improved, and what policies are appropriate for dealing with missed connections?

- **Financing:** Proposition 1B funds for capital have provided the transit system with the ability to update and maintain a high quality fleet and operations facility. As this funding source is expiring, and only limited growth in Local Transportation Funds (LTF) is expected, what public and private sources of revenue are available? What is the funding outlook for the next five years? How can the transit program take advantage of new sources of revenue, such as the cap and trade program? What is the appropriate contribution of LTF from each City and County?

- **Transit Technology:** How can advanced transit technologies best benefit passengers? How can these technologies improve reporting and management strategies?

These issues have been considered as part of a comprehensive look at the role of transit in Yuba and Sutter Counties and the service plan that best serves this role. This study affords the leadership of the area an opportunity to take a look at the transit services in the next five years and identify the optimal manner in which public transit can meet both the present and the future needs of the area.

Chapter 2
Existing Community Conditions

Geography of Yuba and Sutter Counties

Yuba and Sutter counties are located in the central Sacramento Valley, approximately forty miles north of Sacramento. Both are agrarian counties of similar size (just over 600 square miles). Yuba County includes the incorporated cities of Marysville (the County seat) and Wheatland, as well as a number of smaller rural communities including Linda and Olivehurst, as well as Beale Air Force Base. Sutter County includes the incorporated cities of Yuba City (the County seat) and Live Oak, and numerous small, rural communities as well. The study area is shown in Figure 1.

State Route 20 passes through both counties in an east-west direction, while SR 70 and SR 99 serve the counties in the north-south direction. SR 65 intersects with SR 70 in Olivehurst and travels southeast to Interstate 80 in Rocklin. Starting in 2013, SR 20 and SR 70 have undergone major roadwork in Marysville to improve surface conditions, curbs and sidewalks, drainage, traffic control and landscaping. The construction has had an impact on transit schedule performance, but will ultimately provide a better transit operating environment.

Population

General Population Trends: Historic and Projected Population

The growth in population in both Yuba and Sutter Counties has outpaced the growth rate in California over the past two decades, as shown in Table 1. However, the City of Marysville has lost population slightly in recent years, though is projected to grow by 14 percent by 2035. Yuba City has grown very rapidly in the past several decades (particularly between 2000 and 2010, which reflects in part the effect of annexations); growth is expected to slow substantially, but still result in 16 percent growth in population. These trends are shown in Figure 2. Overall, the study area is projected to continue to outpace the growth rate in California, resulting in a population in 2020 that is 11.5 percent greater than in 2010, and a population in 2035 that is 39.1 percent greater than in 2010.

Transit Dependent Population: Nationwide, public transit ridership is drawn in large part from the potentially transit-dependent population consisting of elderly and youth, low-income, disabled, and members of households with no available vehicles. Estimates of current population by categories and households are available at the census tract level through multiple sources, including the US Census Bureau, the California Department of Finance Demographic Section, and the Sacramento Area Council of Governments (SACOG). Population by census tract is shown in Table 2 and Figure 3. The current population of Yuba County is 72,244, while Sutter County has a population of 94,615.

Youths: Youths represent a transportation-dependent population, as those younger than 18 are often unable to drive and may not have a parent available to transport them. In particular, junior high school students who are independent enough to attend after-school activities but are unable to drive are a representative group. The population between 10 and 17 years of age (inclusive), by census tract, is presented in Table 2 and Figure 4. An estimated 12.5 percent of the population consists of youths in Yuba County and 11.9 percent in Sutter County. The

Figure 1
Yuba-Sutter Site and Location Map

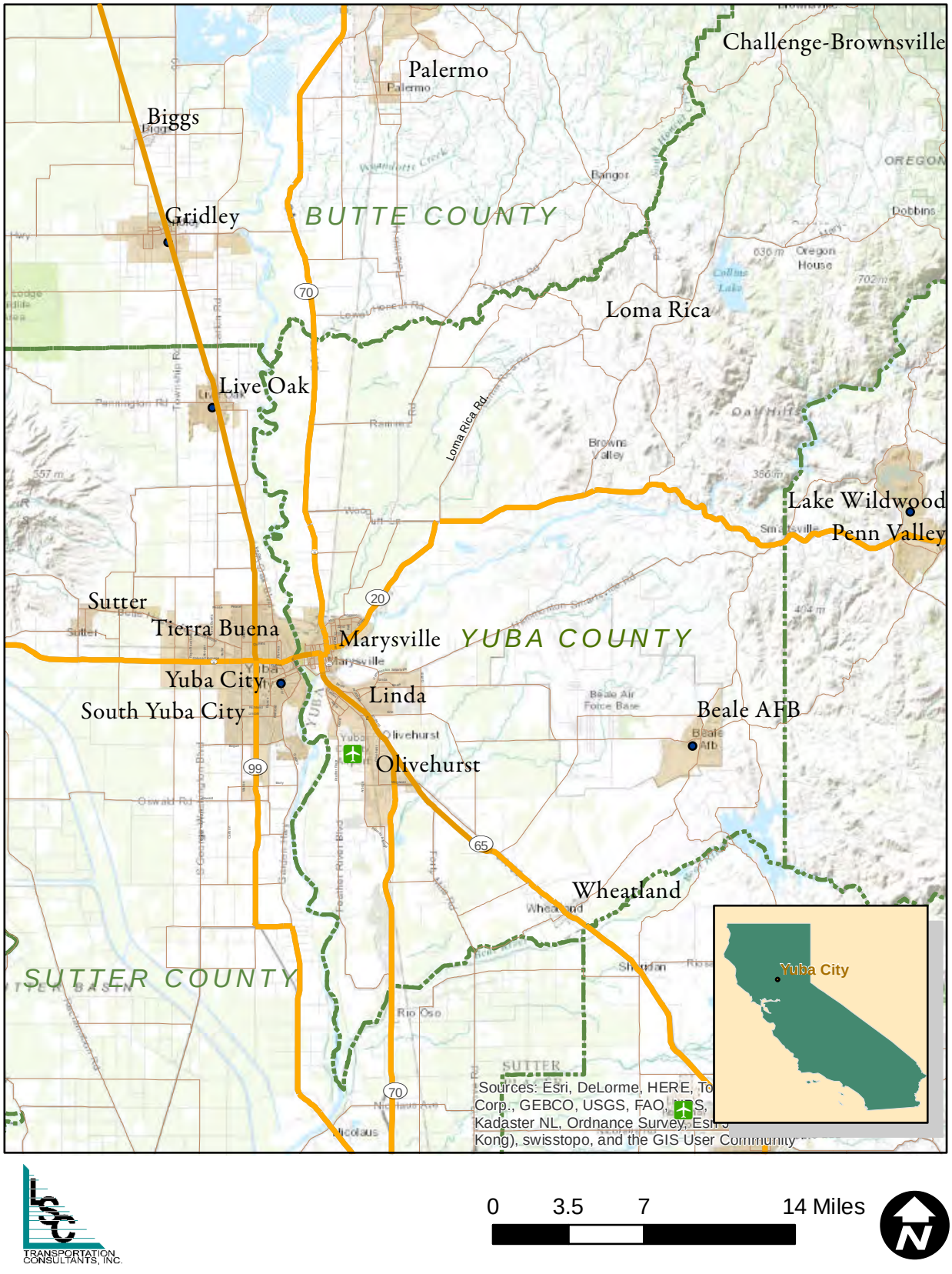


Table 1: Historic and Projected Populations of Yuba and Sutter Counties

	1970	1980	1990	2000	2010	2020	2035
City of Marysville	9,353	9,898	12,324	12,268	12,072	12,844	13,770
Annual Percent Growth	--	0.6%	2.2%	0.0%	-0.2%	0.5%	1.3%
Over Previous Period	--	5.8%	24.5%	-0.5%	-1.6%	6.4%	7.2%
Yuba County	44,736	49,733	58,228	60,219	72,155	84,830	103,775
Annual Percent Growth	--	1.1%	1.6%	0.3%	1.8%	3.5%	3.7%
Over Previous Period	--	11.2%	17.1%	3.4%	19.8%	17.6%	22.3%
Yuba City	13,986	18,736	27,437	36,758	64,925	66,814	75,260
Annual Percent Growth	--	3.0%	3.9%	3.0%	5.9%	6.2%	1.5%
Over Previous Period	--	34.0%	46.4%	34.0%	76.6%	2.9%	12.6%
Sutter County	41,935	52,246	64,415	78,930	94,615	101,171	128,185
Annual Percent Growth	--	2.2%	2.1%	2.1%	1.8%	2.5%	3.1%
Over Previous Period	--	24.6%	23.3%	22.5%	19.9%	6.9%	26.7%
Study Area	86,671	101,979	122,643	139,149	166,770	186,001	231,960
Annual Percent Growth	--	1.6%	1.9%	1.3%	1.8%	2.9%	3.4%
Over Previous Period	--	17.7%	20.3%	13.5%	19.8%	11.5%	24.7%
California Population	19,953,134	23,667,902	29,760,021	33,871,648	37,253,956	40,643,643	46,083,482
Annual Percent Growth	--	1.7%	2.3%	1.3%	1.0%	1.8%	2.1%
Over Previous Period	--	18.6%	25.7%	13.8%	10.0%	9.1%	13.4%

Source: US Census, California Department of Finance and SACOG

southeast portion of Yuba City and areas around Beale Air Force Base include a particularly high proportion of youths, though substantial populations exist in many areas.

Elderly: The population aged 65 years of age and older comprises 10.1 percent in Yuba County and 12.8 percent in Sutter County. There are particularly high concentrations of seniors in Challenge and Browns Valley in Yuba County, and northeast of Yuba City in Sutter County, as shown in Table 2 and Figure 5.

Disability: Individuals with a disability are often transit dependent. The latest Census changed the definitions of disability to better identify the impacts of disabilities rather than the fact that someone had a specific disability. If an individual is found to have one or more of six identified difficulties, they are identified as having a disability. Table 2 and Figure 6 depict the population with disabilities by census tract.

Poverty: The US Census also counts the population living below the poverty level, defined by a number of factors including household income and the number of dependent children. Residents living below the poverty level comprise 20.1 percent of the countywide population in Yuba County and 16.8 percent in Sutter County, compared to 15.3 statewide. As shown in Table 2 and Figure 7, the areas with the greatest percentage of residents below the poverty level include Linda, Olivehurst, and Challenge in Yuba County, and central Yuba City as well as the rural area north of Yuba City in Sutter County. Nearly half of the population in Census Tract 502.01 (central Yuba City) live below the poverty level (45.7 percent), indicating there are pockets of very high transit need there. Other areas with high proportions of low income households are in western Yuba City, Olivehurst, Live Oak, and the Challenge/Brownsville area.

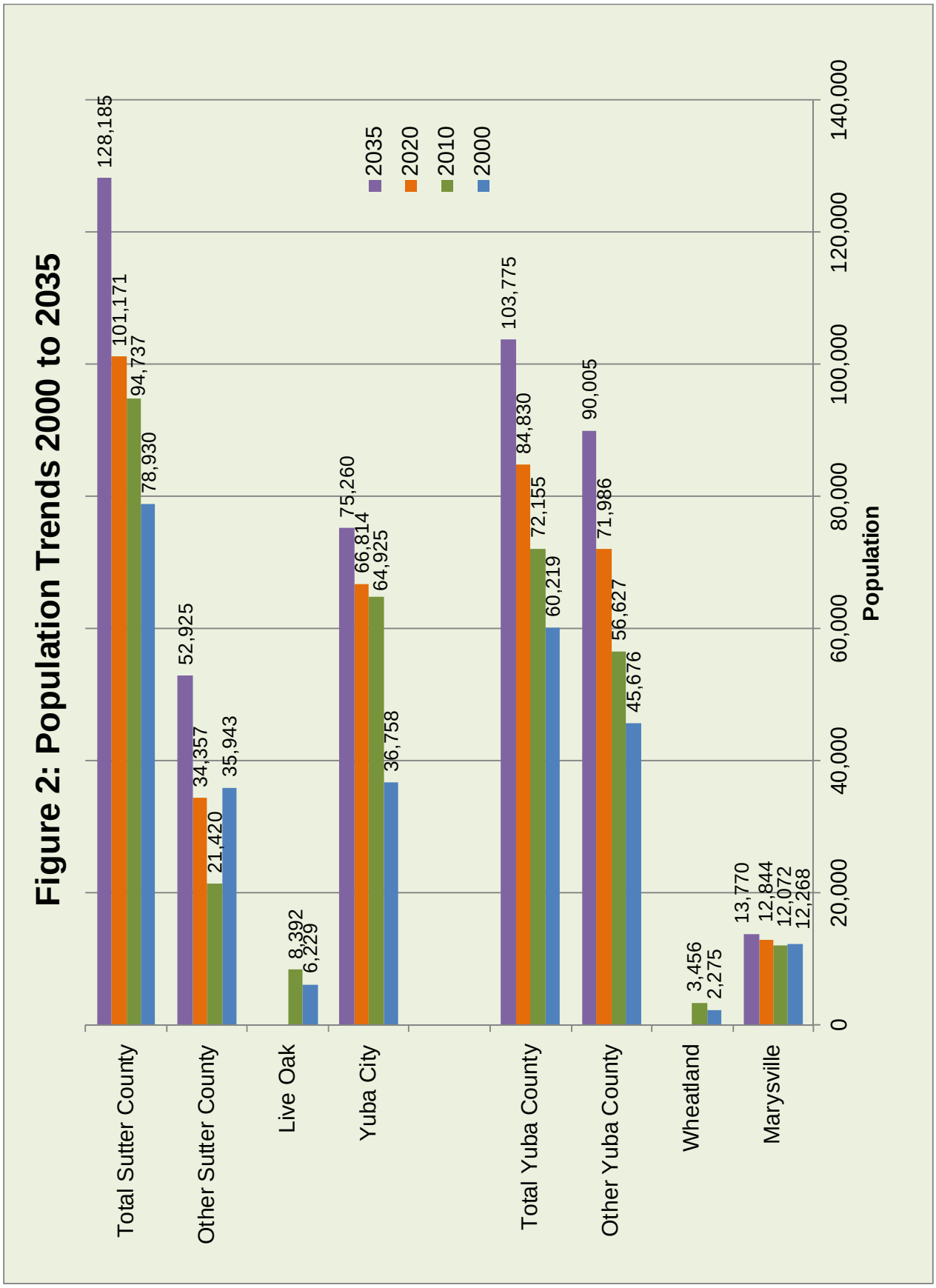


Figure 2: Population Trends 2000 to 2035
2035
2020
2010
2000
Population
0
20,000
40,000
60,000
80,000
100,000
120,000
140,000
Total Sutter County
128,185
101,171
94,737
78,930
Other Sutter County
52,925
34,357
21,420
35,943
Live Oak
8,392
6,229
Yuba City
75,260
66,814
64,925
36,758
Total Yuba County
103,775
84,830
72,155
60,219
Other Yuba County
90,005
71,986
56,627
45,676
Wheatland
3,456
2,275
Marysville
13,770
12,844
12,072
12,268

Table 2: Population Characteristics of Yuba and Sutter Counties

Census Tract	Area Description	Total Persons [2]	Housing Units	Total House-holds [3]	Youth (10-17) [2]		Elderly (65+) [2]		Persons with a Disability [4]		Below Poverty [5]		Zero Vehicle Households [3]	
					#	%	#	%	#	%	#	%	#	%
401	Downtown Marysville	4,627	1,960	1,730	440	9.5%	310	6.7%	673	14.5%	1,168	25.2%	290	16.8%
402	Marysville (northeast)	7,809	3,160	2,904	867	11.1%	976	12.5%	1436	18.4%	1,894	24.3%	244	8.4%
403.01	Linda (northeast)	3,686	1,311	1,238	586	15.9%	273	7.4%	735	19.9%	1,307	35.5%	181	14.6%
403.02	Linda (west, Walmart)	2,508	716	674	308	12.3%	115	4.6%	345	13.8%	770	30.7%	34	5.0%
403.03	Linda (Yuba College)	6,772	2,356	2,040	725	10.7%	440	6.5%	817	12.1%	1,164	17.2%	56	2.7%
404	Olivehurst (north)	4,627	1,850	1,553	588	12.7%	430	9.3%	902	19.5%	1,345	29.1%	152	9.8%
405	Olivehurst (central)	3,614	1,256	1,134	553	15.3%	332	9.2%	818	22.6%	821	22.7%	72	6.3%
406	Olivehurst (south)	6,784	2,044	1,957	1,255	18.5%	651	9.6%	987	14.5%	2,089	30.8%	126	6.4%
407	Olivehurst-Wheatland	11,434	3,842	3,425	1,395	12.2%	583	5.1%	1116	9.8%	980	8.6%	55	1.6%
408	Wheatland	4,201	1,582	1,454	660	15.7%	458	10.9%	655	15.6%	728	17.3%	100	6.9%
409.01	E of Olivehurst	2,777	1,095	958	511	18.4%	319	11.5%	439	15.8%	534	19.2%	48	5.0%
409.02	Beale AFB	2,052	995	489	103	5.0%	4	0.2%	69	3.4%	105	5.1%	10	2.0%
410	Browns Valley	6,616	2,981	2,600	662	10.0%	1,502	22.7%	1135	17.2%	615	9.3%	26	1.0%
411	Challenge/Brownsville	4,737	2,522	1,977	360	7.6%	914	19.3%	946	20.0%	1,021	21.6%	3	0.2%
Yuba County Subtotal		***72,244***	***27,670***	***24,133***	***9,011***	***12.5%***	***7,309***	***10.1%***	***11,073***	**15.3%**	***14,541***	***20.1%***	***1,397***	***5.8%***
501.01	Yuba City (Queens to Pease)	6,984	2,502	2,389	629	9.0%	803	11.5%	813	11.6%	1,358	19.4%	283	11.8%
501.02	Yuba City (Colusa to Queens)	4,584	1,899	1,752	573	12.5%	766	16.7%	801	17.5%	1,334	29.1%	373	21.3%
502.01	Yuba City (downtown central)	3,447	1,306	1,194	531	15.4%	262	7.6%	670	19.4%	1,575	45.7%	159	13.3%
502.02	Yuba City (downtown east)	3,565	1,666	1,432	378	10.6%	367	10.3%	572	16.0%	1,139	31.9%	291	20.3%
503.01	Yuba City (Franklin/Hwy 99)	2,333	1,042	967	254	10.9%	373	16.0%	313	13.4%	305	13.1%	6	0.6%
503.02	Yuba City (Franklin/Bruce)	5,986	2,055	1,831	778	13.0%	515	8.6%	654	10.9%	1,616	27.0%	129	7.0%
504.01	Yuba City (Lincoln/Bogue)	5,109	1,680	1,676	531	10.4%	603	11.8%	1,029	20.1%	512	10.0%	51	3.0%
504.02	Yuba City (south)	3,605	1,395	1,306	346	9.6%	461	12.8%	500	13.9%	290	8.0%	42	3.2%
504.03	Yuba City (east/River)	3,374	1,140	1,010	584	17.3%	216	6.4%	385	11.4%	189	5.6%	10	1.0%
505.01	Yuba City (Hwy 20-Franklin)	6,424	2,086	1,940	925	14.4%	572	8.9%	579	9.0%	1,150	17.9%	161	8.3%
505.03	Yuba City (Franklin/Lincoln)	7,212	2,072	1,992	1,176	16.3%	1,089	15.1%	840	11.6%	763	10.6%	59	3.0%
505.04	Yuba City (southeast)	6,819	2,194	2,120	866	12.7%	846	12.4%	585	8.6%	548	8.0%	0	0.0%
506.01	Yuba City (northwest)	6,159	2,118	2,067	542	8.8%	948	15.4%	840	13.6%	1,029	16.7%	99	4.8%
506.03	Yuba City (northwest)	4,564	1,997	1,790	571	12.5%	1,045	22.9%	710	15.6%	192	4.2%	62	3.5%
506.04	Yuba City (northwest)	4,576	1,722	1,656	339	7.4%	714	15.6%	552	12.1%	504	11.0%	63	3.8%
507.01	North of Yuba City (rural)	4,310	1,316	1,287	435	10.1%	534	12.4%	806	18.7%	1,308	30.3%	187	14.5%
507.02	North of Yuba City (rural)	6,094	1,848	1,758	719	11.8%	670	11.0%	836	13.7%	928	15.2%	79	4.5%
508	Sutter/Sutter Butte	3,180	1,363	1,256	375	11.8%	372	11.7%	379	11.9%	317	10.0%	27	2.1%
509	East of Yuba City (rural)	1,686	603	567	175	10.4%	244	14.5%	299	17.7%	321	19.0%	20	3.5%
510	East of Yuba City	2,091	830	710	293	14.0%	303	14.5%	371	17.7%	314	15.0%	46	6.5%
511	South of Yuba City	2,513	1,001	905	216	8.6%	435	17.3%	282	11.2%	176	7.0%	10	1.1%
Sutter County Subtotal		***94,615***	***33,835***	***31,605***	***11,235***	***11.9%***	***12,139***	***12.8%***	***12,816***	***13.5%***	***15,868***	***16.8%***	***2,157***	***6.8%***
Total Study Area		**166,859**	**61,505**	**55,738**	**20,246**	***12.1%***	**19,448**	***11.7%***	**23,889**	***14.3%***	**30,409**	***18.2%***	**3,554**	***6.4%***

Note 1: US Census Table G001, Geographic Identifiers, American Community Survey (ACS) 2008-2012

Note 2: Table S0101, Age and Sex, ACS 2012

Note 3: Table DP04, Selected Housing, ACS 2008-2012

Note 4: Table DP02, Selected Social Characteristics, ACS 2008-2012.

Note 5: Table S1701, Poverty Status in the Past 12 Months, ACS 2008-2012

Note 6: Table B080201, Household Size by Vehicles Available, ACS 2007-2011

Figure 3
Yuba-Sutter Total Persons by Census Tract

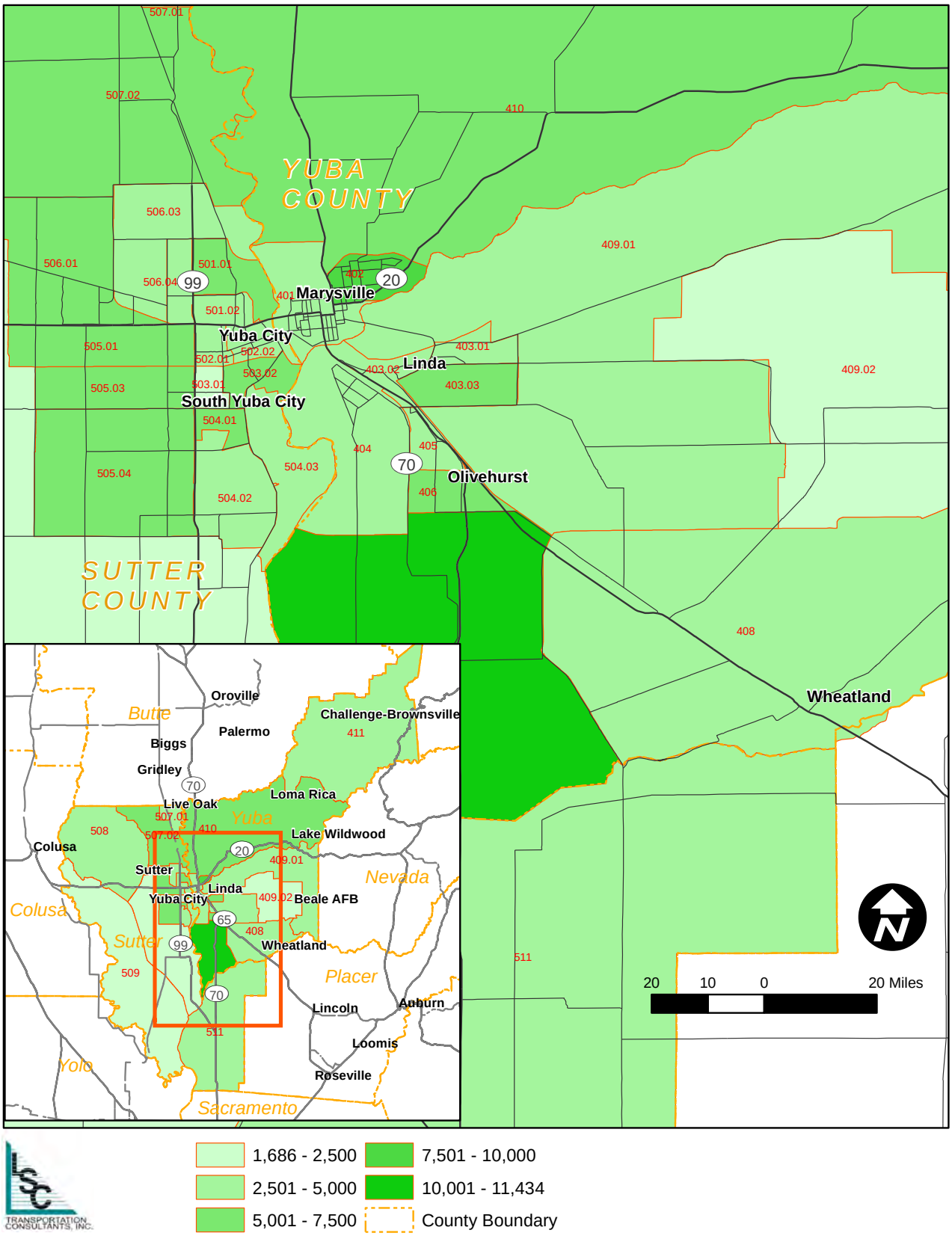


Figure 4
Yuba-Sutter Youth Population by Census Tract

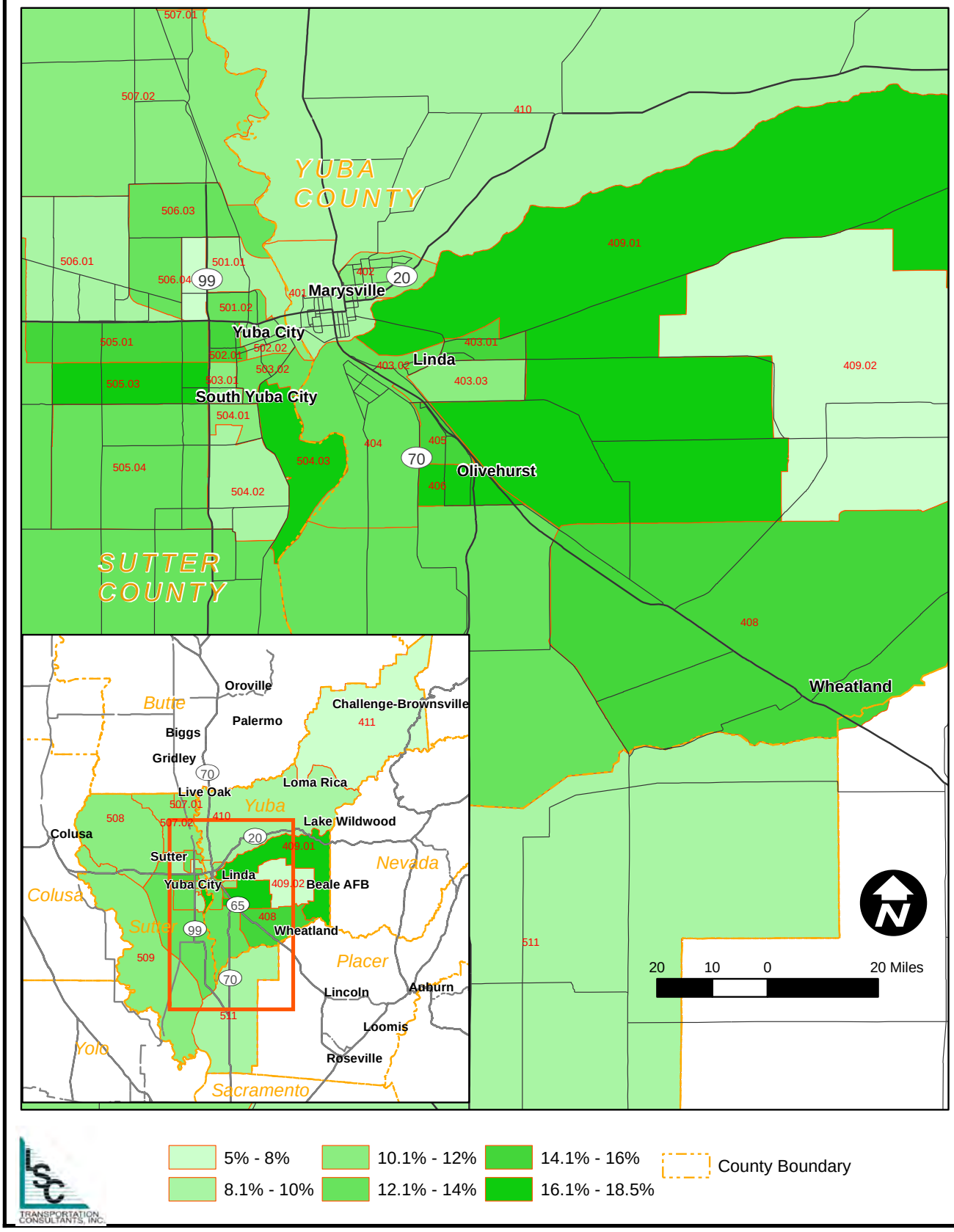


Figure 5
Yuba-Sutter Elderly Population by Census Tract

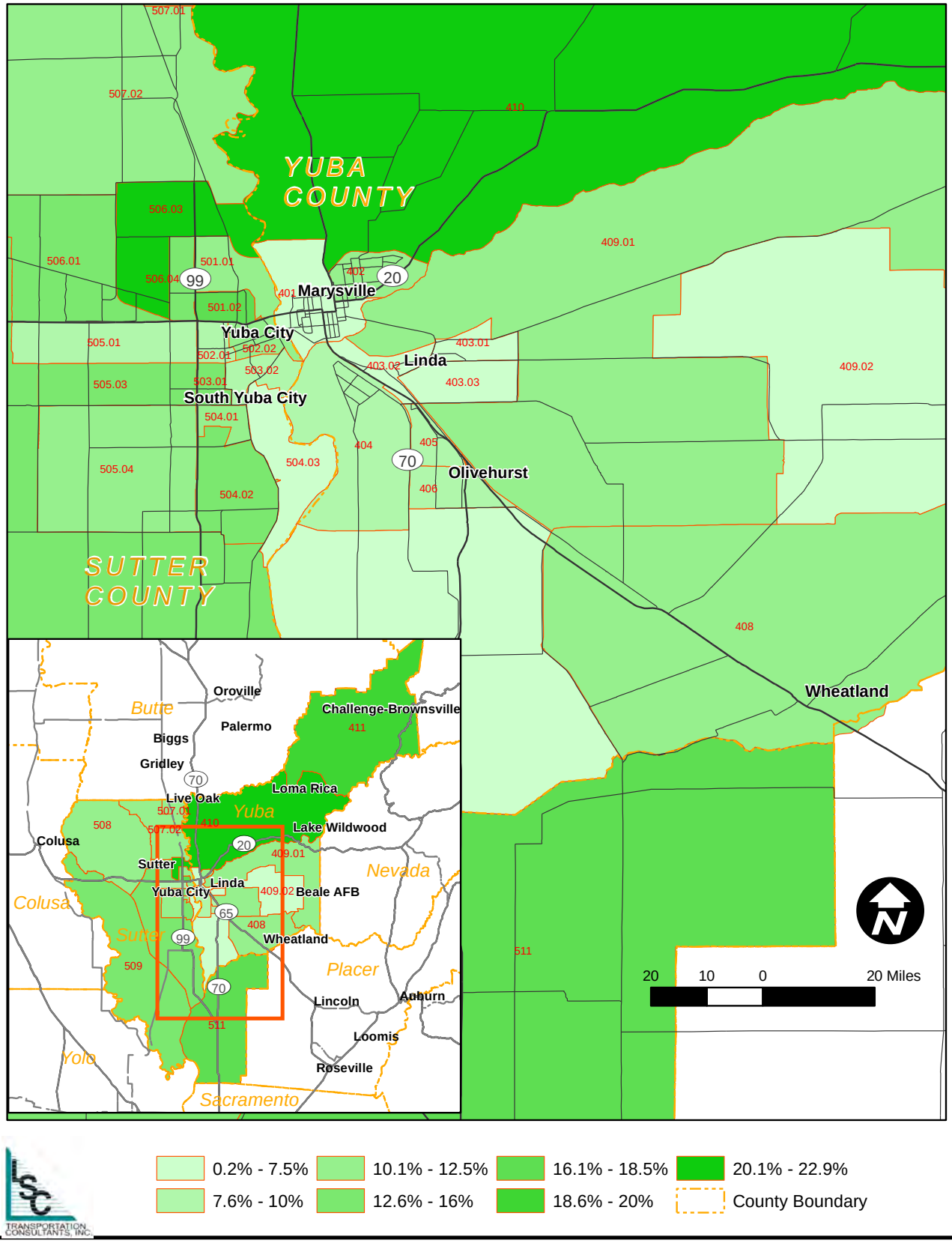


Figure 6
Yuba-Sutter Population with a Disability by Census Tract

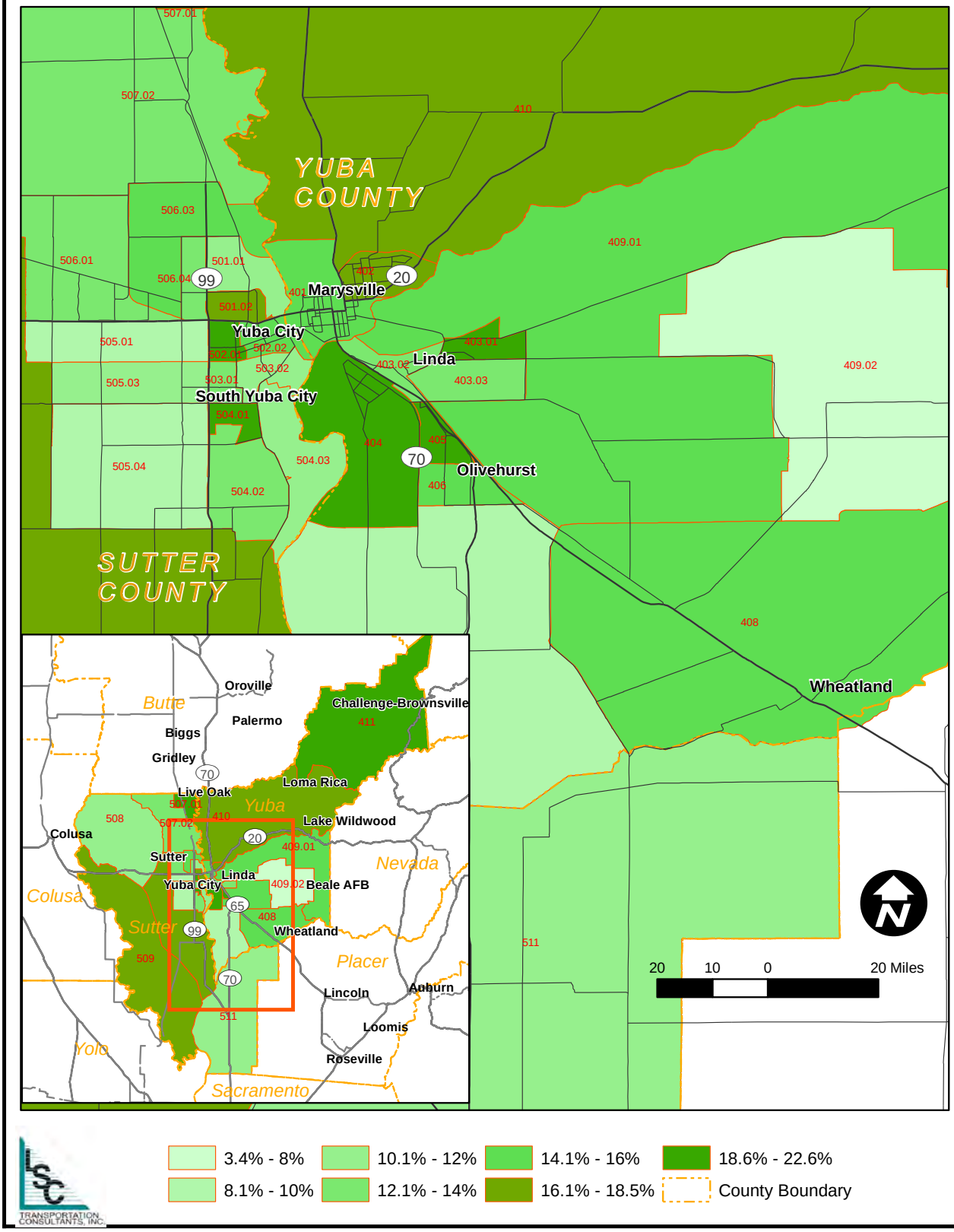
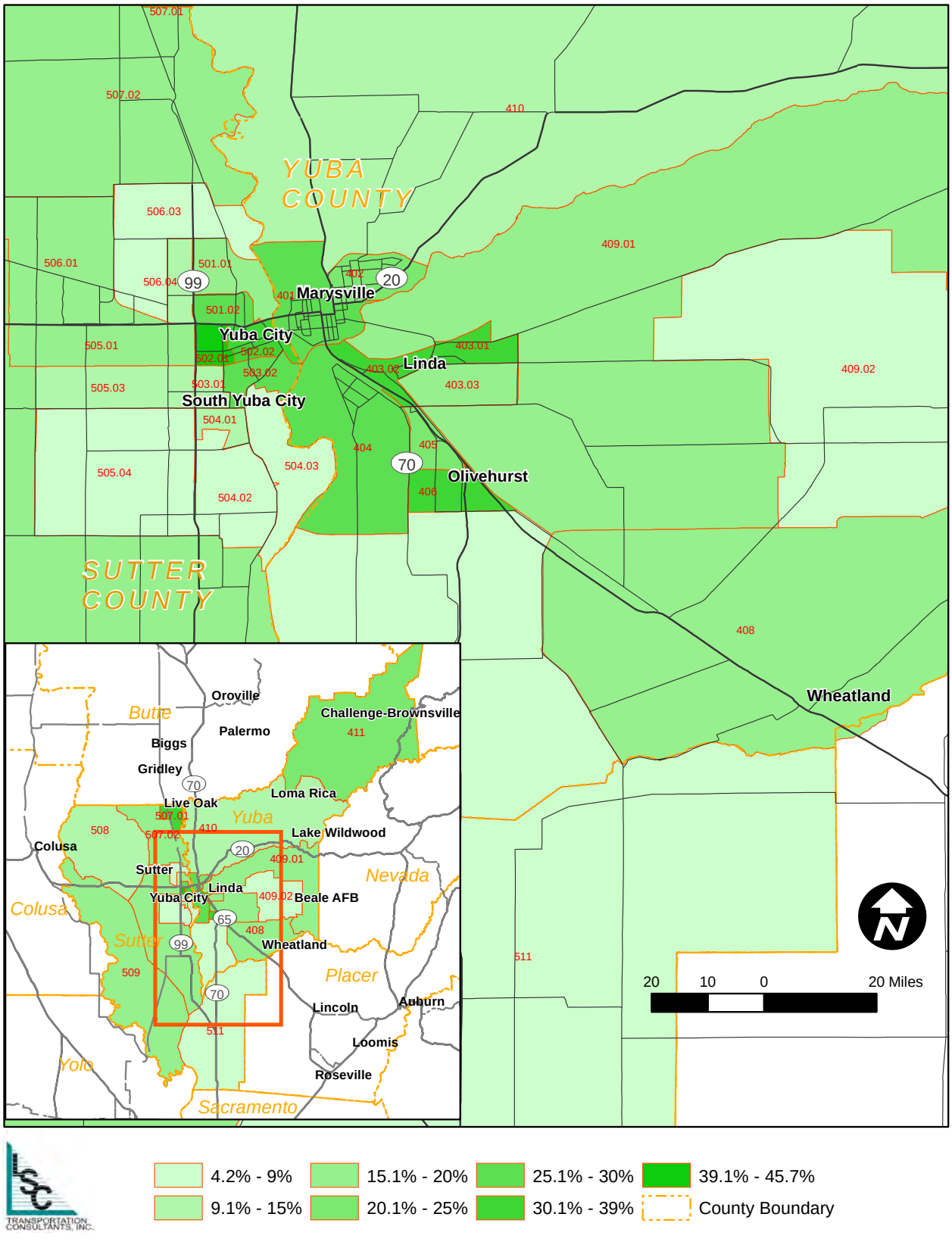


Figure 7
Yuba-Sutter Population Living Below Poverty by Census Tract



Zero-Vehicle Households: Finally, one of the strongest indicators of transit dependency is the number of households without a vehicle available. There are a total of 3,554 households in the two counties without a vehicle (6.4 percent of all households). This number is particularly high in downtown Marysville, Linda, and downtown Yuba City, as shown in Table 2 and Figure 8.

For the most part, trends of the population dependent followed overall population changes within the study area in the past decade, as shown in Table 3. However, while the number of zero vehicle households decreased in both Counties and in Marysville, the number increased in Yuba City. At the same time, the proportion of elderly and youth also decreased within Marysville, while growing in the study area overall. The rural community of Wheatland has seen a significant increase in the proportion of zero vehicle households over the past ten years. In Live Oak, there has only been an increase in the number of youth and elderly.

Projections of Population by Age

Table 4 presents population projections by age group over the next twenty-five years as estimated by the California Department of Demographic Research. This data gives some insight into the trends of the age-related transit dependent groups as both youth and elderly individuals are typically more transit dependent. As also shown Figure 9, the elderly population is expected to grow significantly in all age groups and in all geographic areas from 2010 to 2035. Over the projected 25 year period the population age 62 and above will increase by over 100 percent. This indicates transportation for the elderly will become an even greater need in the coming decades.

Table 4 and Figure 10 show the youth (5-12), middle school and high school (13 – 17) and college age (18-24) populations in the study area over the next several decades. These populations will continue to grow, but at a relatively slow pace in all geographic areas across each of the time periods.

Economy

Yuba and Sutter Counties have changed from a historically agricultural-based economy to a much more mixed economy, which now includes the Air Force base, college, hospitals and clinics, commercial developments and entertainment facilities. Major employers in the study area are listed in Table 5. The top three employers with more than 1,000 employees are: Beale Air Force Base, Marysville School District and Rideout Regional Medical Center. Beale Air Force Base is located east of the Yuba City/Marysville area while the other two large employers are located in Marysville. A wide variety of employers with 100 – 500 employees are spread out through the study area.

Labor Force

The American Community Survey (ACS), conducted by the US Census, provides data on the number of individuals in the labor force and employment rates. According to the ACS 2013 3-year estimates, there are 72,273 individuals over the age of 16 in Sutter County and 54,347 in Yuba County, of which 60.6 percent and 58.5 percent are in the labor force, respectively. In Sutter County, the unemployment rate is 14.1 percent. In Yuba County, the unemployment rate is higher at 17.8 percent.

Figure 8
Yuba-Sutter Zero Vehicle Households by Census Tract

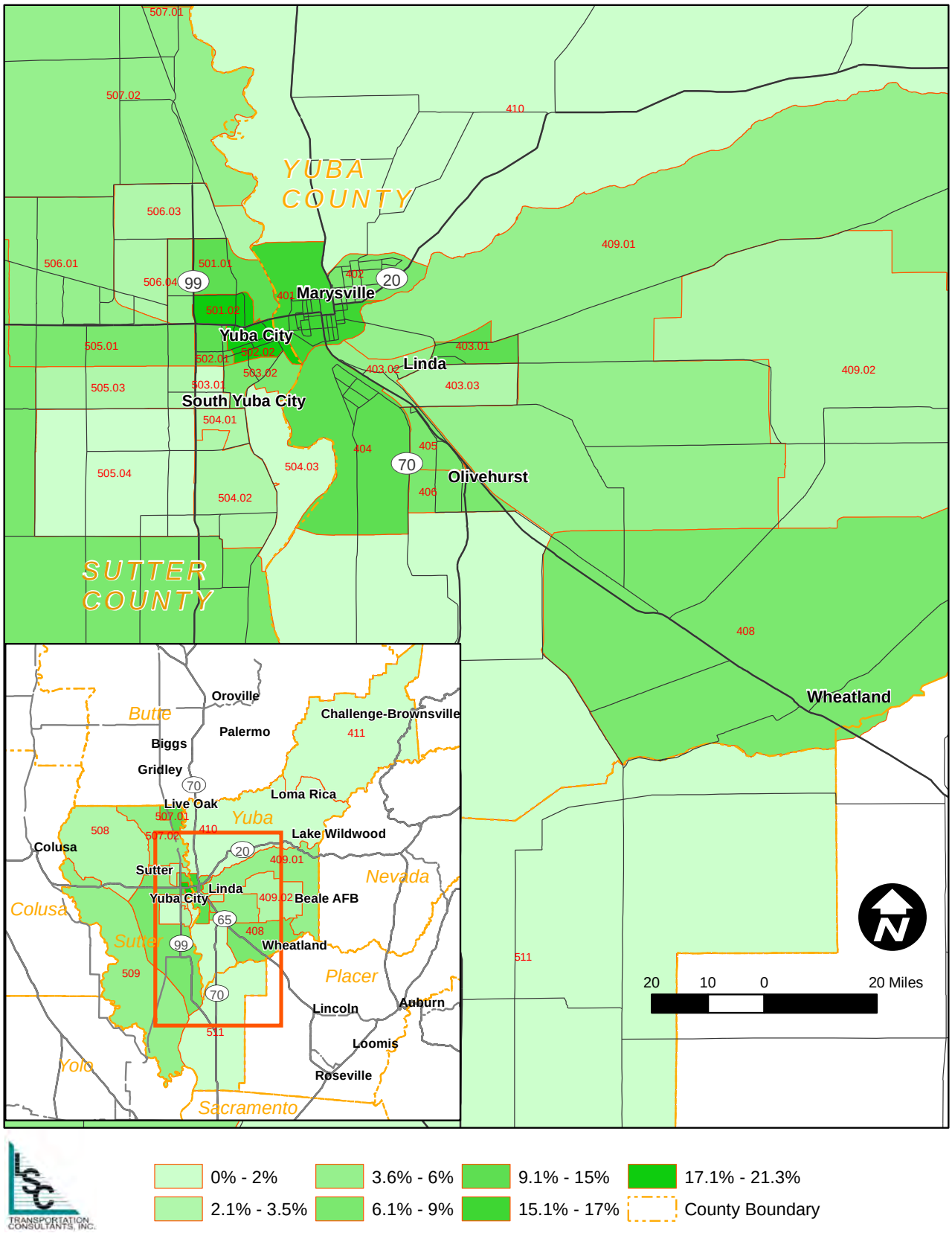


Table 3: Study Area Historical Trends for Transit Dependent Groups

	Total Population	Total Occupied Housing Units	Elderly (Age 65+)	Youth (Age 10 - 17)	Below Poverty	Zero Vehicle Housing Units
2000 [(1)]						
Yuba County Total	60,219	20,535	6,410	8,427	12,205	1,944
Marysville	12,268	4,698	1,602	1,557	2,227	592
Wheatland	2,275	785	305	353	449	52
Sutter County Total	78,930	27,033	9,755	10,510	12,031	2,147
Yuba City	36,758	13,274	4,488	4,573	6,432	1,487
Live Oak	6,229	1,729	667	889	1,840	199
Total Study Area	**139,149**	**47,568**	**16,165**	**18,937**	**24,236**	**4,091**
2010[(2)]						
Yuba County Total	72,155	23,750	7,255	8,901	14,431	1,241
Marysville	12,072	4,529	1,453	1,274	2,801	478
Wheatland	3,456	1,219	360	459	593	118
Sutter County Total	94,737	31,373	11,990	11,667	13,547	1,955
Yuba City	64,925	21,405	7,596	7,943	9,284	1,544
Live Oak	8,392	2,433	896	1,140	1,719	193
Total Study Area	**166,892**	**55,123**	**19,245**	**20,568**	**27,978**	**3,196**
Change -- 2000 to 2010						
Yuba County Total	11,936	3,215	845	474	2,226	-703
Marysville	-196	-169	-149	-283	574	-114
Wheatland	1,181	434	55	106	144	66
Sutter County Total	15,807	4,340	2,235	1,157	1,516	-192
Yuba City	28,167	8,131	3,108	3,370	2,852	57
Live Oak	2,163	704	229	251	-121	-6
Total Study Area	**27,743**	**7,555**	**3,080**	**1,631**	**3,742**	**-895**
% Change -- 2000 to 2010						
Yuba County Total	19.8%	15.7%	13.2%	5.6%	18.2%	-36.2%
Marysville	-1.6%	-3.6%	-9.3%	-18.2%	25.8%	-19.3%
Wheatland	51.9%	55.3%	18.0%	30.0%	32.1%	126.9%
Sutter County Total	20.0%	16.1%	22.9%	11.0%	12.6%	-8.9%
Yuba City	76.6%	61.3%	69.3%	73.7%	44.3%	3.8%
Live Oak	34.7%	40.7%	34.3%	28.2%	-6.6%	-3.0%
Total Study Area	**19.9%**	**15.9%**	**19.1%**	**8.6%**	**15.4%**	**-21.9%**

Note 1: US Census 2000
Note 2: ACS 2006 - 2010 5 Year Estimates

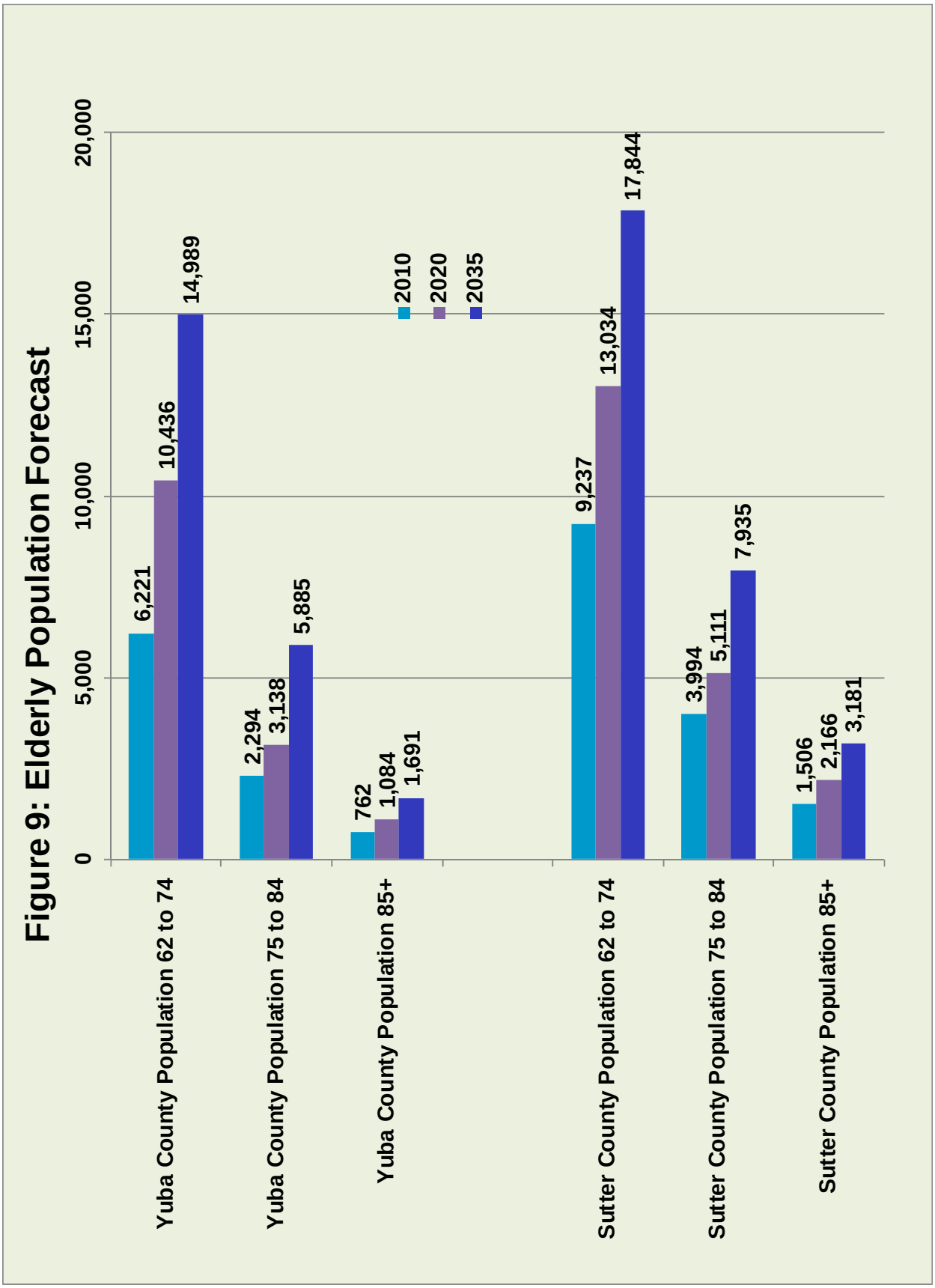


Figure 9: Elderly Population Forecast
0
5,000
10,000
15,000
20,000
2010
2020
2035
6,221
10,436
14,989
2,294
3,138
5,885
762
1,084
1,691
9,237
13,034
17,844
3,994
5,111
7,935
1,506
2,166
3,181
Yuba County Population 62 to 74
Yuba County Population 75 to 84
Yuba County Population 85+
Sutter County Population 62 to 74
Sutter County Population 75 to 84
Sutter County Population 85+

Table 4: Population Projections by Age Groups for Yuba and Sutter Counties

Year	Total (All ages)	Preschool Age (0-4 years)	Youth (5 - 12 years)	Middle/High School (13 - 17 years)	College Age (18-24 years)	Working Age (25 - 61 years)	Young Retirees (62 - 74 years)	Mature Retirees (75-84 years)	Seniors (85 or more years)
Yuba County									
2010	72,329	6,149	9,197	5,554	7,491	34,660	6,221	2,294	762
2020	84,520	6,298	9,965	6,074	7,883	39,642	10,436	3,138	1,084
2035	101,812	6,702	11,535	7,196	9,302	52,231	14,989	5,885	1,691
2010-20 Change									
#	12,191	149	768	519	391	4,983	4,215	844	322
%	17%	2%	8%	9%	5%	14%	68%	37%	42%
2010-35 Change									
#	29,483	553	2,338	1,642	1,811	17,571	8,767	3,591	928
%	41%	9%	25%	30%	24%	51%	141%	157%	122%
Sutter County									
2010	94,669	7,116	11,533	7,327	9,139	44,817	9,237	3,994	1,506
2020	108,939	7,562	11,641	7,918	10,698	50,810	13,034	5,111	2,166
2035	133,010	8,877	15,260	9,625	12,297	71,779	17,844	7,935	3,181
2010-20 Change									
#	14,270	446	108	591	1,559	5,993	3,797	1,117	659
%	15%	6%	1%	8%	17%	13%	41%	28%	44%
2010-35 Change									
#	38,341	1,761	3,727	2,298	3,158	26,962	8,607	3,940	1,674
%	40%	25%	32%	31%	35%	60%	93%	99%	111%
Total Study Area									
2010	166,998	13,265	20,730	12,881	16,630	79,476	15,459	6,288	2,269
2020	193,459	13,860	21,606	13,992	18,580	90,452	23,470	8,249	3,250
2035	234,822	15,578	26,795	16,822	21,600	124,010	32,833	13,819	4,872
2010-20 Change									
#	26,461	595	876	1,111	1,950	10,976	8,012	1,961	982
%	16%	4%	4%	9%	12%	14%	52%	31%	43%
2010-35 Change									
#	67,824	2,314	6,065	3,940	4,969	44,533	17,374	7,531	2,603
%	41%	17%	29%	31%	30%	56%	112%	120%	115%

Source: California Demographic Research Unit, Report P-1

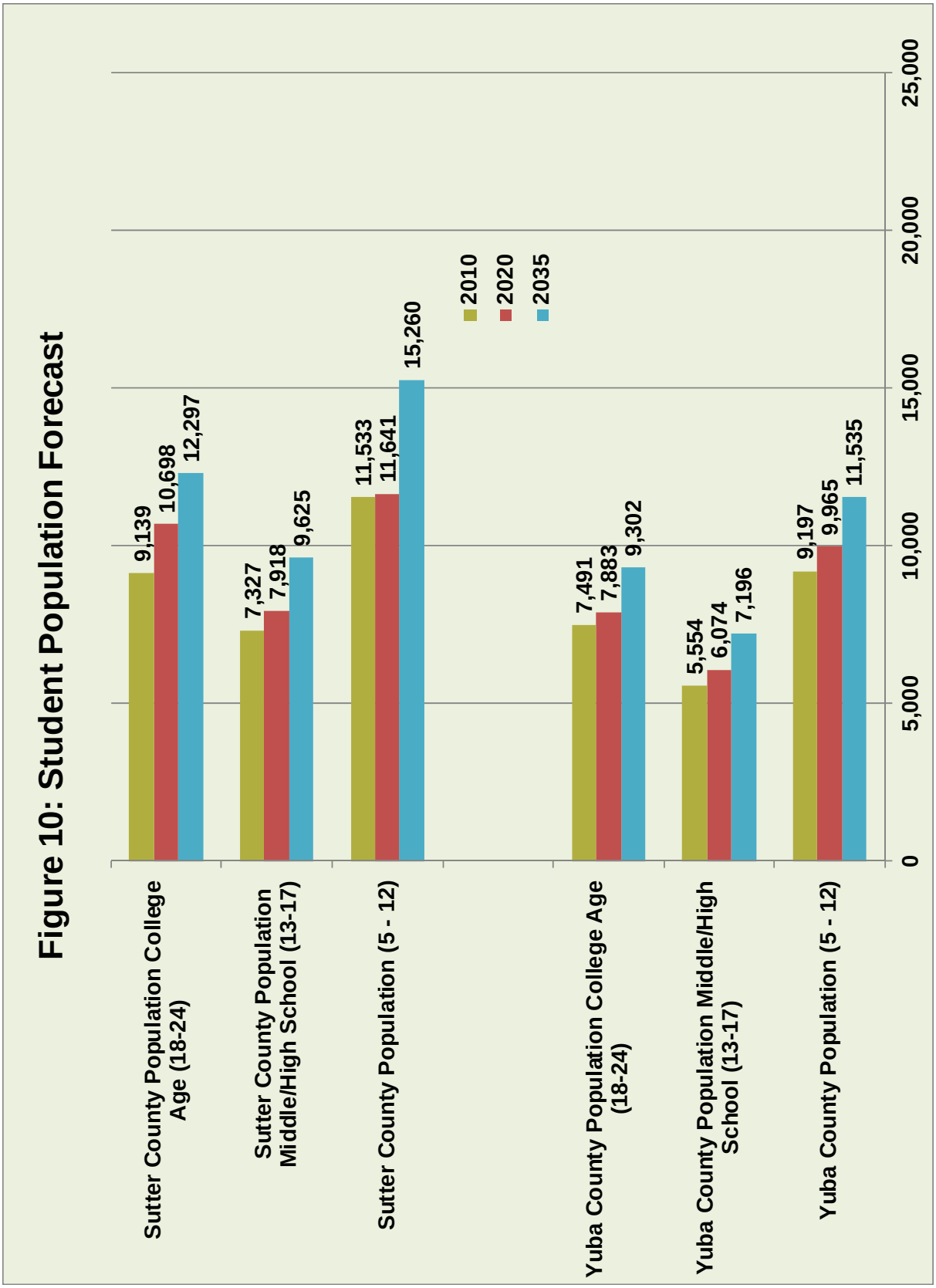


Figure 10: Student Population Forecast
2010
2020
2035
0
5,000
10,000
15,000
20,000
25,000
9,139
10,698
12,297
7,327
7,918
9,625
11,533
11,641
15,260
7,491
7,883
9,302
5,554
6,074
7,196
9,197
9,965
11,535
Sutter County Population College Age (18-24)
Sutter County Population Middle/High School (13-17)
Sutter County Population (5 - 12)
Yuba County Population College Age (18-24)
Yuba County Population Middle/High School (13-17)
Yuba County Population (5 - 12)

Table 5: Major Employers in the Study Area

Employer	Location	Industry	# of Employees
Beale Air Force Base	Beale AFB	Military Bases	1,000 - 4,999
Marysville School District	Marysville	Schools	1,000 - 4,999
Rideout Regional Medical Ctr	Marysville	Hospitals	1,000 - 4,999
Pacific Gas & Electric Co	Marysville	Electric Companies	500 - 999
Sunsweet Growers Inc	Yuba City	Fruits-Dried (Whls)	500 - 999
Yuba County Health & Human Svs	Marysville	Government	250 - 499
Bishop's Pumpkin Farm	Wheatland	Fruits & Vegetables & Produce-Retail	250 - 499
Sierra Kiwi Inc	Marysville	Fruits & Vegetables-Growers & Shippers	250 - 499
Transportation Department	Marysville	State Government-Transportation Programs	250 - 499
Walmart Supercenter	Marysville	Department Stores	250 - 499
Home Depot	Yuba City	Home Centers	250 - 499
Sysco Sacramento Inc	Pleasant Grove	Food Products (Whls)	250 - 499
Trees Inc	Yuba City	Tree Service	250 - 499
Walmart Supercenter	Yuba City	Department Stores	250 - 499
Appeal Democrat	Marysville	Newspapers (Publishers/Mfrs)	100 - 250
Comprehensive Security Svc Inc	Marysville	Security Guard & Patrol Service	100 - 250
Golden West Aviation Assn Inc	Marysville	Organizations	100 - 250
Haycart Custom Farming Inc	Plumas Lake	Farming Service	100 - 250
Lindhurst High School	Olivehurst	Schools	100 - 249
Lone Tree School Kitchen	Beale AFB	Schools	100 - 249
Marysville Care & Rehab Ctr	Marysville	Nursing & Convalescent Homes	100 - 249
Recology Yuba-Sutter	Marysville	Garbage Collection	100 - 249
Shoei Foods USA Inc	Olivehurst	Food Products-Retail	100 - 249
US Post Office	Marysville	Post Offices	100 - 249
Applebee's	Yuba City	Full-Service Restaurant	100 - 249
Bel Air Markets	Yuba City	Grocers-Retail	100 - 249
Fireye Inc	Live Oak	Fire Protection Equipment & Supls-Mfrs	100 - 249
Holt of California	Pleasant Grove	Industrial Equipment & Supplies (Whls)	100 - 249
Homeward Bound Golden	Elverta	Animal Shelters	100 - 249
Larry Geweke Ford	Yuba City	Automobile Dealers-New Cars	100 - 249
Legend Transportation	Yuba City	Trucking-Liquid & Dry Bulk	100 - 249
Los Banos	Robbins	Farm Labor	100 - 249
Lowe's Home Improvement	Yuba City	Home Centers	100 - 249
Pacific Gas & Electric Co	Meridian	Electric Companies	100 - 249
River Valley High School	Yuba City	Schools	100 - 249
Sam's Club	Yuba City	Wholesale Clubs	100 - 249
Sierra Central Credit Union	Yuba City	Credit Unions	100 - 249
Siller Bros Aviation Div	Yuba City	Helicopter-Charter & Rental Service	100 - 249
Sutter County Jail	Yuba City	County Govt-Correctional Institutions	100 - 249
Sutter County Sheriff	Yuba City	Sheriff	100 - 249
Sutter Yuba Mental Health	Yuba City	Mental Health Services	100 - 249
Winco Foods	Yuba City	Grocers-Retail	100 - 249
Yuba City Unified School Dist	Yuba City	Schools	100 - 249
Yuba Skilled Nursing Ctr	Yuba City	Convalescent Homes	100 - 249

Source: California Employment Development Department, America's Labor Market Information System
Note: Some are seasonal (i.e. Bishop's Pumpkin Farm)

County to County Commute Patterns

Table 6 presents US Census Longitudinal Employer Household Dynamics commute flow data for 2011 (the most recent available). This data provides a general overview of the number of potential commuters in the study area. In Sutter County, roughly 32.8 percent of employed residents stay within the county to work. Approximately 14.7 percent travel to Sacramento County for work, while an additional 10.7 percent travel to nearby Yuba County. Another 14.4 percent of Sutter County workers are Yuba County residents traveling to jobs in Sutter County.

The majority of Yuba County employed residents travel to other counties for work, as only 22.4 percent stay within their county of residence. Just over 19 percent commute to Sacramento County, while 16.6 percent travel to Sutter County. Roughly one quarter or 25.8 percent of Yuba County jobs are filled by Sutter County residents.

Means of Transportation to Work

Of the total 36,035 workers in Sutter County age 16 or older, 577 are estimated to take public transportation to work, according to the American Community Survey 2013 three year estimates. This represents a 1.6 percent transit commute mode split. In Yuba County, 279 out of the 25,277 workers age 16 and over take the bus to/from work for a slightly lower transit commute mode split of 1.1 percent.

Related Planning Efforts

Several transit planning studies and documents have been completed over the past few years which have reviewed public transit needs in the Yuba and Sutter County study area:

SACOG Public Transit and Human Services Transportation Coordinated Plan (2012)

A Coordinated Plan is required to obtain funding through certain Federal Transit Administration (FTA) grant programs. The plan focusses on the transportation needs of primarily low income, older adults, and persons with disabilities. All providers of transportation are considered as part of this effort, including human service agencies that provide transportation for clients. Needs and issues identified as part of the public input process included:

- No fixed-route service on Sundays or holidays
- Buses still have steep steps that can be hard to climb.
- There is insufficient information and training on using the transit system.
- There are some who live outside the Dial-a-Ride boundary in Sutter County and so do not qualify for service.
- It can cost $40-50 to use taxi service.

The plan identified the following strategies to meet this Yuba and Sutter County needs:

Lower Cost Strategies/Activities

- Provide more complete travel planning information.
- Provide more mobility training.

Table 6: County to County Commute Patterns for Yuba and Sutter Counties

Where Residents Work…			Where Workers Live…		
Sutter County					
Sutter County	10,704	32.8%	Sutter County	10,704	45.4%
Sacramento County	4,796	14.7%	Yuba County	3,387	14.4%
Yuba County	3,471	10.7%	Butte County	1,698	7.2%
Butte County	1,713	5.3%	Sacramento County	1,531	6.5%
Placer County	1,688	5.2%	Placer County	1,053	4.5%
Yolo County	1,529	4.7%	Yolo County	631	2.7%
Santa Clara County	783	2.4%	Nevada County	388	1.6%
Alameda County	775	2.4%	Colusa County	374	1.6%
San Francisco County	700	2.1%	San Joaquin County	275	1.2%
Colusa County	614	1.9%	Solano County	247	1.0%
All Other Locations	5,818	17.9%	All Other Locations	3,295	14.0%
Total Employed Residents	**32,591**	**100.0%**	**Total Workers**	**23,583**	**100.0%**
Yuba County					
Yuba County	4,553	22.4%	Yuba County	4,553	33.8%
Sacramento County	3,885	19.1%	Sutter County	3,471	25.8%
Sutter County	3,387	16.6%	Butte County	1,047	7.8%
Placer County	1,746	8.6%	Sacramento County	901	6.7%
Butte County	1,212	6.0%	Placer County	717	5.3%
Yolo County	810	4.0%	Nevada County	511	3.8%
Nevada County	531	2.6%	Yolo County	291	2.2%
Solano County	429	2.1%	Colusa County	183	1.4%
Colusa County	390	1.9%	Glenn County	151	1.1%
Contra Costa County	380	1.9%	El Dorado County	143	1.1%
All Other Locations	3,028	14.9%	All Other Locations	1,490	11.1%
Total Employed Residents	**20,351**	**100.0%**	**Total Workers**	**13,458**	**100.0%**
Total Study Area					
Sutter County	14,091	26.6%	Sutter County	14,175	38.3%
Sacramento County	8,681	16.4%	Yuba County	7,940	21.4%
Yuba County	8,024	15.2%	Butte County	2,745	7.4%
Placer County	3,434	6.5%	Sacramento County	2,432	6.6%
Butte County	2,925	5.5%	Placer County	1,770	4.8%
Yolo County	2,339	4.4%	Yolo County	922	2.5%
Colusa County	1,004	1.9%	Nevada County	899	2.4%
All Other Locations	12,444	23.5%	Colusa County	557	1.5%
Total Employed Residents	52,942	100.0%	All Other Locations	5,601	15.1%
			Total Workers	37,041	**100.0%**

Source: US Census, Longitudinal Employer Household Dynamics Dataset, 2011

Higher Cost Options

- Provide more frequent and Sunday bus service.
- Provide shuttles to key shopping and service locations.
- Develop a local volunteer driving program.

SACOG Lifeline Study (2010)

Going a step beyond the required coordinated planning effort, this Caltrans Environmental Justice Planning Grant funded study examined more specifically the public transportation needs

of low-income, transit-dependent residents of the SACOG region. The study mapped concentrations of low-income residents, transit routes and “lifeline” destinations as well as documented the challenges associated with reaching these lifeline destinations in the Sacramento region. The map of the Yuba –Sutter area clearly illustrates a typical problem in rural areas and small cities where large proportions of low income residents are found in outlying communities (such as Live Oak) and all the services are located beyond walking distance in the central communities of Yuba City and Marysville. The document also recommended further study into the needs of transit service after 9:00 PM as well as study of cross county travel demands for medical care.

Connect Card

While there are multiple transit systems in the greater Sacramento region, transit needs do not stay within the boundaries of one jurisdiction. As a result, there is substantial need for transit riders to transfer between systems. Currently, each transit operator maintains their own fare media. The idea of the Connect Card system is to establish a universal smart card fare system for all participating transit systems. The smart card is planned to replace paper fare media and, combined with automatic/electronic fare collection systems, have the ability to track trips for a monthly or daily pass. The benefits of the Connect Card system will be the ability to make seamless transfers between different transit operators, faster boarding, reduced cash handling, elimination of most paper fare products, reduced fare evasion, and, the potential for all new fare products in the future such as daily, weekly or thirty day passes. Funding for the Connect Card Program has been secured through SACOG. Actual implementation is planned to occur in 2015. Yuba-Sutter Transit has developed a transition plan to the Connect Card system in the hopes to make it a smooth process for regular transit users.

Chapter 3
Review of Existing Transit Services

YUBA-SUTTER TRANSIT AUTHORITY

Yuba-Sutter Transit Authority, operating as Yuba-Sutter Transit, provides public transit service in Yuba and Sutter Counties (as well as commuter service to Sacramento) under a joint powers agreement between Sutter and Yuba Counties and the Cities of Marysville and Yuba City. Since its inception in 1975, the organization has gone through many expansions in service. At present, Yuba-Sutter Transit operates six local fixed routes, service to Sacramento, Dial-A-Ride and rural life-line routes.

Yuba-Sutter Transit is directed by an eight-member Board of Directors composed of two elected representatives appointed by each of the four member entities. The Authority is staffed by a Transit Manager, Planning Program Manager, Finance Program Manager, and an Administrative Assistant. Yuba-Sutter Transit staff also serves as staff for the Regional Waste Management Authority. Approximately one-quarter of the available staff time is budgeted for waste management duties.

All of Yuba-Sutter Transit's maintenance and operations are provided through Transdev Services, Inc., (formerly Veolia Transportation), under contract with the Yuba-Sutter Transit Authority. The Transdev Services General Manager is responsible for all transit operations and maintenance. Three managers report directly to the General Manager: Operations Manager, Office Manager, and Maintenance Manager. On the operations side there are three full-time Safety Trainers/Road Supervisors, 6 full-time Dispatchers, 59 full-time and 3 part-time operators. On the maintenance side staff includes: 1 full-time maintenance clerk, 6 full-time mechanics, and 1 full-time/6 part-time utility workers.

Description of Existing Services

The following describes each of Yuba-Sutter Transit services in detail. Figure 11 graphically presents Yuba-Sutter Transit services systemwide.

Local Fixed Routes

Local fixed route service is offered from 6:30 AM to 6:30 PM Monday through Friday and 8:30 AM to 5:30 PM on Saturday. No service is available on Sundays. The one-way general public fare is $1.00 with a 50 percent discount available to seniors age 61/62 & over, youth age 5 to 12 years old, and disabled persons. Children under the age of 5 may ride for free. Monthly passes are available to the general public for $30.00 and $15.00 for discount passengers. Riders may also purchase a ticket book with a $12.00 value for $10.00. There is no charge for transfers between routes or to Dial-A-Ride. Local fixed routes are displayed in Figure 12 and described below:

- **Route 1 – Yuba City / Yuba College** – This route begins in Yuba City at the Walton Terminal at Sam's Club where there are timed transfers with Route 2 and 5, then travels by the Yuba Sutter Mall, stops at the Alturas and Shasta Terminal, then crosses into Marysville with stops at the Government Center, North Beale Transit Center and terminates at Yuba College and a timed transfer with Route 6. The route operates on half-hourly headways using two buses in each direction.

Figure 11
Yuba-Sutter Transit Routes

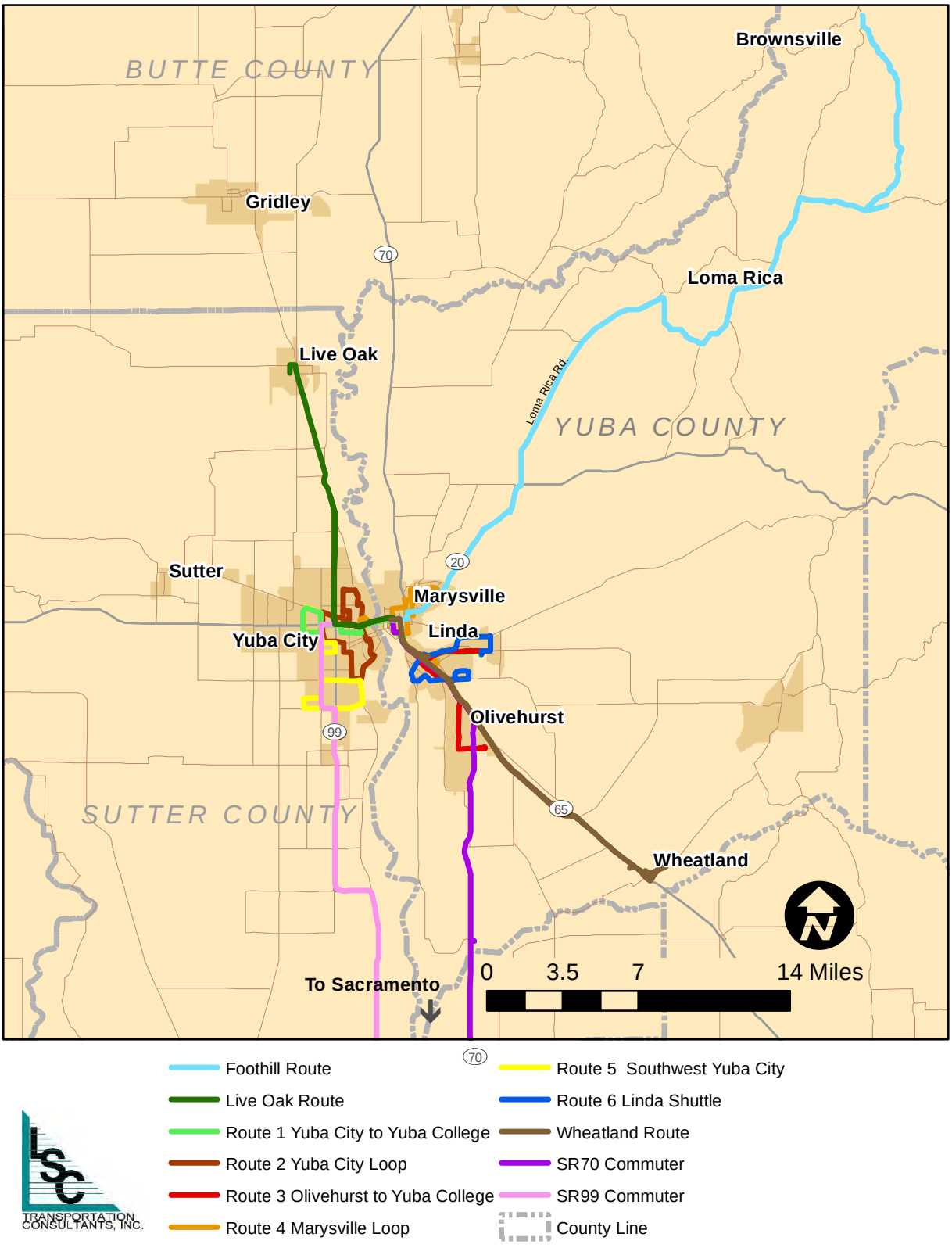
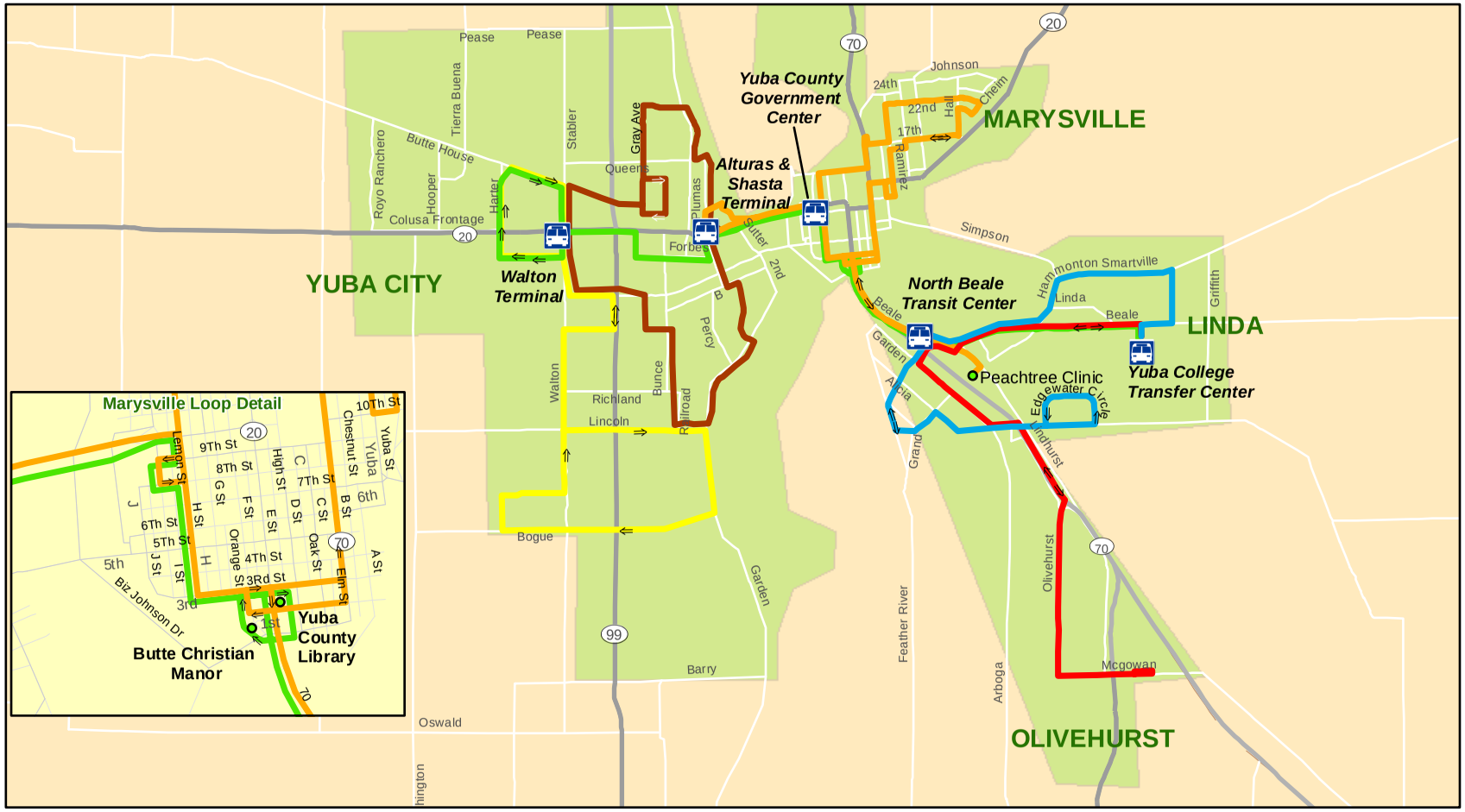


Figure 12
Yuba-Sutter Local Routes



Route 1 Yuba City to Yuba College
Route 2 Yuba City Loop
Route 3 Olivehurst to Yuba College
Route 4 Marysville Loop
Route 5 Southwest Yuba City
Route 6 Linda Shuttle
DAR Service Area

0 1 2 4 Miles

- **Route 2 – Yuba City Loop** – This route begins and ends at the Walton Terminal in Yuba City. Stops along the way include: Yuba Sutter Mental Health, Alturas & Shasta Terminal, and Yuba City High School. Two buses operate the loop in a clockwise direction and two buses operate in a counter clockwise direction for half hourly headways. Timed transfers to Route 1 and 5 are possible at the Walton Terminal. At the Alturas & Shasta Terminal, passengers can transfer directly to the Route 4 Marysville Loop in the clockwise direction.

- **Route 3 – Olivehurst to Yuba College** – Using two buses, half-hourly service is provided between Evelyn & Johnson Park in Olivehurst and Yuba College in Linda. Timed transfers are possible to Route 6 at Yuba College and Route 4 Marysville Loop in the counter clockwise direction at N. Beale Transit Center.

- **Route 4 – Marysville Loop** – Hourly service in each direction is provided using a total of two buses, beginning and ending at the Alturas & Shasta Terminal. Stops include: Yuba County Government Center and Marysville High School. At the Alturas & Shasta Terminal passengers can make direct transfers to Route 2 when travelling in the clockwise direction. At the North Beale Transit Center passengers can transfer to Route 3.

- **Route 5 – South Yuba City to North Yuba City** – Hourly service is provided between southwest Yuba City and the Walton Terminal in northwest Yuba City using one bus. Timed transfers to Route 1 and 2 are possible at the Walton Terminal.

- **Route 6 – Linda Shuttle** – This route serves Yuba College and the North Beale Transit Center at Walmart on hourly headways with one bus. Timed transfers to Route 1 and 3 are possible at Yuba College.

Dial-A-Ride

Yuba-Sutter Transit provides curb to curb demand response service within the general Yuba City, Marysville, Linda, and Olivehurst area, as shown in Figure 12. Evening service is also provided by Dial-A-Ride (DAR). Priority for DAR service is given to Americans with Disabilities Act (ADA) eligible passengers who are unable to use the fixed route as well as to senior passengers. General public passengers traveling to or from locations more than half a mile from a fixed route may use Dial-A-Ride, but they are subject to being transferred to and from the fixed route system if they are traveling across the service area. Evening service is provided by DAR after 6:00 PM, available to the general public. DAR service is offered from 6:30 AM to 9:30 PM on weekdays and 8:30 AM to 5:30 PM on Saturdays. The general public one-way fare is $4.00 during the day and $3.00 after 6:00 PM. Seniors, youth (age 5 – 12), passengers with disabilities and ADA eligible passengers may ride one-way for $2.00 during the day and $1.50 in the evening. Children under the age of 5 may ride for free. Advance reservations may be made up to two weeks in advance and same day reservations are accepted. Transfers to/from the local fixed route are free. Yuba-Sutter Transit DAR is in compliance with ADA policies for complementary paratransit service.

Dial-A-Ride passengers may call two weeks in advance to make a reservation and same day reservations are accepted. Passengers are given a 15 minute window for pick up. Standing reservations are possible for regular appointments.

Rural Routes

Yuba-Sutter Transit provides lifeline transit service to foothill communities a few days a week (Figure 13). Each route includes limited designated fixed stops with the option to request a stop in advance anywhere within one quarter mile of the route. The basic one-way fare is $2.00 or $1.00 for discount passengers. Monthly passes are only available for youth age 5 – 18 at $15.00. Passengers must pay the applicable fare when transferring to other Yuba-Sutter Transit services.

- **Foothill Route -** The Foothill Route connects the communities of Brownsville, Oregon House, Willow Glen and Loma Rica to Marysville, twice a day every Tuesday, Wednesday and Thursday. There are four set scheduled stops along the route. Passengers can connect with other Yuba-Sutter Transit services at the Yuba County Government Center.

- **Live Oak Route –** The Live Oak Route travels between Live Oak and Marysville/Yuba City two times a day on Monday, Wednesday and Friday. There are three designated stops in Live Oak without advance reservation. Seniors and persons with disabilities may request in advance pickup/drop off within a half mile of a bus stop in Live Oak. This is in addition to the general public quarter mile request stop area. Passengers can connect to other Yuba-Sutter Transit services at the Alturas & Shasta Terminal and the Yuba County Government Center. Funding has recently been approved that will allow this service to expand to five weekdays a week, and for deviations to be served to the Yuba College Sutter Campus on request.

- **Wheatland Route –** This rural route connects Wheatland to Linda and Marysville on Tuesdays and Thursdays. Two round trips per day serve five scheduled bus stops in Wheatland. As with the Live Oak Route seniors and persons with disabilities may request in advance pickup/drop off within a half mile of a bus stop and the general public may request a pick-up anywhere within a quarter mile of the route. Connections to other Yuba-Sutter Transit services are possible at the North Beale Transit Center and Yuba County Government Center.

Sacramento Routes

Yuba-Sutter Transit provides both peak hour commuter service and mid-day transit service to Sacramento via both SR 99 and 70 (Figure 14).

- **Commuter Service** – Yuba-Sutter Transit operates nine morning runs (6 via SR 99 and 3 via SR 70) to Sacramento and nine afternoon runs from Sacramento (6 via SR 99 and 3 via SR 70) Monday through Friday. The morning runs begin at either the Yuba County Government Center in Marysville or Walton Terminal in Yuba City as early as 5:20 AM. The SR 99 route picks up passengers in Marysville and Yuba City while the SR 70 route picks up passengers in Marysville, Olivehurst and Plumas Lake. These stops are generally transit terminals or park and rides. In Sacramento, the commuter service makes a loop through downtown with eight set stops. Afternoon commute trips leave Sacramento between 3:45 PM and 6:35 PM. The commuter one-way fare is $4.00 with monthly passes available for $128.00. Passengers can also purchase a combined Yuba-Sutter Transit/Sacramento RT monthly pass for $178.00. There are no discounted fares available on the commuter service. Monthly Sacramento Commuter passes are valid on the Midday Express and Yuba-Sutter Transit fixed route services. Sacramento punch passes are only valid on Sacramento and Mid-Day services.

Figure 13
Yuba-Sutter Transit Rural Routes

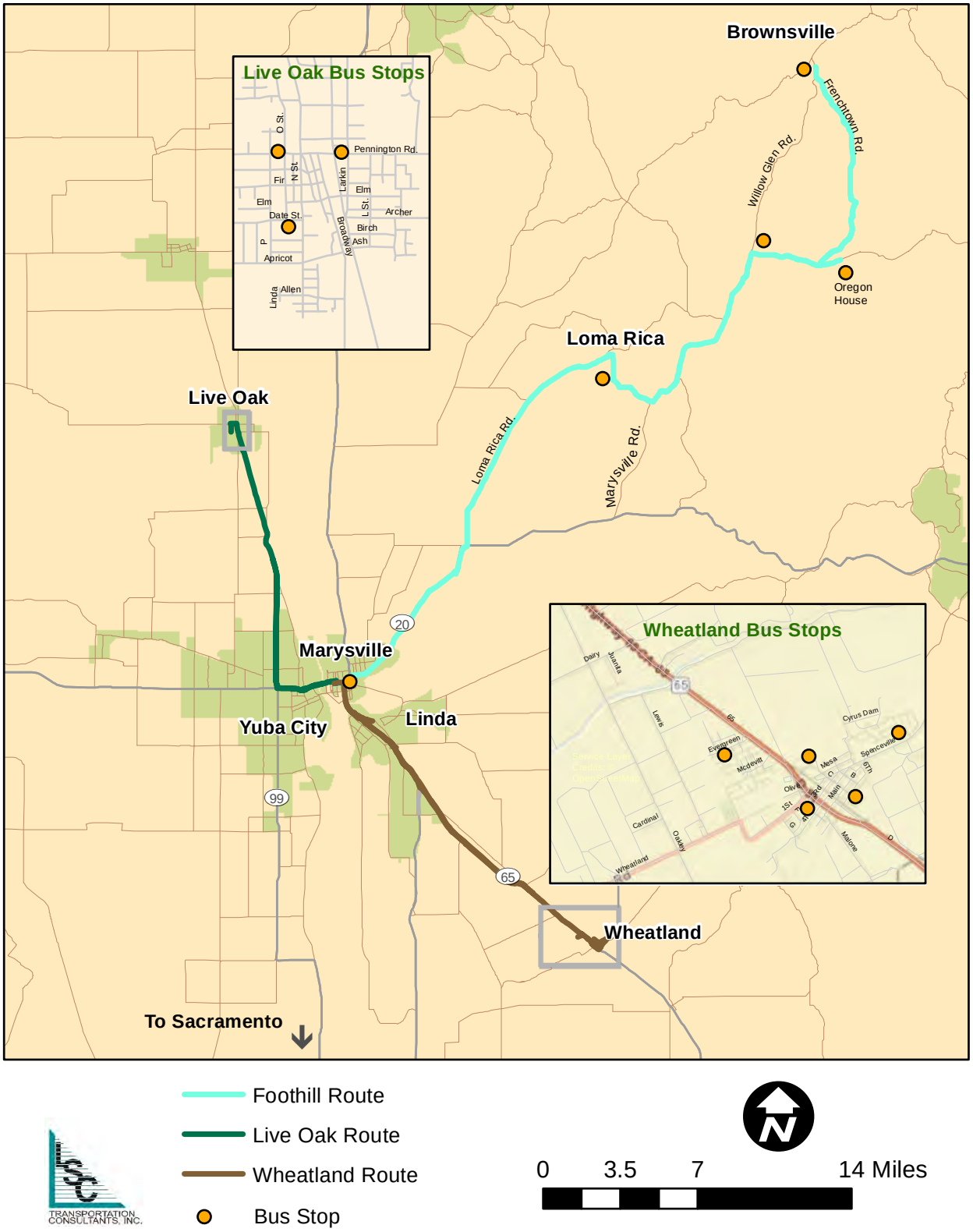
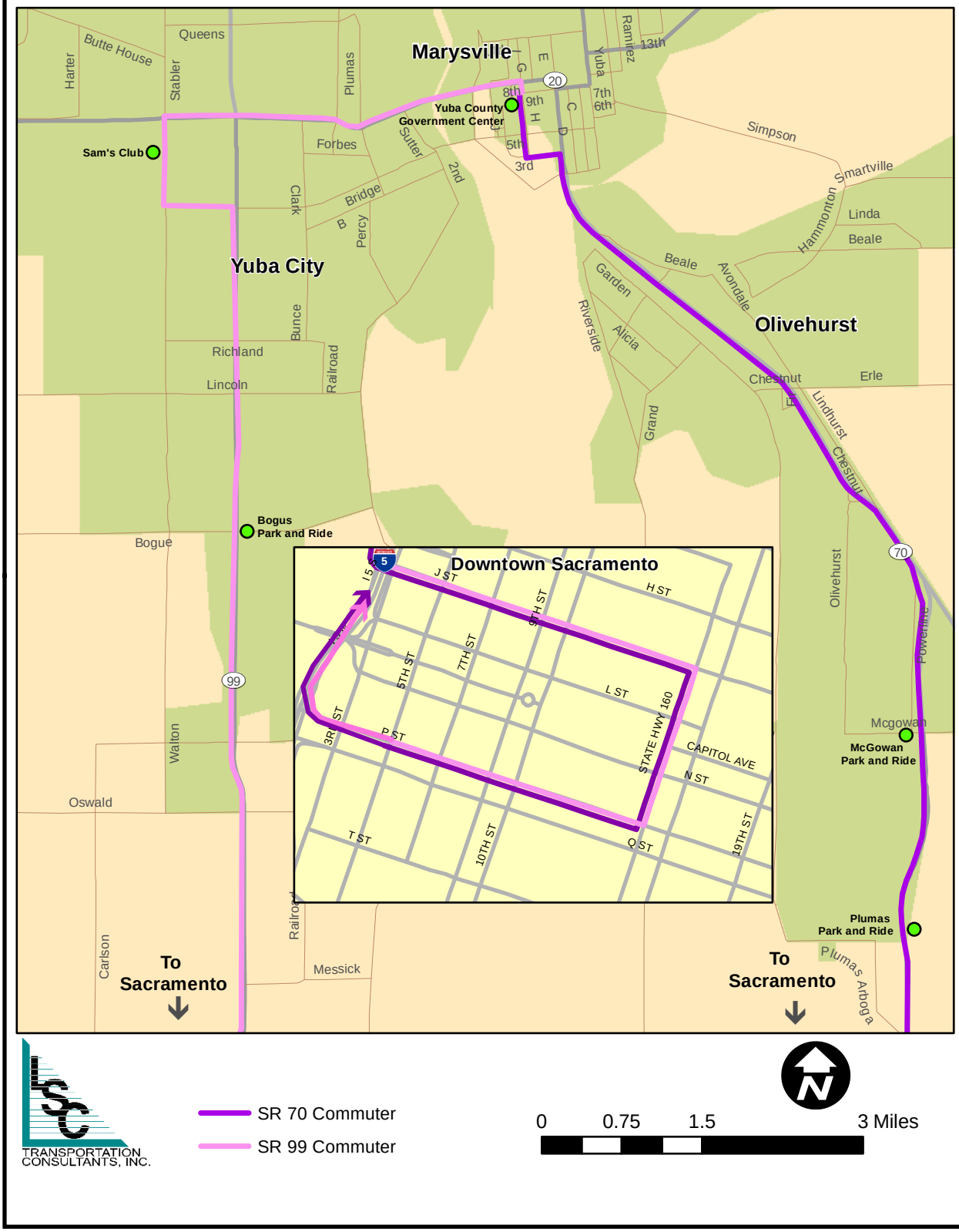


Figure 14
Yuba-Sutter Transit Commuter Routes



- **Mid-Day Express –** Three round trips depart Yuba City/ Marysville at: 7:55 AM via SR 70, 11:00 AM via SR 99 and 1:00 PM via SR 70. The general public one-way fare is the same as the commuter service, $4.00, but a 50 percent discounted fare is available to seniors, youth, and persons with disabilities.

Operational Statistics

Historical Ridership and Service Levels

Some version of Yuba-Sutter Transit services have been in operation since 1979. As shown in Table 7 and Figure 15, annual one-way passenger trips have increased significantly over the 35 year period beginning at 96,371 in FY 1979-80 to 1,279,575 in FY 2013-14. Ridership has increased every year but one since FY 1990-91, resulting in an impressive 502 percent increase over the last 20 years. Unlike many transit services across the state and nation, Yuba Sutter Transit avoided a drop in ridership over recent years during the Great Recession.

Service levels have also increased to serve this demand, and productivity, as measured in passenger-trips per vehicle service hour, has increased from 4.5 trips per hour in FY 1979-80 to 14.1 trips per hour at present.

Over 80 percent of Yuba-Sutter Transit ridership occurs on the local fixed routes, followed by 12 percent on the commuter routes, and 5 percent on Dial-A-Ride (Figure 16). Although an important link for outlying communities, the rural routes represent less than one percent of total Yuba-Sutter Transit ridership. In terms of the proportion of vehicle service hours by service type, fixed route service operates the greatest proportion of hours (56 percent); however, DAR represents over one-quarter of service hours (27 percent) and Sacramento Routes represent 15 percent. Only two percent of system vehicle service hours are operated on the Rural Routes, as shown in Figure 17.

Table 8 and Figures 18 and 19 display Yuba-Sutter Transit historical ridership and service levels over the last five years (FY 2009-10 to FY 2013-14). Over this five year period, systemwide annual-one-way passenger-trips increased by 20.6 percent or 5.2 percent per year. The local fixed routes carry nearly 200,000 more one-way trips per year at present than they did five years ago. In terms of percentages, the rural routes have seen the greatest increase in ridership, 53 percent over the five years. Dial-A-Ride ridership has grown moderately (15.7 percent over five years), while commute service ridership growth has been modest (5.5 percent).

Service levels have not increased significantly with only a 4.5 percent increase in annual vehicle service hours from FY 2009-10 to FY 2013-14 systemwide. As shown in Figure 19, much of the increase is due to an increase in annual vehicle service hours on DAR.

Ridership by Month

Table 9 and Figures 20 and 21 display seasonal trends in ridership for FY 2013-14 and FY 2014-15 to date. In FY 2013-14, October saw the greatest number of passenger-trips systemwide. The local fixed routes have the greatest fluctuations in ridership of all Yuba-Sutter Transit services with a low of 72,461 one-way passenger trips in July and a high of 103,324 trips in October. Sacramento routes and DAR see a small reduction in ridership during the holiday period in November and December. Otherwise, ridership is relatively stable throughout the year.

Table 7: Yuba-Sutter Transit Historical Ridership and Service Levels

1979 - Present

	Systemwide Annual		
	Ridership	Vehicle Service Hours	Passengers per Hour
FY 79/80	96,371	21,589	4.5
FY 80/81	150,957	33,729	4.5
FY 81/82	167,098	33,963	4.9
FY 82/83	153,946	35,178	4.4
FY 83/84	175,832	37,280	4.7
FY 84/85	200,065	37,279	5.4
FY 85/86	158,345	34,966	4.5
FY 86/87	176,259	35,970	4.9
FY 87/88	156,794	32,111	4.9
FY 88/89	135,124	22,592	6.0
FY 89/90	132,373	24,038	5.5
FY 90/91	164,084	29,343	5.6
FY 91/92	182,931	30,496	6.0
FY 92/93	184,535	32,595	5.7
FY 93/94	212,443	35,031	6.1
FY 94/95	243,896	37,703	6.5
FY 95/96	314,744	37,720	8.3
FY 96/97	377,606	37,953	9.9
FY 97/98	422,603	38,789	10.9
FY 98/99	477,825	44,472	10.7
FY 99/00	522,670	55,530	9.4
FY 00/01	570,237	61,408	9.3
FY 01/02	628,714	67,994	9.2
FY 02/03	627,770	68,855	9.1
FY 03/04	652,526	68,644	9.5
FY 04/05	675,327	68,832	9.8
FY 05/06	742,316	70,029	10.6
FY 06/07	828,166	75,539	11.0
FY 07/08	942,611	79,669	11.8
FY 08/09	1,048,696	84,110	12.5
FY 09/10	1,060,864	86,758	12.2
FY 10/11	1,133,329	88,229	12.8
FY 11/12	1,204,530	89,278	13.5
FY 12/13	1,215,834	90,136	13.5
FY 13/14	1,279,575	90,644	14.1
Change -- Last 5 Years			
#	230,879	6,534	1.6
%	22%	8%	13%
Change -- Last 10 Years			
#	627,049	22,000	4.6
%	96%	32%	49%
Change -- Last 20 Years			
#	1,067,132	55,613	8.1
%	502%	159%	133%

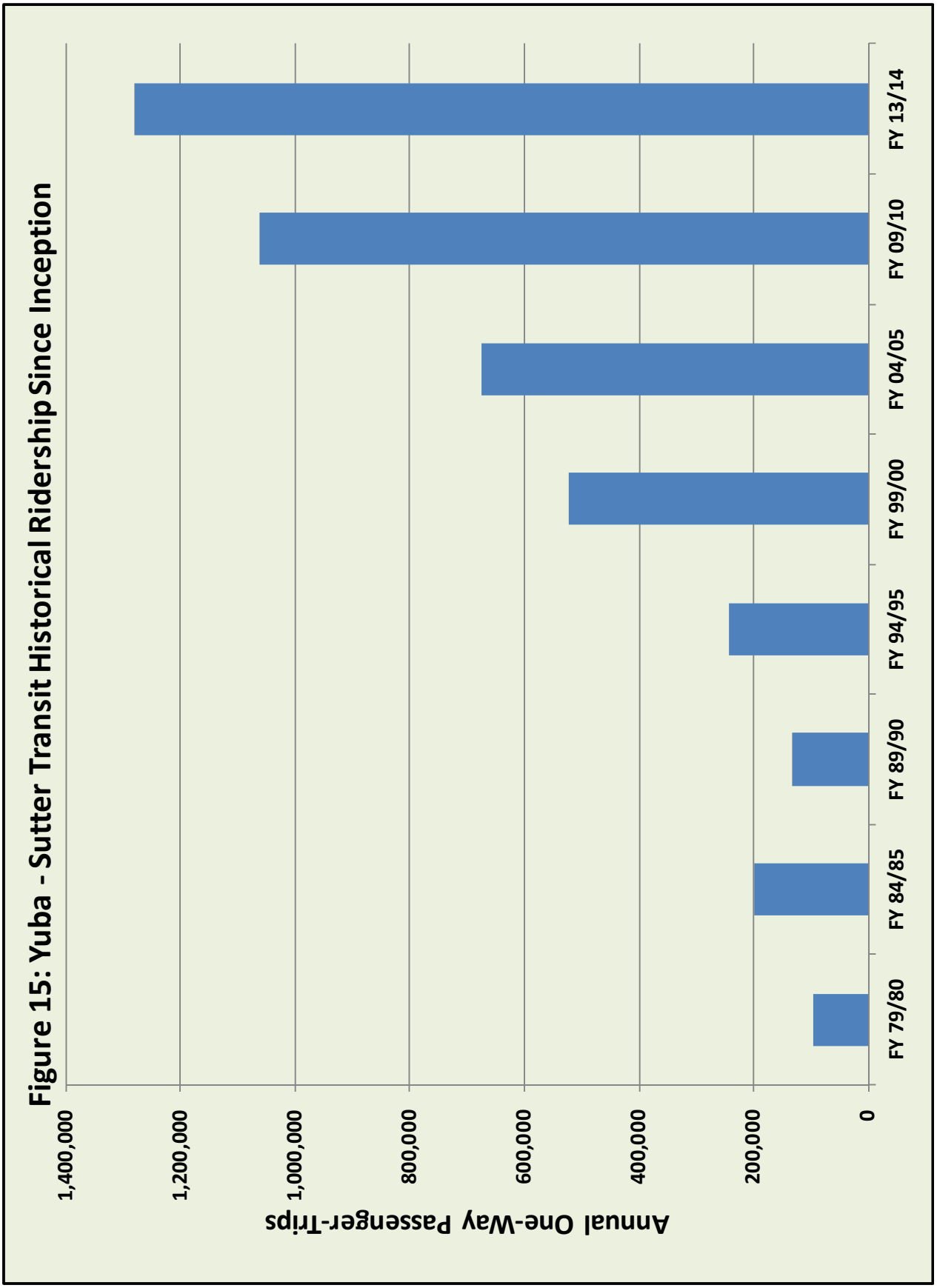


Figure 15: Yuba - Sutter Transit Historical Ridership Since Inception
Annual One-Way Passenger-Trips
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
FY 79/80
FY 84/85
FY 89/90
FY 94/95
FY 99/00
FY 04/05
FY 09/10
FY 13/14

Figure 16: Yuba-Sutter Transit 2013-14 Ridership Proportions by Service

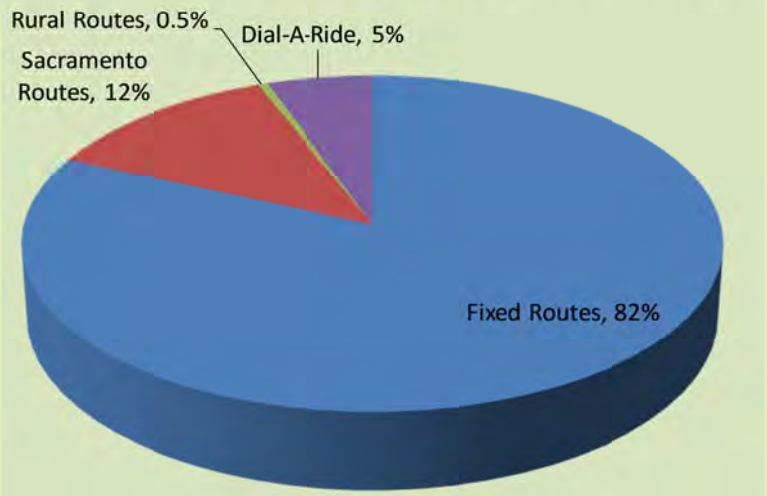


Figure 17: Yuba-Sutter Transit 2013-14 Vehicle-Hours of Service by Service

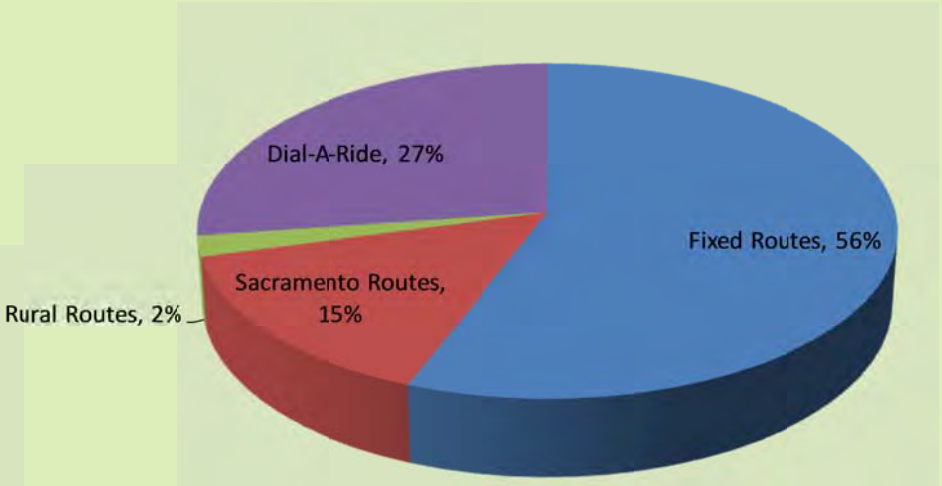


Table 8: Yuba-Sutter Transit Short-Term Historical Ridership and Service Levels by Service Type

FY 2009-10 - FY 2013-14

						Change FY 2009-10 - FY 2013-14		
	FY 2009-10	**FY 2010-11**	**FY 2011-12**	**FY 2012-13**	**FY 2013-14**	**#**	**%**	**Annual %**
Ridership								
Fixed Routes	846,564	907,798	975,805	986,356	1,045,508	198,944	23.5%	5.9%
Sacramento Routes	149,987	156,513	159,949	157,797	158,213	8,226	5.5%	1.4%
Rural Routes	4,073	5,214	4,797	6,144	6,218	2,145	52.7%	13.2%
Dial-A-Ride	60,240	63,804	63,979	65,537	69,672	9,432	15.7%	3.9%
Total Systemwide	**1,060,864**	**1,133,329**	**1,204,530**	**1,215,834**	**1,279,611**	**218,747**	**20.6%**	**5.2%**
Vehicle Service Hours								
Fixed Routes	49,791	50,049	50,383	50,542	50,623	831	1.7%	0.4%
Sacramento Routes	13,661	13,558	13,729	13,731	13,536	-125	-0.9%	-0.2%
Rural Routes	1,716	1,744	1,752	1,810	1,811	95	5.6%	1.4%
Dial-A-Ride	21,590	22,878	23,414	24,054	24,674	3,084	14.3%	3.6%
Total Systemwide	**86,758**	**88,229**	**89,278**	**90,136**	**90,644**	**3,886**	**4.5%**	**1.1%**

Source: Yuba Sutter Transit Annual Performance

Ridership for the first three months of FY 2014-15 has increased from FY 2013-14 levels. September saw the largest increase of 9.2 percent over the previous year for Yuba-Sutter Transit systemwide.

Ridership by Day of Week

Local Routes, Rural Routes, DAR

Table 10 presents FY 2013-14 ridership by day of week for all Yuba-Sutter Transit service except the Sacramento Commuter and Mid-Day Routes. Local fixed route ridership is relatively steady on weekdays. On an average weekday, all the fixed routes carry around 3,700 to 3,800 one-way passenger trips. Saturday ridership represents 10.5 percent of ridership for the entire week, with ridership that is 59 percent of the weekday average. DAR day and evening services also have lower ridership at the beginning of the week. During the day, DAR carries on the order of 200 one-way trips each weekday and around 30 one-way trips on an evening weekday. DAR ridership on Saturdays is only 4.4 percent of ridership for the entire week, or 23 percent of the average weekday. Ridership on the rural routes is spread relatively evenly over the service days available. Ridership is lowest on the Wheatland Route with as few as five one-way passenger-trips a day, on average.

Sacramento Routes

As shown in Table 11, ridership on the Sacramento Commuter service is relatively steady during the week, with the exception of Friday. This is likely due to many state employees following a “4/10’s” schedule. The combined SR 99 and SR 70 commuter routes carry around 550 one-way passenger trips per day. The Mid-Day Express runs to Sacramento carry around 70 one-way passenger trips

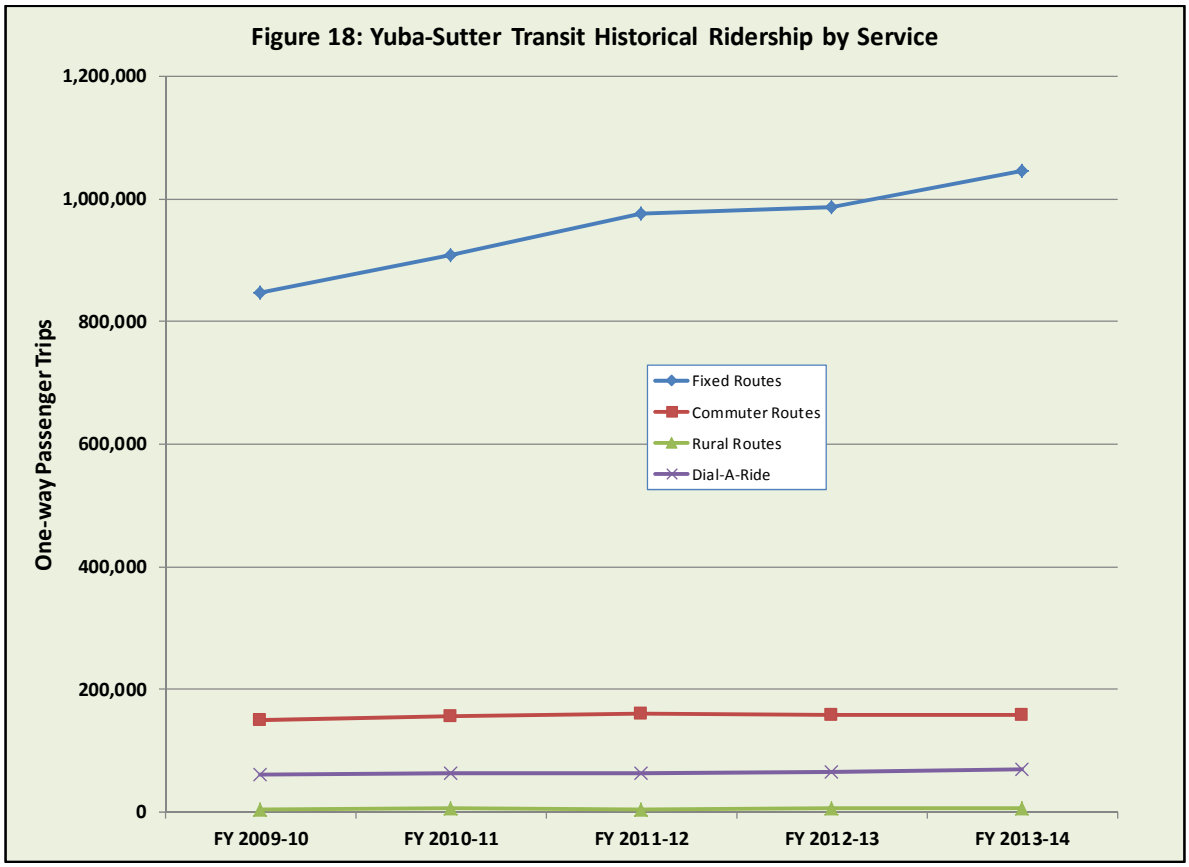


Figure 18: Yuba-Sutter Transit Historical Ridership by Service
One-way Passenger Trips
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
FY 2009-10
FY 2010-11
FY 2011-12
FY 2012-13
FY 2013-14
Fixed Routes
Commuter Routes
Rural Routes
Dial-A-Ride

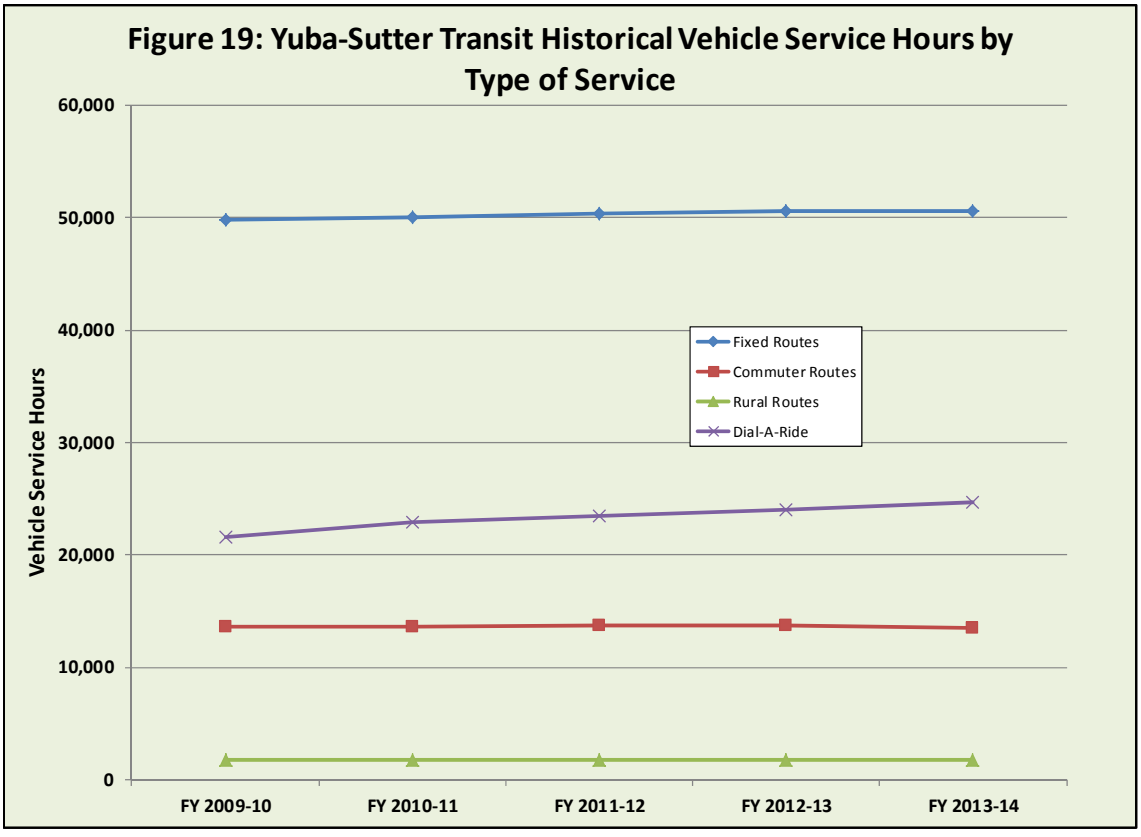


Figure 19: Yuba-Sutter Transit Historical Vehicle Service Hours by Type of Service
Vehicle Service Hours
60,000
50,000
40,000
30,000
20,000
10,000
0
FY 2009-10
FY 2010-11
FY 2011-12
FY 2012-13
FY 2013-14
Fixed Routes
Commuter Routes
Rural Routes
Dial-A-Ride

Table 9: Yuba-Sutter Transit Ridership by Month

	Fixed Routes	Rural Routes	Dial-A-Ride	Sacramento Routes	Total	% of Total
FY 2013-14						
July	72,461	597	5,867	13,546	**92,471**	**7.2%**
August	90,503	559	6,138	13,650	**110,850**	**8.7%**
September	90,074	470	5,701	12,732	**108,977**	**8.5%**
October	103,324	640	6,235	14,664	**124,863**	**9.8%**
November	85,690	526	5,170	11,117	**102,503**	**8.0%**
December	80,661	460	5,218	11,966	**98,305**	**7.7%**
January	86,581	459	6,029	13,460	**106,529**	**8.3%**
February	82,767	435	5,643	12,532	**101,377**	**7.9%**
March	91,377	478	5,742	13,269	**110,866**	**8.7%**
April	90,893	605	6,191	14,736	**112,425**	**8.8%**
May	91,388	577	5,904	13,511	**111,380**	**8.7%**
June	79,789	412	5,834	13,030	**99,065**	**7.7%**
Total	**1,045,508**	**6,218**	**69,672**	**158,213**	**1,279,611**	**100.0%**
FY 2014-15						**% Change from FY 13-14**
July	77,627	546	6,077	13,693	**97,943**	**5.9%**
August	92,721	480	6,083	13,054	**112,338**	**1.3%**
September	98,143	467	5,893	14,464	**118,967**	**9.2%**

Source: Yuba-Sutter Monthly Reports

per day, with Friday generating the greatest average weekday ridership (possibly reflecting passengers working half-days on Fridays).

Sacramento Ridership by Run

Ridership by run is presented in Table 12 and Figure 22. For the morning commute, Yuba-Sutter Transit offers six runs from Yuba City to Sacramento and two reverse commute runs from Sacramento to Yuba City along SR 99. Of these morning runs, the 6:10 AM departure is the most popular with 10,394 annual one-way passenger-trips or 10.5 percent of total SR 99 commuter route ridership. In the afternoon, the 3:45 PM departure receives the greatest ridership with 10,773 annual trips or 10.9 percent of the SR 99 ridership. The SR 99 commuter route carries 62.6 percent of the total commuter service ridership.

Figure 20: Yuba-Sutter Transit FY 2013-14 Monthly Ridership by Service

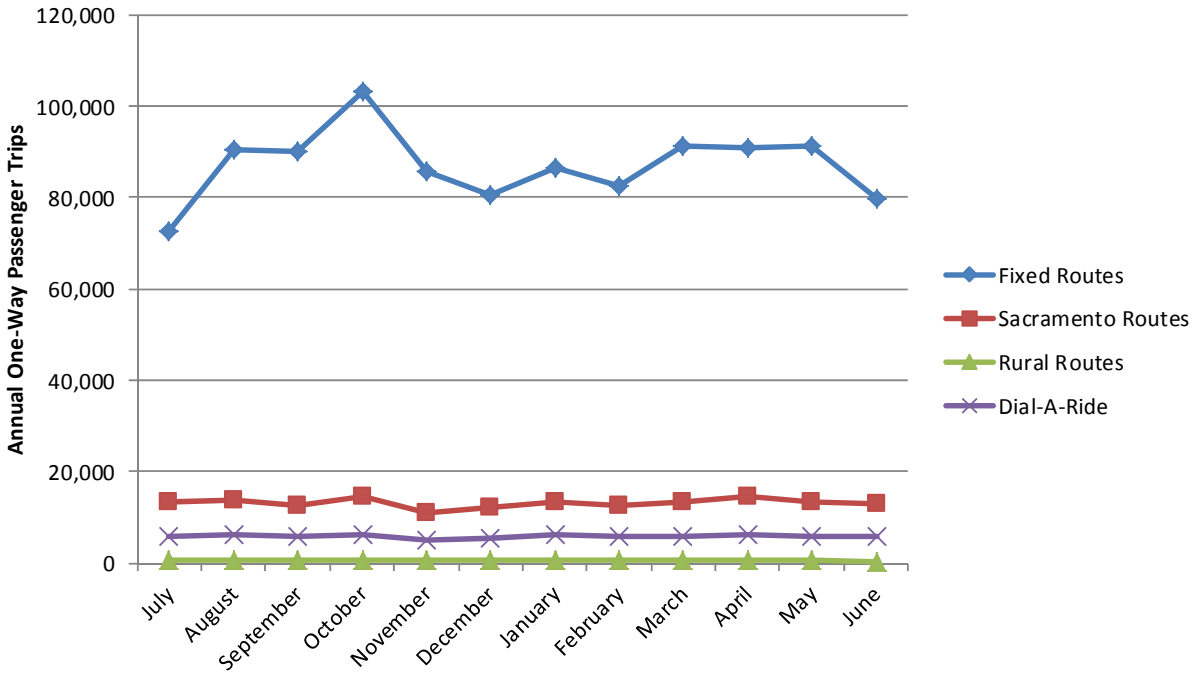


Figure 21: Yuba-Sutter Transit All Services Monthly Ridership

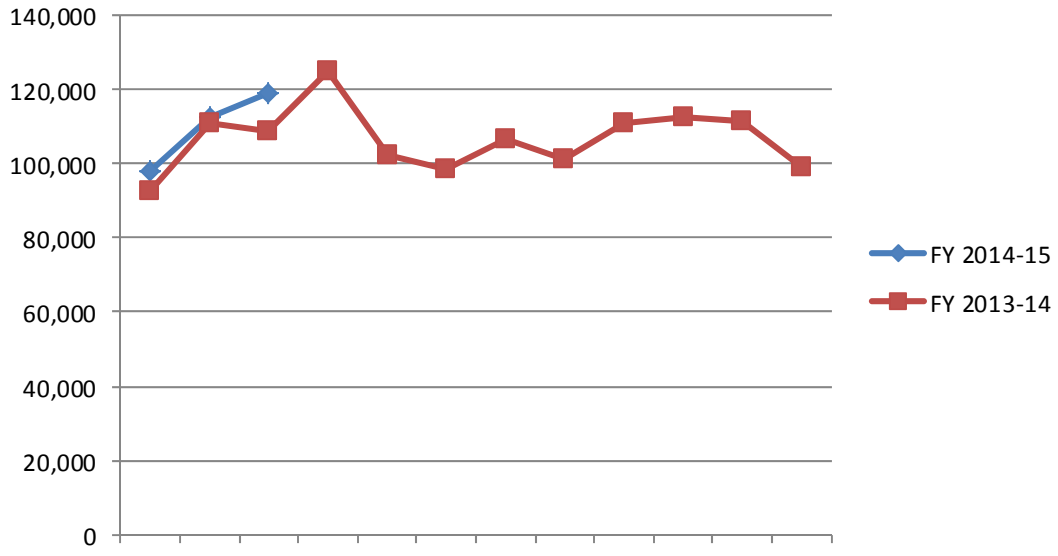


Table 10: Local Route, Rural Route and DAR Average Daily Ridership by Day of Week

FY 2013-14

	Monday	Tuesday	Wednesday	Thursday	Friday	*Total Weekday*	Saturday
Fixed Routes							
Ridership	3,814	3,802	3,843	3,783	3,682	*18,924*	2,224
Percent of Total Week	*18.0%*	*18.0%*	*18.2%*	*17.9%*	*17.4%*	*89.5%*	*10.5%*
Dial-A-Ride							
Day	213	199	241	239	237	*1,130*	60
Evening	30	16	31	31	40	*148*	--
Total	*243*	*215*	*272*	*270*	*278*	*1,278*	*60*
Percent of Total Week	*18.2%*	*16.1%*	*20.4%*	*20.2%*	*20.8%*	*95.5%*	*4.5%*
Rural Routes							
Foothill	--	15	13	17	--	*45*	--
Percent of Total Week		*33.7%*	*29.6%*	*36.7%*		*100.0%*	
Live Oak	20		22	--	21	*64*	--
Percent of Total Week	*32.1%*		*34.3%*	--	*33.6%*	*100.0%*	
Wheatland	--	6	--	5	--	11	--
Percent of Total Week		*51.3%*		*48.7%*		*100.0%*	
Total	**4,078**	**4,038**	**4,150**	**4,075**	**3,981**	**20,321**	**2,284**
Percent of Total Week	**18.0%**	**17.9%**	**18.4%**	**18.0%**	**17.6%**	**89.9%**	**10.1%**

Source: Yuba-Sutter Monthly Reports

Table 11: Sacramento Routes Ridership by Day of Week

FY 2013-14

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Commuter	551	599	599	586	469	**2,803**
Percent of Total	*19.7%*	*21.3%*	*21.4%*	*20.9%*	*16.7%*	***100%***
Mid-Day Express	75	68	65	66	75	**348**
Percent of Total	*21.5%*	*19.4%*	*18.5%*	*19.0%*	*21.6%*	***100%***
Total Sacramento	**626**	**666**	**663**	**653**	**544**	**3,152**
Percent of Total	**19.9%**	**21.1%**	**21.0%**	**20.7%**	**17.3%**	**100.0%**

Source: Yuba-Sutter Monthly Reports

Table 12: Sacramento Route Ridership by Run

FY 2013-14

Run #	Time(1)	Ridership	% of Route	% of Total
SR 99 Runs				
199	**5:20 AM**	8,366	*8.4%*	*5.3%*
199R	**5:20 R**	3,541	*3.6%*	*2.2%*
299	**5:35 AM**	4,526	*4.6%*	*2.9%*
399	**6:00 AM**	5,955	*6.0%*	*3.8%*
499	**6:10 AM**	10,394	*10.5%*	*6.6%*
499R	**6:10 R**	332	*0.3%*	*0.2%*
599	**6:25 AM**	8,076	*8.2%*	*5.1%*
699	**6:45 AM**	7,299	*7.4%*	*4.6%*
199	**3:45 PM**	10,773	*10.9%*	*6.8%*
299	**4:00 PM**	8,580	*8.7%*	*5.4%*
399R	**3:30 R**	1,198	*1.2%*	*0.8%*
399	**4:20 PM**	8,488	*8.6%*	*5.4%*
499	**4:40 PM**	6,611	*6.7%*	*4.2%*
599	**5:00 PM**	5,593	*5.6%*	*3.5%*
699R	**4:15 R**	4,031	*4.1%*	*2.5%*
699	**5:15 PM**	2,261	*2.3%*	*1.4%*
Supp.	**PM**	3,044	*3.1%*	*1.9%*
	Total	99,068	*100.0%*	*62.6%*
SR 70 Runs				
170	**5:30 AM**	3,743	*9.0%*	*2.4%*
270	**5:55 AM**	7,457	*17.9%*	*4.7%*
370	**6:35 AM**	10,235	*24.6%*	*6.5%*
170	**4:05 PM**	8,866	*21.3%*	*5.6%*
270	**4:35 PM**	6,751	*16.2%*	*4.3%*
370	**5:05 PM**	4,618	*11.1%*	*2.9%*
	Total	41,670	*100.0%*	*26.3%*
Mid-Day Runs				
To Sacramento				
	7:55 AM	4,870	*27.9%*	*3.1%*
	11:00 AM	2,763	*15.8%*	*1.7%*
	1:00 PM	1,359	*7.8%*	*0.9%*
From Sacramento				
	9:00 AM	1,008	*5.8%*	*0.6%*
	12:00 PM	3,256	*18.6%*	*2.1%*
	2:00 PM	4,219	*24.1%*	*2.7%*
	Total	17,475	*100.0%*	*11.0%*

Note 1: R = Reverse direction

Source: Yuba-Sutter Transit Commuter Ridership Numbers

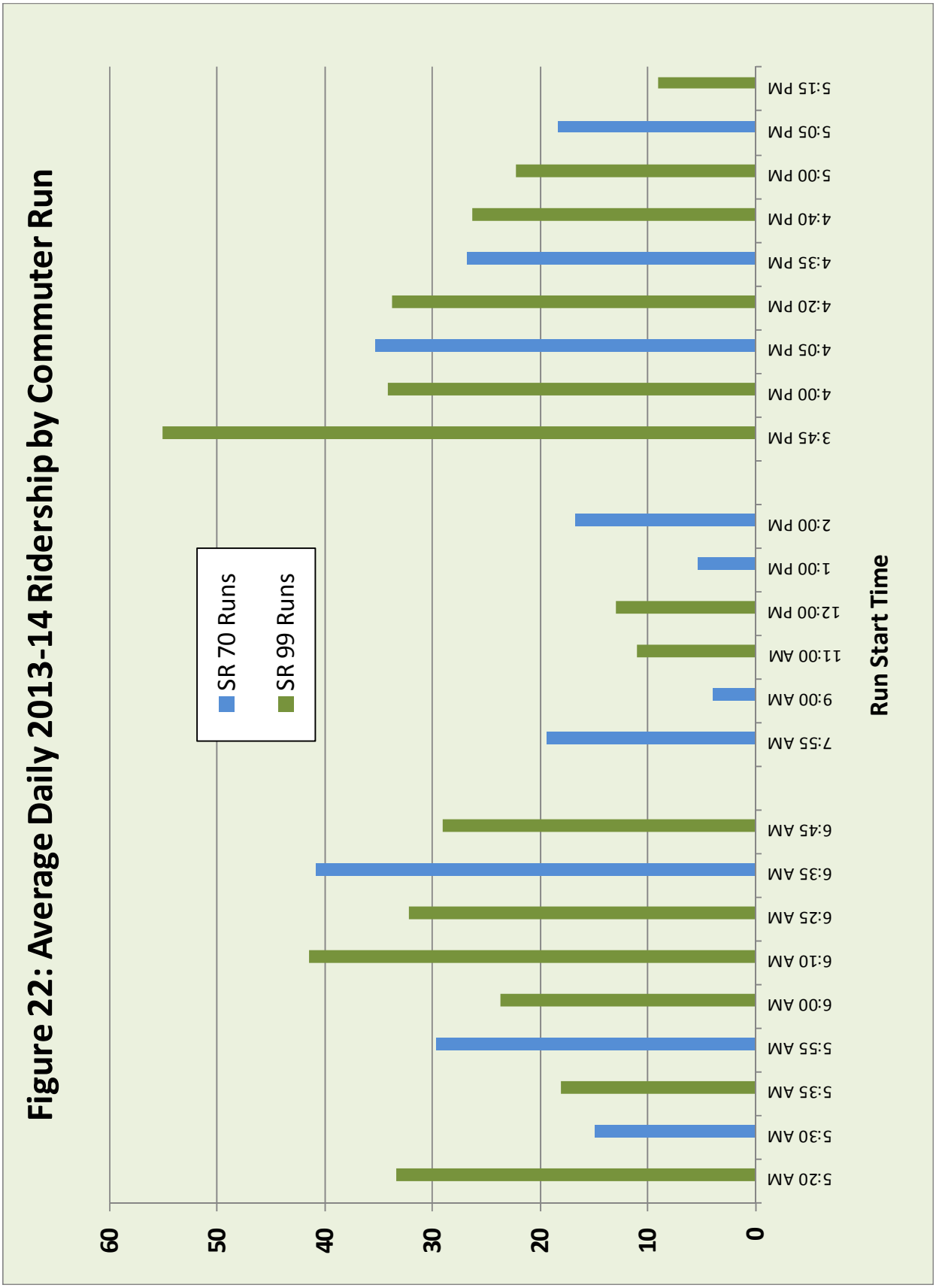


Figure 22: Average Daily 2013-14 Ridership by Commuter Run
SR 70 Runs
SR 99 Runs
Run Start Time
0
10
20
30
40
50
60
5:20 AM
5:30 AM
5:35 AM
5:55 AM
6:00 AM
6:10 AM
6:25 AM
6:35 AM
6:45 AM
7:55 AM
9:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:45 PM
4:00 PM
4:05 PM
4:20 PM
4:35 PM
4:40 PM
5:00 PM
5:05 PM
5:15 PM

Three morning runs and three afternoon runs travel along SR 70 to/from Sacramento each work day. The 6:35 AM and 4:05 PM runs recorded the greatest ridership (10,235) and 8,866 annual one-way passenger-trips respectively. The SR 70 route carries 26.3 percent of the total commuter service riders, or 42 percent of the ridership carried on the SR 99 route.

The Mid-Day Express operates three round trips to Sacramento. The 7:55 AM run to Sacramento and the 2:00 PM return trip from Sacramento have the most ridership, 4,870 and 4,219 annual one-way passenger-trips. Mid-day Express ridership comprises 11 percent of the total commuter service ridership.

Boardings by Passenger Type

Tables 13 - 15 display annual ridership on Yuba-Sutter Transit services by the type of passenger and fare media used to board the vehicle. On the local fixed routes, over one-third of boardings in FY 2013-14 were made by general public passengers, with the majority of those using cash or a pre-paid ticket. Seniors account for 9.4 percent of total boardings, with most seniors using a monthly pass. Persons with disabilities account for 14.5 percent of boardings, of which a great proportion use a monthly pass. Just fewer than six percent of boardings for the year were “free” passengers, many of whom could have been children under age five. Just over 15 percent of boardings were transfers from another local route or DAR. Approximately 19.2 percent of passenger boardings can be attributed to youth age 5 – 18. Wheelchair boardings account for 1.4 percent of total boardings, while 3.7 percent of passengers had a bicycle.

On the DAR service, as shown in Table 14, the vast majority of boardings, 73.6 percent, represent persons with disabilities and another 17.1 percent represent boardings by seniors. Wheelchair boardings account for 9.7 percent of total boardings. Youth represent the smallest proportion of boardings on DAR, 0.7 percent. Only 1 percent of boardings were transfers from the local fixed routes.

Of the rural routes, the Foothill Route carries mostly general public passengers, 63.5 percent of boardings. This pattern is similar to the Live Oak route, although a smaller proportion is general public (41.3 percent). For the Wheatland Route, the largest proportion of passenger boardings is persons with disabilities (34.9 percent), followed by seniors (30.5 percent).

As shown in Table 15, the Sacramento Commuter Route does not offer discounted fare media to seniors/disabled/youth. The majority of Sacramento commuters prefer to purchase a monthly pass (88.8 percent of boardings). Very few wheelchair boardings occurred (0.02 percent) and 2.4 percent of boardings had bicycles. On the Mid-Day Express, boardings by seniors/ disabled/youth are recorded; however the majority of boardings (78.1 percent) represent general public passengers.

Boarding and Alighting Surveys

Yuba-Sutter Transit annually conducts boarding and alighting surveys in March and October on all the local fixed routes and Sacramento Routes. Survey data for six survey periods was summarized in the following tables.

Table 13: Yuba-Sutter Local Fixed Route Passenger Boardings by Type
FY 2013-14

	General Public		Seniors		Disabled				Youth			Wheel-	
	Pass	**Cash/Tkt**	**Pass**	**Cash/Tkt**	**Pass**	**Cash/Tkt**	**Free**	**Transfer**	**Pass**	**Cash/Tkt**	**Total**	**chair**	**Bike**
Weekdays	69,126	271,158	64,703	23,640	99,728	37,237	55,017	142,695	157,718	29,442	949,871	12,981	34,486
Percent of Weekday Total	*7.3%*	*28.5%*	*6.8%*	*2.5%*	*10.5%*	*3.9%*	*5.8%*	*15.0%*	*16.6%*	*3.1%*	*100.0%*	*1.4%*	*3.6%*
Saturdays	5,892	28,144	7,455	2,736	10,746	4,021	6,878	16,266	8,032	5,467	95,637	1,772	3,874
Percent of Saturday Total	*6.2%*	*29.4%*	*7.8%*	*2.9%*	*11.2%*	*4.2%*	*7.2%*	*17.0%*	*8.4%*	*5.7%*	*100.0%*	*1.9%*	*4.1%*
Total	**75,018**	**299,302**	**72,158**	**26,376**	**110,474**	**41,258**	**61,895**	**158,961**	**165,750**	**34,909**	**1,045,508**	**14,753**	**38,360**
Percent of Total	**7.2%**	**28.6%**	**6.9%**	**2.5%**	**10.6%**	**3.9%**	**5.9%**	**15.2%**	**15.9%**	**3.3%**		**1.4%**	**3.7%**
Percent Passenger Type	**35.8%**		**9.4%**		**14.5%**				**19.2%**				

Source: Yuba-Sutter Monthly Reports

Table 14: Dial-A-Ride and Rural Route Boardings by Type

FY 2013-14

	General Public	Senior	Disabled	Youth Cash/Tkt	Youth Pass	Free	Transfer	Total	W/C	Bikes
Dial-A-Ride										
Weekday	273	9,660	46,715	235	--	1,987	57	58,927	5,962	77
Saturday	33	949	1,373	19	--	183	3	2,560	432	10
Evening	2,821	1,335	3,207	206	--	15	602	8,185	335	215
Total	**3,127**	**11,944**	**51,295**	**460**	--	**2,185**	**662**	**69,672**	**6,729**	**302**
Percent of Total	**4.5%**	**17.1%**	**73.6%**	**0.7%**	**--**	**3.1%**	**1.0%**		**9.7%**	**0.4%**
Rural Routes										
Foothill	1,551	168	530	57	66	95	--	2,441	80	200
Percent of Total	**63.5%**	**6.9%**	**21.7%**	**2.3%**	**2.7%**	**3.9%**			**3.3%**	**8.2%**
Live Oak	1,315	562	637	76	484	112	--	3,186	34	247
Percent of Total	**41.3%**	**17.6%**	**20.0%**	**2.4%**	**15.2%**	**3.5%**			**1.1%**	**7.8%**
Wheatland	168	180	206	28	7	2	--	591	1	14
Percent of Total	**28.4%**	**30.5%**	**34.9%**	**4.7%**	**1.2%**	**0.3%**			**0.2%**	**2.4%**

Source: Yuba-Sutter Monthly Reports

Table 15: Yuba-Sutter Transit Sacramento Routes Boardings by Type

	General Public Punch/ Pass	General Public Dollars/ Tickets	Senior Dollars/ Tickets	Disabled Dollars/ Tickets	Youth Dollars/ Tickets	Free	Total	W/C	Bikes
Commuter	124,977	15,443	--	--	--	318	140,738	28	3,393
Percent of Total	*88.8%*	*11.0%*	--	--	--	*0.2%*	--	*0.02%*	*2.4%*
Mid-Day Express	6,404	7,251	1,353	1,540	331	596	17,475	138	772
Percent of Total	*36.6%*	*41.5%*	*7.7%*	*8.8%*	*1.9%*	*3.4%*	--	*0.8%*	*4.4%*
Total	**131,381**	**22,694**	**1,353**	**1,540**	**331**	**914**	**158,213**	**166**	**4,165**
Percent of Total	**83.0%**	**14.3%**	**0.9%**	**1.0%**	**0.2%**	**0.6%**	**--**	**0.1%**	**2.6%**

Source: Yuba-Sutter Monthly Reports

- Table 16 presents the top 20 highest activity fixed route bus stops in terms of the number of boardings for both weekdays and Saturdays. The North Beale Center at Wal-Mart and the Alturas and Shasta Terminal rank the highest for both weekdays and Saturdays. The North Beale Center recorded an average of 418 boardings on weekdays and 290 boardings on Saturdays. Other bus stops rounding out the top 5 on weekdays are: Yuba College Transit Center (287 average boardings), Yuba County Government Center (244), and Walton Terminal at Sam's Club (271).

Table 16: Top 20 Boarding Locations for All Routes

Rank	Bus Stop	Average Weekday Boardings	Rank	Bus Stop	Average Saturday Boardings
1	North Beale Center (Wal-Mart)	418	1	North Beale Center (Wal-Mart)	290
2	Alturas & Shasta Terminal	374	2	Alturas & Shasta Terminal	155
3	Yuba College Transit Center	287	3	North Beale Center (South)	96
4	Yuba County Govt. Center	244	4	Y.C. Mall (Main Entrance)	96
5	Walton Terminal (Sam's Club)	271	5	Walton Terminal (Sam's Club)	90
6	D & 2nd (Habitat) Transit Center	167	6	D & 2nd (Habitat) Transit Center	89
7	North Beale Center (South)	160	7	Harter & Wal-Mart (NE)	82
8	Bogue Road Park & Ride	108	8	Yuba County Govt. Center	80
9	Johnson Park (August 2013)	110	9	Yuba College Transit Center	63
10	Harter & Wal-Mart (NE)	93	10	North Beale & Lowe (NE)	57
11	Y.C. Mall (Main Entrance)	92	11	Feather River & N. Beale (NW)	34
12	North Beale & Lowe (NE)	89	12	Stabler & Butte House (Bel Air)	33
13	Stabler & Butte House (Bel Air)	59	13	North Beale & Woodland (NE)	32
14	North Beale & Woodland (NE)	56	14	Gray & Louise (1E)	31
15	Feather River & N. Beale (NW)	63	15	Bridge & Oji (NW)	30
16	Olivehurst & 7th (3N)	55	16	Olivehurst & 7th (3N)	27
17	N. Beale & Alpine (NW)	37	17	N. Beale & Alpine (NW)	26
18	Bridge & Oji (NW)	21	18	Johnson Park (August 2013)	23
19	McGowan Park & Ride	39	19	Gray & Casita (2B)	23
20	Plumas Lake Park & Ride	35	20	Bridge & Oji (SW)	21

Source: Yuba-Sutter Transit Surveys conducted on March 5-6 2013, October 1-2 2013, March 4-5 2014

- Table 17 presents average weekday boardings and alightings for local fixed Route 1 in each direction. Yuba College, North Beale Transit Center at Wal–Mart, Alturas & Shasta, D & 2nd, and Walton Terminal at Sam's Club all recorded over 100 average weekday boardings. Less than two average weekday boardings were recorded at: North Beale & Hammonton – Smartville, North Beale & Woodland, Harter & Butte House, and Butte House & Tharp.

- Route 2 average weekday boardings and alightings are presented in Table 18. The Alturas and Shasta Terminal is the most common boarding and alighting location (50 – 70 average weekday boardings/alightings), followed by Walton Terminal (41 average weekday boardings/alightings). Upwards of 25 average weekday boardings were recorded at Yuba Sutter Mental Health. On the low end, only 1.8 average weekday boardings and 0.3 alightings were recorded at the Plumas & Fremont Hospital stop.

Table 17: Yuba-Sutter Transit Route 1 Boarding and Alighting Summary - Weekday

Average Daily for Six Survey Periods between March 2011 and March 2014

Westbound	Boardings	Westbound	Alightings
Yuba College	179.8	Alturas & Shasta	109.2
No. Beale Transit Ctr. (Wal-Mart)	179.0	YC Mall	72.7
Yuba Co. Govt. Center (I & 9th)	60.5	D & 2nd (Habitat for Humanity)	71.7
North Beale & Lowe	45.0	Yuba Co. Govt. Center (I & 9th)	61.0
North Beale & Woodland	42.3	No. Beale Transit Ctr. (Wal-Mart)	57.3
Alturas & Shasta	41.2	Walton Terminal (Sam's Club)	56.2
D & 2nd (Old Mervyns')	36.0	Gray & Louise (Palisades Motel)	42.0
YC Mall	26.5	Plumas & Church	25.3
North Beale & Alpine	23.2	Forbes & Gray	25.2
Plumas & Church	15.5	H & 7th	18.8
H & 4th (Rideout Loading Zone)	15.0	Forbes & Clark	18.0
H & 9th	13.3	North Beale & Royal Motel	17.8
Forbes & Clark	13.2	North Beale & Lowe	17.0
North Beale & Albrecht	11.2	H & 4th (Rideout Loading Zone)	15.2
Forbes & Almond	7.3	Forbes & Orange	14.5
Gray & Louise (Palisades Motel)	6.5	F & 2nd	5.5
North Beale & Royal Motel	5.7	Forbes & Almond	5.5
H & 7th	4.8	H & 9th	5.2
F & 2nd	3.2	North Beale & Alpine	4.3
Forbes & Orange	3.0	North Beale & Albrecht	4.0
Forbes & Gray	3.0	North Beale & Woodland	1.5

Eastbound	Boardings	Eastbound	Alightings
Alturas & Shasta	122.5	Yuba College	170.0
D & 2nd (Old Mervyns')	105.2	No. Beale Transit Center (South Side)	114.7
Sams Club (Walton Terminal)	101.3	No. Beale & Feather River Blvd.	72.3
YC Mall	67.0	Harter at Walmart	68.5
Harter at Walmart	61.8	Yuba Co. Govt. Center (I & 9th)	49.5
Yuba Co. Govt. Center (I & 9th)	48.0	Alturas & Shasta	43.0
No. Beale Transit Center (South Side)	47.7	D & 2nd (Old Mervyns')	41.0
Gray & Louise (Kmart)	29.8	North Beale & Woodland	36.5
Stabler & Buttehouse	29.0	No. Beale Rd. & Lowe	32.5
Forbes & Clark (Library)	23.8	Stabler & Buttehouse	28.3
Church & Plumas	20.3	Harter & Spirit Way (River Valley High)	19.2
Harter & Spirit Way (River Valley High)	20.2	YC Mall	18.3
Forbes & Gray	15.0	Church & Plumas	16.8
H & 4th	13.3	North Beale & Hammonton-Smartville	16.8
3rd & F	7.5	North Beale Rd & Park	16.3
H & 7th	7.0	North Beale & Albrecht	15.0
Forbes & Orange	5.7	H & 4th	14.8
Lassen & Klamath	5.2	Forbes & Clark (Library)	14.5
Lassen & Tharp	4.8	Lassen & Klamath	9.3
No. Beale Rd. & Lowe	4.5	3rd & F	8.0
Stabler & Starr	4.0	Forbes & Almond	7.7
Colusa & Civic Center	3.7	H & 7th	5.5
North Beale Rd & Park	3.5	Gray & Louise (Kmart)	5.3
Forbes & Almond	2.5	Buttehouse & Tharp	5.0
North Beale & Albrecht	2.3	Lassen & Tharp	4.2
No. Beale & Feather River Blvd.	2.2	Harter & Buttehouse	4.2
Lassen & Walton	2.0	Stabler & Starr	4.0
North Beale & Hammonton-Smartville	1.7	Forbes & Gray	3.8
North Beale & Woodland	1.7	Forbes & Orange	3.0
Harter & Buttehouse	1.3	Colusa & Civic Center	1.7
Buttehouse & Tharp	1.3	Lassen & Walton	1.5

Source: Yuba-Sutter Transit Boarding and Alighting Surveys March 2011 - March 2014

Table 18: Yuba-Sutter Transit Route 2 Boarding and Alighting Summary - Weekday

Average Daily for Six Survey Periods between March 2011 and March 2014

2A - Clockwise	Boardings	2A - Clockwise	Alightings	2B - Counter Clockwise	Boardings	2B - Counter Clockwise	Alightings
Alturas & Shasta	55.8	Alturas & Shasta	67.7	Alturas & Shasta	68.7	Alturas & Shasta	51.0
Yuba Sutter Mental Health	28.3	Sunsweet	40.8	Walton Terminal (Sam's Club)	41.0	Walton Terminal (Sam's Club)	41.0
Gray & Casita	25.5	Gray & Casita	23.5	Gray & Casita	24.7	Yuba Sutter Mental Health	22.3
Sunsweet	22.7	Bridge & Oji (Toys R Us)	22.8	Bridge & Oji	22.7	Butte House Road & Target	17.7
Butte House/Stabler (Rite Aid)	21.7	Butte House Rd. & YC Mall	21.8	Stabler and BHR (Bel-Air Market)	19.7	Garden Hwy & Percy	14.7
Bridge & Oji (Toys R Us)	20.8	Plumas and B	18.2	Butte House Road & Target	17.5	Bridge & Oji	14.0
Garden Hwy & Percy	19.7	Bridge & Gray (Save Mart)	18.2	Plumas & B - Town Square	15.8	Gray & Casita	14.0
Butte House Rd. & YC Mall	17.8	Lincoln & Garden Hwy.	16.2	Gray & B Street	14.7	Lincoln & Railroad	13.8
Plumas and Bridge	15.8	Franklin & Clark - High School	14.2	Bridge & Gray	13.7	Stabler and BHR (Bel-Air Market)	11.8
Plumas & Church	14.5	Garden Hwy. & Winship	13.0	Yuba Sutter Mental Health	13.2	Gray & B Street	10.7
Wilbur & Yuba City Charter School	14.5	Garden Hwy & Percy	12.0	Clark and Franklin	12.2	Bridge & Gray	9.7
Lincoln & Railroad	14.5	Yuba Sutter Mental Health	11.8	Lincoln & Railroad	12.0	Plumas & Church	9.5
Queens & Live Oak Blvd.	13.3	Butte House/Stabler (Rite Aid)	11.3	Lincoln & Garden Highway	10.7	Plumas & Bridge	9.3
Gray & B Street	12.3	Wilbur and C	9.2	Plumas & Bridge	10.0	Clark and Franklin	8.5
Garden Hwy. & Winship	11.8	Plumas & Church	8.7	Queens & Live Oak	10.0	Wilbur & Garden Highway	8.3
Wilbur & Garden Hwy.	10.7	Plumas and Bridge	8.7	Wilbur & Yuba City Charter School	9.8	Queens & Live Oak	8.2
Plumas and B	10.2	Butte House Rd. & Civic Center	7.7	Garden & Winship	9.0	Plumas & Grant	7.8
Ainsley & Senior Center	9.3	Lincoln & Railroad	7.7	Wilbur & Garden Highway	9.0	Bunce & Richland	6.8
Franklin & Clark - High School	8.8	Ainsley & Clark	7.5	Garden Hwy & Percy	8.5	Lincoln & Garden Highway	6.8
Clark & Julie	8.7	Gray & B Street	7.5	Bridge & Walton	8.0	Plumas & B - Town Square	6.2
Bridge & Gray (Save Mart)	7.7	Clark & Julie	7.0	Plumas & Church	7.3	Ainsley & Senior Center	6.2
Washington & Clark	7.3	Queens & Live Oak Blvd.	6.8	Butte House Rd. & Civic Center	6.3	Ainsley & Clark	5.8
Gray & Queens	7.2	Wilbur & Garden Hwy.	6.7	Plumas & Fremont Hospital	5.8	Bridge & Walton	5.7
Lincoln & Garden Hwy.	6.8	Washington & Clark	6.3	Plumas & Sutter Estates	5.7	Plumas & Sutter Estates	5.7
Plumas & Alemar	6.2	Walton & Bridge	5.7	Ainsley & Senior Center	5.5	Clark & Julie	5.2
Butte House Rd. & Civic Center	5.8	Washington & Gray	5.5	Bunce & Richland	5.3	Garden & Winship	5.2
Plumas & Sutter Estates	5.5	Gray & Queens	5.3	Clark & Julie	5.2	Washington & Clark	5.0
Walton & Bridge	5.5	Northgate & Gray	5.0	Wilbur & Franklin	5.2	Butte House Rd. & Civic Center	5.0
Ainsley & Clark	5.2	Plumas & Sutter Estates	5.0	Northgate & Clark	5.2	Bridge & Joann	4.8
Clark & Richland	4.0	Gray & Franklin	4.8	Bridge & Joann	5.0	Northgate & Clark	4.7
Northgate & Gray	3.8	Bridge & Joann	4.7	Washington & Clark	4.8	Northgate & Gray	4.3
Wilbur & Franklin	3.8	Wilbur & Yuba City Charter School	4.3	C & Wilbur	4.3	Wilbur & Franklin	4.2
Washington & Gray	3.7	Clark & Richland	4.3	Northgate & Gray	4.3	C & Wilbur	4.2
Bridge & Joann	3.0	Ainsley & Senior Center	4.2	Ainsley & Clark	4.3	Wilbur & Yuba City Charter School	4.0
Gray & Franklin	2.7	Stabler & Starr (DMV)	3.8	Gray & Queens	4.0	Gray & Queens	4.0
Wilbur and C	2.5	Northgate & Clark	3.3	Stabler & Starr	3.7	Stabler & Starr	3.8
Northgate & Clark	2.2	Northgate & Live Oak Blvd.	3.2	Northgate & Live Oak Blvd.	3.5	Franklin & Gray	2.7
Plumas & Fremont Hospital	1.7	Wilbur & Franklin	3.2	Plumas & Grant	3.3	Washington & Gray	2.3
Stabler & Starr (DMV)	1.5	Plumas & Alemar	3.0	Franklin & Gray	3.0	Plumas & Bird	2.0
Northgate & Live Oak Blvd.	1.0	Plumas & Ainsley	2.5	Plumas & Bird	3.0	Northgate & Live Oak Blvd.	1.8
Plumas & Ainsley	1.0	Plumas & Fremont Hospital	1.8	Washington & Gray	2.5	Plumas & Fremont Hospital	0.3

Source: Yuba-Sutter Transit Surveys March 2011 - March 2014

Table 19: Yuba-Sutter Transit Route 3 Boarding and Alighting Summary - Weekday

Average Daily for Six Survey Periods between March 2011 and March 2014

3 North	Boardings	3 North	Alightings
Evelyn & Martel (Johnson Park)[1]	104.0	No. Beale Transit Center (South Side)	160.8
Larson & McGowan[2]	72.5	Yuba College	77.8
Olivehurst & 7th	48.8	Evelyn & McGowan[2]	30.0
No. Beale Transit Center (South Side)	46.7	North Beale & Woodland	19.8
Evelyn & McGowan[2]	41.0	North Beale & Lowe	17.5
Olivehurst & 6th	31.3	Arboga & Feather River Boulevard	13.8
Chestnut & Olivehurst	18.5	Arboga & Grand	13.0
McGowan & George	11.5	Olivehurst & 7th	11.7
Olivehurst & 14th	11.2	Olivehurst & 6th	11.0
Olivehurst & 9th	9.2	North Beale & Hammonton-Smartville	9.3
Arboga & Grand	8.7	Olivehurst & 9th	8.8
Olivehurst & Beverly	8.5	North Beale & Albrecht	8.3
McGowan & Ardmore	8.0	North Beale & Park	8.0
Olivehurst & 11th	7.0	Olivehurst & 14th	7.5
North Beale & Lowe	7.0	Arboga & Pasado	7.3
Chestnut & Catalpa	6.7	Chestnut & Catalpa	6.8
Arboga & Pasado	5.5	Chestnut & Olivehurst	5.7
Arboga & Feather River Boulevard	5.2	Olivehurst & 11th	3.8
North Beale & Park	4.0	McGowan & George	3.7
Arboga & Jay	3.5	McGowan & Ardmore	3.7
Chestnut & 2nd	2.8	Arboga & Jay	3.7
5585 Arboga	2.8	5585 Arboga	2.8
North Beale & Albrecht	2.8	Olivehurst & Beverly	2.3
North Beale & Woodland	1.3	Chestnut & 2nd	1.3
North Beale & Hammonton-Smartville	0.5		
3 South	**Boardings**	**3 South**	**Alightings**
No. Beale Transit Ctr. (Wal-Mart)	89.3	Evelyn & Martel (Johnson Park)[1]	89.0
Yuba College	55.5	Larson & McGowan[2]	65.3
Feather River & No. Beale Rd.	32.7	Olivehurst & 7th	46.0
No. Beale Rd. & Lowe	24.7	No. Beale Transit Ctr. (Wal-Mart)	42.7
McGowan & Ardmore	15.8	Olivehurst & 6th	28.5
No. Beale Rd. & Woodland	13.0	Chestnut & Olivehurst	24.3
No. Beale Rd. & Alpine	11.0	McGowan & Ardmore	14.7
Olivehurst & 7th	10.7	Olivehurst & Clarice	14.2
McGowan & George	8.2	McGowan & George	14.2
Arboga & Feather River Blvd.	7.8	Olivehurst & 11th	13.3
Arboga & Grand	7.7	Olivehurst & 9th	12.8
Chestnut & Catalpa	7.3	Olivehurst & Bellis Court	12.2
Olivehurst & Clarice	7.3	Arboga & Grand	9.3
Olivehurst & 6th	7.0	Arboga & Feather River Blvd.	8.5
Olivehurst & 9th	6.3	Chestnut & Catalpa	8.5
No. Beale Rd. & Albrecht	5.5	Arboga & Pasado	6.8
Arboga & Pasado	5.5	Arboga & Jay	6.7
Olivehurst & Bellis Court	5.0	No. Beale Rd. & Alpine	3.7
Olivehurst & 11th	4.8	5594 Arboga	3.7
Arboga & Jay	2.5	Chestnut & 2nd	3.2
Chestnut & Olivehurst	2.5	Feather River & No. Beale Rd.	2.2
5594 Arboga	1.0	No. Beale Rd. & Lowe	2.0
Chestnut & 2nd	0.7	No. Beale Rd. & Woodland	0.8
		No. Beale Rd. & Albrecht	0.8

Note 1: Only 2 survey periods

Note 2: Only 4 survey periods.

Source: Yuba-Sutter Transit Surveys - March 2011 - 2014

- On Route 3 (Table 19), Evelyn & Martel (104 boardings/89 alightings) and the North Beale Transit Center (89 boardings/160 alightings) are the most common boarding and alighting locations. Less than one boarding or alighting was recorded at North Beale & Hammonton – Smartville, Chestnut & 2nd, North Beal & Woodland, and North Beale and Albrecht.

- The Wal-Mart at the North Beale Transit Center attracts the greatest number of boardings (86) on Route 4 (Table 20). At least 50 boardings/alightings were recorded at the Alturas and Shasta Terminal. Low activity stops on Route 4 include: H St. & 11th, H St & 7th, and B St. and 3rd (which was closed for construction).

- Routes 5 and 6 have lower ridership than the other fixed routes. The greatest number of average weekday boardings recorded on Route 5 (Table 21) was at Walton Terminal (Sam's Club) (41.2 boardings), followed by Bogue and Garden Highway (24). Lassen & Walton also recorded 24 alightings. Walton & Cherry, Butte House & Tharp, and Bogue and Walton were among the lowest activity bus stops.

- As shown in Table 22, the south side of the North Beale Transit Center has had the greatest activity over the last few years on Route 6 (40 – 50 average weekday boardings/alightings), followed by the north Beale Transit Center at Wal-mart and Yuba College. The Route 6 bus stop with the least amount of activity was Feather River Blvd & Island.

- For the Sacramento Route along SR 99 (Table 23), the most common boarding locations for commuters going to Sacramento is the Bogue and Hwy 99 Park and Ride (103.8 average weekday boardings), one of the last Yuba/Sutter stops. Once in Sacramento, the greatest number of commuters alight the bus at J & 4th and J & 8th (37.5 alightings). At the end of the day, most commuters will board the bus at P & 5th, P & 9th, or 15th & N (31 – 33 average weekday boardings) and alight the bus at Bogue and Hwy 99 (97.3 alightings).

- For the Sacramento Route along SR 70 (Table 24), the McGowan Park and Ride is the most common boarding/alighting location in Yuba – Sutter with around 40 boardings/alightings each weekday. The Plumas Lake Park and Ride is next with around 35 boardings/alightings. The popular stops in downtown Sacramento are: J & 4th, J & 8th, and P & 9th.

- For the mid-day Sacramento Route (Table 25),the greatest passenger boarding and alighting activity was recorded at the Yuba County Government Center (16.6 boardings/13.6 alightings) and J & 4th (10.4 boardings/13.6 alightings).

Financial Characteristics

Cost Allocation Model

The operating costs for 2013-2014 are presented in Table 26. As shown, total expenses equaled $6,286,800. These costs were used to develop a cost allocation model for Yuba-Sutter Transit services. Costs were allocated in three categories – vehicle-hour, vehicle-mile, or fixed – depending upon the service parameter that most directly generates the cost item. For example, fuel costs are allocated to vehicle-miles. This equation allows an accurate estimation of costs associated with specific services. As shown in Table 26, $1,032,000 can be attributed to per-mile costs; $3,079,128 can be attributed to per-hour costs; and $2,175,672 is considered fixed costs (not including contingency). Dividing by the annual quantities of service, the resulting cost equation is as follows:

Table 20: Yuba-Sutter Transit Route 4 Boarding and Alighting Summary - Weekday

Average Daily for Six Survey Periods between March 2011 and March 2014

4 A Clockwise	Boardings	4 A Clockwise	Alightings	4 B Counter Clockwise	Boardings	4 B Counter Clockwise	Alightings
Alturas & Shasta	59.0	Alturas and Shasta	51.7	North Beale Transit Center (Wal-Mart)	86.2	North Beale Transit Center (South Side)	87.5
Yuba Co. Govt. Ctr. (I & 9th)	35.3	D Street & 2nd (Habitat for Humanity)	25.8	Peach Tree Clinic	32.3	Yuba Co. Government Center	30.2
Yuba County Government Center	17.8	18th & B (Marysville High)	23.8	Chestnut & 18th (Msvl. High School)	26.7	Peach Tree Clinic Stop	25.2
Ramirez & 11th	17.0	22nd & Hansen	14.8	D Street & 2nd (Habitat for Humanity)	23.8	D Street & 2nd (Habitat for Humanity)	23.7
18th & B (Marysville High)	12.5	Fremont Hospital	12.0	22nd & Cheim[1]	22.3	N Beale Rd/Feather River Blvd	19.3
Yuba & 12th (One Stop Center)	10.2	Yuba Co. Govt. Ctr. (I & 9th)	11.0	Hansen & 22nd[2]	20.0	North Beale Transit Center (Wal-Mart)	16.8
22nd & Hansen	9.7	Yuba County Government Center	8.0	North Beale Transit Center (South Side)	19.8	Chestnut & 18th (Msvl. High School)	13.5
17th & Del Pero	8.3	Covillaud & 19th Street	7.2	Ramirez & 18th	17.7	Hansen & 22nd	12.8
17th & Huston	7.5	H Street & 4th	6.0	19th & Covillaud	13.7	Yuba & 12th (One Stop Center)	10.7
Covillaud & 19th Street	6.8	14th & E Street (Ellis Lake Drive)	5.8	17th & Hall	13.5	19th & Covillaud	10.7
D Street & 2nd (Habitat for Humanity)	5.8	Ramirez & 11th	5.7	Yuba Co. Government Center	10.8	Ramirez & 15th	9.5
H Street & 11th	5.7	B Street & 9th	5.5	Hall & E 19th	9.7	Hansen & Arthur	8.0
Ramirez & 13th	5.7	17th & Huston	5.3	Yuba & 12th (One Stop Center)	9.0	Ramirez & 18th	7.8
Market & Lamon	5.3	H & 9th Street[1]	5.3	14th & E Street (Ellis Lake Drive)	9.0	Ramirez & 11th	7.3
H & 9th Street[1]	5.0	22nd & Huston	4.8	Ramirez & 11th	6.3	17th & Covillaud	7.2
H Street & 9th[1]	4.5	H Street & 9th[1]	4.3	B Street & 16th	6.3	14th & E Street (Ellis Lake Drive)	7.2
Ramirez & 15th	4.5	Ramirez & 18th Street	4.2	Sampson & 16th	6.0	17th & Del Pero	6.0
H Street & 4th	3.8	Yuba & 12th (One Stop Center)	4.0	Hansen & Arthur	5.0	Ramirez & 12th	5.8
22nd & Huston	3.7	B Street & 6th	3.8	H Street & 14th	4.8	Hall & E 19th	5.8
Sampson & 16th	3.3	17th & Covillaud	3.7	Ramirez & 12th	4.3	17th & Hall	4.8
14th & E Street (Ellis Lake Drive)	3.2	Ramirez & 13th	3.7	H Street & 4th	3.7	Sampson & 16th	4.7
Hansen & Arthur	3.2	Market & Lamon	3.7	B Street & 9th	3.5	22nd & Covillaud	4.2
F & 2nd Street (Buttes Christian Manor)	2.8	B Street & 16th	3.2	22nd & Huston	3.2	H Street & 7th	3.7
Ramirez & 18th Street	2.7	Covillaud & 22nd Street	2.8	B Street & 6th	2.7	B Street & 6th	3.5
Hall & E 19th	2.7	Hall & E 19th	2.8	17th & Del Pero	2.7	H Street & 14th	3.5
B Street & 9th	2.7	19th & Sampson	2.7	B Street & 3rd	2.5	B Street & 16th	3.3
B Street & 3rd	2.7	17th & Del Pero	2.7	22nd & Covillaud	2.5	B Street & 3rd	2.8
17th & Covillaud	2.5	Sampson & 16th	2.0	19th & Sampson	2.5	22nd & Huston	2.8
B Street & 6th	2.5	H Street & 11th	1.8	H Street & 7th	2.5	3rd Street & F	2.8
Fremont Hospital	2.2	Hansen & Arthur	1.5	17th & Covillaud	2.0	H Street & 4th	2.7
19th & Sampson	2.0	Ramirez & 15th	1.5	North Beale and Royal Motel	1.7	B Street & 9th	2.5
14th & H Street	1.5	F & 2nd Street (Buttes Christian Manor)	1.5	3rd Street & F	1.7	North Beale and Royal Motel	2.0
Covillaud & 22nd Street	1.3	14th & H Street	1.2	Ramirez & 15th	1.5	19th & Sampson	1.7
B Street & 16th	1.0	B Street & 3rd	0.7	N Beale Rd/Feather River Blvd	1.0	H Street & 11th	0.3
H Street & 7th	0.8	H Street & 7th	0.7	H Street & 11th	0.3		

Note 1: Represents only 4 survey periods

Note 2: Represents only 2 survey periods

Source: Yuba-Sutter Transit Surveys March 2011 - 2014

Table 21: Yuba-Sutter Transit Route 5 Boarding and Alighting Summary - Weekday

Average Daily for Six Survey Periods between March 2011 and March 2014

Southbound	Boardings	Southbound	Alightings
Walton Terminal (Sam's Club)	41.2	Bogue & Garden Highway	17.5
Bridge & Oji	10.7	Lincoln & Walton	10.0
Lincoln & Railroad	7.0	Walton & Franklin	9.8
Garden Highway & Teesdale	6.2	Franklin & Winco	8.5
Lincoln & Garden Highway	6.0	Lincoln & Phillips	7.0
Franklin & Winco	5.5	Lincoln & Railroad	5.5
Lincoln & Phillips	5.5	Garden Highway & Teesdale	4.3
Walton & Camino DeFlores (AK School)	3.8	Garden Highway & River Oaks	3.8
Lincoln & Walton	3.5	Walton & Cherry	3.0
Walton & Franklin	2.7	Bridge & Joann	2.8
Lincoln & Jones	2.3	Bridge & Oji	2.7
Bridge & Joann	1.8	Walton & McCune	2.7
Bridge and Walton	1.7	Walton & Camino DeFlores (AK School)	2.5
Garden Highway & River Oaks	1.0	Lincoln & Jones	2.3
Onstott Frontage Road (Cinemark)	0.8	Onstott Frontage Road (Cinemark)	2.0
Walton & Cherry	0.5	Lincoln & Garden Highway	1.8
Walton & McCune	0.2	Bridge and Walton	1.7
Northbound	**Boardings**	**Northbound**	**Alightings**
Bogue & Garden Highway	24.0	Lassen & Walton	24.5
Harter & Wal-Mart Entrance	18.7	Harter and Spirit Way	15.8
Franklin & Winco	9.3	Stabler & Butte House Road	14.7
Harter and Spirit Way	8.7	Bridge & Oji	13.5
Walton & Lincoln	8.2	Harter & Wal-Mart Entrance	9.8
Franklin & Walton	7.5	Walton Terminal (Sam's Club)	9.0
Stabler & Butte House Road	7.2	Lassen and Tharp	8.5
Sanborn & Bogue	6.2	Sanborn & Bogue	8.2
Bridge & Joann Way	5.0	Walton & Camino de Flores (AK)	5.7
Walton & Joseph	4.3	Franklin & Winco	4.7
Pebble Beach & Portola Valley	3.8	Walton & Joseph	4.0
Bridge & Oji	3.3	Stabler &Starr Drive	3.8
Pebble Beach & Walton	3.2	Lassen and Klamath	3.5
Lassen and Klamath	3.0	Bridge & Joann Way	3.2
Walton & Tracy	2.8	Bogue & Ramona	2.8
Walton & McCune	2.7	Pebble Beach & Portola Valley	2.3
Lassen and Tharp	2.7	Franklin & Walton	2.3
Walton & Camino de Flores (AK)	2.5	Pebble Beach & Walton	2.0
Walton & Cherry	2.2	Walton & Lincoln	1.8
Lassen & Walton	2.2	Bogue & Germaine	1.7
Bogue & Falls	1.8	Walton & Tracy	1.3
Walton & Bridge	1.8	Walton & Bridge	1.3
Bogue & South Park	1.7	Butte House Rd. & Tharp	1.3
Bogue & Ramona	1.7	Bogue & Railroad	1.2
Stabler &Starr Drive	1.3	Bogue & Falls	1.0
Bogue & Railroad	0.5	Bogue & South Park	0.8
Harter & Butte House Road	0.5	Harter & Butte House Road	0.7
Bogue & Germaine	0.3	Walton & McCune	0.3
Bogue & Walton (Grace Baptist)	0.2	Bogue & Walton (Grace Baptist)	0.0
Butte House Rd. & Tharp	0.0	Walton & Cherry	0.0

Source: Yuba-Sutter Transit Surveys March 2011 - 2014

Table 22: Yuba-Sutter Transit Route 6 Boarding and Alighting Summary - Weekday

Average Daily for Six Survey Periods between March 2011 and March 2014

Route 6	Boardings	Route 6	Alightings
North Beale Transit Center (South Side)	51.8	North Beale Transit Center (South Side)	41.5
No. Beale Transit Ctr. (Wal-Mart)	32.3	Yuba College	38.5
Yuba College	17.0	No. Beale Transit Ctr. (Wal-Mart)	36.8
Hammonton-Smartville & Farrell	12.7	Hammonton-Smartville & Farrell	17.7
Feather River Blvd. & North Beale	11.2	Alberta & North Beale	14.2
Grand & Alicia	10.3	Grand Avenue & Alicia	12.2
Hammonton-Smartville & Hile	9.2	Grand Avenue & Cottonwood	9.3
Feather River Blvd. & Alicia	9.0	Feather River Blvd. & Alicia	6.7
Alberta & North Beale	8.0	Hammonton-Smartville &Hile (Yuba Gardens Apts.)[1]	6.5
Hammonton-Smartville &Hile (Yuba Gardens Apts.)[1]	7.5	North Beale & Lowe	6.3
Hammonton-Smartville & Mapes	6.8	Feather River Blvd. & Island	6.2
Alberta & North Beale	6.5	Hammonton-Smartville & No. Beale	6.0
Grand Avenue & Alicia	6.3	Edgewater & Rupert	5.0
Grand & Cottonwood	6.3	Hammonton-Smartville & Dunning	5.0
North Beale & Lowe	5.5	Alicia & Pasado	4.3
Hammonton-Smartville & Dunning	5.3	Alberta & North Beale	3.8
Feather River Blvd. & Island	4.8	Hammonton-Smartville & Dunning	3.7
Feather River Blvd. & Alicia	4.7	North Beale & College View	3.7
North Beale Road & Lowe	4.3	North Beale & Park	3.5
Edgewater & Oakwood	4.3	Edgewater & Oakwood	3.3
Grand Avenue & Cottonwood	4.0	North Beale Road & Lowe	3.2
North Beale & Park	4.0	Feather River Blvd. & North Beale	3.2
Edgewater & Riverbank	3.5	Pasado & Arboga	3.2
Edgewater & Rupert	3.0	Edgewater & Riverbank	3.2
Hammonton-Smartville & No. Beale	3.0	Feather River Blvd. & Riverside	2.8
Pasado & Arboga	2.8	Feather River Blvd. & Alicia	2.8
Feather River Blvd. & Cottonwood	2.5	North Beale Road & Alpine	2.2
North Beale Road & Alpine	2.3	Feather River Blvd. & Arboga	2.0
Pasado & Arboga	2.3	Hammonton-Smartville & Mapes	1.7
Feather River Blvd. & Arboga	2.3	Hammonton-Smartville & Hile	1.7
Feather River Blvd. & Island	2.0	Feather River Blvd. & Arboga	1.3
Pasado & Alicia	2.0	Grand & Alicia	1.2
North Beale & College View	1.8	Alberta & Hammonton-Smartville	1.0
Hammonton-Smartville & Dunning	1.5	North Beale & College View	0.5
Alicia & Pasado	1.2	Pasado & Arboga	0.5
North Beale & College View	1.2	Erle & Ravine Ct. (Pedestrian Access)	0.3
Feather River Blvd. & Arboga	1.0	Grand & Cottonwood	0.3
Alberta & Hammonton-Smartville	0.5	Feather River Blvd. & Cottonwood	0.3
Erle & Ravine Ct. (Pedestrian Access)	0.5	Alberta & Hammonton-Smartville	0.2
Alberta & Hammonton-Smartville	0.5	Pasado & Alicia	0.0
Feather River Blvd. & Riverside	0.3	Feather River Blvd. & Island	0.0

Source: Yuba-Sutter Transit Surveys March 2011 - 2014

Note 1: Represents only 2 survey periods

Table 23: Yuba-Sutter Transit Sacramento 99 Route Boarding and Alighting Summary

Average Daily for Four Survey Periods between March 2010 and March 2014

AM	Boardings	AM	Alightings
Bogue and Hwy 99	103.8	J & 4th	37.5
Walton Terminal	81.0	J & 8th	37.5
Yuba Co. Govt. Center	16.0	15th & N	27.3
Gateway Oaks	11.5	P & 13th	27.3
P & 13th	1.0	J & 11th	23.8
P & 9th	1.0	P & 9th	19.0
P & 5th	0.8	P & 5th	17.0
15th & N	0.5	Caltrans Bldg	13.3
J & 4th	0.3	15th & K	11.3
J & 8th	0.3	Yuba Co. Govt. Center	2.3
J & 11th	0.3	Gateway Oaks Park & Ride	0.5
15th & K	0.0	Walton Terminal	0.0
Caltrans District Office B&8th	0.0	Bogue and Hwy 99	0.0

PM	Boardings	PM	Alightings
P & 5th	33.0	Bogue and Hwy 99	97.3
P & 9th	32.5	Walton Terminal	77.0
15th & N	31.3	Gateway Oaks	22.0
P & 13th	29.0	Yuba Co. Govt. Center	16.0
J & 4th	21.3	Caltrans District Office B&8th	4.5
J & 11th	20.8	J & 4th	2.5
J & 8th	17.8	J & 8th	2.3
15th & K	15.3	P & 13th	0.8
Caltrans Bldg	12.8	J & 11th	0.5
Yuba Co. Govt. Center	6.5	15th & K	0.5
Bogue and Hwy 99	0.0	P & 5th	0.5
Walton Terminal	0.0	15th & N	0.0
Gateway Oaks Park & Ride	0.0	P & 9th	0.0

Source: Yuba-Sutter Transit Boarding and Alighting Surveys March 2010 - 2014

Annual Operating/Administrative Cost = ($33.98) X (vehicle-hours of service) + ($0.72 per vehicle-mile of service) + $2,175,672

This cost equation is used to evaluate service performance, as discussed below.

Figure 23 indicates how Yuba-Sutter operating expenses are divided among expense categories. Operations and maintenance compose the largest chunk of expenses ($4.4 million) followed by fuel and tire at just under $1,000,000. Administrative costs total $482,000 while insurance expenses reach $242,600. Lastly utilities and supplies cost around $111,000 annually.

Table 24: Yuba-Sutter Transit Sacramento 70 Route Boarding and Alighting Summary

Average Daily for Five Survey Periods between March 2010 and March 2014

AM	Boardings	AM	Alightings
McGowan Parkway	39.6	P & 9th	19.8
Plumas Lake Park and Ride	35.8	J & 8th	14.0
Yuba Co. Government Center	25.4	J & 4th	13.4
		J & 11th	12.4
		P & 5th	11.6
		15th & N	10.8
		P & 13th	10.6
		15th & K	8.8
PM	**Boardings**	**AM**	**Alightings**
J & 4th	25.6	McGowan Parkway	39.6
J & 8th	22.0	Plumas Lake Park and Ride	35.0
15th & N	12.6	Yuba Co. Government Center	26.0
P & 9th	12.6	Walton Terminal	0.8
J & 11th	11.4		
P & 13th	7.2		
P & 5th	4.8		
15th & K	4.6		

Source: Yuba-Sutter Transit Surveys March 2010- 2014

Table 25: Yuba-Sutter Transit Sacramento Mid-Day Route Boarding and Alighting Summary

Average Daily for Five Survey Periods between March 2010 and March 2014

Mid-Day	Boardings	Mid-Day	Alightings
Yuba Co. Government Center	16.6	J & 4th	13.6
J & 4th	10.4	Yuba Co. Government Center	13.6
Walton Terminal (Sunsweet)	9.2	J & 8th	10.6
J & 8th	6.6	Walton Terminal (Sam's Club)	6.2
McGowan Parkway	5.2	McGowan Parkway	4.4
Plumas Lake Park and Ride	5.0	J & 11th	4.2
P & 9th	4.2	Walton Terminal (Sunsweet)	3.8
J & 11th	3.2	P & 13th	3.6
Walton Terminal (Sam's Club)	3.0	Bogue Park and Ride	3.4
P & 13th	2.6	15th & N	3.0
15th & N	2.4	P & 9th	2.6
P & 5th	2.4	15th & K	2.0
Bogue Park and Ride	2.2	P & 5th	1.6
15th & K	1.2	Plumas Lake Park and Ride	1.6

Source: Yuba-Sutter Transit Surveys March 2010 - 2014

TABLE 26: Yuba-Sutter Transit Fiscal Year 2013-14 Expenses & Cost Allocation Model

Projected Year-End Budget

Line Item	Allocation Variable: Fixed	Allocation Variable: Hourly	Allocation Variable: Per Mile	Total Expense
Operating Expenses				
Services - Other Maintenance	$96,500			$96,500
Fuels and Lubricants			$920,000	$920,000
Tires and Tubes			$52,000	$52,000
Other Materials and Supplies			$60,000	$60,000
Utilities - Electric, Gas, Water, Sewer	$51,000			$51,000
Insurance - Casualty and Liability		$242,600		$242,600
Services - Contract Operations	$1,545,972	$2,824,028		$4,370,000
Services - Out of Contract		$12,500		$12,500
Subtotal Operating	*$1,693,472*	*$3,079,128*	*$1,032,000*	*$5,804,600*
Administration Expenses				
Salaries, Wages, Benefits - Admin Staff	$361,100			$361,100
Services - Accounting, Legal, Printing, Other	$56,500			$56,500
Materials and Supplies - Office & Postage	$10,600			$10,600
Utilities - Telephone	$4,300			$4,300
Miscellaneous Expenses	$49,700			$49,700
Subtotal Administration	*$482,200*	*$0*	*$0*	*$482,200*
Total Expenses	**$2,175,672**	**$3,079,128**	**$1,032,000**	**$6,286,800**
Service Factors for FY 2013-14		Vehicle Service Hours: 90,619	Vehicle Service Miles: 1,438,097	
Vehicle Service Hour Cost Factor	**$33.98**			
Vehicle Service Mile Cost Factor	**$0.72**			
Annual Fixed Cost	**$2,175,672**			

Source: Yuba-Sutter Transit FY 2014-15 Operating Budget

System Revenues

The revenue sources required to support Yuba-Sutter Transit's administration, operations and maintenance are drawn from a number of sources. Table 27 shows the unaudited revenues received in FY 2013-14 for operations, totaling $6,320,692. As indicated, the largest source of income for Yuba-Sutter Transit is Federal Transit Administration (FTA) 5307 grant funds for urbanized areas. which account for 31.6 percent of the operating budget. This is also demonstrated in Figure 24. The next largest source of revenue is Transportation Development Act (TDA) Local Transportation Funds (LTF) funds (29.6 percent of the revenues). Passenger fares account for 22.9 percent of the operating budget, while TDA State Transportation Assistance (STA) accounts for 8.7 percent. Other FTA grant programs such as Section 5311 (for rural areas) and FTA Jobs Access Reverse Commute grant funds compose around 3 percent each of the operating budget. Other operations funding sources include advertising and interest revenues.

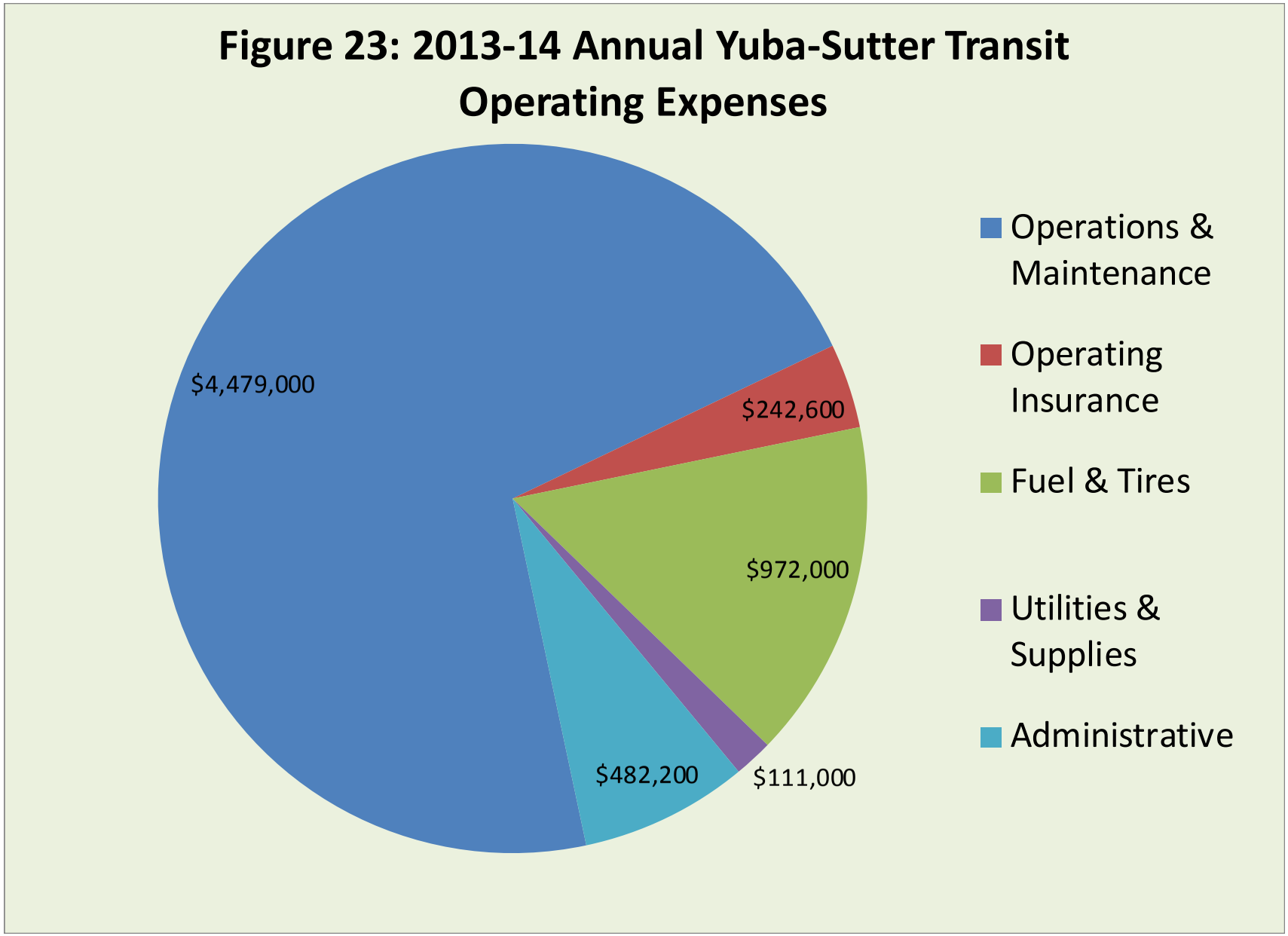


Figure 23: 2013-14 Annual Yuba-Sutter Transit Operating Expenses
$4,479,000
$242,600
$972,000
$111,000
$482,200
Operations & Maintenance
Operating Insurance
Fuel & Tires
Utilities & Supplies
Administrative

Table 27: Yuba-Sutter Transit Revenues

FY 2013-14 Projected Year End

Revenue Source	$	%
Operating Revenues		
Passenger Fares	$1,444,392	22.9%
Auxiliary Revenue (Bus, Shelter & Bench Advertising)	$27,000	0.4%
Non-Transportation Revenue (Interest)	$1,700	0.0%
Non-Transportation Revenue (FRAQMD, RWMA, Misc.)	$18,000	0.3%
Transportation Development Act Local Transportation Funds (TDA LTF)	$1,871,882	29.6%
Transportation Development Act State Transportation Assistance (TDA STA)	$550,000	8.7%
Federal Transit Administration 5307 (urbanized)	$2,000,000	31.6%
Federal Transit Administration 5311 (rural)	$200,000	3.2%
Federal Transit Administration 5316 (JARC)	$207,718	3.3%
Total Operating Revenue	**$6,320,692**	**100.0%**
Capital Revenues		
Congestion Mitigation & Air Quality (CMAQ)	$2,257,000	41.7%
Federal Transit Administration 5309 (State of Good Repair)	$1,080,000	20.0%
Transportation Development Act Local Transportation Funds (TDA LTF)	$893,000	16.5%
Vehicle Emission Fees (FRAQMD)	$97,495	1.8%
Other Local (Insurance Settlement)	$195,721	3.6%
Proposition 1B (PTMISEA/Safety)	$889,222	16.4%
Total Capital Revenues	**$5,412,438**	**100.0%**
Total Revenues	**$11,733,130**	

Source: Yuba-Sutter Transit Operating and Capital Budget FY 2014-15

The capital budget includes funding sources from the federal Congestion, Mitigation & Air Quality (CMAQ) program (41.7 percent), FTA State of Good Repair funds (20 percent), TDA – LTF (16.5 percent), and Proposition 1B (16.4 percent). Other sources include insurance settlement and vehicle emission fees.

Yuba-Sutter Transit Service Performance Analysis

To gain further insight into the efficiency and effectiveness of the Yuba-Sutter Transit services, it is useful to conduct an analysis of ridership and operating data on a service category basis. Ridership and operating statistics for FY 2013/14 were reviewed to identify average passenger activity, fares, and operating quantities. The operating cost of each route was calculated using the cost factors in Table 26. The cost to operate each service was applied to service quantities to calculate a series of "performance indicators" for the various services. The performance indicators are illustrated in Table 28 Figures 23 - 30, and summarized below:

Ridership by Route

Systemwide ridership by route and type of service is presented in Figure 25. For the local fixed routes, Route 1, Yuba City to Yuba College carries the most one-way passenger-trips (358,144)

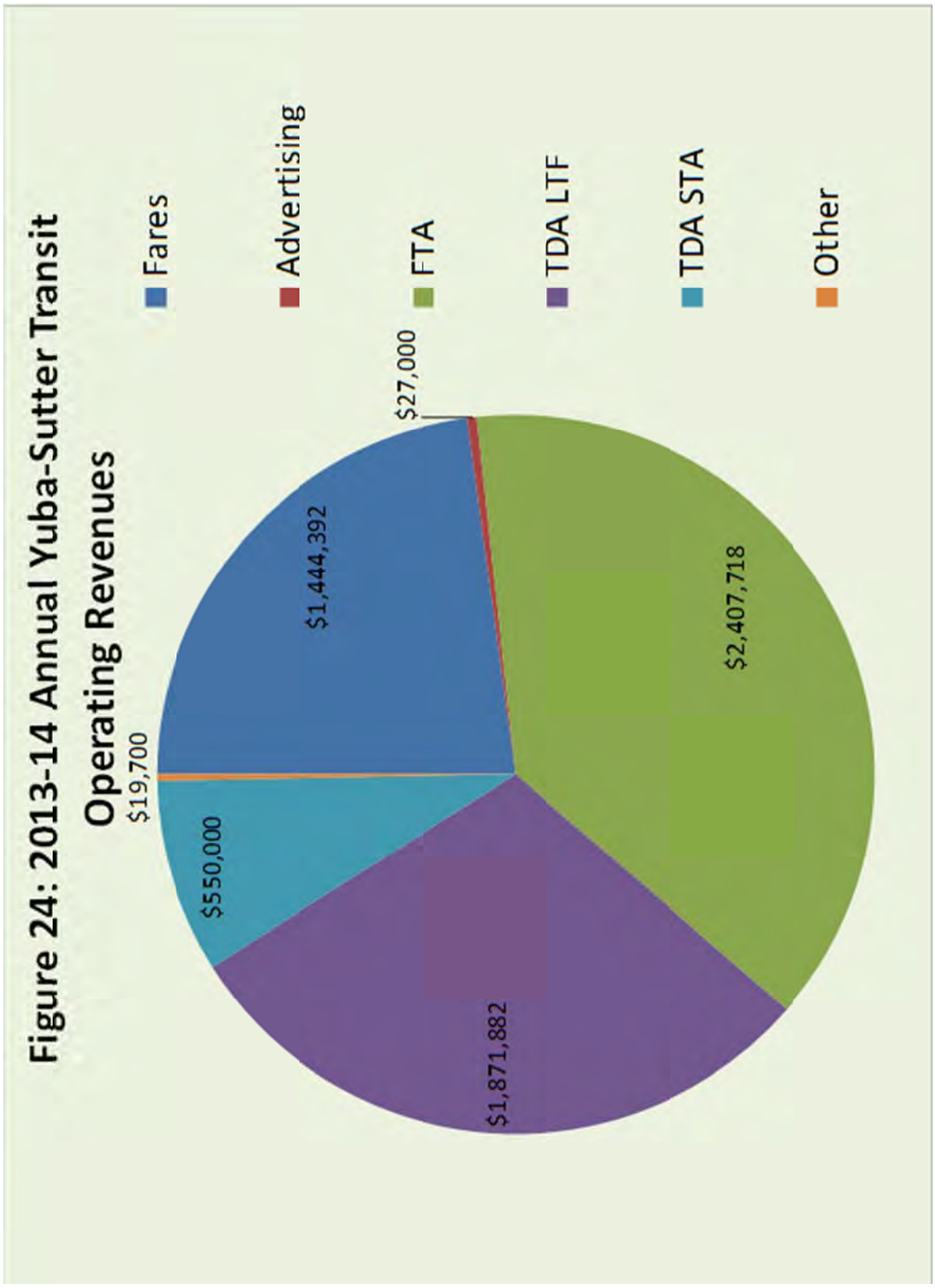


Figure 24: 2013-14 Annual Yuba-Sutter Transit Operating Revenues
Fares
Advertising
FTA
TDA LTF
TDA STA
Other
$1,444,392
$27,000
$2,407,718
$19,700
$550,000
$1,871,882

Table 28: Yuba-Sutter Transit Operations Statistics and Performance Analysis
FY 2013-14

	Local Fixed Routes							Dial-A-Ride		
	1	**2**	**3**	**4**	**5**	**6**	**Total**	**Day**	**Evening**	**Total**
Operating Data										
One-Way Passenger-Trips	358,144	232,996	188,346	148,181	61,187	56,654	1,045,508	61,487	8,185	69,672
Vehicle Service Hours	15,112	13,169	7,625	7,201	3,783	3,708	50,598	21,036	3,637	24,674
Vehicle Service Miles	154,225	142,631	116,439	76,916	53,292	54,115	597,618	247,739	46,418	294,157
Fare Revenue(1)	$210,160	$138,775	$119,098	$80,714	$31,590	$32,241	$612,577	$110,928	$14,539	$125,467
Operating Cost	$987,004	$865,994	$525,708	$472,736	$257,622	$253,854	$3,362,918	$1,397,624	$244,237	$1,641,861
Operating Subsidy	$776,845	$727,219	$406,611	$392,022	$226,032	$221,613	$2,750,342	$1,286,696	$229,698	$1,516,394
Performance Indicators										
Passenger-Trips per Hour	23.7	17.7	24.7	20.6	16.2	15.3	20.7	2.9	2.3	2.8
Passenger-Trips per Mile	2.3	1.6	1.6	1.9	1.1	1.0	1.7	0.2	0.2	0.2
Operating Cost Per Hour	$65.31	$65.76	$68.95	$65.65	$68.10	$68.46	$66.46	$66.44	$67.15	$66.54
Subsidy Per Passenger-Trip	$2.17	$3.12	$2.16	$2.65	$3.69	$3.91	$2.63	$20.93	$28.06	$21.76
Average Fare	$0.59	$0.60	$0.63	$0.54	$0.52	$0.57	$0.59	$1.80	$1.78	$1.80
Farebox Ratio	21.3%	16.0%	22.7%	17.1%	12.3%	12.7%	18.2%	7.9%	6.0%	7.6%

	Rural Routes				Sacramento			Systemwide
	Foothill	**Live Oak**	**Wheatland**	**Total**	**Commuter**	**Mid-Day**	**Total**	**Total**
Operating Data								
One-Way Passenger-Trips	2,441	3,186	591	6,218	140,738	17,475	158,213	**1,279,611**
Vehicle Service Hours	988	528	295	1,811	11,479	2,057	13,536	**90,619**
Vehicle Service Miles	33,490	12,205	8,187	53,882	421,943	70,497	492,440	**1,438,097**
Fare Revenue(1)	$3,861	$3,905	$750	$8,516	$653,991	$43,841	$697,832	**$1,444,392**
Operating Cost	$81,343	$39,377	$22,980	$143,699	$968,458	$169,863	$1,138,321	**$6,286,800**
Operating Subsidy	$77,482	$35,472	$22,230	$135,183	$314,467	$126,022	$440,489	**$4,842,408**
Performance Indicators								
Passenger-Trips per Hour	2.5	6.0	2.0	3.4	12.3	8.5	11.7	**14.1**
Passenger-Trips per Mile	0.1	0.3	0.1	0.1	0.3	0.2	0.3	**0.9**
Operating Cost Per Hour	$82.30	$74.58	$77.90	$79.33	$84.36	$82.58	$84.09	**$69.38**
Subsidy Per Passenger-Trip	$31.74	$11.13	$37.61	$21.74	$2.23	$7.21	$2.78	**$3.78**
Average Fare	$1.58	$1.23	$1.27	$1.37	$4.65	$2.51	$4.41	**$1.13**
Farebox Ratio	4.7%	9.9%	3.3%	5.9%	67.5%	25.8%	61.3%	**23.0%**

Note 1: Farebox revenue by route estimated based on Yuba-Sutter Transit fare revenue estimates by type of service, and passenger boardings by type of passenger.
Source: Yuba-Sutter Monthly Reports, Annual Performance 2007-14

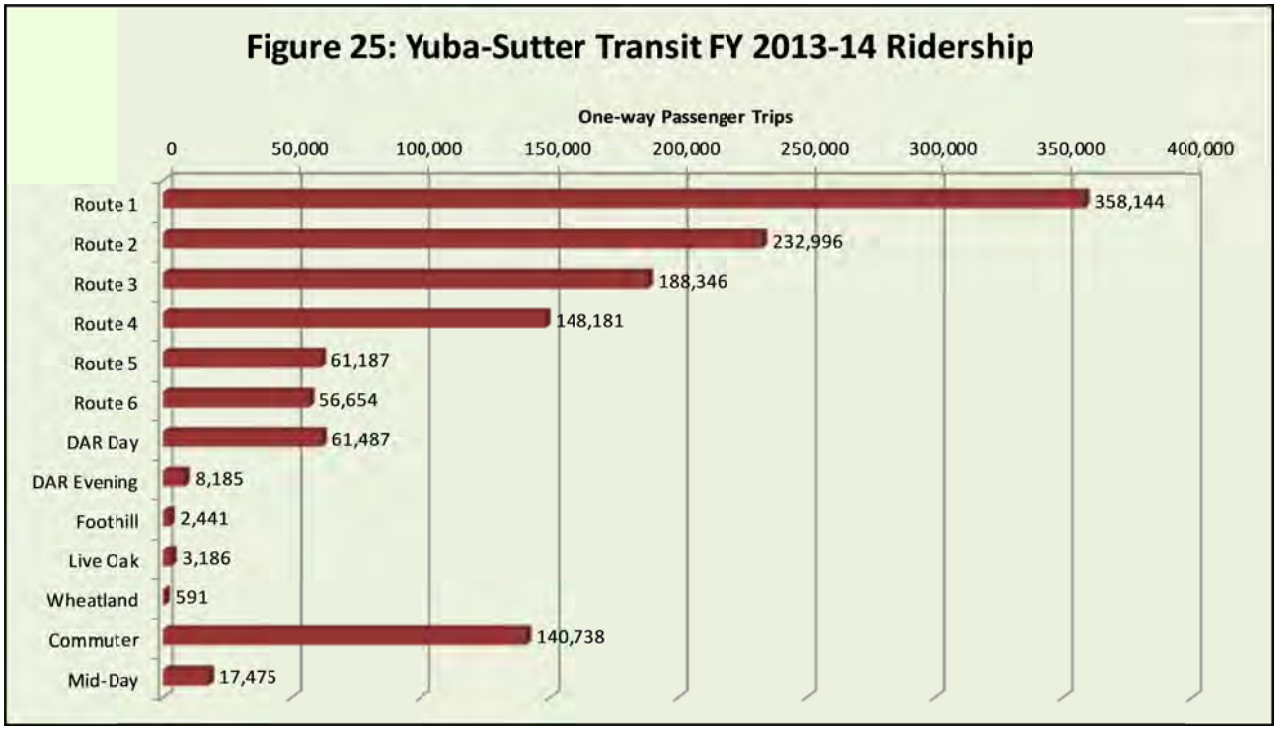


Figure 25: Yuba-Sutter Transit FY 2013-14 Ridership
One-way Passenger Trips
0
50,000
100,000
150,000
200,000
250,000
300,000
350,000
400,000
Route 1
358,144
Route 2
232,996
Route 3
188,346
Route 4
148,181
Route 5
61,187
Route 6
56,654
DAR Day
61,487
DAR Evening
8,185
Foothill
2,441
Live Oak
3,186
Wheatland
591
Commuter
140,738
Mid-Day
17,475

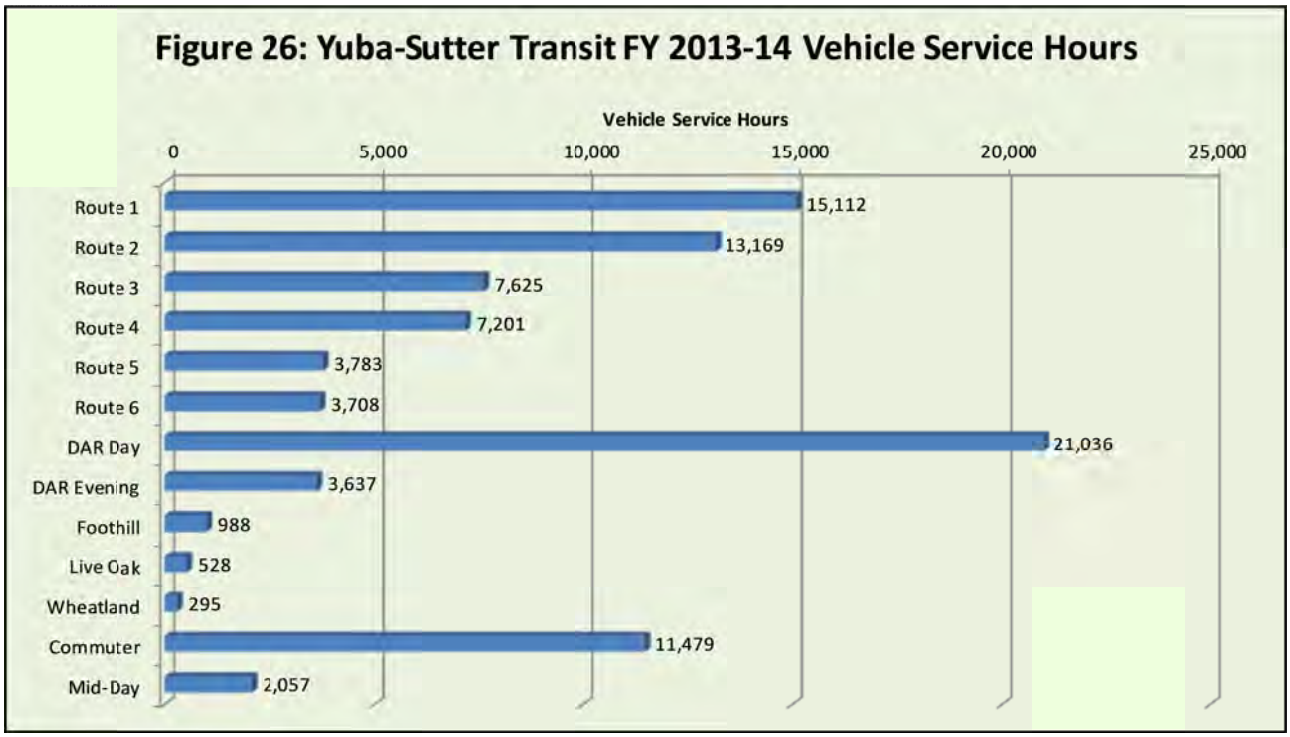
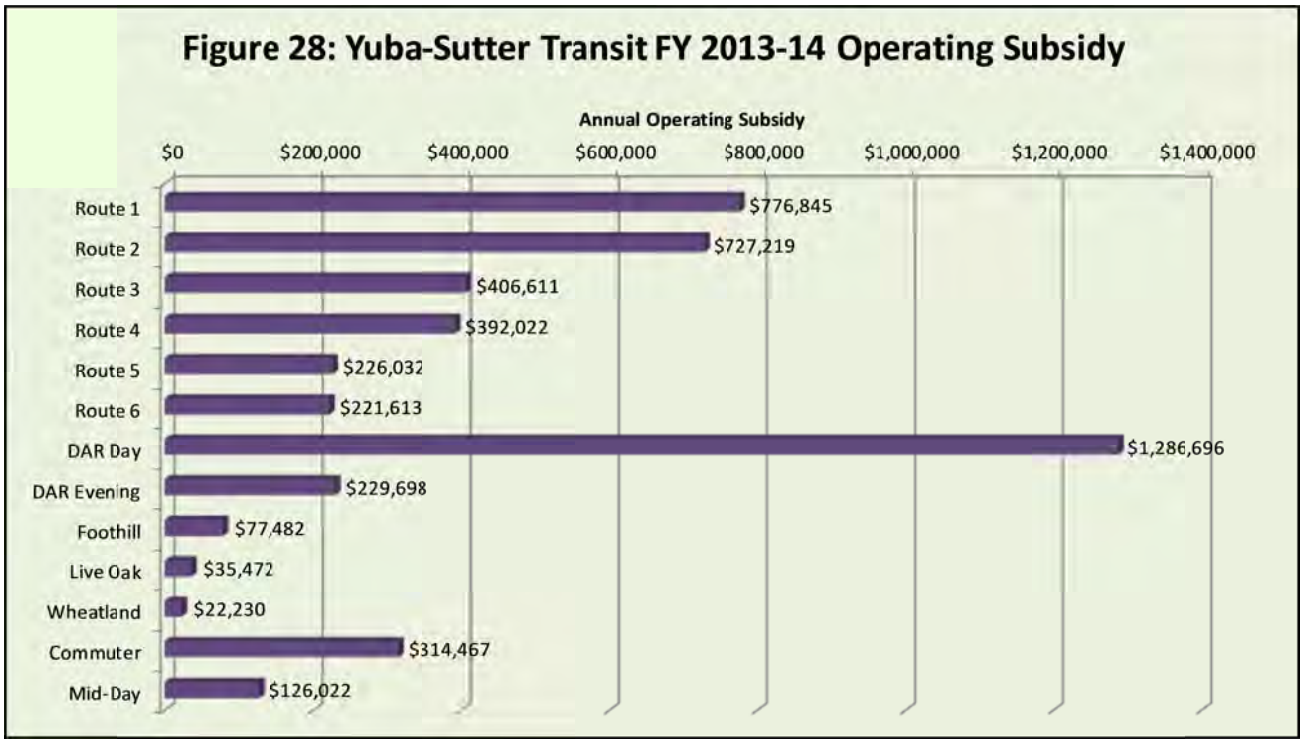


Figure 26: Yuba-Sutter Transit FY 2013-14 Vehicle Service Hours
Vehicle Service Hours
0
5,000
10,000
15,000
20,000
25,000
Route 1
15,112
Route 2
13,169
Route 3
7,625
Route 4
7,201
Route 5
3,783
Route 6
3,708
DAR Day
21,036
DAR Evening
3,637
Foothill
988
Live Oak
528
Wheatland
295
Commuter
11,479
Mid-Day
2,057

Figure 27: Yuba-Sutter Transit FY 2013-14 Operating Cost

Figure 28: Yuba-Sutter Transit FY 2013-14 Operating Subsidy



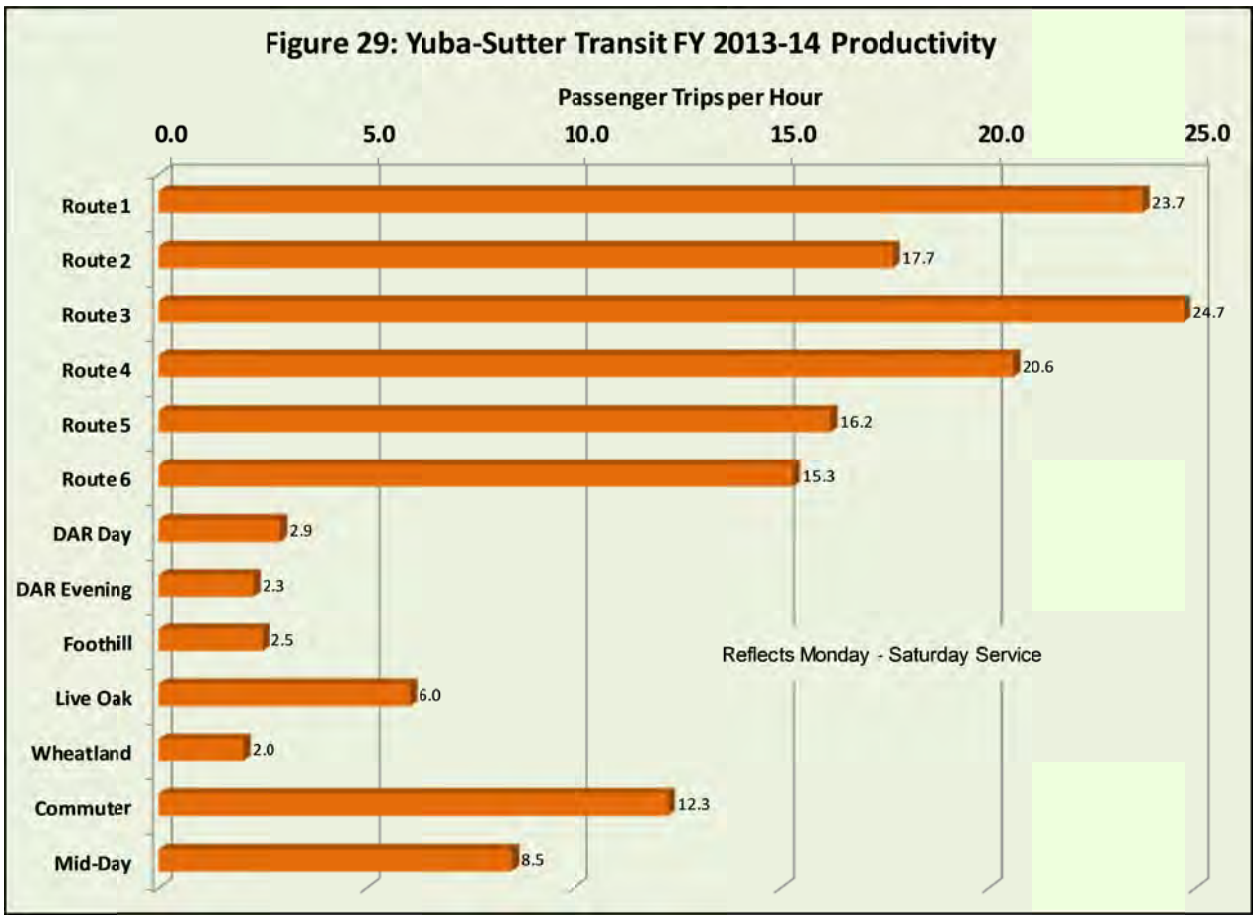


Figure 29: Yuba-Sutter Transit FY 2013-14 Productivity
Passenger Trips per Hour
0.0
5.0
10.0
15.0
20.0
25.0
Route 1
Route 2
Route 3
Route 4
Route 5
Route 6
DAR Day
DAR Evening
Foothill
Live Oak
Wheatland
Commuter
Mid-Day
23.7
17.7
24.7
20.6
16.2
15.3
2.9
2.3
2.5
6.0
2.0
12.3
8.5
Reflects Monday - Saturday Service

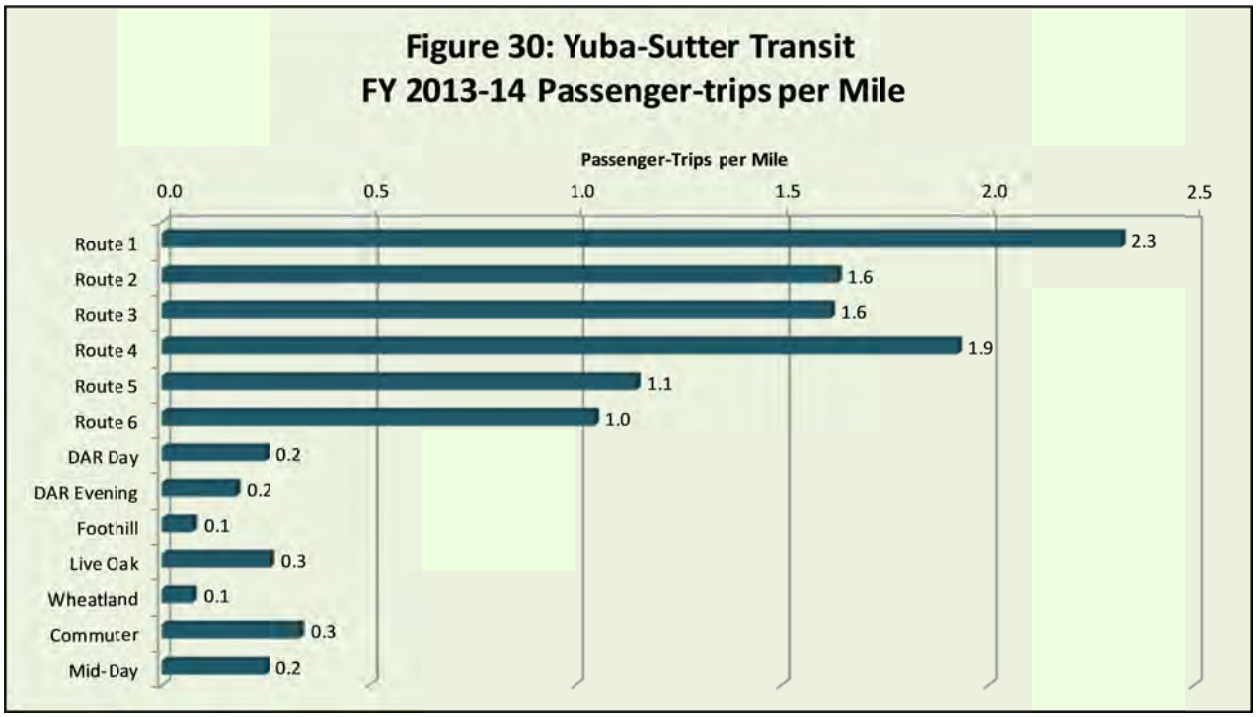


Figure 30: Yuba-Sutter Transit
FY 2013-14 Passenger-trips per Mile
Passenger-Trips per Mile
0.0
0.5
1.0
1.5
2.0
2.5
Route 1
Route 2
Route 3
Route 4
Route 5
Route 6
DAR Day
DAR Evening
Foothill
Live Oak
Wheatland
Commuter
Mid-Day
2.3
1.6
1.6
1.9
1.1
1.0
0.2
0.2
0.1
0.3
0.1
0.3
0.2

annually. Route 2, Yuba City Loop is also a high ridership generator with 232,996 annual one-way passenger-trips, followed by Route 3, Olivehurst to Yuba College, with 188,346 annual one-way passenger trips. Routes 5, Yuba City to N. Yuba City, and Route 6, Linda Shuttle, carry fewer one-way passenger-trips (61,187 and 56,564, respectively).

Ridership on the DAR service totals 69,672 annually with 11.8 percent or 8,185 one-way trips during the evening hours. The rural routes carry the fewest one-way passenger trips with the Live Oak route recording the most trips out of the three with 3,186 annual trips and Wheatland recording the least (591 trips). The Sacramento Commuter Routes generate a fair amount of ridership as the SR 99 and 70 routes carry 140,738 annual one-way passenger trips. The Mid-day service only carries 17,475 trips annually.

Service Levels

Systemwide annual vehicle service hours by route and type of service are presented in Figure 26. Annual vehicle service hours and miles follow ridership trends on the local fixed routes with Route 1 operating the most vehicle service hours (15,112) and Route 6 operating the least (3,708). After the local fixed routes, the DAR service operates the greatest number of vehicle service hours in total, 24,674. The Sacramento Routes operate a total of 13,536 and the Rural Routes operate a total of 1,811 annual vehicle service hours.

Allocated Operating Costs

Applying the cost model in Table 26 and allocating fixed operating costs based on the proportion of vehicle-hours, $3,362,918 in operating funds was required for the local fixed route services, $1,641,861 was required for the Dial-A-Ride service, $1,138,321 was required for the Sacramento Routes and $143,699 was required for the Rural Routes. On a per route basis the DAR Day had the greatest operating costs ($1,397,642).The operating cost by route and service is presented in Figure 27.

Operating Subsidy

As presented in Table 28 and Figure 28, subtracting the systemwide farebox revenues of $1,444,392 from total operating costs indicates that the total operating subsidy required to fund services was $4,842,408. The DAR Day required the greatest annual subsidy ($1,286,696), followed by Route 1 ($776,485).

Passenger-Trips per Vehicle-Hour of Service

An important measure of service effectiveness is “productivity,” defined as the number of one-way passenger-trips provided per vehicle service hour. As presented in the table, the system as a whole achieved a productivity of 14.1 one-way passenger-trips per vehicle service hour. Figure 29 shows that Route 3 boasted the highest productivity (24.7), followed by Route 1 (23.7). The Sacramento Commuter routes carried 12.3 passenger trips per hour of service. The Wheatland Rural Route attained the lowest productivity figure (2.0 trips per hour), followed by the Dial-A-Ride Evening (2.3) and the Foothill Rural Route (2.5).

Passenger-Trips per Vehicle-Mile of Service

Another measure of service effectiveness is the number of one-way passenger-trips provided per vehicle service mile. The systemwide average during the fiscal year was 0.9. By service category Route 1 provided the greatest number of one-way passenger-trips per vehicle service mile (2.3), followed by Route 4 (1.9) and Routes 2 & 3 (1.6). The Foothill and Wheatland Rural Routes carried only 0.1 passengers per mile of service. See Figure 30 for details on each route and service.

Operating Cost per Vehicle Hour

In FY 2013-14 it cost roughly $69.38 per vehicle hour to operate all Yuba-Sutter Transit services. The Sacramento Commuter Routes were the most expensive to operate at $84.36 per hour, followed by the Mid-Day Route ($82.58) and the Foothill Rural Route ($82.30). Route 1 was the least expensive with an operating cost per hour of $65.31.

Operating Subsidy per Passenger-Trip

When fare revenue is subtracted from the total cost and divided by the number of one-way passenger-trips, the subsidy required per one-way passenger-trip is calculated. This performance measure is particularly important, as it directly compares the most significant public “input” (public subsidy funding) with the most significant “output” (one-way passenger-trips). The system as a whole required a subsidy of $3.78 per one-way passenger-trip. As indicated in Figure 31, Route 3 had the lowest operating subsidy per passenger-trip at $2.16, while Route 1 required $2.17 per trip. At the other extreme, Wheatland Rural Route required $37.61 for each one-way passenger trip, and the Foothill Rural Route required $31.74 for each one-way passenger-trip.

Farebox Recovery Ratio

The financial efficiency of a system can be measured by the farebox recovery ratio, which is illustrated in the table and compared by route/service category in Figure 32. The farebox recovery ratio is particularly important as a measurement for meeting the mandated minimums required for state Transportation Development Act funding. The systemwide farebox recovery ratio in FY 2013/14 was 23.0 percent, which exceeds the target standard of 20 percent. By service category, the Commuter runs boasted the highest farebox recovery ratio (67.5 percent) followed by the Mid-Day service (25.8 percent) and Route 3 (22.7 percent). The Wheatland and Foothill Rural Routes had the lowest farebox ratio with 3.3 percent and 4.7 percent, respectively.

On-Time Performance

In 2014, Yuba-Sutter Transit surveyed bus arrival and departure times at scheduled time points on all local fixed routes in order to evaluate schedule adherence. Surveys were conducted on one weekday and one Saturday in March and October. The surveys did not completely record data at each time point.

Table 30 and 31 summarize the results of these surveys. First, the maximum number of minutes late that a run operated was determined for the two weekday survey periods. The average of these March and October survey figures is displayed in Table 30 by run and by route direction. The 2008 SRTP identifies an on time performance standard of 95 percent of **trips** should not be

Figure 31: Yuba-Sutter Transit FY 2013-14 Operating Subsidy per Passenger-Trip

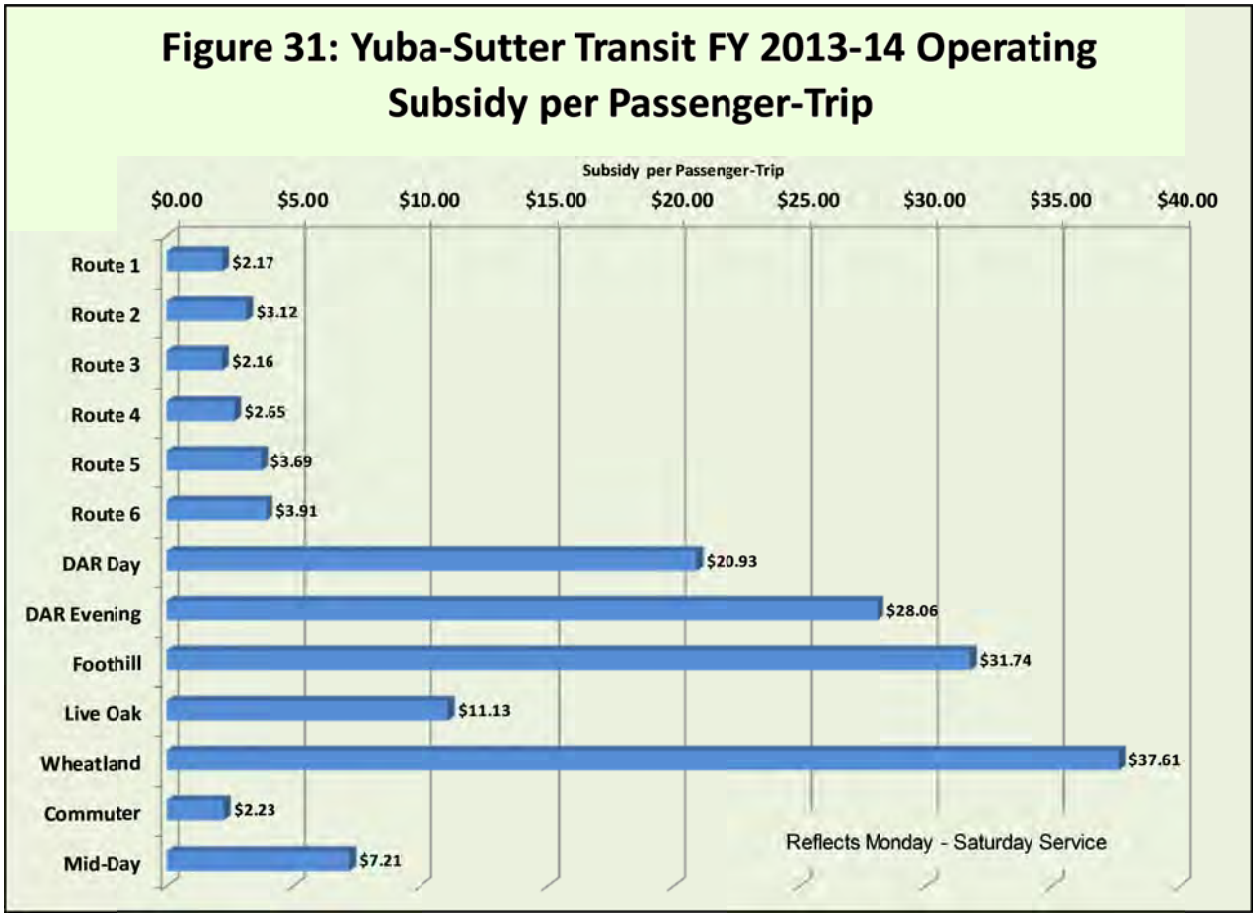
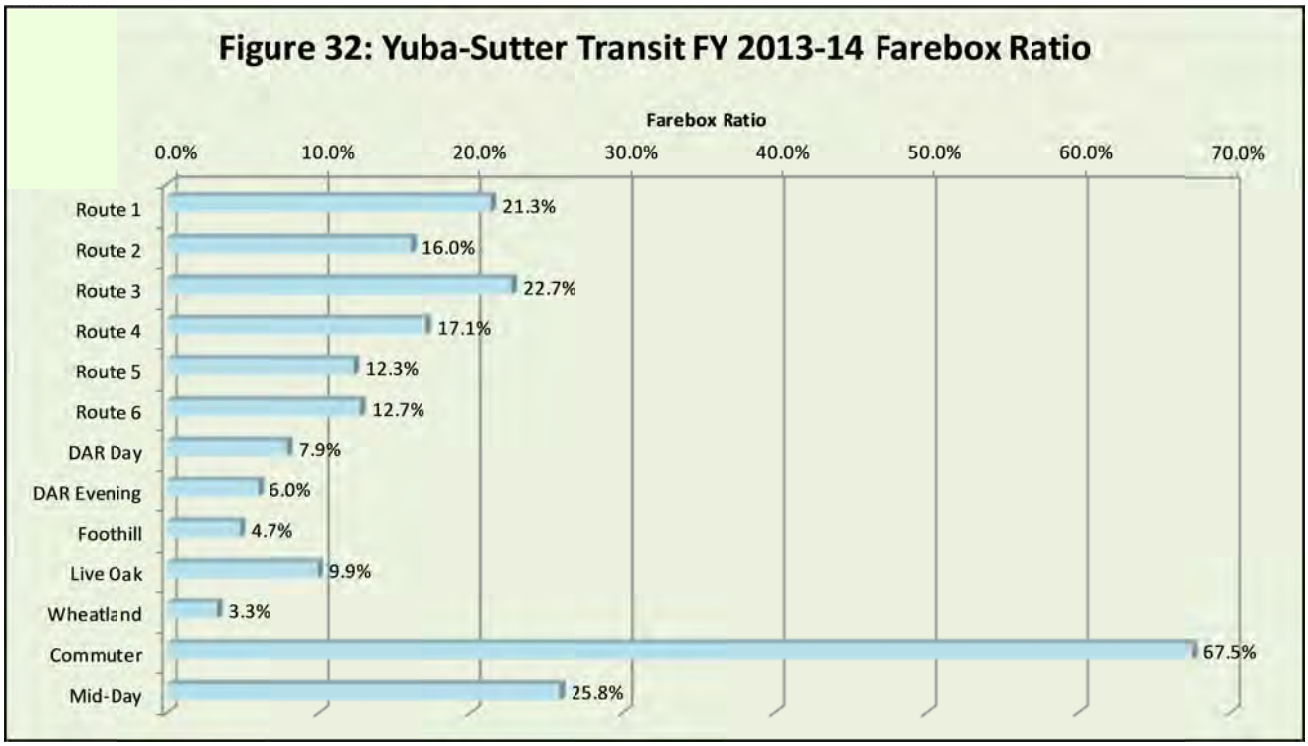


Figure 32: Yuba-Sutter Transit FY 2013-14 Farebox Ratio



more than 5 minutes late. It is unclear whether “trips” means the number of “runs” which have at least one stop served late or the number of “time points” served late. Both are reviewed as part of this analysis. According to the 2014 surveys (Table 30), on average, only 52.3 percent of local route runs were considered on time, or less than five minutes late. On a per route basis, Route 4 recorded the best on-time performance as 83.3 percent of runs in the clockwise direction were no more than 5 minutes late while 70.8 percent of counter clockwise runs were on time. Route 5 northbound recorded the worst on-time performance during the survey periods with only 11.5 percent of runs considered on-time. Some runs departed as much as 32 minutes past the scheduled departure time. Typically, buses run later in the afternoon hours. The systemwide average proportion of runs served on-time is 52.3 percent.

At the bottom of Table 30 the percent of runs with at least one stop served early is identified. In this case, early signifies departing prior to the scheduled departure time. It should also be noted that the majority of stops served early only departed one minute prior to the scheduled departure time. Nevertheless, Route 2 had the highest proportion of runs served early: 22 percent in the clockwise direction and 32 percent in the counter clockwise direction. Route 4 and Route 5 had the fewest number of runs served early during the survey period. For the local routes as a whole, roughly 10.1 percent of the runs were served early at least at one time point. The previous SRTP identified a minimum standard of no more than 0.5 percent of trips should be served early.

Reviewing on-time performance by time point can be better reflection of overall service to the passenger. Table 31 displays the number of time points served early or late by route during the survey period for both weekdays and Saturdays. More than 30 percent of time points were served late on Route 5, 3, and 1. Routes 4 and 6 had the best one time performance with less than 15 percent of time points being served late. Only one time point was served early on Route 6 and as many as 28.5 time points (6.4 percent) were served early on Route 2. None of the routes met the early standard.

A variety of factors contribute to poor on-time performance. These include processing transfers and fares, a relatively high number of boardings per stop for a small city, traffic, and road construction. Once implemented, the Connect Card universal smart card system may speed up the boarding process and help with on-time performance.

Road Calls

Over the past fiscal year, there were 98 road calls, of which 87 caused an interruption of service. On average, there was a total of 27,000 vehicle miles between road calls each month. Only one of the road calls in FY 2013-14 resulted in a major mechanical repair and one was the result of an accident. This exceeds the 2008 SRTP target standard of no more than 12,500 miles between road calls for all vehicles in the fleet that are within their normal useful life.

Accidents

According to monthly operations reports for FY 2013-14, for all services there were a total of 15 accidents. This equates to roughly 96,000 vehicle service miles between accidents, just shy of the minimum standard of 100,000 miles between accidents. The majority of these accidents occurred on the local fixed route and DAR services.

TABLE 29: Yuba-Sutter Transit On Time Performance Summary by Route and Run - Weekday

Based on YST Surveys Conducted March and October 2014

Route 1: Max Minutes Late				Route 2: Max Minutes Late				Route 3: Max Minutes Late				Route 4: Max Minutes Late				Route 5: Max Minutes Late				Route 6: Max Minutes Late		
Run Start Time	East	Run Start Time	West	Run Start Time	Clock-wise	Run Start Time	Counter Clock-wise	Run Start Time	North	Run Start Time	South	Run Start Time	Clock-wise	Run Start Time	Counter Clock-wise	Run Start Time	North	Run Start Time	South	Run Start Time	All	All Local Routes
6:23 AM	1.0	6:30 AM	3.5	6:19 AM	4.5	6:23 AM	2.0	6:09 AM	2.5	6:45 AM	2.0	6:33 AM	3.0	6:42 AM	2.5	6:18 AM	5.5	6:53 AM	7.0	6:20 AM	0.5	
6:40 AM	0.0	6:30 AM	5.5	6:49 AM	4.0	6:51 AM	5.0	6:39 AM	3.0	7:15 AM	2.5	7:22 AM	5.0	7:42 AM	2.0	7:08 AM	18.0	7:53 AM	9.5	6:50 AM	1.5	
6:49 AM	2.0	7:00 AM	1.0	6:51 AM	7.0	6:53 AM	1.5	7:09 AM	5.0	7:45 AM	3.0	8:22 AM	6.0	8:42 AM	2.5	8:08 AM	16.5	8:53 AM	4.5	7:50 AM	3.5	
7:19 AM	4.0	7:30 AM	2.5	7:21 AM	5.0	7:21 AM	1.0	7:39 AM	6.0	8:15 AM	6.5	9:22 AM	4.0	9:42 AM	7.0	9:08 AM	8.5	9:53 AM	5.0	8:50 AM	4.0	
7:49 AM	3.0	8:00 AM	3.5	7:51 AM	9.0	7:51 AM	6.0	8:09 AM	6.0	8:45 AM	1.5	10:22 AM	3.5	10:42 AM	4.5	10:08 AM	12.0	10:53 AM	2.5	9:50 AM	5.0	
8:19 AM	3.5	8:30 AM	3.5	8:21 AM	4.0	8:21 AM	0.5	8:39 AM	4.0	9:15 AM	1.5	11:22 AM	3.5	11:42 AM	5.0	11:08 AM	4.5	11:53 AM	6.5	10:50 AM	7.0	
8:49 AM	4.5	9:00 AM	1.0	8:51 AM	5.5	8:51 AM	4.0	9:09 AM	5.5	9:45 AM	8.5	12:22 PM	2.0	12:42 PM	4.5	12:08 PM	9.0	12:53 PM	3.0	11:50 AM	9.5	
9:19 AM	6.0	9:30 AM	8.0	9:21 AM	5.5	9:21 AM	4.0	9:39 AM	7.0	10:15 AM	6.0	1:22 PM	4.5	1:42 PM	3.5	1:08 PM	12.5	1:53 PM	8.0	12:50 PM	4.5	
9:49 AM	4.0	10:00 AM	8.5	9:51 AM	6.5	9:51 AM	5.0	10:09 AM	14.0	10:45 AM	8.0	2:22 PM	7.5	2:42 PM	12.0	2:08 PM	17.5	2:53 PM	3.0	1:50 PM	5.5	
10:19 AM	12.5	10:30 AM	9.5	10:21 AM	5.5	10:21 AM	2.0	10:39 AM	7.5	11:15 AM	2.5	3:22 PM	7.5	3:42 PM	8.0	3:08 PM	24.0	3:53 PM	24.5	2:50 PM	2.5	
10:49 AM	12.0	11:00 AM	10.0	10:51 AM	6.5	10:51 AM	4.0	11:09 AM	9.5	11:45 AM	1.5	4:22 PM	2.5	4:42 PM	3.0	4:08 PM	32.0	4:53 PM	14.5	3:50 PM	4.0	
11:19 AM	11.0	11:30 AM	6.0	11:21 AM	20.5	11:21 AM	4.0	11:39 AM	7.0	12:15 PM	4.0	5:22 PM	3.5	5:42 PM	1.0	5:08 PM	21.5	5:53 PM	6.0	4:50 PM	4.5	
11:49 AM	17.0	12:00 PM	10.0	11:51 AM	8.0	11:51 AM	10.5	12:09 PM	3.5	12:45 PM	2.0					6:08 PM	11.5			5:50 PM	5.5	
12:19 PM	13.5	12:30 PM	11.0	12:21 PM	5.0	12:21 PM	7.0	12:39 PM	7.5	1:15 PM	3.5											
12:49 PM	15.0	1:00 PM	10.5	12:51 PM	9.5	12:51 PM	11.0	1:09 PM	4.0	1:45 PM	16.0											
1:19 PM	16.5	1:30 PM	9.0	1:21 PM	7.5	1:21 PM	1.5	1:39 PM	5.0	2:15 PM	7.0											
1:49 PM	14.0	2:00 PM	11.0	1:51 PM	15.0	1:51 PM	8.5	2:09 PM	16.5	2:45 PM	5.5											
2:19 PM	10.5	2:30 PM	8.0	2:21 PM	5.5	2:21 PM	3.0	2:39 PM	10.5	3:15 PM	3.5											
2:49 PM	24.0	3:00 PM	2.0	2:51 PM	12.5	2:51 PM	8.0	3:09 PM	14.0	3:45 PM	16.5											
3:19 PM	15.0	3:30 PM	9.0	3:21 PM	5.0	3:21 PM	3.5	3:39 PM	10.0	4:15 PM	3.5											
3:49 PM	3.5	4:00 PM	18.0	3:51 PM	18.5	3:51 PM	8.0	4:09 PM	23.0	4:45 PM	19.5											
4:19 PM	13.0	4:30 PM	8.5	4:21 PM	8.0	4:21 PM	3.0	4:39 PM	4.5	5:15 PM	1.5											
4:49 PM	22.0	5:00 PM	4.0	4:51 PM	20.0	4:51 PM	5.0	5:09 PM	13.0	5:45 PM	13.5											
5:19 PM	12.5	5:30 PM	2.0	5:21 PM	4.5	5:21 PM	2.5	5:39 PM	1.5													
5:49 PM	2.5	6:00 PM	9.0	5:51 PM	2.0	5:51 PM	0.0	6:09 PM	14.0													
Total Runs >5 Minutes Late	**15.0**		**14.5**		**16.5**		**8**		**14.5**		**8**		**2**		**3.5**		**11.5**		**6.5**		**3.5**	**103.5**
% of Runs On-Time	**40.0%**		**42.0%**		**34.0%**		**68.0%**		**42.0%**		**65.2%**		**83.3%**		**70.8%**		**11.5%**		**45.8%**		**73.1%**	**52.3%**
% of Runs Early	**12.0%**		**12.0%**		**22.0%**		**32.0%**		**0.0%**		**13.0%**		**4.2%**		**4.2%**		**3.8%**		**4.2%**		**3.8%**	**10.1%**

Note 1: Complete data for every run was not available.

Table 30: Local Route On-Time Performance by Stop

Average of Surveys Conducted March and October 2014

	Average Daily Time Points Served On Time		Average Daily Time Points Served Late (> 5 Min)		Average Daily Time Points Served Early	
	#	%	#	%	#	%
Route 1	392.5	66.5%	184.0	31.2%	13.5	2.3%
Route 2	321.5	72.2%	95.5	21.6%	28.5	6.4%
Route 3	204.5	64.3%	103.0	32.1%	10.5	3.3%
Route 4	230.5	83.2%	34.0	12.3%	12.5	4.5%
Route 5	81.5	51.7%	68.5	44.9%	7.5	4.6%
Route 6	73.0	85.4%	11.5	13.5%	1.0	1.2%
Total Local Routes	1303.5	69.6%	496.5	26.6%	73.5	3.9%

Note: Complete data is not available for every run. Includes both weekday and Saturday data.

Source: Yuba-Sutter Transit Surveys March, October 2014

Table 31: YST Transit Performance Peer Review

FY 2013-14

	Performance Indicator		
	Passenger-trips per Vehicle Revenue Hour	Farebox Ratio	Cost per Vehicle Revenue Hour
Yuba Sutter Transit			
Local Routes	21.6	--	$69.45
DAR	3.1	--	$71.95
Sacramento	18.7	--	$134.81
Rural	4.1	--	$95.75
Systemwide	15.8	23%	$77.44
Roseville Transit			
Fixed Route	7.4	13%	$95.31
DAR	2.6	9%	$106.81
Commuter	23.1	78%	$138.53
Total	8.1	22%	$102.77
Yolo Bus			
Fixed Route	16.8	27%	$97.00
Paratransit	1.7	7%	$87.66
Total	14.8	24%	$95.85
B-Line			
Fixed Route (Urban)	20.8	21%	$76.58
Fixed Route (Rural)	16.3	23%	$92.51
DAR (Urban)	2.8	11%	$64.11
DAR (Rural)	3.4	11%	$63.62
Total	13.8	18%	$76.52

Note: To be consistent with peer data, Yuba-Sutter Transit data reflects vehicle revenue service hours and therefore performance measures differ from Table 28.

Peer Analysis

Table 29 compares select Yuba-Sutter Transit performance indicators to the performance of similar peer transit operators in Northern California. Note that various systems compile their data into slightly different service categories. So as to more appropriately compare Yuba-Sutter Transit services to other transit agencies. Vehicle revenue hours (not including deadhead) are included in Table 29 calculations. This differs from other data in this report where vehicle service hours are used (including deadhead).Yuba-Sutter Transit typically uses vehicle service hours for internal performance comparisons. This table indicates the following:

1. Productivity of the Yuba-Sutter Transit local routes is relatively high, as it substantially exceeds the passengers per vehicle-hour on Roseville Transit and Yolobus, and slightly exceeds the B-Line urban fixed route figure.

2. Productivity on Yuba-Sutter Transit DAR service is also relatively good, equaling the urban value for B-Line service and exceeding the values for Roseville Transit and Yolobus.

3. Of the peer systems, only Roseville Transit runs a "pure" commuter bus service (services on Yolobus are folded into the fixed route system). Yuba-Sutter Transit's productivity (18.7 passengers per revenue vehicle hour) is lower than that of Roseville (23.1), due to the substantially shorter trip length from Roseville to Sacramento, as well as the fact that this other system does not operate mid-day services.

4. Yuba-Sutter Transit's farebox return ratio (23 percent) compares well with the peer systems, exceeding the systemwide figure for B-Line and Roseville Transit and falling only 1 percent below that of Yolobus.

5. Yuba-Sutter Transit's systemwide cost per vehicle-hour of service ($77.44) is only one percent higher than the least-expensive system (B-line), and a full 6 percent below the peer average.

Summary of Goals Policies and Objectives

Table 32 presents adopted Yuba-Sutter Transit goals and performance measures from the 2008 SRTP. Goals are as follows:

1. *Continue to provide safe and convenient transportation services to the residents of Yuba and Sutter counties for employment, shopping, education and social service trips, so long as service can be provided in a cost-effective manner.*

2. *Ensure that all transit programs can be provided at a high quality of service. Quality of service is more important than expansion of service.*

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

4. *Provide public transportation services that are financially sustainable within existing local, state and federal funding program availability.*

Table 32: Yuba-Sutter Transit Goals and Performance Measures

Fiscal Year 2013-14 Results

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

Goal	1. Continue to provide safe and convenient transportation services to the residents of Yuba and Sutter counties for employment, shopping, education and social service trips, so long as service can be provided in a cost-effective manner			2. Ensure that all transit programs can be provided at a high quality of service. Quality of service is more imiportant than expansion of service.				3. Provide an effective level of service in response to demonstrated community market needs.		4. Provide public transportation services that are financially sustainable within existing local, state and federal funding program availability	
Performance Measure	Accessible	Total Accidents	Training and Safety Plan	On-time Performance[1]	Frequency	Road Calls	Customer Satisfaction Survey	Passengers per Vehicle Service Hour		Farebox Recovery	Cost per Vehicle Revenue Hour
Minimum Standard	Provide service within the service area between 6:30 AM and 6:30 PM on weekdays and 8:30 AM and 5:00 PM on Saturdays	100,000 Between Accidents	100% Compliance with employee selection, drug testing and training requirements in the operator contract	0.5% runs early and 95% no more than 5 minutes late	Local Routes: No more than 60 minutes between runs Rural Routes: 2 Round Trips 2 Days per Week	10,000 miles between road call for all buses that are within normal useful life	Conduct Every 6 Months	Local Fixed Routes Sacramento Dial-A-Ride Rural Routes	13.0 12.0 3.0 2.0	14.6 % Systemwide	No more than 110% of average of 5 Northern California Peer Systems
Target Objective	Provide service within the service area between 6:00 AM and 9:00 PM on weekdays, 8:00 AM and 6:30 PM on Saturdays, 9:00 AM and 4:00 PM on Sundays	500,000 Between Accidents	100% Compliance with employee selection, drug testing and training requirements in the operator contract	0% runs early and 99% no more than 5 minutes late	Local Routes: 30 minute service when 15 psgrs per vsh can be achieved in 2 years Rural Routes: 2 Round Trips 3 Days per Week, if 4 psgrs per VSH can be achieved	12,500 miles between road call for all buses that are within normal useful life		Local Fixed Routes Sacramento Dial-A-Ride Rural Routes	17.0 16.0 4.0 4.0	20% Systemwide	No more than 90% of average of 5 Northern California Peer Systems

CURRENT PERFORMANCE											
Local Routes	1	6:23 AM to 6:45 PM	--	--	41% on-time/ 12% early	30 Minute Service	--	--	23.7	--	--
	2	6:19 AM to 6:19 PM	--	--	51% on-time/ 27% early	30 Minute Service	--	--	17.7	--	--
	3	6:09 AM to 6:25 PM	--	--	54% on-time/ 6% early	30 Minute Service	--	--	24.7	--	--
	4	6:33 AM to 6:20 PM	--	--	77% on-time/ 4% early	Hourly Service	--	--	20.6	--	--
	5	6:18 AM to 6:22 PM	--	--	29% on-time/ 4% early	Hourly Service	--	--	16.2	--	--
	6	6:20 AM to 6:13 PM	--	--	73% on-time/ 5% early	Hourly Service	--	--	15.3	--	--
DAR		6:30 AM - 9:30 PM	--	--	NA	--	--	--	2.8	--	--
Sacramento		--	--	--	87% on-time/ 1% early	--	--	--	11.7	--	--
Rural Routes	Foothill	--	--	--	NA	2 Round Trips 3 Days per Week	--	--	2.5	--	--
	Live Oak	--	--	--	NA	2 Round Trips 3 Days per Week	--	--	6.0	--	--
	Wheatland	--	--	--	NA	2 Round Trips 2 Days per Week	--	--	2.0	--	--
Systemwide		--	96,000	Yes	52% on-time/ 10% early	--	27,000	No	14.1	23.0%	*$69.38*

Note 1: Data summarized for weekdays.

The Table also presents various standards and compares these standards to operating data for FY 2013 – 14. Yuba-Sutter Transit has adopted both minimum and target standards. Areas of Table 32 which are shaded in orange meet the target standard, areas shaded green meet the minimum standard, while areas shaded pink do not meet the standard.

Per the previous SRTP, the minimum operating cost per vehicle hour standard is no more than 110 percent of 5 peer transit systems in Northern California while the target standard is no more than 90 percent of 5 peer transit systems in Northern California. The five peer transit systems chosen for this study are: Roseville Transit, Yolobus (serving Yolo County), B-Line (serving Butte County), Redding Area Bus Authority (RABA) and The Bus in Merced. FY 2013-14 was available for all services except The Bus where 2012 data was used. The average annual systemwide operating cost per hour for these transit systems is $87.54. As shown in Table 29, Yuba-Sutter Transit's FY 2013-14 annual operating cost of $69.38 exceeds the target standard of $78.79 per hour.

Overall, Yuba-Sutter Transit performs quite well. Areas where Yuba-Sutter Transit did not meet the minimum standard in FY 2013 -14 include:

- Mileage between accidents (very close to standard)
- On-time performance on all local routes
- Conducting customer satisfaction surveys
- Passengers per Vehicle Hour for the Sacramento Routes

In addition, the minimum standard is attained but the target standard not achieved regarding the passengers per vehicle service hour on the following services:

- Local Routes 5 and 6
- Dial-A-Ride
- Foothill Route and Wheatland Route

TRANSIT CAPITAL ASSETS

Maintenance Facility

Yuba-Sutter Transit's operations and maintenance facility, located at 2100 B St. in Marysville was remodeled in 2011 to include office space for maintenance, operations, training, and administrative functions, 3 lane fueling station, full service maintenance bays and parking for up to 70 buses. The facility is fenced and includes lighting and surveillance for security purposes. The 2011 upgrades represented a large improvement from the former facility and Yuba-Sutter Transit currently has no plans to further expand the facility over the short term.

Vehicle Fleet

As of March 2014, the Yuba-Sutter Transit vehicle fleet consisted of 51 revenue vehicles and 7 non-revenue vehicles. As presented in Table 33, the revenue vehicles range in capacity from 16 to 57 passengers; all of the revenue vehicles are equipped with wheelchair lifts and securement positions. The average age of the revenue fleet is 3.6 years, and the average accumulated mileage is 113,437 per revenue vehicle. A total of 28 revenue vehicles are eligible for replacement by 2020. All revenue vehicles are currently operating within their useful life.

Table 33: Yuba-Sutter Transit Vehicle Fleet

Bus #	Year	Make	Model	Engine Type	Capacity*	Condition	Lifetime Mileage Date	Mileage As of 3/18/15
Revenue Vehicles								
1670	2010	ChevylStarcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	144,737
1671	2010	Chevy/Starcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	141,532
1672	2010	Chevy/Starcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	134,081
1673	2010	Chevy/Starcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	139,184
1674	2010	ChevylStarcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	132,818
1675	2010	Chevy/Starcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	135,152
1676	2010	Chevy/Starcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	139,033
1677	2010	Chevy/Starcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	110,332
1678	2010	Chevy/Starcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	143,856
1679	2010	Chevy/Starcraft	All·Star 4500	6.6 L/Diesel	16/2	F	2019	146,209
1681	2014	ChevylGlaval	Titan 114500	6.6 L/Diesel	16/2	E	2023	28,107
1682	2014	Chevy/Glaval	Titan 114500	6.6 L/Diesel	16/2	E	2023	31 ,860
1683	2014	Chevy/Glaval	Titan 114500	6.6 L/Diesel	16/2	E	2023	32,394
1684	2014	Chevy/Glaval	Titan 114500	6.6 L/Diesel	16/2	E	2023	27,471
1685	2014	Chevy/Glaval	Titan 114500	6.6 L/Diesel	16/2	E	2023	26,093
1686	2014	Chevy/Glaval	Tllan 114500	6.6 L/Diesel	16/2	E	2023	31 ,159
2721	2008	NABI/Opus	Opus 29SD	6.7 L/Diesel	27/2	F	2020	193,084
2722	2008	NABI/Opus	Opus 29SD	6.7 L/Diesel	27/2	F	2020	175,124
2723	2008	NABI/Opus	Opus 29SD	6.7 L/Diesel	27/2	F	2020	206,244
2724	2008	NABI/Opus	Opus 29SD	6.7 L/Diesel	27/2	F	2020	207,448
2725	2008	NABI/Opus	Opus 29SD	6.7 L/Diesel	27/2	F	2020	190,356
2727	2008	NABI/Opu.	Opus 29SD	6.7 L/Diesel	27/2	F	2020	167,133
3161	2008	NABI/Opus	Opus 3400	6.7 L/Diesel	31/12	F	2020	171,973
3162	2008	NABI/Opus	Opus 3400	6.7 L/Diesel	31/12	F	2020	170,289
3163	2008	NABI/Opus	Opus 3400	6.7 L/Diesel	31/12	F	2020	181 ,345
3164	2008	NABI/Opus	Opus 3400	6.7 L/Diesel	31/12	F	2020	194,880
3165	2008	NABI/Opus	Opus 3400	6.7 L/Diesel	31/12	F	2020	201,766
3230	2013	Gillig	35DD	8.9lL/Diesel	31/12	E	2026	35,718
3231	2013	Gillig	35DD	8.9lL/Diesel	31/12	E	2026	41,642
3232	2013	Gillig	35DD	8.9lL/Diesel	31/12	E	2026	36,736
3233	2013	Gillig	35DD	8.9lL/Diesel	31/12	E	2026	38,691
3234	2013	Gillig	35DD	8.9lL/Diesel	32/2	E	2026	38,999
3235	2013	Gillig	35DD	8.9lL/Diesel	32/2	E	2026	39,555
3236	2014	Gillig	35DD	8.9lL/Diesel	32/2	E	2026	41,371
3237	2014	Gillig	35DD	8.9lL/Diesel	32/2	E	2026	37,066
3238	2014	Gillig	35DD	8.9lL/Diesel	32/2	E	2026	34,344
3239	2014	Gillig	35DD	8.9lL/Diesel	32/2	E	2026	40,375
3240	2014	Gillig	35DD	8.9lL/Diesel	32/2	E	2026	39,502
4151	2006	Blue Bird	Xcel-102	7.0L/Diesel	41/2	F	2018	331,301
4152	2006	Blua Bird	Xcel-102	7.0L/Diesel	41/2	F	2018	350,180
4153	2006	Blua Bird	Xcal-102	7.0L/Diesel	41/2	F	2018	332.792
4154	2006	Blua Bird	Xcel-102	7.0L/Diesel	41/2	F	2018	341 .266
4155	2006	Blua Bird	Xcel-102	7.0L/Diesel	41/2	F	2018	342.888
4156	2006	Blua Bird	Xcel·102	7.0L/Diesel	41/2	F	2018	317.398
4157	2007	Blue Bird	Xcel·102	7.0L/Diesel	41/2	F	2018	152.779
5701	2010	MCI	D4500	11.0 L/Diesel	57/2	E	2025	207,668
5702	2010	MCI	D4500	11.0 L/Diesel	57/2	E	2025	207,226
5703	2010	MCI	D4500	11.0 L/Diesel	57/2	E	2025	202,391
5704	2012	MCI	D4500	11.9 L/Diesel	57/2	E	2028	95,727
5705	2012	MCI	D4500	11.9 L/Diesel	57/2	E	2028	93,846
5706	2012	MCI	D4500	11.9 L/Diesel	57/2	E	2028	99,073
Non-Revenue Vehicles								As of 5/13/14
001	1999	Ford	Taurus	Gas	6	F	--	154,059
005	2003	Ford Truck	F350	6,0 L/Diesel	3	F	--	29,681
006	2003	Ford	Taurus	Gas	5	F	--	75,684
007	1998	Dodge	Activan	3.3 L/Gas	6/1	P	--	17,118
008	2007	Ford	500	Gas	5	F	--	118,423
010	2007	Ford	Escape	Gas/Hybrid	5	P	--	136,647
011	2009	Ford	Escape	Gas/Hybrid	5	F	--	90,292

* - Seated capacity/ wheelchair capacity

Source: Yuba-Sutter Transit Vehicle Inventory April 2014

Bus Stops and Bus Shelters

The Yuba-Sutter Transit system uses 283 bus stops throughout Yuba County, Yuba City, Marysville, Sacramento and the rural route communities. Depending on the level of activity at each stop, various types of passenger amenities are provided at these bus stops. In total, 81 bus stops include a bench, 47 stops include a shelter, 47 include a schedule, 13 have lockers, and 16 have a garbage receptacle. A complete list of bus stops and amenities is provided as Appendix A.

OTHER TRANSIT PROVIDERS IN YUBA – SUTTER COUNTIES

In addition to Yuba-Sutter Transit, there are several other transportation providers serving the region. Summary descriptions of the available transportation services are described below.

American Cancer Society - The Road To Recovery program provides transportation to and from treatment for people who have cancer who do not have a ride or are unable to drive themselves. Volunteer drivers donate their time and the use of their cars so that patients can receive the life-saving treatments they need.

Pride Industries – Provides transportation to worksites for adult clients with disabilities. Three vans are operated within the Yuba City/Marysville urban area and Live Oak.

Easter Seals ACE IT III (Adult Day Program & Fine Arts Program) - Easter Seals Superior California's Adult Day Services provide unique training opportunities for adults with developmental disabilities that focus on increasing each person's level of independence through a variety of teaching and training methods. The focus of the ACE-IT III program is on the development of functional skills related to individual needs and greater access to the community. Individual goals can be in the areas of vocational, fine arts, performing arts, domestic, recreational/leisure, general life skills, independent living skills, socialization skills and having the opportunity to be a part of the community. Presently, the program serves 68 consumers, with 24 staff and 2 buses to help transport people within the community and beyond for program purposes.

Head Start – The E Center Head Start Program is a comprehensive child development program serving in Yuba, Sutter and Butte Counties. As part of the seasonal Head Start program the E Center provides full day care and school readiness programs for children up to age five of agriculture working families in Butte, Colusa, Glenn, Lake, Sutter, Tehama, Yolo, and Yuba Counties. The program has two dedicated school buses for transporting children to program sites (Yuba City and Live Oak); primarily May through October/November. The program also uses minivans to transport parents and children to weekly Early Start programs, year round.

Colusa County Transit – Colusa County Transit offers intercity trips from Colusa to Yuba City on Fridays. The bus services the Walmart or Social Security office in Yuba City and returns to Colusa at 1:30 PM. Passengers may transfer to Yuba Sutter Transit at full fare.

FREED – FREED's Mission is to eliminate barriers to full equality for people with disabilities through programs which promote independent living. Services are offered in Nevada, Sierra, Yuba, Sutter and Colusa Counties. Public funding sources for the program include Area 4 Agency on Aging, California Department of Rehabilitation, US Department of Education, Nevada County, and City of Yuba City. In terms of transportation, FREED provides vouchers for Yuba-Sutter Transit fixed route or DAR at discounted prices to persons with disabilities, Yuba and Sutter County residents over 60 as well as low income residents.

Chapter 4
Outreach Efforts and Survey Summaries

STUDY OUTREACH

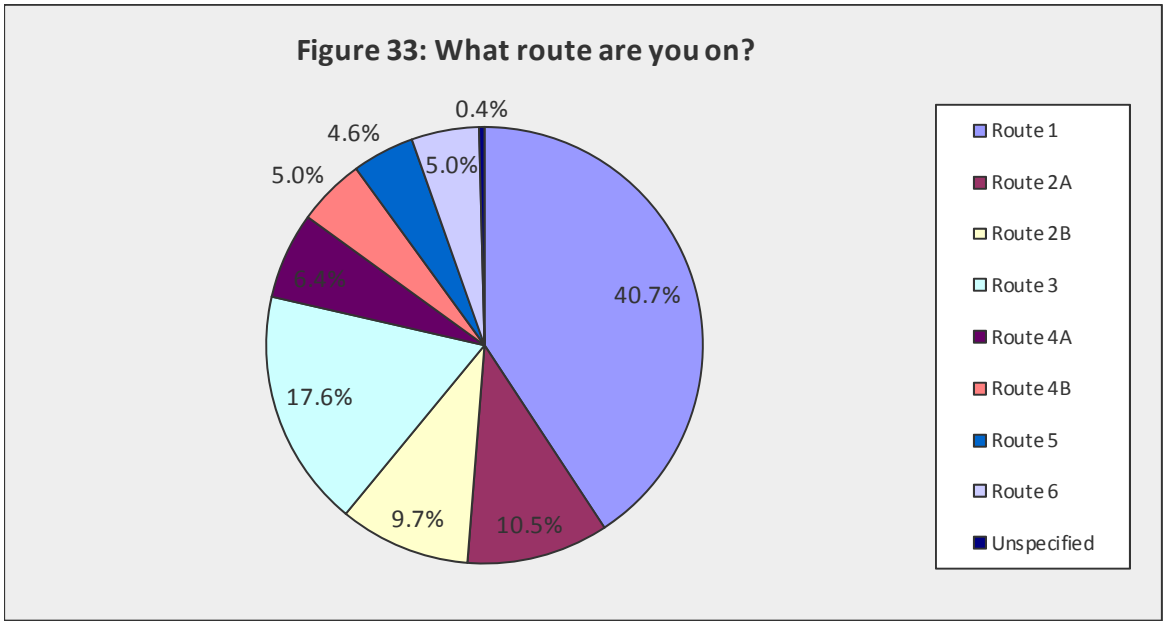
A number of activities have been undertaken as part of this study to encourage and ensure public input, including stakeholder interviews, online community surveys, and onboard passenger surveys. This Chapter presents the highlights of the findings of outreach efforts.

Yuba-Sutter Transit Onboard Surveys

Surveys were conducted to assess ridership patterns and the rider's opinion for each existing Yuba-Sutter Transit existing service. The surveys were distributed onboard as well as administered online through Survey Monkey. The onboard surveys were conducted over the course of one service week, Monday through Friday, between September 8, 2014 and September 12, 2014. The extent of participation in the surveys for each service was varied.

Local Fixed Routes

On the local fixed routes, all runs were surveyed over multiple days, resulting in 1,095 valid survey responses. There are six local service routes and the proportion of survey respondents coming from each route is displayed in Figure 33. The routes with the most rider responses were Routes One and Three.



There were slightly more responses coming from the morning runs with 55 percent of respondents boarding the bus during the AM hours. Riders were primarily coming and going between home and school; they rarely indicated work as a starting point or a destination in their travels. Questions 3 and 4 of the survey ask riders what mode of transport they used to get to the bus and how they will complete their trip after leaving the route. Most riders (79 percent) walked to the bus, while 15 percent transferred from another route. Of those 15 percent who transferred, the most common route that people transferred from was Route One. Routes 2A,

2B, 4A, and 4B were indicated at least ten percent of the time. After leaving the bus, 58 percent of riders were walking to their destination and 31 percent were transferring to another bus.

Table 34 displays the cross tabulation of the riders on each route with the results of Questions 3 and 4, with the bottom portion providing a summary analysis of the transfer activity of ridership on each route. Overall, 23.1 percent of Yuba Sutter Transit riders need to transfer at least once as part of their trip[1]. By route, this ranges from a low of 15.7 percent for Route 3, to a high of 29.8 percent of Route 4. Of all transfers, 41.9 percent were to or from Route 1, followed by 18.3 percent to or from Route 2. This reflects the importance of Route 1 as a connecting link in the overall route network. The greatest transfers to and from Route 1 were generated by Route 6, at 20.0 percent of all Route 6 riders, while the lowest transfers to and from Route 1 were generated by Route 3 (11.3 percent).

Local Route Rider's Characteristics and Opinions

The respondents indicated they typically ride the bus daily (49 percent) or at least 2-4 days per week (39 percent). Most of the riders did not have a vehicle available (80 percent) or even a driver's license (70 percent). The age ranges of the riders were varied with the following percentages:

- =/<12 (1 percent)
- 13-18 (28 percent)
- 19-24 (20 percent)
- 25-61 (44 percent)
- 62-74 (6 percent)
- 75+ (1 percent)

At the time of the survey, 27 percent of the riders were registered as a Yuba College student, mostly at the Main Campus (21 percent). 2.7 percent indicated that they are registered at both the main campus in Linda and the Sutter County Center in Yuba City.

Respondents were asked to rate the local route service on a scale of a 1 to 5 rating with 5 indicating an excellent rating. Results are displayed in Figure 34. The following services received the lowest ratings:

- On-time performance
- Travel time
- Areas served
- Bus stops and shelters

The following services received the highest ratings:

- System safety
- Driver courtesy
- Printed information materials

[1] Of all respondents, 1.6 percent indicated they needed to transfer twice as part of their one-way transit trip. The majority of these passengers (1.4 percent of the total) rode Route 1 as the middle portion of their trip. Of these, the largest number was trips made linking Routes 2, 1 and 6 or Routes 4, 1 and 3, both of which constituted 0.3 percent of all respondent trips.

Table 34: Crosstabs by Rider's Current Route to Transfer To/From Routes

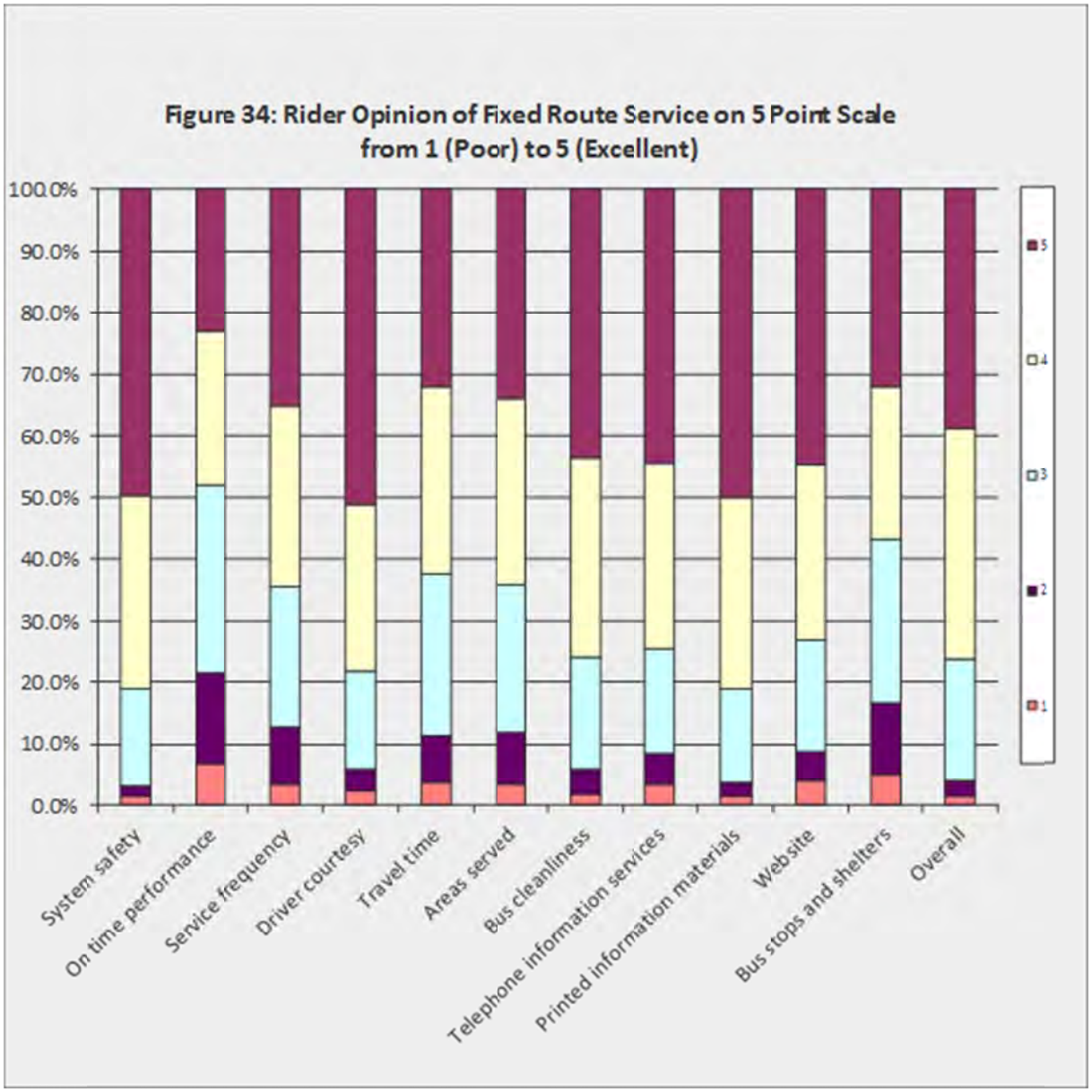
Local Routes Survey

Percent of Valid Response

	Route 1	Route 2A	Route 2B	Route 3	Route 4A	Route 4B	Route 5	Route 6	Total All Routes
Q3. How did you get to this bus?									
Walked	73.4%	78.9%	83.5%	88.1%	70.2%	64.4%	83.3%	89.1%	78.2%
Bicycled	4.6%	1.1%	2.4%	2.5%	0.0%	6.7%	4.8%	2.2%	3.3%
Drove alone	1.6%	1.1%	0.0%	0.6%	0.0%	0.0%	2.4%	0.0%	1.0%
Transferred from Route	17.3%	15.8%	12.9%	7.5%	26.3%	26.7%	7.1%	6.5%	15.0%
Other	3.0%	3.2%	1.2%	1.3%	3.5%	2.2%	2.4%	2.2%	2.4%
Transferred from Route									
1	1.8%	35.7%	75.0%	72.7%	42.9%	44.4%	50.0%	66.7%	28.0%
2	8.8%	7.1%	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%	5.9%
2A	14.0%	0.0%	0.0%	0.0%	21.4%	0.0%	0.0%	0.0%	9.3%
2B	10.5%	7.1%	0.0%	0.0%	14.3%	0.0%	50.0%	0.0%	8.5%
3	12.3%	0.0%	0.0%	18.2%	0.0%	22.2%	0.0%	0.0%	9.3%
4	1.8%	0.0%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	1.7%
4A	14.0%	28.6%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	11.0%
4B	10.5%	21.4%	0.0%	9.1%	7.1%	0.0%	0.0%	33.3%	10.2%
5	7.0%	0.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%
6	19.3%	0.0%	0.0%	0.0%	0.0%	22.2%	0.0%	0.0%	11.0%
Other/left blank	--	--	--	--	--	--	--	--	--
Q4. After you get off this route, how will you complete your trip?									
Transfer to another bus	33.2%	30.9%	33.3%	23.9%	33.3%	20.0%	31.0%	43.5%	31.1%
Ride Dial-A-Ride	2.0%	0.0%	3.6%	1.9%	0.0%	2.2%	2.4%	0.0%	1.7%
Walk	53.1%	57.4%	57.1%	67.1%	64.9%	73.3%	64.3%	47.8%	58.5%
Bicycle	3.9%	0.0%	2.4%	2.6%	0.0%	2.2%	0.0%	2.2%	2.5%
Drive alone	1.1%	1.1%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%
Ride with someone	3.4%	7.4%	1.2%	1.9%	0.0%	0.0%	2.4%	2.2%	2.8%
Other (explain)	3.4%	3.2%	1.2%	2.6%	1.8%	2.2%	0.0%	4.3%	2.7%
Transfer to another bus									
1	10.4%	33.3%	60.0%	65.4%	54.5%	25.0%	54.5%	53.3%	35.2%
2	10.4%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	4.9%
2A	9.1%	5.6%	10.0%	0.0%	9.1%	25.0%	36.4%	0.0%	8.8%
2B	7.8%	5.6%	0.0%	0.0%	9.1%	0.0%	0.0%	0.0%	4.4%
3	14.3%	0.0%	5.0%	11.5%	0.0%	0.0%	0.0%	13.3%	9.3%
4	6.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%
4A	9.1%	22.2%	20.0%	3.8%	9.1%	0.0%	0.0%	0.0%	9.3%
4B	15.6%	5.6%	0.0%	15.4%	18.2%	0.0%	0.0%	26.7%	12.6%
5	10.4%	27.8%	5.0%	0.0%	0.0%	0.0%	9.1%	0.0%	8.2%
6	6.5%	0.0%	0.0%	3.8%	0.0%	25.0%	0.0%	6.7%	4.4%
Other/left blank	--	--	--	--	--	--	--	--	--

Total Transfers -- Both Directions

		Transferring To/From								
		Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Total All Routes	% Do Not Transfer	Total
Passengers On Route #	1	0.0%	8.3%	7.2%	4.9%	2.0%	2.9%	25.3%	74.7%	100.0%
	2	16.9%	0.0%	0.0%	4.2%	2.1%	0.0%	23.2%	76.8%	100.0%
	3	11.3%	0.0%	3.1%	0.0%	0.0%	1.3%	15.7%	84.3%	100.0%
	4	16.2%	6.6%	2.5%	2.5%	0.0%	2.1%	29.8%	70.2%	100.0%
	5	12.7%	8.5%	0.0%	0.0%	0.0%	0.0%	21.2%	78.8%	100.0%
	6	20.0%	0.0%	1.3%	3.8%	0.0%	0.0%	25.0%	75.0%	100.0%
	Total	9.7%	4.2%	3.1%	3.1%	1.3%	1.8%	23.1%	76.9%	100.0%



Respondents were asked about customer improvements such as “increased service frequency”, “new or extended routes”, “bus stop improvements”, “Earlier Weekday Service”, “Later Weekday Service”, Earlier Saturday Service”, “Later Saturday Service”, and “Sunday Service”. The most popular selection was “Sunday Service” with 63 percent selecting this improvement. “Later Weekday Service” was commonly selected with 44 percent and “Later Saturday Service” with 36 percent. Another common selection was “increased service frequency” and out of the 40 percent who made this selection, 27 percent filled out the open-ended text option. The following comments were shared requests under increased service frequency:

- Every 15-30 minutes
- Afternoon Service
- Weekend Service

The full results, including customer comments, are displayed in Appendix B.

Yuba College Transit Survey

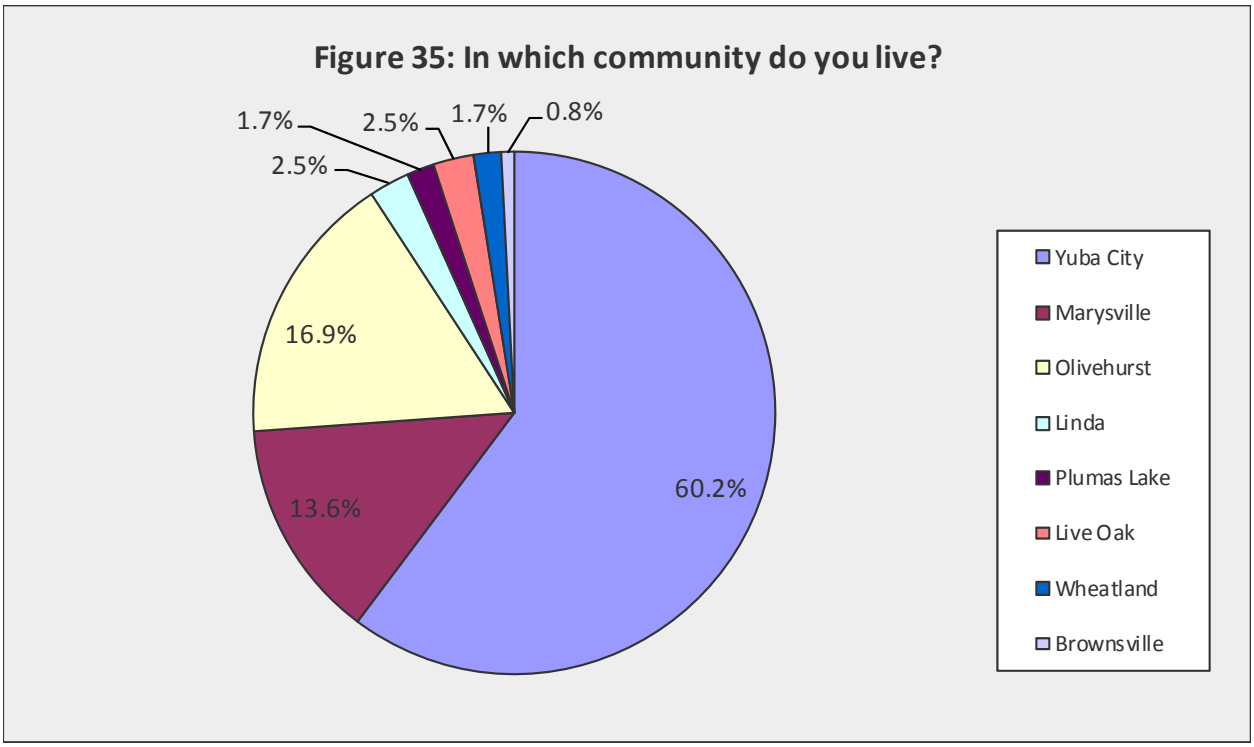
A survey specifically tailored for Yuba College students was offered online through the online Surveymonkey site during the month of October. The purpose of the survey was to consider the transit patterns of student riders as well as their opinion of the service. There were a total of 130 respondents. Results are summarized below and displayed in Appendix C.

Student Rider's Characteristics and Opinions

The students were asked to select the campus where they currently have classes and they were able to select multiple answers with the following options: Yuba College Campus, Sutter County Center, and Online. Only two people skipped this question. Slightly more students indicated Yuba College Campus with the following percentages:

- Yuba College Campus (65 percent)
- Sutter County Center (52 percent)
- Online (11 percent)

The most common residential community among survey respondents was Yuba City and the proportions are displayed in Figure 35. Nearly half (46 percent) of the students were taking between 7 and 12 units at the time of the survey and 32 percent were taking between 13 and 16 units. Two-thirds (67 percent) of the students have a driver's license but only a little over one-half (57 percent) have a vehicle available to drive.

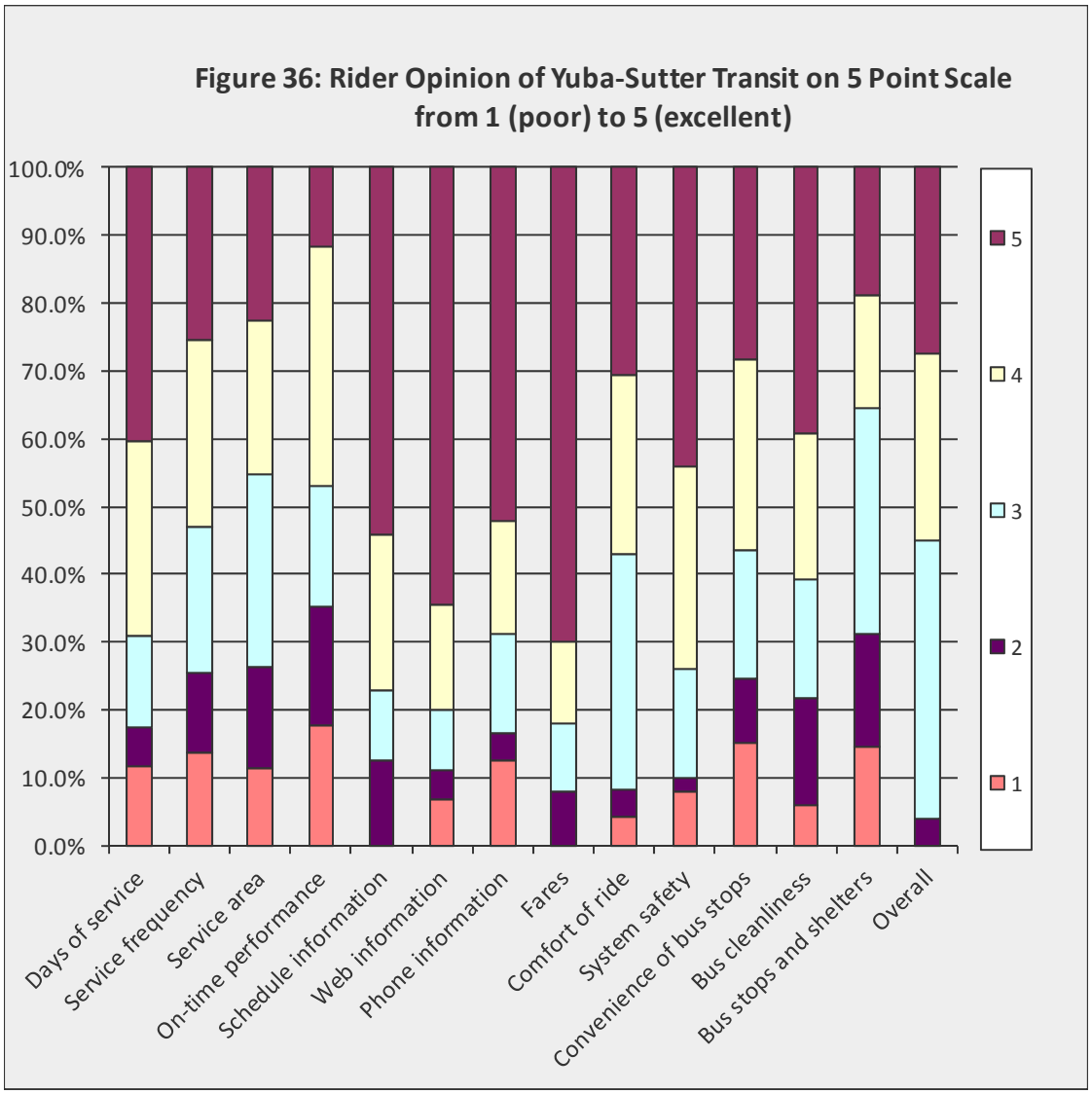


The students were questioned on their awareness of Yuba-Sutter Transit's services and their answers were wide-ranging with the following percentages:

- Yes, I use Yuba-Sutter Transit (36 percent)
- Yes, but I don't use it and have no need for it (22 percent)
- Yes, but I don't use it, though I wish I could (16 percent)
- Yes, but I don't know much about the service (18 percent)
- No, I'm not aware of the service (8 percent)

The respondents typically use Route One most often, citing an average of six 1-way trips each week. They indicated an average of four trips weekly on Route Four and three on Routes 2A and 2B. The rural routes and commuter service were rarely cited and the remaining services are used on average only once or twice weekly.

Respondents were asked to rate the Yuba-Sutter Transit service on a scale of a 1 to 5 rating with 5 indicating an excellent rating. Results are displayed in Figure 36.



The following services received the lowest ratings:

- On-time performance
- Bus stops and shelters
- Service area

The following services received the highest ratings:

- Fares
- Web information
- Schedule information

If Yuba-Sutter Transit service was free to college students, the majority (56 percent) would definitely start using the service, 14 percent might start using the service, and 12 percent would still not use the service. When asked to choose from a list of factors that limit their use of Yuba-Sutter Transit service, the respondents indicated most often that they have a vehicle. Three additional factors they indicated frequently were:

- The bus does not stop near my home
- The bus does not go where I need to go in Yuba City / Marysville
- The bus does not run late enough

When questioned whether they would use a route serving Sutter County Center, respondents predominantly indicated they would use the service to/from home as well as to/from the main campus. In doing a cross tabulation of a student who currently has classes at the Sutter County Center and their community of residence, the overwhelming majority (74 percent) live in Yuba City. The rest of these students live in Olivehurst (six percent), Live Oak (five percent), and outlying communities (15 percent). Respondents were asked about customer improvements and the most popular selection was “new or extended routes” (64 respondents), “Later Weekday Service” (46 respondents), and “increased service frequency” (45 respondents).

Dial-A-Ride Transit Survey

Onboard surveys were conducted for the curb to curb demand response service: Dial-A-Ride (DAR). There were 91 rider responses to the DAR surveys. Most of the respondents (72 percent) were taking the bus in the morning between the hours of 7:00 and 10:00 AM. The most common timeframe for rider responses in the afternoon was early evening between 6:00 and 8:00 PM. A little over half the riders’ (51 percent) make subscription trips. The riders’ response to the purpose for their trip was widespread with the following percentages

- School/College (19 percent)
- Work (36 percent)
- Shopping (10 percent)
- Medical/Dental (18 percent)
- Senior Center (2 percent)
- Personal Business (3 percent)
- Recreation/Social (13 percent)

Nearly half of the respondents’ (40 percent) claimed they would not have made the trip if the DAR service was not available. Most of the respondents (86 percent) do not have a vehicle

available or even a driver's license (76 percent). Almost half of the respondents (48 percent) use the service daily. The following percentages are in response to the routine use of DAR service:

- Daily (48 percent)
- 1 Day/Week (3 percent)
- 1 Day/Month or less (2 percent)
- 2-4 Days/Week (34 percent)
- 2-3 Days/Month (10 percent)
- First Time (2 percent)

About one-quarter (23 percent) of the respondents are over the age of 62. Yuba City, Marysville, and Olivehurst were frequently indicated as residences. The riders were questioned whether they use Yuba-Sutter Transit services in addition to DAR. There were 66 percent who indicated that they only use DAR service, 38 percent who use Local Routes, and nine percent who use the Commuter Routes. The riders were asked to choose from a list of reasons they don't use other Yuba-Sutter Transit services and these are the percentages:

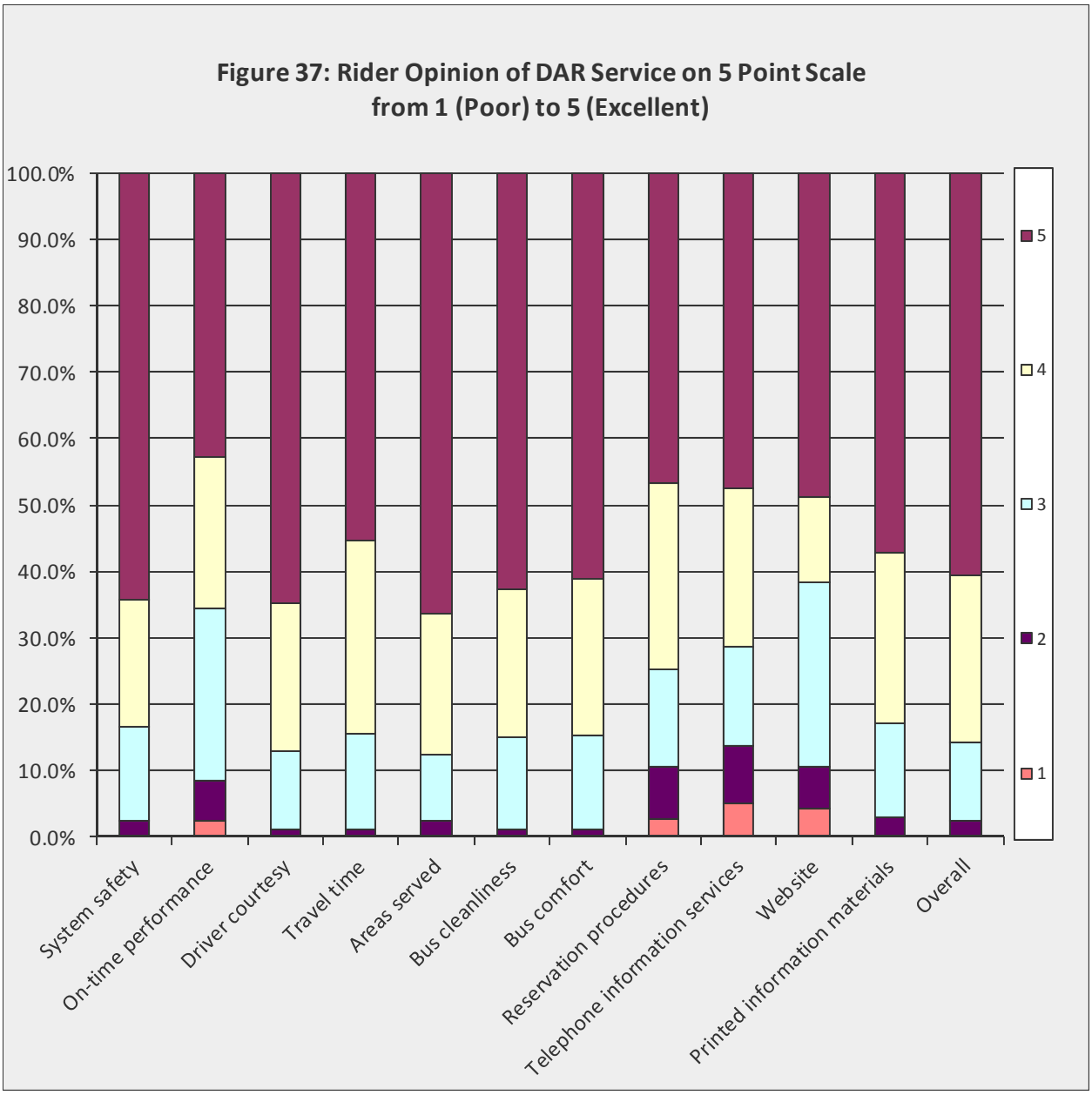
- I prefer using curb-to-curb service (27 percent)
- Disability makes use of fixed route bus difficult (48 percent)
- Bus stop is too far from my home or destination (22 percent)
- Difficult to take grocery/shopping bags on bus (5 percent)
- I am not aware of other services (7 percent)

The riders chose from the following list of disabilities:

- I have difficulty understanding how to use the fixed route bus (27 percent)
- I have a visual disability (12 percent)
- I can use the fixed route bus for some trips, but not others (29 percent)
- I cannot use the fixed route bus by myself (49 percent)

Respondents were asked to rate the Yuba-Sutter Transit DAR service on a scale of a 1 to 5 rating with 5 indicating an excellent rating. Results are displayed in Figure 37. As shown, riders are overall pleased with the service, with 86 percent ranking it a 4 or 5. Riders are pleased in particular with system safety, driver courtesy, travel time, area served, bus cleanliness, bus comfort and the printed information materials, all of which had at least 82 percent of passengers indicating a 4 or 5. However, the website and on-time performance were ranked relatively poorly, with 60 and 65 percent indicating a 4 or 5, respectively.

Respondents were asked about customer improvements and 63 riders answered this question. The most popular selection was "Sunday Service (36 respondents), "Increased availability/more service" (23 respondents), and "Later Saturday Service" (22 respondents). The remaining results including comments are displayed in Appendix D.



Rural Routes

Onboard surveys were conducted for the rural routes: Foothill Route, Live Oak Route, and Wheatland Route. The Wheatland Route did not receive any rider response to the survey.

Foothill Route

The Foothill Route only received nine rider responses and the full results are displayed in Appendix E. Six respondents indicated that they have a driver's license and four have a car available, reflecting that some passengers are riding out of choice, not necessity. Five out of the eight who responded only ride the bus 1-3 days during the month. The remaining three take the route every weekday it's offered. Two people need a wheelchair lift to board or exit the bus.

Over half the riders (62 percent) want service on Mondays and Fridays, 25 percent want service on Saturdays, and 25 percent want additional runs on current service days.

Live Oak Route

A total of 9 respondents filled out survey forms while riding the Live Oak service. Of these, four were age 62 or above, four were age 25 to 44, and one was under age 19. Four did not typically have a car available for their trip, and six did not have a driver's license. Three use the serve more than 10 days a month, two use it 5 to 10 days a month, and four use it 1 to 4 days a month. Five also use Yuba-Sutter Transit local fixed route services. The large majority walked to or from the bus, though 33 percent indicated they transfer to another bus in Yuba City. Of the 8 persons indicating their trip purposes, four stated shopping, two stated personal business, one stated going to work, and one stated making a medical trip. None of the passengers were Yuba College students. Responses to perceptual questions are included in the Live Oak Community Survey, discussed below.

Live Oak Community Survey

To gain greater input regarding Live Oak transportation needs, an online survey was offered for Live Oak residents. Nine riders filled out a survey onboard the Live Oak Route, and 102 participants filled out an online survey, totaling 111 valid survey responses. Out of the 111 participants, 100 indicated they are Live Oak residents. The results are summarized below as well as displayed in Appendix F.

The respondents were typically 45 years or older (75 percent). Over two-thirds (69 percent) have their driver's license but 40 percent do not have a vehicle available for travel. Half of the respondents (51 percent) do not use Yuba-Sutter Transit service and no one skipped this question. In the case of online survey respondents who never use the service or use it less than one day per month, the survey system required the survey respondent skip to question 11, since the preceding questions are not applicable to someone who doesn't use Yuba-Sutter Transit service. This accounted for 67 respondents, leaving 44 people remaining with the opportunity to respond to questions six through ten. Out of the six Yuba-Sutter Transit existing services, these people generally use the Live Oak Route and the Local Routes in Yuba City/Marysville. There were seven people each who also stated they use Dial-A-Ride and Sacramento Commuter Routes.

Respondents were asked to rate the Yuba-Sutter Transit service on a scale of a 1 to 5 rating with 5 indicating an excellent rating. Results are displayed in Figure 38. The following services received the lowest ratings:

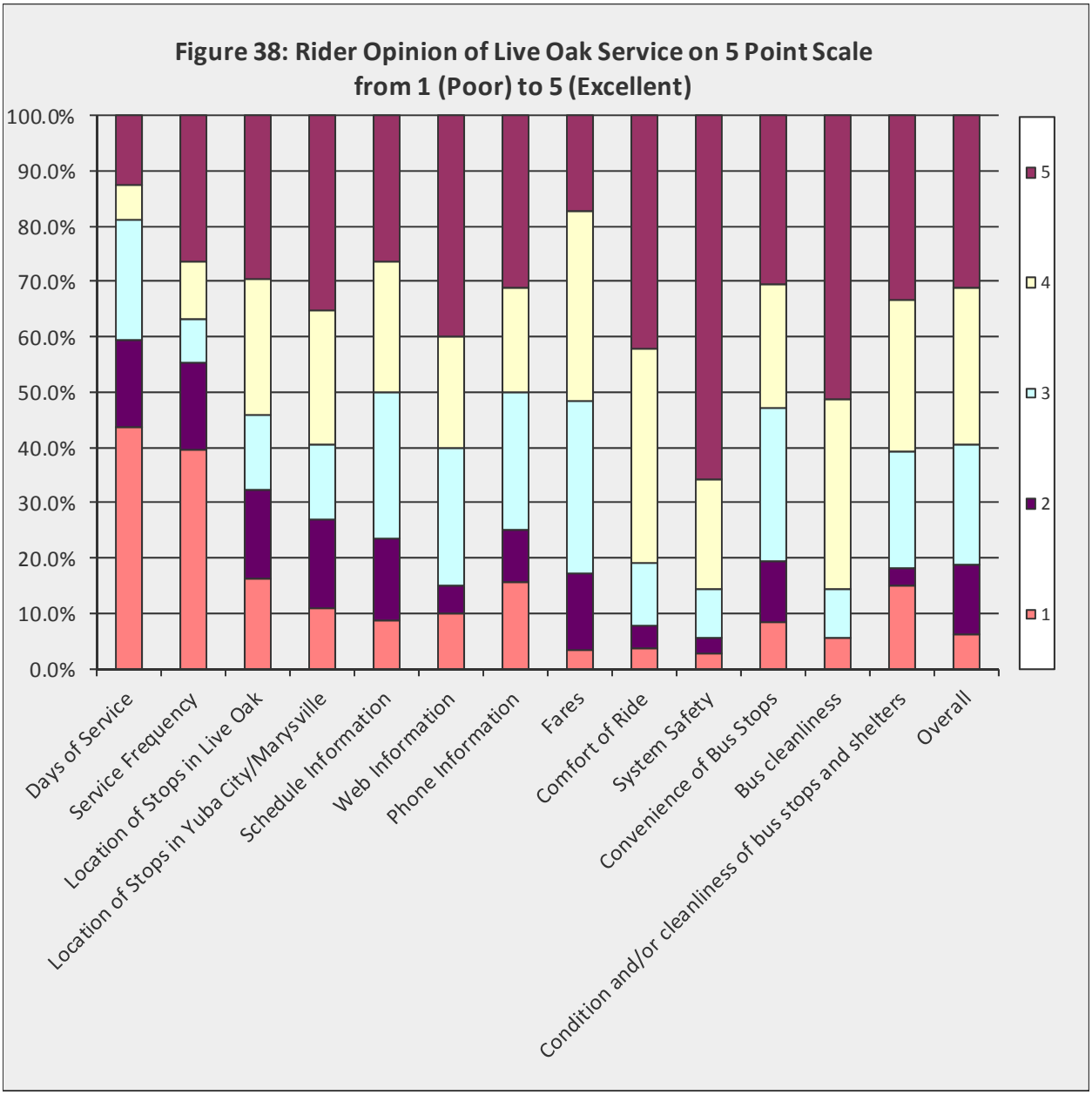
- Days of service
- Service frequency

The following services received the highest ratings:

- System safety
- Bus cleanliness
- Comfort of ride

Only 28 people answered questions eight and nine regarding the primary reason for use and the days of the week use of Live Oak service. The top three reasons for use of the system were the following: medical appointments, personal business, and shopping. Typical use throughout the three weekdays that the service is offered was almost equally dispersed with the following counts:

- Monday 24 responses
- Tuesday 26 responses
- Wednesday 23 responses



All of the survey participants were asked about factors limiting their use of Yuba-Sutter Transit services. There were 93 people who answered this question and the percentages of selected factors varied with the following:

- The bus does not stop near my home (31.2 percent)
- The bus does not go where I need to go in Yuba City / Marysville (26.9 percent)
- The bus doesn't run on the days I want to travel (39.8 percent)
- The bus does not run early enough (25.8 percent)
- The bus does not run late enough (41.9 percent)
- The schedule requires too long a stay in Yuba City / Marysville (31.2 percent)
- The fares are too high (6.5 percent)
- I'm not aware of the bus services (29.0 percent)
- I prefer to drive (25.8 percent)
- I make multiple stops along the way (17.2 percent)

The survey respondents selected from a list of suggested improvements to the transit service. “Service on additional days” was requested the most (85 percent). The other listed improvements were selected half the time: “mid-morning run on existing days of service”, “mid-afternoon run on existing days of service”, and “evening run on existing days of service”. There were also various comments for suggested improvements which are displayed in Appendix F.

There were seven additional questions that were only offered to the nine onboard survey participants. Two riders boarded at 7AM, two boarded at noon, and the remaining skipped this question. Most of the riders (88 percent) walked to the bus stop and 33 percent were transferring to another bus to complete their trip. One rider needed a wheelchair lift to board or exit the bus. None of the riders were Yuba College students.

Sacramento Commuter Online Survey

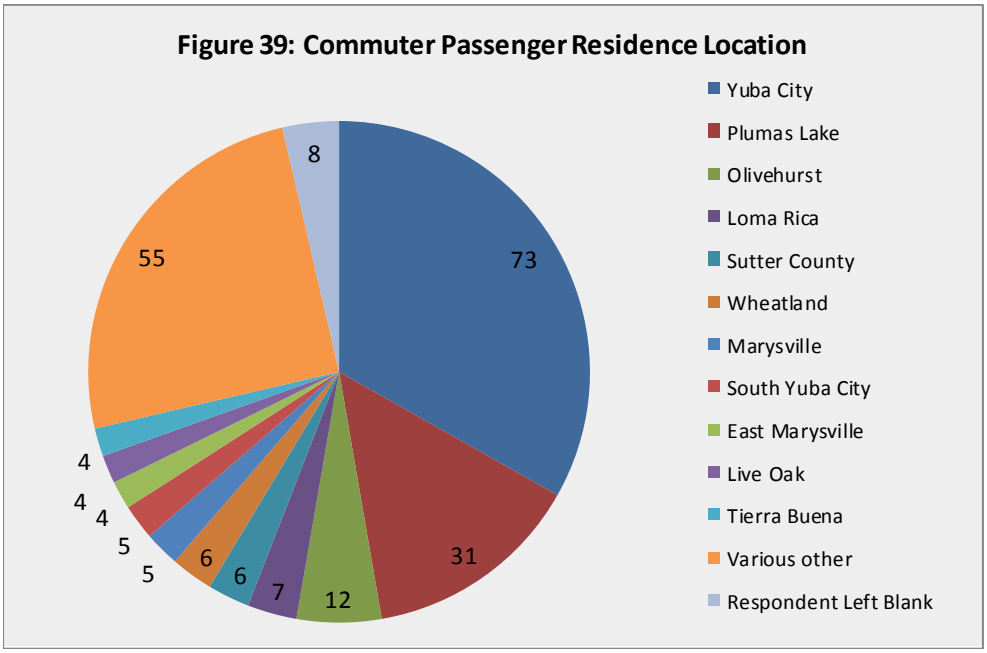
A survey for the Sacramento commuter routes was offered online through Survey Monkey during the month of September. The purpose of the survey was to assess commute patterns of riders and riders’ opinions of the commuter service. There were a total of 220 respondents. Several of the questions were open-ended, allowing respondents to explain their requests. In this case, only the common responses are summarized below and the full text responses are displayed in Appendix G.

Commute Patterns

Nearly one-third or 33 percent of the respondents live in Yuba City and South Yuba City, followed by Plumas Lake (14 percent). Olivehurst and Marysville, including East Marysville, also are the residential location of many passengers. Figure 39 displays the top 11 communities that had at least four respondents indicate it as their residence. Respondents were also asked to list the nearest cross streets to their residence. Within Yuba City, the following streets were listed most often: Stabler, Teesdale, Bogue Road, Garden Hwy, and Walton. Within Plumas Lake, Plumas Lake Blvd and River Oaks were cited the most.

Most people are using the Yuba-Sutter Transit commuter service between Yuba City/Marysville and Sacramento for the purpose of work. A large percentage of people are commuting from Bogue & Hwy 99 in Yuba City between the hours of 6:00 and 7:00 AM. The following are additional common departing locations and time intervals:

- Government Center between 5:15 and 6:30 AM
- McGowan Park and Ride between 6:00 and 7:00 AM
- Plumas Lake Park and Ride between 6:00 and 7:00 AM
- Sam's Club between 5:30 and 6:45 AM
- Walton between 6:30 and 8:00 AM



Most of the commuters (86 percent) drive themselves to their boarding locations from less than ten minutes away. A small amount of commuters (7 percent) are dropped off and the remaining carpool, walk or bike.

The respondents listed their typical travel destinations and 88 percent travel to Sacramento, primarily downtown such as 5th & J Street or 15th & N Street. Most of them walk to work from the bus stop and a small percentage need to transfer to another bus (6 percent). Of the respondents that transfer, most transfer to Light Rail.

The commute patterns outlined above are typical almost every weekday with 72 percent indicating daily use. There were 19 percent who indicated 3-4 days per week, 5 percent use it only 1-2 days per week, and the remaining respondents either skipped the questions or use the service less than 3 days in a month. Most of them pay with a Monthly Pass (79 percent) or a Punch Pass (13 percent). The survey questioned the length of time commuters have been using the Yuba-Sutter Transit Commuter service and the responses revealed the following:

- 59 percent for over five years
- 16 percent for 3-5 years
- 16 percent for 1-3 years
- 9 percent for less than one year

Commuter Service Riders' Characteristics and Opinions

Survey respondents were asked a variety of questions related to their circumstances if Yuba-Sutter Transit Commuter service was not available. The responses indicate that most of these commuters use the service out of choice rather than necessity and a majority of them are reimbursed through their employer. Almost all the commuters (96 percent) have a driver's license and 94 percent indicate they have a vehicle available to use for commuting. The survey requested that people indicate how they would travel if the commuter service was not available. Most people would drive if the service was not available with 60 percent opting they would drive themselves, 17 percent would vanpool and 20 percent would carpool. There were only four people who claimed that they would not commute if the service was not available.

Commuters have found out about the Yuba-Sutter Transit service through a variety of sources. The most cited source was friends with 39 percent claiming this, followed by 33 percent claiming to have merely seen the bus. There were 20 percent citing their employer as a source and 14 percent discovered Yuba-Sutter Transit through the website. The age of these respondents for the commuter survey was wide-ranging. The highest percentage was the age range 45 to 54 with 32 percent out of 213 respondents selecting this age range. The next common choices were 55 to 61 with 25 percent, and 35 to 44 with 20 percent.

Most of these commuters (95 percent) are full-time employed, primarily in downtown Sacramento, as indicated from earlier questions regarding commute patterns. The remaining respondents are part-time, retired, students, or self-employed. Also, 197 people or 92 percent out of 215 respondents claim their employer pays a portion of the fare for commuter service. Only five people skipped this question and the remaining 18 do not receive reimbursement for the fare. Those that do receive reimbursement for the fare, were asked to explain the various ways they are reimbursed:

- 74 respondents receive direct reimbursement
- 53 receive a payroll deduction
- 51 have employers who purchase a pass for them
- 66 respondents skipped the explanatory question or selected the "other" option, and the most common explanation was a partial subsidy from the employer for a pass.

Respondents were asked to rate the commuter service on a scale of a 1 to 5 rating with 5 indicating an excellent rating. As displayed in Figure 40, ratings of 4 and 5 were common in most of the areas with the exception of "bus stops and shelters" which received a rating of 3 or lower from almost 50 percent of its reviews. "Service frequency" and "convenience of schedule" received ratings of 3 or lower from around 40 percent of its reviews. The other areas that received lower ratings were "areas served" and "telephone information services". When asked to rank "overall service", and more than 80 percent rated this with a 4 or 5 score. "Travel time" and "driver courtesy" received a 4-5 rating in 80 percent of its reviews also.

Respondents were asked to select from a list of suggested improvements to the service such as "additional AM arrivals", additional PM departures", "new or extended routes", and "alternative stops". The option selected the most was "additional PM departures" with 118 requests for this improvement. There were 72 respondents that chose "additional AM arrivals" and many respondents also included this as a request in the text option "other". Additional common requests were:

- Additional midday service, especially in Plumas Lake
- Additional service, especially between Yuba City and Sacramento, Foothill and Sacramento, and Gridley and Sacramento
- Additional route to Natomas
- Additional runs on Highway 70
- Additional service to Arden Fair, West Sacramento, Elk Grove, and Davis
- Additional service to Live Oak, Wheatland, and Yuba College

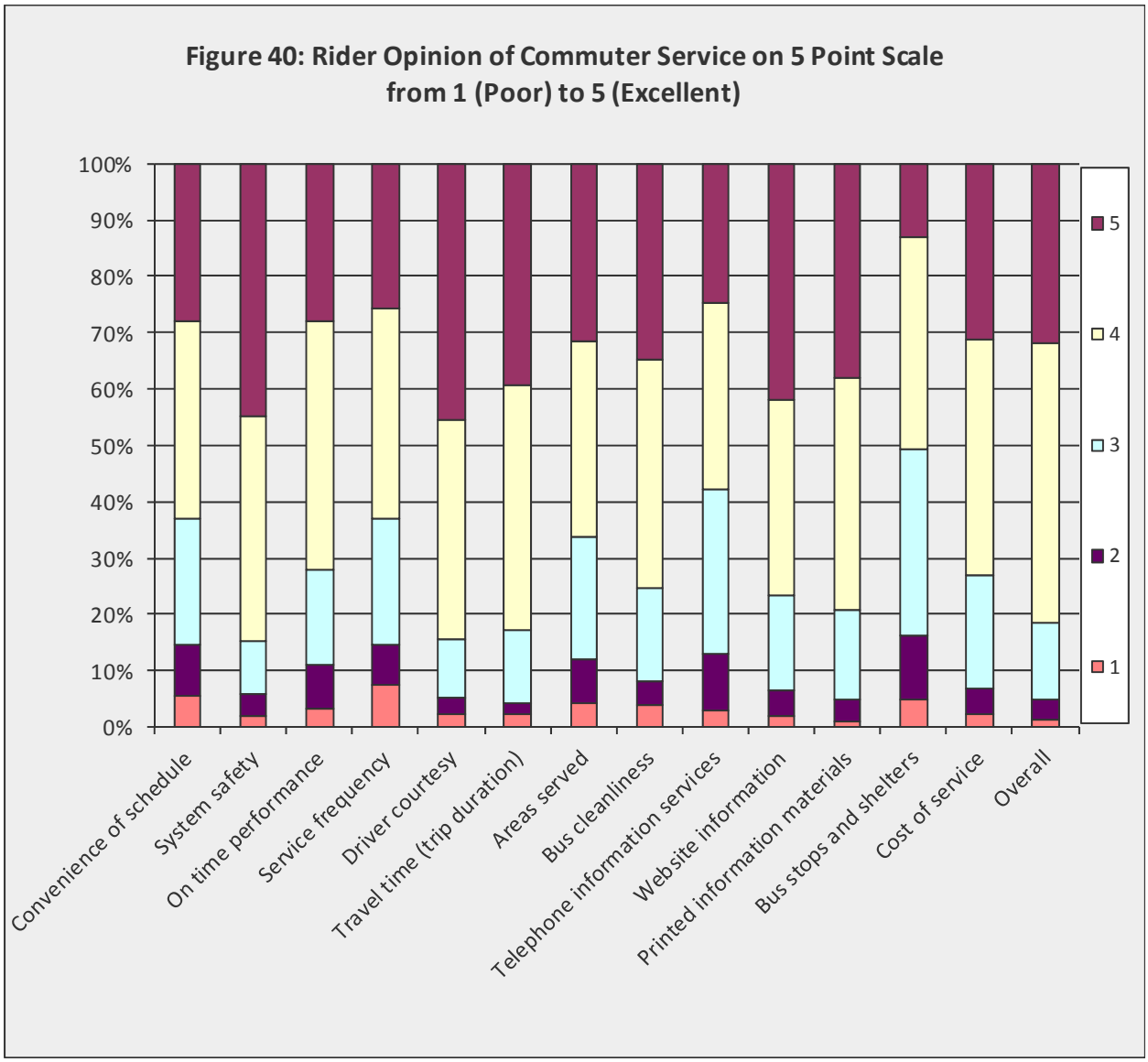


Table 35 lists the percentage of responses for customer service improvements from each community of residence.

Table 35: Customer Service Requests by Community Residence
Commuter Survey

	Total Repondents from each Community										
	Yuba City 73	Plumas Lake 31	Olivehurst 12	Loma Rica 7	Sutter County 6	Wheatland 6	Marysville 5	South Yuba City 5	East Marysville 4	Live Oak 4	Tierra Buena 4
Customer Service Requests											
Additional AM Arrivals Requested	30%	35%	25%	29%	67%	67%	0%	60%	50%	25%	25%
Additional PM Departures Requested	47%	61%	58%	43%	50%	67%	20%	60%	75%	75%	75%
New or Extended Routes	14%	32%	8%	14%	17%	17%	40%	60%	0%	75%	25%
Alternative Stops	10%	23%	0%	29%	17%	50%	0%	20%	0%	25%	0%

Stakeholder Interviews

Stakeholder interviews were conducted to gain a perspective from elected officials and non-profit transportation providers, and others who have an interest or represent those with an interest in transportation in the study area. A list of potential stakeholders was developed at the study kick-off meeting, and more than a dozen individuals were contacted to participate. Ultimately, four individuals participated in the interviews. Highlights of the interviews are summarized below.

- Issues:
    - Service is needed to the new Yuba College Sutter Campus
    - DAR is overloaded, requires a long wait time (particularly to return from appointments)
    - Limited service for outlying, rural areas
    - No Sunday or holiday or late evening service, and no wheelchair accessible taxis, so people dependent on mobility devices must rely on friends and family
    - We need collaborative solutions—pool transportation resources and share.
    - We need multi-modal, holistic planning so health care, school transportation, low income housing, senior housing are all addressed in a compatible way
    - Better bike and pedestrian connectivity with transit, particularly identifying biking opportunities to get to commuter options
    - On-time performance is a real problem, and may not just be related to highway construction. How do other congested communities deal with this? Is technology, such as something GPS-based, part of the solution?
    - Yuba-Sutter Transit serves the transit dependent very well. It would be a benefit to also make the service desirable to discretionary riders. But getting around by bus takes too long.

- Future Concerns
    - Aging population, particularly in Marysville, East Marysville
    - More residential growth than commercial growth, so continued need for commuter service to Sacramento, but also to Chico (a need now as well)

- Yuba City is expanding its sphere of influence southward and will build a large commercial center at Bogue Road and Highway 99 within the next 3 to 5 years
- Kmart is closing, but the commercial center will be redesigned and continue to be a draw
- Growth around Plumas Lake

- Other Comments

  - Needs within Yuba City and Marysville are pretty well met (other than wait times)
  - The $5.00 senior pass is a great program
  - The bike racks on the buses are a real asset
  - The youth fare program is great
  - The Connect Card is going to be a big benefit to Yuba-Sutter Transit

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Chapter 5
Transit Demand

INTRODUCTION

An important step in developing and evaluating transit plans is a careful analysis of the mobility needs of various segments of the population and the potential demand for transit services. The demand for transit services can be defined as, "The number of trips likely to be made over a given period within a given geographic area and at a given price and level of service." (*TRCP Report 161, Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation*).This is a somewhat difficult task for Yuba and Sutter Counties because they include areas of suburban development, small urban centers, and rural areas, and is thus not easily classified. Moreover, demand for one target market often overlaps with the needs of another target market. In this chapter, existing transit demand is quantified, and factors which will influence future demand are discussed.

EXISTING TRANSIT NEED AND DEMAND

The transit planning profession has developed differing methodologies for evaluation of transit demand in urban areas in comparison with small cities or rural areas. Accordingly, demand for Yuba City (population over 50,000) is evaluated separately from the remainder of the population in both counties. In addition, there are several sub-categories of demand that address both urban and rural areas. It is important to note that these various methods overlap, and the demand assumes a very high level of transit in both frequency and coverage. The demand estimation represents an upper limit of demand which is not typically feasible to meet. Nonetheless, identifying the relative need is helpful in terms of determining which areas of demand are most underserved and which areas have the greatest potential for new growth.

Employment Demand

Transit demand generated by persons commuting to employment sites is one area of demand to consider. Using the employment flow data presented earlier in Table 6, potential employment commute trips were identified in Yuba and Sutter Counties assuming the Census reported mode splits of 1.1% and 1.6% respectively. Using the mode split, and assuming employees make an average of two passenger trips daily, the potential number of trips by transit is identified in Table 36. Commute flow between and within Yuba and Sutter County as well as into Sacramento County. As indicated, the highest potential for commute transit trips is from Sutter County to other counties combined (175,100 annual one-way trips), followed by Yuba County to other counties (86,900). The commute pattern with the greatest demand which is served by public transit is within Sutter County (85,600 annual one-way trips).

General Public Demand

<u>Urbanized Area Demand Estimation Techniques</u>

The demand for general public trips in the urbanized portions of Yuba and Sutter counties is based upon a simple mode split which estimates that one percent of the population would use transit on a daily basis, making an average of 3.5 trips per day. This method generates an estimated demand for all trips within Yuba City at 678,700 transit trips annually.

Table 36: Yuba and Sutter County Employee Transit Demand

Employee Residential Location	Employee Work Location	Total Commuters	Transit Mode Share	Daily Commuters	Annual 1-Way Psgr Trips
Yuba County	Yuba County	4,553	1.1%	50	25,000
Yuba County	Sutter County	3,387	1.1%	37	18,600
Yuba County	Sacramento County	3,885	1.1%	43	21,400
Yuba County	Other Locations	15,798	1.1%	174	86,900
Sutter County	Sutter County	10,704	1.6%	171	85,600
Sutter County	Yuba County	3,471	1.6%	56	27,800
Sutter County	Sacramento County	4,796	1.6%	77	38,400
Sutter County	Other Locations	21,887	1.6%	350	175,100
				Total	**478,800**

Source: LSC, derived from U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2011

Rural Demand Estimation Techniques

Yuba – Sutter Transit Data

According to TCRP Report 161, the preferred approach to estimating demand for rural passenger transportation services is to base the estimate on the experience of the existing system. The workbook recommends computing the following ratios and applying these ratios to alternative service levels to estimate new ridership:

- Passenger-trips per capita
- Passenger-trips per vehicle mile (by service type)
- Passenger-trips per vehicle hour (by service type)

Table 37 displays transit demand ratios for Yuba-Sutter Transit by type of service. US Census American Community Survey data for 2012 (latest available) was applied to the FY 2013-14 operating statistics in Table 28. The local fixed routes which serve the more urbanized area of Yuba City as well as the small cities of Marysville, Olivehurst, and Linda generate a demand of 9.6 one-way passenger-trips per capita. The Sacramento Routes, which serve the same area in addition to Plumas Lake, generate a demand of 1.4 trips per capita. The rural routes and the DAR service generate demand of less than one trip per capita. Passenger trips per hour and mile follow the same pattern and were discussed in the performance indicators section.

Table 37: Yuba-Sutter Transit Demand Ratios

	Local Fixed Route	Rural Routes			DAR	Sacramento Routes
		Foothill	Live Oak	Wheatland		
Passenger Trips per Capita	9.6	0.6	0.2	0.2	0.6	1.4
Passenger Trips per Vehicle Mile	1.7	0.1	0.3	0.1	0.2	0.3
Passenger Trips per Vehicle Hour	20.7	2.5	6.0	2.0	2.8	11.7
Population Served	108,965	4,014	16,747	3,442	108,965	115,106

Source: Yuba-Sutter Transit, US Census ACS 2012 5 Year Estimates

General Public Rural Passenger Transportation Demand

Through the TCRP B-36 Project (Report 161), a variety of methods are available to calculate demand for public transit in rural areas. One method for estimating the demand for transit trips for both social service program purposes as well as non-social service program purposes relates expected demand to the estimate of need and the amount of service provided. Transit need is defined as, "The number of people in a given geographic area likely to require a passenger transportation service". This can be calculated by determining the difference between the number of trips made by persons who reside in households owning no personal vehicle and the number of trips that would likely be made by those persons if they had access to a personal vehicle. This measure is referred to as the Mobility Gap. (*TRCP Report 161, Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation*).

The General Public Rural Passenger Transportation Demand method was developed using data from the 2009 Rural NTD and data from the American Community Survey. This function accounts for the need for transportation services in a given area, regardless of the type of service needed and the amount of service provided. This method produces an estimate of how much demand will result related to the amount of service provided. This method can also be used to compare the change in demand associated with an expansion or reduction in service. The function is as follows:

Annual Demand on Rural Transportation Services = $2.44 \times (\text{Need}^{0.028}) \times (\text{Annual Vehicle-miles}^{0.749})$

Applying demographic information for the non-urbanized areas of Yuba and Sutter County, to the above formula equates to 145,800 annual passenger-trips.

College Student Demand

Yuba Sutter Transit serves the Yuba College Campus in Marysville; however it does not directly serve the Sutter Campus on Onstott Road in Yuba City or the satellite campus at Beale Air Force Base. Route 2 stops within one mile of the Sutter Campus. The majority of students live in Sutter County, not Yuba County where the main campus is located. Additionally, the Sutter Campus attracts high school students, particularly from River Valley High School, who wish to

take a few college classes before graduating from high school. There is a need to serve the Sutter Campus with public transit.

According to on-board surveys conducted as part of this SRTP effort, 26.8 percent of respondents stated that they are a registered Yuba College student. Applying this proportion to annual ridership on the local fixed routes equates to an estimated college student ridership 280,200 one-way passenger-trips.

Surveys at major institutions such as Seattle Community College and Portland State University have shown that anywhere from 29 to 44 percent of students use public transit as their primary form of transportation to school. These major urban areas offer a much more frequent level of transit service and parking at the school is cost prohibitive. However, by expanding Yuba-Sutter transit to serve the Sutter Campus as well as implementing a college pass program, student ridership demand will increase. According to college staff there is approximately 7,300 students between the two campuses. On-board surveys indicate that an average of 708 one-way passenger-trips are made each weekday by Yuba College students on Yuba-Sutter Transit (during the school year), or 304 round-trips per day. While the fact that many students do not attend classes every day make it not possible to calculate a specific transit mode share, it is clear that the current share is significant but there is also the potential for increased ridership.

SUMMARY OF TRANSIT DEMAND

A summary of the results of the various demand methodologies above are presented in Table 38. These estimates are not cumulative; some are different approaches to the same target market, and different methods forecast demand for different target markets. While the demand forecasts have highly variable results, they are useful in determining a range of service which might be appropriate in the future, particularly in light of what service is available. Table 38 also presents the current ridership levels on Yuba-Sutter Transit.

FUTURE TRENDS IN TRANSIT DEMAND

Future change in actual transit demand will be influenced by a variety of factors, including:

Increasing Fuel Costs – The increase in gas prices over the last several years has increased the demand for public transit services across the nation. Fuel increases particularly affect low income and discretionary riders, and has less of an impact on social service program-related demand.

Change in Senior Population -- The change in the older adult population will also impact transit demand. The elderly population will outpace other age categories in the coming decades. The number of mature retirees (age 74 – 84) is anticipated to increase by 31 percent from 2010 to 2020 while seniors age 85 and up are expected to increase by 43 percent. This will increase the demand for services, particularly DAR.

Changes in Travel Patterns Among Young Adults – There is increasing evidence that young adults are shifting their travel away from auto use, and delaying their obtaining of a driver's license. Researchers indicate that this is probably due to increased costs of auto ownership and use, reduced employment and income, as well as that the spread of mobile internet technologies make travel by transit more attractive relative to driving. As a result, transit systems are seeing growing use of services among teenagers and young adults.

Table 38: Summary of Yuba and Sutter Counties Transit Demand

Estimation Methodology	TOTAL
General Public Demand	
General Public Rural Passenger Transportation	145,800
Urban Core Mode Split (Yuba City Demand)	678,700
Employment Demand	478,800
College Student Demand	280,200

NOTE: Demand Methodologies overlap. Demand assumes high level of transit service and coverage.

Current Ridership in Yuba and Sutter Counties	TOTAL
Local Fixed Route	1,045,508
Dial-A-Ride	69,672
Rural Routes	6,218
Sacramento Routes	158,213
Total Systemwide	**1,279,611**

Source: LSC Transportation Consultants, Inc.

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Chapter 6
Service Alternatives

INTRODUCTION

This document presents the analysis of a wide range of potential service alternatives for the Yuba-Sutter Transit system. It builds upon the findings regarding existing conditions and transit demands as presented in *Yuba Sutter Short Range Transit Plan Technical Memorandum One: Existing Conditions*. Alternatives regarding the Local Fixed Route system are presented first. This is followed by a discussion of Commuter Service alternative and Rural Route alternatives. A comparison and performance analysis of these various service alternatives is then presented. Finally, alternatives for the demand response services are presented.

It should be noted that these are simple options for discussion at this point, and no firm recommendations are presented in this document. Input received regarding the various alternatives will be carefully considered in developing an overall short-range plan for Yuba-Sutter Transit, in the next element of the planning study.

LOCAL FIXED ROUTE ALTERNATIVES

Increase Frequency of Routes 1 and 3 to 20 Minutes

Connecting all the other routes, Route 1 is the “backbone” of the local route system. In addition, both Route 1 and Route 3 are the most productive routes in the system, carrying the greatest number of passengers for every vehicle-hour of service. One reasonable option to improve local route service quality would be to operate an additional two buses on Route 1 and one bus on Route 3, scheduled to provide service every 20 minutes over the current service span.

This would improve the convenience of the transit service for the roughly 40 percent of all local route passengers that use Route 1 or 3. Some current timed transfers with Route 2 (which would be the only half-hourly route) would require a longer wait. However, improving frequency would help address the on-time performance in two ways. First, by spreading ridership over more runs, the average boardings per run would be reduced, thereby reducing boarding delays and improving on-time performance. For those transfers that are missed, moreover, the wait for the next departure would be reduced.

Ridership for this type of service change can be analyzed using an “elasticity analysis”. Based upon the concepts of microeconomics, elasticity analysis is a standard transit planning method that considers the relationship between the change in a service variable (in this case, the frequency of service) and the change in ridership. An elasticity factor is applied that is based on the change in ridership associated with service changes observed in similar systems in the past. Applying this methodology to the existing Route 1 and Route 3 ridership figures, the impact of this service alternative is estimated to increase total annual ridership (sum of both routes) by 136,600 one-way passenger-trips per year.

This alternative would increase overall service levels by 10,800 vehicle-hours and 129,450 vehicle-miles per year. Applying the FY 15/16 cost model, this would increase annual operating costs by approximately $462,600 per year, as shown in Table 39. At current average fares per passenger boarding on each route, the additional passenger revenue would total approximately $82,300 per year. Overall operating subsidy requirements would therefore increase by $380,300 annually.

TABLE 39: Local Route Service Alternatives

Fiscal Year 2015-16 — *Costs Exclude Allocated Fixed Costs*

Alternatives / Options/Details	Additional Vehicles	Annual: Operating Days	Annual: Vehicle Service.. Miles	Annual: Vehicle Service.. Hours	Annual: Marginal Operating Cost	Ridership Impact (One-Way Trips): Daily	Ridership Impact (One-Way Trips): Annual	Annual: Farebox Revenue	Annual: Subsidy Required
Increase Frequency of Routes 1 and 3 to 20 Minutes									
Route 1	2	304	73,760	7,230	$298,600	294	89,500	$52,500	$246,100
Route 3	1	304	55,690	3,650	$164,000	155	47,100	$29,800	$134,200
Total	3	304	129,450	10,880	$462,600	449	136,600	$82,300	$380,300
Sutter County Center Shuttle									
Spring and Fall Semesters Only	1	167	30,113	1,917	$86,700	137	22,800	$14,500	$72,200
Spring and Fall Semesters and Summer Session	1	191	34,441	2,115	$96,600	132	25,200	$16,000	$80,600
Spring, Fall and Summer -- Monday Through Thursday Only	1	159	28,839	1,771	$80,900	141	22,400	$14,200	$66,700
Year Round Sutter County Center -- Tierra Buena Route	1	252	55,498	3,783	$168,400	160	40,300	$25,600	$142,800
Revise Route 2 to Serve Sutter County Center									
Eliminate Senior Center Loop	0		-12,300	0	-$8,800		0		
Extend to College			47,700		$34,200		29,200		
Eliminate Senior Center Loop and Drop 2/4A Timed Transfer	0	304	35,400	0	$25,400	96	29,200	$18,500	$6,900
Revise Route 2 Schedule to 40 Minute Headways	0	304	300	0	$0	-38	-11,700	-$7,400	$7,400
Route 2 Realignment / Shorten Route 5	0	304	400	0	$300	72	22,000	$13,900	-$13,600
Revise Route 4 to Serve Linda On All Runs (Drop Yuba City Connection)	0	304	5,066	0	$3,600	32	9,800	$5,800	-$2,200
Half Hourly Service on Route 4 Weekdays	2	252	61,310	5,740	$239,000	271	68,400	$37,300	$201,700
Revisions to Route 5									
Walton Avenue Rather than the Diversion to Winco/Cinemark	0	304	-6,800	0	-$4,900	-12	-3,600	-$1,900	-$3,000
Realign on Germaine Drive Instead of Sanborn Road	0	304	-3,000	0	-$2,200	-2	-600	-$300	-$1,900
Realign on Phillips Avenue Rather than Garden Highway	0	304	-5,300	0	-$3,800	-9	-2,800	-$1,400	-$2,400
Realign on Tharp Road Rather than Harter Road	0	304	-6,300	0	-$4,500	-10	-3,000	-$1,500	-$3,000
Route 3 / Route 6 Realignment	0	304	-18,500	0	-$13,300	59	18,000	$11,000	-$24,300
Weekday Evening Service									
1 Additional Hour -- All Routes	0	252	41,479	3,528	$149,600	148	37,300	$21,900	$127,700
1 Additional Hour -- All Routes (Hourly on Routes 1, 2 and 3)	0	252	27,090	2,268	$96,500	106	26,700	$15,600	$80,900
2 Additional Hours -- All Routes (Hourly on Routes 1, 2 and 3)	0	252	54,180	4,536	$193,000	159	40,000	$23,400	$169,600
3 Additional Hours -- All Routes (Hourly on Routes 1, 2 and 3)	0	252	81,270	6,804	$289,500	198	50,000	$29,300	$260,200
3 Additional Hours on 1, 2B, 3, 4A, 5, 6 (Hourly Service on Routes 1, 2 and 3)	0	252	64,827	5,292	$226,300	160	40,300	$23,600	$202,700
Extend Saturday Service by 1 Hour	0	52	7,004	598	$25,300	85	4,400	$2,600	$22,700
Sunday Service -- Hourly Service on Routes 1, 2A, 3, 4A, 5, 6, with DAR									
Fixed Route	0	52	37,911	3,087	$132,200	1,085	56,400	$29,100	$103,100
DAR	0	52	10,617	832	$35,900	60	3,100	$5,600	$30,300
Total	0	52	86,439	7,006	$168,100	1,145	59,500	$34,700	$133,400

Revise Route 1 to Change Yuba Sutter Mall Service

Since the initiation of fixed route service, Route 1 has served the Yuba Sutter Mall by entering Mall property from Colusa Avenue and serving a stop immediately to the west of the main southern Mall entrance doors. While this has certainly been a convenience to transit passengers, it increases the running time of Route 1 and creates conflicts between Mall traffic and the four buses per hour serving this stop. For these reasons, transit systems typically avoid routing buses through private parking lots. An option that is currently under consideration is to revise Route 1 in the westbound direction to travel north on Gray Avenue (rather than turn west on Colusa Avenue) to serve a stop at Ainsley Avenue before continuing northbound before turning west on Butte House Road and south on Stabler Lane to Walton Terminal. In the eastbound direction, Route 1 would use the current loop along Lassen Boulevard, Harter Road and Butte House Road, and then continue east on Butte House Road (rather than turning south on Stabler Lane and east on Colusa Avenue) to turn south on Gray Avenue and serving a new stop at the intersection with Ainsley Avenue. In both directions, the existing Route 2 stops on Butte House Road would also be served by Route 1 buses.

These new stops at Gray/Ainsley will be provided with a shelter in the southbound direction and an accessible path to the Mall (provided by the Mall owner), while the traffic signal at this location provides for good pedestrian protection crossing the streets. As these new stops are a relatively convenient walk (250 to 350 feet) to the nearest Mall entrance, the impact on convenience to the transit passengers will be modest. In addition, by reducing the number of turns along the route, avoiding the congestion within the mall parking lot as well as the substantial congestion at Colusa/Stabler (in the eastbound direction), this modification will reduce Route 1 running time by 1 to 2 minutes in each direction, which will help to solve the existing on-time performance issues on this key route. Finally, this change will result in four additional buses per hour serving the stops along Butte House Road (City Hall, Target, Sutter County Health Department, and Sutter County Courthouse) which will reduce the need for passengers to transfer to/from Route 2 to access these destinations, and will also provide additional service near the Senior Center. In turn this will result in a modest increase in ridership. This modification will have no impact on operating costs.

Revise Route 2 to Serve Sutter County Center

<u>Eliminate Senior Center Loop and Drop 2/4A Timed Transfer</u>

One element of Route 2 that could be modified to improve on-time performance and to provide some running time for other uses would be to eliminate the clockwise loop made by both Route 2A and Route 2B around Washington Avenue, Clark Avenue, Ainsley Avenue and Gray Avenue. If Route 2 were to instead stay on Gray Avenue between Butte House Road and Washington Avenue, it would reduce the total route length by 0.6 miles on each run counterclockwise run and 1.2 miles on each clockwise run. This would reduce running time by approximately 2 minutes in the counterclockwise direction and 4 minutes in the clockwise direction. Over the course of the year, this equates to a reduction of 12,300 vehicle-miles of travel, which would reduce operating cost by $8,800 per year.

This loop serves a total of three bus stops:

1. Washington/Clark (Total boarding plus alighting = 24 on weekdays, 5 on Saturdays)
2. Ainsley/Clark (Total daily boarding plus alighting = 32 on weekdays, 14 on Saturdays)

3. Ainsley/Senior Center (Total daily boarding plus alighting = 26 on weekdays, 20 on Saturdays)

With the realignment, the passengers using the Washington/Clark and Ainsley/Clark stops would need to shift to the stops along Gray Avenue, one quarter mile to the west. The passengers using the Ainsley/Senior Center stop would need to walk to the new Gray/Ainsley stop 300 feet to the west.

Some of the 56 passengers per day boarding or alighting at the stops along Clark Avenue would be dissuaded from using the transit program by the longer walk (particularly those living between Clark Avenue and Live Oak Boulevard. This would result in a reduction of approximately 20 boardings / alightings (or 10 round-trips) per day. On the other hand, all 820 daily Route 2 passengers would benefit from better on-time performance, and those traveling on the northwest portion of the route would benefit from shorter travel times. On balance, this option is estimated to result in a negligible net impact on ridership.

At present, the Route 2 schedule is defined at two points. It is set to provide timed transfers at Walton Terminal (to Routes 1 and 5) at approximately 20 and 50 minutes past each hour. It is also set to provide timed transfers at Alturas/Shasta between Route 2A and Route 1 eastbound at 15 minutes past the hour and Route 4A at 17 minutes past the hour. At Alturas / Shasta, Route 2B is scheduled only a few minutes after Route 1 eastbound and a few minutes before Route 1 westbound. Overall, this provides good connections for passengers traveling between northern Yuba City and Marysville and beyond and for passenger travelling from Marysville to southern Yuba City, as well as for passengers traveling between northern and southern Yuba City and the Route 1 destinations to the west. However, it does not provide good connections for southern Yuba City residents traveling to Marysville and beyond.

The southern portion of Route 2 between Walton Terminal and Alturas/Shasta is 5.6 miles in length, while the northern portion is 5.7 miles for Route 2A and 5.2 miles for Route 2B. Excluding layover time, the northern portion is scheduled to take 24 minutes, while the southern portion takes 28. This schedule corresponds to an average operating speed on the northern portion of 14.3 miles per hour for Route 2A and 13 miles per hour for Route 2B, while the southern portion is scheduled at only 12.0 miles per hour (relatively slowly, in order to make the Alturas/Shasta time transfer). If this southern portion were rescheduled at 13 miles per hour, that would provide an additional 2 minutes each hour of available time. Eliminating any layover at Alturas / Shasta (beyond the time needed for passenger boarding / alighting) would provide approximately 3 minutes each hour. Including the reduction in running time associated with dropping the Washington / Clark / Ainsley loop, this would provide 9 minutes each hour for Route 2A and 7 minutes for Route 2B. Some of this time could be allocated to increasing the layover at Walton Terminal, improving on-time performance.

The quickest option to extend Route 2 to serve the Sutter County Center would be to travel in both directions along Live Oak Boulevard, Pease Road and Onstott Road. This would add 3.5 minutes to the length of the route, and require 7 to 8 minutes of running time. It would also allow service to the residential neighborhoods along Pease Road. On balance, there would be adequate time to serve the Sutter County Center if the other routing and schedule changes were made. However, the existing on-time service problems would remain essentially unchanged. At Alturas / Shasta, Route 2A would provide a slightly less convenient transfer with Route 1. Route 2B would be timed well with Route 1 eastbound, but would be far off of the current Route 1 westbound schedule. Considering these impacts and the level of transfers occurring between Routes 1 and 2 at Alturas / Shasta, this change in transfer convenience

would reduce ridership by an estimated 4,200 per year. On the other hand, the extension along Pease Road would provide service to an estimated 970 new residents that would generate approximately 8,200 passenger-trips per year. Including the Sutter County Center ridership, this option would yield a total increase of 30,000 passenger-trips per year.

Overall, this option would not add hours of service, but would increase overall mileage. As a result, annual operating costs would be increased by a net of $25,400. Farebox revenue (assuming no change in fare policies) would generate $18,500 per year, yielding a net increase in subsidy needs of only $6,900.

Sub-Option: Hourly Route 2 Service to Sutter County Center

As Route 2 is operated half-hourly, one sub-option would be for only every other Route 2 bus to extend north to the Sutter County Center, while the other buses remain on the current route. This would result in hourly service to the Sutter County Center (in both clockwise and counterclockwise directions), as well as hourly service around the Washington/Clark/Ainsley loop. However, this runs the potential of being quite confusing to passengers.

Sub-Option: Eliminate Senior Center Loop and Revise Schedule but Do Not Serve Sutter County Center

Another sub-option would be to implement this alternative except the extension to Sutter County Center. The additional running time would be used to improve on-time performance. This would reduce operating costs by $8,800 per year, with a negligible overall impact on ridership, and effectively solve Route 2's current on-time performance problem.

Revise Route 2 Schedule to 40 Minute Headways

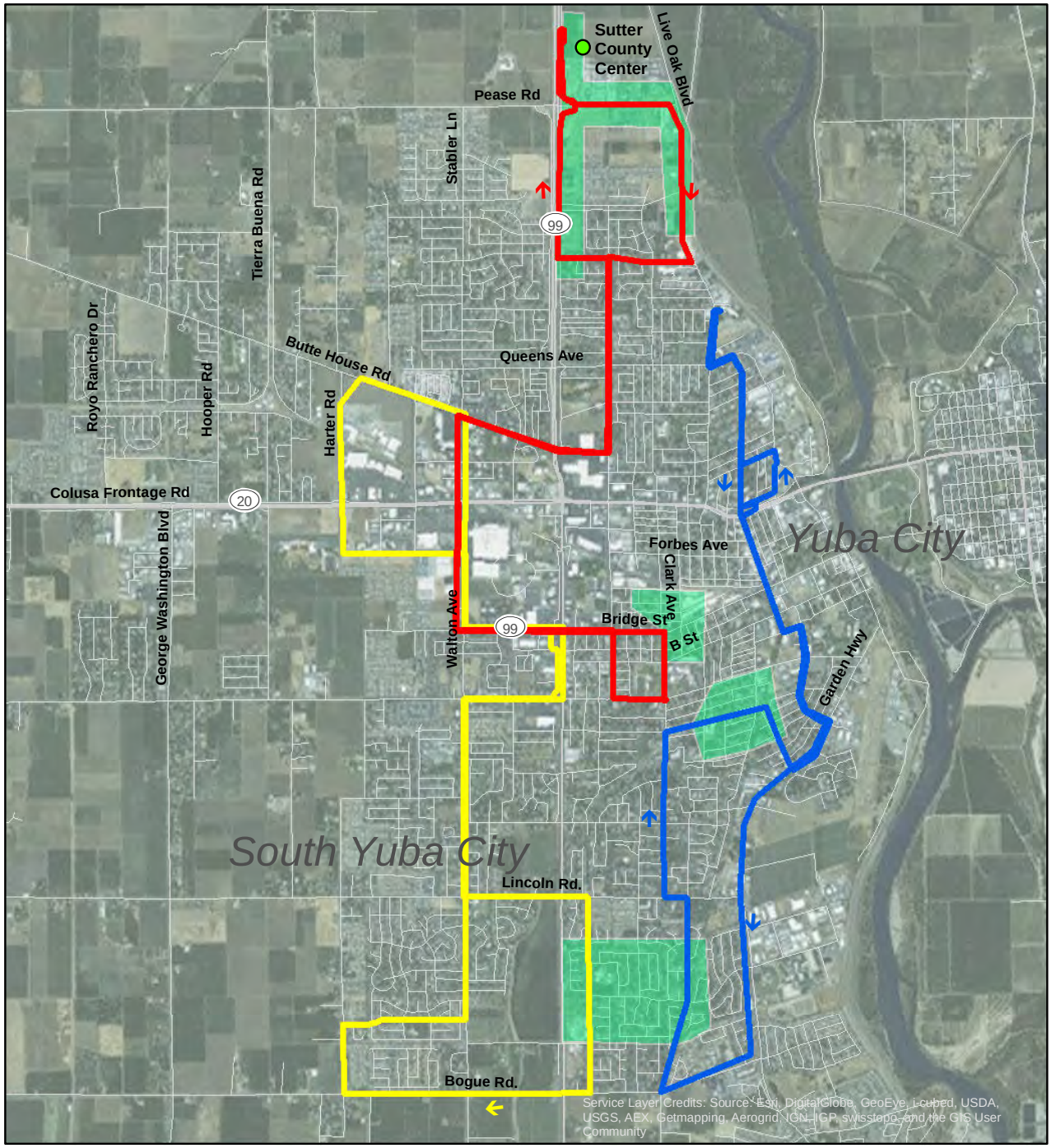
Another option for Route 2 that provides service to Sutter County Center would be to maintain the existing route, add the northern extension via Live Oak Boulevard, Pease Road and Onstott Road, and extend the route timing to operate a full loop in 80 minutes. Service would then be provided every 40 minutes, rather than the current 30 minutes. This option would provide more than adequate time to make good transfer connections, particularly if Route 1 is modified to 20 minute headways (as discussed above). Annual hours of service would remain unchanged and the additional mileage associated with extension to the Center would be largely offset by the reduced number of runs, resulting in negligible impact on operating costs. The reduction in service frequency and the increase in in-vehicle travel times, however, would result in a substantial reduction in the quality of service and thus ridership. Even with the additional ridership generated by the Sutter County Center, an elasticity analysis indicated that a net loss of 11,700 passenger-trips per year would result. For this reason, this alternative is not considered further.

Reconfiguration of Yuba City Local Routes

A more significant option for local route services (while extending service to the Sutter County Center) would be to "break up" the existing Route 2 large bi-directional loop into two largely linear routes. As shown in Figure 41, these new routes would be as follows:

- The eastern portion of the existing Route 2 service area would be served by a new route (discussed in this document as **Route 2 East**). Starting from the Alturas / Shasta transfer point, it would first travel east on Alturas Street, north on Market Street (serving a stop at

Figure 41
Route 2 Realignment Alternative



Ampla Health) and west on Del Norte Avenue before heading north as far as the Yuba Sutter Mental Health Center on the existing Route 2 alignment before return to Alturas / Shasta. The route would then head south on the existing Route 2 to Lincoln Road, but then extend further south to Bogue Road. It would then head east on Bogue Road and turn north on Railroad Avenue, west on Lincoln Avenue, north on Bunce Road, east on Morton Street and south on Plumas Boulevard before turning north on Garden Highway and returning to Alturas /Shasta via the current Route 2. This route is 11.1 miles in length, and two buses would be used to provide service twice each hour.

- The western portion of Yuba City would be served by **Route 2 West**. This route would depart Walton Terminal (east side) and travel north and east on Walton Avenue, Butte House Road and Gray Avenue along the existing Route 2 as far as Northgate Drive. The route would then turn west on Northgate and north on Onstott Road to the Sutter County Center. Heading south, it would make a loop via Pease Road, Live Oak Boulevard before returning to Walton Terminal (west side) via the existing Route 2. It would then travel south on Walton Avenue and east on Bridge Street. Reaching Gray/Bridge, it would make a loop along Bridge, Clark Avenue, Franklin Avenue and Gray Avenue before returning to Walton Terminal via existing Route 2. This route is 12.0 miles in length and can be operated in one hour. Two buses would provide service twice each hour.

- **Route 5** would be modified slightly to travel south on Phillips Avenue between Lincoln Road and Bogue Road, rather than along Garden Highway. This reduces the length of Route 5 by a full 1.5 miles, which would effectively solve the existing very poor performance of this route (45 percent of runs are more than 5 minutes late).

This reconfiguration would not change the total number of buses in operation (five) or the hours of service. Overall mileage changes would largely balance, yielding a very small annual increase of 400 additional vehicle-miles and a cost increase of $300 per year.

Service would only be eliminated to the following stops:

- Lincoln Road / Jones Road on Route 5 (Daily Boardings & Alightings = 2)
- Washington / Clarke on Route 2 (Daily Boardings & Alightings = 24)
- Ainsley / Clarke on Route 2 (Daily Boardings & Alightings = 32)

On the other hand, this reconfiguration would provide the opportunities for new stops serving new residential areas as follows, and as shown in Figure 41:

- The residential areas along Onstott Road north of Northgate Drive, as well as along Pease Road east of SR 99
- The area along Bridge Street (near Morley Park) in central Yuba City
- The area along both sides of Morton Street between Park Avenue and Percy Avenue (including Park Avenue Elementary School)
- In southern Yuba City, the large residential area more than a quarter mile south of Lincoln Road, more than a quarter mile north of Bogue Road, more than a quarter mile west of Garden Highway, and east of SR 99

Table 40 presents an evaluation of the population and the characteristics of these potential newly served areas. In total, these areas encompass approximately 1,653 households and 4,600 persons. The northern area along Pease Road and Onstott Road has a relatively high

proportion (23 percent) of elderly residents. The area centered on Morton Street / Main Street has a relatively high proportion of households below poverty (27 percent) and/or that do not have a vehicle (7 percent). In addition, the larger area in southern Yuba City has a relatively high proportion of residents with a disability (20 percent). Considering these factors, overall service to these new areas would generate an estimated 33,000 additional transit boardings per year.

TABLE 40: Demographic Characteristics of Potential New Service Areas With Yuba City Local Route Reconfiguration

				Demographic Characteristics of Census Transit With New Service Area					
Area	Total Persons	Housing Units	Census Tract	Youth (10-17)	Elderly (65+)	Persons with a Disability	Below Poverty	Zero Vehicle Households	Estimated Annual Transit Ridership
Total Existing Local Fixed Route Service Area				*12.1%*	*11.7%*	*14.3%*	*18.2%*	*6.4%*	
Pease Road/Onstott Road	836	366	506.03	12.5%	22.9%	15.6%	4.2%	3.5%	5,600
Bridge St. East of Clark Ave	308	144	502.02	9.6%	12.8%	13.9%	8.0%	3.2%	1,800
Morton St. / Main St.	1,068	367	503.02	13.0%	8.6%	10.9%	27.0%	7.0%	10,900
South Phillips / Railroad	2,361	776	504.01	10.4%	11.8%	20.1%	10.0%	3.0%	14,700
	4,574	1,653							33,000

This reconfiguration would also have other impacts on ridership:

- Perhaps most significantly, "cutting" the existing Route 2 loops at the northern and southern ends would require out-of-direction travel and/or additional transfers for many existing passengers. As an example, a trip from the Garden Highway area to Yuba City High School, which now requires a roughly 10 minute trip on Route 2B, would instead require a trip north to Alturas / Shasta on Route 2 East, transfer to Route 1 westbound, a second transfer to Route 2 West, and then a southbound trip. Depending on timing of Route 1, this would require a minimum of 40 minutes. Another example would be a trip from the northern portion of Northgate Drive to Marysville: Rather than boarding Route 2A for a clockwise trip to Alturas / Shasta and a transfer to Route 1 eastbound, passengers would board Route 2 West in the southbound direction, and transfer to Route 1 eastbound at Walton Terminal. While the number of transfers would not increase, the in-vehicle travel time would increase by 26 minutes. Overall, this is estimated to result in a loss of approximately 29,000 annual passenger-trips.

- As discussed above, ridership would be generated by adding service to the Sutter County Center, while ridership would be reduced by elimination of service to Washington / Clark and Ainsley / Clark.

- By reducing the size of the southern loop on Route 5, in-vehicle travel times would be reduced and on-time performance improved. This would increase Route 5 ridership by approximately 7,000 passenger-trips per year.

Overall, this reconfiguration is estimated to increase ridership by an estimated 22,000 passenger-trips per year. Considering the additional passenger revenues, overall subsidy requirements would be reduced by an estimated $13,600. On-time performance would also be

improved over current conditions. While these are good arguments for realignment, the fact that many existing Route 2 passengers would be negatively impacted (through additional travel time or need to transfer) needs to be carefully considered.

Revise Route 4 to Always Serve Linda (Drop Yuba City Connection)

At present, Route 4 consists of a large two-way loop around Marysville, with extensions. Route 4A buses travel the loop in the clockwise direction each hour and extend across the 10th Street Bridge to the Alturas / Shasta terminal. Route 4B buses operate hourly in the opposite, counterclockwise direction and extend south across the Yuba River to the North Beale Transfer Center and the Peach Tree Clinic. This operating plan was initially developed to avoid the need for Marysville passengers to transfer twice to complete some trips, such as a trip to the northern or southern portions of Route 2, by providing direct transfers between Route 4 and Routes 2, 3 and 6. However, it has proven confusing to passengers (who sometimes find themselves on the wrong bus) and results in long in-vehicle travel times for specific trips. As an example, since only Route 4B serves the North Beale Transit Center and it operates in the counterclockwise direction, a trip from Linda to the Marysville High School area (where the continuation high school and Charter Academy are also located) takes 27 minutes. One option, particularly if Route 1 were expanded to 20 minute headways, would be for both 4A and 4B to serve the North Beale Transit Center, dropping Route 4A service to Alturas /Shasta.

Assuming no change in Route 1 schedules, this alternative would best serve passengers if the 4A schedule were modified to depart Yuba County Government Center at 52 minutes past the hour, providing timed transfers with the arriving eastbound Route 1 bus. This would result in 4A at North Beale Transit Center between 29 and 34 minutes past the hour. Shifting the Route 3 schedule forward by approximately 7 minutes would allow direct transfers between Routes 3 and 4A at North Beale Transit Center, improving overall connectivity.

The onboard surveys (as summarized in Table 34 of Technical Memorandum One) indicate that approximately 8 percent of Route 4 passengers transfer to or from Route 2. This equates to an estimated 18,200 transfers between Routes 2 and 4 each year. In comparison, 10 percent of Route 4 passengers transfer to Routes 1, 3 or 6 in Linda. Over an average weekday, 111 passengers board or alight at Alturas / Shasta on Route 4A, while 173 board or alight at North Beale Transit Center.

With this alternative, the passengers traveling between Route 4 and Route 2 would need to transfer to Route 1(probably at the Yuba County Government Center) and then transfer a second time at Alturas / Shasta. The additional travel time and inconvenience of this double transfer would reduce ridership by an estimate 3,300 passengers per year. However, this modification would provide half-hourly Route 4 service to two of the busiest stops on Route 4: North Beale Transit Center and Peachtree Clinic. This would increase ridership by an estimated 10,700 passenger-trips per year. Service to the existing stop at Market & Lamon (Ampla Health) would impact the 9 daily passengers boarding or alighting each day at this stop, requiring them to travel the quarter-mile to Alturas / Shasta. Finally, passengers traveling between Linda/Olivehurst and Marysville would no longer have to travel “the long way around” on one leg of their trip or the other, which would increase ridership by 2,400 passengers-trips per year. Overall, Route 4 boardings would be increased by an estimated 9,800.

As the extension to North Beale is 0.8 miles longer than the extension to Alturas / Shasta, this option would increase annual mileage. As a result, operating costs would increase by $3,600 per year. However, additional fare revenues would total $5,800, yielding a net reduction in

subsidy needs of $2,200 per year. This would also reduce the bus congestion at Alturas/Shasta, improving operations and reducing impacts at this transit center.

Half-Hourly Service on Route 4

Of the local routes that currently offer only hourly service (Routes 4, 5 and 6), Route 4 has the highest annual ridership as well as the best productivity. It is therefore the logical next candidate for half-hourly service. In addition to providing more convenient service throughout Marysville, this would result in better transfer opportunities to the half-hourly Routes 1, 2 and 3, and would also help with on-time performance issues by spreading passenger boarding activity over a greater number of runs. Eleven additional runs of both 4A and 4B would be needed, along with two additional buses in the fleet. This would incur an operating cost of $239,000 per year. The resulting growth in ridership was calculated through an elasticity analysis to be 68,400 additional boardings per year. Subtracting the $37,300 estimated increase in farebox revenues, total operating subsidy requirements would increase by $201,700.

New Yuba College Sutter County Center Route

A new service designed to serve the Sutter County Campus would consist of a direct route between the Walton Terminal and the Center. Departing Walton Terminal, the bus would turn right on Lassen Boulevard, right on Harter Road, right on Colusa Highway (SR 20), left on SR 99, exit at Queens Avenue and left on Onstott Road to the campus. The return route would be identical, except that the inbound bus would turn left off of SR 20 at Walton Avenue to return to the Walton Terminal. This route is 7.9 miles in length (round-trip). It could be operated in 22 to 24 minutes per run, allowing one vehicle to provide two runs per hour while still providing roughly 10 minutes for layover and driver break. (Another option would be to continue north on SR 99 to Eager Road and returning south on Onstott Road to the Sutter County Center, which may reduce running time.)

This service would only operate on school class or registration days. Two options were considered: serving the Spring Semester and Fall Semester only (a total of 36 weeks) or also adding service in the Summer Session (6 additional weeks). Consistent with the class schedules, services would be operated between 7:15 AM and 6:30 PM (including deadhead) on Mondays through Thursdays, and between 7:15 AM and 3:30 PM on Fridays (excluding Summer Session, when no Friday classes are held). Applying the cost model, this service would incur an operating cost of approximately $86,700 per year for Spring/Fall service only, or $96.600 for Spring/Summer/Fall service.

Ridership potential for this service can be estimated by considering the ridership currently generated at the Yuba College campus. At present, the Yuba College main campus generates approximately 462 passenger boardings and alightings per weekday, excluding transfers. Total enrollment at the Sutter County Center is currently 38 percent of enrollment at the main campus. In addition, a review of the Spring 2015 schedule of classes for the Sutter County Center indicates that Friday activity is substantially lower than other weekdays. Of the total of 268 scheduled classes per week, only 5 classes are held on Fridays. Of these five, three have alternative schedules that could allow a student to complete the course without a class on Fridays, leaving only two (Mass Communications and Introduction to Online Learning) that would require a class on Fridays. Based on this pattern and the relative enrollment levels, potential ridership at the Sutter County Center is estimated to be 175 passenger-trips on Monday through Thursday and 13 on Fridays during the Spring and Fall Semesters, and 100 on Monday through Thursday during the Summer Session. Over the year, this would total 22,800

passenger-trips if service is provided only during the Spring and Fall Semesters, and 25,200 if service is also provided during the Summer Session. These passengers (assuming typical fares) would generate $14,500 in farebox revenues during the Spring and Fall Semesters and an additional $1,500 during the Summer Session. Overall operating subsidy requirements would equal $72,200 per year if operated in spring and fall only, or $80,600 if summer is also added.

Shuttle on Mondays through Thursdays Only for Spring, Summer and Fall

As discussed above, ridership potential during the Spring and Fall Semesters is much lower on Fridays, reflecting the very low number of classes held on Fridays. Given this pattern, a realistic option would be to limit service to Monday-Thursday only. This option would cost $80,900 in operating costs, and serve 22,400 annual passenger-trips. Subtracting $14,200 in passenger revenues, net operating subsidy requirements for this option would be $66,700.

New Route – Sutter County Center and Tierra Buena

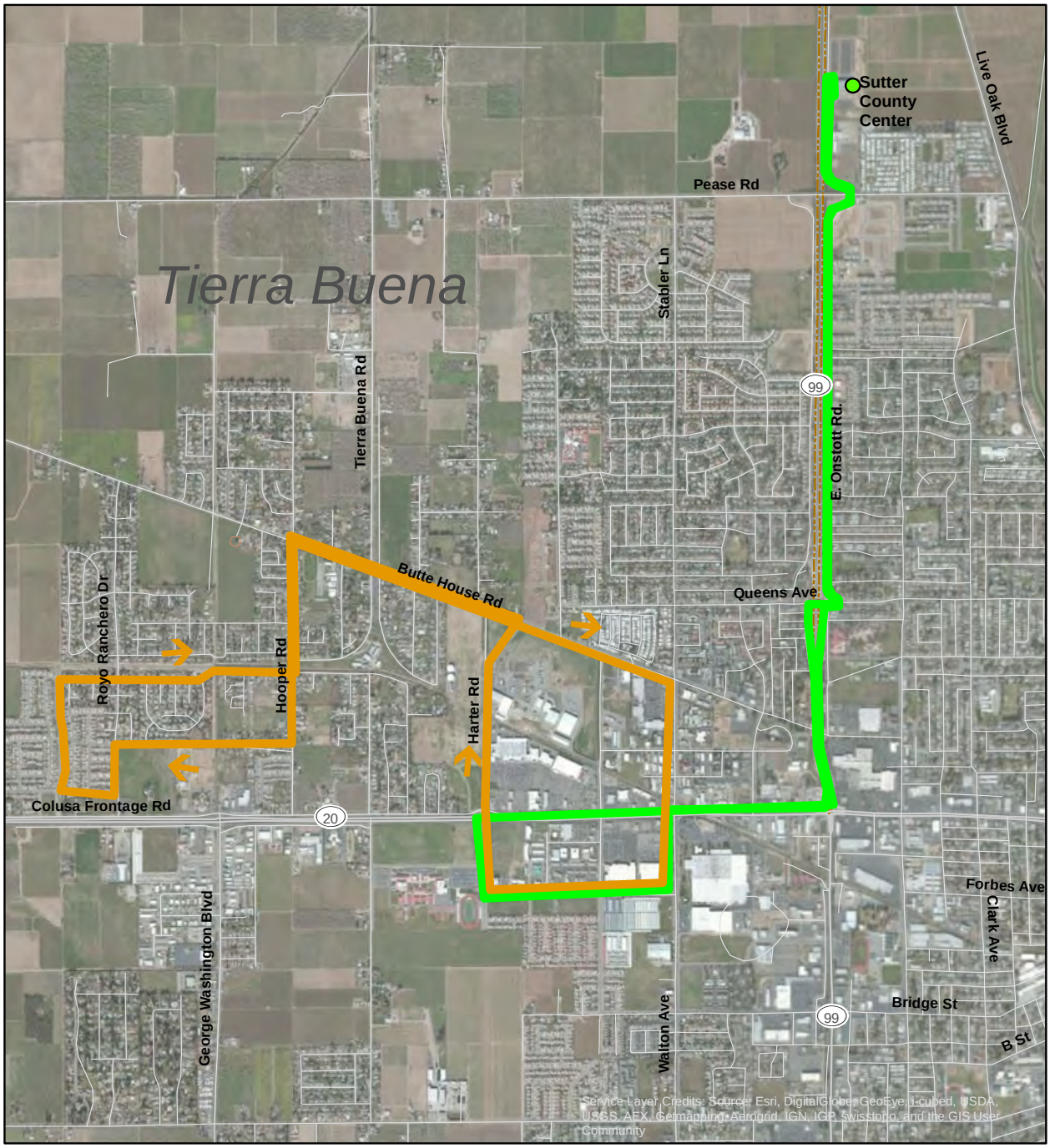
Another option that could provide service to the Sutter County Center and that would also expand the local route service area would be to operated hourly shuttle service to the Center and use this vehicle to also provide hourly service to the Tierra Buena area (north of SR 20 and west of Harter Road). A potential route serving this area is shown in Figure 42. Leaving the Walton Terminal, the Tierra Buena route segment would head west on Lassen Boulevard, north on Harter Road, west on Butte House Road, and south on Hooper Road. It would then make a clockwise one-way loop via Monroe Drive, Royo Ranchero Drive, Western Parkway, and Jefferson Avenue before returning to Walton Terminal via Hooper Road northbound, Butte House Road eastbound and Walton Avenue southbound. This route segment would be 7.4 miles in length (round-trip). A combined route with the Sutter County Campus shuttle would total 14.5 miles in length, and could be reliably operated once per hour. To be consistent, it would operate over the same span of service as the other local routes (which would result in service to the Sutter County Center on days with little or no activity). Span of service is assumed to be similar to that of the existing local fixed route (12 hours per weekday and 9 hours per Saturday). This combined route would incur an operating cost of approximately $168,400 per year.

The residential areas that would be newly served by the route (within a quarter-mile walk) have a residential population of approximately 5,100. These residents have typical characteristics regarding the proportion that are elderly, disabled or youth, but have a relatively low proportion of households that low income or do not have a vehicle. Based on these characteristics, it is estimated that the Tierra Buena portion of this combined route would generate roughly 17,900 passenger-trips per year. As service to the Sutter County Center would be hourly (rather than half-hourly), ridership generated by the college would be approximately 6,300 less than discussed above. In addition, a modest level of ridership would be generated by the additional service around the Lassen / Harter / Butte House / Welton loop. Overall, this alternative is estimated to generate 40,300 passenger-trips per year. Subtracting the resulting farebox revenues, the subsidy required would be $142,800 per year.

Revision to Route 3 -- Service to Olivetree Senior Apartments in Olivehurst

A common request is for Route 3 to service the Olivetree Senior Citizen Apartments. This complex is located one quarter mile east of the existing route on 7th Avenue in Olivehurst. Two options were considered to serve this complex:

Figure 42
Sutter County Center and Tierra Buena Route Options



TRANSPORTATION CONSULTANTS, INC.

Sutter County Center Shuttle

Tierra Buena Route

0 0.375 0.75 1.5 Miles

- A straightforward option would be to revise the route to divert east off of the current southbound route along Olivehurst Avenue at 7th Avenue, turn south on Fleming Way (serving a stop at the corner of 7th and Fleming adjacent to the apartment complex), turn west on 9th avenue (serving an additional stop) and regain the existing route by turning south on Olivehurst Avenue. The northbound route would also follow this alignment in the opposite direction. While this would better serve the Senior Apartments along with other residential areas in the vicinity, it would add 3 to 4 minutes of running time to each Route 3 round trip. As Route 3 currently operates 40 percent of its runs behind schedule (more than 5 minutes late), there is no available running time within the current schedule to extend the route. This option was therefore not considered further.

- Another option would be for the inbound (northbound) Route 3 to travel north along Powerline Road between McGowan Parkway and 7th Avenue and then west along 7th Avenue before regaining the existing route on Olivehurst Avenue. Olivehurst Avenue south of 7th Avenue would only be served in the southbound direction. This option would not significantly change the length of the route or the running time. While it would serve a stop at the Olivetree Senior Apartments, it would be a substantial reduction in the quality of service of some existing Route 3 passengers. Specifically, the 55 daily passengers (7 percent of all Route 3) that board along Olivehurst Avenue wishing to travel north would need to catch the bus in the southbound direction, adding 10 to 15 minutes to their travel time. A greater impact would be for the passengers currently boarding in the Johnson Park area that alight along Olivehurst Avenue south of 7th Avenue. This is equal to approximately 30 passengers per day, or 4 percent of total Route 3 boardings. They would be required either to ride for approximately 50 minutes around Route 3, or alight along Powerline Road and walk west (a half-mile on average). Overall, this option would provide poorer two-way coverage of Olivehurst, and is therefore not considered further.

Route 3 and 6 Realignment in Olivehurst / Linda Area

Route 3 currently serves Linda, West Linda and Olivehurst every half hour, while Route 6 serves Linda and West Linda every hour. The Beale Road corridor west of Yuba College is also served every half hour by Route 1. There are a number of shortcomings with this current route plan:

- Perhaps most importantly, Route 3 has a substantial on-time performance problem. Surveys conducted in March and October of 2014 (as presented in Table 30 of Technical Memorandum One) indicate that 32 percent of Route 3 runs operated more than five minutes behind schedule. Route 6 on-time performance is better, but 13 percent of runs still run late. The current route does not provide any potential to serve new areas, moreover.

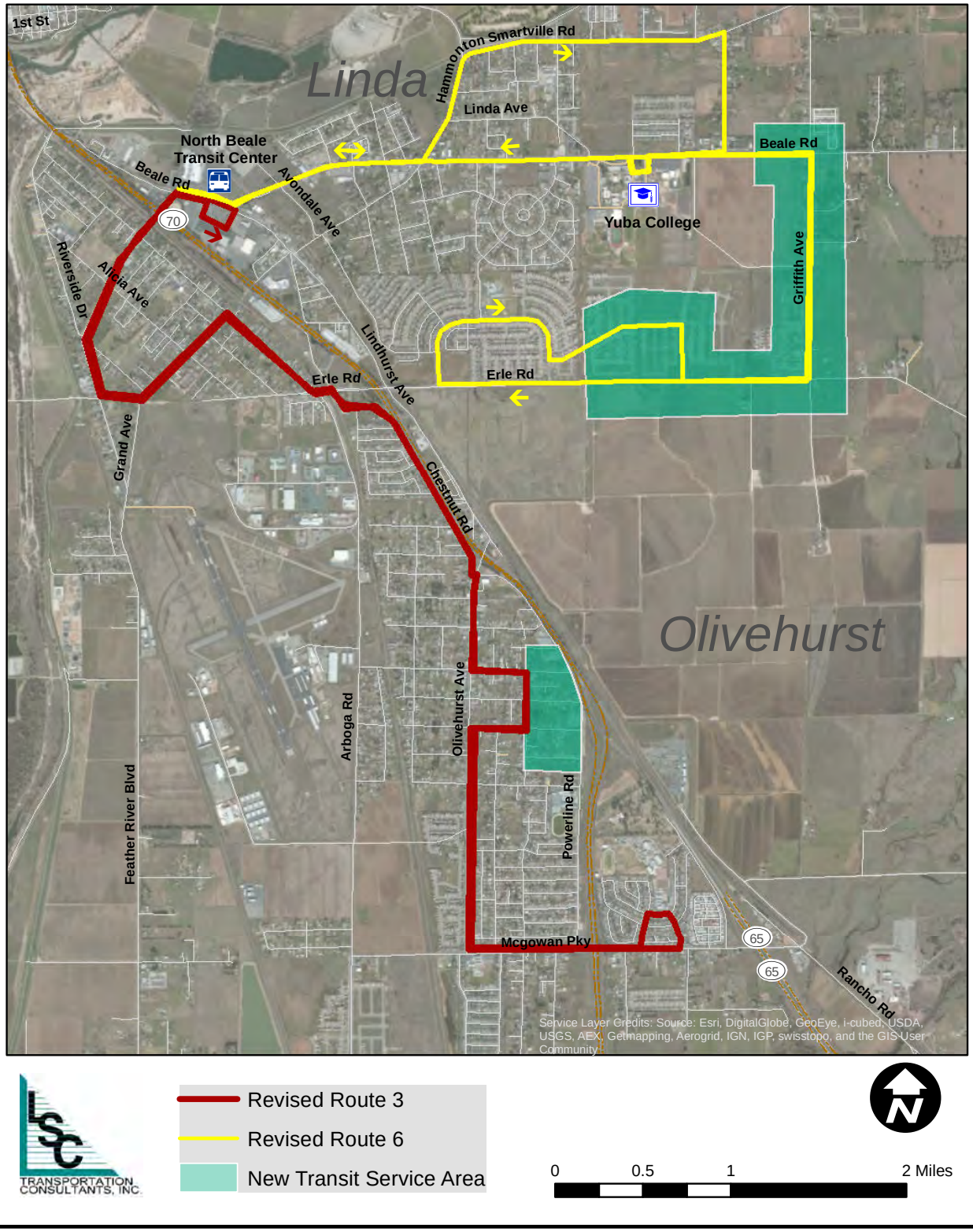
- There is a substantial area of development that is not currently served in the neighborhoods along Erle Road and Griffith Avenue (including the Edgewater development).

- Some of the bus stops along narrow-but-busy Hammonton-Smartville Road are very close to the travel lanes, constrained by embankments.

- The service areas of Routes 3 and 6 overlap in some areas.

To address these issues, a potential realignment of these two routes was developed as presented in Figure 43, and discussed below:

Figure 43
Route 3 and 6 Reconfiguration Alternative



- **Route 3** would be revised to focus on West Linda and Olivehurst only. It would start at the North Beale Transit Center (rather than Yuba College). It would head southwest on Feather River Boulevard along the existing Route 6 as far as Grand Avenue/Alicia Avenue. It could then extend along Grand Avenue to Arboga Road, where it would turn southeast and follow existing Route 3. Time would be available to jog west on 7th Avenue to the Olivetree Senior Apartments, returning to the existing Route 3 at 9th / Olivehurst Avenue. After serving the existing terminal loop in the Johnson Park area, it would return to North Beale Transit Center along the same alignment. This route would be 13.5 miles in length, compared with the existing 15.7 mile-long Route 3, saving approximately 5 minutes in running time.

- **Route 6** would focus on serving Linda. Starting at the North Beale Transit Center, it would head east on North Beale Road and Hammonton Smartville Road before returning west to Yuba College (where passengers boarding along Hammonton Smartville Road would be able to transfer to Route 1). The route would then head east on North Beale Road, South on Griffith Avenue, west on Erle Road and then serve a terminal loop consisting of Goldfields Parkway, Riverbank Drive and Edgewood Circle. The route would then return eastward on Erle Road, northward on Griffith Avenue and westward on North Beale Road to Yuba College, and then west on North Beale Road to the North Beale Transit Center. This route is 13.7 miles in length, rather than the current 14.6 miles.

Two buses could be interlined to alternate operation of Route 3 with Route 6 each hour. A third bus would then operate Route 3 only, in order to provide half-hourly service. This strategy would minimize the need to turn buses around at the North Beale Transit Center, and would also reduce the need for passengers to transfer between individual buses. This alternative is probably dependent on expansion of Route 1 to 20 minute service, in order to maintain adequate capacity along North Beale Road.

This reconfiguration would have several impacts on ridership:

- The only existing stops that would lose service would be those at Arboga Road / Jay Street on Route 3 and at Alicia Avenue /Pasado Road on Route 6. As both of these stops are within a quarter mile of another stop in both directions, the overall number of residents within the transit service area (a quarter mile walk to the nearest stop) would not be reduced (though some individuals would have longer walks to the nearest stop).

- Passengers on Route 3 currently traveling through the North Beale Transit Center (such as between Olivehurst and Yuba College) on the one hourly run that does not interline with the revised Route 6 would need to transfer to/from Route 1. The majority of Route 3 passengers approaching North Beale Transit Center today (54 percent), however, does not travel through, but rather transfer to other routes at North Beale Transit Center. Of all Route 3 passengers, 24 percent current ride through the North Beale Center. While these remaining passengers would need to transfer, with proper timing with Route 1, the overall impact of this change would be relatively modest, at 4,000 passenger-trips per year.

- Passengers boarding on the Hammonton Smartville Road route segment in the westbound direction would instead need to board in the eastbound direction and then transfer to Route 1 at Yuba College. A review of ridership data indicates that these westbound stops serve 27 passengers per day, or 10 percent of total Route 6 ridership. The additional travel time and transfer requirement would result in a reduction of 1,100 passenger-trips per year.

- New ridership would be generated by the expanded Route 6 service area along Earle Road and Griffith Avenue. This area currently encompasses approximately 400 homes, with plans in place for at least 300 more. While as relatively new homes the per-capita transit ridership would be relatively low, overall ridership generate by serving this new area is estimated to be approximately 5,600 passenger-trips per year.

- The expanded service area on Route 3 in Olivehurst would provide a stop within a quarter-mile walk distance of approximately 140 additional single family homes, as well as the Olivetree Senior Housing Apartments. Considering the demographics of this area, this would increase ridership by approximately 4,800 passenger-trips per year.

- Finally, all of Route 3 riders would benefit from much better on-time performance. This would increase ridership by roughly 13,000 passenger-trips per year.

Overall, this realignment would increase annual ridership by an estimated 18,000. The reduction in mileage would reduce operating costs by $13,300. Coupled with $11,000 in additional farebox revenues, overall subsidy requirements would be reduced by $24,300.

Revisions to Route 5 To Address Poor On-time Performance

Recent surveys indicate that Route 5 operates more than 5 minutes late on fully 45 percent of its runs, which is substantially worse than the other local routes. Several alternatives were considered to address this problem.

Stay on Walton Avenue Rather than the Diversion to Winco/Cinemark/Bridge Street

At present, Route 5 departs southbound from Walton Terminal along Walton Avenue, and then diverts east to Onstott Road/SR 99 between Bridge Street and Franklin Road. This adds 2.0 miles to the round trip length of Route 5 and 9 minutes to the running time, contributing to the overall poor on time performance of the route. If Route 5 were instead to stay on Walton Avenue between Bridge Street and Franklin Road, the following impacts on existing stops would result:

- The only stop that would completely lose service and is not within a convenient walk of another stop is on Franklin Road at Winco Center. This stop currently serves an average of 23 boardings plus alightings on weekdays, and 17 on Saturdays. These passengers would need to walk approximately 0.4 miles to either the stop at Franklin/Walton or at Bridge/ Oji. While some of these passengers would either make the walk or change their destination, most of them would probably stop using the transit system.

- The existing southbound-only stop at the Cinemark 12 would lose service. Average ridership served at this stop, however, is only 4 passengers on weekdays and on Saturdays, and it is a relatively short walk to the Bridge / Oji stop.

- The two stops served by Route 5 along Bridge Street (at Oji Way and Joann Way) would lose Route 5 service, but would still be served by 4 buses an hour on Route 2. In total, these stops on Route 5 currently serves an average of 55 passengers (boarding plus alighting) on weekdays and 38 on Saturday. Passengers boarding in the westbound direction or alighting in the eastbound direction would not be significantly impacted as they could easily access Route 2. In the other direction, Route 5 passengers boarding in the eastbound and alighting in the westbound direction (and thus are traveling to/from the southern portions of Route 5)

total 36 on weekdays and 20 on weekends. These passengers would either need to walk to/from the Walton/Bridge stop, or use Route 2 to transfer to Route 5 at Walton Terminal.

Overall, eliminating service to these stops is estimated to reduce ridership by 12,600 passenger-trips per year (21 percent of existing Route 5 ridership). On the other hand, this route realignment would speed travel times for the remaining passengers, and more importantly would allow much better on-time performance. These factors would increase ridership by an estimated 9,000 passenger-trips per year. Overall, this option would result in a net reduction of approximately 3,600 passenger-trips per year. This alternative would result in a net reduction in operating cost of $4,900 per year and a reduction in required subsidy of $3,000 and solve the on-time performance problem, but result in a net loss of ridership.

Realign to Use Germaine Drive Rather Than Sanborn Road

Another option would be to revise the southwestern portion of Route 5 to travel north on Germaine Drive rather than Sanborn Road, which would reduce overall route length by 0.86 miles and trim approximately two minutes off of the running time. This would eliminate service to two stops (Bogue Road / Falls Drive and Bogue Road / Sanborn Road, while the stop at Happy Park would be relocated east to Germaine Drive / Pebble Beach Drive. The two stops on Bogue Road currently serve a total of 17 average daily boardings plus alightings, or 7 percent of total Route 5 ridership. Eliminating these stops would cause a reduction in annual existing ridership of an estimated 3,500 passenger trips. The benefits of this alternative are relatively low, as the modest reduction in running time would not solve all of the on-time performance problems. Better on-time performance as well as shorter travel times would add an estimate 2,900 new passenger-trips, resulting in a net reduction of 600 annual passenger-trips. Costs would be reduced by $2,200 per year while farebox revenues would drop by $300, resulting in a net reduction in required subsidy of $1,900.

Realign to Use Phillips Avenue Rather than Garden Highway

This option would reduce Route 5 in the southeast portion of the service area, by turning south off of Lincoln Road to Bogue Road rather than continuing east to turn south on Garden Highway. This would save approximately 4 minutes of running time by trimming 1.5 miles off of the route length. A total of eight existing stops would be dropped from Route 5, though two stops (Lincoln / Railroad and Lincoln / Garden Highway would still be served by Route2. In total, the stops that would be eliminated currently serve approximately 68 passenger boardings plus alightings each day, which is 29 percent of total Route 5 ridership. An estimated 14,100 annual existing trips would no longer be served. However, the new service area along Phillips Avenue would generate on the order of 4,400 passenger-trips. Improved service reliability along with shorter travel times would add an estimated 6,900 passenger-trips. In total, this alternative would reduce ridership by roughly 2,800 passenger-trips. Costs would be cut by $3,800 per year and farebox revenues cut by $1,400 per year, leaving a net reduction in operating subsidy of $2,400 annually.

Realign to Use a Lassen Blvd. / Tharp Road /Colusa Highway / Walton Avenue Loop Rather than a Lassen Blvd. / Harter Road / Butte House Road / Stabler Lane Loop

A final option considered for Route 5 would reduce the size of the one-way loop served west and north of Walton Terminal. Rather than using the same loop served by Route 1, Route 5 would travel west on Lassen Boulevard, north on Tharp Road, east on Colusa Highway and south on Stabler Lane, reducing travel time by an estimated 6 minutes per loop. This would

eliminate Route 5 service to seven existing stops, though service would still be provided by Route 1 at five of these stops, and Routes 1 and 2 at the two stops along Stabler Lane. These stops serve a number of important trip generators, including River Valley High School, Feather River Academy and Wal-Mart. As a result, Route 5 ridership at the stops that would be eliminated equals 89 per day on average, or fully 37 percent of all Route 5 ridership. Route 5 passengers to these stops would be required to transfer at Walton Terminal to complete their trip. This would be particularly onerous for trips from these eliminated stops to Route 5: passengers would need to board Route 1 but then alight at the stop on Stabler Lane just north of Colusa Highway (before Route 1 turns east) and walk south to Walton Terminal to catch Route 5. As a result, an estimated 8,000 existing passenger-trips would be lost. While the improved on-time performance would generate on the order of 5,000 new passenger-trips, the overall impact would be a 3,000 passenger-trip decline in overall ridership.

Evening Local Route Service

At present, weekday local route services typically have their last run departing between 5:30 PM and 6:00 PM, and all end by between 6:07 PM and 6:30 PM. There have been numerous requests for evening local transit service. This has the benefit of providing expanded transit options to access jobs (such as restaurant positions), shopping, and evening social events.

The potential ridership on evening services is evaluated by considering the existing ridership by hour on Yuba-Sutter Transit, as well as the relative ridership for evening services on other transit programs providing such service. As shown in Figure 44, ridership is relatively constant over the bulk of the day. After a peak in the 3 PM hour, however, ridership drops substantially. In the 5 PM hour (when services are all still operating at full levels), ridership is only 3 percent of the total weekday ridership. While this figure would be higher if evening service were provided (as few passengers currently start a round trip in the 5 PM hour), this figure is relatively low compared with that of other transit programs.

A range of potential evening service options were evaluated, ranging from 1 to 3 additional hours of service (with services ending as late as 9:00 PM to 9:30 PM, depending on the route). In addition, options were considered that would provide only hourly service on those routes currently operated each half-hour during the day. Table 41 presents the evaluation of the daily service quantities that would be required to operate the evening service options. In addition, ridership estimates are provided based upon the current Yuba-Sutter Transit ridership by route and ridership pattern, as well as the relative evening vs. daytime weekday ridership seen on similar systems. These totals are then analyzed in Table 39 to yield total costs and subsidy requirements. As shown, the cost of expanding evening services ranges from a low of $96,500 (for 1 additional hour of service, with hourly service on all routes) to a high of $289,500 (for full service for an additional three hours on all routes). Ridership would range from 26,700 per year on the most limited option (or 105 passengers per day) up to 50,000 per year (or 196 per day). Subtracting fare revenues, subsidy needs would range from a low of $80,900 for the limited extension by one hour up to $260,200 for the full provision of an additional three hours of service.

Extension of Saturday Service by One Hour

At present, Saturday fixed route service last departure times occur between 4:22 PM and 5:15 PM, depending on route. There have been several requests for extension of service by approximately one hour (depending on route) to provide better opportunities to complete trips on Saturday afternoons. This would also have the benefit of providing a consistent end of day

service schedule between Saturdays and weekdays. Beyond expanding travel options on Saturdays, this would have the benefit of providing a more consistent service plan that is easier to understand.

Figure 44: Local Route Weekday Ridership by Hour

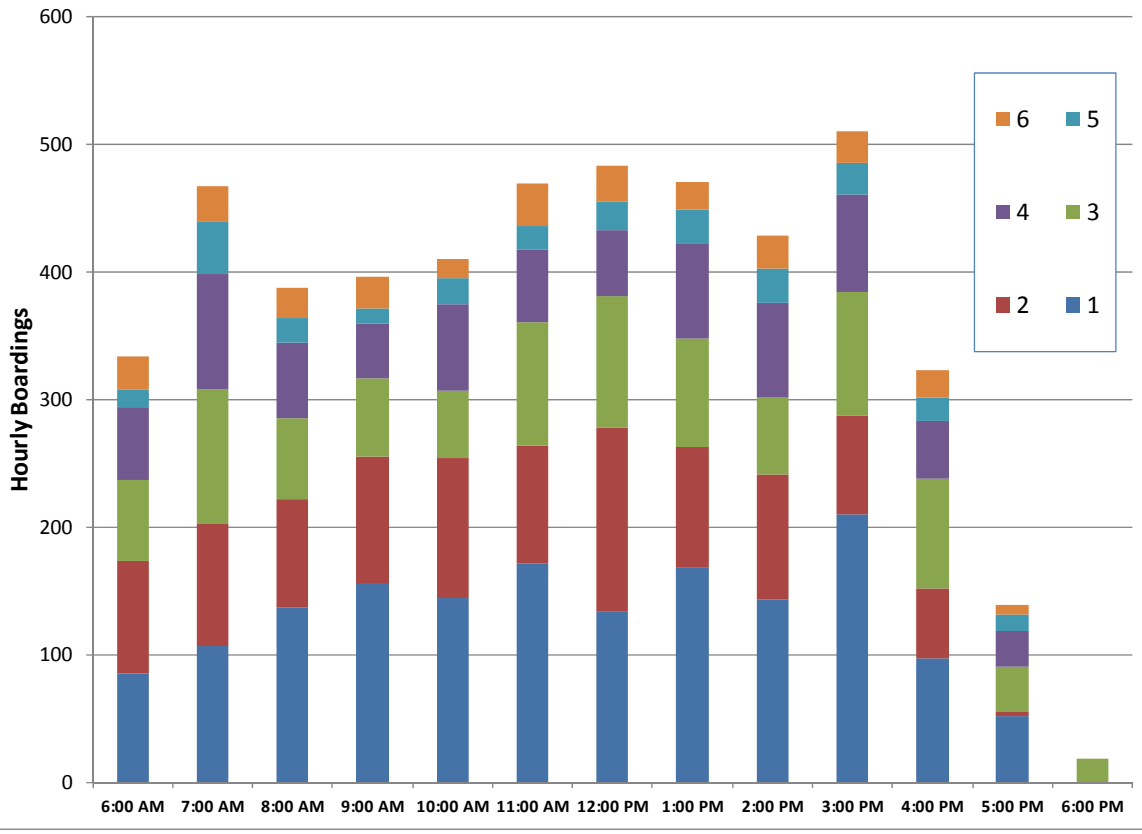
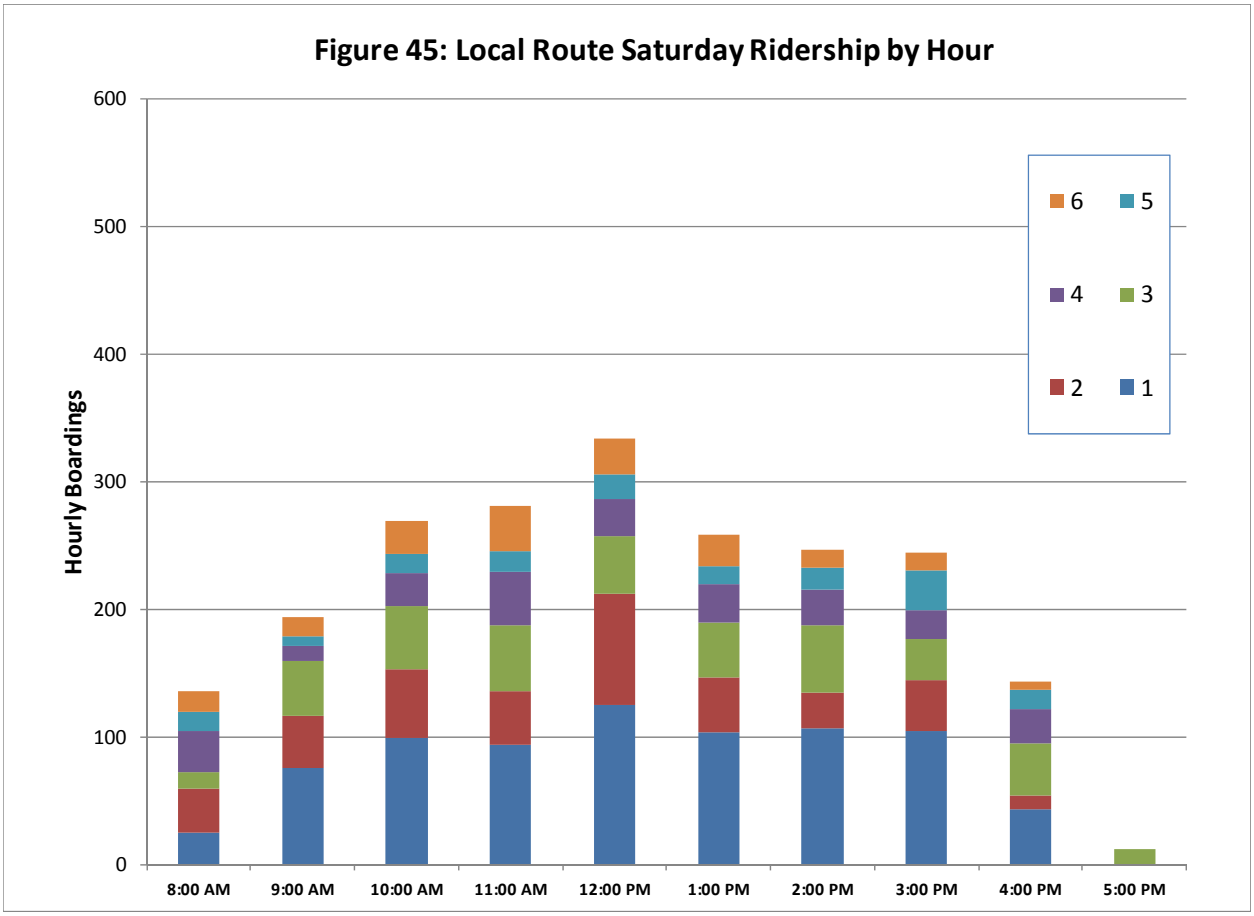


TABLE 41: Weekday Evening Service Alternatives Service Quantities

	Local Route						
	1	2	3	4	5	6	Total
Additional Daily Vehicle-Miles							
1 Additional Hour -- All Routes	39	44	31	22	14	15	165
1 Additional Hour -- All Routes (Hourly on Routes 1, 2 and 3)	19	22	16	22	14	15	108
2 Additional Hours -- All Routes (Hourly on Routes 1, 2 and 3)	39	44	31	43	28	29	215
3 Additional Hourrs -- All Routes (Hourly on Routes 1, 2 and 3)	58	66	47	65	43	44	323
3 Additional Hours on 1, 2B, 3, 4A, 5, 6 (Hourly Service on Routes 1, 2 and 3)	58	33	47	33	43	44	257
Additional Daily Vehicle-Hours							
1 Additional Hour -- All Routes	4	4	2	2	1	1	14
1 Additional Hour -- All Routes (Hourly on Routes 1, 2 and 3)	2	2	1	2	1	1	9
2 Additional Hours -- All Routes (Hourly on Routes 1, 2 and 3)	4	4	2	4	2	2	18
3 Additional Hourrs -- All Routes (Hourly on Routes 1, 2 and 3)	6	6	3	6	3	3	27
3 Additional Hours on 1, 2B, 3, 4A, 5, 6 (Hourly Service on Routes 1, 2 and 3)	6	3	3	3	3	3	21
Change in Annual Ridership							
1 Additional Hour -- All Routes	12,800	8,300	6,700	5,300	2,200	2,000	37,300
1 Additional Hour -- All Routes (Hourly on Routes 1, 2 and 3)	7,900	5,100	4,200	5,300	2,200	2,000	26,700
2 Additional Hours -- All Routes (Hourly on Routes 1, 2 and 3)	11,800	7,700	6,200	8,000	3,300	3,000	40,000
3 Additional Hours -- All Routes (Hourly on Routes 1, 2 and 3)	14,800	9,600	7,800	9,900	4,100	3,800	50,000
3 Additional Hours on 1, 2B, 3, 4A, 5, 6 (Hourly Service on Routes 1, 2 and 3)	14,800	4,800	7,800	5,000	4,100	3,800	40,300

Figure 45 presents the existing Saturday ridership by hour on the local routes. Saturday ridership in the 4:00 PM hour is currently 7 percent of total daily ridership. Based upon this information and relative ridership by hour on other systems, the annual increase in ridership associated with this option is estimated to be 4,400 per year, or roughly 85 per day. As shown in Table 39, this service would incur an operating cost of $25,300 per year, and an operating subsidy requirement of $22,700 annually.



Sunday Limited Service

In the onboard fixed route surveys, provision of Sunday service was substantially the service improvements with the greatest requests. Fully 63 percent of survey respondents asking for any type of service improvement (or 48 percent of all persons completing any part of the survey) cited their desire for Sunday service. In comparison, the second-highest requested improvement (later weekday service) was cited by 44 percent. A reasonable operating plan for Sunday fixed-route service would be to provide service over an eight hour span of the day (approximately 8:30 AM to 4:30 PM), with hourly service on Routes 1, 2A, 3, 4A, 5 and 6. In addition, Dial-A-Ride service would be operated over the same span. As shown in Table 39, this would incur an operating cost of $168,100 per year. Providing Sunday service also has an impact on overall operations, as maintenance and dispatch services are required to operate on Sundays, and there is more need for part-time employees. As a result, training and management costs can be increased.

Systems that offer Sunday service are typically larger than Yuba-Sutter Transit. Of those that do, Sunday service productivity (as measured in passengers served per vehicle-hour of service) is typically lower than productivity on Saturday by 30 to 40 percent. Given the strong interest in Sunday service identified in the survey, the potential for Sunday ridership is relatively high. In light of this, and the existing Saturday ridership, ridership on Sunday service is forecast to be approximately 56,400 passenger-trips per year on fixed route service, and 3,100 on Dial-A-Ride. These passengers would generate an estimated $34,700 per year, yielding a net operating subsidy requirement of $133,400 per year (plus any impact of associated contractual changes).

COMMUTER ROUTES

Later SR 99 Morning Commuter Run (7:30 AM SR 99 Run, 8:30 AM Reverse)

At present, the Sacramento Commuter service provides the last AM run departing at 6:45 AM from Walton Terminal (699), with the next southbound run on SR 99 as the 2nd Mid-day run (2MD) departing at 11:00 AM from Yuba County Government Center and 11:10 AM from Walton Terminal. There were a total of four survey comments indicating the desire for this service. A later run, departing at 7:30 AM and serving stops in Sacramento at 8:30 AM before returning via SR 99, would better serve commuters with a later (or flexible) start time. As shown in Table 42, this alternative would require one additional bus and result in an increase in annual operating costs of $36,700 per year. Based on the ridership generated by the similar schedule on the SR 70 corridor, the requests for service, and the relative demand between the two corridors, this service would serve an average of 22 passenger-trips per day (20 southbound and 2 northbound), or 5,500 per year. This would in turn generate $24,500 in increased farebox revenues, resulting in a net increase in subsidy requirements of $12,200.

TABLE 42: Commuter and Rural Service Alternatives

Fiscal Year 2015-16 *Costs Exclude Allocated Fixed Costs*

Alternatives Options/Details	Additional Vehicles	Annual				Ridership		Annual	
		Operating Days	Vehicle Service.. Miles	Vehicle Service.. Hours	Marginal Operating Cost	(One-Way Trips) Daily	(One-Way Trips) Annual	Farebox Revenue	Subsidy Required
COMMUTER SERVICE									
Later AM SR 99 Run	1	250	23,500	583	$36,700	22	5,500	$24,500	$12,200
Mid-day SR 70 Run	0	250	22,650	583	$36,100	10	2,600	$6,500	$29,600
SR 99 2 PM Mid-Day Run	1	250	23,500	583	$36,700	16	4,100	$10,300	$26,400
Earlier SR 99 PM Run (Replacement for Supplemental First PM 99)	0	60	5,640	140	$8,800	42	2,500	$11,600	-$2,800
RURAL ROUTES									
Foothill Route 5 Day / Week	0	101	22,195	655	$38,200	22	2,200	$3,500	$34,700
Live Oak 5 Days / Week	0	101	13,963	412	$24,000	27	2,700	$3,300	$20,700
Revise Wheatland Route to 2 Runs per Day 3 Days per Week	0	156	-62	-13	-$500	1	177	$200	-$700
Plumas Lake Rural Route	1	101	8,484	429	$20,700	19	1,900	$3,000	$17,700

Earlier Afternoon Commuter Run (Replacement for Supplemental First PM 99 Schedule)

A common request is for earlier PM departures, particularly on the SR 99 route. At present, a supplemental bus run is operated in tandem with the first PM 99 (199) schedule departing from the J & 4th Street stop at 3:45 PM, in order to provide adequate seating capacity on this popular run. This is operated approximately 190 days per year, as it does not operate on Fridays or during major holiday periods such as Christmas and New Year's.

Providing consistent service on an earlier schedule (such as departure at 3:30 PM) would provide a convenience to passengers at a relatively modest cost. While one additional full-sized coach would be required, this would replace the current cutaway used in the service. As the costs associated with operations 190 days per year are already borne by the system, only the costs associated with the additional 60 days would be added. These are estimated to be $8,800 per year. By including this run in the schedule, more potential passengers would become aware that they could depend on this additional schedule flexibility. A specific survey of the Run 199 passengers would be warranted to identify a time that draws a sufficient numbers of existing passengers of off the existing run to provide adequate loading conditions on Run 199. This modification is expected to increase overall ridership by approximately 2,500 passenger-trips per year. Generating $11,600 in increased passenger revenues, this alternative would actually decrease the subsidy requirement slightly.

SR 70 Mid-day Run

This alternative would provide a mid-day run via the SR 70 corridor close to the existing SR 99 schedule departing the Yuba County Government Center at 11:00 AM with stops served in Sacramento starting at 12 Noon. At present, there is a long mid-day gap in the schedule for northbound service from Sacramento serving the SR 70 corridor, with departures at 9:10 AM and 2:15 PM (P&5th). The second mid-day run along the SR 99 corridor does offer drop-offs at Yuba County Government Center and McGowan Park-and-Ride, but does not serve Plumas Lake. In comparison with a run on the SR 70 corridor, this mid-day SR 99 run requires an additional 10 minutes on the bus to return to the Yuba County Government Center and an additional 40 minutes to McGowan Park-and-Ride. As the first SR 70 mid-day run does not allow adequate time in Sacramento for passengers to complete a trip purpose, effectively this requires a Plumas Lake resident to depart no later than 6:57 AM with a return no earlier than 2:48 PM. In the onboard surveys, a total of five passenger comments requested a mid-day run, similar to the 12:15 northbound departure from Sacramento on the SR 99 corridor. This additional run would incur an operating cost of approximately $36,100 per year. Based upon the relative ridership on the SR 99 mid-day run, the ridership potential along both corridors and the degree of service improvement that this SR 70 run would provide, ridership is forecast to increase by approximately 2,600 passenger-trips per year. Subtracting the additional $6,500 in farebox revenues, net operating subsidy would be increased by roughly $29,600 annually.

SR 99 2 PM Mid-Day Run

The current schedule on the SR 99 corridor has a long break in the schedule between a 12:15 PM departure from P & 5th and the 4 PM departure. Two survey respondents requested a 2 PM departure, citing the long waits required of some passengers making half-day trips, or getting off work early. Passengers can catch the 2 PM northbound departure on SR 70 (3 MD run), but that only extends as far into Yuba City as Walton Terminal (on request), leaving persons boarding at Bogue Road (where 52 percent of the SR 99 corridor southbound boardings occur) needing to transfer to Route 5 to get back to their car. This additional run would incur an operating cost of

$36,700 per year. Considering the relative ridership on the 3 MD run via the SR 70 corridor and the potential benefit to SR 99 corridor patrons boarding at the various stops, this additional run would serve an estimated 4,100 passenger-trips per year. Subtracting the resulting $10,300 in farebox revenues, this option would increase subsidy requirements by $26,400 per year.

RURAL ROUTES

Five Days A Week Service on Foothill Route

The Foothill Route currently operates on Tuesdays, Wednesdays and Thursdays only. It provides a morning inbound trip, a mid-day round trip, and an evening outbound trip.

The onboard survey indicated that 5 of the existing passengers that completed the survey are using the current service for work purposes, apparently driving or carpooling on other days of the week but preferring to use the transit service when it is available. In addition, 5 of 8 survey respondents indicated a desire for 5-days a week service. These indicate that there is ridership demand on the other two days a week among current riders. In addition, it can be expected that consistent 5-days-a-week would also attract other passengers for commuting as well as other trip purposes.

This service alternative would not require additional vehicles, but it would increase annual operating costs by an estimated $38,200 per year. Providing dependable and consistent daily service would generate ridership beyond the current daily ridership, as well as additional ridership on the current days of service. Given the interest in daily service and the commute pattern from the Foothill communities to the Marysville/Yuba City area, the increase in annual ridership is estimated to be 2,200. Subtracting $3,500 in additional fare revenues, the net increase in subsidy requirements is forecast to be $34,700 per year.

A sub-option would be to revise the Foothill schedule to provide a direct connection with the Sacramento Commuter service. The Foothill bus currently arrives at Yuba County Government Center at 7:45 AM, and departs in the evening at 5:15. This schedule is convenient for persons spending a full day in the Marysville/Yuba City area for work or school, but this morning arrival time is a full 70 minutes after the last current Sacramento Commuter departure (6:35 AM). Shifting the Foothill schedule to make this connection would significantly reduce the convenience of the service for the majority of passengers, and this would be a net detriment. (Foothill passengers do have the option to transfer to the first midday 99 bus at 8:00 AM at Yuba County Government Center.) In the afternoon, the 199 schedule (first 99 PM run) arrives at Yuba County Government Center at 5:05 PM – 10 minutes prior to the departure of the Foothill Route.

Five Days A Week Service on Live Oak Route

At present, service to Live Oak is limited to 3 runs per day (morning, mid-day and late afternoon) connecting Live Oak with the Alturas/Shasta and Yuba County Government Center transit centers. In Live Oak, three scheduled stops are served, and service to other parts of the city is available on demand. This service has been relatively productive for a rural/inter-community route, carrying 6.0 passenger-trips per vehicle-hour. One potential means of improving service would be to operate the current schedule every weekday.

In addition, there may be some benefit in establishing additional fixed stops beyond the current three scheduled stops, so that passengers can avoid the trouble of calling for pickups. To

assess this, two weeks of driver run sheets were reviewed, as shown in Table 43. Typically, an additional location warranting a scheduled stop would have a pattern of regular pick-up requests. As shown, no stops beyond the three scheduled stops had pickups in more than two of the six days reviewed, and all averaged less than one passenger boarding or alighting per day. This pattern does not currently indicate the need for additional scheduled stops, though this should be reviewed over time to identify if any regular requests become a pattern that warrants an additional stop. This route could easily be modified to serve the Yuba College Sutter County Center. Serving new stops could add approximately 5 minutes per run, or 15 minutes per day to the current schedule.

As shown in Table 42, adding the other two weekdays and providing additional time to serve more stops would increase operating costs by $24,000 per year.[2] By providing consistent service each weekday, the service would start to serve Live Oak residents that travel daily to Yuba City/Marysville, such as full-time workers and students. As a result, it would generate ridership in excess of the existing daily ridership, and would also encourage ridership on the current days of service. More convenient service to the additional scheduled stops would also encourage ridership by avoiding the need to call for service in advance. Overall, a ridership increase of 2,700 passenger-trips per year is estimated. These passengers would increase farebox revenues by $3,300, yielding a net increase in marginal operating costs (exclusive of allocated overhead costs) of $20,700 per year.

Revise the Wheatland Route to Two Runs per Day, Three Days per Week

The current Wheatland Route is a relatively poor performer, carrying only 2 passenger-trips per vehicle-hour of service (or roughly 6 per day of service) and requiring $37.61 in operating subsidy per passenger-trip served. The current service plan provides three trips per day (morning, mid-day, and late afternoon), which provide a passenger with 3 hours 25 minutes in the morning in the Marysville area, 4 hours 25 minutes in the afternoon, or 9 hours 25 minutes if using the first and last run. If either the Foothill or Live Oak Routes are expanded to five days a week, the fact that the current Wheatland schedule coincides with the Foothill Route and Live Oak Route schedules would require an additional bus. However, if the Wheatland Route schedule were modified to periods when not needed for the Live Oak or Foothill Routes, the fleet would not need to be expanded. This corresponds to 8:00 AM – 11:15 AM and 2:00 PM – 5:00 PM. A reasonable schedule would be to operate one morning run departing the transit operations facility at 8:15 AM with the first pickup in Wheatland (at Spruce Avenue / Evergreen Drive) at 8:40 AM, and arriving at North Beale Transit Center at 9:10 AM and Yuba County Government Center at 9:40 AM. In the afternoon, the route would depart from Yuba County Government Center at 3:55 PM and North Beale Transit Center at 4:05 PM, serve stops in Wheatland between 4:20 PM and 4:30 PM, and be back at the Yuba County Government Center by 4:55. This schedule would allow for late morning or early afternoon appointments in the Marysville/Yuba City area, as well as shopping and recreational trips.

At the same time, the number of days per week of service could be increased from two to three days per week (such as Monday, Wednesday and Friday). The overall number of trips to and from Wheatland would remain unchanged. A small ($500 per year) reduction in operating costs would occur, as a higher proportion of runs would deadhead between the operations center to or from Wheatland (rather than start or end at the Yuba County Government Center).

[2] The Live Oak Route is currently charged out at a rate of $83.66, which has been negotiated to include an equitable share of fixed costs. At this rate, the service improvements would increase charges for the route by approximately $39,800 per year.

TABLE 43: Passenger Boarding and Alighting Activity in Live Oak by Stop

	Scheduled Stop?		11/3/2014			11/5/2014			11/7/2014			11/10/2014			11/14/2014			11/14/2014			Average				
			AM	Mid	PM	AM	Mid	PM	AM	Mid	PM	AM	Mid	PM	AM	Mid	PM	AM	Mid	PM	AM	Mid	PM	Total	Total B+A
Pennington / Larkin	✓	Board	1	5	0	1	2	0	2	1	0	1	1	0	1	0	1	2	1	0	1.3	1.7	0.2	3.2	5.7
		Alight	2	0	0	0	0	2	0	0	1	0	4	2	2	0	0	0	2	0	0.7	1.0	0.8	2.5	
Pennington / O Street	✓	Board	0	4	0	1	9	0	0	2	0	4	0	0	1	2	0	0	2	0	1.0	3.2	0.0	4.2	6.7
		Alight	0	0	6	0	0	7	0	0	0	0	0	0	0	0	2	0	0	0	0.0	0.0	2.5	2.5	
Date / O Street (Senior Village)	✓	Board	0	1	0	1	1	0	1	1	0	0	0	0	2	0	0	0	0	0	0.7	0.5	0.0	1.2	1.3
		Alight	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.0	0.2	
9234 Linda		Board	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0	0.3	0.0	0.3	0.5
		Alight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	0.0	0.2	0.2	
9904 Broadway		Board	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.8
		Alight	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	0.0	0.0	0.8	0.8	
9768 Cannon		Board	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.0	0.0	0.2	0.3
		Alight	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.0	0.2	
9632 Q Street		Board	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.3
		Alight	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.2	0.0	0.3	
Civic Centers		Board	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.2
		Alight	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.0	0.2	
Pennington / Live Oak		Board	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.2	0.2	0.3
		Alight	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.2	0.2	
9505 Q Street		Board	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.2
		Alight	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.2	0.2	
2551 Allen St		Board	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.2
		Alight	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.0	0.0	0.2	0.2	
10221 Live Oak Blvd (Penny Candy Store)		Board	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.3
		Alight	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0.0	0.3	0.0	0.3	
1990 Archer		Board	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.0	0.2	0.0	0.2	0.3
		Alight	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.0	0.0	0.2	0.2	
Live Oak Market		Board	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0.0	0.0	0.5	0.5	0.5
		Alight	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	
9400 Larkin		Board	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.2
		Alight	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.0	0.2	0.0	0.2	
																					4.0	8.0	5.8	17.8	

Source: Yuba Sutter Transit driver logs.

As little ridership on the Wheatland Route is currently for employment or school trips, the reduction in number of runs per day would result in only a modest reduction in ridership. While the provision of an additional day of service each week would result in some existing riders simply shifting to another day, overall this service change is forecast to increase ridership by 200 per year. Overall, this option would reduce subsidy needs by an estimated $700 per year, increase ridership, and reduce vehicle fleet requirements.

Provide Plumas Lake Rural Route

At present, transit service in Plumas Lake is limited to only the SR 70 commuter runs, which only pick up passengers at the Plumas Lake Park and Ride in the southbound direction and drop off passengers from Sacramento in the northbound direction. This newer development area has grown to an estimated population of 6,058. As a newer area, Plumas Lake residents have a relatively low proportion of persons living below the poverty level (3.5 percent) or with disabilities (1.9 percent). However, these residents are much more likely to be youths age 10 to 17 (35.0 percent) than the average for Yuba and Sutter Counties as a whole (12.1 percent) or elderly age 65 or above (17.3 percent versus 11.7 percent). While much of Plumas Lake resident's commutes are to the south, the lack of significant commercial, recreational and social service opportunities in Plumas Lake generates substantial need for travel north to the Linda and Marysville areas.

Implementing this service would require adding a bus to the fleet. The route would originate at the Yuba County Government Center and serve the North Beale Transit Center before traveling south on SR 70, serving several stops along River Oaks Boulevard between Plumas Lake Boulevard and Feather River Boulevard and returning to Linda and Marysville. A service providing three runs a day three days a week (on a schedule similar to that of the Live Oak Route) would require an additional vehicle, and incur an operating cost of approximately $20,700 per year. Based upon ridership on the other rural routes and the relative size and characteristics of the population, ridership is estimated to be 1,900 passenger-trips per year. Subtracting $5,000 in farebox revenues, the subsidy requirement is $17,700 annually.

As an aside, two other options were considered for service to Plumas Lake. First, the Wheatland Rural Route could be modified to also serve Plumas Lake on the way between Linda and Wheatland. However, this would add substantial travel time for Wheatland residents and was therefore not considered to be feasible. Secondly, the existing Route 70 commuter and mid-day express buses could be opened to Plumas Lake residents traveling to/from Linda and Marysville. However, this would add significant running time to the commuter buses. Providing this service would also trigger the need for complementary paratransit services (the large commuter buses would not be able to effectively deviate to provide ADA requests), which would result in van service from Marysville in any case.

PERFORMANCE ANALYSIS OF FIXED ROUTE SERVICE ALTERNATIVES

The discussion above and figures presented in Tables 39 and 42 can be used to conduct a performance analysis of the various service alternatives. This is presented in Table 44 and depicted in Figures 46 through 49:

- As simple comparison of impact on **annual ridership** is shown in Figure 46. As shown, by a substantial margin the alternative with the greatest increase in ridership is providing 20 minute service frequency on Routes 1 and 3, with 136,600 annual passenger-trips. Other

TABLE 44: Service Alternative Performance Analysis

Route / Service	Vehicle Hours	Operating Costs	Change In Annual: Passenger-Trips	Change In Annual: Fare Revenues	Change In Annual: Subsidy		Alternative Performance Measure: Passenger-Trips per Vehicle-Hour	Alternative Performance Measure: Subsidy per Passenger-Trip	Farebox Return Ratio
LOCAL ROUTES									
Increase Frequency of Routes 1 and 3 to 20 Minutes	10,880	$462,600	136,600	$82,300	$380,300		12.6	$2.78	18%
Sutter County Center Shuttle									
Spring and Fall Only	1,917	$86,700	22,800	$14,500	$72,200		11.9	$3.17	17%
Spring, Fall, and Summer	2,115	$96,600	25,200	$16,000	$80,600		11.9	$3.20	17%
Spring, Fall and Summer -- Mon Thru Thur	1,771	$80,900	22,400	$14,200	$66,700		12.6	$2.98	18%
Year Round Sutter County Center -- Tierra Buena Route	3,783	$168,400	40,300	$25,600	$142,800		10.7	$3.54	15%
Revise Route 2 to Serve Sutter County Center									
Eliminate Loop, Drop Timed Transfer	0	$25,400	29,200	$18,500	$6,900		--	$0.24	73%
Revise Route 2 Schedule to 40 Minute Headways	0	$0	-11,700	-$7,400	$7,400		--	-$0.63	--
Route 2 Realignment / Shorten Route 5	0	$300	22,000	$13,900	-$13,600		--	-$0.62	4633%
Revise Route 4 to Serve Linda On All Runs	0	$3,600	9,800	$5,800	-$2,200		--	-$0.22	161%
Half Hourly Service on Route 4 Weekdays	5,740	$239,000	68,400	$37,300	$201,700		11.9	$2.95	16%
Revisions to Route 5									
Stay on Walton Ave	0	-$4,900	-3,600	-$1,900	-$3,000		--	$0.83	39%
Realign on Germaine Dr	0	-$2,200	-600	-$300	-$1,900		--	$3.17	14%
Realign on Phillips Ave	0	-$3,800	-2,800	-$1,400	-$2,400		--	$0.86	37%
Realign on Tharp Rd	0	-$4,500	-3,000	-$1,500	-$3,000		--	$1.00	33%
Route 3 / Route 6 Realignment	0	-$13,300	18,000	$11,000	-$24,300		--	-$1.35	-83%
Weekday Evening Service									
1 Additional Hour -- All Routes	3,528	$149,600	37,300	$21,900	$127,700		10.6	$3.42	15%
1 Additional Hour -- All Routes Hourly	2,268	$96,500	26,700	$15,600	$80,900		11.8	$3.03	16%
2 Additional Hours	4,536	$193,000	40,000	$23,400	$169,600		8.8	$4.24	12%
3 Additional Hours	6,804	$289,500	50,000	$29,300	$260,200		7.3	$5.20	10%
3 Additional Hours on Limited Routes	5,292	$226,300	40,300	$23,600	$202,700		7.6	$5.03	10%
Extend Saturday Service by 1 Hour	598	$25,300	4,400	$2,600	$22,700		7.4	$5.16	10%
Sunday Service	7,006	$168,100	59,500	$34,700	$133,400	(1)	8.5	$2.24	21%
COMMUTER SERVICE									
Later AM SR 99 Run	583	$36,700	5,500	$24,500	$12,200		9.4	$2.22	67%
Mid-day SR 70 Run	583	$36,100	2,600	$6,500	$29,600		4.5	$11.38	18%
SR 99 2 PM Mid-Day Run	583	$36,700	4,100	$10,300	$26,400		7.0	$6.44	28%
Earlier SR 99 PM Run	140	$8,800	2,500	$11,600	-$2,800		17.9	-$1.12	132%
RURAL ROUTES									
Foothill Route 5 Day / Week	655	$38,200	2,200	$3,500	$34,700		3.4	$15.77	9%
Live Oak 5 Days / Week	412	$24,000	2,700	$3,300	$20,700		6.6	$7.67	14%
Revise Wheatland Route to 2 Runs/Day 3 Days/Wk	-13	-$500	177	$200	-$700		-13.6	-$3.95	-40%
Plumas Lake Rural Route	429	$20,700	1,900	$3,000	$17,700		4.4	$9.32	14%

Note 1: Plus Contractual Costs

Figure 46: Alternative Annual Ridership Impact

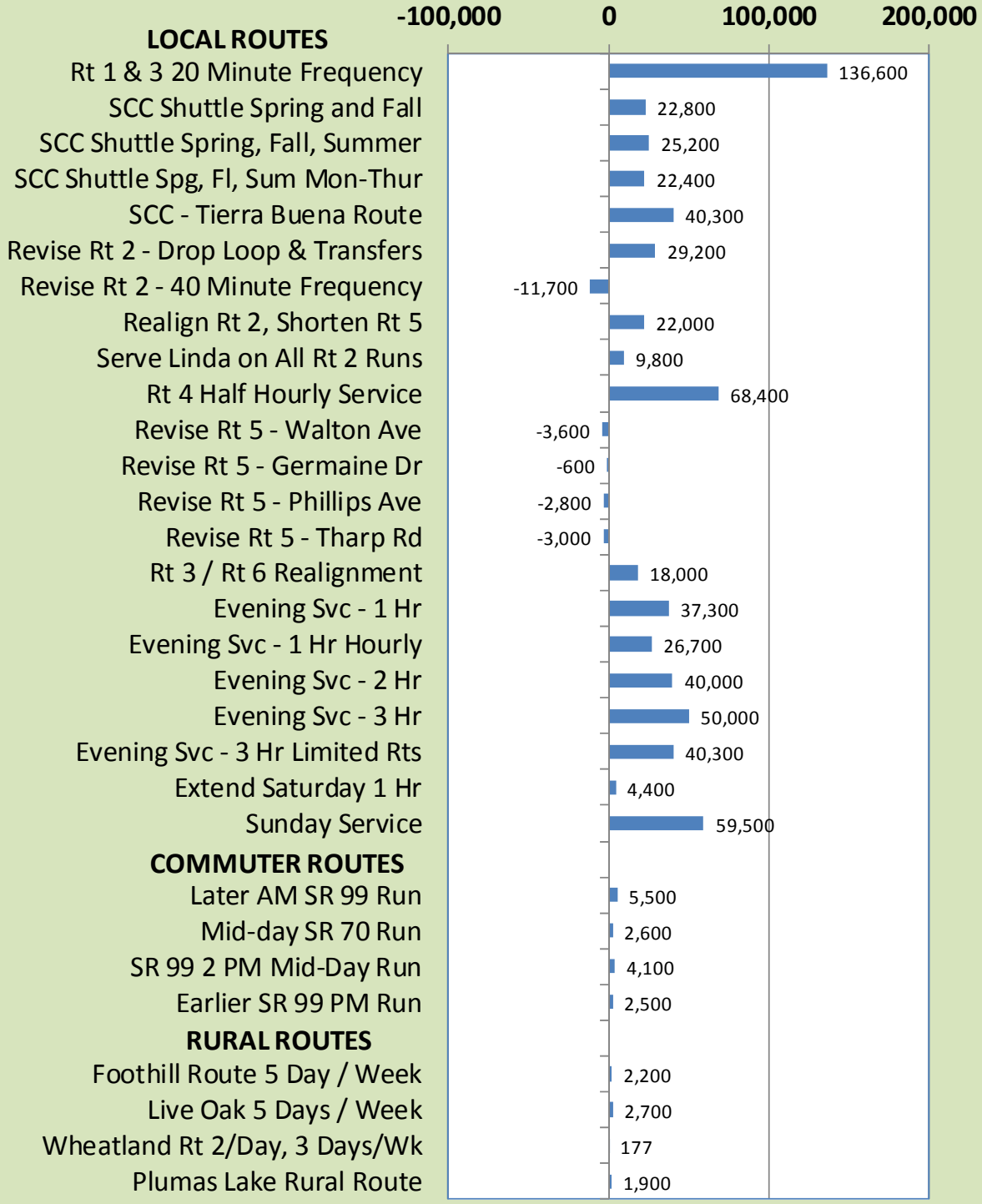


Figure 47: Alternative Annual Operating Subsidy Impact

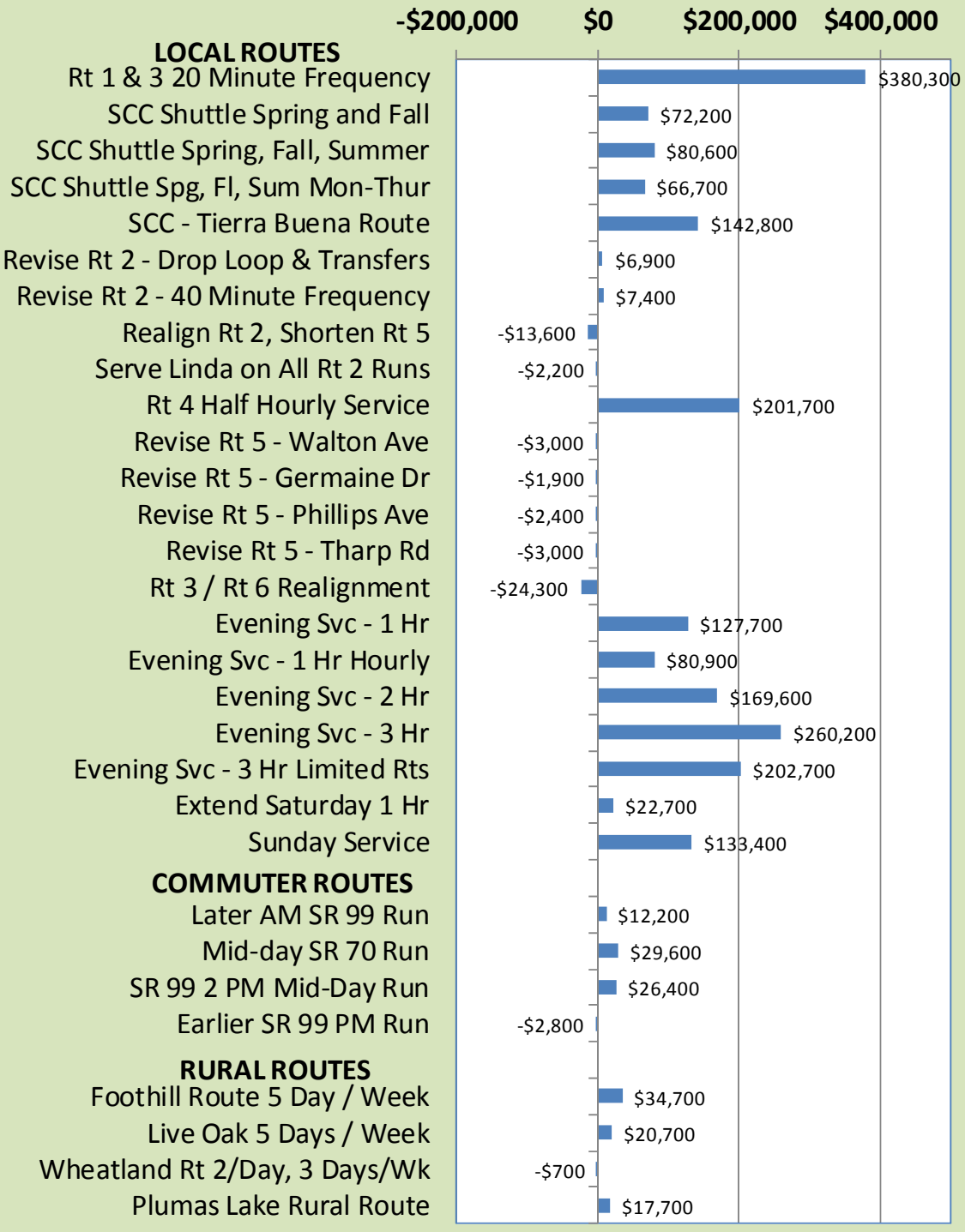


Figure 48: Alternative Passenger-Trips Per Vehicle-Hour

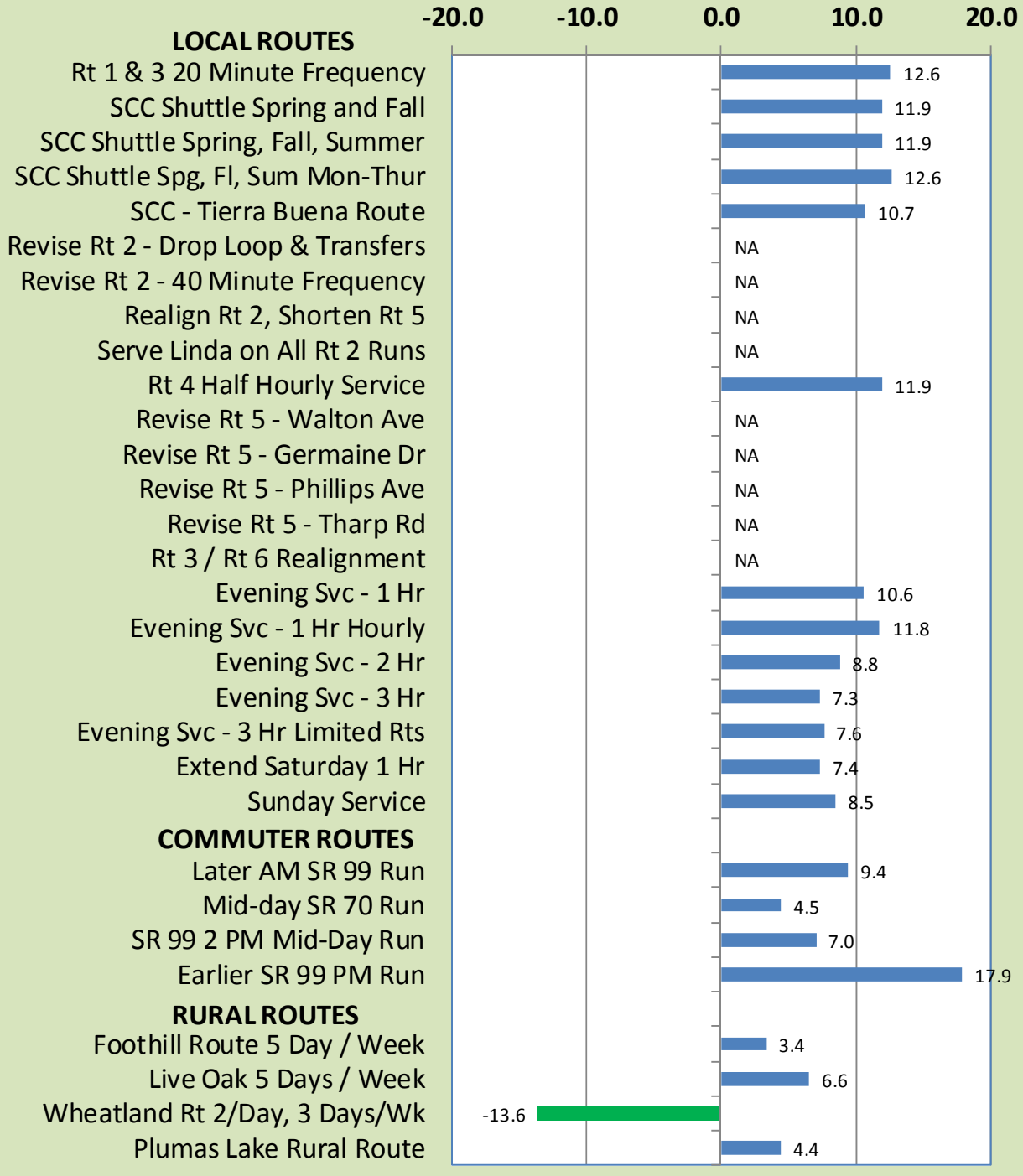
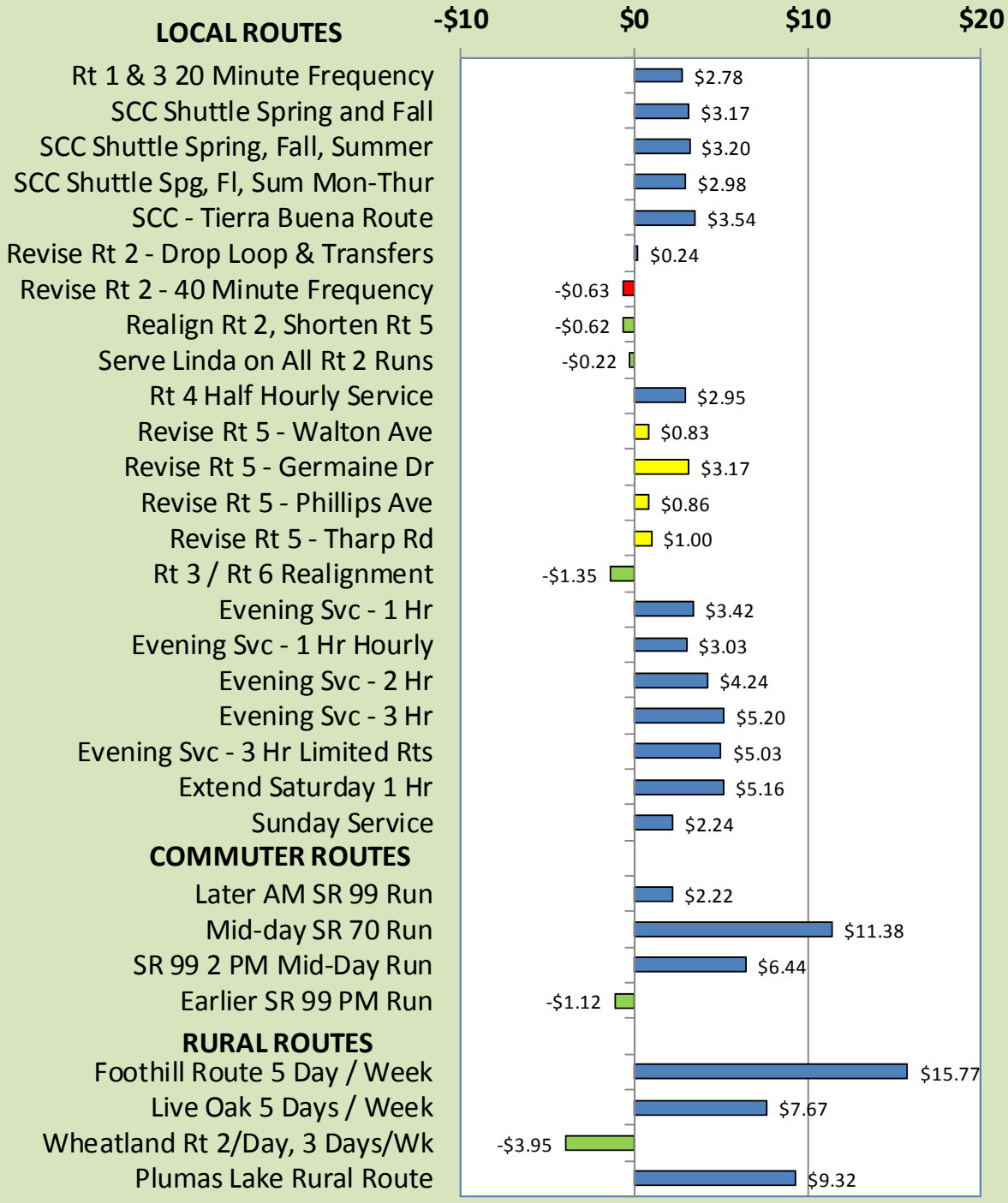


Figure 49: Alternative Subsidy per Passenger-Trip



alternatives with relatively high ridership increases are half-hourly Route 4 service (68,400), Sunday service (59,500), and evening service (up to 50,000). On the other hand, revising Route 2 to 40 minute headways reduces ridership by 11,700 per year, while the potential revisions to Route 5 routing all result in more modest reductions.

- The impact on **annual operating subsidy** is shown in Figure 47. The alternative with the greatest ridership potential (20 minute service on Routes 1 and 3) also has the greatest financial requirement, at $380,300 in annual subsidy. This is followed by the 3 hour evening service alternative ($260,200) and the Route 4 half-hourly service ($201,700). Several alternatives would have cost savings. In particular, the Route 3 / Route 6 realignment would reduce subsidy needs by $24,300, while the realignment of Route 2 and shortening of Route 5 would reduce subsidy needs by $13,600 per year.

- Operational effectiveness ("productivity") is best reflected in the **passenger-trips per vehicle-hour**, as shown in Figure 48. Note that this measure is not applicable to those alternatives that result in no change to the vehicle-hours of service. The "best" alternative by this measure is the earlier SR 99 PM run, which would serve an additional 17.9 passenger-trips for every additional hour of service added. Other alternatives that make relatively good use of additional vehicle-hours are the Route 1 & 3 20 minute frequency alternative, the various Sutter County Center alternatives (including the option that provides service to Tierra Buena), half-hourly service on Route 4, and one additional hour of evening service. The revision of the Wheatland Rural Route to runs per day on three days per week has a negative value (-13.6), reflecting an increase in passenger-trips and a reduction in vehicle-hours.

- The best overall measure of service efficiency is the **operating subsidy per passenger-trip**, depicted in Figure 49. This relates the key public "input" to a transit program (public funding) to the key "output" (passenger-trips). The results shown in Figure 49 are indicated in four colors:

    - The "best" alternatives by this measure are shown in green and have a negative value, reflecting a reduction in operating subsidy and an increase in passenger-trips. These consist of the revisions to the Wheatland Rural Route (reducing subsidy by $3.95 for every additional passenger-trip), Route 3 / Route 6 realignment (-$1.35), the earlier SR 99 PM run (-$1.12) the realignment of Route 2 / shortening of Route 5 (-$0.62), and revising Route 4 to serve Linda on all runs (-$0.22).

    - The blue bars reflect alternatives that increase ridership while also increasing subsidy needs (the majority of all alternatives). Of these, the better alternatives are the lower figures, reflecting relatively small funding investment per passenger-trip gained. The better alternatives by this measure are the later AM SR 99 run ($2.22), Sunday service ($2.24), Route 1 / Route 3 20 minute service frequency ($2.78), Route 4 half-hourly service ($2.95), and the Sutter County Center shuttle alternatives (ranging from $2.98 to $3.54).

    - The alternatives that reduce ridership but also reduce subsidy requirements are shown as yellow bars. These are the options for revising Route 5, which range from $0.83 to $3.17 in subsidy savings per passenger-trip lost.

    - Finally, the “worst” alternative is the revision of Route 2 to 40 minute frequency, shown in red. This alternative would reduce ridership while increasing subsidy requirements.

- Another measure of fiscal efficiency is the **farebox return ratio**, calculated as the change in farebox revenues divided by the change in operating costs. When costs decrease but fares increase (such as is the case for the Wheatland Rural Route revisions and the Route 2 realignment/shortening of Route 5), a negative value connotes a good alternative. This measure is most useful in evaluating the performance of alternatives with both an increase in farebox revenues and an increase in costs, in which a larger value reflects a “better” alternative. By this measure, the revision of Route 4 to serve Linda on all runs is the best of the alternatives that increase costs, with a farebox return ratio of 161 percent. Other alternatives that are relatively good performers are the earlier SR 99 PM run (132 percent), the revisions to Route 2 that would eliminate the Senior Center loop (73 percent) and the later AM SR 99 commuter run (67 percent).

The alternatives can also be compared against the existing performance measures and standards. (Note that changes to these standards are discussed in a following chapter). As shown in Table 45, the performance measures that pertain to the service alternatives consist of measures of accessibility (span of service), on-time performance, frequency, productivity, and farebox recovery. Overall, by these measures the Wheatland Rural Route and earlier SR 99 PM run alternatives are best, in that they meet all applicable target objectives (shown in gold). For the productivity measure, none of the local fixed route alternatives attain either the target objective (20 passengers per vehicle service hour) or the minimum standard (13 passengers per vehicle service hour), though the alternatives that would increase the frequency of Routes 1 and 3 to 20 minutes as well as the lowest of the Sutter County Center shuttle alternatives would get close, at 12.6. It also bears noting that while none of the individual local fixed route alternatives meet the “accessible” performance measure, in combination the full evening, Saturday extension and Sunday service alternatives would effectively meet the target objective.

This performance analysis review reflects the trade-offs between various goals. In evaluating future improvements, funding limitations also are very important. Overall, the following conclusions can be drawn:

- The two relatively major local route realignments (Routes 2 and 5, and Routes 3 and 6) are relatively good overall alternatives, as is the expansion of Route 1 to 20 minute headways. The revision to Route 4 to serve Linda on all runs also ranks relatively high.

- Though none of the Sutter County Center service alternatives meet the minimum productivity standard of 13 passenger-trips per vehicle-hour, they are not far below this standard and meet other goals and standards. Of note, the option that provides year-round service to the Center as well as Tierra Buena is not substantially less efficient or effective than the shuttle-only alternatives.

- While the extension of weekday services for one additional hour has reasonably good performance, further extension to full evening service is less efficient or effective.

- Among the Commuter options, the later SR 99 AM run and earlier SR 99 PM run stand out as better than the two additional mid-day run alternatives.

TABLE 45: Service Alternative Analysis of Existing Standard Attainment

Shading Indicates Does Not Meet Minimum Standard

Shading Indicates Meets Minimum Standard But Not Target Objective

Shading Indicates Meets Target Objective

Performance Measure	Accessible	On-time Performance	Frequency	Passengers per Vehicle Service Hour		Farebox Recovery
Minimum Standard	Provide service within the service area between 6:30 AM and 6:30 PM on weekdays and 8:30 AM and 5:00 PM on Saturdays	0.5% runs early and 95% no more than 5 minutes late	Local Routes: No more than 60 minutes between runs	Local Fixed Routes	13.0	14.6 % Systemwide
				Sacramento	12.0	
			Rural Routes: 2 Round Trips 2 Days per Week	Dial-A-Ride	3.0	
				Rural Routes	2.0	
Target Objective	Provide service within the service area between 6:00 AM and 9:00 PM on weekdays, 8:00 AM and 6:30 PM on Saturdays, 9:00 AM and 4:00 PM on Sundays	0% runs early and 99% no more than 5 minutes late	Local Routes: 30 minute service when 15 psgrs per vsh can be achieved in 2 years	Local Fixed Routes	17.0	20% Systemwide
				Sacramento	16.0	
			Rural Routes: 2 Round Trips 3 Days per Week, if 4 psgrs per VSH can be achieved	Dial-A-Ride	4.0	
				Rural Routes	4.0	

Route / Service	Accessible	On-time Performance	Frequency	Passengers per Vehicle Service Hour	Farebox Recovery
LOCAL ROUTES					
Increase Frequency of Routes 1 and 3 to 20 Minutes		Improves	Improves		
Sutter County Center Shuttle					
Spring and Fall Only					
Spring, Fall, and Summer					
Spring, Fall and Summer – Mon Thru Thur					
Year Round Sutter County Center -- Tierra Buena Route					
Revise Route 2 to Serve Sutter County Center					
Eliminate Loop, Drop Timed Transfer		Improves			
Revise Route 2 Schedule to 40 Minute Headways		Improves			
Route 2 Realignment / Shorten Route 5		Improves			
Revise Route 4 to Serve Linda On All Runs		Improves			
Half Hourly Service on Route 4 Weekdays		Improves			
Revisions to Route 5					
Stay on Walton Ave		Improves			
Realign on Germaine Dr		Improves			
Realign on Phillips Ave		Improves			
Realign on Tharp Rd		Improves			
Route 3 / Route 6 Realignment		Improves			
Weekday Evening Service					
1 Additional Hour -- All Routes	Improves				
1 Additional Hour -- All Routes Hourly	Improves				
2 Additional Hours	Improves				
3 Additional Hours	Improves				
3 Additional Hours on Limited Routes	Improves				
Extend Saturday Service by 1 Hour	Improves				
Sunday Service	Improves				
COMMUTER SERVICE					
Later AM SR 99 Run	--	--	--		
Mid-day SR 70 Run	--	--	--		
SR 99 2 PM Mid-Day Run	--	--	--		
Earlier SR 99 PM Run	--	--	--		
RURAL ROUTES					
Foothill Route 5 Day / Week	--	--			
Live Oak 5 Days / Week	--	--			
Revise Wheatland Route to 2 Runs/Day 3 Days/Wk	--	--			
Plumas Lake Rural Route	--	--			

- The revisions of the Wheatland Route to three days a week / two runs a day is a positive in every respect. Of the other rural route alternatives, the expansion of Live Oak service to five days a week stands out, and meets standards. The expansion of the Foothill Route to five days a week and Plumas Lake service are significantly less effective/efficient.

DIAL-A-RIDE SERVICES

Yuba-Sutter Transit's Dial-A-Ride services are a very important service for many area residents. The program serves three categories of passengers. The service was designed to serve primarily the needs of seniors and individuals with qualifying disabilities. Dial-a-Ride also serves as the complementary paratransit service required under the Americans with Disabilities Act (ADA). Dial-a-Ride is also offered to the general public with trips starting or ending more than one half mile from the fixed-route service.

Eligibility for seniors to use Dial-a-Ride is to be age 62 or older. The eligibility for individuals with a disability is defined based on 49 CFR 609.3. These criteria are also used to qualify for a reduced fare on the fixed-route service. Eligibility for a person with a disability must be certified by a physician or agency.

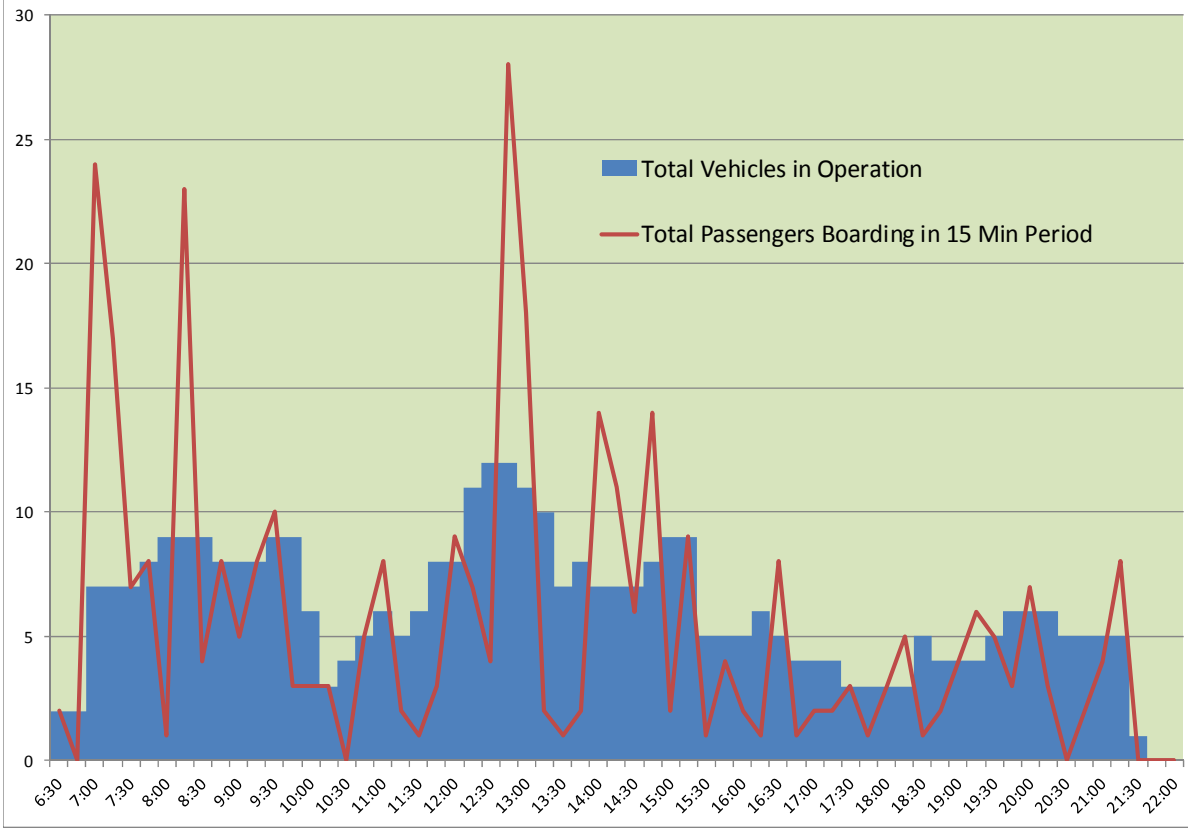
Eligibility for ADA complementary paratransit service is based on the criteria established by the ADA and is directly related to the individual's inability to use fixed-route bus service. The application to be eligible for complementary paratransit service includes questions related to functional abilities and requires verification by a professional care giver. An in-person interview is not required as part of the eligibility determination and a functional assessment is not conducted.

The demand for this service has been growing in recent years: in the four years between FY 2009/10 and FY 2013/14, DAR ridership grew by 16 percent. The vehicle-hours of service needed to serve the demand grew by 14 percent. If these trends continue, the 21 percent growth in ridership over the coming five years will require a 19 percent increase in service levels (and thus operating costs). As shown in Figure 50, the number of vehicles in active DAR operation ranges over the course of the day up to 12.

This issue is not so much about reducing costs as it is ensuring that limited resources are put to the best uses possible. For persons not ADA eligible, limitations on capacity can mean that serving one long trip precludes the ability to serve a higher number of shorter trips. As an example, a single passenger request from the residential neighborhood along the north side of Franklin Road west of George Washington Boulevard requires on the order of 30 minutes and 10 miles of travel to serve (depending on where the van starts and ends). At current costs, this requires a marginal cost of approximately $24 to serve. In comparison, the average marginal cost for the daytime Dial-A-Ride program is on the order of $14. This means that roughly three passengers can be served within the urban core area for the same funds that the DAR program expends on serving two passengers in the outlying areas.

The following presents a range of alternatives that could accommodate expected future growth in DAR demand or manage the demand to reduce costs and/or shift resources.

FIGURE 50: Dial-A-Ride Operations and Ridership: Tuesday, Dec 12, 2014



Expand Capacity to Address Existing Capacity Limitation and/or Future Growth in Demand

Under current trends, it can be expected that up to two additional vehicles will be needed to serve DAR needs by 2020. At current unit costs (excluding the impact of inflation), daytime DAR service operating costs will increase by $136,000 per year, while evening DAR will increase by $24,000 per year. The following discusses options for reducing this financial requirement.

Reduce the DAR Service Area

The Dial-A-Ride service area is substantially larger than the minimum area required under the Americans with Disabilities Act (ADA), which is ¾ miles from a fixed route. Examples of these areas include:

- Western Yuba City and adjacent areas from a line just east of George Washington Boulevard on the east to Township Road on the west, and from Franklin Road on the south to Pease Road on the north.

- The area south of Yuba City between Stewart Road on the north to Barry Road on the south and from Walton Avenue on the west to the Feather River on the east.

- The area north of Marysville along Laurellen Road.

Based on a review of driver logs, the ridership served in these outlying areas is estimated to be 1,100 passenger-trips per year. Reducing the DAR service area would eliminate these trips, but would reduce overall subsidy requirements by an estimated $25,000 per year.

Eliminate General Public Ridership on Daytime Dial-A-Ride Service

Another option would be to eliminate general public use of the daytime Dial-A-Ride service. A review of ridership data indicates that this is roughly 0.5 percent of total daytime DAR ridership, equivalent to 1 to 2 trips per day, or 300 per year. As these passengers are limited to persons more than a half-mile from the fixed route service, they tend to be in relatively remote areas that are difficult to serve and thus have a disproportionate impact on the overall service. A reasonable estimate of the reduction in subsidy needs associated with this service is $6,000 per year.

Reduce Evening DAR Service in Conjunction with Expansion of Evening Fixed Route Service

The types of riders on the evening service vary substantially from daytime ridership. Of the total riders, approximately 40 percent are disabled, 30 percent are general public, 18 percent are seniors, 4 percent are youth and 7 percent are children under the age of five or are companions. If the hours of Local Route service are extended into the evening, it would be feasible to also shift the hours of evening DAR to match the new end of fixed route service. This would allow the new hours to be limited to non-General Public only. If evening fixed route service is extended by three hours, this would reduce ridership by an estimated 3,300 passenger-trips per year. Operating costs, however, would be reduced by roughly $33,000 per year. Subtracting the loss in fare revenues, operating subsidies would be reduced by roughly $23,000.

Tighten the ADA Certification Process

There are four basic strategies followed by transit agencies for the ADA certification process. These include:

- Self-certification with professional verification only as needed
- Self-certification with professional verification for all applications
- Professional verification with an in-person interview and assessment
- Functional and/or cognitive assessment

Yuba-Sutter Transit follows the second approach with completion of the application by the individual or a representative and verification by a professional.

A recommended approach to manage the demand for ADA complementary transit service is to conduct an in-person interview and minimal assessment for all applicants. This will typically reduce the number of applications by 25 to 30 percent which subsequently reduces the increase in demand for the paratransit service. However, in the case of Yuba-Sutter Transit, Dial-a-Ride service is provided to all seniors and other individuals with a qualifying disability. Those individuals who might be ineligible for complementary paratransit may be eligible for the general Dial-a-Ride service. As a result, even though the applications for ADA complementary paratransit might be reduced, the overall demand for Dial-a-Ride service would be expected to have very little change.

Recertification for all individuals with a disability is recommended. This should be completed every five years for each person who has been certified as eligible for either the Dial-a-Ride service or the ADA complementary paratransit service. This will help to ensure that individuals continue to qualify for the service and to remove individuals who no longer need the service or no longer reside in the community. Recertification may be accomplished through a telephone interview rather than an in-person interview.

Potential Impact of the Enterprise Rancheria Casino Resort Project

The Estom Yumeka Maidu Tribe of the Enterprise Rancheria has been working for many years to develop a resort casino complex on a site along 40 Mile Road east of Plumas Lake. This would include a 170-room hotel, restaurants, conference facilities and a gaming facility with 91,000 square feet of floor area. As of this writing, the development has not progressed much in recent years, and legal proceedings are underway. If it were to develop, there is a potential for it to generate a new need for transit services, particularly for employees.

The transit needs associated with similar existing gaming facilities is mixed. The Cache Creek Casino in rural Yolo County has had a relatively large impact on transit services, in large part due to an aggressive commitment on the part of the casino operators to fund transit services (largely for employees). The Yolo County Transit District's Yolobus service operates 17 round-trips per day between the casino and Woodland, between roughly 4 AM and Midnight. Approximately 760 passenger-trips per day are generated by this casino, which has 200 hotel rooms and 74,000 square feet of gaming floor area. The relatively remoteness of this site and long travel distances to potential employee housing contributes to the strong transit ridership to this casino.

On the other hand, the Redhawk Casino in Shingle Springs (El Dorado County) generates less than 10 passenger boardings/alightings per day (and that is largely generated by a health clinic on-site). It is served four times per day in each direction by El Dorado Transit's Iron Point Express Route connecting Folsom with Placerville. The Thunder Valley Casino in Placer County generates an average of only 10 passenger-trips per day, even though it is served hourly in both directions by the Placer County Transit's Rocklin – Sierra County Route, and is much larger than the proposed Enterprise Rancheria project (at 300 rooms and 144,000 square feet of gaming floor area). Finally, the Jackson Rancheria casino near Jackson, California has never generated sufficient need for service for the Amador Regional Transit System to extend service to it.

The ridership at these facilities points to several factors which reduce the potential for effective transit service to a rural gaming facility. With the exception of the remote Cache Creek Casino location, employees tend to come from a large and dispersed region. Many of the employee shifts (including the evening shift, with the greatest employment) are not served by typical public transit schedules on one end or the other. As a result, an effective transit program is only possible if there is a focused effort to provide a high level of transit service (typically using gaming facility subsidies). This review indicates that there is no current need to include new services for the Enterprise Rancheria proposal in this SRTP. However, Yuba-Sutter Transit should continue to monitor the progress of the project and as warranted meet with the proponents to discuss transit strategies and funding.

Potential impact of the Fifth Street Bridge Expansion Project

The Fifth Street Bridge Expansion Project is planned to replace the existing bridge constructed in 1958 with a modern facility along the existing alignment. Current schedule is for the new bridge to be complete by the end of 2018. The project will expand the current two-lanes of traffic to four lanes from Shasta Street in Yuba City eastward over the bridge to J Street in Marysville, along with improvements at the 5th/J intersection and along Bridge Street and 2nd Street. It would not directly impact any existing Yuba-Sutter Transit routes. However, it is forecasted to improve traffic conditions at the Bridge Street / Plumas Street intersection from Level Of Service (LOS) F in the PM peak hour (in the first year of service) to LOS D, which will translate into noticeable travel time savings for the Route 2 operations along Plumas Street. While not studied in detail in the project's environmental study document, the project will result in a significant reduction in traffic volumes (and thus congestion) on the 10th Street Bridge that is currently used by six Yuba-Sutter Transit fixed route buses each hour. The traffic analysis indicates that a four-lane Fifth Street Bridge will carry 13,400 more vehicles per day than at present. Much of this will consist of traffic shifting off of the alternate route – the 10th Street Bridge. This is equal to roughly one third of the current daily traffic on the 10th Street Bridge. By the 2035 design year for the project, the four lane Fifth Street Bridge is forecast to reduce 10th Street Bridge traffic by a full 30,000 vehicles per day.

Once completed, the new Fifth Street Bridge will provide an opportunity to provide transit service on a second crossing of the Yuba River. In theory, Route 1 could be shifted from 10th Street to 5th Street, and the transfer point between Routes 1 and 2 shifted to the vicinity of Plumas Street and Bridge Street. Route 1 would then travel north (rather than south) on the east side of the river to access the Yuba County Government Center. However, this would route additional buses down Plumas Street, which is quite constrained, and would not significantly change the area served by transit. Another option would be to split Route 1 into one element that uses the 10th Street Bridge and a second (such as one bus per hour in each direction) that uses the 5th Street Bridge. This has the potential to be confusing and would not provide much benefit other than service at Bridge Street / Plumas Street that provide direct routing to Marysville. Overall, the greatest potential benefit of the new bridge to transit operations will be to reduce traffic and speed running times along the 10th Street Bridge, rather than opening up a new route.

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Chapter 7
Capital Alternatives

INTRODUCTION

The provision of public transit services requires a substantial investment in vehicles, facilities and equipment. This chapter first discusses the need for improvements to passenger facilities. Next, options for vehicles are evaluated. Finally, new technologies are reviewed for potential application at Yuba-Sutter Transit.

PASSENGER FACILITIES

Bus Stop / Transit Center Improvement Program

The quality of bus stops is a very important factor in a passenger's overall perception of a transit service. Depending on the trip, a passenger can spend a substantial proportion of their total time using the transit service waiting at their boarding location. If this is an uncomfortable experience, if it is perceived to be unsafe, or if it does not provide adequate protection from winter rain or summer sun, the bus stop can be the deciding factor regarding a potential passenger's use of the transit system. Yuba-Sutter Transit, moreover, does not currently get particularly high marks in this regard: in the onboard survey of local route passengers, it ranked second from the bottom (behind only on-time performance) in passenger satisfaction, with 17 percent of passenger giving a score of 1 or 2 out of a scale of 1 to 5.

Transit Centers

The local route system relies on timed transfers between the six local routes. This makes the five transfer centers particularly important in the overall functioning and passenger experience of the system. The investment in these transit centers has to date been relatively modest (in comparison with the facilities provided for other similar systems), consisting of one to two bus shelters apiece. A review of existing ridership patterns, and including a 10 percent factor to reflect near-term growth, indicates that the following capacity (peak number of persons waiting at the transfer points at key times) should be used to plan these facilities:

- Alturas/Shasta – 50
- North Beale Road – North Side – 50
- North Beale Road: South Side – 25
- Yuba County Government Center -- 35
- Walton Terminal – 30

These peak passenger loads are not sufficiently high to warrant the significant capital and operational expenses that would be required for a staffed, off-street transit center. However, based on these figures and the current condition of the transfer centers, the following improvements are recommended to improve the transit centers.

Walton Terminal

This facility currently provides two ad shelters and two additional benches. It has good shade from adjacent trees, and street lighting to the north and south. An additional large shelter, an

additional streetlight over the bus shelters, and two additional benches should be provided. This will also require additional sidewalk paving for expanded passenger waiting area.

Estimated Cost: $23,000

Alturas/Shasta

This facility is provided with only a single shelter. The sidewalk area is narrow. Approximately 120 feet of curb is painted white for use by Yuba-Sutter Transit buses, which only provides adequate space for three buses at a time. Three buses at a time are a common occurrence, and a fourth bus can sometimes arrive when routes are behind schedule, blocking the travel lane. Loading/unloading wheelchairs can be a problem due to the narrow sidewalk and the presence of curb stops in the adjacent paved parking area.

This location works well with regards to route running time, as it provides the opportunity for Routes 1, 2A, 2B and 4A to all serve a common stop with only a one-block deviation off of their primary route. The presence of traffic signals on Colusa Avenue at both Plumas and Shasta Streets also provides good access, and the location on a lower-volume roadway provides a more pleasant waiting environment for passengers than would a stop immediately along Colusa Avenue. However, the lack of space has been a problem. Other nearby sites were considered as alternative locations: along Alturas Avenue east of Shasta Street, along Shasta Street south of Colusa Avenue, along Alturas Avenue west of Plumas Street, and along the south side of Colusa Avenue between Plumas and Shasta Streets. In every case, the alternate location would require additional running time for routes to ingress and egress and/or land would need to be purchased to provide adequate space.

Accordingly, the recommended strategy is to make improvements at the current location. The following improvements are recommended:

- Negotiate an easement with the adjacent commercial property owner (currently used for Los Charros Taqueria) to use 6 to 8 parking spaces along the south side of Alturas Street for additional passenger waiting area. This may require conducting parking counts to identify that adequate parking can be provided without these spaces and/or obtaining a parking variance.

- Install two additional shelters, three to four benches, and overhead street lighting. A short length of fence between the passenger waiting area and the adjacent parking lot would also help to reduce passengers spilling into the parking area.

Estimated Cost: $84,000

Yuba County Government Center

Peak ridership activity at this location warrants construction of a second shelter, along with two to three benches. *Estimated cost: $20,000*

North Beale Road

This center consists of two ad shelters and four benches on the north side of N. Beale Road, and two ad shelters and two benches on the south side. This arrangement requires some transferring passengers (such as those between northbound Route 3 and westbound Route 1)

to cross busy North Beale Road at the adjacent signal. Optimally, these stops would be replaced with a single facility at which all buses can serve a single passenger waiting area, in a location with adequate ingress and egress to minimize route running time. One opportunity would be to create a transit center in the adjacent Peach Tree Mall parking lot. This would require a detailed study of potential site configurations, access modifications, and land availability. In the meantime, the following improvements are recommended:

- On the north side, replace shelters with two large shelters, additional passenger waiting paved area, two additional benches, and a streetlight.
- On the south side, install an additional bench and a streetlight.

Estimated Cost: $73,000

The total cost of these transit center improvements is $200,000.

Bus Stop Improvement Program

Beyond the transit centers, improvements are also warranted at other key bus stops. Table 46 presents the recommended locations for new shelters. This was developed based upon a review of boarding activity, the feasibility of installing shelters (some which would require easements on private land), and the availability of existing shelter. At the Peachtree Clinic and at the Route 2B stop at Plumas Street and B Street, there is available building overhang that functions as adequate shelter. At the Plumas / B Street stop, however, paving is needed between the existing sidewalk and the curb at the bus loading area to improve loading/unloading conditions for both ambulatory and wheelchair passengers. Some of the locations have very limited available right-of-way width (such as along North Beale Road); if an adequate pad cannot be obtained through easement from adjacent landowners, a "half-shelter" (with a narrow footprint on the ground and an overhang towards the street) could be considered.

TABLE 46: Recommended Locations for New Shelters at Other Key Bus Stops
Excluding New Shelters at Transit Centers

Stop Location	Average Weekday Boardings (1)	Rank Among All Stops in Local Route System	Provide New Shelter?	Installation Issues
Johnson Park	109	9	Yes	Bump out pad
North Beale & Woodland (NE)	58	15	Yes	Limited clearance
Olivehurst & 7th (3N)	52	16	Yes	Location in lawn area
N. Beale & Alpine (NW)	42	17	Yes	Unimproved shoulder, sidewalk desirable
Plumas & Church (SW)	33	25	Yes	In existing streetscape
Chestnut & Olivehurst (3N)	30	27	Yes	Unimproved shoulder, sidewalk desirable
Forbes & Clark (Library)	28	28	Yes	Location in library lawn
Gray & Casita (2B)	27	29	Yes	Location in apartment lawn
Plumas & Church (NE)	26	31	Yes	
Garden & Percy (2A)	26	32	Yes	May require bumping out curb or relocating stop to the south
Ramirez & 11th (4A & 4B)	24	33	Yes	Shelter in lawn, or bump out curb
Lincoln & Garden (SW)	24	34	Yes	Shelter in landscaping area
Chestnut & E. 18th (4B--MSH)	23	37	Yes	Shelter in landscaping area
Lincoln & Railroad (SE -- 2B & 5)	23	38	Yes	Shelter in landscaping area
Gray & Casita (2A)	23	39	Yes	Shelter on school property (relocate fence)
Olivehurst & 7th (3S)	23	40	Yes	Shelter on existing private property grass area
Hansen & 22nd (4B)	22	41	Yes	Shelter on apartment lawn
Plumas & Bridge (2A)	21	42	Yes	Shelter in existing streetscape area
17th & Hall (4B)	20	46	Yes	Shelter in lawn area
Forbes & Gray (1E)	20	47	Yes	Shelter in landscaping area
N. Beale & Albrecht (NE)	20	48	Yes	Limited clearance
H & 4th (NW)	20	49	Yes	Limited clearance
Total			22	

Note 1: Average of counts conducted in Fall 2013, Spring 2014 and Fall 2014.

As shown, a total of 22 new shelters are recommended. An estimated eight of these will be relatively straightforward projects of pouring a pad in existing right-of-way and installing a shelter; a unit cost of $15,000 apiece is assumed. For the remainder, additional elements will be required, such as curb modifications, utility relocation, negotiation and surveying of easements, landscaping modifications, historic amenities, etc. An average unit price of $25,000 is applied to these more challenging projects. Overall, an estimated $430,000 in capital costs (along with significant staff time) would be needed to construct these bus shelter improvements.

Bus Stop Sign Replacement Program

In addition, a comprehensive bus stop sign replacement program should be implemented. Bus stop signs are an important part of the overall marketing/public awareness strategy, as they are in neighborhoods around the region at all times. The current signs have been installed at various times, and many are fading or damaged. At an estimated average of $200 per stop (considering that some will require repairs to poles) and $10,000 in graphic design costs, this will require $66,600 to implement.

Work With Local Entities to Provide Better Sidewalks/Bicycle Access to Stops

On one or both ends of their trip, virtually all transit passengers walk, bicycle or use a mobility device as part of their overall travels. The quality of bike lanes, bike paths and (particularly) sidewalks is therefore an important factor in generating transit ridership. Local transit agencies such as Yuba-Sutter Transit therefore have a role in encouraging improvements to non-motorized facilities, particularly those facilities that access bus stops. Staff should coordinate with local Public Works and Community Development departments to gain an opportunity to review bicycle / pedestrian / activity transportation plans and provide input regarding locations that merit high priority in programming improvements. There are also opportunities to coordinate bus stop and sidewalk improvements (as evidenced by the North Beale Road project). Adequate non-auto access is particularly important on transit route segments along high-volume roads that were originally developed in rural conditions.

TRANSIT VEHICLES

Low-Floor Dial-A-Ride Vehicles

Over recent years, low-floor transit buses have become the norm for larger bus sizes, such as those used on urban fixed-route systems. The advantage of low-floor vehicles is that they eliminate the need for passengers to climb stairs to enter the bus by having a lower floor. This is particularly helpful for elderly or disabled passengers. This also eliminates the need for a wheelchair lift, in favor of a simpler wheelchair ramp. Low-floor buses are intended to provide greater passenger comfort as well as cut down on dwell time due to wheelchair boardings. Eliminating a wheelchair lift can also reduce time spent on wheelchair lift maintenance, and increase dependability. Perhaps the greatest benefit is passenger safety: while some systems surveyed as part of a Transit Cooperative Research Program (Report #66) reported little discernible difference in accident rates for passengers boarding or deboarding the bus, the Phoenix Transit System reported that these rates fell by half for low-floor buses compared with traditional buses.

One of the disadvantages of a low-floor vehicle is a reduction in passenger capacity as a result of lowering the passenger compartment toward the wheels. Another is cost, as low-floor

vehicles tend to cost more than standard models. The CalAct vehicle purchasing cooperative indicates that a 16-passenger low-floor cutaway costs between $98,000 and $110,000 while the standard floor counterpart costs on the order of $80,000.

More recently, there has been a trend towards low-floor configurations for smaller transit vehicles, such as those used in the Dial-A-Ride program. Roseville Transit has recently committed to only purchasing low-floor models for their DAR fleet (due in large part to concerns over passenger safety). Discussions with California transit agencies that have recently procured low-floor DAR vehicles indicated that the primary benefit of these types of vehicles is passenger safety and comfort. DAR services typically transport the most vulnerable of the population. The additional costs related to the purchase of a low-floor vehicle with wheelchair ramp can outweigh the costs an accident/incident with a wheelchair lift or stairs. Passengers have also reported that they prefer the low-floor vehicles. The agencies did not indicate a significant reduction in maintenance due to the elimination of the lift. Nor was the time required for wheelchair boarding and alighting significantly reduced, as the driver is still required to exit the vehicle to assist a passenger with a mobility device. The lower capacity was not reported as an issue, as the transit agency does not typically carry a full load on DAR buses. Some of the additional cost of a low-floor vehicle may be justified if a vehicle with a longer useful life is acquired. Overall, however, it can be concluded that low-floor vehicles for the Yuba-Sutter Transit DAR program would be beneficial, so long as the additional capital costs can be funded.

Vehicle Fuel Technologies

With the need to replace aging vehicles, it is important to consider the options regarding fuel. The following discussion presents the different alternative fuels, their advantages and disadvantages, their "global" affect, and their potential application.

Compressed Natural Gas (CNG)

Natural gas is a domestically produced alternative fuel and is readily available to end users through the utility infrastructure. The strength of CNG as an alternative fuel for transit buses is that it is generally less expensive per unit of energy than gasoline or diesel fuels. Per the Clean Cities Alternative Fuel Price Report in July 2014, the average price of CNG in the West Coast region was $2.42 per gasoline gallon equivalents (GGE) compared to an average of $3.94 for gasoline. Compared with diesel, CNG cost $2.69 per Diesel Gallon Equivalent (DGE) compared with $4.04 for a gallon of diesel (at that time).

The fuel also has the potential to reduce NOx emissions and PM when compared to diesel, although low sulfur diesel fuel used in conjunction with particulate matter traps can reduce PM emissions by a similar amount. Greenhouse gas emissions from CNG vehicles are approximately 15 percent to 20 percent lower than from gasoline vehicles, since natural gas has lower carbon content per unit of energy than gasoline. However, CNG generally vehicles have about the same greenhouse gas emissions as diesel fuel vehicles, with lower CO2 emissions offset by higher hydrocarbon emissions.

Many people – both inside and outside the transit industry – perceive CNG as the future fuel of choice. Others see CNG as a stop-gap measure that can be used to reduce vehicle emissions until other technologies (hydrogen fuel-cell or combustion-electric hybrid) are developed further. Indeed, the decision to pursue CNG comes down to the underlying goals of the agency considering alternative fuels, the local politics, the financial resources of the agency, and the commitment of decision-makers.

Historically, the weakness of CNG is its difficult storage requirements. CNG is stored in high pressure cylinders at pressures up to 3,000 pounds per square inch. The high weight, volume, and cost of the storage tanks for CNG have been a barrier to its commercialization as an alternative fuel. Tanks also have a useful life that can be less than that of the bus as a whole, resulting in expensive replacement of on-vehicle tanks. The recent development of lighter aluminum tanks, however, has reduced this disadvantage to some degree.

The advantages of a CNG bus are the lack of visible pollution and quieter operation. The problems encountered with CNG include the inconsistent quality of local CNG supplies, limited range of CNG vehicles, and continued industry concerns regarding reliability. Specialized maintenance training and equipment, along with modifications to facilities to safely accommodate CNG, also add to costs.

According to the 2011 APTA Public Transportation Vehicle Database, a 35-foot CNG bus in 2011 cost on the order of $340,000, substantially less than a hybrid bus ($550,000) and more than a diesel engine bus ($250,000). The higher cost relative to diesel engine vehicles is due to the higher cost of the engine itself and the higher cost of the fuel tanks. The useful life of a CNG engine is roughly equivalent to that of a traditional diesel engine, depending on the level of maintenance as well as level of contaminates in the fuel. The CNG tanks, however, are typically certified for 15 years; if careful maintenance on the remainder of the bus allows its life to exceed this period, a transit agency can be faced with expensive replacement of the tanks.

In a 1996 Department of Energy report, Pierce Transit (Tacoma, Washington) estimated that CNG engines are about 20 percent less efficient than diesel engines on a per gallon equivalency, which reduces the range of CNG buses. CNG buses are described as having a driving range of about 300 miles (depending upon the capacity of the gas cylinders) compared to a little more than 400 miles for diesel buses. Typically, buses smaller than 35-feet in length are unable to accommodate enough fuel tank capacity to operate a full urban cycle service day without refueling.

CNG fuel is dispensed in either a slow or fast fill station. While capital costs for slow fill facilities are less expensive, they can take over 12 hours to refuel vehicles, compared to 3 to 10 minutes for fast fill facilities. However, slow fill stations require less area for the set-up, making them more appealing to smaller systems that may have less space available for modifications or facility components. Another drawback to fast fill stations is that the completeness of the fill is less, in that temperature increases with gas compressions, thus reducing the amount of gas that is transferred into the tank.

CNG is available at the PG&E facility on 7th Street in Marysville, though capacity is limited to smaller vehicles (autos and utility trucks). To accommodate a transit fleet would require a new fueling facility. Such a task would increase start-up costs dramatically and would present additional problems should the CNG option prove to be a poor long term solution. In general, a CNG refueling station for an urban transit fleet can cost between $320,000 and $7,400,000. The TCRP Report 132 identified a general base cost of $1 million plus $15,000 per CNG bus. The lower end of this range is for “slow fill” facilities with a very limited capacity in the number of vehicles that can be fueled per day, while the high end is for “fast fill” facilities with large (and expensive) compressors. Further, it is estimated that facility maintenance costs can equal 6 percent of CNG infrastructure costs.

Another important consideration with CNG is the need to retrofit existing maintenance/storage facilities to avoid the potential for explosion. As CNG is lighter than air, any leak in vehicle fuel tanks or lines can result in CNG accumulating in the roof of a building. Building codes require that monitors be installed and the potential for ignition be minimized, including retrofitting heating, electrical and lighting fixtures to avoid open flames or sparks. This can easily reach several hundred thousand dollars or more.

The power provided by CNG engines, while it has improved over recent years, is still 25 to 30 percent lower than the power provided by a similar diesel engine. While grades are not an issue with Yuba-Sutter Transit routes (with the exception of the Foothills Route), even on level ground this increases the traffic congestion caused by bus operations.

Overall, CNG is not the ideal fuel for Yuba-Sutter Transit to pursue in the long run. The capital costs, including both vehicles and facilities, outweigh the potential benefits of CNG as an alternative fuel.

Hybrid Electric

A vehicle technology gaining popularity among transit systems nationwide is hybrid electric propulsion. Under this arrangement, battery-powered electric motors drive the wheels; the batteries are charged using a small internal combustion engine (diesel-, gasoline- or alternative-fueled) to power an electric generator. This arrangement provides dramatically lower emissions, as the engine operates within a very narrow and efficient operating range. Hybrid buses which use ultra-low sulfur diesel and particulate matter filters have 90 percent lower emissions than a conventional diesel bus, and tend to have less greenhouse gas emissions than both conventional diesel and CNG buses.

Hybrid electric propulsion systems have been tested at several large transit programs, most notably at New York City Transit. The National Renewable Energy Laboratory prepared an evaluation of the benefits of 10 new CNG Orion VII buses and 10 new Orion VII hybrids used for New York City Transit. According to the report, hybrid maintenance costs were lower than the CNG buses, battery replacement rate for the hybrid vehicles was about 4.5 percent per year, brake repair costs were 79 percent lower on the hybrid buses than the CNG buses and the hybrids had fewer roadcalls. New York City Transit has since placed an order for an additional 500 hybrid buses. Other agencies which have tested hybrid technologies include Sunline Transit in Thousand Palms (California), the Roaring Fork Transit Authority (Colorado), the Los Angeles County Metropolitan Transportation Authority, the Orange County Transportation Authority, Omnitrans in San Bernardino, TriMet in Portland (Oregon), King County Metro Transit in Seattle, the Southeastern Pennsylvania Transportation Authority in Philadelphia, and New Jersey Transit.

The National Renewable Energy Laboratory (NREL) has conducted several studies comparing fuel economy and maintenance cost per mile between hybrid electric and diesel transit vehicles for urban fleets. According to a NREL study for Long Beach Transit, fuel economy (miles per gallon) on a gasoline powered hybrid electric vehicles was 4.3 percent lower than on a diesel fueled vehicle but maintenance per mile costs were 42 percent less on the hybrid. Similar comparisons made for King County Metro Transit in Seattle show that fuel economy in miles per gallon was 27 percent greater on a diesel hybrid vehicle in comparison to an Ultra Low Sulfur Diesel (ULSD) vehicle. In this case study, total maintenance cost per mile was only 4 percent lower for the hybrid vehicles.

Operating costs for a hybrid electric system are typically lower in comparison to conventional diesel- or CNG powered arrangements due to greater fuel economy and reduced brake wear (the batteries are also charged through regenerative breaking, which tends to slow the vehicle while it recoups energy). In addition, hybrid electric buses provide better acceleration and quieter operation than conventional internal combustion engine propulsion systems. Another benefit of hybrid electric technologies is that it does not require the large infrastructure investment that is required for CNG technologies. However, the average price of a hybrid bus is quite dramatic, costing roughly $550,000 for a 35-foot bus when compared to $280,000 for a conventional diesel bus (2011 APTA Public Transportation Vehicle Database). In addition, conventional sealed-gel lead acid battery systems typically last only two to three years, and replacement units cost on the order of $25,000. Better battery technology currently exists that could extend battery life (i.e., nickel metal hydride), but this technology currently costs $35,000 to $45,000 per bus.

While hybrid technology is a potential fuel choice for commuter and fixed route Yuba-Sutter Transit services, route, the costs hybrid electric buses are prohibitive. As a total of 18 larger buses will require replacement over the coming five years, the $270,000 in incremental costs per unit for a hybrid vehicle means that a total of roughly $4,900,000 would be required in additional capital funding. Even focusing only on the "local match" and assuming 80 percent non-local funding, hybrid vehicles would require on the order of $970,000 in local funds. As such, this is not a fuel technology that should likely be pursued by Yuba-Sutter Transit.

Propane Fuel (LPG)

Propane (or liquefied natural gas – LPG) is a by-product of natural gas processing and petroleum refinement, and is another alternative that has been used in the transportation sector for decades, and is the world's third most common fuel source for engines. In the United States, LPG accounts for roughly 2 percent of energy used, of which less than 2 percent of that is used for transportation fuel. According to the Propane Education and Research Council, there are more than 270,000 propane vehicles on the road in the United States, many of which are used as fleet vehicles. For transportation applications, LPG is appealing due to its wide availability (particularly in rural areas, where LPG is used to heat homes when natural gas is unavailable) and low cost, as well as the clean burning qualities. As of July 2014, LPG's average price in the West Coast region was $3.16 per gallon, roughly 20 percent less expensive than gasoline and 22 percent less than diesel

Surprisingly, propane buses are less fuel efficient than diesel buses. Studies have shown that on a gallon-to-gallon basis, the energy content of propane is 73 percent of gasoline; as such, more fuel is needed to travel the same distance. According to a 2006 United States General Accounting Office report, Mass Transit: Use of Alternative Fuels in Transit Buses, buses fueled with LPG at a California transit agency were 26 percent less fuel efficient than the equivalent diesel bus, while other studies have shown that this can range from 15 to 30 percent.

The environmental benefits of propane make this an attractive fuel. LPG is nontoxic and insoluble in water, thus presenting no threat to soil, surface water or groundwater supplies. Additionally, propane fueled vehicles generally produce lower amounts of pollutants and GHGs when compared to diesel and gasoline powered vehicles due to a lower carbon content. However, due to more stringent emissions regulations for light- and heavy-duty vehicles, such as those put in place by CARB, emissions from propane vehicles are generally equivalent to gasoline and diesel vehicles with the up-to-date modifications and retrofits.

Propane powered vehicles tend to cost more than diesel and gasoline vehicles, however existing gasoline or diesel vehicles are able to be retrofitted or converted to propane use. New propane vehicles cost on the order of $380,000 for a 35-foot transit vehicle, falling roughly in the midrange for the various fuel types. Vehicles using propane have a low-pressure tank where the fuel is stored, and on some vehicles, extra storage tanks can be added to increase range (however this displaces payload capacity). According to the North Dakota State University Study, Use of Alternative Fuels and Hybrid Vehicles by Small Urban and Rural Transit Systems (April 2012), one problem for propane vehicles in smaller urban and rural areas is that of significant mechanical down time, as well as access to technical and mechanical expertise for repairs.

As the only commercial propane fueling station in the Yuba City – Marysville area is at a U-Haul facility in Yuba City, a new fueling station would be required. Fueling stations for propane cost more than diesel stations, but significantly less than those for CNG fuel. However, in order to accommodate for needed improvements for maintenance, facility improvements are required, which for a larger fleet cost on the order of $300,000 for one maintenance garage. Propane stations require onsite storage with tanks installed above ground. The Department of Energy's Alternative Fuels Data Center estimates that it would cost roughly $37,000 to $175,000 to purchase and install the equipment required to dispense propane, but that this varies based on situation and need. For a wholly new fueling facility, TRB's TCRP Report 146 estimates that one new propane fueling facility can cost up to $700,000. Additional annual maintenance costs similar to those of diesel, at $5,800 to $8,200 per year.

While propane does present some benefits, it is not recommended that Yuba-Sutter Transit pursue this option. The costs associated with converting to this fuel type are likely to outweigh the benefits, and thus it is not financially favorable.

Ultra Low Sulfur Diesel

Diesel-fueled engines have traditionally dominated the transit vehicle marketplace with their fuel efficiency and durability. From an air quality perspective, diesel engines have very low tailpipe emissions of CO and other organic gases. The concern from an air quality perspective, however, has been the emission rates of NOx and PM. The July 2014 Clean Cities Alternative Fuel Price Reports indicates that the current cost of diesel fuel at that time was $4.04 per gallon on the West Coast (it has since declined in price).

Due to increasing environmental pressure to reduce the above emissions, the Environmental Protection Agency has developed stringent NOx and PM regulations, as referenced above. The final Clean Air Amendments permit the use of clean diesel in urban buses, provided that the clean diesel engines meet the PM standards. In partial response to the 1990 CAA amendments for cleaner burning fuels and the continued development of the previously mentioned alternative fuels, the traditional diesel fuel engine has made great strides toward evolving with a cleaner burning particulate trap and catalytic converter technology.

Ultra-low sulfur diesel (ULSD) is diesel fuel with 15 parts per million (ppm) or lower sulfur content. In 2010, the U.S. Environmental Protection Agency required 100% of the highway diesel fuel refined in or imported into the United States to be ULSD. This ultra-low sulfur content enables use of advanced emission control technologies such as particulate traps and catalytic converters on light-duty and heavy-duty diesel vehicles. When combined with advanced

emission control technologies, reductions from use of clean diesel can be equivalent to removing the pollution from more than 90 percent of today's trucks and buses3.

While ULSD typically does not impact vehicle performance, fuel economy can be compromised since the process that produces ULSD can also reduce the fuel's energy content. Additionally, lubricity is reduced as a result of removing the sulfur. This can be resolved by adding various additives to the fuel before retail sale or by the addition of biodiesel.

Diesel facilities are some of the least expensive to maintain, with an estimated yearly cost of $5,800 to $8,200 per year. This, in addition to the improvements to diesel engines and the current wide availability of the fuel, make diesel an attractive choice for many agencies. As technology with diesel engines improves, this fuel type becomes a much more favorable option. The costs associated with it are very minimal, if there are any at all, and air quality goals can still be obtained.

Biodiesel Fuel

Biodiesel can be legally blended with petroleum diesel in any percentage. The percentages are designated as B20 for a blend containing 20% biodiesel and 80% petroleum diesel, B100 for 100% biodiesel, and so forth. Per the Energy Policy Act of 1992, alternative fuel credits are available for B100 and blends of B20 and higher.

Biodiesel, in general, contains roughly 8 percent less energy per gallon than standard petroleum-based diesel. Benefits related to greenhouse gases and air quality correspond with the blend used, whereby B20 generates roughly 20 percent of the benefit of B100.

B20 is the most common biodiesel blend in the United States and provides the benefits of biodiesel but avoids many of the cold-weather performance and material compatibility concerns associated with B100. B20 can be used in nearly all diesel equipment, is compatible with most storage and distribution equipment, and generally does not require engine modifications. According to the United States Department of Energy, B20 can reduce PM (particulate matter) emissions by 10 percent, CO (carbon monoxide) by 11 percent, and unburned HC (hydrocarbons) by 21 percent. Further, carbon dioxide emissions can be reduced by 15 percent.

B100 and other higher level blends cannot be used in all engines, though they are typically compatible with diesel engines built after 1994 with biodiesel-compatible material for parts such as hoses and gaskets. Since biodiesel blend levels increase quite substantially beyond B20, there are concerns that should be considered. These concerns include lower energy content per gallon, potential engine warranty issues and microbial contamination. Emission reductions are greater with the use of B100 biodiesel – reducing PM and CO by nearly 50 percent and unburned HC by nearly 70 percent. Likewise, carbon dioxide emissions can be reduced by more than 75 percent. It is important to note that despite these potential reductions, use of B100 biodiesel can actually increase NOx emissions.

Low-level biodiesel blends are also available, and are the result of blending biodiesel with petroleum diesel. Such fuel is compatible with diesel engines and aids in reducing harmful emissions. Blends include B2 (2 percent biodiesel, 98 percent diesel) and B5 (5 percent biodiesel, 95 percent diesel), both of which are suitable for light-duty and heavy-duty vehicles such as transit buses. As mentioned in the low-sulfur diesel discussion, low-level biodiesel, such

[3] United Stated Department of Energy Alternative Fuels and Advaced Vehicle Data Center, 2011

as B2 or B5, is a common additive to increase lubricity. In addition to the lubricity benefit, these biofuels also provide air quality benefits. The United States Department of Energy states that "using 100 gallons of B5 brings roughly the same air quality and alternative fuel use benefits as using 25 gallons of B20 or 5 gallons of B100".

In terms of pricing, biodiesel tends to cost slightly more than traditional diesel fuel. As of July 2012, the Clean Cities Initiative cited the cost of B20 biodiesel in the West Coast region at $4.14, compared to $4.04 per gallon for standard diesel. Another consideration is that there is not currently a commercial source of biodiesel in Yuba or Sutter Counties; the nearest such facilities are located in Rocklin and Woodland.

While biodiesel has many benefits, they are not superior to those of regular diesel fuel, which is more readily available and tends to have better fuel economy. As such, unless a biodiesel fueling facility was to be planned through a partnership with another agency, this fuel type is not the ideal alternative for Yuba-Sutter Transit's long term plan.

Alternative Fuel Summary

Each fuel type described above presents its own pros and cons. Generally, capital costs tend to be the major disadvantage to a number of fuels, including propane and CNG. Compressed Natural Gas is used by many transit agencies across the country, including systems in nearby Placer County, the Tahoe Basin (BlueGO), City of Roseville Transit, Sacramento County and Yolo County, to name a few. The major benefits of CNG are the availability of buses, parts and fuel, as well as the reduced emissions that are generated. However, safety and capital costs are the greatest concerns when contemplating the possibility of using CNG. Discussions with Nevada County's Gold Country Stage system revealed that after converting to CNG for a portion to their fleet, they have since converted back to diesel. Major problems experienced by the system included not enough power due to topography, no local maintenance available (they had to conduct major repairs in Sacramento), vehicles required fueling twice per day, only one local fueling station provided by PG&E (and fueling had to be done around PG&E's schedule), and the very high maintenance costs.

Hybrid electric buses are a popular choice for larger transit agencies across the country. By using the widely availability of diesel fuel, coupled with electric technology, these engines produce fewer emissions and have lower fuel costs than other options. Additionally, any fuel type can be used (gasoline, diesel, etc), making this a flexible option. Unfortunately, hybrid electric buses cost significantly more than other alternative fuel vehicles, making this a major deterrent for many transit agencies.

Propane has been used as a domestic fuel for decades, as well as to power lighter duty fleet vehicles, including school buses. Lower emissions and fuel costs, as well as relatively minimal maintenance costs, make this an attractive option for transit fleets; however this may be offset by the lower fuel economy, high costs for facility conversion and construction of a fueling facility, and low availability of propane engines for larger transit vehicles.

Diesel is by far the most popular transit fuel used in the United States. Recent regulations put in place by the EPA have created more efficient and clean burning engines, bringing diesel fuel up to par emissions-wise with other alternative fuels. While it has many benefits, economic and environmental concerns are present regarding the refining of crude oil, leading to the interest alternative fuel types.

The allure of biodiesel is the result of minimal modifications required to existing diesel engines, as well as the clean burning aspects and low emissions. Unfortunately, fuel economy with biodiesel is worse than regular diesel, and the fuel is not widely available.

In summary, maintaining diesel buses with more efficient and clean burning engines would yield the most economical option for Yuba-Sutter Transit, as any future buses purchased would be at the lower spectrum and no major facility improvements would be required. CNG would offer lower fuel costs and moderately priced vehicles for future procurement, however because of the high facility costs, higher maintenance costs and lower fuel efficiency compared to diesel, this may not be an ideal option. Fuels with higher fuel efficiency – propane, biodiesel and hybrid electric – also come with higher costs, particularly for vehicles and facility conversion.

TECHNOLOGY

Wi-Fi on Commuter Buses

The provision of internet Wi-Fi connectivity to transit passengers is becoming increasingly common, as a means of attracting additional riders and better serving existing riders. In particular, providing connectivity on long commute trips helps to make transit service more competitive with driving. While no detailed studies have been conducted, anecdotal information indicates that a ridership increase of several percentage points can be attributed to provision of Wi-Fi service. Examples of existing transit systems providing Wi-Fi service are the Regional Transportation Commission in Reno, Nevada, as well as Sonoma County Transit.

Ongoing internet service costs can vary widely, though some services find that these costs can be offset through user fees. The value of on-board Wi-Fi may be a good selling point for potential companies advertising on buses. A brief ad before allowing access to the internet is acceptable to customers in many public places. Internet users could be charged a daily, monthly or annual rate. For example, Southwest Airlines charges $8.00 per day.

Washoe RTC implemented Wi-Fi on four commuter buses and four downtown circulator buses which serve mainly college students. RTC purchased industrial vehicle routers from Cradlepoint for roughly $500 per vehicle. Installation of the router was fairly easy, about 1 hour per bus, and was done by RTC staff, resulting in a total installed cost of approximately $1,500 per bus. In the Reno area, RTC discovered that Verizon was the best carrier after an initial trial with Sprint. The plan with Verizon reflects a government rate and costs around $50/month per bus for 5 GB of data. RTC staff warned that a transit agency considering Wi-Fi may wish to employ some type of content filter as passengers attempting to download movies will bump the agency over the maximum data limit quickly and incur large overage charges. As a result, RTC passengers must now request access to download movies or other high data programs. RTC does not charge passengers for internet usage.

Overall, RTC has had a good experience with Wi-Fi though they cannot make a direct link between internet availability and a ridership increase. RTC staff offered the following advice for other transit agencies considering Wi-Fi: Look for a router supplier with good customer support which is located in the US and place the router where it is accessible by the driver. Preferably, the router should not be located on the exterior of the bus so that it is not damaged by the bus wash.

Automatic Vehicle Location (AVL)

Simply defined, Automatic Vehicle Location (AVL) is technology which identifies and transmits the geographic location of the vehicle. Most AVL is satellite Global Positioning System (GPS) based. AVL is an increasingly common technology used for mass transit systems. Although AVL should not be seen as the answer to all problems, the knowledge of the geographic location of a transit bus at any one point in time has multiple applications and advantages.

- Schedule adherence – Provides the ability for operations management to view bus arrival times on a regular basis without conducting on-time performance surveys. Managers can more easily make schedule adjustments to improve on-time performance, analyze dwell time at intersections, as well as review driver performance.

- AVL has the ability to provide the dispatcher with more knowledge and awareness of the entire fleet and therefore allows the dispatcher to manage a larger fleet more effectively.

- Being always aware of a vehicle's location, dispatchers can provide more timely reactions to service disruptions.

- AVL can be combined with automated "next stop" announcements. This will reduce the workload for drivers so that they can focus on safely operating the buses.

- AVL can be combined with automatic passenger counters for on-going detailed data collection without the need for periodic surveys which may be subject to human error. Transit agencies can make more accurate passenger projections and more thorough analysis of route changes with the more detailed data.

- AVL provides enhanced customer service with the ability to communicate to passenger's real-time bus arrival information. Additionally, any staff member with access to the program (not just dispatchers) can communicate demand response arrival time information.

- The GPS features can provide on-board navigation assistance for new demand response operators.

- When combined with demand response scheduling software and mobile data terminals, dispatchers can more accurately assign same day demand response trips to drivers and make other real time revisions to the drivers manifest.

- "No-show" complaints will decrease as reports generated by the AVL can provide back up evidence or confirmation that a vehicle served a stop at a particular time.

- Fare revenue – Greater detailed information about passenger fare revenue can be obtained by combining AVL with electronic farebox technology.

- Security - A covert alarm feature can notify dispatch of the vehicles location in case of emergency.

Surveys conducted as part of the TCRP Report 73 indicated that in order to make AVL a good asset to a transit program, personnel must be willing and able to use the technology to its full

extent. There can also be a short-term decrease in productivity as personnel are learning the new process and software. There is also the factor of increased on-going maintenance.

According to TCRP Report 73, industry experience shows that AVL is not a cost saving measure but rather a resource through which to achieve more value from the system in terms of customer service, planning resources and management tools. The cost of implementing AVL type systems varies depending on the specific features required, location, and the availability of competitive bidders. Surveys conducted as part of TCRP 73 report (2008) indicates the cost could be upwards of $3,000,000 for 50 vehicles. More recent internet research indicates that the initial cost of AVL is around $8,000 to $11,000 per vehicle. Whether or not AVL technology is considered cost effective or likely to increase productivity, it is becoming increasingly common and more expected on larger mass transit systems.

Yuba-Sutter Transit Existing Technology

Yuba-Sutter Transit currently has a GPS feature as part of the Motorola radio system. The system provides a digital map feature which allows dispatchers to track vehicles. Schedulers and supervisors use the digital map for a variety of purposes: placement of last minute Dial-A-Ride trips, customer inquiries ("where's my bus" calls), responding to incidents, verifying the location/speed of vehicles when investigating complaints, etc. The use of the digital map has cut down on the radio traffic that would otherwise be necessary in most of those situations.

Zonar

Several specific applications of AVL technology that could be useful for Yuba-Sutter Transit were reviewed. AVL technology can be beneficial for fleet maintenance purposes, operations management, as well as reviewing on-time performance. Some AVL based products like Zonar are equipped to communicate vehicle data back to base such as temperature, pressure, malfunctions etc. Thresholds can be set and notifications are triggered if the vehicle exceeds the set threshold. The Zonar system also ensures that pre-trip vehicle inspections are properly performed and the appropriate staff members are notified of any needed repairs. Electronic "tags" are placed at important inspection points on each vehicle. During daily vehicle inspections, each driver places a hand-held reader near each tag and keys in the condition of that part of the vehicle. After the inspection is complete, the reader is returned to a holder mounted inside the bus where the data is transmitted wirelessly to maintenance and operations staff. This technology improves operational efficiency by allowing managers to be informed of potential maintenance issues in a timely manner. Although primarily used to track maintenance issues, Zonar technology includes a GPS system which allows transit supervisors to remotely pinpoint the route and stops of each bus and receive in-route information such as vehicle speeds and excessive idling. In turn this can allow management to reduce vehicle service hours and increase productivity. Many transit agencies, including El Dorado Transit, TART, and Roseville Transit, employ Zonar Technology.

Real-Time Traveler Information Systems

Web-based technologies now allow passengers to track buses or receive real-time information on arrivals. These Automatic Vehicle Location (AVL) technologies, marketed under various names such as NextBus and TripSpark, provide real-time information to passengers and personnel. Northern California/Nevada transit systems that have implemented NextBus include the Unitrans system serving Davis, Tahoe Area Regional Transit (TART) operated by Placer County, RTC Ride in the Reno area, Amador Transit, and Muni in San Francisco. The program

is quite user-friendly for passengers and a link to the program can be found on the TART website through both a standard workstation or a mobile internet device. By selecting the bus line, direction and stop, passengers are told the number of minutes to the next bus. A map is also available which displays all bus stops on the line and a marker moves along the line indicating the real-time position of the transit vehicle. On a mobile phone, NextBus automatically determines your location and displays the location of the closest bus stop to you in map and text format, as well as the number of minutes to the next bus.

TART staff indicated that installation of NextBus was not difficult and has been one of the least problematic technologies that the transit system has implemented. There have, however, been some disruptions in service at times. On the administrative side, NextBus tracks and provides information by bus, rather than by route or driver shift, as most driver manifests are organized. As such, each season TART must provide to NextBus the route and stops for each vehicle. A job number is assigned to each bus which the driver or dispatch must log in every morning. TART has received numerous positive comments on the technology and feels that it is a great way to communicate to the public. NextBus is also helpful for researching past incidents and reviewing schedule adherence. Although office staff have the ability to "replay" the NextBus map of past bus activity at 10 times the actual speed, researching previous incidents is a bit time consuming. Zonar has the ability to generate reports of past vehicle activity, whereas NextBus does not.

TART's initial one-time setup costs for 15 buses plus one spare, mobile data terminals and an LCD display for the office was around $87,000. On-going costs for cellular service, route updates and other support total to around $28,000 per year.

Both Zonar and NextBus could be useful to Yuba-Sutter in reviewing on-time performance and helping the system meet on-time performance goals. There may also be future GPS applications available with the Connect Card program which is being implemented through SACOG.

Computer Assisted Scheduling and Dispatch (CASD)

Currently, Yuba-Sutter's contractor schedules and dispatches DAR trip requests manually. The following provides an overview of the existing scheduling procedure. All trip requests are entered into Microsoft Excel spreadsheets. Master sheets including standing requests or subscription trips have been created for each day of the week. These spreadsheets are maintained on a shared network drive so that everyone can access them. As trip requests come in, they are entered in to the day's sheet as they fit. Passengers are able to schedule trips two weeks in advance so dispatchers are working with three weeks' worth of spreadsheets at one time. At close of business each day, the dispatcher prints out two copies of all ten of the driver manifests (one for the driver and one for the dispatcher). As Yuba-Sutter Transit takes same day reservations, changes to driver manifests are done manually in red ink and communicated to the driver over the radio, who then must also change his/her copy of the manifest manually.

Computer Assisted Scheduling and Dispatch (CASD) for demand response systems is software which assists dispatchers with scheduling trip requests and vehicle assignments. The technology is often integrated with AVL and Mobile Data Terminals (MDT) so that dispatchers can also track vehicles and communicate with the drivers. CASD began replacing manual trip scheduling for DAR systems when systems grew too large to be handled effectively by schedulers. The idea behind the technology is that the software will increase productivity, efficiency, as well as provide better management tools. Through the use of a computer, trip

scheduling can be “tightened up” and rides with nearby origins and destinations can be grouped together more easily. CASD can also replace handwritten paper manifests with electronic reports. Less paperwork can mean more time for other duties. Revisions to the manifests are updated through a MDT throughout the day, relieving the driver of the responsibility of manually writing down trip request changes. With CASD the driver presses a button on the MDT terminal after the completion of a trip which transmits the time and location to dispatch. A paper manifest is typically provided to the driver each day as backup.

TCRP Report 124, Guidebook for Measuring, Assessing, and Improving Performance of Demand Response Transportation (2008) surveyed transit agencies regarding the impact of CASD and MDT/AVL technologies on overall productivity. Positive impacts included:

- Scheduling Improvements – Many agencies noted that prior to CASD, staff were apt to take all reservations before actually knowing if the trip can be reasonably scheduled. With CASD, all staffers have immediate access to already booked trips and can better determine how the new trip will fit in. It is important to note that the effectiveness of the software depends on the skill level of schedulers for both manual scheduling and with the new software.

- Improved Accuracy of Driver Manifests – With CASD, dispatchers no longer hand write pick up and drop off locations and can use a series of drop down and trip history menus for repeat destinations. Some agencies noted that with CASD a dispatcher is less likely to schedule the wrong store for pick up.

- Improved On-Time Performance – With more accurate and realistic driver manifests, some transit agencies notice an improvement in on-time performance even without the AVL component.

- Impact on Productivity – Transit agencies had varied responses to whether or not CASD alone improved passenger-trips per hour. Some reported “tighter manifests” but did not have enough data to determine overall effect on productivity. Some cited a slight increase in productivity. Others cited a decrease in productivity. It may be difficult to make this comparison as it is possible that CASD may estimate revenue hours differently than operations staff. When combined with AVL, some agencies reported an increase in productivity as the technology allows managers to scrutinize actual system speed by time of day, day of week, and trip distance within the service area. With a more accurate understanding of speed, managers have refined the system speed in the CASD system, resulting in more accurate and realistic vehicle schedules which then translate to more efficient and often more productive schedules.

- When combined with MDTs, drivers can communicate in real time when a trip is completed. Therefore dispatchers have real-time information about vehicle capacity and can adjust schedules to have less “slack time”.

Qualifications noted in the survey included:

- Not all transit agencies used CASD to its full extent. Some seemed to never adapt to it or some constantly overrode the computer and its parameters. Reasons cited included that CASD focuses too much on grouping trips at the expense of longer travel times and less convenience for riders. In some cases where CASD was not used properly, productivity decreased.

- It takes time to implement and transition to the new software. Some agencies stated it took more than a year to operate smoothly.

- Computation of hours may be different and perhaps more accurate with CASD, if agencies previously estimated data or used sampling procedures. CASD may result in more accurate data but data that appears to indicate a decrease in performance.

- If on-time performance of a DAR system is improved through these technologies, it may come at the cost of lower productivity.

A variety of CASD products are available to Yuba-Sutter Transit. There is the full CASD system (described above) in which an algorithm is developed to assign and schedule trips via computer not human. This technology can be used with or without MDTs. Mobile devices such as a Blackberry or tablets can be used instead of MDTs for a lower cost solution. A more simple option is scheduling software which produces electronic manifests and allows dispatchers to track trips more easily. Under this option, the dispatcher is still deciding who will be picked up when.

Which type of technology is appropriate for a transit agency depends on the number of trips being provided per day, the geographic area in which the trips are provided and the capabilities of the dispatcher. The primary question is: Would the transit agency benefit from a computer program which optimizes scheduling? If the DAR service area is quite large with long trips between two common destinations, it is relatively simple for a dispatcher to keep track and schedule these trips. If the DAR service area is more compact with many possible pick up/drop off scenarios, the transit agency may benefit by having a computer algorithm to maximize the number of passengers which can be served. If an algorithm based program can increase productivity to the point that fewer vehicles are required, then it is likely cost-effective. Some seasoned dispatchers can handle scheduling a large volume of trips. If this is not the case or of the dispatchers' time could be better spent doing other things, an algorithm may be a useful tool.

Some type of scheduling assistance is likely to increase efficiency for transit systems serving more than 100 trips per day. Yuba-Sutter Transit's DAR daytime service serves roughly 160 trips per day while the evening service serves around 20 trips per day. If scheduling software with an algorithm is not chosen, it would be worthwhile for Yuba-Sutter Transit to procure some type of scheduling program which reduces the paper trail and allows the dispatcher to schedule same day trips without reviewing 10 separate paper manifests.

Costs of the different types of CASD programs vary and are dependent on specific transit system requirements. A ballpark cost estimate for a CASD algorithm based program is around $75,000 initially with roughly $10,000 per year in on-going support and maintenance costs. Scheduling software would have significantly less upfront costs and the transit agency would be charged a monthly rate based on the number of trips.

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Chapter 8
Institutional/Management Alternatives

The institutional framework for transit services in Yuba and Sutter Counties (the Yuba Sutter Transit Authority) is well-established and is serving the region well. As a result, this chapter focuses only on two specific current institutional/management issues: reconsideration to the goals, objectives and standards of the program, and an evaluation of management staffing levels.

Revisions to Goals, Objectives, Standards

Yuba-Sutter Transit current policy statements (Mission Statement, Motto, Goals and Performance Standards) were developed and presented in the 2008 SRTP. As part of the current SRTP, the current status of the performance standards was reviewed (as presented in Chapter Two), standards were used to assess potential service modifications and current goals and performance standards for other transit systems in the Sacramento Region were reviewed. Based upon this review, the following conclusions were drawn:

- The overall Mission Statement (*"To provide safe and cost effective public transportation services that increase mobility and improve the quality of life for Yuba And Sutter County residents"*) and Motto ("*Safety-Service-Smiles"*) remain appropriate.

- The overall four Goals (Safe and Accessible Goal, Service Quality Goal, Service Effectiveness Goal, and Service Cost-Efficiency Goal) remain appropriate. However, the second sentence of the Service Quality Goal ("*Ensure that all transit programs can be provided at a high quality of service. Quality of service is more important than expansion of service")* is a value judgment, rather than a goal. As discussed in detail in *Technical Memorandum One*", the fixed route system is far from meeting the minimum standard of no less than 95 percent more than 5 minutes late: the individual local routes range between 29 and 77 percent on-time. The analysis of route options to address on-time performance (as discussed in *Technical Memorandum 2)*, moreover, indicates that solving the on-time performance problems by reducing route length or increasing route running time (absent operation of additional buses) results in a reduction in ridership (and thus usefulness of the local route system to the community). Strictly interpreted, the statement "Quality of service is more important than expansion of service" would infer that no potential expansion of service would be considered until all on-time performance standards are met through operating additional buses along the existing routes. Removing this second statement provides future Boards more latitude to decide that expansion of service serves the region better than additional service on existing routes, given limited financial resources.

- As discussed above, the current standards (minimum of 95 percent no more than 5 minutes late and target objective of 99 percent) are far from being met by any of the local routes. The current estimate for the Commuter Service (87 percent on-time) is also substantially below these standards. While improved road supervision as well as implementation of the Connect Card program is expected to improve on-time performance, and while several of the service improvement options would also improve performance, the current standards are not realistically attainable. It is suggested that these standards be reduced to a minimum of 80 percent no more than 5 minutes late and a target objective of 90 percent no more than 5 minutes late. This is more in line with other on-time performance standards in the

Sacramento Region, such as the 90 percent standard adopted by Yolobus and El Dorado Transit, and the 85 percent standard adopted by Sacramento Regional Transit.

- The current Yuba-Sutter Transit road call rate of 27,000 miles between roadcalls substantially exceeds both the existing minimum standard (10,000) and the target objective (27,000). The minimum standard, however, is already relatively high in comparison with typical transit industry experience. In light of this and to provide incentive for further improvement, it would be appropriate to keep the minimum standard at 10,000 but increase the target objective to 30,000.

- The Rural Route target objective for frequency is currently "2 round trips 3 days per week if 4 passengers per vehicle service hour can be achieved". In light of current performance and the analysis of service expansion, this should be "upgraded" to "2 round trips 5 days per week if 4 passengers per vehicle service hour can be achieved".[4]

- The minimum standard for customer satisfaction surveys is currently to conduct a survey every six months. While knowledge of customer satisfaction is an important element to providing quality service, conducting surveys require substantial staff resources and trends in rider perceptions do not change dramatically over six months on well-established services. It is recommended that this be modified to conduct surveys at a minimum bi-annually and after six months of implementation of any new services, with a target objective of annual surveys and after six months of implementation of any new services.

- The current passengers per vehicle service hour value for the Commuter Service (11.7) does not meet either the existing minimum standard of 12.0 or the target object of 16.0. None of the service alternatives meet either of these standards. As keeping the current minimum standard would infer a need to eliminate the less effective existing runs (which is counter to other local as well as state goals), the minimum standard should be reduced to 10.0. A reduction of the target goal to 15.0 would also be reasonable.

- The current minimum standard for Local Route passengers per vehicle service hour (13.0) would preclude any of the service alternatives that add service to the Sutter County Center. To give the Board greater flexibility to implement service improvements that meet other goals, and consistent with service productivity standards at other small urban systems, it is recommended that this minimum standard be reduced to 10.0.

With these changes, the resulting recommended goals, minimum standards and target objectives are presented in Table 47.

Administrative Staffing

Yuba-Sutter Transit currently is managed by a lean staff, consisting of a Transit Manager, a Planning Program Manager, a Finance Program Manager, and an Administrative Assistant. With the exception of the Planning Program Manager position, moreover, these positions are shared between the transit program and the Regional Waste Management Authority (with the preponderance of time assigned to the transit program). As a result, the transit program's staff is equivalent to 3.45 Full Time Equivalent (FTE) positions. All other staff required for the transit program is provided through the operations contractor.

[4] A rural trip should be considered to be a round-trip even if it is operated closed door in the off-peak direction.

TABLE 47 : Summary of Recommended Goals, Minimum Standards and Target Objectives

Goal	Minimum Standards	Target Objectives
1. **Safe and Accessible Goal**: Continue to provide safe and convenient transportation services to the residents of Yuba and Sutter counties for employment, shopping, educations and social service trips, so long as service can be provided in a cost-effective manner.	Accessible: Provide access to public transportation within the Yuba-Sutter Transit Service area between 6:30 AM and 6:30 PM on weekdays and 8:30 AM to 5:00 PM on Saturday.	Accessible: Provide public transportation services to residents within the Yuba-Sutter Transit service area between 6:00 AM and 9:00 PM on weekdays, and service on Saturdays between 8:00 AM and 6:30 PM and Sunday between 9:00 AM and 4:00 PM.
	Total Accidents: 100,000 miles between accidents	Total Accidents: 500,000 miles between all accidents
	Training and Safety Plan: 100% compliance with the employee selection, drug testing, and training requirement included in the operator contractor.	Training and Safety Plan: 100% compliance with the employee selection, drug testing, and training requirement included in the operator contractor.
2. **Service Quality Goal:** Ensure that all transit programs can be provided at a high quality of service.	On-time Performance: 0.5% of trips are not early and 80% of trips that are no more than 5 minutes late.	On-time Performance: Zero percent of trips that are not early and 90% of trips that are no more than 5 minutes late.
	Local Fixed Route Frequency: No more than 60 minutes	Local Fixed Route Frequency: At least 30 minute service for all local routes that can achieve 15 passengers per vehicle service hour after a two year implementation period.
	Rural Route Frequency: 2 round trips 2 days per week (1)	Rural Route Frequency: 2 round trips 5 days per week(1)
	Road Calls: 10,000 miles between road calls for all buses in the fleet that are within their normal useful life.	Road Calls: 30,000 miles between road calls for all buses in the fleet that are within their normal useful life.
	Customer Satisfaction Survey: Every 2 years, and six months after implementation of a new service	Customer Satisfaction Survey: Annually, and six months after implementation of a new service
3. **Service Effectiveness Goal**: Provide an effective level of service in response to demonstrated community market needs.	Passengers Per Vehicle Service Hour: Local Fixed Route: 10.0 Sacramento: 10.0 Dial-A-Ride: 3.0 Rural Routes: 2.0	Passengers Per Vehicle Service Hour: Local Fixed Route: 17.0 Sacramento: 15.0 Dial-A-Ride: 4.0 Rural Routes: 4.0
4. **Service Cost-Efficiency Goal:** Provide public transportation services that are financially sustainable within existing local, state and federal funding programs in a cost-efficient manner.	Farebox Recovery: Systemwide is 14.6%.	Farebox Recovery: Systemwide is 20.0%.
	Cost Per Vehicle Revenue Hour: The minimum standard should be no more than 110% of five northern California peer systems.	Cost Per Vehicle Revenue Hour: 90% of five northern California peer systems.

Note 1: A rural route should be considered a round trip even if it is operated closed-door in the off-peak direction.

While this has been sufficient in the past, the burdens placed on public transit administrative staffs are growing, largely due to increasing requirements of state and federal programs. Examples of these include the following:

- The increased planning and reporting requirements for FTA recipients.
- New funding programs through California Air Resources Board's Cap-and-Trade Program, such as the Low Carbon Transit Operations Program.
- Expanded reporting requirements of the National Transit Database program.
- Continued focus and evolution of the Americans with Disabilities Act.
- Implementation requirements of technology advancements (on-board video, Connect Card, AVL, etc.)

In addition, some of the elements of this SRTP will require staff time to effectively implement, including the bus stop and transit center improvements, the Nextbus real-time traveler information system, and wifi on the commuter buses.

To gain an understanding of staffing needs, a "peer comparison" was conducted of administrative staffing levels with other similar transit organizations. To provide the best comparison, the following criteria were applied in selecting the peers: (1) a separate transit organization without reliance on other elements of a county or city government, (2) operations provided through a service contractor, (3) location within California, and (4) relatively similar in number of peak buses and annual vehicle-hours of service. As shown in Table 48, three peers were identified: Yolobus (Yolo County), WestCAT (western Contra Costa County) and KART (Kings County). As shown, these other organizations have administrative staffs ranging from four at KART[5] up to ten at Yolobus. Dividing by the number of peak vehicles in operation, the FTE per peak vehicle is 0.10 at Yuba-Sutter Transit compared with an average of 0.18 at the peer systems. By this measure, Yuba Sutter Transit is fully 43 percent below the peer average. Considered by another measure, the administrative FTE positions per 100,000 annual vehicle-hours of service at Yuba-Sutter Transit (3.8) is 49 percent below the peer average of 7.5.

While these figures speak well to the efficiency of Yuba-Sutter Transit's administrative staff, it also indicates that staff limitations could become an impediment to meeting state and federal requirements (and potentially to gaining grants that could in turn reduce local funding needs) and/or achieving some of the improvements called for in this plan. On balance, it is recommended that one additional position be established in the FY 2016/17 period to help with implementation of this plan and maximize Yuba-Sutter Transit's ability to successfully pursue state and federal funding. It is worth noting that even with this additional position Yuba-Sutter Transit would still remain the most efficient organization of the peers by either measure.

[5] KART is currently planning on adding a fifth administrative position (junior position) in the coming year.

TABLE 48: Comparison of Administrative Staffing Levels

Similar Transit Districts With Contracted Operations

	Administrative Positions	FTE	Peak Vehicles in Operation	Annual Vehicle Revenue Hours	FTE per Pk Vehicle	FTE per 100,000 Vehicle Hours
Yuba Sutter Transit	Transit Manager	0.8				
	Planning Program Manager	1				
	Finance Program Manager	0.9				
	Administrative Assistant	0.75				
	TOTAL	3.45	34	90,619	0.10	3.8
Yolobus (Yolo County Transportation District)	Executive Director	1				
	Executive Admin. Asst.	1				
	Deputy Director - Planning	1				
	Deputy Director - Finance	1				
	IT Specialist	1				
	IT System Support Tech	1				
	Associate Transportation Plnr	1				
	Assistant Transportation Plnr	1				
	Finance Associates	2				
	TOTAL	10	49	114,506	0.20	8.7
WestCAT (Western Contra Costa Area Transit Authority)	General Manager	1				
	Asst. General Manager	1				
	Transit Planner	1				
	Marketing Coordinator	1				
	Admin Asst/DBE Coordinator	1				
	Bookkeeper	1				
	TOTAL	6	45	92,467	0.13	6.5
KART (Kings Area Regional Transit)	Executive Director	1				
	Transit Assistant	1				
	Facilities Specialist	1				
	Office Manager	1				
	TOTAL	4	20	55,736	0.20	7.2

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Yuba College Student Pass Program

College transit pass programs have become relatively common, particularly among larger colleges and universities. Under these programs, funds are provided (typically from student activity fees) to offset the loss of transit fares that accompanies a fare program by which students are allowed to board the bus system at no charge. Some programs also include college staff and faculty (with funding provided from non-student-fee sources.

This type of program has the potential to increase ridership. The survey of Yuba College students conducted online as part of this SRTP study generated 110 responses, of which 52 percent indicated they would "definitely start using the transit service" if they could board for free, 14 percent said they might start using the service, 11 percent would not use it, 16 percent currently use it but would use it more, and 8 percent currently use the service and would not change their use level.

For Yuba-Sutter Transit, a reasonable scenario would be a pass program that provides free boardings to current students (showing a current student ID, or ultimately a Connect Card) on the Local Routes and Rural Routes. It could also potentially generate funds over and above the lost farebox revenues, in order to generate funding for expansion of transit service (such as to serve the Sutter County Center).

Existing Student Fare Revenues

A good starting place for this discussion is to estimate the current transit fares generated by Yuba College students. Fortunately, the surveys conducted to date as part of the SRTP process yields information useful in this evaluation:

- The Local Fixed Route Onboard Survey surveyed all runs of all local routes in October 2014 (when the college was in session). Of the 1,095 surveys completed, 26.8 percent of respondents indicated that they were currently Yuba College students. Not all passengers completed a survey on each trip; overall the ratio of total completed surveys to total daily boardings (excluding transfers) was approximately one out of three. It is reasonable to consider that college students were more likely to complete a survey than the general public as a whole. The reported proportion of college students (26.8 percent) thus may represent the higher end of a potential range. A reasonable lower end of the range is 20 percent (still a substantial number). Multiplied by the annual boardings, this indicates a range of 209,000 to 280,000 boardings per year by Yuba College students (for all trip purposes).

- Similar surveys were conducted on the Foothills and Live Oak rural routes. When asked about their Yuba College status, 1 out of 9 respondents on the Foothills Route indicated they were a current student. This question was not asked on the Live Oak survey, however.

- Of those indicating on the Local Route survey that they were Yuba College students, respondents indicated they were in the following categories related to transit fares:

- o 7 percent indicated they were age 62 or above (eligible for half-fare)
- o 4 percent indicated they were age 19 to 61 and had a disability (also eligible for half-fare)
- o 30 percent indicate they were 12-18 years of age (eligible for the $6 Youth Pass).

These figures can be used, along with other fare information, to estimate student existing fares. As shown in Table 49, the current average fare per boarding is $0.59 (per Table 28 in Chapter 3). However, Yuba College students have a differing average fare. On one hand, a relatively low proportion of students are seniors or persons with disabilities (half-fare), while on the other hand a relatively high proportion of students are youths (potential youth pass users). The table presents the proportions of total ridership versus Yuba College student ridership that use various fare types. This reflects that 84 percent of boarding youths take advantage of the low-cost Youth Pass program. Factored by the relative fare revenue per boarding of full fare versus half-fare versus youth pass, overall the estimated Yuba College average fare revenue per boarding is 8 percent higher than the average for all passengers as a whole. This in turn indicates an average fare of $0.63 per boarding.

TABLE 49: Yuba College Pass Program -- Estimate of Existing Student Transit Fares

Total Local Route Fare Revenues	$612,577
Total Local Route Annual Boardings	1,045,508
Average Overall Fare per Passenger-Trip	$0.59
Proportion of Total Local Route Ridership Half Fare	
Full Fare	45%
Half Fare	35%
Youth Pass	20%
Proportion of Yuba Sutter College Ridership Half Fare	
Full Fare	59%
Half Fare	16%
Youth Pass	25%
Proportion of Current Local Route Passengers that are Yuba College Students	
- High End of Range	26.8%
- Low End of Range	20.0%
Local Route Annual Yuba Sutter College Student Boardings	
- High End of Range	280,000
- Low End of Range	209,000
Estimated Average Fare per Yuba College Student Transit Passenger-Tri	$0.63
Estimated Existing Annual Yuba College Student Transit Fare Revenue	
- High End of Range	$178,000
- Low End of Range	$133,000

Multiplying this figure by the range in total boardings, the existing annual Yuba College student fare revenues are estimated to be $133,000 to $178,000 per year.

Potential Student Fee Revenue

Table 50 presents estimates of the revenues that could be generated by a student activity fee at a reasonable level. Specifically, fees of $20 for a full-time student for each of the Spring and Fall Semesters and $15 for the shorter Summer Session are assumed. State regulations require that part-time students (taking less than 12 credits) have a reduced student fee; a fee of $15 per semester and $10 per summer session is assumed for part-time students. Applying these rates to the number of unduplicated students (i.e., considering students enrolled in more than one campus only once), student fee revenues would be an estimated $208,000 per year. At these rates, therefore, student fees would fully offset existing Yuba College student transit fare revenues, and generate in the range of $30,000 to $75,000 per year in funds for new college-focused services.

TABLE 50: Estimate of Yuba College Student Fee Revenues

	Total Enrollment by Campus / Program (Including Persons Enrolled at More Than One)	Full Time Equivalent Students	# of Units	Number of Unduplicated Students	Assumed Fee	Estimated Revenue
Summer 2014	Marysville Campus	137				
	Marysville City	2				
	Yuba City	24				
	Yuba College Distributive Ed	25				
	Sutter County Campus	132				
	Sutter Distributive Education	83				
			12+ units	14	$15	$200
			6-11.9 units	2,055	$10	$20,600
			<6 units	1,237	$10	$12,400
			TOTAL	3,307		$33,200
Fall 2014	Marysville Campus	4273				
	Yuba City	87				
	Misc. Off-Campus	9				
	Yuba College Distributive Ed	594				
	Sutter County Campus	1607				
	Sutter Distributive Education	1326				
			12+ units	2,135	$20	$42,700
			6-11.9 units	1,654	$15	$24,800
			<6 units	1,119	$15	$16,800
			TOTAL	4,909		$84,300
Spring 2015	Marysville Campus	4273				
	Yuba City	87				
	Misc. Off-Campus	9				
	Yuba College Distributive Ed	594				
	Sutter County Campus	1607				
	Sutter Distributive Education	1326				
			12+ units	2,204	$20	$44,100
			6-11.9 units	1,896	$15	$28,400
			<6 units	1,202	$15	$18,000
			TOTAL	5,302		$90,500
Total Annual						$208,000

Potential Student Ridership Increase

The elimination of fares for Yuba College students would induce additional ridership. As an example, the implementation of a free-fare program (funded through student fees) at the University of Washington resulted in a 38 percent increase in transit ridership. The experience in other settings indicates a wide range of ridership changes, ranging from relatively little to more than doubling of ridership. The response varies in large part with the relative inconvenience of driving to the campus, in terms of traffic congestion and (particularly) parking fees. Given the relatively low parking fees at Yuba College, a conservatively low factor of 30 percent growth in ridership is estimated. This is equivalent to an estimated 73,000 additional transit boardings per year.

Fare Increase

The local route cash fare of $1.00 has been unchanged since the inception of service in 1993, rural route service has also not been increased since 1993, and Dial-A-Ride fares have not been increased since 2004. As a point of comparison, the impact of inflation between 1993 and 2014 (as reflected in the Consumer Price Index as measured by the federal Bureau of Labor Statistics) has reduced the value of the dollar by 39 percent. Put another way, $1.64 in 2014 dollars are required to equal the purchasing power of one 1993 dollar. The Commuter Service fares were increased more recently, in 2010. Given their relatively high base fares ($4.00 per one-way trip) and the good financial performance of this service, a fare increase for this service was not considered.

This discussion therefore focuses on the Local Fixed Route, Dial-A-Ride and Rural Route services. A reasonable scenario given the length of time since the last fare increase would be a 50 percent increase in the base cash fare. To encourage greater use of passes and to reduce the impact of a fare increase on frequent transit riders, an increase of 33 percent in pass prices is assumed. With this fare increase, fares would be as follows:

- Base Local Route Cash Fare $1.50
- Discount Local Route Cash Fare $0.75
- Base Monthly Pass $40.00
- Discount Monthly Pass $20.00
- Base Dial-A-Ride Fare $6.00 ($4.50 after 6 PM)
- Discount Dial-A-Ride Fare $3.00 (2.25 after 6 PM)
- Rural Route Base Fare $3.00
- Rural Route Discount Fare $1.50

The analysis of the impacts of this fare alternative on ridership and revenues was conducted by first collecting the existing annual ridership (boardings) and fare revenues by fare type for Fiscal Year 2013/14. The pass revenues and boardings were then adjusted to reflect the current $6 discount pass costs (compared to $5 in FY 2013/14). The resulting estimates of existing annual ridership and revenues are shown in Table 51. An elasticity analysis was then conducted assuming the fare increases discussed above, and applying the methodology and factors identified in *Transit Cooperative Research Program Report 95: Transit Pricing and Fares* (Transportation Research Board, 2004), and *Forecasting Incremental Ridership Impacts from Bus Route Service Changes* (Transportation Research Board, 1991). A factor was also included in the forecasts to reflect that the lower increase in pass costs versus cash fares would result in some existing cash fare passengers choosing to shift to pass use.

TABLE 51: Impact of Fare Increase on Local Route, Dial-A-Ride and Rural Route Services

	Fare Type				
	Cash/Ticket	Pass	Free (1)	Total	
Existing Annual Boardings					
Fixed Route	401,845	484,018	220,856	1,106,719	
Dial-A-Ride	66,826	--	2,847	69,673	
Rural Routes	5,478	120	209	5,807	
TOTAL	474,149	484,138	223,912	1,182,199	
Existing Annual Revenues					
Fixed Route	$452,793	$159,783	$0	$612,577	
Dial-A-Ride	$125,467	--	$0	$125,467	
Rural Routes	$8,396	$120	$0	$8,516	
TOTAL	$586,657	$159,903	$0	$746,560	
Alternative Fare Increase (%)					
Fixed Route	50%	33%	--	--	
Dial-A-Ride	50%	--	--	--	
Rural Routes	50%	33%	--	--	
Annual Ridership with Fare Increase					
Fixed Route	348,700	438,000	220,856	1,007,556	
Dial-A-Ride	58,000	--	2,847	60,847	
Rural Routes	4,800	100	209	5,109	
TOTAL	411,500	438,100	223,912	1,073,512	
Change in Annual Ridership					
Fixed Route	-53,100	-46,000	0	-99,163	-9%
Dial-A-Ride	-8,800	--	0	-8,826	-13%
Rural Routes	-700	-20	0	-698	-12%
TOTAL	-62,649	-46,038	0	-108,687	-9%
Percent Change in Total	*-13%*	*-10%*	--	*-9%*	
Annual Revenue with Fare Increase					
Fixed Route	$589,400	$192,300	$0	$781,700	
Dial-A-Ride	$163,300	--	$0	$163,300	
Rural Routes	$11,000	$100	$0	$11,100	
TOTAL	$763,700	$192,400	$0	$956,100	
Change in Annual Revenue					
Fixed Route	$136,600	$32,500	$0	$169,123	28%
Dial-A-Ride	$37,800	--	$0	$37,833	30%
Rural Routes	$2,600	-$20	$0	$2,584	30%
TOTAL	$177,043	$32,497	$0	$209,540	28%
Percent Change in Total	*30%*	*20%*	--	*28%*	

Note 1: Transfers, children age less than six, attendants.

As shown in Table 51, this fare increase scenario would reduce ridership by a total of approximately 109,000 passengers per year over the three services, or 9 percent of the current total. Ridership loss would be relatively high on the Dial-A-Ride system and the Rural Routes (13 percent and 12 percent loss, respectively), as virtually all passengers would be impacted by the higher fare increase in cash fare levels. Total fare revenue would increase by an estimated $210,000 per year, or 28 percent. This represents 3.2 percent of FY 2014/15 operating revenues.

Given the relatively modest level of additional fares that would result, the good financial position of the transit program, the substantial impact on overall ridership, and the particular impact on those riders on the lower end of the economic scale, a fare increase is not recommended at this time. It is also appropriate to observe the final impacts of the Connect Card program on ridership and fare revenues before making a substantial change in fare policy.

Connect Card

The Connect Card project is a long-term effort to enhance transit fare collection across the Sacramento Region. Led by SACOG, the Connect Card will provide convenient "tap to board" proximity cards for the following systems: Regional Transit, e-tran (Elk Grove), El Dorado Transit, Folsom Stage Line, Placer County Transit, Roseville Transit, South County Transit Link, Yolobus, and Yuba-Sutter Transit. This program is currently planned for full implementation by the fall of 2015.

With implementation of the Connect Card (and after a transition period), Yuba-Sutter Transit is planning to modify fare policies as follows:

- Phase out the sale of monthly paper passes, discount ticket books and Sacramento punch passes, transitioning passengers to the Connect Card.

- Implement photo identification eligibility cards for all persons eligible for reduced senior, disabled or youth pass rates.

- Paper transfer slips will be phased out, and effectively replaced by a daily cap equal to three times the cash fare. (This is consistent with the general trend in the transit industry to move from the historic practice of paper transfers to greater use of a day pass.)

Connect Card will provide a number of benefits to Yuba-Sutter residents:

- It will speed boardings, by reducing the time necessary for each passenger to provide their proof of payment, by increasing the proportion of fare sales occurring off of the bus, and by reducing interactions between passengers and drivers over transfers.

- It will eliminate the need for Yuba and Sutter County residents to figure out the fare structure of connecting Sacramento Region transit services. For instance, a Yuba City resident with a Connect Card could use the Yuba-Sutter Transit Sacramento Commuter Service and the Yolobus service to travel to and from Sacramento International Airport (via a transfer in downtown Sacramento) by simply tapping the Connect Card upon entering the second bus.

- It will reduce the potential for fare evasion, and for disagreements between passengers and drivers. As one example, drivers will no longer need to make judgment calls or challenge passengers regarding whether they are young enough for the youth discount. It will also eliminate issues regarding valid transfers.

- It will eliminate the cost of printing paper fare media and reduce fare handling / accounting costs in the office.

There is, however, a substantial level of uncertainty as to how Connect Card implementation will actually affect farebox revenues. As an example, the requirement for photo ID of youth currently riding on the very-discounted youth pass may reveal some currently-unknown level of youths that are beyond the cut-off age of 18. This uncertainty is one factor that indicates it may be prudent to delay any other changes in base fares until the long-term implications of the Connect Card on farebox revenues are proven.

Low Carbon Transit Operations Program Funding

The Low Carbon Transit Operations Program (LCTOP) is an element of the Transit, Affordable Housing and Sustainable Communities Program established by the passenger of Senate Bill 862 in 2014. These funds are generated by greenhouse gas reduction funds ("Cap and Trade" funds). In 2014, $25 Million was appropriated statewide, while going forward 5 percent of total Greenhouse Gas Reduction Fund revenues will be allocated to LCTOP. Funds are allocated under a formula by Caltrans. The program is intended to reduce greenhouse gas emissions, with a focus on low-income communities (for those areas that include areas designated as disadvantaged communities).

For funds allocated in 2014, Yuba-Sutter Transit is eligible for a total funding of $60,305. The program guidelines require that at least 50 percent of funds be allocated to benefit disadvantaged communities. As designated by the California Environmental Protection Administration, portions of Linda (largely west of Lindhurst Avenue) and portions of Marysville (west of SR 70) are considered to be disadvantaged.

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Chapter 10
Yuba-Sutter Short Range Transit Plan

The following plan presents service programs, capital improvements, management plan elements and financial strategies to enhance public transit services in the Yuba-Sutter Bi-County area, within the constraints of realistic funding projections. This chapter presents the individual plan elements in brief, based on the substantial discussions presented in previous chapters; the reader is encouraged to refer to previous chapters for additional background on the plan elements. Figure 51 presents an overview of the plan.

One key consideration in the timing of this plan is the upcoming implementation of the Connect Card regionwide fare media program. As discussed in Chapter 9, this will impact ridership patterns in a variety of ways, not all of which can be fully anticipated. While overall passenger revenues are not expected to drop, this program adds a degree of uncertainty to fiscal forecasts. As a result, it is prudent for this plan to delay implementation of service improvements that have substantial cost implications until the impacts of the Connect Card can be fully judged.

SERVICE PLAN

Local Routes

Revise Route 2 to Improve On-Time Performance

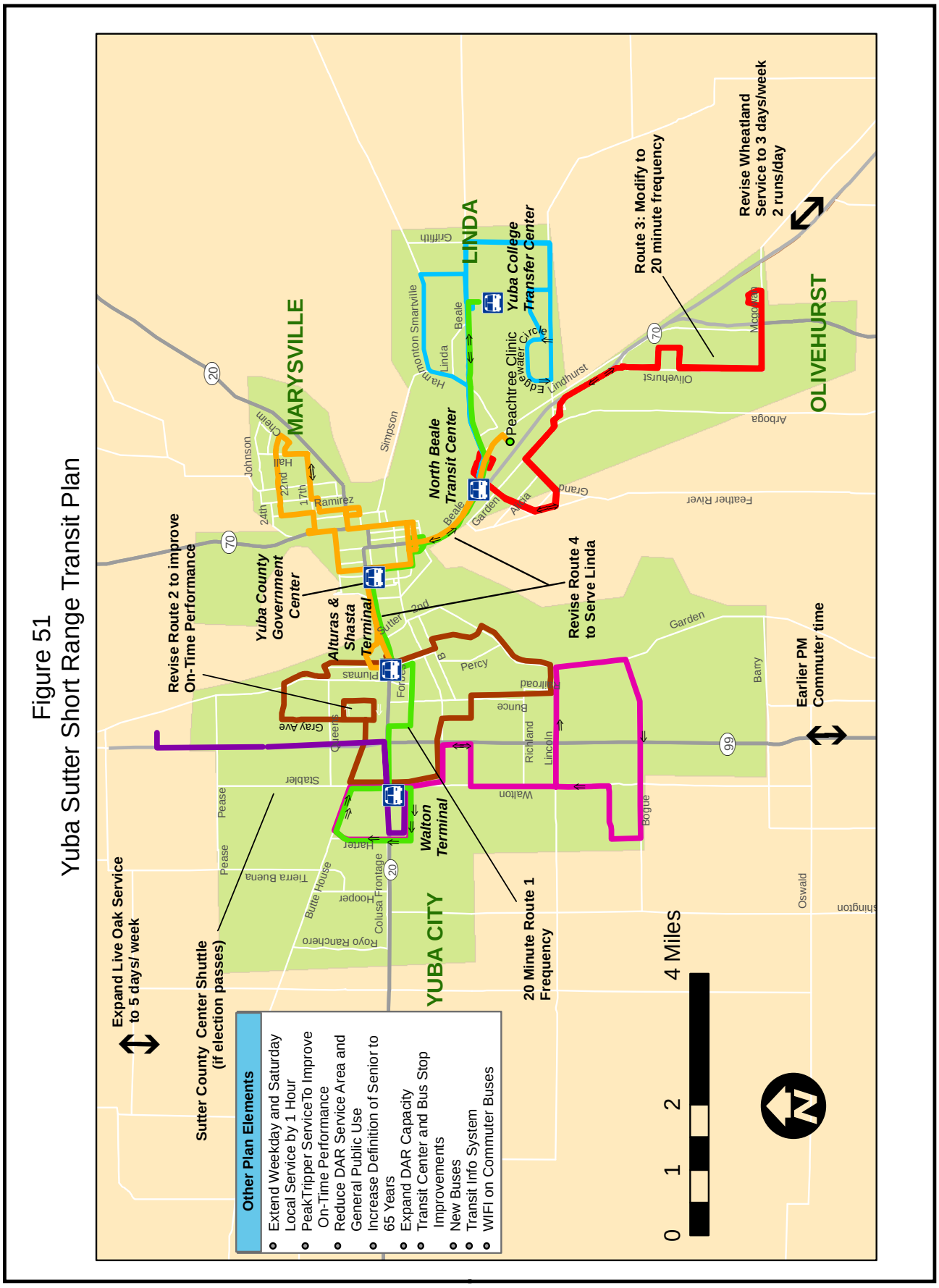
Route 2 should be revised to eliminate the Washington/Clark/Ainsley loop, instead staying on Gray Avenue. This is necessary to improve the current poor on-time performance on Route 2, which currently operates more than 5 minutes behind schedule on 32 percent of the runs. This realignment will require some additional passengers on the existing loop to walk further to the nearest stop. However, ridership on these stops is relatively modest. For instance the stop on Ainsley at the Senior Center only serves 13 passengers boarding and 13 passengers alighting each day, which is equivalent to only 1 passenger for every 2 times the stop is served. Given that the two to four minutes of travel time savings per run will benefit all Route 2 passengers through improved service reliability and less missed connections, that the new Route 1 stops on Gray are only 500 feet from the Senior Center and that a Route 2 stop will be provided on Gray just north of Butte House Road, the modest impact on these existing passengers is substantially outweighed by the overall benefit. This change is planned for September 2015.

Also as part of this plan element the Route 2 schedule will be revised to better reflect running times around the route, shifting transfer times at the Alturas/Shasta Transit Center.

Revise Route 4A to Serve Linda Rather Than Yuba City

Reflecting shifts in passenger travel patterns, Route 4A will be revised to serve the North Beale Transit Center and Peach Tree Clinic in Linda, rather than the current route segment west of the Yuba County Government Center to the Alturas/Shasta Transit Center in east Yuba City. Besides providing better connections for a larger proportion of passengers, this will also reduce in-vehicle travel time (by eliminating the current need for Linda passengers to sometimes ride the “long way around” Route 4B) and enhance access to the Peach Tree Clinic. This plan element will increase ridership by almost 10,000 passenger-trips per year, yielding a net reduction in operating subsidy needs. As part of this strategy, the Route 3 schedule should also

Figure 51
Yuba Sutter Short Range Transit Plan



be shifted “forward” (leaving earlier) by seven minutes to provide better transfers to Route 4A at the North Beale Transit Center. This should be implemented in September 2015.

Peak Tripper Bus Service

As one strategy to address the poor on-time performance of the Local Routes, “tripper buses” should be operated on busy ridership days. These buses should be deployed when runs fall significantly behind schedule, focusing on routes and runs with large passenger loads (impacting running times) and/or relatively limited layover times to regain the schedule. In particular, these conditions occur on Routes 2, 4 and 5. By inserting a tripper bus into the operations to depart a new run on time, the late bus on the existing run can make passenger drop-offs and then provide some driver break time before departing the next scheduled run on-time, allowing the tripper bus to then repeat the strategy on another route. As these tripper runs will vary depending on “real time” conditions, they will not be shown on the schedules. Six hours of tripper bus service are programmed on school days (185 days per year).

Extend the Service Day One Additional Hour on Weekdays and Saturday

To better serve passengers returning home from work, school, social programs, etcetera, the service day on all local routes will be extended by one hour on weekdays and Saturdays. For those runs currently operating half-hourly service (Routes 1, 2 and 3), this will consist of one additional run one hour after the last existing run. This service improvement should be implemented in Fiscal Year 2016-17. This service improvement will increase the need for street lighting at bus stops, as discussed below. When implemented, the start time for the evening Dial-A-Ride should be shifted from the current 6:00 PM to 7:00 PM.

Implement Yuba College Sutter County Center Shuttle Service

A dedicated shuttle should be implemented between the Yuba College Sutter County Center and the Walton Terminal (providing transfers to Routes 1, 2 and 5) starting in the Fall Semester of 2016, so long as a student fee election (scheduled for spring of 2016) is successful in generating funds for this service improvement. This shuttle will operate on a half-hour frequency, five days a week during the Fall and Spring Semesters and Monday through Thursday in the Summer Session. It will also serve stops around the Lassen Boulevard/Harter Road/Colusa Highway loop. A dedicated shuttle is recommended over modifications to an existing fixed route (such as Route 2) in order to better tailor the service times to the Center’s transit needs, and avoid impacts to other riders on an existing route. Once ridership patterns become firmly established, other strategies such as implementation of a fixed route consistent with the remainder of the Local Route system could be considered.

Expand Route 1 and 3 to 20 Minute Service Frequency and Modify Routes 3 and 6

The most significant service improvement identified in this plan is a comprehensive set of improvements to Routes 1, 3 and 6, recommended for implementation in Fiscal Year 2017/18:

- Increasing the frequency on Routes 1 and 3 from 30 minutes to 20 minutes, on both weekdays and Saturdays. This will require operation of three additional buses. In addition to significantly improving the quality of service on these key local routes, it will help to address on-time performance issues by (1) spreading passenger load over more runs, thereby reducing passenger boarding/alighting time on any one run and (2) reducing wait time for transferring passengers when connections are missed.

- Revising Routes 3 and 6 as shown in Figure 43 (Chapter 6) to focus Route 3 service on West Linda and Olivehurst and focus Route 6 service on East Linda east of SR 70. This reconfiguration has several advantages: (1) providing service to new neighborhoods including the Edgewater area south of Yuba College and the Olivetree Senior Apartments, (2) Route 3 running time would be reduced by approximately 5 minutes, substantially improving on-time performance and (3) passengers would no longer be served on the stops along the north and west sides of Hammonton-Smartville Road, which are close to the travel lane. While Route 3 passengers currently riding through the North Beale Transit Center (24 percent of current Route 3 riders) would need to transfer, the greater frequency on Routes 1 and 3 would minimize this inconvenience.

Together, these service improvements will substantially increase the quality of transit service throughout the system, particularly in the Olivehurst and Linda areas. Overall, ridership will increase on the order of 150,000 passenger-trips per year.

Commuter Service

Implement Earlier SR 99 PM Commuter Run

An earlier afternoon departure will be added to the SR 99 corridor commuter schedule. This will replace the peak supplemental bus operating on the first existing SR 99 afternoon schedule, and will be operated earlier to accommodate the common request by commuter riders for earlier service. A specific survey of SR 99 passengers will be made to define an exact schedule. This additional run will be added in September 2015.

Rural Routes

Expand Live Oak Service to 5 Days per Week and Revise Wheatland Service to 2 Runs per day 3 Days per Week

The Live Oak Rural Route service will be expanded from the current three day per week schedule to five days per week, starting in July 2015. This will enhance the ability of Live Oak residents to access the Yuba City and Marysville area, particularly for daily activities such as work or school. At the same time, the Wheatland Route will be revised to provide two runs per day on three days per week, which will expand Wheatland resident's choices regarding days of travel. The schedule will be revised to serve late morning or early afternoon activities in the Marysville/Yuba City area. This change will also allow service to Live Oak five days per week without the need for an additional bus, as the Wheatland run times will fit between the Live Oak run times.

Ridership patterns in Live Oak should be monitored on at least an annual basis. If concentrations of regular requests for service are found, consideration should be given to establishing new scheduled stops.

Dial-A-Ride

DAR Service Improvements

In recent years, DAR service has been expanding by 3.6 percent per year and ridership by 3.9 percent per year. While reduction in the service area, elimination of daytime general public use

and the gradual increase in the minimum age for seniors will slow this somewhat, the forecasts of population growth will still generate increases in demand. A 3 percent per year growth in DAR ridership and service-hours is included in this plan. This plan expands Dial-A-Ride service by 3,930 vehicle-hours per year over five years, or 16 percent over current levels. This is to accommodate expected growth in ridership demand, as well as to reduce capacity constraints at peak times. An additional two vehicles will be added to the operations by the end of the five-year plan period.

Reduce Dial-A-Ride Service Area

To focus limited resources on those areas that can be most efficiently served, the Dial-A-Ride service area should be reduced (based on a staff review) to exclude areas of low density or that require excessively long trips to serve. This will eliminate approximately 4 passenger-trips per day (1,100 per year), but will provide an estimated $25,000 in funds that can be used for expansion of Dial-A-Ride capacity in the more densely developed areas. This, along with the following two other policy changes, should be implemented in September 2015.

Increase the Definition of Senior from 62 to 65

To better focus limited resources on passengers with the greatest need, the definition of senior (for all services) will be gradually raised from 62 to 65. This is consistent with the Federal Transit Administration's definition, as well as with the age used by many transit agencies. The definition was last changed (from 60 to 62) in 1993. The minimum age will be stepped up in one year increments for each of the next three years.

Eliminate the General Public Dial-A-Ride Eligibility

At present, Dial-A-Ride service is available to members of the general public that live within the Dial-A-Ride service area by beyond a half-mile of the nearest local fixed route. While only one to two passenger-trips per day are carried, these tend to be relatively costly trips to serve. As a further step to focus DAR resources on those with greater needs, it is recommended that daytime Dial-A-Ride service be limited to seniors and persons with disabilities only.

Additional Service Enhancements For Consideration – 2020 to 2025

Beyond the service improvements planned for the coming five years, there are several additional improvements to Yuba-Sutter Transit services that are recommended for consideration over the longer term:

- Half-hourly service on Route 4.
- Additional Commuter Service runs, as needed to address vehicle capacity constraints or changes in commuter demand.
- Additional extension of weekday Local Route service later into the evening.
- Limited Sunday Local Route service.
- Fixed route service to Sutter County Center, replacing the shuttle service.

- Five-day-a-week service on the Foothill Route.

- Rural route service to Plumas Lake.

If conditions change over the course of the five-year SRTP planning period (such as shifts in ridership demand), one or more of this longer-range service strategies could be considered for earlier implementation.

CAPITAL IMPROVEMENTS

Transit services require ongoing capital investment in facilities and rolling stock. Capital investments in both vehicles and passenger facilities can also attract additional riders, while improving the quality of service and safety/security of existing riders. In addition, new advancements in communications technologies can significantly benefit public transit programs.

Transit Fleet Improvements

Foremost, the ongoing replacement of the transit fleet is essential for the long-term sustainability of the Yuba-Sutter Transit program. The following vehicles will require replacement over the coming years:

- 7 Blue Bird Commuter Service buses in 2018
- 10 Starcraft DAR/Rural Route buses in 2019
- 11 NABI Fixed Route buses in 2020
- 6 Glavel DAR/Rural Route buses in 2023

In addition, two Dial-A-Ride buses will be purchased for expansion of the program, and two local fixed route expansion buses will be purchased near the end of the five-year plan period to accommodate future service expansion, such as Route 4 half-hourly service or fixed route service to the Sutter County Center. The Dial-A-Ride/Rural Route fleet will be transitioned to low-floor vehicles to improve the ease of entry/exit and to improve passenger and driver safety.

In 2017, the Supervisor vehicle (a 1998 model year Dodge Activan) will be replaced.

Transit Center and Bus Stop Improvements

This plan includes an increased program to enhance passenger facilities at the transit centers and key bus stops. As discussed in greater detail in Chapter 7, above, the following improvements will be pursued:

- Expansion of passenger facilities at the key **transit centers**, including additional bus shelters, benches, passenger waiting areas and street lighting. These improvements will benefit passengers, help keep passengers from wandering into adjacent properties in search of seating or shade, aid operations by reducing the competition for curb space among transit vehicles, increase wheelchair accessibility, and improve passenger safety and security.

- Provision of an additional 22 new shelters at other **key bus stops**.

- The replacement of all **bus stop signs** with a consistent and attractive new sign.

In addition, Yuba Sutter Transit staff should participate in studies conducted by the various local jurisdictions to expand bicycle, pedestrian and overall "active transportation" facilities, and advocate for improved non-motorized access to transit stops.

While implementation is not expected to occur within the five-year SRTP period, it is recommended that detailed planning be conducted to investigate further improvements in two key transit centers. The current site of the Alturas / Shasta Transit Center is very constrained, and results in impacts both to adjacent properties as well as to the efficiency of transit operations. An off-street location (such as a portion of the Caltrans property along Alturas Street between Shasta Street and Market Street) could address these issues, but should be carefully weighed against the construction costs, ongoing maintenance costs, and impacts on transit operations. In addition, the North Beale Transit Center currently requires passengers to cross busy North Beale Road (at a signalized crosswalk). Passenger safety and convenience could be improved by constructing a transit center in a portion of the old Peach Tree Mall parking lot, which would allow all buses to access a single passenger waiting area, thereby avoiding any need for passengers to cross travel lanes when transferring. This need will become increasingly important as improvements to Routes 1, 3, 4 and 6 are implemented.

Transit Operations Facility Improvements

Ongoing funding of modest improvements to the Transit Operations Facility is included in this plan, such as new furnishings, equipment and building repairs. These funds could also support installation of solar panels to reduce utility costs and help cut greenhouse gas emissions.

Advanced Technology

The following advanced technologies are recommended:

- **Real-time Traveler Information System** – By providing passengers with real-time information on the location of transit buses and expected next arrival times, systems such as Nextbus increase the convenience of public transit. This can translate into an increase in ridership, particularly among "discretionary" riders who have the option of driving. This system is recommended for the Yuba-Sutter Local Route, Commuter and Rural Route services.

- **Wifi Service on Commuter Buses** – Wifi internet service is rapidly being implemented in transit systems across the nation, particularly for longer services. Wifi is recommended for installation in the Commuter Service buses as new buses are ordered in two years. In the meantime, technical issues of coverage and service costs can be addressed.

- **Computer-Aided Dispatch** – The Dial-A-Ride system would benefit from improved efficiency provided through a computer-aided dispatch system. While computerized scheduling is not warranted at the current ridership level, computer-aided tracking of vehicles and messaging systems would improve efficiency. This would also improve safety and security by providing real-time information and expanded communication channels.

MANAGEMENT PLAN

Expand Road Supervision

As documented in Chapter 3, above, the on-time performance of the Local Route system is quite poor and far below the performance standards, with 27 percent of runs operating five or more minutes behind schedule. The poor Local Route on-time performance is a result of many factors, including growth in passenger boardings, growth in wheelchair boardings, and increasing traffic delays. One additional factor is an apparent lack of focus by drivers regarding maintaining schedules. Additional contractor supervision is recommended to ensure that drivers do not take breaks beyond those required or operate the routes in a manner that adds to on-time performance problems.

Adopt Updated Goals and Performance Measures

The revised goals, objectives and standards shown in Chapter 8 are recommended for adoption. These revisions are more in line with current operating conditions, while still providing appropriate incentives to improve services.

Expand Management Staff by One Position

One additional staff position is recommended for the management staff, at a junior to mid-range level. This position will be necessary to implement technology and bus stop improvements identified in this plan, and to help address the continual growth in staff resources needed to address federal and state operational, administrative and reporting requirements.

FINANCIAL PLAN

Use a Combination of State and Local Sources to Fund Transit Operations and Capital Improvements

The following methodology was utilized in developing this Financial Plan:

- First, forecasts of annual operating and administrative costs were developed, as presented in Table 52 for FY 2015/16 through FY 2019/20. “Base case” operating and administrative cost forecasts were estimated based on the existing budget, including the revisions to Yuba Sutter Mall, Live Oak service, and Wheatland service. A 3 percent annual inflation rate is applied to estimate base case costs in the absence of any change in service levels. Next, operating and administrative cost estimates were identified for each SRTP element, based upon the analyses presented in previous sections of this document, and consistent with the implementation plan presented below. These costs were also factored to reflect the assumed rate of inflation. Operating and administrative costs by the fifth year of the plan will total approximately $8,538,000, which is 15 percent over the base-case cost of $7,445,000.

- Next, ridership for each SRTP element was estimated, as presented in Table 53. The “base case” ridership reflects expected ridership assuming no changes in service. The ridership impact of each Plan element (including the fare modifications) is then identified and summed. These figures include the ridership increase that would be expected from a Yuba College student fee program (which allows students to board at no fare). As new services do not immediately attain the full potential ridership, ridership on new services is factored to reflect 66 percent of potential ridership in the first year of service and 90 percent of potential

ridership in the second year. For relatively small changes to existing services (such as changes in hours of operation), a 90 percent factor is assumed for the first year and full ridership thereafter. In addition, ridership (for both base case and for the service improvements) is factored to reflect a 1.1 percent annual increase in population and associated ridership demand. By FY 2019/20, ridership is forecast to equal 1,693,000 one-way passenger-trips per year, which is 328,400 trips over the base case forecast of 1,364,500. This indicates that the plan will result in a 24 percent increase in ridership by the end of the plan period.

- Based on the ridership figures presented in Table 53, the estimated farebox revenues are presented in Table 54. Again, these figures reflect the impacts of the fare modifications. As presented, in the 2016/17 fiscal year the elimination of existing fares paid by Yuba College students yields a net reduction in fare revenue[6]. Over the subsequent years, growth in fare revenues generated by increased ridership yield a net increase in farebox revenues. The base case farebox revenues for FY 2019/20 are estimated at $1,498,400. Implementation of the SRTP elements will increase FY 2019/20 farebox revenues by $23,000 (excluding Yuba College student fee revenues), equal to a 1.5 percent increase.

- The next element necessary in the development of the SRTP is estimation of the capital cost for vehicles, passenger amenities, passenger facility improvements and operating equipment, as shown in Table 55 for each year of the Short Range Transit Plan period. It should be noted that an annual inflation rate of 3.0 percent is reflected in these figures. Based on the capital plan, presented above, the capital costs total $12,591,800 over the five-year period. This table also indicates the fleet replacement requirements in the 5-10 year period, consisting of seven Dial-A-Ride vehicles in FY 22-23.

TABLE 52: Yuba - Sutter SRTP Estimated Operating Cost
All Figures in Thousands

Plan Element	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20	5-Year Plan Total
Base Case Operating Cost (1)	$6,614.4	$6,812.8	$7,017.2	$7,227.7	$7,444.6	$35,116.7
Service Plan Elements						
Revise Route 2 To Improve On-Time Performance	-$7.3	-$9.1	-$9.3	-$9.6	-$9.9	-$45.3
Revise Route 4A to Serve Linda Rather Than Alturas/Shasta	$3.0	$3.7	$3.8	$3.9	$4.1	$18.5
Peak Tripper Bus Service	$0.0	$48.5	$50.0	$51.5	$53.0	$203.0
Extend Weekday and Saturday Service by One Hour	$0.0	$125.5	$129.2	$133.1	$137.1	$524.9
Sutter County Center Shuttle Service	$0.0	$95.5	$102.5	$105.6	$108.7	$412.3
Improve Route 1 and 3 to 20 Minute Frequency	$0.0	$0.0	$490.8	$505.5	$520.7	$1,516.9
Modify Routes 3 and 6	$0.0	$0.0	-$14.1	-$14.5	-$15.0	-$43.6
Implement Earlier SR 99 PM Commuter Run	$7.3	$9.1	$9.3	$9.6	$9.9	$45.3
Eliminate General Public Eligibility for Daytime DAR Service	$0.0	-$6.2	-$6.4	-$6.6	-$6.8	-$25.9
Reduce DAR Service in Outlying Areas	$0.0	-$27.8	-$28.6	-$29.5	-$30.4	-$116.3
Expand DAR Capacity	$0.0	$43.1	$88.7	$137.0	$188.2	$457.0
Subtotal: Service Plan Elements	*$3.0*	*$282.3*	*$815.8*	*$886.0*	*$959.6*	*$2,586.7*
Management Plan Elements						
Nextbus	$0.0	$25.0	$25.8	$26.5	$27.3	$104.6
Wifi	$0.0	$0.0	$8.0	$8.2	$8.5	$24.7
Additional Administrative Staff	$0.0	$90.0	$92.7	$95.5	$98.3	$376.5
Subtotal: Management Plan Elements	*$0.0*	*$115.0*	*$126.5*	*$130.2*	*$134.2*	*$505.8*
Net Operating Cost (2)	$6,617.4	$7,210.1	$7,959.5	$8,244.0	$8,538.3	$38,209.3

Note 1: The FY 2015-16 costs based on draft Yuba-Sutter Transit budget, which includes revisions to Yuba Sutter Mall service, Live Oak service, and Wheatland service.
Note 2: This analysis assumes an annual inflation rate of 3 percent.
Source: LSC Transportation Consultants, Inc.

[6] The offsetting student fee revenues are reflected in Table 56, below.

TABLE 53: Yuba-Sutter SRTP Estimated Ridership

All Figures in Thousands

Plan Element	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20	5-Year Plan Total
Base Case Ridership (1)	1,316.1	1,328.0	1,340.1	1,352.2	1,364.5	8,005.3
Service Plan Elements						
Revise Route 2 To Improve On-Time Performance	0.0	0.0	0.0	0.0	0.0	0.0
Revise Route 4A to Serve Linda Rather Than Alturas/Shasta	7.4	10.0	10.1	10.2	10.4	48.1
Peak Tripper Bus Service	0.0	2.1	2.4	2.4	2.4	9.3
Extend Weekday and Saturday Service by One Hour	0.0	28.6	32.1	32.5	32.8	126.0
Sutter County Center Shuttle Service	0.0	16.3	23.4	26.3	26.6	92.6
Improve Route 1 and 3 to 20 Minute Frequency	0.0	0.0	127.0	142.7	144.3	414.0
Modify Routes 3 and 6	0.0	0.0	16.7	18.8	19.0	54.5
Implement Earlier SR 99 PM Commuter Run	1.9	2.5	2.5	2.5	2.5	11.9
Expand Live Oak Service to 5 Days per Week	2.5	2.8	2.8	2.8	2.9	13.8
Revise Wheatland Service to 2 Runs per Day, 3 Days per Week	0.2	0.2	0.2	0.2	0.2	1.0
Eliminate General Public Eligibility for Daytime DAR Service	0.0	-0.2	-0.3	-0.3	-0.3	-1.1
Reduce DAR Service in Outlying Areas	0.0	-1.1	-1.1	-1.1	-1.2	-4.5
Expand DAR Capacity	0.0	2.8	5.7	8.7	11.7	28.9
Ridership Induced by Yuba College Student Pass Program	0.0	71.6	75.4	76.3	77.1	300.4
Subtotal Plan Elements	12.0	135.6	296.9	322.0	328.4	1,094.9
Net Ridership	1,316.3	1,463.6	1,637.0	1,674.2	1,692.9	7,784.1

Note 1: Base case ridership on local fixed routes assumed to grow with population (1.1%); commuter and DAR base case ridership assumed to not change.

Source: LSC Transportation Consultants, Inc.

TABLE 54: Yuba-Sutter SRTP Estimated Farebox Revenues

All Figures in Thousands

Plan Element	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20	5-Year Plan Total
Base Case	$1,470.0	$1,477.0	$1,484.0	$1,491.2	$1,498.4	$7,420.6
Service Plan Elements						
Revise Route 2 To Improve On-Time Performance	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Revise Route 4A to Serve Linda Rather Than Alturas/Shasta	$4.4	$5.9	$6.0	$6.0	$6.2	$28.5
Peak Tripper Bus Service	$0.0	$3.8	$4.3	$4.3	$4.3	$16.8
Extend Weekday and Saturday Service by One Hour	$0.0	$16.7	$18.8	$19.0	$19.2	$73.7
Sutter County Center Shuttle Service	$0.0	$10.3	$14.9	$16.7	$16.9	$58.8
Improve Route 1 and 3 to 20 Minute Frequency	$0.0	$0.0	$76.5	$86.0	$86.9	$249.4
Modify Routes 3 and 6	$0.0	$0.0	$10.2	$11.5	$11.6	$33.3
Implement Earlier SR 99 PM Commuter Run	$8.8	$11.6	$11.6	$11.6	$11.6	$55.2
Expand Live Oak Service to 5 Days per Week	$3.1	$3.4	$3.4	$3.4	$3.5	$16.9
Revise Wheatland Service to 2 Runs per Day, 3 Days per Week	$0.2	$0.2	$0.2	$0.2	$0.2	$1.1
Eliminate General Public Eligibility for Daytime DAR Service	$0.0	-$0.8	-$1.2	-$1.2	-$1.2	-$4.4
Reduce DAR Service in Outlying Areas	$0.0	-$2.0	-$2.0	-$2.0	-$2.2	-$8.1
Expand DAR Capacity	$0.0	$5.0	$10.3	$15.7	$21.1	$52.0
Existing Fare Revenue Lost With Yuba College Student Fee (1)	$0.0	-$149.3	-$155.5	-$155.5	-$155.5	-$615.8
Subtotal Plan Elements	$16.5	-$95.0	-$2.5	$15.8	$22.7	-$42.5
Net Farebox Revenues	$1,486.5	$1,382.0	$1,481.5	$1,506.9	$1,521.1	$7,993.8

Source: LSC Transportation Consultants, Inc. Note 1: Student fee revenues shown in Table 56.

TABLE 55: Yuba-Sutter SRTP Capital Plan

All Figures in Thousands

Plan Element	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20	5-Year Plan Total	Vehicle Needs 6-10 Years FY 22-23
Dial-A-Ride/Rural Replacement Vans (Low Floor)							
Number of Vehicles	0	0	0	10	0	10	6
Total Cost	*$0.0*	*$0.0*	*$0.0*	*$1,250.0*	*$0.0*	$1,250.0	*$810.0*
Dial-A-Ride Expansion Vans (Low Floor)							
Number of Vehicles	0	0	0	1	0	1	1
Total Cost	*$0.0*	*$120.0*	*$0.0*	*$125.0*	*$0.0*	$245.0	*$135.0*
Local Fixed Route Replacement Buses							
Number of Buses	0	0	0	0	11	11	0
Total Cost	*$0.0*	*$0.0*	*$0.0*	*$0.0*	*$5,225.0*	$5,225.0	*$0.0*
Local Fixed Route Expansion Buses							
Number of Buses	0	0	0	0	2	2	0
Total Cost	*$0.0*	*$0.0*	*$0.0*	*$0.0*	*$950.0*	$950.0	*$0.0*
Commuter Replacement Buses							
Number of Buses	0	0	7	0	0	7	0
Total Cost	*$0.0*	*$0.0*	*$4,200.0*	*$0.0*	*$0.0*	$4,200.0	*$0.0*
Replace Dodge Activan (Supervisor Vehicle)	$0.0	$45.0	$0.0	$0.0	$0.0	$45.0	--
North Beale Road Accessibility Improvements	$286.0	$0.0	$0.0	$0.0	$0.0	$286.0	--
Onboard Video System	$134.3	$0.0	$0.0	$0.0	$0.0	$134.3	--
Transit Operations Facility Equipment, Furnishing & Repairs	$100.0	$50.0	$50.0	$50.0	$50.0	$300.0	--
Transit Center and Bus Shelter Improvements	$60.3	$155.5	$160.2	$166.6	$175.0	$717.5	
Bus Stop Sign Improvement Program	$0.0	$38.3	$30.0	$0.0	$0.0	$68.3	--
Nextbus Office and Vehicle Equipment	$0.0	$100.0	$0.0	$0.0	$0.0	$100.0	--
Wi-Fi on Commuter Buses	$0.0	$0.0	$20.7	$0.0	$0.0	$20.7	--
Total Capital Plan Elements	$580.6	$508.8	$4,460.9	$1,591.6	$6,400.0	$12,591.8	$810.0

Note 1: All costs include 2 percent annual inflation.
Source: LSC Transportation Consultants, Inc.

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154 safety and security, wifi, nextbus, transit stop improvements

The results of Tables 52 through 55 were used to develop the Financial Plan, as presented for each of the five years of the Short Range Transit Plan period in Table 56. In addition to passenger fare revenues, this Financial Plan incorporates the following funding sources:

- Yuba College student fees, starting in the Fall 2017 Semester, offset the loss of existing student fares and fund approximately 60 percent of the cost of the Sutter County Center shuttle service.

- Feather River Air Quality Management District funds are used to continue to provide low-cost pass rates.

- FTA 5316 (Jobs Access Reverse Commute) funds are used for operations.

- FTA Section 5307 (Urban Program) is used for operations and the purchase of local route buses.

- FTA Section 5311 (Rural Program) is used for rural operations and the purchase of one commuter bus, reflecting that the Commuter Service serves rural areas.

- FTA Section 5317 (New Freedom) funds are allocated to the North Beale Road improvement program

- FTA 5339 (Formula Capital Program) funds Dial-A-Ride vehicle purchases, along with a portion of the Local Route bus purchases.

- Proposition 1B PTMISEA (Public Transportation Modernization, Improvement, and Service Enhancement Account) Program funds are used for bus purchases.

- Proposition 1B Safety and Security Program funds are used for video monitoring, wifi improvements and bus stop / transit center improvements.

- Low Carbon Transit Operations Program funds are used for transit center and bus stop improvements, along with facility improvements that reduce carbon emissions.

- State Transit Assistance funds are used as funding for transit operations and for bus and van purchases, bus stop improvements, facility improvements, and a new supervisor vehicle.

- Local Transportation Funds are used for transit operation and for budget contingency.

As shown, both the operating financial plan and the capital financial plan are balanced in each of the plan years.

TABLE 56: Yuba-Sutter SRTP Financial Plan

All Figures in Thousands

	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20	5-Year Plan Total
OPERATING PLAN						
Base Case Costs	*$6,614.4*	*$6,812.8*	*$7,017.2*	*$7,227.7*	*$7,444.6*	*$35,116.7*
Operating Plan Elements (From Table 51)	$3.0	$282.3	$815.8	$886.0	$959.6	$2,946.7
Total Operating Costs	$6,617.4	$7,095.1	$7,833.1	$8,113.7	$8,404.2	$38,063.5
Operating Revenues						
Passenger Fares (From Table 53)	$1,486.5	$1,382.0	$1,481.5	$1,506.9	$1,521.1	$7,378.0
Yuba College Student Fees	$0.0	$178.7	$214.9	$217.3	$219.7	$830.6
Annual LTF & STA Operating Revenues	$2,662.9	$2,946.8	$3,447.6	$3,595.0	$3,759.2	$11,620.5
FTA 5307 (Urban)	$2,000.0	$2,105.6	$2,192.6	$2,283.2	$2,377.6	$10,959.0
FTA Section 5311 (Rural)	$325.0	$334.8	$344.8	$355.1	$365.8	$1,725.5
FTA 5316 (Jobs Access / Reverse Commute)	$100.0	$103.0	$106.1	$109.3	$112.6	$530.9
Interest	$1.0	$1.0	$1.0	$1.0	$1.0	$5.0
Non-Transportation Revenue (FRQMD, RWMA, etc.)	$17.0	$17.5	$18.0	$18.6	$19.1	$90.3
Auxiliary Ad Revenues	$25.0	$25.8	$26.5	$27.3	$28.1	$132.7
Total Operating Revenues	$6,617.4	$7,095.1	$7,833.1	$8,113.7	$8,404.2	$38,063.5
Annual Balance	$0.0	$0.0	$0.0	$0.0	$0.0	
CAPITAL PLAN						
Capital Costs (From Table 54)	$580.6	$508.8	$4,460.9	$1,591.6	$6,400.0	$13,541.8
Capital Revenues						
LTF	$100.0	$253.8	$0.0	$64.5	$105.0	$523.2
STA	$0.0	$0.0	$339.0	$485.0	$1,235.0	$2,059.0
Federal (5307,5310,5311,5317)	$286.0	$0.0	$530.0	$890.0	$4,940.0	$6,646.0
Proposition 1B PTMISEA	$0.0	$0.0	$3,331.0	$0.0	$0.0	$3,331.0
Proposition 1B Safety and Security	$134.3	$135.0	$102.9	$32.1	$0.0	$404.3
Low Carbon Transit Operations Program	$60.3	$120.0	$120.0	$120.0	$120.0	$540.3
Total Capital Revenues	$580.6	$508.8	$4,422.9	$1,591.6	$6,400.0	$13,503.8
Annual Balance	$0.0	$0.0	($38.0)	$0.0	$0.0	
Evaluation of Systemwide Farebox Return Ratio						5-Year Average
With Yuba College Fee	22.5%	22.0%	21.7%	21.3%	20.7%	21.6%
Without Yuba College Fee	22.5%	21.6%	20.9%	20.5%	19.9%	21.1%

LTF - Local Transportation Funds
STA - State Transit Assistance
FTA - Federal Transit Administration

Source: LSC Transportation Consultants, Inc.

Monitor the Need to Increase Fares

As shown in the bottom portion of Table 56, without the Yuba College student fee the systemwide farebox return ratio[7] falls below the Board-adopted target minimum value of 20 percent, and trends towards the minimum required under the Transportation Development Act. This indicates that a fare increase (excluding Commuter Service) may be necessary in FY 2017/18, depending on the results of a student fee election and other financial shifts. A $0.50 increase in the base fare (as discussed in the previous chapter) would raise the overall farebox return ratio to approximately 22.4 percent in FY 2019/20, while a $0.25 fare increase would raise it to approximately 11.1 percent.

It should also be noted that if the FRAQMD funding used to subsidize the discount fare is eliminated, pass prices would need to increase.

IMPLEMENTATION PLAN

Fiscal Year 2015-16

- Revise Route 2 and Route 4A (September), including preparation of new schedules
- Expand Live Oak Service to five days per week, and revise Wheatland service to three days per week (July)
- Revise Dial-A-Ride program to eliminate general public daytime service, reduce service area, revise age definition of senior, and expand capacity (September)
- Conduct passenger surveys and implement earlier SR 99 PM commuter run (September)
- Define specific proposal for Yuba College student fee and hold election (Spring)
- Implement Connect Card, and closely monitor ridership and fare revenue impacts
- Start implementing bus stop and transit center improvements and bus stop sign replacement
- Expand road supervision to help address on-time performance issues
- Fund the North Beale Road project
- Implement the remainder of the on-board and park-and-ride video system

Fiscal Year 2016-17

- Assuming a successful Yuba College student fee election, implement Sutter County Center shuttle service and eliminate fares for Yuba College students on local fixed routes, at the beginning of the Fall Semester
- Extend weekday and Saturday Local Route service by one hour, and trim Evening Dial-A-Ride to start at 7:00 PM
- Implement peak tripper service on Local Routes to improve on-time performance
- Continue implementing bus stop and transit center improvements and bus stop sign replacement
- Implement real-time transit information system
- Establish and fill additional administrative position

[7] This is calculated by dividing the total fares (including student fee income) by total operating costs. Note that the figures shown is a simple calculation, not considering the exceptions allowed under the Transportation Development Act for the first few years of a new service. It still reflects the long-term trend in farebox return ratio under the two scenarios.

- Finalize plans for improvements to Routes 1, 3 and 6
- Review the need for a fare increase
- Purchase new Supervisor van
- Conduct a study of a potential new transit center to replace the current stop at Alturas/Shasta

Fiscal Year 2017-18

- Continue to expand Dial-A-Ride capacity
- Continue implementing bus stop and transit center improvements
- Implement 20-minute service frequency on Routes 1 and 3, along with potential realignment of Routes 3 and 6
- Purchase seven replacement Commuter Service buses
- Conduct study of a potential new transit center at North Beale Road

Fiscal Year 2018-19

- Purchase 11 low-floor Dial-A-Ride vans
- Continue to expand Dial-A-Ride capacity
- Continue implementing bus stop and transit center improvements

Fiscal Year 2019-20

- Purchase 13 buses for Local Fixed Route Service
- Continue to expand Dial-A-Ride capacity
- Continue implementing bus stop and transit center improvements

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Appendix A
List of Bus Stops

YUBA-SUTTER TRANSIT
MASTER BUS STOP LOCATION LIST

Revised August 12, 2013

NUMBER	STREET	CROSS STREET	CORNER	ROUTE(S)	AD BENCH	NON-AD BENCH	NON-AD SHELTER	AD SHELTER	SCHEDULE	LOCKERS	GARBAGE	
	CITY OF YUBA CITY (Incorporated)											
1	Walton Ave.	Sam's Club Entrance**	SW	**1/2/5 & 99**		2		2	1			**1**
2	Walton Ave.	Sunsweet Entrance	SE	**2 & 70**				1	1		1	**2**
3	Lassen Boulevard	Walton Avenue	NW	**1/5**					2			**3**
4	Lassen Boulevard	Tharp Rd.	NW	**1/5**	1							**4**
5	Lassen Boulevard	Klamath	NW	**1/5**	1							**5**
6	Harter Road	Spirit Way	NE	**1/5**	1			1				**6**
7	Harter Road	Yuba City Marketplace**	NE	**1/5**				1			1	**7**
8	Harter Road	Butte House Road	SW	**1/5**								**8**
9	Butte House Rd.	Tharp Rd.	SE	**1/5**								**9**
10	Stabler Ln.	Butte House Rd.	SW	**1/2/5**				1				**10**
11	Butte House Rd.	Stabler Ln. (Rite-Aid)	SE	**2**				1				**11**
12	Stabler Ln.	Starr Drive	SW	**1/2/5**								**12**
13	Stabler Ln.	Starr Drive	NE	**2**								**13**
14	Butte House Rd.	Civic Center Blvd.	SE	**2**				1				**14**
15	Butte House Rd.	El Dorado Lane	NW	**2**	1							**15**
16	Butte House Rd.	Yuba City Mall Signal Ent.	SE	**2**				1				**16**
17	Butte House Rd.	Target Entrance	NW	**2**				1				**17**
~~18~~	~~Colusa Hwy.~~	~~Civic Center Blvd.~~	~~SW~~	~~1~~	~~1~~							**18**
19	Mall at Yuba City	Rocca Way (At Main Entrance)	----	**1**			1					**19**
20	Gray Ave.	Louise Ave. (K-Mart)	SW	**1**				1				**20**
21	Gray Ave.	Louise Ave. (Paradise Motel)	NE	**1**				1				**21**
22	Forbes Ave.	Gray Ave.	SE	**1**	1							**22**
23	Forbes Ave.	Gray Ave.	NE	**1**	1							**23**
24	Forbes Ave.	Clark Ave. (Library)	SE	**1**	1				1			**24**
25	Forbes Ave.	Clark Ave.	NE	**1**								**25**
26	Forbes Ave.	Orange St.	NW	**1**								**26**
27	Forbes Ave.	Orange St.	SE	**1**								**27**
28	Forbes Ave.	Almond St.	SE	**1**								**28**
29	Forbes Ave.	Almond St.	NW	**1**								**29**
30	Plumas St.	Church St.	NE	**1/2**								**30**
31	Plumas St.	Church St.	SW	**1/2**								**31**
32	Alturas St.*	Shasta St.**	SW	**1/2/4A**			1				1	**32**
33	Sutter Street	Lamon Street	NE	**4A**	1							**33**
34	Plumas St.	Bridge St.	NW	**2**								**34**
35	Plumas St.	Bridge St.	NE	**2**								**35**
36	Plumas Street	B Street	SW	**2**					1			**36**
37	Plumas Street	Town Square	SE	**2**					1			**37**
38	C Street	Wilbur Avenue	SW	**2**								**38**
39	C Street	Wilbur Avenue	NW	**2**								**39**
40	Wilbur Avenue	Franklin Road	NE	**2**					1			**40**
41	Wilbur Ave.	Franklin Ave.	SW	**2**					1			**41**
42	Wilbur Ave.	Career Placement Center	NW	**2**	1							**42**
43	Wilbur Ave.	Fairview MHP Entrance	NE	**2**	1							**43**
44	Wilbur Ave.	Garden Hwy.	SW	**2**	1							**44**
45	Wilbur Ave.	Garden Hwy.	NW	**2**	1							**45**
46	Garden Hwy.	Percy Ave.	SW	**2**	1							**46**
47	Garden Hwy.	Percy Ave.	NE	**2**	1							**47**
48	Garden Hwy.	Winship Rd.	NW	**2**				1				**48**
49	Garden Hwy.	Winship Rd.	NE	**2**	1							**49**
50	Lincoln Rd.	Garden Hwy.	NW	**2**	1							**50**
51	Lincoln Rd.	Garden Hwy.	SW	**2/5**								**51**
52	Lincoln Rd.	Railroad Ave.	SE	**2**	1				1			**52**
53	Lincoln Rd.	Railroad Ave.	NW	**2/5**	1				2			**53**
54	Clark Ave.	Richland Rd.	NE	**2**	1							**54**
55	Bunce Rd.	Richland Rd.	SW	**2**	1							**55**
56	Clark Ave.	Julie Dr. (Hillcrest Plaza)	SE	**2**	1							**56**
57	Clark Ave.	Julie Dr. (St. Isidore's)	SW	**2**								**57**
58	Franklin Road	Clark Avenue (Tennis Courts)	NW	**2**	1				1			**58**
59	Clark Ave.	Franklin Ave.	SW	**2**					1			**59**
60	Franklin Road	Gray Ave.	SE	**2**								**60**
61	Gray Avenue	Franklin Road	NE	**2**								**61**
62	Gray Avenue	B Street	NE	**2**								**62**
63	Gray Avenue	B Street	SW	**2**								**63**
64	Bridge St.	Gray Ave. (Save Mart)	NW	**2**	1							**64**
65	Bridge St.	North Barrett Rd.	SE	**2**								**65**
66	Bridge St.	Toys R' Us Entrance	NW	**2/5**				1				**66**
67	Bridge St.	Oji Way	SW	**2/5**				1				**67**
68	Onstott Frontage Road	Cinemark Movies 12	SW	**5**	1							**68**
69	Bridge St.	JoAnn Way	SE	**2/5**								**69**
70	Bridge Street	JoAnn Way	NW	**2/5**								**70**
71	Walton Ave.	Bridge St.	NE	**2/5**	1							**71**
72	Bridge St.	Walton Ave.	SE	**2/5**	1							**72**
73	Franklin Road	Winco Foods (Across Street)	NW	**5**	1				1			**73**
74	Franklin Road	Winco Foods	SW	**5**				1				**74**
75	Walton Ave.	Franklin Road	SE	**5**								**75**
76	Franklin Road	Walton Ave.	SW	**5**	1							**76**
77	Walton Ave.	Camino Del Flores (AK School)	SW	**5**		1						**77**
78	Walton Ave.	Camino Del Flores	SE	**5**	1							**78**
79	Walton Ave.	Cherry Street	SW	**5**								**79**
80	Walton Ave.	Cherry Street	NE	**5**								**80**
81	Walton Ave.	McCune Avenue	NW	**5**								**81**
82	Walton Ave.	McCune Avenue	NE	**5**								**82**
83	Walton Ave.	Lincoln Road	NE	**5**	1				1			**83**

YUBA-SUTTER TRANSIT
MASTER BUS STOP LOCATION LIST

Revised August 12, 2013

NUMBER	STREET	CROSS STREET	CORNER	ROUTE(S)	AD BENCH	NON-AD BENCH	NON-AD SHELTER	AD SHELTER	SCHEDULE	LOCKERS	GARBAGE	
84	Walton Ave.	Joseph Street	NE	**5**								**84**
85	Walton Ave.	Tracy Drive	SE	**5**								**85**
86	Lincoln Road	Crest Drive	SW	**5**								**86**
87	Lincoln Road	Phillips Road	SE	**5**	1							**87**
88	Lincoln Road	Jones Road	SE	**5**								**88**
89	Garden Highway	Teesdale	SW	**5**	1							**89**
90	Garden Highway	River Oaks Drive	SW	**5**								**90**
91	Bogue Road	Garden Highway	NW	**5**				1				**91**
92	Bogue Road	South Park	NE	**5**								**92**
93	Bogue Road	Railroad Avenue	NE	**5**								**93**
94	Bogue Road	Germaine Drive	NW	**5**								**94**
95	Bogue Road	Falls Drive	NW	**5**	1							**95**
96	Sanborn Road	Bogue Road	NE	**5**					1			**96**
97	Pebble Beach Drive	Walton Ave.	SW	**5**								**97**
98	Pebble Beach Drive	Portola Valley Drive (Park)	SE	**5**					1			**98**
99	Washington Ave.	Gray Ave.	SE	**2**								**99**
100	Washington Ave.	Clark Ave.	SW	**2**								**100**
101	Ainsley Ave.	Clark Ave.	NW	**2**								**101**
102	Ainsley Ave.	Yuba City Senior Center	----	**2**			1					**102**
103	Gray Ave.	Queens Ave.	NE	**2**					1			**103**
104	Gray Ave.	Queens Ave.	SW	**2**								**104**
105	Gray Ave.	Casita Dr.	NE	**2**	1				1			**105**
106	Gray Ave.	Casita Dr.	SW	**2**	1				1			**106**
107	Northgate Dr.	Gray Ave.	SE	**2**								**107**
108	Northgate Dr.	Gray Ave.	NE	**2**								**108**
109	Northgate Dr.	Clark Ave.	SE	**2**								**109**
110	Northgate Dr.	Clark Ave.	NE	**2**								**110**
111	Northgate Dr.	Live Oak Blvd.	SW	**2**								**111**
112	Northgate Dr.	Live Oak Blvd.	NW	**2**								**112**
113	Yuba-Sutter Mental Health	----	----	**2**			1					**113**
114	Queens Ave.	Live Oak Blvd. (Brundy Ct.)	SE	**2**	1							**114**
115	Queens Ave.	Live Oak Blvd. (Brundy Ct.)	NE	**2**				1				**115**
116	Plumas St.	Alemar Way	NW	**2**								**116**
117	Plumas St.	Alemar Way	NE	**2**								**117**
118	Plumas St.	Sutter Estates (south ent.)	NW	**2**	1							**118**
119	Plumas St.	Sutter Estates (south ent.)	NE	**2**	1							**119**
120	Plumas St.	Ainsley Ave.	NW	**2**								**120**
121	Plumas St.	Ainsley Ave.	NE	**2**								**121**
122	Plumas St.	Fremont Hospital	NE	**2**	1							**122**
123	Plumas St.	Fremont Hospital (front door)	NW	**2**	1							**123**
	Total Yuba City Stops			**123**	**41**	**3**	**4**	**18**	**21**	**0**	**3**	
	SUTTER COUNTY (Unincorporated)											
124	Bogue and Highway 99	Park and Ride**	SE	**Hwy. 99**			1			5 (#1,2, 3, 4, 5)	1	**1**
125	Bogue Road	Ramona Avenue	NW	**5**								**2**
126	Bogue Road	Walton	NE	**5**								**3**
	Total Sutter County Stops			**3**	**0**	**0**	**1**	**0**	**0**	**5**	**1**	
	CITY OF MARYSVILLE											
127	Yuba Co. Government Center*	I & 9th Streets**	SW	**1/4/70/99**			1		1	4 (#5, 6, 7, 8)	1	**1**
~~128~~	~~H Street~~	~~9th Street~~	~~NE~~	~~**1/4**~~								~~**2**~~
129	H Street	7th Street	SW	**1/4**								**3**
130	H Street	7th Street	NE	**1/4**								**4**
131	H Street	4th Street	NW	**1/4**	1				2			**5**
132	H Street	Northbound Between 3rd & 4th	Midblock	**1/4**				1				**6**
133	Third Street	F Street	SW	**1/4**								**7**
134	H Street	11th Street	NW	**4**								**8**
135	H Street	11th Street	NE	**4**								**9**
136	H Street	14th Street	SW	**4**								**10**
137	14th Street	H Street	SE	**4**								**11**
138	14th Street	Ellis Lake Drive	SW	**4**	1							**12**
139	14th Street	Ellis Lake Drive	NW	**4**				1				**13**
140	B Street	3rd Street	NW	**4**								**14**
141	B Street	3rd Street	NE	**4**								**15**
142	B Street	6th Street	SW	**4**	1							**16**
143	B Street	6th Street	NE	**4**	1							**17**
144	B Street	9th Street	SW	**4**				1				**18**
145	B Street	8th Street (Caltrans)	NE	**4**	1							**19**
146	B Street	16th Street	NE	**4**								**20**
147	B Street	16th Street	SW	**4**								**21**
148	D Street	Second Street (Old Mervyn's)**	----	**1/4**			1				1	**22**
149	F Street	Second Street (Buttes Manor)	NE	**1/4**				1				**23**
150	East 17th Street	Huston Street	NE	**4**								**24**
151	East 17th Street	Huston Street	SE	**4**								**25**
152	East 17th Street	Del Pero Street	NE	**4**								**26**
153	East 17th Street	Del Pero Street	SW	**4**								**27**
154	East 17th Street	Covillaud Street	SW	**4**								**28**
155	East 17th Street	Covillaud Street	NE	**4**								**29**
156	East 18th Street	Chestnut	SW	**4**				1				**30**
157	Chestnut	East 18th Street	SE	**4**	1							**31**
158	Ramirez Street	East 15th Street	NE	**4**								**32**
159	Ramirez Street	East 15th Street	NW	**4**								**33**
160	Ramirez Street	East 13th Street	NW	**4**								**34**
161	Ramirez Street	East 12th Street	NE	**4**								**35**

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NUMBER	STREET	CROSS STREET	CORNER	ROUTE(S)	AD BENCH	NON-AD BENCH	NON-AD SHELTER	AD SHELTER	SCHEDULE	LOCKERS	GARBAGE	
162	Ramirez Street	East 11th Street	NE	**4A/B**	1							**36**
163	Yuba Street	12th Street (One-Stop)	SW	**4A/B**			1					**37**
164	Ramirez Street	East 18th Street	NE	**4**								**38**
165	Ramirez Street	East 18th Street	SW	**4**	1							**39**
166	East 19th Street	Sampson Street	SW	**4**								**40**
167	East 19th Street	Sampson Street	NE	**4**								**41**
168	East 19th Street	Covillaud Street	NW	**4**	1				1			**42**
169	Covillaud Street	East 19th Street	NE	**4**	1				1			**43**
170	Covillaud Street	East 22nd Street	SE	**4**								**44**
171	22nd Street	Covillaud Street	NE	**4**								**45**
172	22nd Street	Huston Street	NE	**4**								**46**
173	22nd Street	Huston Street	SW	**4**								**47**
174	East 22nd Street	Hansen Street	SW	**4**	1				1			**48**
175	Hansen Street	East 22nd Street	SE	**4**	1				1		1	**49**
176	Hansen Street	Arthur Street	SW	**4**								**50**
177	Hansen Street	Arthur Street	NE	**4**								**51**
178	Hall Street	East 19th Street	NW	**4**								**52**
179	Hall Street	East 19th Street	SE	**4**								**53**
180	Sampson Street	East 16th Street	NE	**4**								**54**
181	Sampson Street	East 16th Street	NW	**4**								**55**
	Total Marysville Stops			**55**	**12**	**0**	**3**	**5**	**7**	**4**	**4**	
	COUNTY OF YUBA											
182	North Beale Road	Rio Rancho Motel	**SE**	**1/4B**								**1**
183	North Beale Road	Feather River Blvd.	**NW**	**1/4B**								**2**
184	North Beale Road	Wal-Mart**	**NW**	**1/3/4B/6**		4		2			1	**3**
185	North Beale Road	SouthSide**	**SW**	**1/3/4B/6**		2		2			1	**4**
186	5730 Packard Avenue	Yuba County Buildings	**NE**	**4B**					1			**5**
187	North Beale Road	Lowe Avenue	**SE**	**1/3/6**								**6**
188	North Beale Road	Lowe Avenue**	**NE**	**1/3/6**			1				1	**7**
189	North Beale Road	Park Avenue	**SE**	**1/3/6**								**8**
190	North Beale Road	between Alpine and Park	**NW**	**1/3/6**					3			**9**
191	North Beale Road	Albrecht Avenue	**SE**	**1/3**								**10**
192	North Beale Road	Albrecht Avenue	**NW**	**1/3**								**11**
193	North Beale Road	Woodland Drive	**SE**	**1/3**	1							**12**
194	North Beale Road	Woodland Drive	**NE**	**1/3**	1							**13**
195	Yuba College Terminal*	East Parking Lot**	**----**	**1/3/6**		3	2				1	**14**
196	North Beale Road	College View Drive	**SE**	**6**					1			**15**
197	North Beale Road	College View Drive	**NW**	**6**								**16**
198	Alberta Avenue	North Beale Road	**NE**	**6**	1				1			**17**
199	Alberta Ave.	North Beale Road	**NW**	**6**	1				1			**18**
200	Alberta Ave.	Hammonton-Smartville Road	**SE**	**6**								**19**
201	Alberta Ave.	Hammonton-Smartville Road	**SW**	**6**								**20**
202	Hammonton-Smartville Rd.	Dunning Avenue	**NW**	**6**					1			**21**
203	Hammonton-Smartville Rd.	Dunning Avenue	**SE**	**6**								**22**
204	Hammonton-Smartville Rd.	Farrell	**SW**	**6**	1							**23**
205	Hammonton-Smartville Road	Mapes Way	**NE**	**6**								**24**
206	Hammonton-Smartville Road	Hile Avenue	SW	**6**								**25**
207	Hammonton-Smartville Road	North Beale Road	NE	**6**								**26**
208	North Beale Road	Hammonton-Smartville Road	SE	**1/3**								**27**
209	Feather River Blvd.	North Beale Road**	NW	**6**				1			1	**28**
210	Feather River Blvd.	Arboga Road	SW	**6**								**29**
211	Feather River Blvd.	Arboga Road	NW	**6**								**30**
212	Feather River Blvd.	Alicia Avenue	SE	**6**	1				1			**31**
213	Feather River Blvd.	Alicia Avenue (Clover Leaf)	NE	**6**					1			**32**
214	Feather River Blvd.	Riverside	NW	**6**								**33**
215	Feather River Blvd.	Riverside	SE	**6**								**34**
216	Feather River Blvd.	Island	NW	**6**								**35**
217	Feather River Blvd.	Island	NE	**6**								**36**
218	Grand	Island	NE	**6**								**37**
219	Grand	Island	NW	**6**								**38**
220	Grand Avenue	Alicia Avenue	SW	**6**					1			**39**
221	Grand Avenue	Alicia Avenue	SE	**6**					1			**40**
222	Alicia	Pasado Road	NW	**6**								**41**
223	Pasado Road	Alicia Avenue	NE	**6**								**42**
224	Pasado Road	Arboga Road	NW	**6**								**43**
225	Pasado Road	Arboga Road	SW	**6**								**44**
226	Arboga Road	Grand Avenue	SE	**3**					1			**45**
227	Arboga Road	Grand Avenue	SW	**3**					1			**46**
228	5585 Arboga Road	----	SW	**3**								**47**
229	5594 Arboga Road	----	NW	**3**								**48**
230	Arboga Road	Pasado Road	NW	**3**								**49**
231	Arboga Road	Pasado Road	NE	**3**								**50**
232	Edgewater	Rupert	NE	**6**								**51**
233	Edgewater	Oakwood	NE	**6**	1				1			**52**
234	Edgewater	Riverbank	SW	**6**								**53**
235	Erle	Ravine Ct. Pedestrian Access	NW	**6**	1							**54**
236	Arboga Road	Jay	NW	**3**								**55**
237	Arboga Road	Jay	SE	**3**								**56**
238	Arboga Road	Feather River Blvd.	SE	**3**								**57**
239	Arboga Road	Feather River Blvd.	SW	**3**								**58**
240	Chestnut Road	Catalpa Street	SW	**3**								**59**
241	Chestnut Road	Catalpa Street	NE	**3**								**60**
242	Chestnut Road	2nd Avenue	SW	**3**								**61**
243	Chestnut Road	2nd Avenue	NE	**3**								**62**

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244	Chestnut Road	Olivehurst Avenue	SW	**3**	1				1			**63**
245	Chestnut Road	Olivehurst Avenue	NE	**3**	1				1			**64**
246	Olivehurst Avenue*	6th Avenue	SE	**3**			1					**65**
247	Olivehurst Avenue	6th Avenue**	SW	**3**	1				1		1	**66**
248	Olivehurst Avenue	7th Avenue	NW	**3**								**67**
249	Olivehurst Avenue	7th Avenue**	NE	**3**	1				1		1	**68**
250	Olivehurst Avenue	9th Avenue	SW	**3**								**69**
251	Olivehurst Avenue	9th Avenue	NE	**3**								**70**
252	Olivehurst Avenue	11th Avenue	NW	**3**								**71**
253	Olivehurst Avenue	11th Avenue	NE	**3**								**72**
254	Olivehurst Avenue	Clarice Avenue	SW	**3**	1							**73**
255	Olivehurst Avenue	14th Avenue	SE	**3**								**74**
256	Olivehurst Avenue	Beverly Avenue	NE	**3**								**75**
257	Olivehurst Avenue	Bellis Court	SW	**3**	1							**76**
258	McGowan Parkway	Ardmore Avenue	SE	**3**	1							**77**
259	McGowan Parkway	Ardmore Avenue	NE	**3**								**78**
260	McGowan Parkway	George Avenue	SE	**3**								**79**
261	McGowan Parkway	George Avenue	NE	**3**								**80**
262	Evelyn Drive	Martel Drive (Johnson Park)	SE	**3**								**81**
~~263~~	~~Larson Street~~	~~McGowan Parkway~~	~~NE~~	~~**3**~~	~~1~~							**82**
264	McGowan Park and Ride**	McGowan & Power Line Rd.	NE	**70**			1			2 (#11,12)	1	**83**
265	Plumas Lake Park & Ride**	Feather River & Challice Creek	NW	**70**			1			2 (#9,10)		**84**
	Total Yuba County Stops		**84**		**16**	**9**	**6**	**5**	**19**	**4**	**8**	
	SACRAMENTO SERVICE											
266	J Street	4th Street	SE	**99/70**								**1**
267	J Street	8th Street	SW	**99/70**								**2**
268	J Street	11th Street	SE	**99/70**								**3**
269	15th Street	K Street	NW	**99/70**								**4**
270	15th Street	N Street	NW	**99/70**								**5**
271	P Street	13th Street	NW	**99/70**								**6**
272	P Street	9th Street	NW	**99/70**								**7**
273	P Street	5th Street	NW	**99/70**								**8**
274	2379 Gateway Oaks			**99**								**9**
	Total Sacramento Stops		**9**		**0**	**0**	**0**	**0**	**0**	**0**		
	FOOTHILL ROUTE											
275	Brownsville (Gold Eagle Market)			**Foothill**								**1**
276	Dobbins/Oregon House Fire Dept.			**Foothill**								**2**
277	Willow Glen Café			**Foothill**								**3**
278	Loma Rica (Gold Eagle Market)			**Foothill**								**4**
	Total Foothill Stops		**4**									
	LIVE OAK ROUTE											
279	Pennington Road	Larkin Road	NW	**Live Oak**								**1**
280	Pennington Road	O Street (Live Oak Park)	NW	**Live Oak**								**2**
281	Date Street	O Street (Senior Village)	SE	**Live Oak**								**3**
	Total Live Oak Stops		**3**									
	WHEATLAND ROUTE											
282	Spruce Avenue	Evergreen Drive	SE	**Wheatland**			1					**1**
283	Highway 65	Third Street	SE	**Wheatland**			1					**2**
284	Main Street	C Street	SE	**Wheatland**			1					**3**
285	Anderson Way	McCurry St. (Wheatland Ranch)	SW	**Wheatland**			1					**4**
286	Donner Trail Manor	121 C Street	SW	**Wheatland**			1					**5**
	Total Wheatland Stops		**5**				**5**					
		Total Bus Stops	**286**		**69**	**12**	**19**	**28**	**47**	**13**	**16**	

*The shelters at these locations have solar panels **These locations have large garbage cans

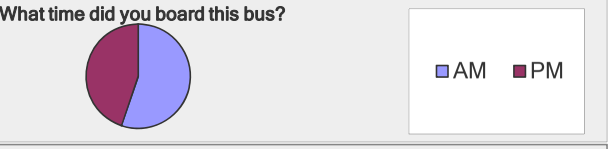
Appendix B

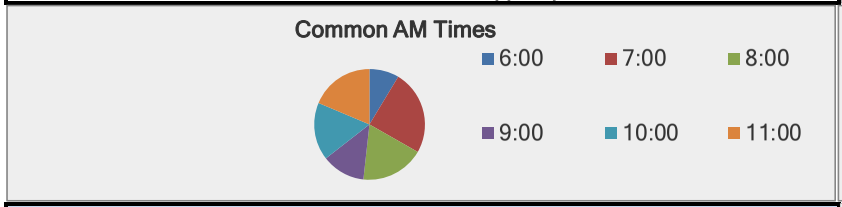
Yuba-Sutter Transit Local Fixed Routes Survey

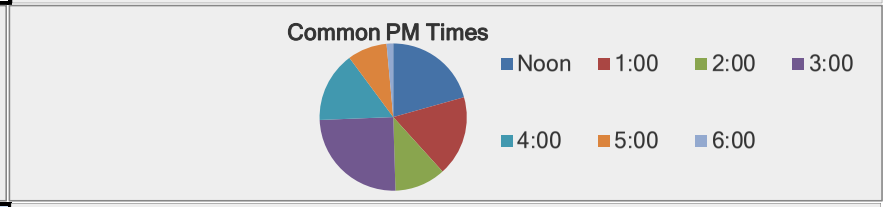
Yuba-Sutter Transit DATA Entry Local Fixed Routes

Q1. What time did you board this bus?

Answer Options	Response Percent	Response Count
AM	55.2%	501
PM	44.8%	407
answered question		**908**
skipped question		**187**

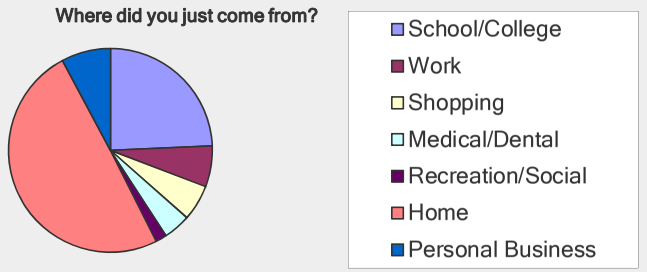






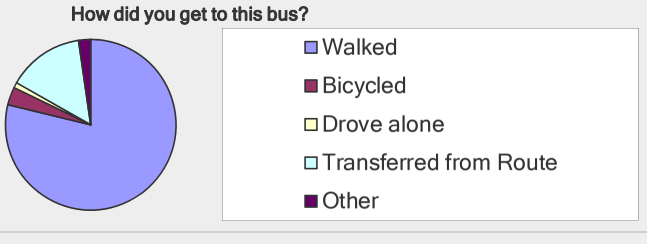
Q2. Where did you just come from?

Answer Options	Response Percent	Response Count
School/College	24.3%	254
Work	6.5%	68
Shopping	5.7%	59
Medical/Dental	4.3%	45
Recreation/Social	1.8%	19
Home	49.6%	518
Personal Business	7.8%	81
Other (please specify)		58
answered question		**1044**
skipped question		**51**



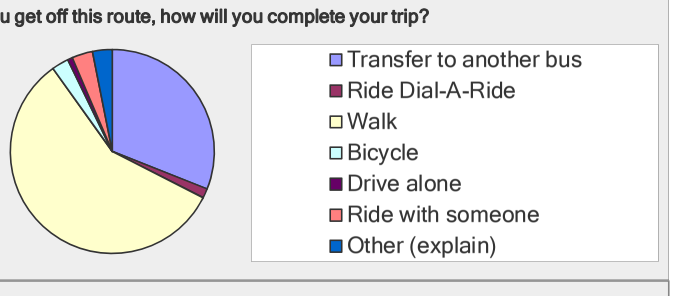
Q3. How did you get to this bus?

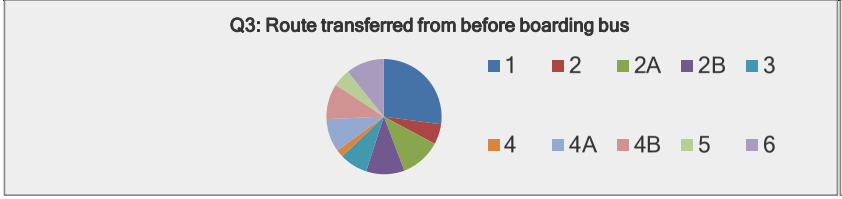
Answer Options	Response Percent	Response Count
Walked	78.8%	853
Bicycled	3.4%	37
Drove alone	1.0%	11
Transferred from Route	14.5%	157
Other	2.3%	25
List route transferred from or "other" here:		176
answered question		**1083**
skipped question		**12**

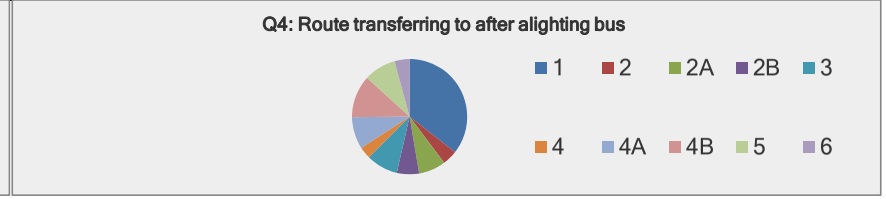


Q4. After you get off this route, how will you complete your trip?

Answer Options	Response Percent	Response Count
Transfer to another bus	31.0%	329
Ride Dial-A-Ride	1.5%	16
Walk	57.6%	612
Bicycle	2.7%	29
Drive alone	0.8%	9
Ride with someone	3.3%	35
Other (explain)	3.1%	33
List route transferring to or "other"		275
answered question		**1063**
skipped question		**32**

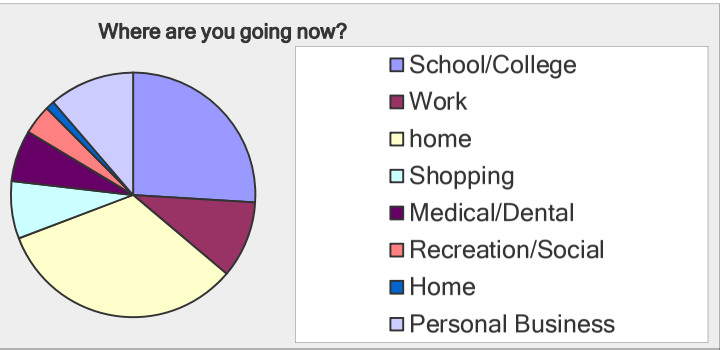




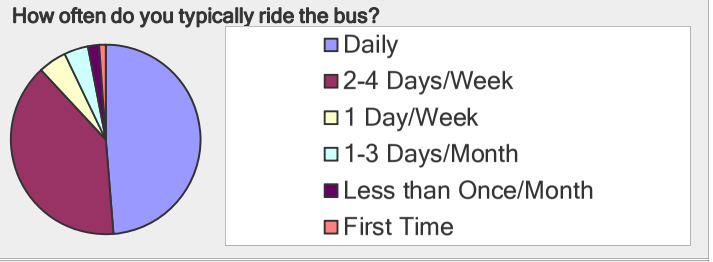


Yuba-Sutter Transit DATA Entry Local Fixed Routes

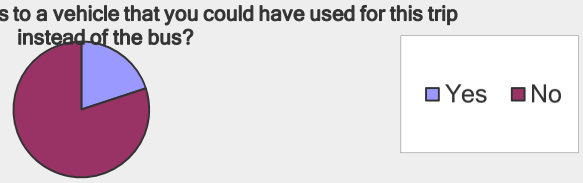
Q5. Where are you going now?		
Answer Options	**Response Percent**	**Response Count**
School/College	26.0%	261
Work	10.2%	102
home	33.1%	332
Shopping	7.6%	76
Medical/Dental	6.8%	68
Recreation/Social	3.9%	39
Home	1.2%	12
Personal Business	11.3%	113
Other (please specify)	9.3%	93
	answered question	**1003**
	skipped question	**92**



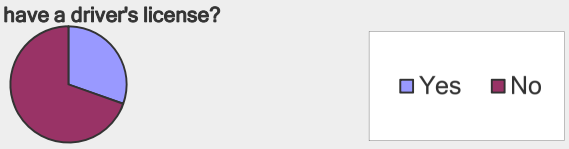
Q6. How often do you typically ride the bus?		
Answer Options	**Response Percent**	**Response Count**
Daily	48.7%	527
2-4 Days/Week	39.4%	426
1 Day/Week	4.8%	52
1-3 Days/Month	4.1%	44
Less than Once/Month	1.9%	21
First Time	1.1%	12
	answered question	**1082**
	skipped question	**13**



Q7. Do you own or have access to a vehicle that you could have used for this trip instead of the bus?		
Answer Options	**Response Percent**	**Response Count**
Yes	20.0%	211
No	80.0%	845
	answered question	**1056**
	skipped question	**39**



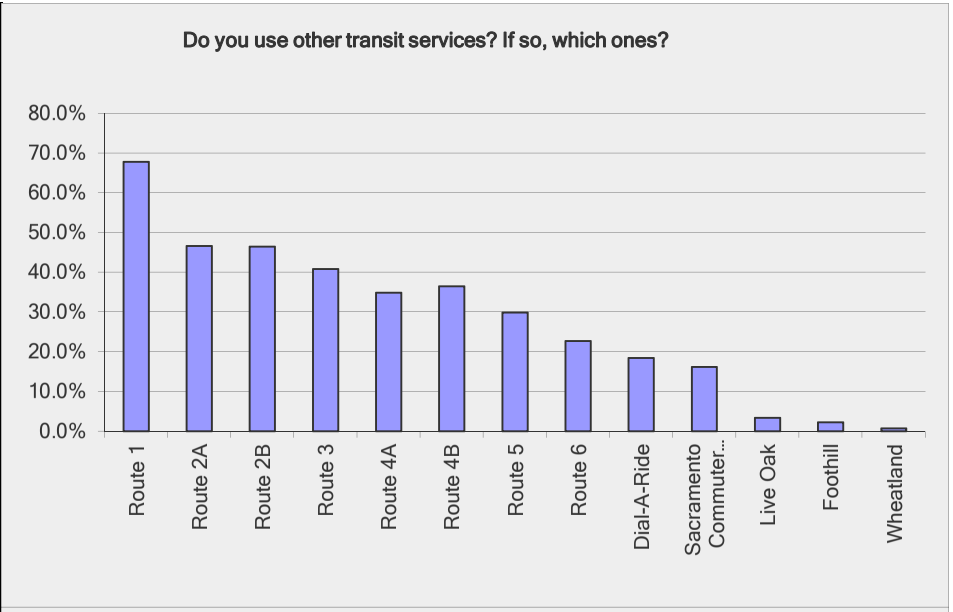
Q8. Do you have a driver's license?		
Answer Options	**Response Percent**	**Response Count**
Yes	30.4%	320
No	69.6%	733
	answered question	**1053**
	skipped question	**42**



Yuba-Sutter Transit DATA Entry Local Fixed Routes

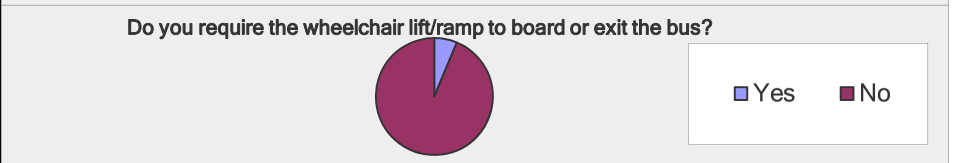
Q9. Do you use other transit services? If so, which ones?

Answer Options	Response Percent	Response Count
Route 1	67.8%	578
Route 2A	46.6%	397
Route 2B	46.5%	396
Route 3	40.8%	348
Route 4A	34.9%	297
Route 4B	36.5%	311
Route 5	29.9%	255
Route 6	22.7%	193
Dial-A-Ride	18.4%	157
Sacramento Commuter Routes / Midday route	16.2%	138
Live Oak	3.4%	29
Foothill	2.2%	19
Wheatland	0.7%	6
Other (please specify)		
Yuba Sutter (3)		
Marysville (1)	2.2%	19
Grass Valley (1)		
Chico (1)		
Roseville (1)		
answered question		**852**
skipped question		**243**



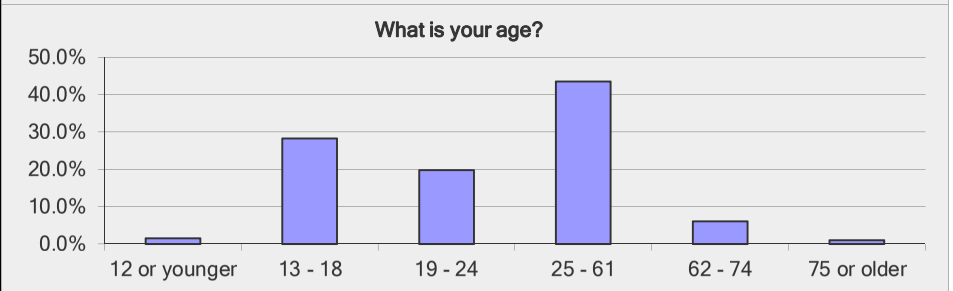
Q10. Do you require the wheelchair lift/ramp to board or exit the bus?

Answer Options	Response Percent	Response Count
Yes	6.3%	62
No	93.7%	925
answered question		**987**
skipped question		**108**



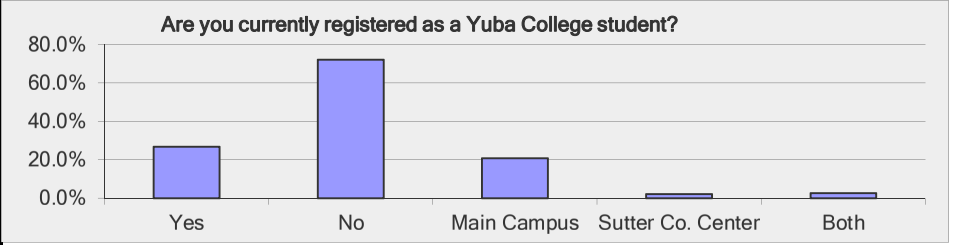
Q11. What is your age?

Answer Options	Response Percent	Response Count
12 or younger	1.5%	15
13 - 18	28.3%	289
19 - 24	19.8%	203
25 - 61	43.6%	446
62 - 74	6.1%	62
75 or older	1.0%	10
Other (please specify)		0
answered question		**1023**
skipped question		**72**



Q12. Are you currently registered as a Yuba College student?

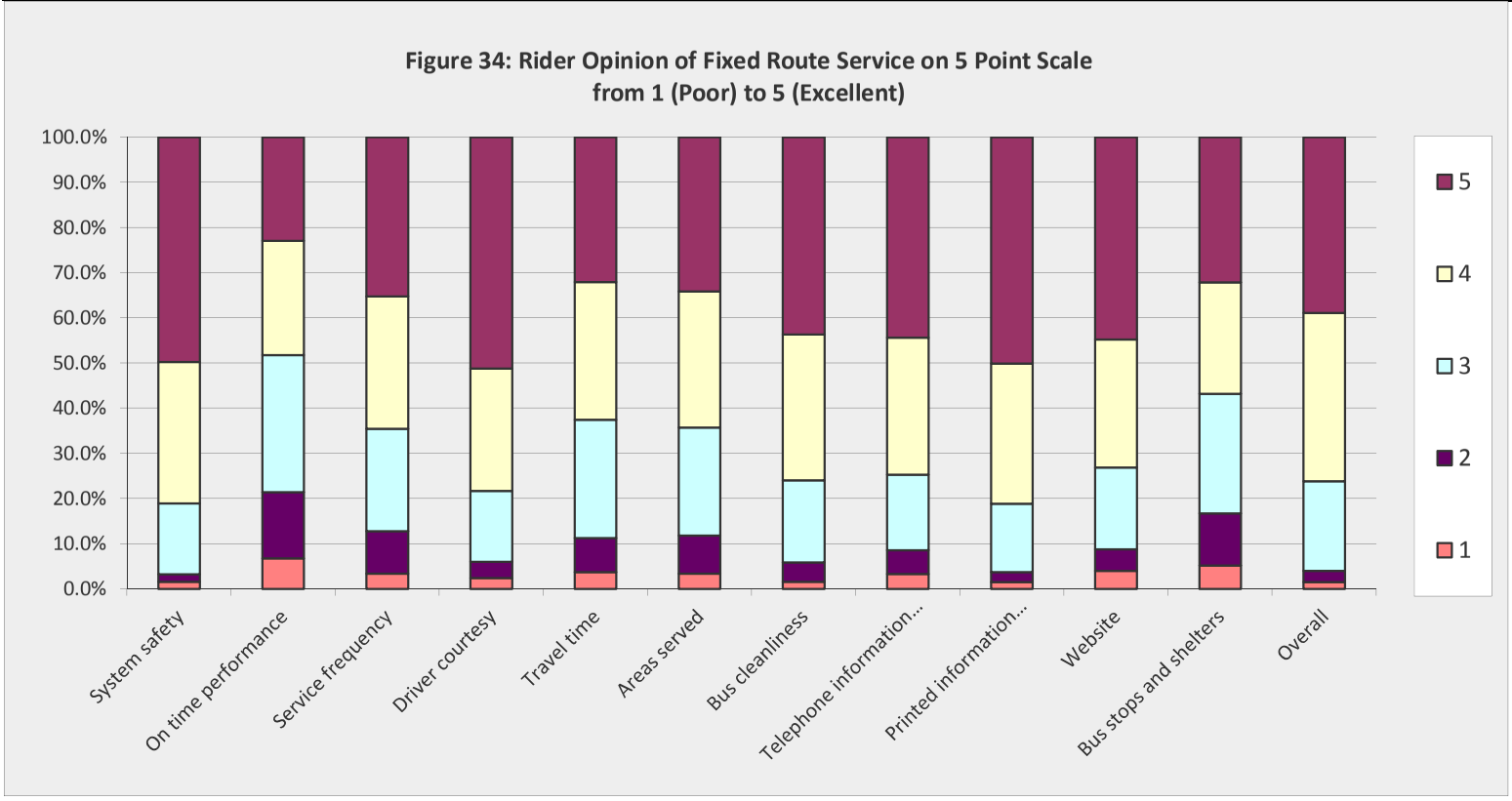
Answer Options	Response Percent	Response Count
Yes	26.8%	270
No	72.2%	729
Main Campus	20.8%	210
Sutter Co. Center	2.2%	22
Both	2.7%	27
answered question		**1009**
skipped question		**86**



Yuba-Sutter Transit DATA Entry Local Fixed Routes

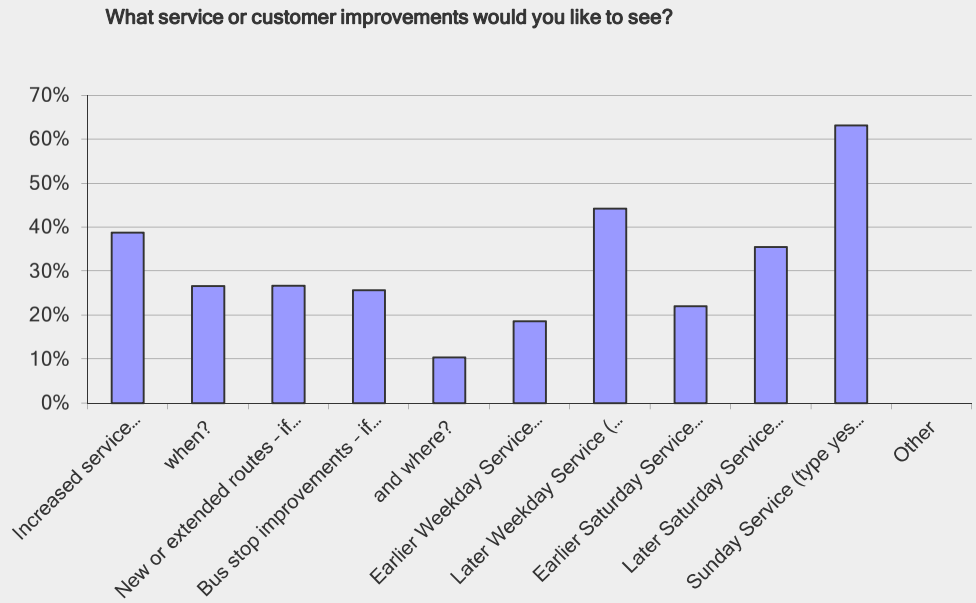
Q13. Please indicate your opinion of the fixed route service from 1 (poor) to 5 (excellent) using the list below (please circle your answer or leave blank if you have no opinion):

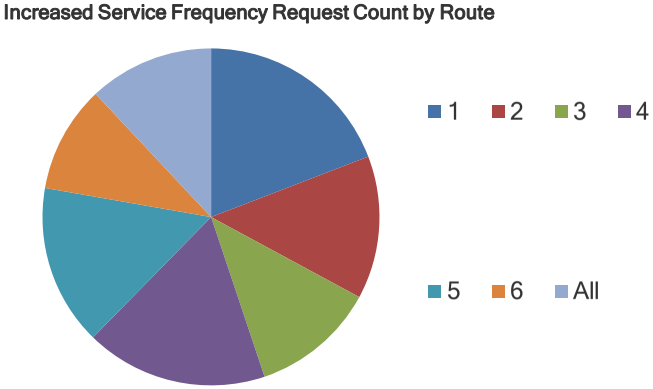
Answer Options	1		2		3		4		5		Response Count
System safety	15	1.6%	16	1.7%	152	15.7%	303	31.3%	481	49.7%	967
On time performance	65	6.7%	142	14.7%	293	30.3%	244	25.3%	222	23.0%	966
Service frequency	32	3.4%	88	9.3%	214	22.7%	276	29.3%	332	35.2%	942
Driver courtesy	23	2.4%	34	3.6%	150	15.7%	259	27.1%	490	51.3%	956
Travel time	35	3.7%	72	7.6%	249	26.2%	289	30.4%	305	32.1%	950
Areas served	32	3.4%	79	8.4%	226	24.0%	284	30.1%	322	34.1%	943
Bus cleanliness	15	1.6%	41	4.3%	173	18.2%	307	32.2%	416	43.7%	952
Telephone information services	30	3.3%	47	5.2%	151	16.7%	274	30.3%	401	44.4%	903
Printed information materials	14	1.5%	20	2.2%	138	15.1%	284	31.1%	458	50.1%	914
Website	33	4.0%	40	4.8%	151	18.1%	236	28.3%	373	44.8%	833
Bus stops and shelters	48	5.1%	108	11.6%	247	26.5%	230	24.7%	300	32.2%	933
Overall	14	1.5%	23	2.5%	183	19.8%	344	37.3%	359	38.9%	923
									answered question		**976**
									skipped question		**119**



Yuba-Sutter Transit DATA Entry Local Fixed Routes

Q14. What service or customer improvements would you like to see?		
Answer Options	**Response Percent**	**Response Count**
Increased service frequency – if so, what route(s)?	38.8%	322
when?	26.6%	221
New or extended routes – if so, where?	26.7%	222
Bus stop improvements – if so, what	25.7%	213
and where?	10.4%	86
Earlier Weekday Service (type yes if marked)	18.6%	154
Later Weekday Service (type yes if marked)	44.2%	367
Earlier Saturday Service (type yes if marked)	22.0%	183
Later Saturday Service (type yes if marked)	35.5%	295
Sunday Service (type yes if marked)	63.1%	524
Other		41
	answered question	**830**
	skipped question	**265**





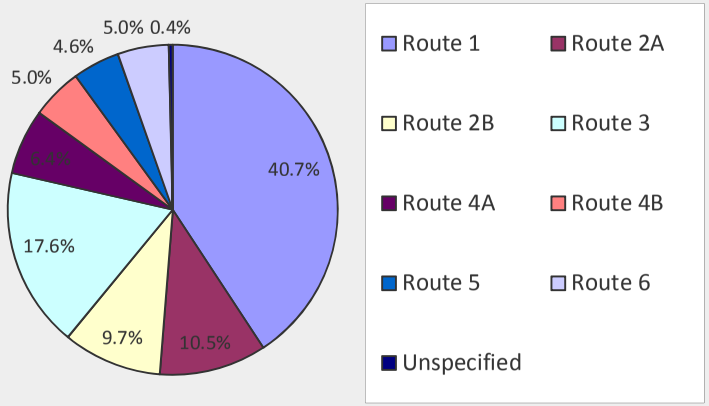
Common Requests in Customer Improvements

Increased Service Frequency	New or Extended Routes	Bus Stop Improvements
Every 15-30 minutes	Extend Route 1 into evening	More shade/shelter
Afternoon service	Oroville and Chico	More benches
Everyday service	Sundays	Cleaner
Weekend service	Olivehurst	No smoking
	Plumas Lake	
	Yuba College Sutter Campus	

Yuba-Sutter Transit DATA Entry Local Fixed Routes

Q16. What route are you on?		
Answer Options	**Response Percent**	**Response Count**
Route 1	40.7%	371
Route 2A	10.5%	96
Route 2B	9.7%	88
Route 3	17.6%	160
Route 4A	6.4%	58
Route 4B	5.0%	46
Route 5	4.6%	42
Route 6	5.0%	46
Unspecified	0.4%	4
	answered question	**911**
	skipped question	**184**

Figure 33: What route are you on?



Q15. Other comments?	
answered question	253
skipped question	842

Text Responses

Overall good service. :)
Great job! Overall great experience.
Thank you for the transportation everyday! :)
Karen is AMAZING! Having to strap down all the carts is ridiculous. They never had to do it before and it never caused a problem. Lose that rule! It takes up unnecessary seating and makes the drivers late.
Karen is one of the best drivers you have had in years! I alos think strapping down shopping carts is a waste of time and unfair to others.
Keep up the good work
Thank You :)
Overall good service :)
Overall I think the bus service is pretty decent for the size of Yuba/Sutter area.
Manuel- 1 bus driver is the best.
Keep up the work.
Overall good job
I love all services. :)
Stay awsome
Thank you for transportation :)
Great Service.
The bus service is fine, so keep it up.
Thank you for your hard work.
It would be nice if it ran on Sundays. Most of the drivers are so friendly. Theres a few that could use improvement on their friendlyness.
I would like the bus to run on Sunday.
Thanks for the opportunity to give feedback. Biggest desire is Sunday services (for Church) and evening (for concerts/plays/cultural events).
You guys are always late.
Need to get to school on time.
Dial a Ride service not just for disabled.
Outer routes could use shade.
Make a route through I-65 to Roseville and Sacramento
Bus stop between Linda and Hile
Route 6 has many handicap customers, always runs late. Karen + Sandy are great.
Be on time.
Tying down shopping carts seems like a waste of time.
Improve stops for wheelchairs.
I wish the Rt1 still made the Hammonton loop instead of Rt6.
Music
Recommend changing Rt 5 to 15 after Hr, add a second run. I get the feeling that management does not care about the riders
The #5 bus is slow.
Seriously, there needs to be more frequency with the 4A & 4B routes.
4A leaves before 2 gets to Alturas and Shasta.
Driver leaves before I sit down, not safe. She misses stops when people pull the cord.
I have been stranded many times.
Improve courtesy to our special needs clients
Whatever helps us to better our lives. 9:30 a better time, will help us out a lot.
Some of us work all week and would like the bus to run all weekend.
Bus stop near school (Ella in Olivehurst) needs a shelter. Bus stop by Walmart in Linda needs to be cleaned.
Arrive on time.
Better places to buy (monthly) tickets.
Bus crowded with standing-can be dangerous.
No Smoking at bus stops please. I'm allergic
I have seen unsafe verbal and physical confrontations on the bus and at bus stops. There was no intervention or action taken in the interest of other passengers. I believe safetey procedures or traing should be enacted for the reaction to inappropriate behaivor.
In 2010 my daughter was kicked from bus by a passenger. Kicked her from behind! Driver did nothing.
My husband hurt his leg bad. They would not put the lift down for him.
Just be on time.
Busses should run later from the college
I really like riding the bus, it helps a lot.
Some people have to work Sunday but don't have a ride.
I enjoy taking the bus.
Very nice-buses+people.
The system needs to run longer si the people who work can use it.
On-time performance has been an issue but may be attributed to traffic/high peak times.
More frequent and longer day and night routes. Also Sundays and longer weekend hours.
Have a bus that goes to the college in Yuba City.
Good job!
13b. Rte 6 is always 10-20 mins late EVERY SINGLE DAY. 13d. Rude drivers(some)not all. A few bad apples. 13g. Buses need to be cleaned more often.
Driver scares people, displays odd behavior.
Same day Dial a Ride pickup.
The bus should run later
Some of your drivers are rude but most are very polite and happy to do their job.
SUNDAY, PLEASE! :)
Needs to run on weekends and later on weekdays.
Route 5 counter-clockwise.
Better bus stop shelters.
No pets policy should be enforced. Drivers do not make those with foul language shut up.
I think all service should run until 8PM weekdays (6PM weekends).
I like the bus
Strollers shouldn't have to be folded up if occupied by a child only. Strollers should recieve the same treatment as wheel chairs if occupied by a child only. Food carts/food strollers should be folded up.
Thank you.
More polite/helpful bus drivers.
Bus drivers not friendly. I take bus for work with my clients in wheelchairs. Drivers get mad if we take too long to get on. Most are mean when you ask questions.
The 1 east bus to Yuba College is almost always 10-25 minutes late in the afternoons.
You are doing alright.
More professionalism
I would say thank you.
Bus keeps on moving when someone tries to catch up.
The bus is a big help:)
All the above!
It's all good.

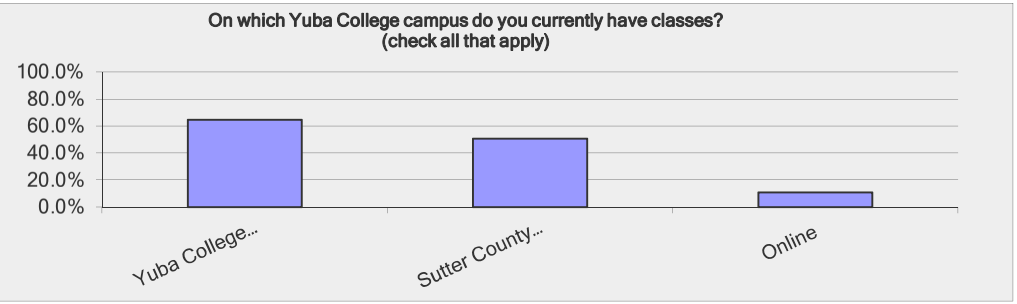
Text Responses (continued)
A route 2 and 1 Transfer Point at Alturas and Shasta. Also, a bus that runs the opposite way of the 5 bus.
You all are great
Run busses until 8:30pm
Good driver you guys have
Newsletter is almost always late.
I am a mother with 4 children under 6 and I carry a carseat and stroller and the bus driver never pulls the bus over? for me to get on or off route.
Afternoon busses run a little off time.
Look at Reno bus system- it's slick. Stop by grocery stores.
Transfers don't work when busses arent on time- 4A leaves before 2A shows up
The bus are run right every day.
Save gas good for the environment.
Some people use the bus for work so the busses should be on time.
#13d depends on the driver. Better timing overall.
Drivers need to enforce the rules of no drinks and food. The busses have a lot of spilled soda all over the floors.
Drivers need to wait for elderly/all people to walk to stop. They see someone is coming but keep on going.
Sunday Service!
There are drivers who are mean to disabled people. Need class on helping people and patients.
Some drivers act like they hate their job.
Yo gasto $3.00 Diarios para llever a mi hija a la escuela, que tengo que hacer para que gaste menos. Agarro siempre la misma ruta (De la Shasta a Wilbur)
todo bien
At the 2 main transfer stops, busses should not pull away while other busses are arriving. Sometimes waiting 1 minute so passengers can get off the bus will help. Too many I've had to wait 1/2 hour in heat.
me gustariag ubiese transporte sabado y Domingos tarde para lose qi no sabemos manejar y lonesesitamos
Service everything until night time (9pm)
Transfers between 2A + 2B
Bus be on time, been late to work cause of late bus.
Need more drivers to serve more hours.
God Bless
Sunday bus for Church
Most people need the bus after work and you've already stopped running.
buen servicio
Thanks for helping us to get around. Everybody have a great day!
More service on Saturday
I've always been very happy w/ the bus service. Great Drivers. Only problem once in a while is the busses get a little crowded.
Some drivers are rude; should shave their neck!!
Drivers are very kind and helpful.
Dial-a-ride for seniors, disabled, veterans. Get enough reservations on Fri&Sat. Run hours on Sun. Charter van to Chico.
I work at Rideout Hospital, getting a ride earlier in the morning would be nice.
Need a service between Yuba College campuses.
For those of us that work its hard with such early service in evenings espicially if you work weekends.
Grateful for minor pass for $5.
Would like to see bus service to Sutter Co Center.
I get out of APHS at 11:10 and the bus gets there around 11am, would appreciate if you could work around school schedule.
Busses should run until 8 or 9 pm
Thank you :)
Church and community events should be free to and from.
The only thing I can complain about is how long the routes take.
Transfers
Mainly I really appreciate all you do.
The busses are up to 20 minutes late (Routes 1 and 2) in the afternoon
Later bus service 7 days a week
More wheelchair accessable stops on Hammonton Rd toward Walmart
I like the bus.
I think there should be a new route going from Yuba College to 11th+Ramirez, Gvt Center, Sutter Campus and back.
Clean bus stops and more shelters.
Clean bus stops.
Extend hours
Busses don't run late enough
Busses don't run late enough
Need longer hours. Until 7:30 or 8PM
Sometimes the bus comes late.
Enjoy riding the bus but would love to ride after night classes.
Sometimes I am late to my classes because the bus does not come on time. I ride the bus from Sams Club to Yuba College. I am in the bus for an hour. So if the bus is 10 minutes late, I am 10 minutes late to my class.
Extend hourly services (evenings)
Sundays would be cool
Get rid of the A-B system or allow transfers between them espicially 4A-4B. Some people just want a ride over the bridges.
Bus needs to run on Sundays. Also busses need to be cleaned.
Driver often have unique personalities and make riding the bus fun!
Better on time performance
Later busses and Sundays
Stop being late all the #@%?! time.
Need shelter at Hammonton+ Farrel also cement pads toward Walmart for wheelchairs.
que haya cervicio el Domingo porque habemos personas q'no sabemos manejar y necesitmos salir a alguna parte y nos toca caminar distancias largas (grandes)
Shelters need to be cleaned real bad.
Longer Hours. Sundays.
Sunday bus service
Better/more seating.
Everyone has been helpful. Bus drivers have been great. Foothill Route!
Change departure time for Rt 5
If busses could run later service daily. Clean bus stops daily.
Satisfied, meets my needs.
Transfers for all busses even the one you got off of. Pet access for dogs. Driver Daniel has a bad attitude.
Busses shouldn't stop until 9PM.
Need more frequent access to Foothill!
Driver is an awful driver!
Later Busses. Sunday Service
Stinks on the bus in the mornings.
It's hard for students who have late classes. We are walking long distances, some of have physical disabilitys, and it is a danger to women walking down dark roads. Thank you for your time.
Put a soda machine on it

Text Responses (continued)
SUNDAY SERVICE
Soda machine and wifi.
Bus needs to get to stops on time.
At times Rt 1 crowded with standing. Can be dangerous.
I know a lot of people who live on Griffith who ride the bus.
Thanks for all your work, and your time. :)
We need more routes and later service. Some of us work later than 6PM.
A route that goes to the Sutter campus would have been helpful last summer.
Sunday would help me.
The busses are improving. New busses are nice. Glad you want to do even better.
Foothill, Live Oak, and Wheatland needs to be daily.
We need the bus to get home or we can't work.
Service later into the evening and SUNDAY SERVICE!
Glad for $5 senior packs
Some drivers are rude. Rarely on time especially after about 2pm.
Need a Yuba College Sutter Campus stop or a direct bus between the two campuses at say noon. Also some of the drivers need to just drive the bus.
Longer hours for students to ride the bus.
Some of the bus stops are very dirty. Overall good service, glad to see it get better and better.
Longer Hours
Most drivers are awesome. Donny Thomson Route is the best.
No limit on transfers. No time limit.
Free Wifi like in the bigger cities. Last Mcgowen should be across from apartments like it used to be. No time limit on transfers...2 hours is not enough time.
Great service, wish it was longer and more days. Great attitudes.
Thank you for 5 star service
Great Service.
This man should not be able to hang out.
More on time when waiting forever
Keep up the good work.
Tried calling the other day, no one ever picked up. Maybe another operator?
You guys are awesome
N/A
A bus route that goes from the college all the way back up Arboga/Plumas and back would be perfect.
More frequent stops. No smoking
extended hours
Improve customer relations
:)
We need to extend the time they run
Overall I'm satisfied.
One bus in Olivehurst in not enough
Need service to Colusa/Rocklin
Busses need to run every 15 mins and later to 8pm and have dial-a-ride until 10pm. More room for wheelchairs and more space for chairs
To make transit monthly meeting
Bus drivers notifying other busses in order for us to board them
Take powerline 3 to Megowan
SEE SURVEY SHEET
Moat driver are very nice, but 2B a man driver is very rude to elders, and foreign customers.
Also if a person is in a wheelchair and wants to board, but both wheelchair securement locations are taken by persons that do not have wheelchairs, and there are seats available, those persons should move to make room for the wheelchair. This should be a RULE. If the person has a large walker, or the stroller cannot be stowed w/o blocking the aisle, then s/he may remain. But if s/he can walk, s/he should move.
Routes 1 + 2A are frequently like 10-25 mins late in the afternoon
Everyone we know that takes a bus would like to have it run on Sunday.
Should run later
You guys do a good job.
Sometimes the bus arrives on time, but leaves to quikly.
Service is always excellent otherwise
Water vending @ time stops. First aid kits.
When hot have drivers check shaded areas.
More bus hours would really help some people be able to get more hours at work and not be so limited.
I noticed the buses tend to run late.
Customer service / bad attitude
None
me gusta mucho el Servicio y el trato alagente
Que es busque va para Sacramento lleque hasta el College
Be on time more often.
No
Have a nice day.
Hopefully the bus can run on Sundays for half days.
let us have own drinks
bus needs to be on time
bus routes should run until 8
they need to run longer
run later - until about 8 pm
thanks for the ride
its good to have the bus, thank you
needs to be on time!
overall its good
free wifi on bus
good job on employee diversity :)
great job
timing

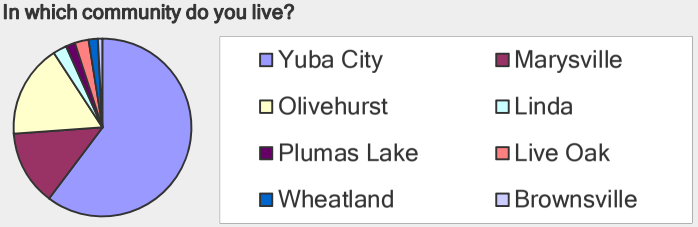
Appendix C
Yuba College Transit Survey

Yuba College Transit Survey

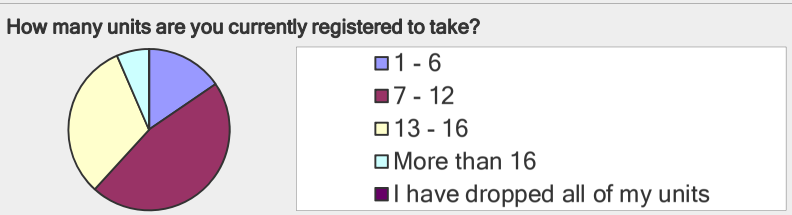
Q1. On which Yuba College campus do you currently have classes? (check all that apply)		
Answer Options	**Response**	**Response**
Yuba College Campus (N. Beale Road, Marysville)	64.8%	83
Sutter County Center (E Onstott Road, Yuba City)	50.8%	65
Online	10.9%	14
Other locations		
Woodland		3
I work at YC Campus		
answered question		**128**
skipped question		**2**



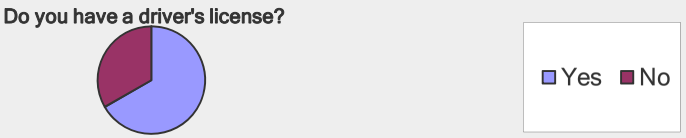
Q2. In which community do you live?		
Answer Options	**Response**	**Response**
Yuba City	60.2%	71
Marysville	13.6%	16
Olivehurst	16.9%	20
Linda	2.5%	3
Plumas Lake	1.7%	2
Live Oak	2.5%	3
Wheatland	1.7%	2
Brownsville	0.8%	1
answered question		**118**
skipped question		**12**



Q3. How many units are you currently registered to take?		
Answer Options	**Response**	**Response**
1 - 6	15.4%	19
7 - 12	46.3%	57
13 - 16	31.7%	39
More than 16	6.5%	8
I have dropped all of my units	0.0%	0
answered question		**123**
skipped question		**7**



Q4. Do you have a driver's license?		
Answer Options	**Response**	**Response**
Yes	66.7%	86
No	33.3%	43
answered question		**129**
skipped question		**1**

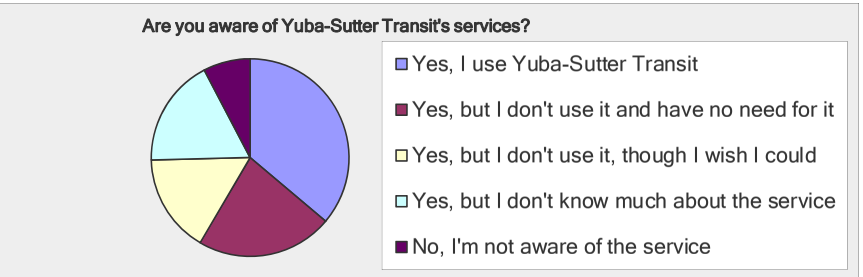


Q5. Do you typically have a vehicle available to drive?		
Answer Options	**Response**	**Response**
Yes	56.6%	73
No	43.4%	56
answered question		**129**
skipped question		**1**

Yuba College Transit Survey

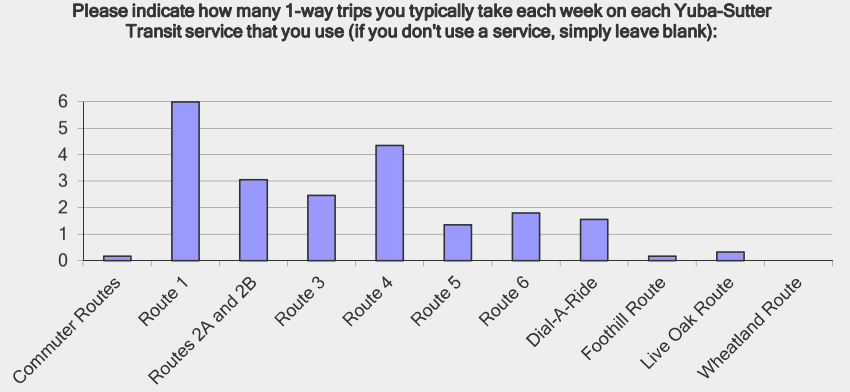
Q6. Are you aware of Yuba-Sutter Transit's services?

Answer Options	Response Percent	Response Count
Yes, I use Yuba-Sutter Transit	36.2%	47
Yes, but I don't use it and have no need for it	22.3%	29
Yes, but I don't use it, though I wish I could	16.2%	21
Yes, but I don't know much about the service	17.7%	23
No, I'm not aware of the service	7.7%	10
Other (please specify) It doesn't go to the Sutter or Yuba Campus		2
answered question		**132**
skipped question		**0**



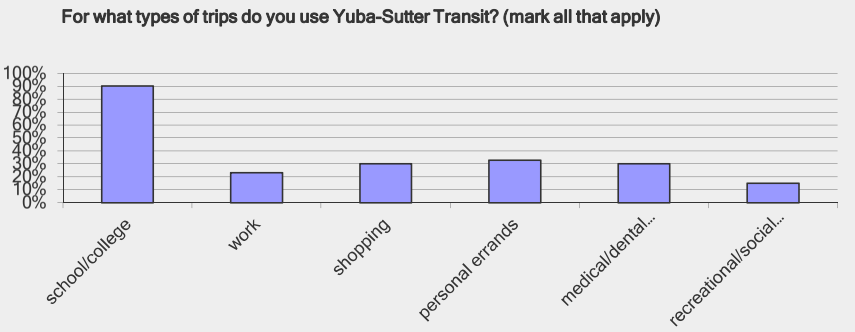
Q7. Please indicate how many 1-way trips you typically take each week on each Yuba-Sutter Transit service that you use (if you don't use a service, simply leave blank):

Answer Options	Response Average	Response Total	Response Count
Commuter Routes	.17	1	6
Route 1	6.00	198	33
Routes 2A and 2B	3.06	55	18
Route 3	2.47	42	17
Route 4	4.35	74	17
Route 5	1.36	15	11
Route 6	1.80	18	10
Dial-A-Ride	1.56	14	9
Foothill Route	.17	1	6
Live Oak Route	.33	2	6
Wheatland Route	.00	0	5
answered question			**43**
skipped question			**87**



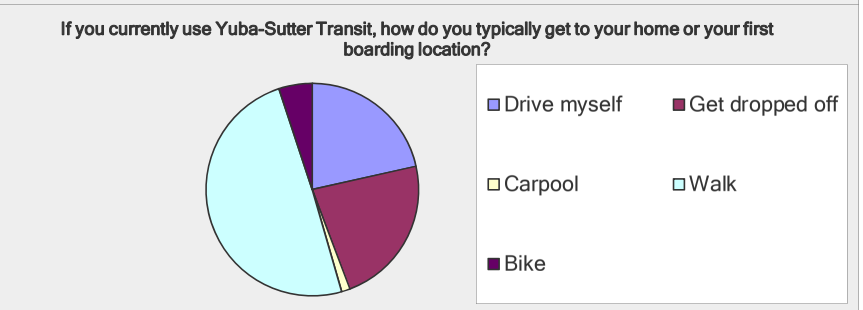
Q8. For what types of trips do you use Yuba-Sutter Transit? (mark all that apply)

Answer Options	Answer Options	Response Percent	Response Count
school/college		90.4%	66
work		23.3%	17
shopping		30.1%	22
personal errands		32.9%	24
medical/dental appointments		30.1%	22
recreational/social visits		15.1%	11
Other (please specify) I live in Butte County Would use if it went to Sutter Campus Emergency transportation			10
answered question	*answered question*	*73*	**73**
skipped question	*skipped question*	*57*	**57**



Q9. If you currently use Yuba-Sutter Transit, how do you typically get to your home or your first boarding location?

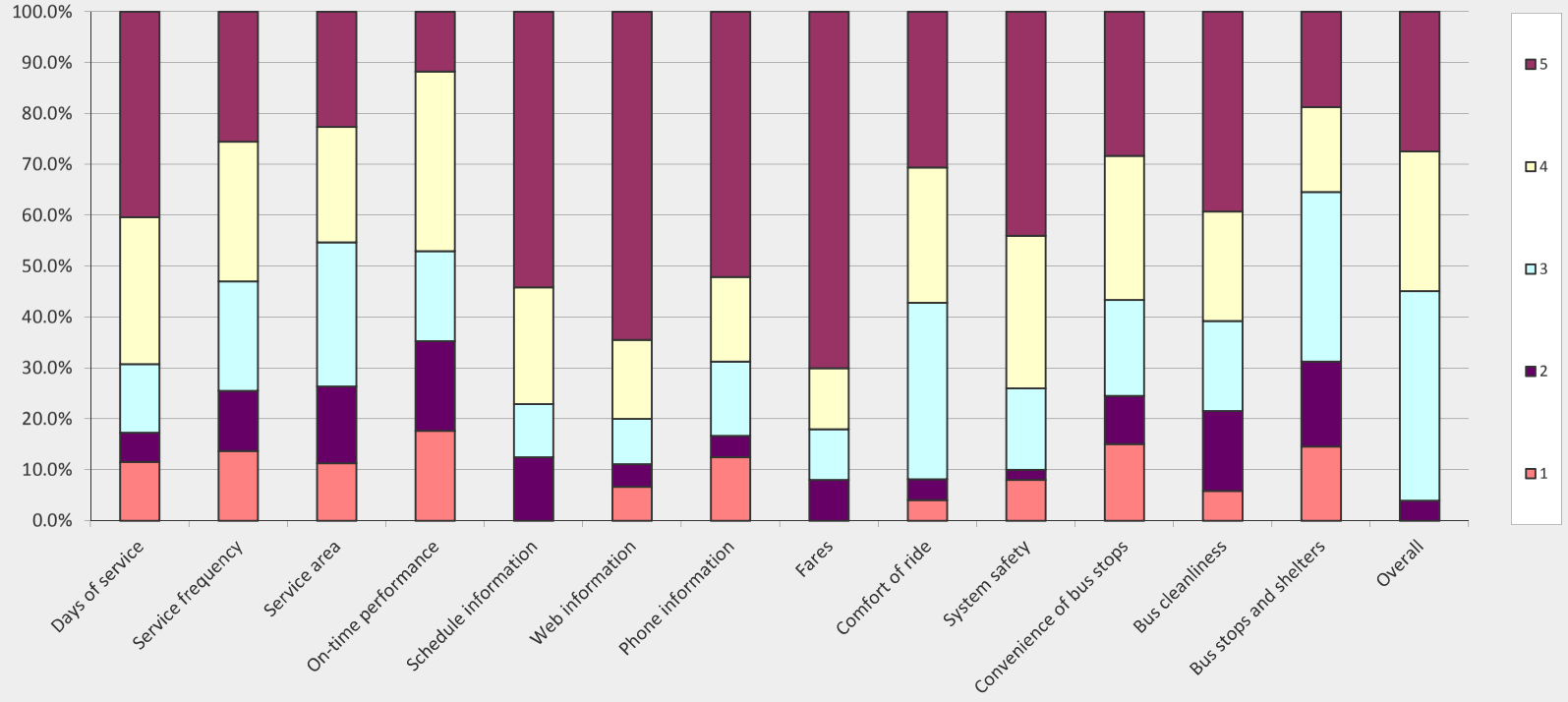
Answer Options	Answer Options	Response Percent	Response Count
Drive myself	Drive myself	21.5%	17
Get dropped off	Get dropped off	22.8%	18
Carpool	Carpool	1.3%	1
Walk	Walk	49.4%	39
Bike	Bike	5.1%	4
Other (please specify) walk 45-60 minutes			3
answered question	*answered question*	*79*	**79**
skipped question	*skipped question*	*51*	**51**



Yuba College Transit Survey

Q10. If you currently use Yuba-Sutter Transit, please rank the following service characteristics on a scale of 1 (poor) to 5 (excellent):											
Answer Options	**1**		**2**		**3**		**4**		**5**		**Response Count**
Days of service	6	11.5%	3	5.8%	7	13.5%	15	28.8%	21	40.4%	52
Service frequency	7	13.7%	6	11.8%	11	21.6%	14	27.5%	13	25.5%	51
Service area	6	11.3%	8	15.1%	15	28.3%	12	22.6%	12	22.6%	53
On-time performance	9	17.6%	9	17.6%	9	17.6%	18	35.3%	6	11.8%	51
Schedule information	0	0.0%	6	12.5%	5	10.4%	11	22.9%	26	54.2%	48
Web information	3	6.7%	2	4.4%	4	8.9%	7	15.6%	29	64.4%	45
Phone information	6	12.5%	2	4.2%	7	14.6%	8	16.7%	25	52.1%	48
Fares	0	0.0%	4	8.0%	5	10.0%	6	12.0%	35	70.0%	50
Comfort of ride	2	4.1%	2	4.1%	17	34.7%	13	26.5%	15	30.6%	49
System safety	4	8.0%	1	2.0%	8	16.0%	15	30.0%	22	44.0%	50
Convenience of bus stops	8	15.1%	5	9.4%	10	18.9%	15	28.3%	15	28.3%	53
Bus cleanliness	3	5.9%	8	15.7%	9	17.6%	11	21.6%	20	39.2%	51
Bus stops and shelters	7	14.6%	8	16.7%	16	33.3%	8	16.7%	9	18.8%	48
Overall	0	0.0%	2	3.9%	21	41.2%	14	27.5%	14	27.5%	51
									answered question		**72**
									skipped question		**58**

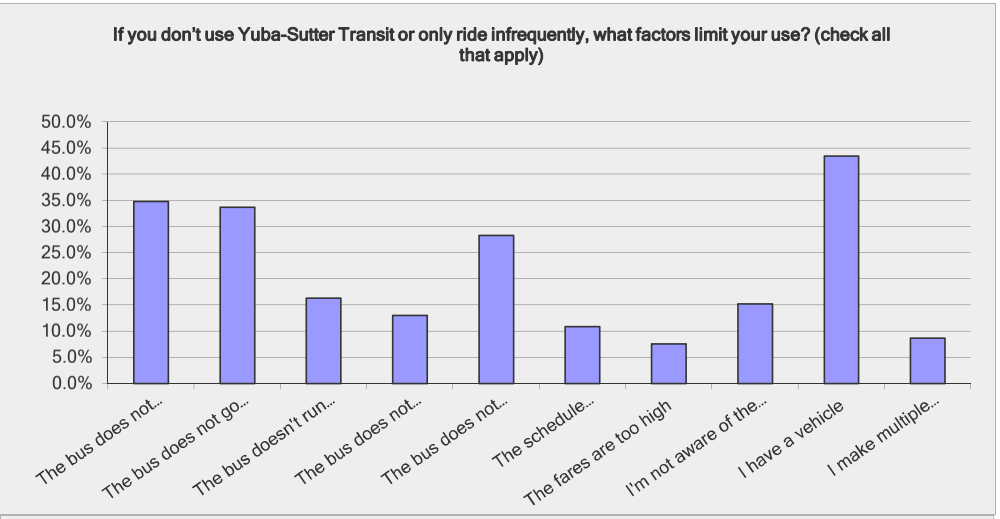
Figure 36: Rider Opinion of Yuba-Sutter Transit on 5 Point Scale from 1 (poor) to 5 (excellent)



Yuba College Transit Survey

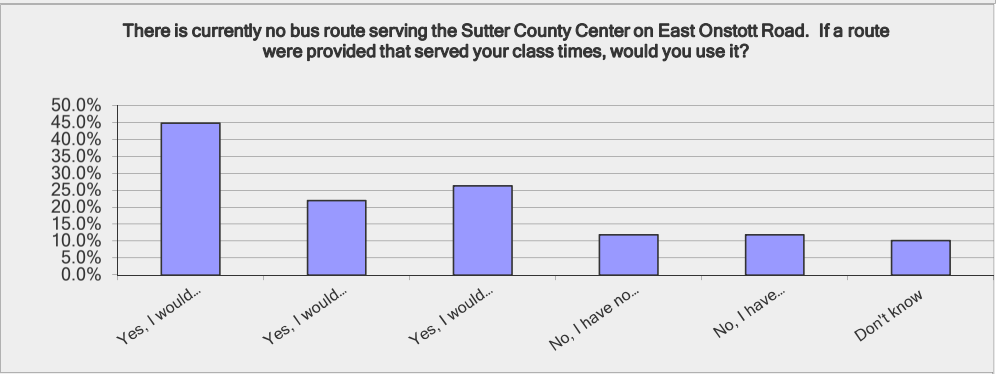
Q11. If you don't use Yuba-Sutter Transit or only ride infrequently, what factors limit your use? (check all that apply)

Answer Options	Response Percent	Response Count
The bus does not stop near my home	34.8%	32
The bus does not go where I need to go in Yuba City / Marysville	33.7%	31
The bus doesn't run on the days I want to travel	16.3%	15
The bus does not run early enough	13.0%	12
The bus does not run late enough	28.3%	26
The schedule requires too long a stay in Yuba City / Marysville	10.9%	10
The fares are too high	7.6%	7
I'm not aware of the bus services	15.2%	14
I have a vehicle	43.5%	40
I make multiple stops along the way	8.7%	8
Other (please specify)		
Not enough Foothill buses		
Buses don't run on East Onstott Rd		6
Buses don't run late enough from the college		
YST is always late		
answered question		**92**
skipped question		**38**



Q12. There is currently no bus route serving the Sutter County Center on East Onstott Road. If a route were provided that served your class times, would you use it?

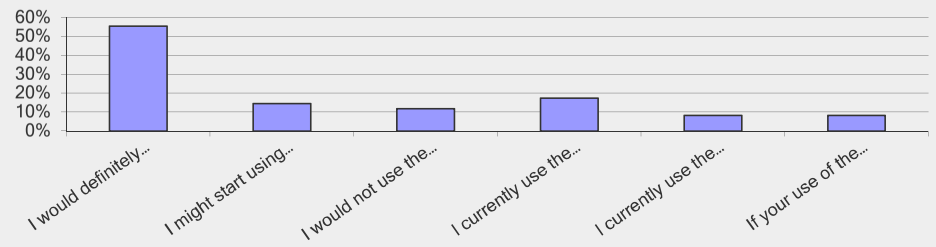
Answer Options	Response Percent	Response Count
Yes, I would use it to travel to and from my home	44.9%	53
Yes, I would use it to travel to and from the main Yuba College Campus	22.0%	26
Yes, I would use it to travel both to/from home and to/from the main Yuba College Campus	26.3%	31
No, I have no classes at the Sutter County Center	11.9%	14
No, I have classes at the Sutter County Center but would not use the transit service	11.9%	14
Don't know	10.2%	12
Comment		7
answered question		**118**
skipped question		**12**



Yuba College Transit Survey

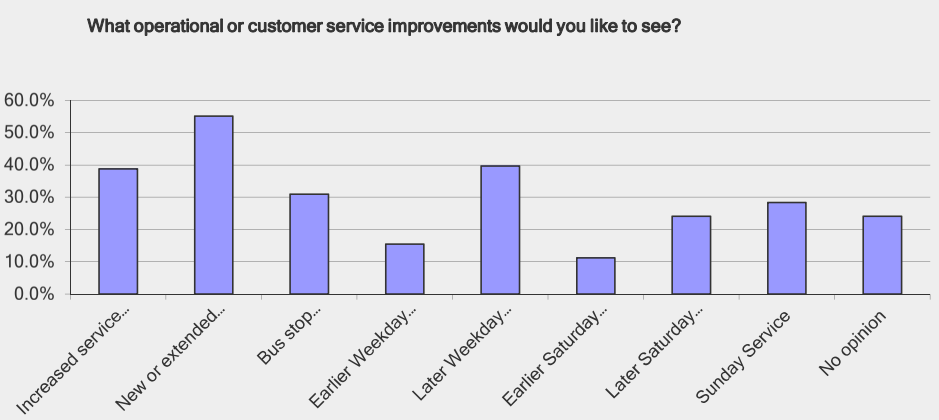
Q13. Fares are currently required to board Yuba-Sutter Transit buses. If Yuba College students could board for free, how would it affect your use of the transit service?

Answer Options	Response Percent	Response Count
I would definitely start using the transit service	55.5%	61
I might start using the transit service	14.5%	16
I would not use the transit service	11.8%	13
I currently use the transit service, but would use it more	17.3%	19
I currently use the transit service and would ride it about the same amount	8.2%	9
If your use of the transit service would increase, please indicate what routes or services you would use	8.2%	9
	answered question	**110**
	skipped question	**20**



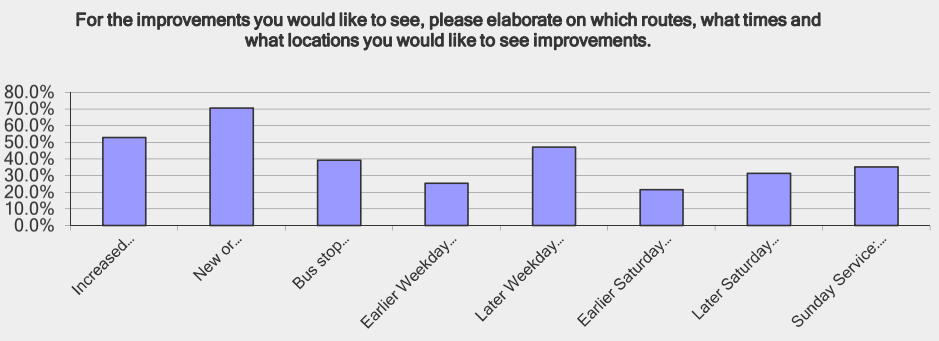
Q14. What operational or customer service improvements would you like to see?

Answer Options	Response Percent	Response Count
Increased service frequency	38.8%	45
New or extended routes	55.2%	64
Bus stop improvements	31.0%	36
Earlier Weekday Service	15.5%	18
Later Weekday Service	39.7%	46
Earlier Saturday Service	11.2%	13
Later Saturday Service	24.1%	28
Sunday Service	28.4%	33
No opinion	24.1%	28
Other (please specify)		
Sunday service Emergency service Later service, after 6PM Route to Sutter campus		7
	answered question	**116**
	skipped question	**14**



Q15. For the improvements you would like to see, please elaborate on which routes, what times and what locations you would like to see improvements.

Answer Options	Response Percent	Response Count
Increased service frequency: which route, what time of day, what area?	52.9%	27
New or extended routes: what time and where?	70.6%	36
Bus stop improvements: where?	39.2%	20
Earlier Weekday Service: on which routes?	25.5%	13
Later Weekday Service: on which routes?	47.1%	24
Earlier Saturday Service: on which routes?	21.6%	11
Later Saturday Service: on which routes?	31.4%	16
Sunday Service: on which routes?	35.3%	18
	answered question	**51**
	skipped question	**79**

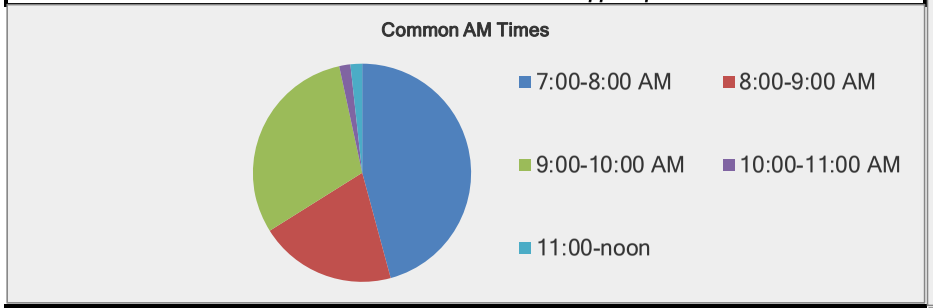


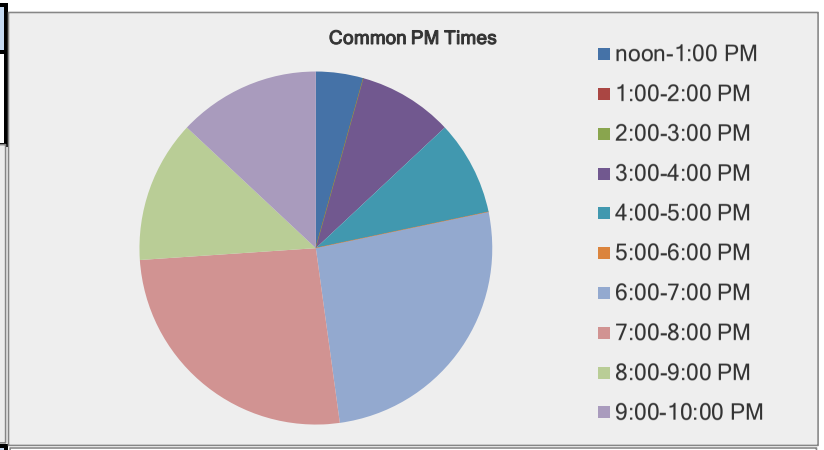
Appendix D
Yuba-Sutter Transit Dial-A-Ride Survey

Yuba-Sutter Dial-A-Ride Survey

Q1. What time did you board the vehicle for this ride?

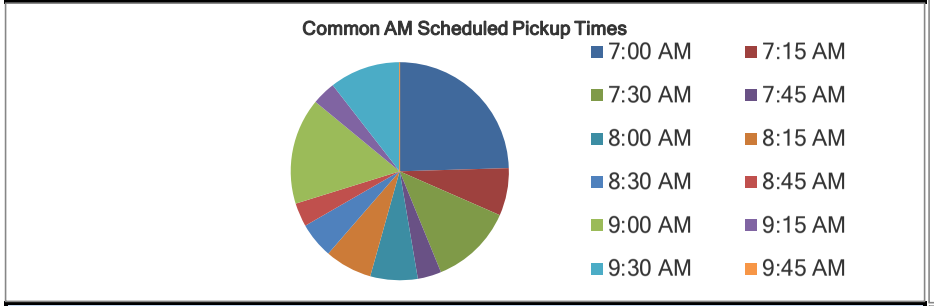
Answer Options	Response Percent	Response Count
AM	72.0%	59
PM	28.0%	23
answered question		**82**
skipped question		**9**

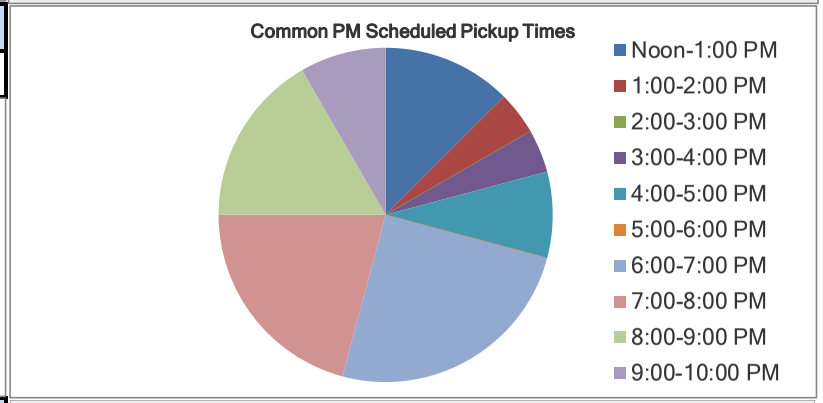




Q2. What was your scheduled pickup time for this ride?

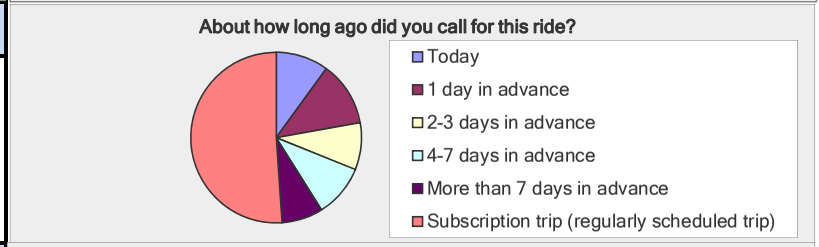
Answer Options	Response Percent	Response Count
answered question		**83**
skipped question		**8**





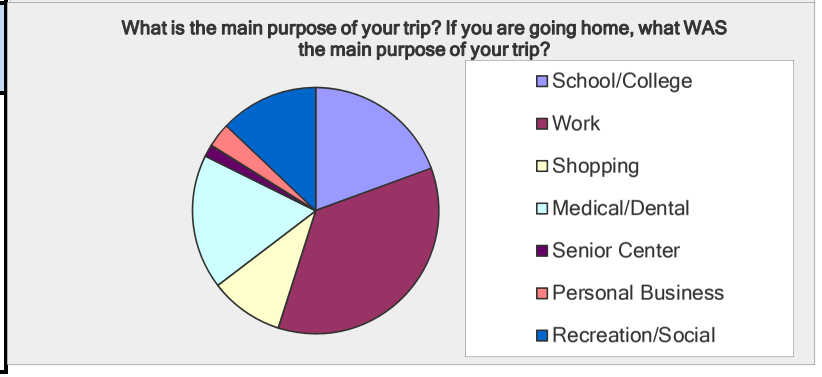
Q3. About how long ago did you call for this ride?

Answer Options	Response Percent	Response Count
Today	10.0%	9
1 day in advance	12.2%	11
2-3 days in advance	8.9%	8
4-7 days in advance	10.0%	9
More than 7 days in advance	7.8%	7
Subscription trip (regularly scheduled trip)	51.1%	46
answered question		**90**
skipped question		**1**



Q4. What is the main purpose of your trip? If you are going home, what WAS the main purpose of your trip?

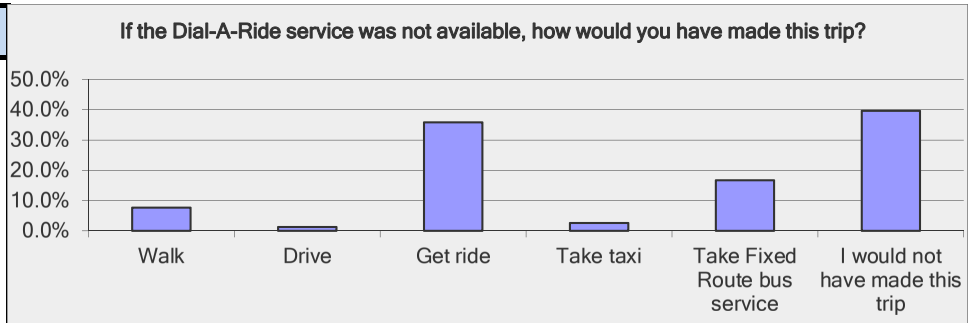
Answer Options	Response Percent	Response Count
School/College	19.4%	12
Work	35.5%	22
Shopping	9.7%	6
Medical/Dental	17.7%	11
Senior Center	1.6%	1
Personal Business	3.2%	2
Recreation/Social	12.9%	8
Other (please specify)		
Art Center Program		32
answered question		**62**
skipped question		**29**



Yuba-Sutter Dial-A-Ride Survey

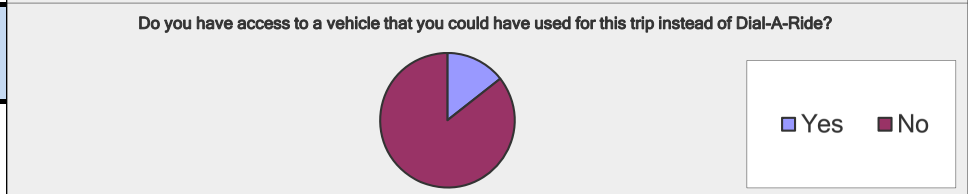
Q5. If the Dial-A-Ride service was not available, how would you have made this trip?

Answer Options	Response Percent	Response Count
Walk	7.7%	6
Drive	1.3%	1
Get ride	35.9%	28
Take taxi	2.6%	2
Take Fixed Route bus service	16.7%	13
I would not have made this trip	39.7%	31
Other (please specify)		
Friend/family		7
Heart-to-Heart		
answered question		**78**
skipped question		**13**



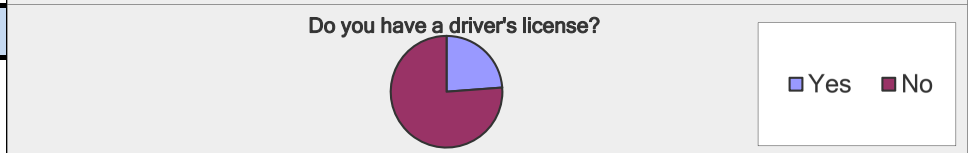
Q6. Do you have access to a vehicle that you could have used for this trip instead of Dial-A-Ride?

Answer Options	Response Percent	Response Count
Yes	14.4%	13
No	85.6%	77
answered question		**90**
skipped question		**1**



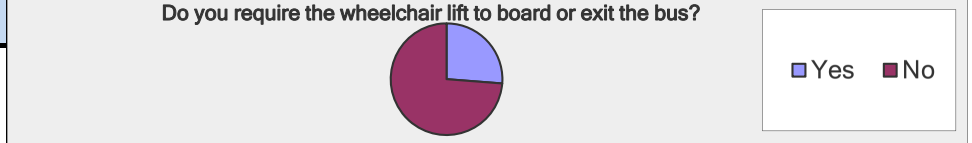
Q7. Do you have a driver's license?

Answer Options	Response Percent	Response Count
Yes	23.8%	20
No	76.2%	64
answered question		**84**
skipped question		**7**



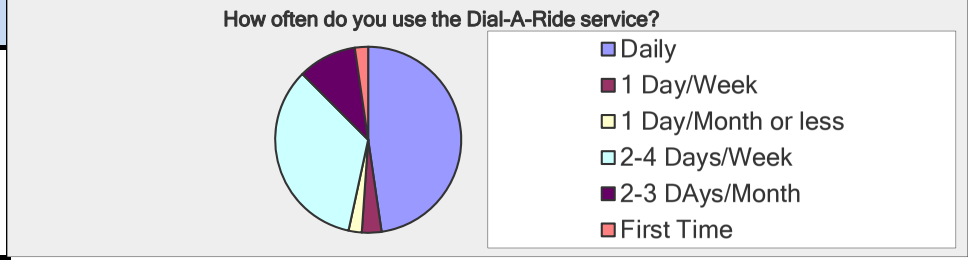
Q8. Do you require the wheelchair lift to board or exit the bus?

Answer Options	Response Percent	Response Count
Yes	26.2%	22
No	73.8%	62
answered question		**84**
skipped question		**7**



Q9. How often do you use the Dial-A-Ride service?

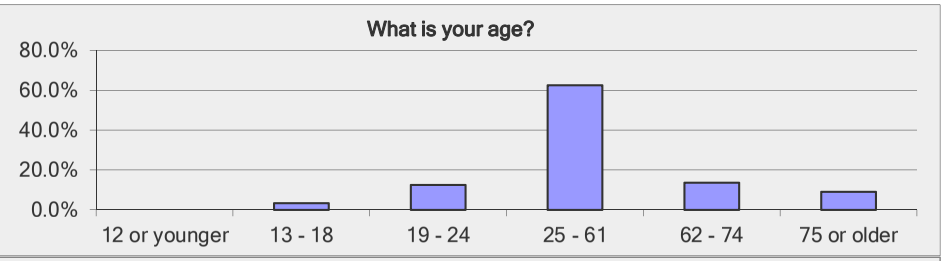
Answer Options	Response Percent	Response Count
Daily	47.7%	42
1 Day/Week	3.4%	3
1 Day/Month or less	2.3%	2
2-4 Days/Week	34.1%	30
2-3 DAys/Month	10.2%	9
First Time	2.3%	2
answered question		**88**
skipped question		**3**



Yuba-Sutter Dial-A-Ride Data Entry

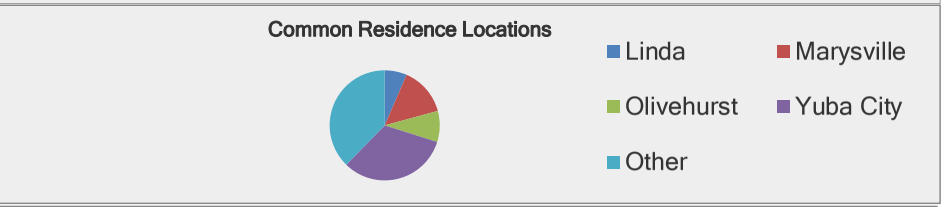
Q10. What is your age?

Answer Options	Response Percent	Response Count
12 or younger	0.0%	0
13 - 18	3.4%	3
19 - 24	12.5%	11
25 - 61	62.5%	55
62 - 74	13.6%	12
75 or older	9.1%	8
	answered question	**88**
	skipped question	**3**



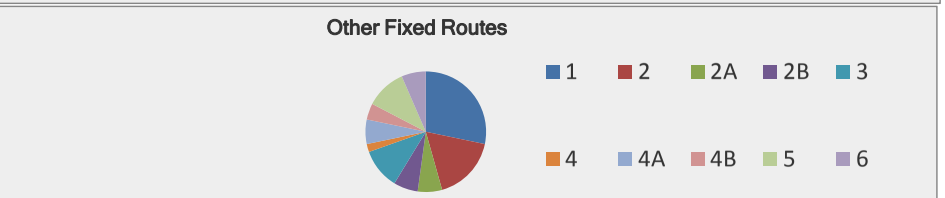
Q11. What is the general location of your home?

Answer Options	Response Percent	Response Count
	answered question	**77**
	skipped question	**14**



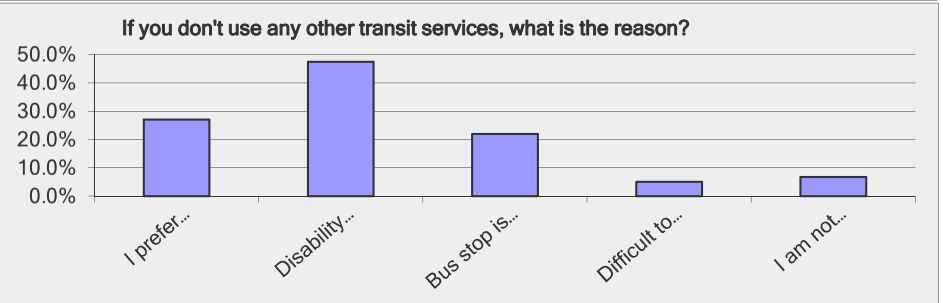
Q12. Do you use any other Yuba-Sutter Transit services?

Answer Options	Response Percent	Response Count
No, I only use Dial-A-Ride	66.3%	59
Local Fixed Routes	38.2%	34
Sacramento Commuter & Midday Services	9.0%	8
Other or Fixed Route #		21
	answered question	**89**
	skipped question	**2**



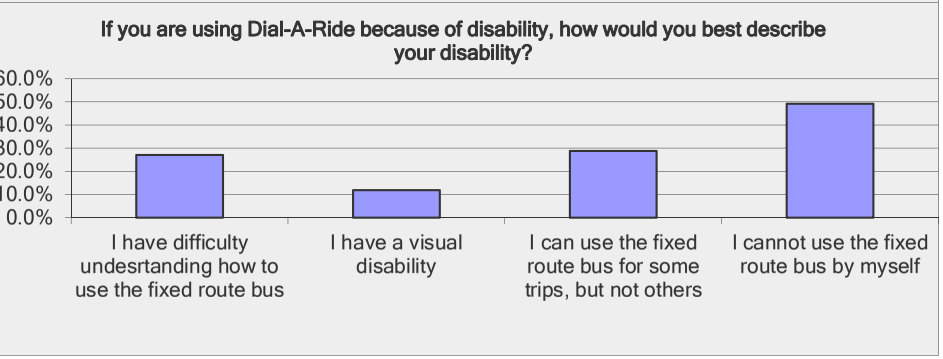
Q13. If you don't use any other transit services, what is the reason?

Answer Options	Response Percent	Response Count
I prefer using curb-to-curb service	27.1%	16
Disability makes use of fixed route bus difficult	47.5%	28
Bus stop is too far from my home or destination	22.0%	13
Difficult to take grocery/shopping bags on bus	5.1%	3
I am not aware of other services	6.8%	4
Other (please specify)		10
	answered question	**59**
	skipped question	**32**



Q14. If you are using Dial-A-Ride because of disability, how would you best describe your disability?

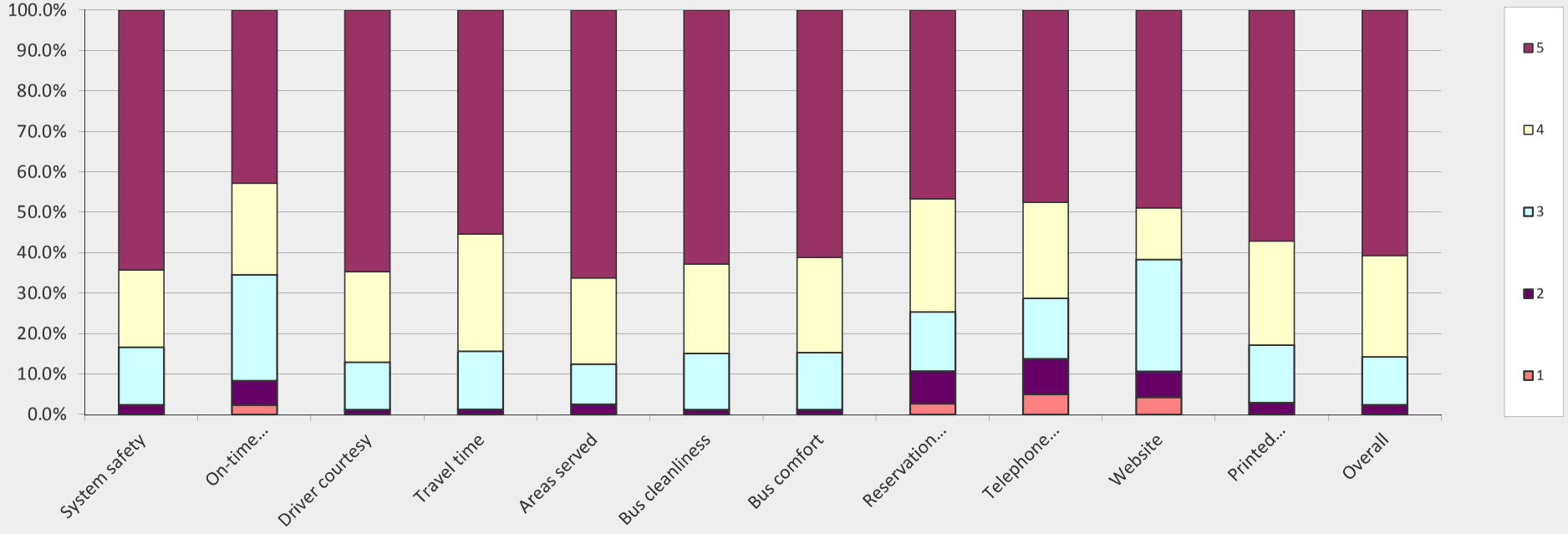
Answer Options	Response Percent	Response Count
I have difficulty understanding how to use the fixed route bus	27.1%	16
I have a visual disability	11.9%	7
I can use the fixed route bus for some trips, but not others	28.8%	17
I cannot use the fixed route bus by myself	49.2%	29
Other (please specify)		17
	answered question	**59**
	skipped question	**32**



Q15. Please indicate your opinion of the Dial-A-Ride service from 1 (poor) to 5 (excellent) using the list below (please circle your answer or leave blank if you have no opinion):

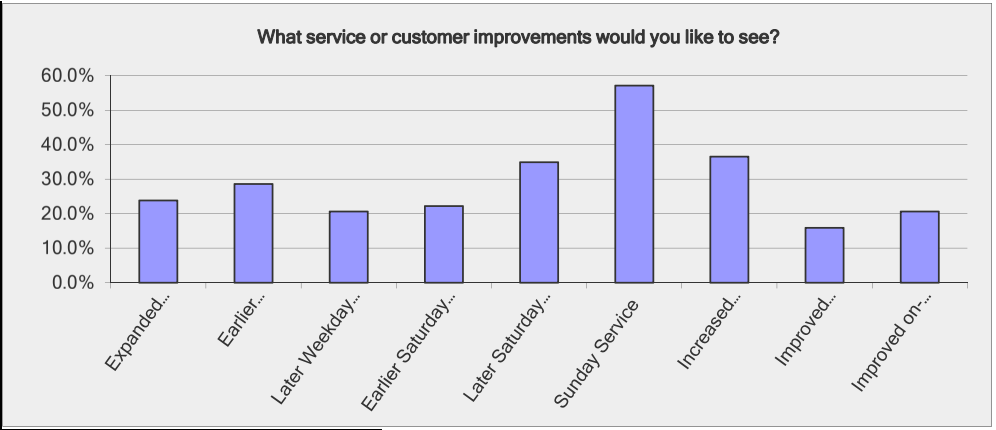
Answer Options	1		2		3		4		5		Response Count
System safety	0	0.0%	2	2.4%	12	14.3%	16	19.0%	54	64.3%	84
On-time performance	2	2.4%	5	6.0%	22	26.2%	19	22.6%	36	42.9%	84
Driver courtesy	0	0.0%	1	1.2%	10	11.8%	19	22.4%	55	64.7%	85
Travel time	0	0.0%	1	1.2%	12	14.5%	24	28.9%	46	55.4%	83
Areas served	0	0.0%	2	2.5%	8	10.0%	17	21.3%	53	66.3%	80
Bus cleanliness	0	0.0%	1	1.2%	12	14.0%	19	22.1%	54	62.8%	86
Bus comfort	0	0.0%	1	1.2%	12	14.1%	20	23.5%	52	61.2%	85
Reservation procedures	2	2.7%	6	8.0%	11	14.7%	21	28.0%	35	46.7%	75
Telephone information services	4	5.0%	7	8.8%	12	15.0%	19	23.8%	38	47.5%	80
Website	2	4.3%	3	6.4%	13	27.7%	6	12.8%	23	48.9%	47
Printed information materials	0	0.0%	2	2.9%	10	14.3%	18	25.7%	40	57.1%	70
Overall	0	0.0%	2	2.4%	10	11.9%	21	25.0%	51	60.7%	84
									answered question		**86**
									skipped question		**5**

Figure 37: Rider Opinion of DAR Service on 5 Point Scale from 1 (Poor) to 5 (Excellent)



Yuba-Sutter Dial-A-Ride Survey

Q16. What service or customer improvements would you like to see?		
Answer Options	**Response Percent**	**Response Count**
Expanded service coverage area (if so,where?)	23.8%	15
Earlier Weekday Service	28.6%	18
Later Weekday Service	20.6%	13
Earlier Saturday Service	22.2%	14
Later Saturday Service	34.9%	22
Sunday Service	57.1%	36
Increased availability/more service	36.5%	23
Improved reservation process	15.9%	10
Improved on-time performance	20.6%	13
Expanded Coverage Area (where) Gridley,Beale,AFB,Sutter Morning time slots Sutter Linda		4
	answered question	**63**
	skipped question	**28**



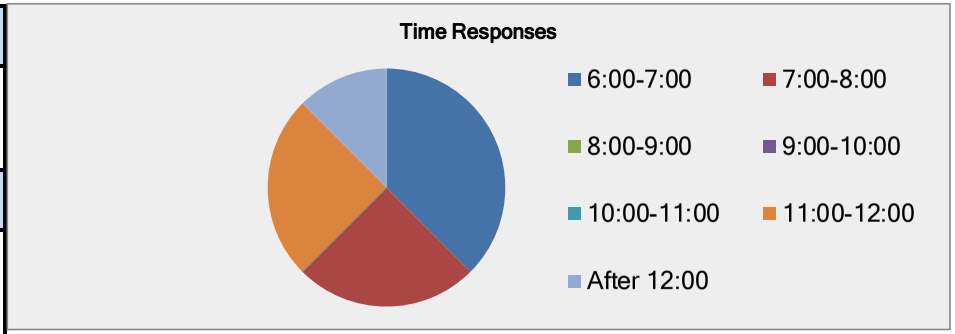
Q17. Other comments?		
	answered question	**22**
	skipped question	**69**

Text Responses
depends on RTS, needs to run on the 30 min during peak service, i.e. school - grade and high school
most of the drivers are on time
answer phone calls in timely manner
They could be nicer on the phone. It would be nice to have Dial-A-Ride on holidays.
first time rider
I would like to see the Dial-A-Ride be on time!
Something needs to be done about people getting harassed on the bus.
Patricia is the worst driver, poor attitude , I don't want her driving me
They're very nice people
would like suni church
church, yuba city mall, walmart
some drivers are too impatient regarding some riders ability to get on the bus.
beep horn a little longer and wait for more than a second. Please make sure all drivers check schedules, I call to cancel and they still come!
wish all drivers would wear easily read nametags. I would like to know their names. They have all been so polite and kind!
Thank you for feeling comfortable on my rides
go to dialysis tues/thurs/sat time is the same but pickup on sat is always late with different drivers. I've taken DAR for years, fee was 25c
most drivers are OK
Brenda is a very sweet lady
I think you should have a route 7 Queens-Stable-Peas-Live Oak
Later saturday service
Great Job
more rides available for disabled people other than groups

Appendix E
Yuba-Sutter Transit Foothill Route Survey

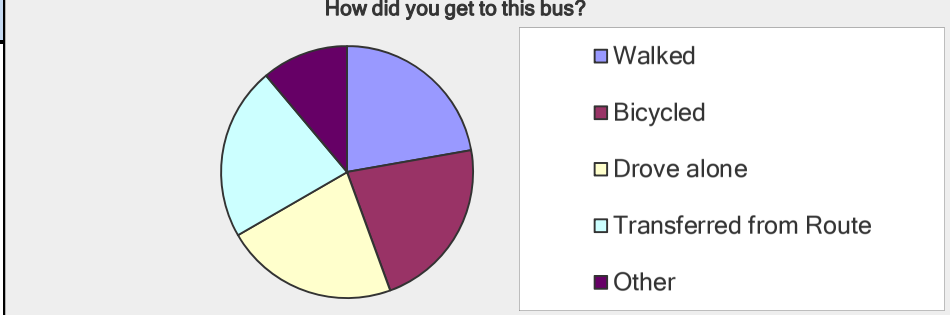
Yuba-Sutter Transit Foothill Route Survey

Q1. What time did you board this bus?		
Answer Options	**Response Percent**	**Response Count**
AM	100.0%	8
PM	0.0%	0
	answered question	**8**
	skipped question	**1**

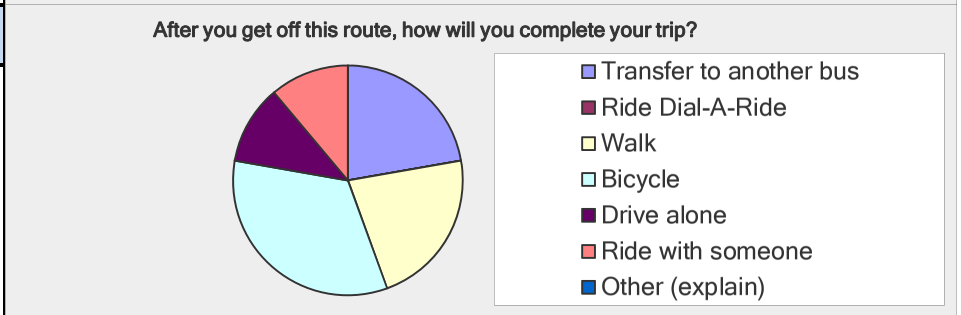


Q2. Where did you board this bus?		
Answer Options	**Response Percent**	**Response Count**
Bus Stops (listed below)	100.0%	6
Brownsville Gold Eagle		1
Government Center		1
OH Fire Dept		2
Oregon House		1
Vassure Way		1
	answered question	**6**
	skipped question	**3**

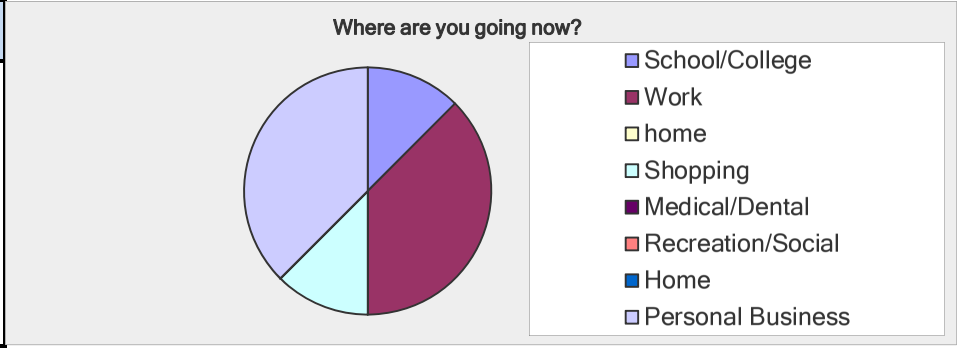
Q3. How did you get to this bus?		
Answer Options	**Response Percent**	**Response Count**
Walked	22.2%	2
Bicycled	22.2%	2
Drove alone	22.2%	2
Transferred from Route	22.2%	2
Other	11.1%	1
List route transferred from or "other" here:		
Got a ride		3
Route 1		
Sacramento		
	answered question	**9**
	skipped question	**0**



Q4. After you get off this route, how will you complete your trip?		
Answer Options	**Response Percent**	**Response Count**
Transfer to another bus	22.2%	2
Ride Dial-A-Ride	0.0%	0
Walk	22.2%	2
Bicycle	33.3%	3
Drive alone	11.1%	1
Ride with someone	11.1%	1
Other (explain)	0.0%	0
List route transferring to or "other"		1
	answered question	**9**
	skipped question	**0**

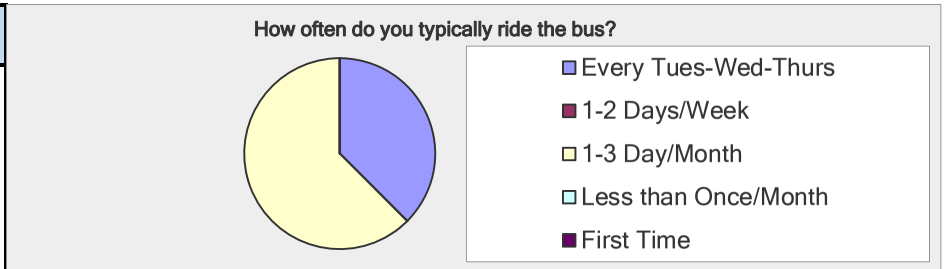


Q5. Where are you going now?		
Answer Options	**Response Percent**	**Response Count**
School/College	12.5%	1
Work	37.5%	3
home	0.0%	0
Shopping	12.5%	1
Medical/Dental	0.0%	0
Recreation/Social	0.0%	0
Home	0.0%	0
Personal Business	37.5%	3
Other (please specify)		1
	answered question	**8**
	skipped question	**1**

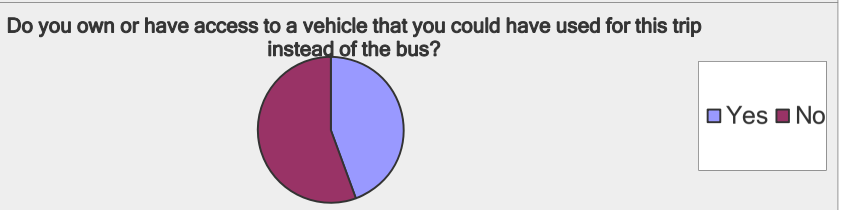


Yuba-Sutter Transit DATA Entry Foothill Routes

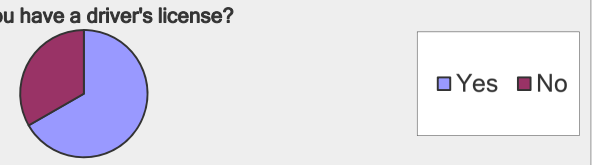
Q6. How often do you typically ride the bus?		
Answer Options	**Response Percent**	**Response Count**
Every Tues-Wed-Thurs	37.5%	3
1-2 Days/Week	0.0%	0
1-3 Day/Month	62.5%	5
Less than Once/Month	0.0%	0
First Time	0.0%	0
	answered question	**8**
	skipped question	**1**



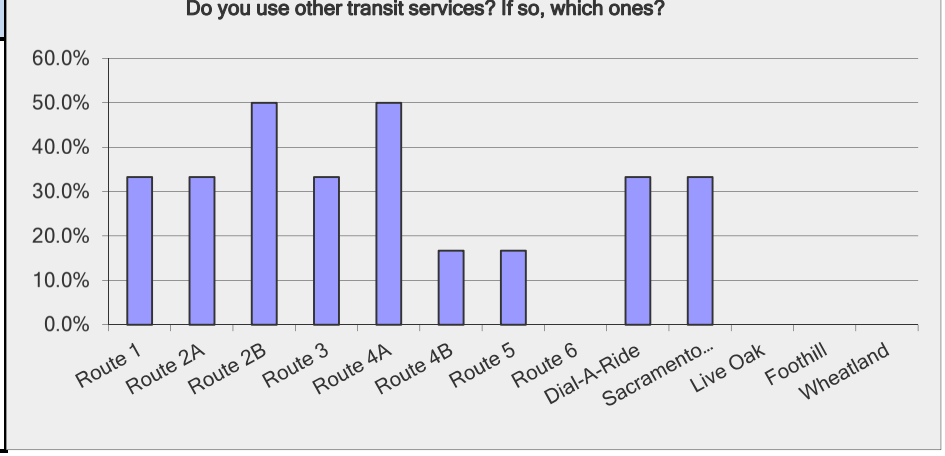
Q7. Do you own or have access to a vehicle that you could have used for this trip instead of the bus?		
Answer Options	**Response Percent**	**Response Count**
Yes	44.4%	4
No	55.6%	5
	answered question	**9**
	skipped question	**0**



Q8. Do you have a driver's license?		
Answer Options	**Response Percent**	**Response Count**
Yes	66.7%	6
No	33.3%	3
	answered question	**9**
	skipped question	**0**

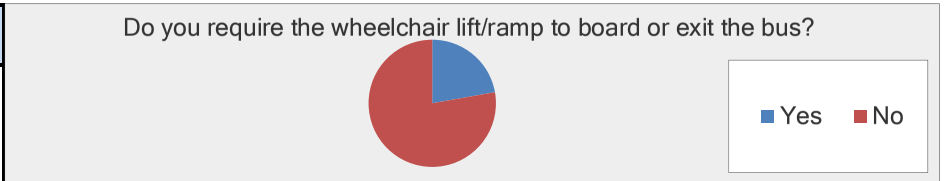


Q9. Do you use other transit services? If so, which ones?		
Answer Options	**Response Percent**	**Response Count**
Route 1	33.3%	2
Route 2A	33.3%	2
Route 2B	50.0%	3
Route 3	33.3%	2
Route 4A	50.0%	3
Route 4B	16.7%	1
Route 5	16.7%	1
Route 6	0.0%	0
Dial-A-Ride	33.3%	2
Sacramento Commuter Routes / Midday route	33.3%	2
Live Oak	0.0%	0
Foothill	0.0%	0
Wheatland	0.0%	0
Other (please specify)		1
	answered question	**6**
	skipped question	**3**

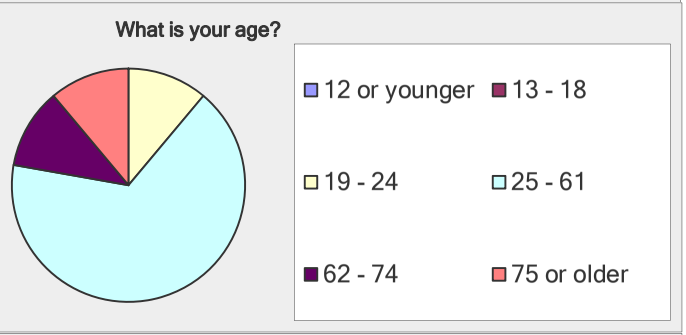


Yuba-Sutter Transit DATA Entry Foothill Routes

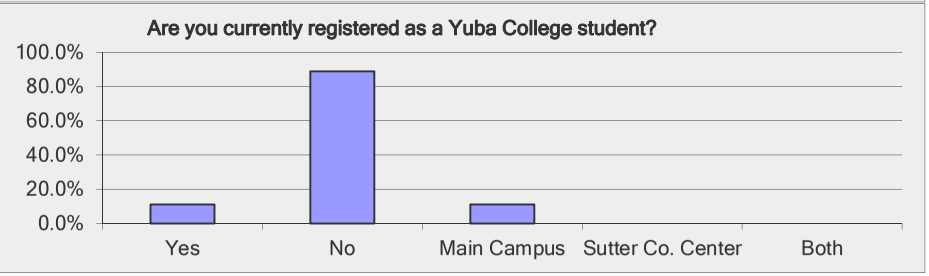
Q10. Do you require the wheelchair lift/ramp to board or exit the bus?		
Answer Options	**Response Percent**	**Response Count**
Yes	22.2%	2
No	77.8%	7
	answered question	**9**
	skipped question	**0**



Q11. What is your age?		
Answer Options	**Response Percent**	**Response Count**
12 or younger	0.0%	0
13 - 18	0.0%	0
19 - 24	11.1%	1
25 - 61	66.7%	6
62 - 74	11.1%	1
75 or older	11.1%	1
Other (please specify)		0
	answered question	**9**
	skipped question	**0**

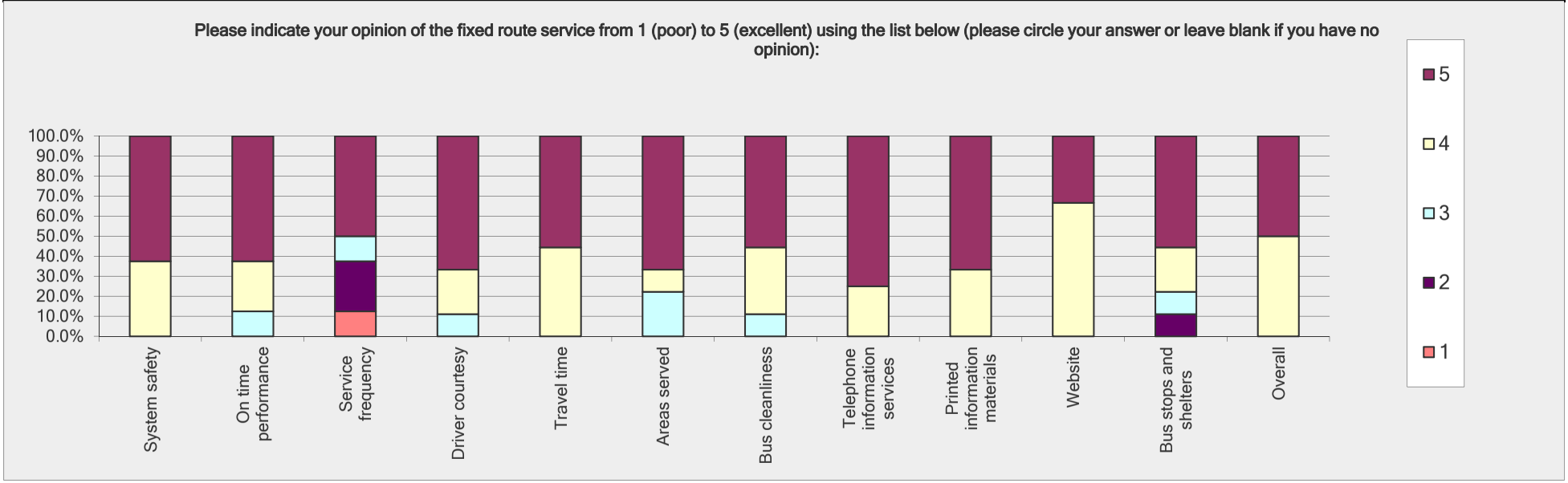


Q12. Are you currently registered as a Yuba College student?		
Answer Options	**Response Percent**	**Response Count**
Yes	11.1%	1
No	88.9%	8
Main Campus	11.1%	1
Sutter Co. Center	0.0%	0
Both	0.0%	0
	answered question	**9**
	skipped question	**0**

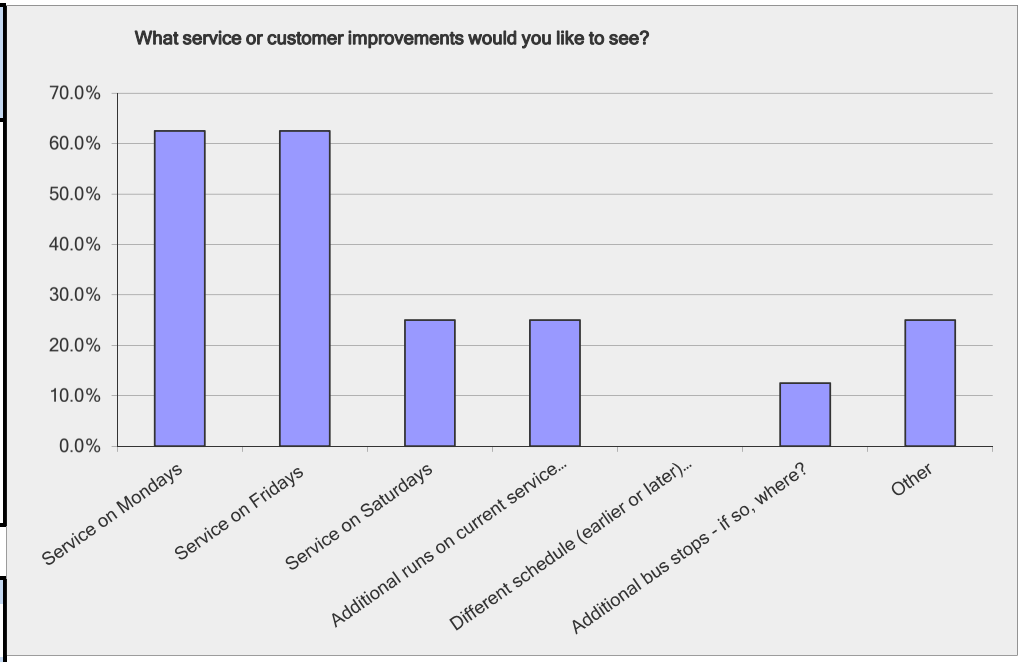


Q13. Please indicate your opinion of the fixed route service from 1 (poor) to 5 (excellent) using the list below (please circle your answer or leave blank if you have no opinion):

Answer Options	1		2		3		4		5		Response Count
System safety	0	0.0%	0	0.0%	0	0.0%	3	37.5%	5	62.5%	8
On time performance	0	0.0%	0	0.0%	1	12.5%	2	25.0%	5	62.5%	8
Service frequency	1	12.5%	2	25.0%	1	12.5%	0	0.0%	4	50.0%	8
Driver courtesy	0	0.0%	0	0.0%	1	11.1%	2	22.2%	6	66.7%	9
Travel time	0	0.0%	0	0.0%	0	0.0%	4	44.4%	5	55.6%	9
Areas served	0	0.0%	0	0.0%	2	22.2%	1	11.1%	6	66.7%	9
Bus cleanliness	0	0.0%	0	0.0%	1	11.1%	3	33.3%	5	55.6%	9
Telephone information services	0	0.0%	0	0.0%	0	0.0%	2	25.0%	6	75.0%	8
Printed information materials	0	0.0%	0	0.0%	0	0.0%	3	33.3%	6	66.7%	9
Website	0	0.0%	0	0.0%	0	0.0%	4	66.7%	2	33.3%	6
Bus stops and shelters	0	0.0%	1	11.1%	1	11.1%	2	22.2%	5	55.6%	9
Overall	0	0.0%	0	0.0%	0	0.0%	4	50.0%	4	50.0%	8
									answered question		9
									skipped question		0



Q14. What service or customer improvements would you like to see?		
Answer Options	**Response Percent**	**Response Count**
Service on Mondays 10AM, Mon, Wed 10AM, 2PM	62.5%	5
Service on Fridays 10AM, 2PM	62.5%	5
Service on Saturdays	25.0%	2
Additional runs on current service days	25.0%	2
Different schedule (earlier or later) on service days	0.0%	0
Additional bus stops	12.5%	1
Other Sunday service Mon-Fri	25.0%	2
	answered question	**8**
	skipped question	**1**



Q15. Other comments?	
answered question	**5**
skipped question	**4**
Text Responses	
sun is good, clean stations	
need more bike racks! (ramp needed for bike) Run this bus mon-fri, you'll get more college students!	
bike rack on back of bus or one inside somewhere	
more bike racks, reclining seats	
I'm happy with the service, this is my first day	

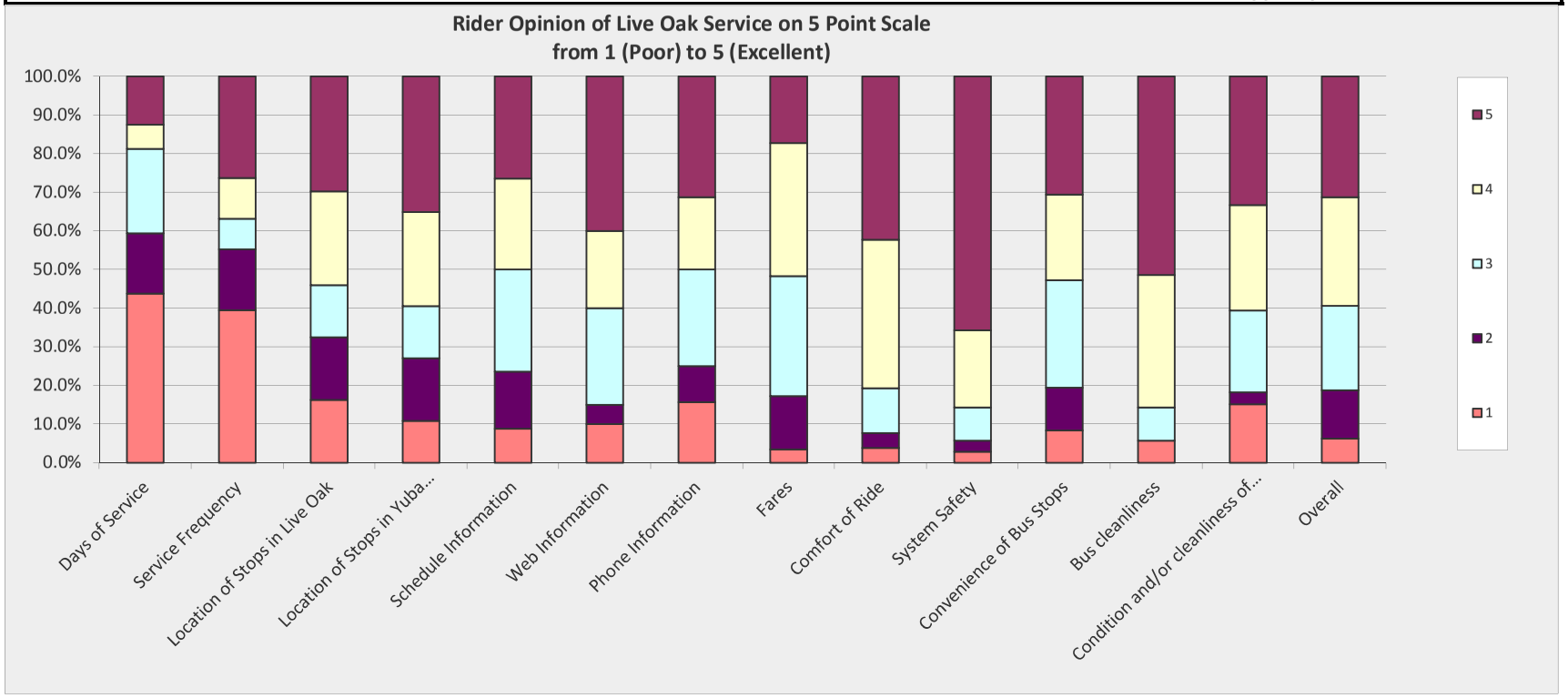
Appendix F

Yuba-Sutter Transit Live Oak Route Survey

Yuba Sutter Transit Survey for the Community of Live Oak

Q7. If you use Yuba-Sutter Transit's Live Oak service, please rank the following service characteristics on a scale of 1 (poor) to 5 (excellent):

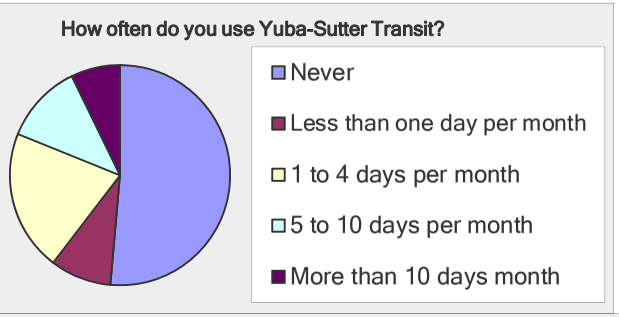
Answer Options	1		2		3		4		5		Response Count
Days of Service	14	43.8%	5	15.6%	7	21.9%	2	6.3%	4	12.5%	32
Service Frequency	15	39.5%	6	15.8%	3	7.9%	4	10.5%	10	26.3%	38
Location of Stops in Live Oak	6	16.2%	6	16.2%	5	13.5%	9	24.3%	11	29.7%	37
Location of Stops in Yuba City/Marysville	4	10.8%	6	16.2%	5	13.5%	9	24.3%	13	35.1%	37
Schedule Information	3	8.8%	5	14.7%	9	26.5%	8	23.5%	9	26.5%	34
Web Information	2	10.0%	1	5.0%	5	25.0%	4	20.0%	8	40.0%	20
Phone Information	5	15.6%	3	9.4%	8	25.0%	6	18.8%	10	31.3%	32
Fares	1	3.4%	4	13.8%	9	31.0%	10	34.5%	5	17.2%	29
Comfort of Ride	1	3.8%	1	3.8%	3	11.5%	10	38.5%	11	42.3%	26
System Safety	1	2.9%	1	2.9%	3	8.6%	7	20.0%	23	65.7%	35
Convenience of Bus Stops	3	8.3%	4	11.1%	10	27.8%	8	22.2%	11	30.6%	36
Bus cleanliness	2	5.7%	0	0.0%	3	8.6%	12	34.3%	18	51.4%	35
Condition and/or cleanliness of bus stops and shelters	5	15.2%	1	3.0%	7	21.2%	9	27.3%	11	33.3%	33
Overall	2	6.3%	4	12.5%	7	21.9%	9	28.1%	10	31.3%	32
									answered question		**38**
									skipped question		**73**



Yuba Sutter Transit Survey for the Community of Live Oak

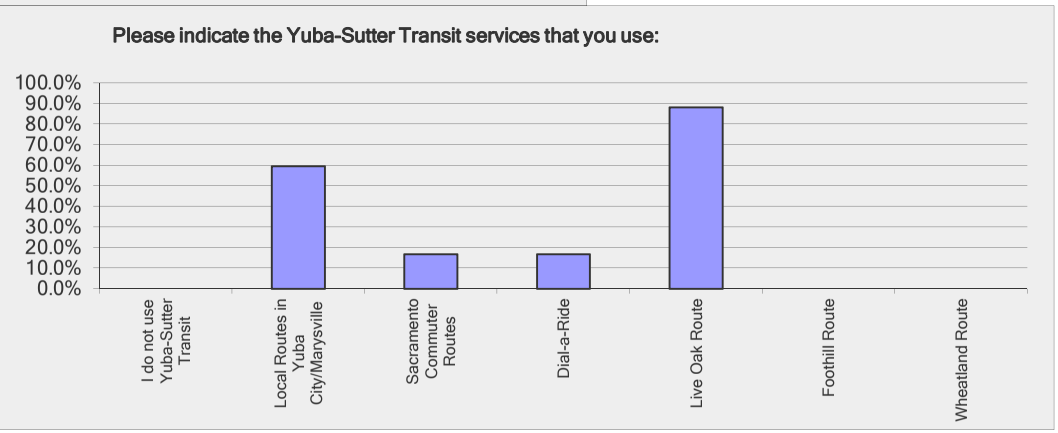
Q5. How often do you use Yuba-Sutter Transit?

Answer Options	Response Percent	Response Count
Never	51.4%	57
Less than one day per month	9.0%	10
1 to 4 days per month	20.7%	23
5 to 10 days per month	11.7%	13
More than 10 days month	7.2%	8
	answered question	**111**
	skipped question	**0**



Q6. Please indicate the Yuba-Sutter Transit services that you use:

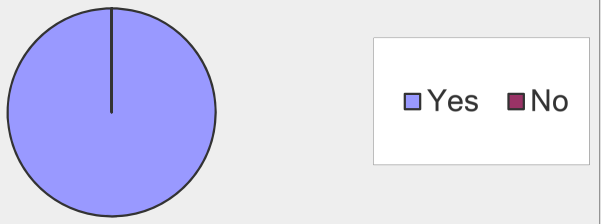
Answer Options	Response Percent	Response Count
I do not use Yuba-Sutter Transit	0.0%	0
Yuba-Sutter Transit Local Routes in Yuba City/Marysville	59.5%	25
Yuba-Sutter Transit Sacramento Commuter Routes	16.7%	7
Yuba-Sutter Transit Dial-a-Ride	16.7%	7
Yuba-Sutter Transit Live Oak Route	88.1%	37
Yuba-Sutter Transit Foothill Route	0.0%	0
Yuba-Sutter Transit Wheatland Route	0.0%	0
	answered question	**42**
	skipped question	**69**



Yuba Sutter Transit Survey for the Community of Live Oak

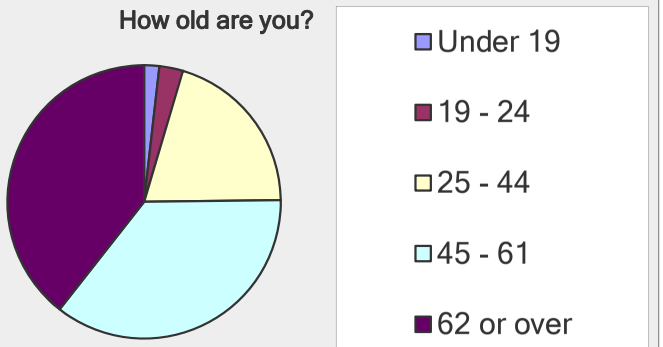
Q1. Are you a resident of Live Oak?

Answer Options	Response Percent	Response Count
Yes	100.0%	100
No	0.0%	0
answered question		**100**
skipped question		**11**



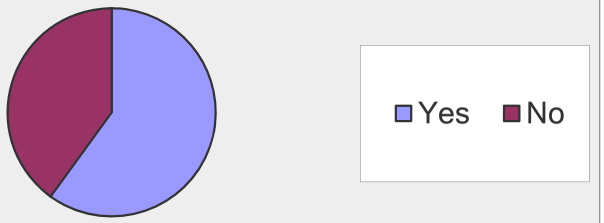
Q2. How old are you?

Answer Options	Response Percent	Response Count
Under 19	1.8%	2
19 - 24	2.8%	3
25 - 44	20.2%	22
45 - 61	35.8%	39
62 or over	39.4%	43
answered question		**109**
skipped question		**2**



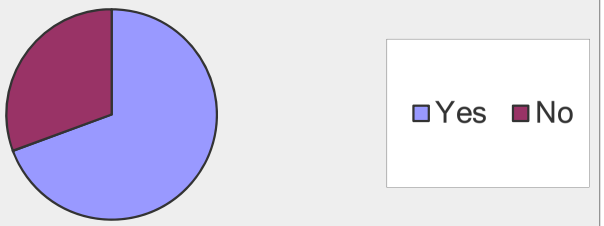
Q3. Do you typically have a vehicle available for travel?

Answer Options	Response Percent	Response Count
Yes	60.0%	63
No	40.0%	42
answered question		**105**
skipped question		**6**



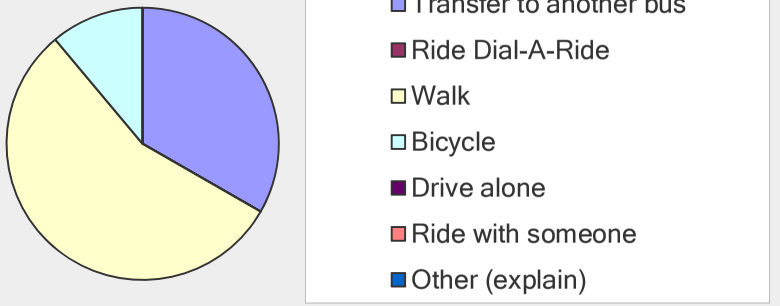
Q4. Do you have a driver's license?

Answer Options	Response Percent	Response Count
Yes	69.4%	75
No	30.6%	33
answered question		**108**
skipped question		**3**

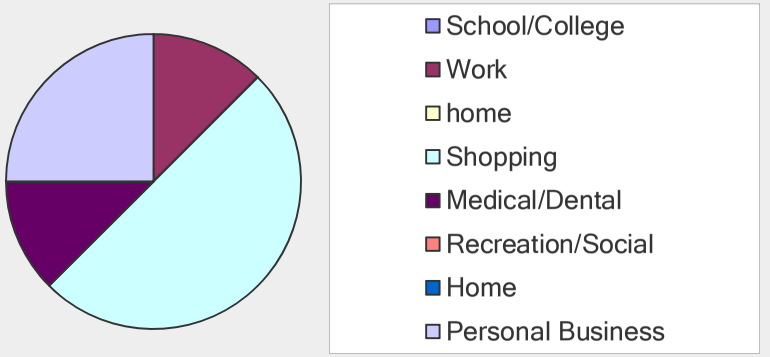


Yuba Sutter Transit Survey for the Community of Live Oak

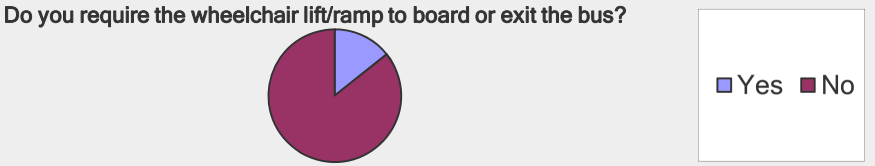
Onboard Q4. After you get off this route, how will you complete your trip?		
Answer Options	**Response Percent**	**Response Count**
Transfer to another bus	33.3%	3
Ride Dial-A-Ride	0.0%	0
Walk	55.6%	5
Bicycle	11.1%	1
Drive alone	0.0%	0
Ride with someone	0.0%	0
Other (explain)	0.0%	0
List route transferring to or "other"		3
	answered question	**9**
	skipped question	**0**



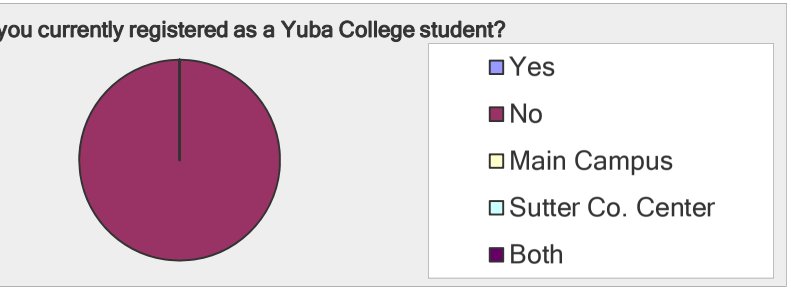
Onboard Q5. Where are you going now?		
Answer Options	**Response Percent**	**Response Count**
School/College	0.0%	0
Work	12.5%	1
home	0.0%	0
Shopping	50.0%	4
Medical/Dental	12.5%	1
Recreation/Social	0.0%	0
Home	0.0%	0
Personal Business	25.0%	2
Other (please specify)		2
	answered question	**8**
	skipped question	**1**



Onboard Q10. Do you require the wheelchair lift/ramp to board or exit the bus?		
Answer Options	**Response Percent**	**Response Count**
Yes	14.3%	1
No	85.7%	6
	answered question	**7**
	skipped question	**2**



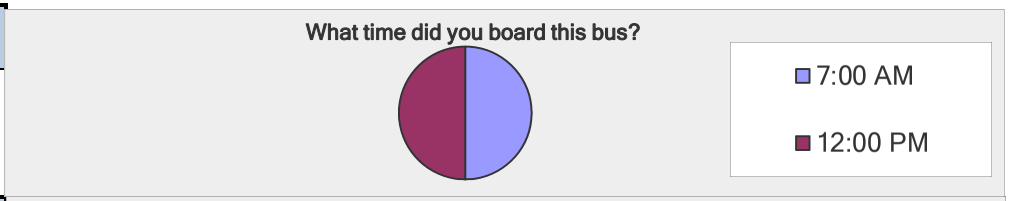
Onboard Q12. Are you currently registered as a Yuba College student?		
Answer Options	**Response Percent**	**Response Count**
Yes	0.0%	0
No	100.0%	8
Main Campus	0.0%	0
Sutter Co. Center	0.0%	0
Both	0.0%	0
	answered question	**8**
	skipped question	**1**



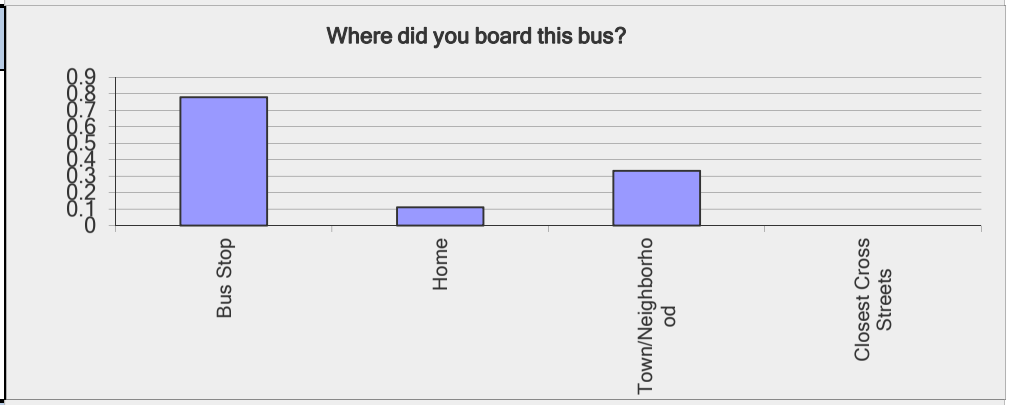
Yuba Sutter Transit Survey for the Community of Live Oak

These questions were not covered on the online survey. There were nine riders who completed a survey.

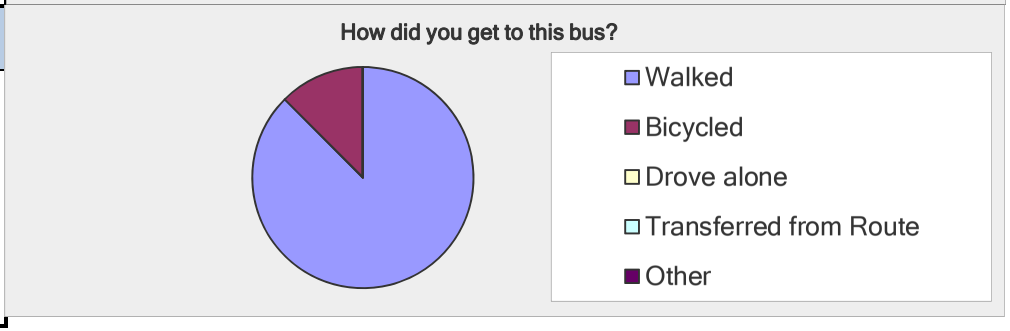
Onboard Q2. What time did you board this bus?		
Answer Options	**Response Percent**	**Response Count**
7:00 AM	50.0%	2
12:00 PM	50.0%	2
	answered question	**4**
	skipped question	**5**



Onboard Q2. Where did you board this bus?		
Answer Options	**Response Percent**	**Response Count**
Bus Stop Park (2 responses) Pennington & Larkin (2 responses)	77.8%	7
Home - if so, what is the general location of your home?	11.1%	1
Town/Neighborhood Park (1 response) Ulitma Parada (1 response)	33.3%	3
Closest Cross Streets	0.0%	0
	answered question	**9**
	skipped question	**0**



Onboard Q3. How did you get to this bus?		
Answer Options	**Response Percent**	**Response Count**
Walked	87.5%	7
Bicycled	12.5%	1
Drove alone	0.0%	0
Transferred from Route	0.0%	0
Other	0.0%	0
List route transferred from or "other" here:		1
	answered question	**8**
	skipped question	**1**

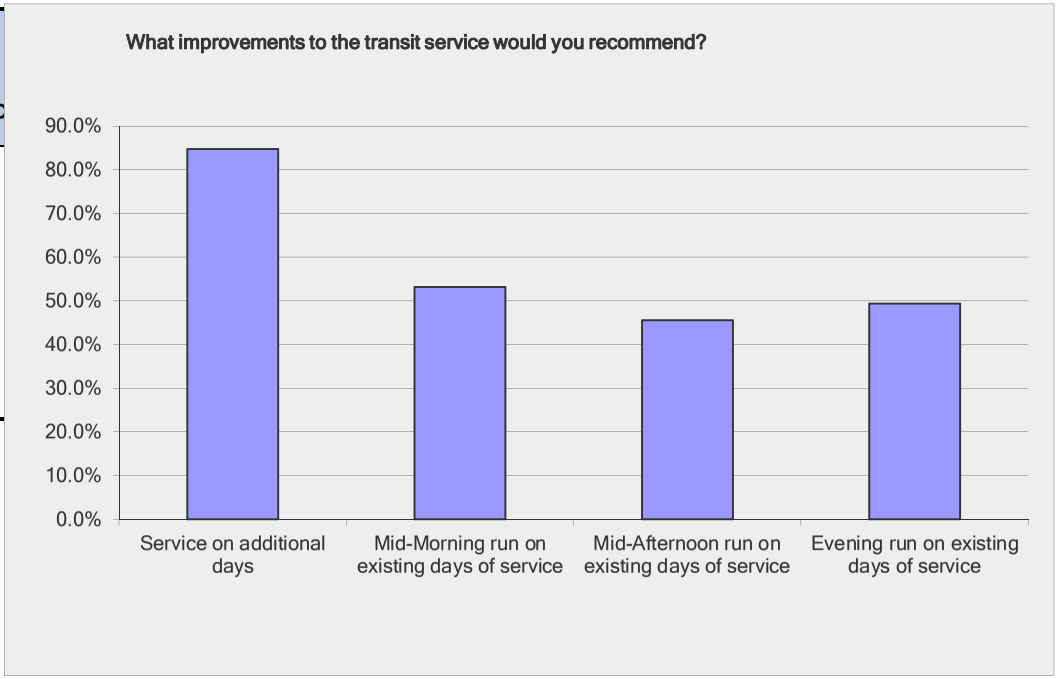


Q13. Do you have any other suggestions as to how Yuba-Sutter Transit could better meet your transportation needs? Please describe.

Respondents who answered question	**77**
Respondents who skipped question	**143**

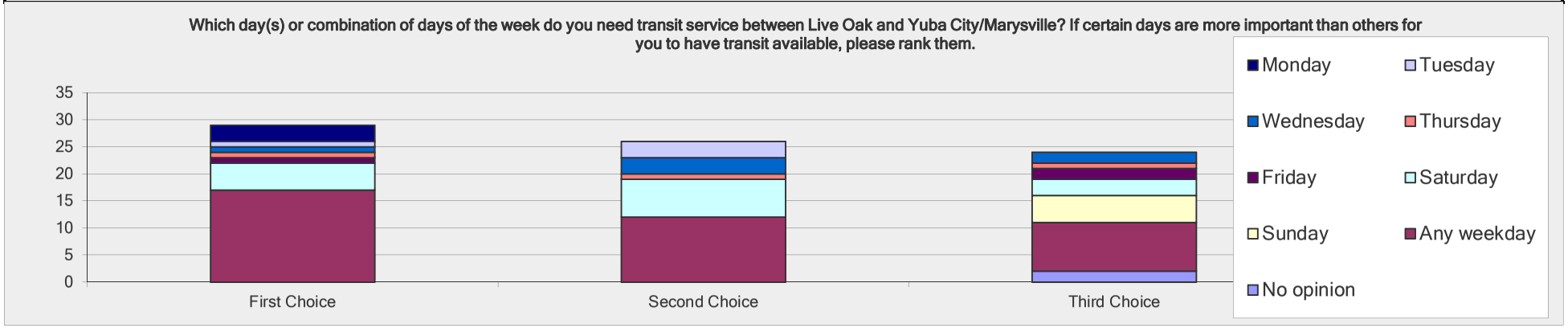
Other Response Text
More days in a row
Two or three times daily
Transit should go everywhere people go
Bus going to Gridley
For all of us that need to do our shopping, from the 3rd to the 6th of evey month, it would be the best if we would have service every 2 hours to yuba city and back. We are old with pain, it is hard to hang out all day. perfect world would be a bus every 2 hours, 5 days a week.
Live Oak, need stop stations in every stop now placed and other close to the 3 soccer field project and keep going to exit by Larkin to Paseo Rd to get 99 hwy with option to pick up people there.
If we can't add bus lines, can we have a better Dial-A-Ride program?
published schedules in mail
Having better service for seniors who do not drive
Runs more often, runs to Gridley
Just run it more days and more often.
More buses
Bring the bus service to Live Oak!
Yes, for future projects they could also look at other transportation options such as AMTRAK which runs through Live Oak every now and then that could take people into Sacramento or Santa Clara County as we have people that do commute to work in other counties. But for now we really need a Monday - Sunday 5am-12midnight service running every 20min. or 25min
None, Service is appreciated!
Normal services that connect from Gridley to Live Oak also. Maybe more jobs could come to the area or people without cars could get to regular jobs with good bus
None at this time
Not sure what services are available, are they posted multiple places?
Daily consistent service
Transit service to Live Oak has been spotty for years. If the transit system collects tax monies generated from the Live Oak area, transit service should be provided
Go to bank or Dr. App. Then then wait 2 to hours to come home. I'm disabled. And is hard on me.
I have not used the transit because I drive, but as I am getting older, i can see the benefit of the transit in the future especially for seniors.
Have routes 6 daysa week
Advertise
Need regular size buses on daily routes to LiveOak
If there was service more days then there would be a possibility of getting to a job or running errands in Yuba City. As it is I can only get work where I live or when my husband can drive me to work and that takes away most possibilities for employment!!
Offer trips to/from Yuba College north of Yuba City, too.
I do believe there is a need for addional service to live oak. I know that many more people would use it if the transit have a lot better schedules and service. People do need this service. Thank you
Advertise the sevice
It would be great to be able to use transit.
I commute to Sacramento -- YS Transit really isn't of use to me. Otherwise, I'd be interested.
At present I am very independent and drive. I never consider the bus however I know that as a senior non driver I would strongly evaluate bus services
More stops to and from Live Oak and more days
Commuter route to Sacramento
Your service does not accomodate college students and residents that need to do business in Yuba City. It seems to only serve senior citizens.
Bus passes available for Live Oak residents
Advertise in Spanish & Punjabi
Provide the community of more information on the transit hours and stops
Lived here 3 years didnt know there was a transit system
There is a need for in town stops from outer areas of town for seniors and those that can't walk far to be able to get to the store and back closer to their homes. An in
College campus.
A three trip daily service between Yuba City/Linda/Wheatland and Roseville, similar to the Sacramento Service.

Q12. What improvements to the transit service would you recommend?		
Answer Options	**Response Percent**	**Response C**
Service on additional days	84.8%	67
Mid-Morning run on existing days of service	53.2%	42
Mid-Afternoon run on existing days of service	45.6%	36
Evening run on existing days of service	49.4%	39
Other (please specify)		33
	answered question	**79**
	skipped question	**32**



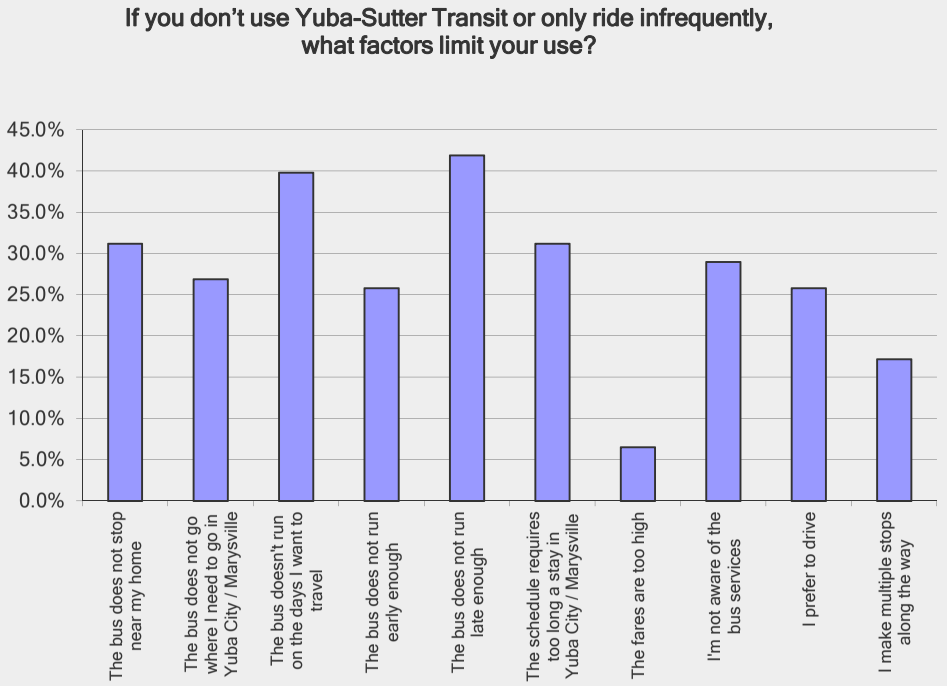
Q10. Which day(s) or combination of days of the week do you need transit service between Live Oak and Yuba City/Marysville? If certain days are more important than others for you to have transit available, please rank them.

Answer Options	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Any weekday	No opinion	Response Count
First Choice	3	1	1	1	1	5	0	17	0	29
Second Choice	0	3	3	1	0	7	0	12	0	26
Third Choice	0	0	2	1	2	3	5	9	2	24
								answered question		**29**
								skipped question		**82**



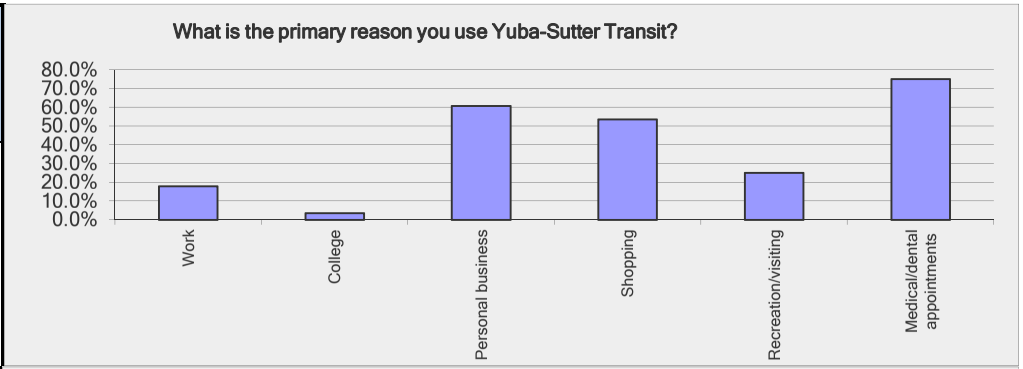
Q11. If you don't use Yuba-Sutter Transit or only ride infrequently, what factors limit your use? (check all that apply)

Answer Options	Response Percent	Response Count
The bus does not stop near my home	31.2%	29
The bus does not go where I need to go in Yuba City /	26.9%	25
The bus doesn't run on the days I want to travel	39.8%	37
The bus does not run early enough	25.8%	24
The bus does not run late enough	41.9%	39
The schedule requires too long a stay in Yuba City /	31.2%	29
The fares are too high	6.5%	6
I'm not aware of the bus services	29.0%	27
I prefer to drive	25.8%	24
I make multiple stops along the way	17.2%	16
	answered question	**93**
	skipped question	**18**



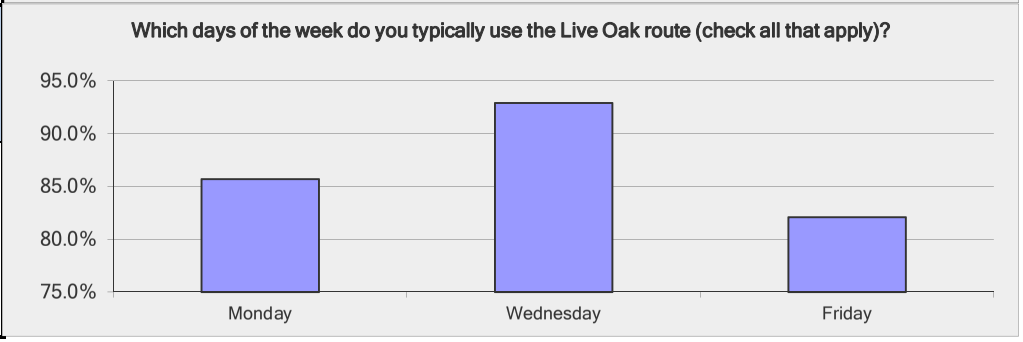
Q8. What is the primary reason you use Yuba-Sutter Transit?

Answer Options	Response Percent	Response Count
Work	17.9%	5
College	3.6%	1
Personal business	60.7%	17
Shopping	53.6%	15
Recreation/visiting	25.0%	7
Medical/dental appointments	75.0%	21
Other (please specify)		6
answered question		**28**
skipped question		**83**



Q9. Which days of the week do you typically use the Live Oak route (check all that apply)?

Answer Options	Response Percent	Response Count
Monday	85.7%	24
Wednesday	92.9%	26
Friday	82.1%	23
answered question		**28**
skipped question		**83**



Appendix G
Yuba-Sutter Transit Commuter Survey

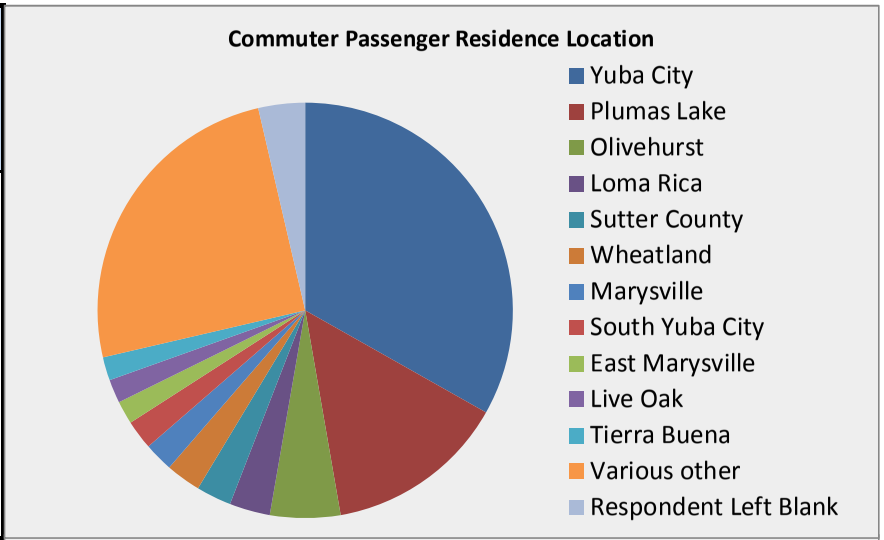
Q1. Which Yuba-Sutter Transit Sacramento Commuter service do you typically use? (list locations and times)

AM Departures From:	Response Count	Response Percentage
Bogue & Hwy 99	62	28.2%
Government Center	38	17.3%
Plumas Lake Park & Ride	38	17.3%
Sam's Club	28	12.7%
McGowan Park & Ride	25	11.4%
Walton	8	3.6%
Gateway Oaks	4	1.8%
Sam's Club and Walton Terminal	3	1.4%
Natomas	2	0.9%
Venture Oaks, Sacramento	2	0.9%
Bogue Road and sometimes Sam's Club	1	0.5%
Bogue, McGowan	1	0.5%
Varies	1	0.5%
Garden Hwy	1	0.5%
Sams Club/Sunsweet	1	0.5%
McGowan & Hwy 70 Olivehurst	1	0.5%
Respondent Left Blank	4	1.8%

PM Departures From:	Response Count	Response Percentage
P & 5th	35	15.9%
P & 9th	27	12.3%
P & 13th	26	11.8%
15th & N	22	10.0%
J & 11th	19	8.6%
J & 8th	13	5.9%
J & 4th	12	5.5%
Caltrans	8	3.6%
Bogue	5	2.3%
Downtown Sacramento	5	2.3%
15th & K	4	1.8%
P & 7th	3	1.4%
P Street	3	1.4%
15th Street	2	0.9%
Government Center	2	0.9%
P & 4th	2	0.9%
Plumas Lake P&R	2	0.9%
Sunsweet	2	0.9%
1500 Capitol	1	0.5%
16th & N	1	0.5%
8th and L,P & 9th	1	0.5%
Across from CalPers on P street	1	0.5%
Bogue, McGowan	1	0.5%
Garden Hwy	1	0.5%
Gray st Yuba City	1	0.5%
J & 12th	1	0.5%
J & 16th	1	0.5%
J & 3rd	1	0.5%
J & 5th	1	0.5%
J & 9th	1	0.5%
J & P street	1	0.5%
J Street	1	0.5%
McGowan P&R	1	0.5%
P & 5th,14th & L	1	0.5%
Sacramento - Natomas Area (Afternoon	1	0.5%
Sam's Club	1	0.5%
The 270 or 499 in afternoon	1	0.5%
varies	1	0.5%
Yuba City	1	0.5%
Yuba College	1	0.5%
Respondent Left Blank	6	2.7%

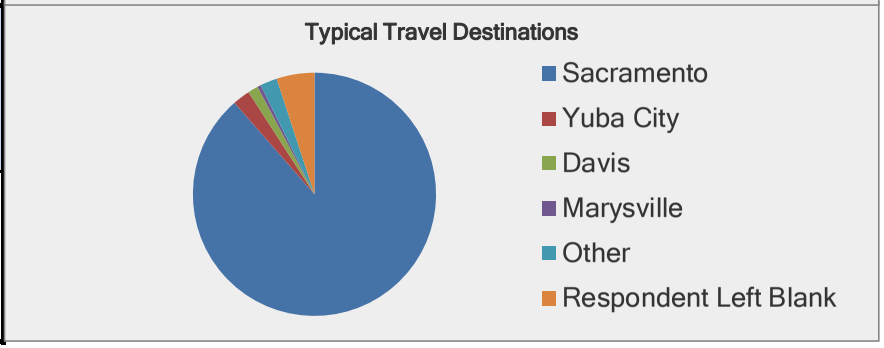
Q2. What community do you live in and what are the nearest cross streets to where you live?

Community	Response Count	Response Percentage
Yuba City	73	33.2%
Plumas Lake	31	14.1%
Olivehurst	12	5.5%
Loma Rica	7	3.2%
Sutter County	6	2.7%
Wheatland	6	2.7%
Marysville	5	2.3%
South Yuba City	5	2.3%
East Marysville	4	1.8%
Live Oak	4	1.8%
Tierra Buena	4	1.8%
Various other	55	25.0%
Respondent Left Blank	8	3.6%



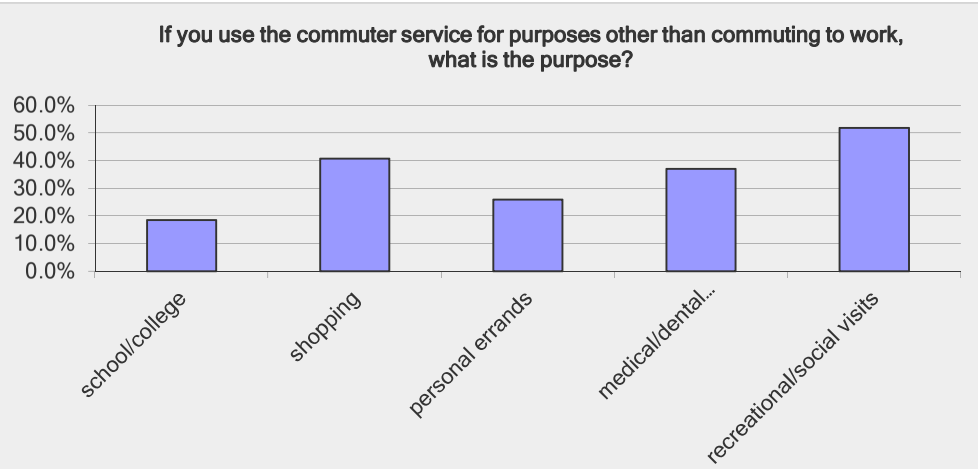
Q3. What is your typical travel destination?

Community	Response Count	Response Percentage
Sacramento	194	88.2%
Yuba City	5	2.3%
Davis	3	1.4%
Marysville	1	0.5%
Other	5	2.3%
Respondent Left Blank	11	5.0%



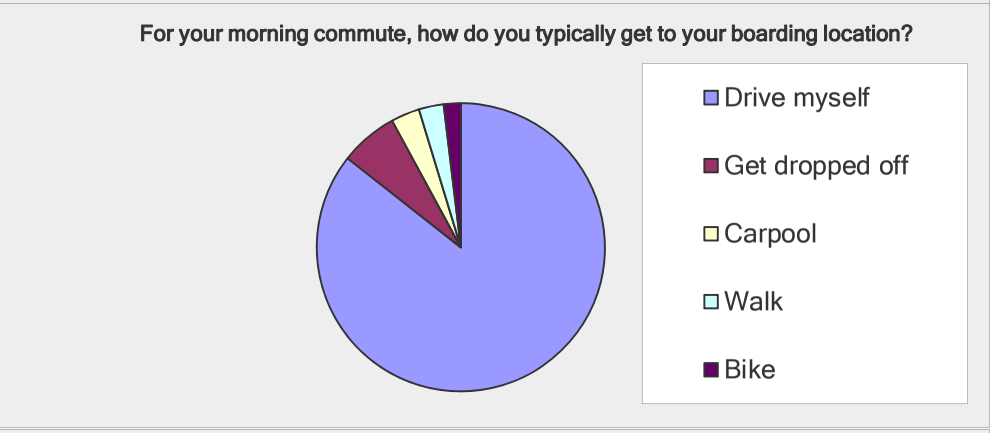
Q4. If you use the commuter service for purposes other than commuting to work, what is the purpose?

Answer Options	Response Percent	Response Count
school/college	18.5%	5
shopping	40.7%	11
personal errands	25.9%	7
medical/dental appointments	37.0%	10
recreational/social visits	51.9%	14
Other (please specify) lunch with friends connect for travel		3
answered question		**27**
skipped question		**193**



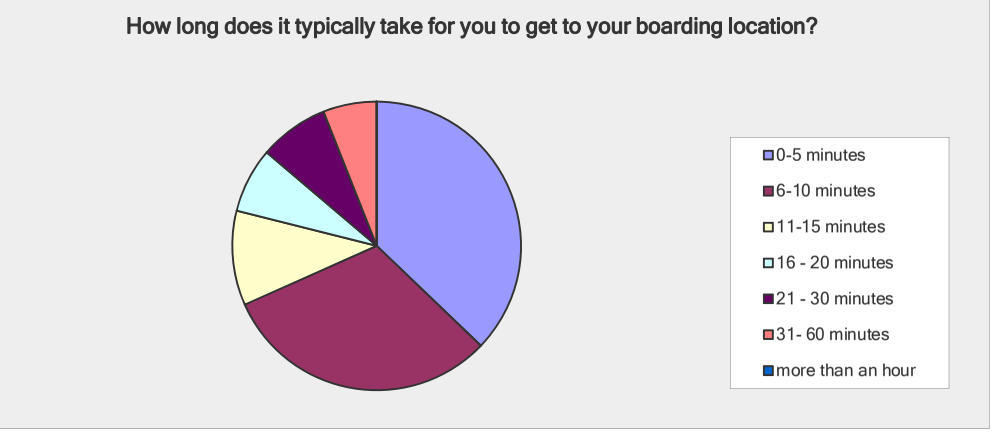
Q5. For your morning commute, how do you typically get to your boarding location?

Answer Options	Response Percent	Response Count
Drive myself	85.6%	185
Get dropped off	6.5%	14
Carpool	3.2%	7
Walk	2.8%	6
Bike	1.9%	4
Other (please specify) local bus (Route 5)		6
answered question		**216**
skipped question		**4**



Q6. How long does it typically take for you to get to your boarding location?

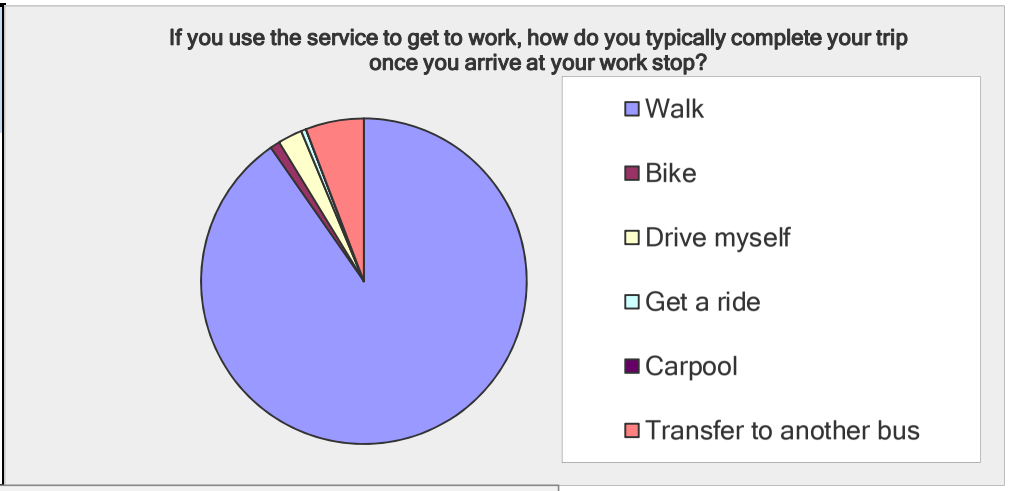
Answer Options	Response Percent	Response Count
0-5 minutes	37.2%	81
6-10 minutes	31.2%	68
11-15 minutes	10.6%	23
16 - 20 minutes	7.3%	16
21 - 30 minutes	7.8%	17
31- 60 minutes	6.0%	13
more than an hour	0.0%	0
answered question		**218**
skipped question		**2**



Yuba-Sutter Transit Commuter Survey

Q7. If you use the service to get to work, how do you typically complete your trip once you arrive at your work stop?

Answer Options	Response Percent	Response Count
Walk	90.4%	188
Bike	1.0%	2
Drive myself	2.4%	5
Get a ride	0.5%	1
Carpool	0.0%	0
Transfer to another bus	5.8%	12
Other (please specify) Light Rail		14
answered question		**208**
skipped question		**12**

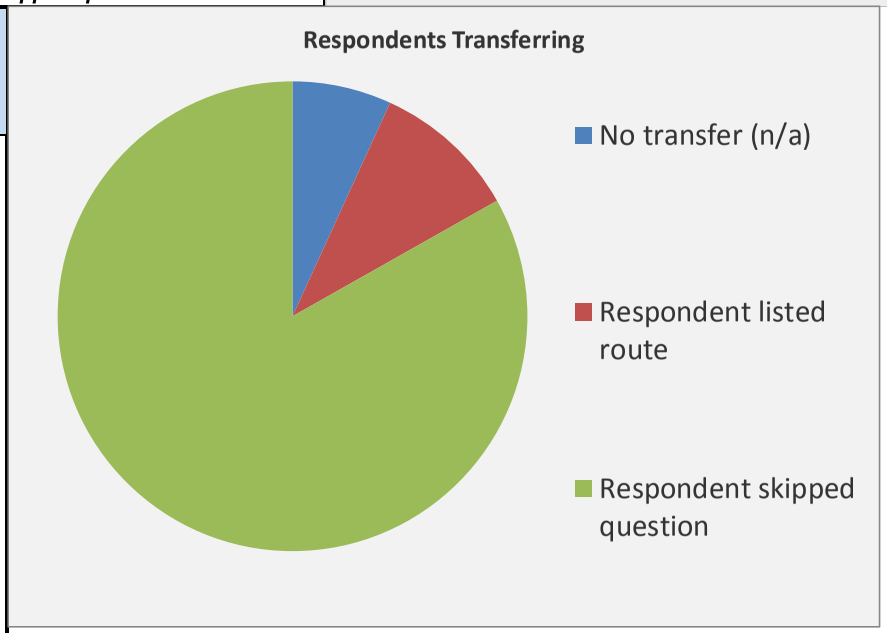


Q8. It you typically transfer, to which route? (please list)

Response Text:

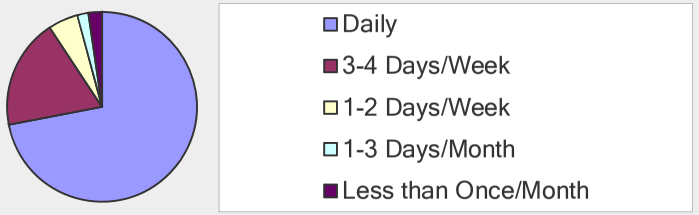
Folsom bound train
Route 70
Would transfer to El Dorado bus, but they don't coordinate times very well
Elk Grove
Gateway Oaks
RT 11 or Light Rail
E-Tran to Elk Grove (Route 90)
Blue LIne (to Folsom)
499
4A
Regional transit
Lightrail towards sunrise
Watt & 80 Lightrail route
88 or 89
Gold Line
Regional transits to sac state
Sacramento RT Rout 30
Light Rail Gold Line
RT Gold Line (purchase the combo pass)
RT 88
yolo bus (but perfer if Yuba sutter transit can have drop off in west sacramento)
North Natomas

No transfer (n/a)	15
Respondent listed route	22
Respondent skipped question	183



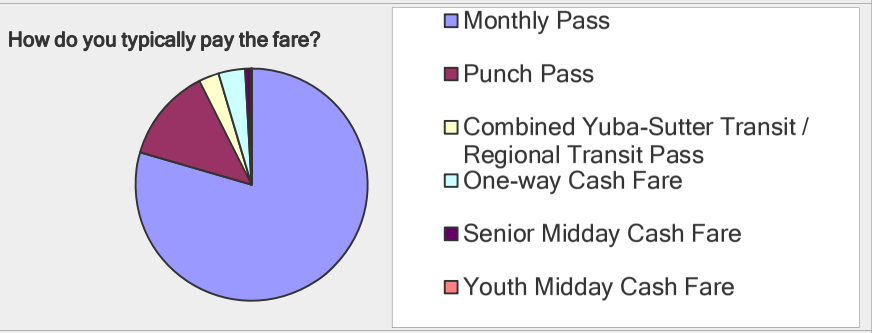
Q9. How often do you typically use the commuter service?

Answer Options	Response Percent	Response Count
Daily	72.0%	154
3-4 Days/Week	18.7%	40
1-2 Days/Week	5.1%	11
1-3 Days/Month	1.9%	4
Less than Once/Month	2.3%	5
answered question		**214**
skipped question		**6**



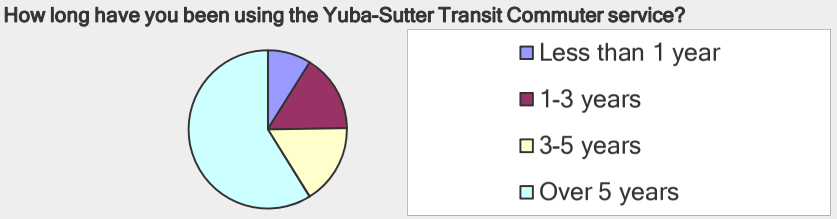
Q10. How do you typically pay the fare?

Answer Options	Response Percent	Response Count
Monthly Pass	79.4%	170
Punch Pass	13.1%	28
Combined Yuba-Sutter Transit / Regional Transit Pass	2.8%	6
One-way Cash Fare	3.7%	8
Senior Midday Cash Fare	0.9%	2
Youth Midday Cash Fare	0.0%	0
Midday Discount Ticket	0.0%	0
answered question		**214**
skipped question		**6**



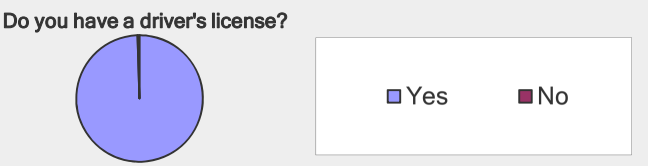
Q11. How long have you been using the Yuba-Sutter Transit Commuter service?

Answer Options	Response Percent	Response Count
Less than 1 year	8.9%	19
1-3 years	15.9%	34
3-5 years	16.4%	35
Over 5 years	58.9%	126
answered question		**214**
skipped question		**6**



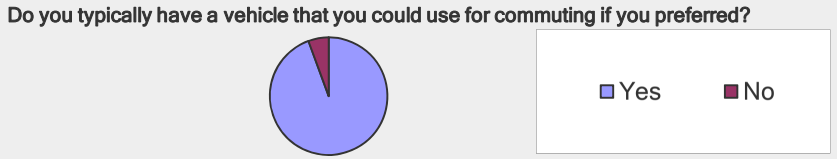
Q12. Do you have a driver's license?

Answer Options	Response Percent	Response Count
Yes	99.5%	211
No	0.5%	1
answered question		**212**
skipped question		**8**

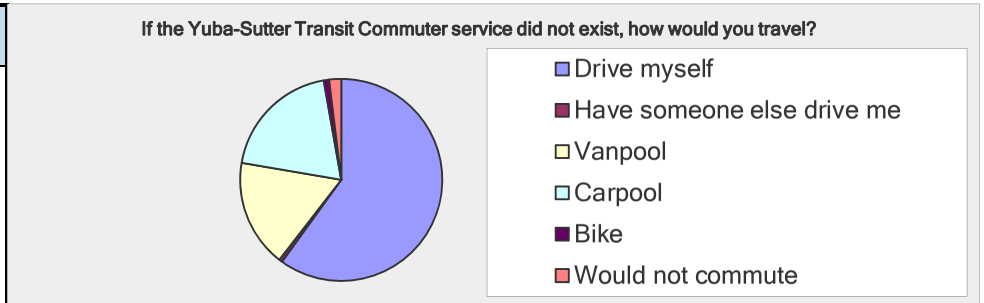


Q13. Do you typically have a vehicle that you could use for commuting if you preferred?

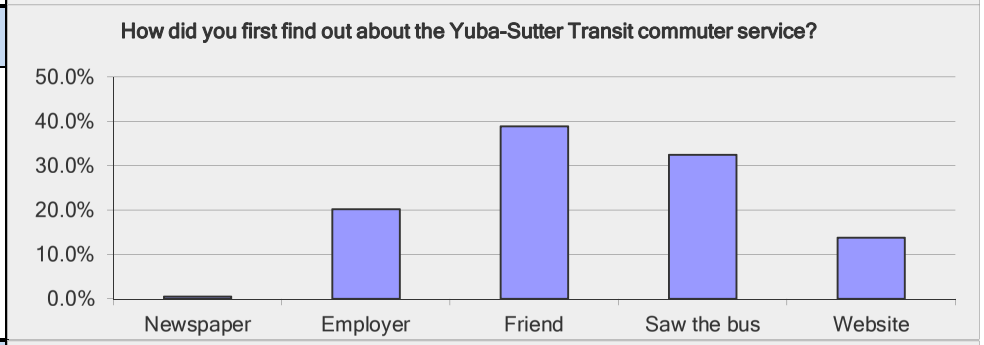
Answer Options	Response Percent	Response Count
Yes	94.4%	201
No	5.6%	12
answered question		**213**
skipped question		**7**



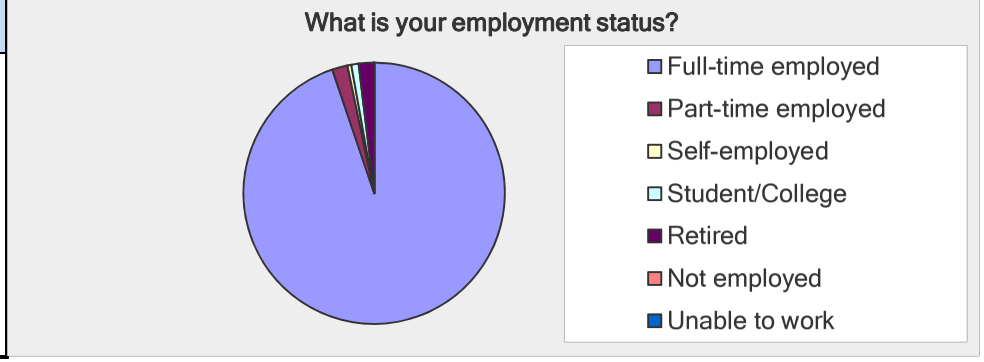
Q14. If the Yuba-Sutter Transit Commuter service did not exist, how would you travel?		
Answer Options	**Response Percent**	**Response Count**
Drive myself	60.0%	129
Have someone else drive me	0.5%	1
Vanpool	17.2%	37
Carpool	19.5%	42
Bike	0.9%	2
Would not commute	1.9%	4
	answered question	**215**
	skipped question	**5**



Q15. How did you first find out about the Yuba-Sutter Transit commuter service?		
Answer Options	**Response Percent**	**Response Count**
Newspaper	0.5%	1
Employer	20.2%	41
Friend	38.9%	79
Saw the bus	32.5%	66
Website	13.8%	28
Other (please specify) Bus schedule at bus stop		13
	answered question	**203**
	skipped question	**17**



Q16. What is your employment status?		
Answer Options	**Response Percent**	**Response Count**
Full-time employed	94.9%	203
Part-time employed	1.9%	4
Self-employed	0.5%	1
Student/College	0.9%	2
Retired	1.9%	4
Not employed	0.0%	0
Unable to work	0.0%	0
Other (please explain)		2
	answered question	**214**
	skipped question	**6**

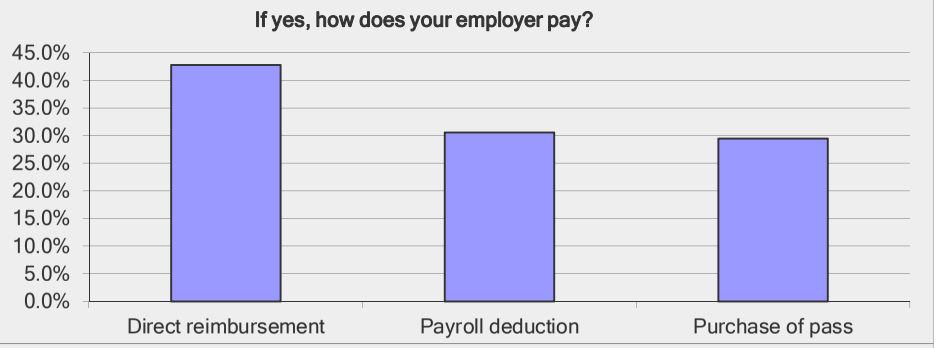


Q17. Does your employer pay a portion of the fare for your trip?

Answer Options	Response Percent	Response Count
Yes	91.6%	197
No	8.4%	18
	answered question	**215**
	skipped question	**5**

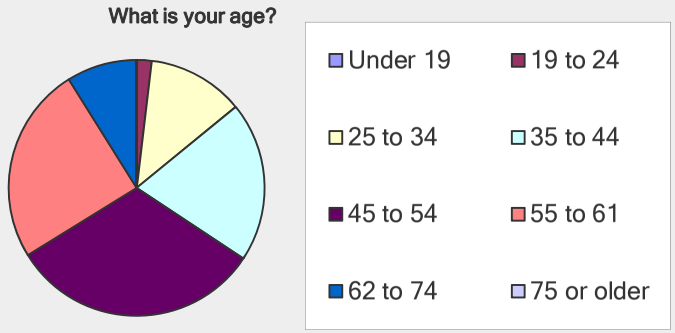
Q18. If yes, how does your employer pay?

Answer Options	Response Percent	Response Count
Direct reimbursement	42.8%	74
Payroll deduction	30.6%	53
Purchase of pass	29.5%	51
Other (please specify)		
Discounted pass		
Voucher		29
Partial subsidy		
Pay employer, employer purchases pass		
	answered question	**173**
	skipped question	**47**



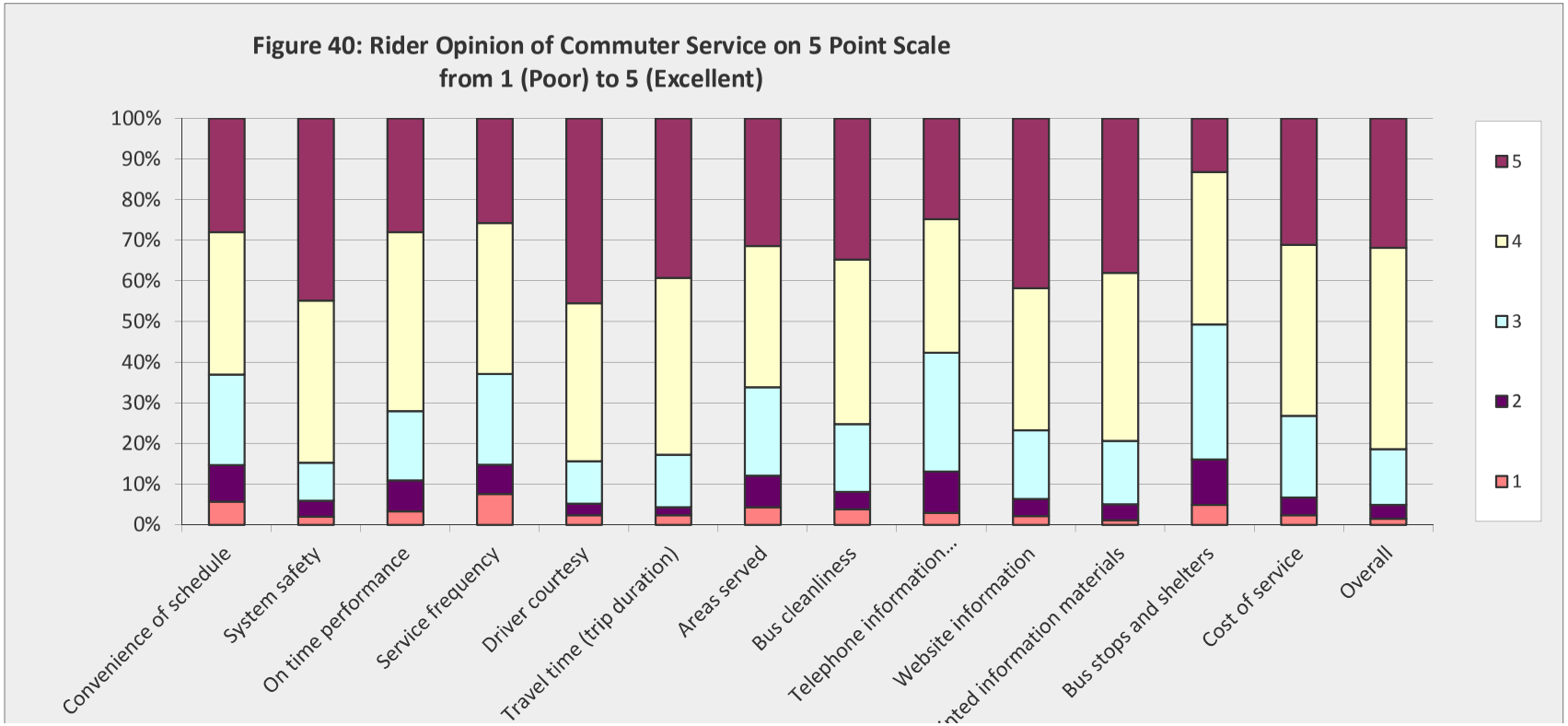
Q19. What is your age?

Answer Options	Response Percent	Response Count
Under 19	0.0%	0
19 to 24	1.9%	4
25 to 34	12.2%	26
35 to 44	20.2%	43
45 to 54	31.9%	68
55 to 61	24.9%	53
62 to 74	8.9%	19
75 or older	0.0%	0
	answered question	**213**
	skipped question	**7**



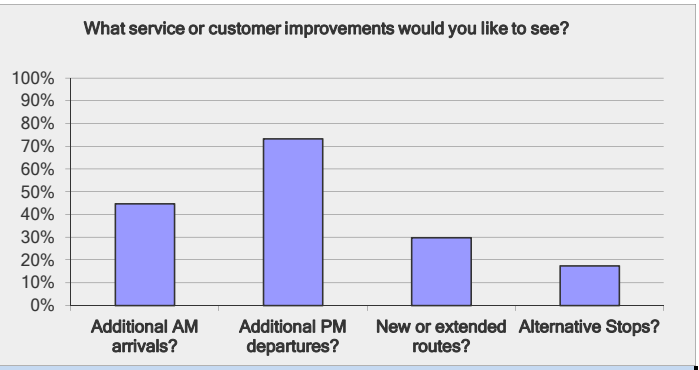
Q20. Please indicate your opinion of the commuter service from 1 to 5 using the list below, with 1 indicating "poor" and 5 indicating "excellent".

Answer Options	1		2		3		4		5		Response Count
Convenience of schedule	12	5.7%	19	9.0%	47	22.3%	74	35.1%	59	28.0%	211
System safety	4	2.0%	8	3.9%	19	9.4%	81	39.9%	91	44.8%	203
On time performance	7	3.3%	16	7.6%	36	17.1%	93	44.1%	59	28.0%	211
Service frequency	16	7.6%	15	7.1%	47	22.4%	78	37.1%	54	25.7%	210
Driver courtesy	5	2.4%	6	2.8%	22	10.4%	82	38.9%	96	45.5%	211
Travel time (trip duration)	5	2.4%	4	1.9%	27	12.9%	91	43.5%	82	39.2%	209
Areas served	9	4.3%	16	7.7%	45	21.7%	72	34.8%	65	31.4%	207
Bus cleanliness	8	3.8%	9	4.3%	35	16.7%	85	40.5%	73	34.8%	210
Telephone information services	4	2.9%	14	10.2%	40	29.2%	45	32.8%	34	24.8%	137
Website information	4	2.1%	8	4.2%	32	16.9%	66	34.9%	79	41.8%	189
Printed information materials	2	1.1%	7	3.9%	28	15.6%	74	41.3%	68	38.0%	179
Bus stops and shelters	10	4.9%	23	11.2%	68	33.2%	77	37.6%	27	13.2%	205
Cost of service	5	2.4%	9	4.3%	42	20.1%	88	42.1%	65	31.1%	209
Overall	3	1.5%	7	3.4%	28	13.7%	101	49.5%	65	31.9%	204
									answered question		**214**
									skipped question		**6**



Q21. What service or customer improvements would you like to see?

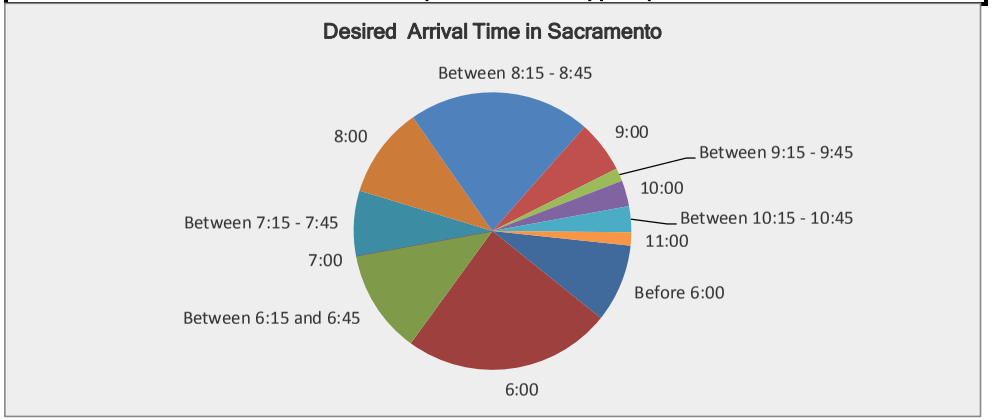
Answer Options	Response Percent	Response Count
Additional AM arrivals	44.7%	72
Additional PM departures	73.3%	118
New or extended routes	29.8%	48
Alternative Stops	17.4%	28
Other (please specify)		64
	answered question	161
	skipped question	59



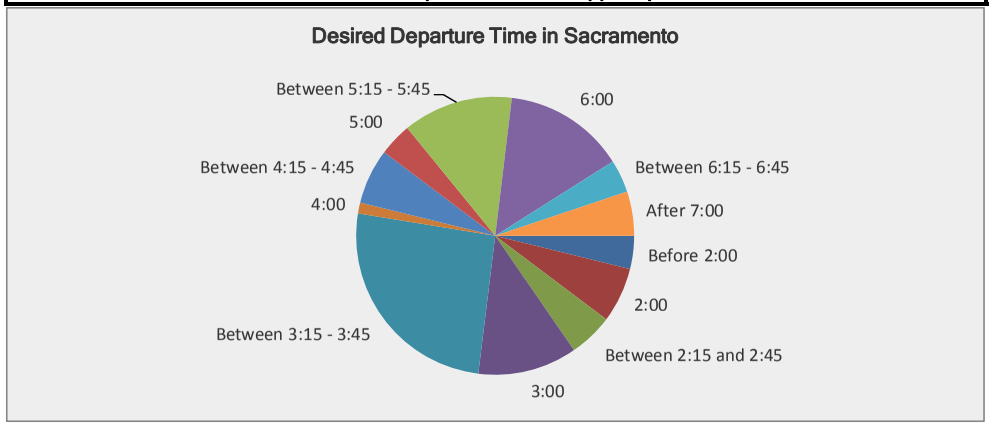
Other Response Text

Marysville departure 7:00 AM
Additional 70 commuter service
Earlier AM departures from YC to Sacramento
Noon midday stop in Plumas Lake
Earlier Friday AM departure due to traffic
Wheatland stop to sacramento on commuter
Foothill stops that coordinate with Sac routes
Hourly runs during the day between morning and afternoon commutes. Currently, there are three midday buses that go from Sacramento to Yuba/Sutter at 9, 12, and 2.
3:00 PM route leaving Sacramento
Middays cover all stops
More stops east of 21st and south of J in Sacramento
5:10 AM departure
Coordinate schedules with ALL greater Sac/Foothill area bus services
No other recommended improvements
Early afternoon/late morning bus that goes straight to Sacramento and/or early afteroon bus (2PM) that goes to Yuba City; not through Marysville
Additional midday service
There really needs to be a trash can provided at the Mcgowen shelter
More options for midday 70 runs, leaving Sacramento closer to noon
Morning return service should include Yuba City stops instead of stranding the rider in Marysville. Use of an around town route can take an hour or more to get back to your car.
Bus that goes out towards Elk Grove
Route through 99 for 3rd midday
Use a regular bus instead of the supplemental
Strongly recommed one more mid day after 12 Pm Hwy 99 route like you guys have for HWY 70 (2PM route)
On time afternoon departures!
Be flexible for late PM passengers due to lightrail delay, have courtesy
I would really love an AM bus going to downtown Sacramento betweent 7:30AM and 8:00AM from Yuba City Bogue Park & Ride...Currently the latest one I can take is at 6:55AM which I think is way too early. We should have an option between 7AM and 8AM.
Bus from Sacramento to Yuba City at like 8 or 9 PM
A bus between 12 and 4 for YC
Later PM bus
Earlier departures
For 2nd Mid-day to stop at Plumas Lake
Bus shelters that prevent rain and wind similar to the Bogue shelter.
It's pretty fine
Some of the buses smell
An earlier 99 or 70 to Sacramento to catch light rail; it's a coin toss now in the summer with good weather and I take the early AM bus.
Better mid-day bus system, and additonal PM departures
Gridley to Sac or connect to 1-99 AM & 2-99 PM
Automobile protection in park and rides.
Yuba City to Davis and Davis to Yuba City
Frequently, I have missed the last mid day leaving Sacramento and had to wait over an hour for the first 99. A 3 PM departure out of J and 4th would be most helpful.
None
I'd like to see a couple weekend routes.
More flexibility in schedule
As traffic increases, it will require earlier departures
Above for Hwy 70 Routes
N/A
FRONT DOOR PICKUP
No improvements at this time
Extended bus service beyond 15th Street to 30th Street
Additional Midday service
Tracking access to bus whereabouts (esp. if they are late)
Have another 70 route between 3rd and Mid-day
service to west sacramento
earlier departure
mid-day in the middle of the day that serves Hwy 70
A bus from Woodland would be nice.
Supplemental bus is needed on Fridays. 1st 99 is always packed.
Drivers leaving the stops on time ... one driver told me he sets his clock to the clock in the office and it is not set to world clock as our cells phones are
Right now the current stops and schedule work good for me.
Earlier bus & later busses for overtime hours... maybe small bus?
Mid-day drop off to the Gateways Oaks stop
Wi-fi
I would love a drop-off in the north Natomas area
Go to Rancho

Q22. If you want additional AM departures, when do you want them?	
Respondents who answered question	77
Respondents who skipped question	143



Q23. If you want additional PM departures, when do you want them?	
Respondents who answered question	130
Respondents who skipped question	90



Q24.If you want new or extended routes, where and when should they go?

Respondents who answered question	67
Respondents who skipped question	153

Other Response Text

6pm or later with more pickup 21st and south of J in Sacramento
8260 Longleaf Dr Elk Grove, CA 95758
A 70/99 that picks up from a stop closer to Loma Rica, Browns Valley, Oregon House
A bus earlier than the PM 199 on Fridays
Arden Arcade
Arden Fair
Avoid J Street coming in on J (take Richards Blvd exit & come in on H St
Beale Area, Yuba college to downtown
Between the 699 and the 1st mid day
Bogue
Browns Valley
Capitol mall near old Sacramento
Chico
Current route is fine
Davis daily
Davis, CA. Woodland, CA etc.
Depends
Elk Grove
Elk Grove to marysville ca
Extend the PM Overflow bus to Fridays.
From loma rica to gov center and back
from sac to 70 around noon.
Gridley to Sac or connect to 1-99 AM & 2-99 PM
Into YC, Bogue rd and into Downtown Sac J street
It would be nice to have a stop close to 2020 W. El Camino Blvd in Natomas so riders would not have to transfer downtown.
Live Oak
Live Oak Stop
Maybe add a stop near Garden and Shanghai Bend Intersection
Maybe someday to Natomas. But I just don't apply for jobs out there.
Midtown
Mirror the 4:15 pm route from the Caltrans D3 office to Sacramento sometime around 12 pm daily
More midday options to Plumas Lake would be nice.
More options to Natomas from/to Hwy 70
More routes from Sac in the a.m. from 6:00 - 7:30
Natomas, Elk Grove, West Sacramento
Natomas
Natomas
Natomas
Natomas (1 morning and 1 afternoon), even if there was only 1 bus, it would be a good start.
Natomas would be nice
North Natomas--specifically Gateway Oaks
Plan for evening routes to Sacto 4th & J stop for new arena.
Plumas Lake
Plumas Lake at 12:00
Plumas Lake on the noon bus!
Rancho
Richards Blvd in Sacramento
Sacramento Airport
Sacramento downtown from Yuba City commuter
Same loop just longer hours of service or bigger supplemental bus
San Francisco
see question to #23 ANS.
Start at Plumas Lake to new Riego Park n ride to Sac. This Express route would fill quickly when word got out. The Plumas lake is near capacity on
TBA
The 3rd MD should go to Bogue
West Sacramento
West Sacramento
West Sacramento (Harbor Blvd and Reed Ave.)
Wheatland
Wheatland (maybe at Bear River School?)
Woodland CA
Yuba City to Davis, CA Daily 6:30 a.m. and return at 5:30 p.m.
Yuba College
Yuba college departing am. Peach tree mall departing am.

Q25.If you want an alternative stop location, where do you want it?

Respondents who answered question	41
Respondents who skipped question	179

Other Response Text

N/a
Wheatland
natomas
Old sacramento
none
I want the Middays to all go to Bogue, Sams, Govt Center
8th & Capitol
the 12 noon bus should pick up at McGowan and Plumas Lake
None
NA
n/a
8260 Longleaf Dr Elk Grove, CA 95758
West El Camino & Gateway Oaks Drive
Return AM service should offer Yuba City destination (where the majority of the ridership originates).
Intersection of SR113 and SR99
North Natomas, near Natomas Market Place
Yuba college, and/or peach tree mall.
n/a
Calvine Rd
J&9 (nice if could add)
Depends on "New or Extended Routes"
Yuba College
Maybe a natomas area
Howsley, Riego, or Elverta
Bogue
Linda Walmart
City Hall
TBA
Gridley or Live Oak to Sac AM
Sacramento Police Deprt. (Richards Blvd)
See #22 and #23 above
Live Oak
NA
midtown
Accross from WalMart
Interchange 113/99
near 860 Stillwater Road, West Sacramento.
Natomas
Further south on Highway 99
Community Center, Sacramento
Larger Supplemental Bus and Run it every day especially on FRIDAYS

Q26.Other comments?	
Respondents who answered question	77
Respondents who skipped question	143

Other Response Text
Positive
The 6:38 am (Natomas to Marysville) morning bus driver brightens my day. He loves his job and does it well, with the best attitude. I like the nice green bus in the morning. Don't like the old white bus!
Luis is the best driver in skill and friendliness. Bruce and Sean are awesome as well :-)
I am very satisfied with the current service. Thank you.
Thanks for offering this service. Drivers are very friendly. It would be nice to have a late morning bus and early afternoon bus go straight to YC /Sacto
Jonathon (morning- 1st 99 bus) Excellent and Courteous Driver. Good choice in hiring.
I am very happy for the commuter buses that save me from driving in the rain and fog.
Thank you for providing this service :)
Overall, good job.
This is a long enough commute. no need to add to it.
Additional Runs
The space between the last AM bus and the first midday is too long. Put a bus inbetween for commuters who wish to start work at 8:30AM
An additional bus after 0645 and before 0755 would be helpful for some commuters.
Earlier 70 route home in evening
Add another morning am stop in Plumas Lake the 6:57 is WAY TOO CROWDED!!!! MY 3 year old 40 lb child should NOT have sit on my pregnant stomach. people never move for us.
There may not be enough interest or demand for an hourly commuter run, but that would be the ideal world, where people could leave on an hourly buses. Over all, the service is very reliable, only having delays when events beyond their direct control intefere with the commute.
If could have at least one more route departure from Sac that goes up Hwy 70 starting at least 45 min before current first 70 bus That way could get back earlier and not have to wait an extra hour if only work 8hrs and still want to catch the first earliest bus going to Sac.
Adding more buses would be nice
More buses/departure and arrivals in PL, just like YC
The PM 199 tends to be crowded with people that don't commute for work and pushes those of us that are daily users to later buses so a larger bus prior to the PM 199 especially on Fridays would be beneficial
Thank you. Please add additional morning times. It would be nice if there was a time departing McGowan about 7am. Incase someone is running late. Thank you.
Evening class routes
The 699 bus in morning that leaves to downtown Sacramento, needs to be bigger. Many time the bus been packed and one time 2 to 3 people stood because of no seating all the way to Sacramento. A bus that leaves from Yuba City to Sacramento and arrives in Sacramento Downtown at 9AM is very much needed for late commuter. Another request is only around holidays a bus that departures at 3PM from Sacramento downtown to Yuba City.
Additional evening run would be great. Maybe a complete circle through Yuba / Sutter County.
Driving in from the foothills - the existing services are too early - there are currently no services which leave Marysville between 0635 and 0800. Why are there so many very early services and no later services - makes commuting from the foothills very difficult.
I have to take the 1st midday bus & I am 15 minutes late to work everyday. It would be nice to have a bus that arrive shortly before 9 a.m. so I am not late to work.
At least during holidays weeks, should have extra bus at 3pm for people that are let off early. Every year, people let go around 2-3pm and we are stuck waiting upto a few hours for the bus.
I would love to have at least one commuter bus on weekends (Sat.?) in the morning and late afternoon.
Additional buses for non commuter ridership events in Sacramento like the Tea Party Rally etc.
You need more am buses returning to Yuba City. Often we get to work and get called from home about a sick child or family member and have to wait a very long time in order to catch a bus that goes back to Yuba City to care for that person. We miss so many chances to network because we can't stay late to go for drinks with the executives, or to an evening office event, if asked. Your fabric seats need to be vacuumed once in a while to cut down on dust particales in the bus, which causes illness and lung problems. If we have an early MD appointment, we have to stay home all day because If we miss the 699 we may also have difficulty making it to Marysville in time for that bus. By then it's just not worth making the trip.
The issue of additional departure times has been raised many times over the years by many riders. YS Transit has consistently held that the request cannot be accomodated due to funding or lack of interest. With ridership increasing the way it has over the last 5 years, it would seem the organization would be able to at least test the water to see if the requests can be accomodated. The public understands a pilot project that validates the costs against the benefit. However, consisently being told no when the appearance of increased ridership exists just seems more like indifference to the needs and requests of those that support the existence of YS transit.
Get a larger supplemental bus or add an earlier route ... supplemental fills up every day and also run it on Friday !!!

Other Response Text (continued)
Expand Geographic Service Area
A lot of people seem to commute from Loma Rica, Browns Valley, Oregon House, Dobbins area and have to drive all the way to Marysville to catch a bus. A bus that picks up along Highway 20 enroute to the Government Center would be nice.
More midday pick up locations from Sacramento to Plumas Lake/Marysville
The returning 12 noon bus should drop off at Plumas Lake.
One Direct bus from Yuba To Sac Downtown to Elkgrove will be great.
I realize you probably do not have enough ridership to stop in Natomas, but hey you asked. I may be transferring back to downtown, so i will ride the bus regularly again. It would be nice to be able to get to work by 6 or 6:30
Since my Department moved out of downtown, I have had to commute solo. Would be great to have a transit option that doesn't require a 13 hour + day.
Because of transfer it take me longer to get from downtown to west sacamento. From downtown to West Sacramento takes up to 1 hour in Am and 1 hour in PM. It will be better if Yuba Sutter Transit add stop in West Sacramento.. It could be after all sacramento drop off and pickup before Sacramento pickups.
Bus Stop Improvements
Bus shelter at 15th & N
Would like additional security measures for parked vehicles at Bogue park and ride, if possible
Finally feel safer at the park & rides. Camera & Lights seemed to have detoured car break in's
Onboard and Service Issues
1st midday driver will not wait for runners
The service is excellent-one of the main reasons I don't move out of YC. What needs to be added to the service is a rule that phone convos must be short and quiet. It is very annoying to listen to the personal domestic issues of others. El Dorado has (and enforces) this rule. We can, too, just like we do with no eating, no music, no standing near the driver. PLEASE POST THIS RULE - several notices need to be placed within each bus.
On Fridays, the bus usually comes late due to traffic. Maybe leave a little earlier to accommodate for time. Other than that, great job!
Put a sign on each bus notifying bus riders not to hog the seats. If they are paying for two seats, no problem. However, there are seat hogs on the bus. The seat hogs also give attitude when another passenger wishes to sit in the unoccupied seat. If the seat hogger wants to pay the extra $4.00, tell them to pay for it accomodate their personal belongings.
Yearly pass
I ride the 270 in the evening. The driver constantly talks and uses a great amount of hand movement during the commute. I feel at times her talking interferes with her driving. It's ironic that no signal lights exist until Feather River, but we get in the same time and most days we're later. I feel a driver should be friendly, but keep driving the bus a priority over constant chatting with the passengers. She is also very, very loud.
Support your riders with ADA issues. The drivers should help Disabled riders obtain the seats in front and help discourage non-handicapped from lounging on them and giving the handicapped a hard time. You walk with a cane to the back of the bus and see how easy it is.
I would like to have wifi available on the bus
Better coordination with the bus services from the greater sac/foothill areas.
More green busses
Need to provide buses that are more wheelchair friendly - putting on a wheelchair is a major ordeal for both the person that uses it and the other passengers on the bus.
Want all routes green buses-older models suck and smell diesel inside
Some of the buses going to sacramento are very old. The 699 in morning is always full yet it's always an old white bus. I would really appricate if Yuba-Sutter invests in replacing the old white buses with green newer ones.
Drivers need guidance on AC and Heating levels. In Winter sometimes no heat and in summer often too cold with AC on full.
Keep up the good works. Replace all old commuter buses with the big Green ones!
Cleaner midday buses please.
Some buses are in bad shape especially the air conditioner and heater. Sometimes the door doesn't want to close.
Morning on time performance good; evening return home fair depending on driver and time they are able to leave Yuba City/Mry & terrible J Street traffic betw. 3:30-5:00
Supplemental bus desparately needs shade on the driver side of the bus. Bus drivers allow drunk passengers, loud passengers and passengers that disturb other passengers. Many passengers are overweight and take up a seat and one half. Seating is tight. Some drivers prepare for hot days by keeping the bus freezing when it is 50 degrees and dark outside. You freeze on the mid-day bus. Very crowded and "smelly" on 4:00 hour buses.
Please make sure drivers do not depart last station before the stipulated time. I have had that problem several times at Bogue & 99 where drivers leave about 5 minutes earlier regardless of driver seeing people getting out of their cars and running trying to catch up with a departing bus, often half way full.
I feel the bus driver should step in when passengers are being loud and disruptive to the rest of us that are trying to doze. I truly think most passengers would appreciate a no-noise rule.
Other
Leaving directly from home takes 40 minutes to get to Sac. Using the bus take 1 hour 10 minutes
Need to change the payment system to digital
Overall good, responsive, customer oriented service. I will consider holding YST accountable if necessary for forcing me to expose my DL number on my check if identity theft becomes a problem.
Bus pass by mail is a great option for Sac commuters, thanks
I would prefer if the 1st 99 bus 'DID NOT' stop in Marysville first. Typically the bus is not packed but on some occassions it is. Also by the time we get into downtown Sac the first 70 Marysville arrives as well and sometimes it's 'empty'. Why does the Marysville group get '2' chances at the first stop?
Park and Ride security. My vehicle has been vandalized twice in year.
One thing I would add: I wish there was an easier way to get from my location to the government center. As it is, I would have to transfer from the 2A to something going across the bridge, which requires me to leave my house an hour early. It would be far more convenient if the 2A made a stop at the government center, or if the transfer were timed so as to avoid a long wait.
I'd like city route stops further north on Stabler Lane (perhaps Regency Park?)
Picking up passengers in Sacramento on the 1st 99 at the 1st stop many times makes commuters late to work. Is there any way passengers to YC/Marysville could be picked up at the last stop in Sacramento?
Overall good job; however, if a bus is going to be late, it would be nice if more info was available asap (email, app, etc.)
It would be nice if the 3rd midday bus went to Bogue Road.
The Mid day services not coming to YC is sometime inconvenient, but I don't use them all that often.