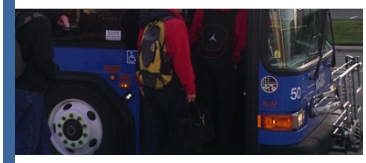
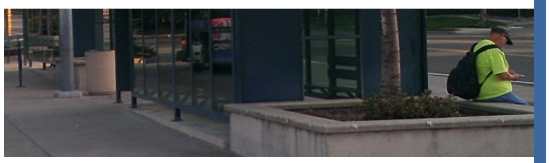
FINAL SHORT-RANGE TRANSIT PLAN

Redding Area Bus Authority

June 2014





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Caltrans

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Executive Summary

Purpose of Short Range Transit Plan

The Redding Area Bus Authority (RABA) last developed a Short Range Transit Development Plan (SRTP) in October 2007. The primary purpose of the SRTP is to guide the development of fixed and demand response transit for residents, employees and visitors in the RABA service area over the next five years. More specifically, the SRTP process:

- Provides opportunities for public and key stakeholder input into the future of public transportation throughout the RABA service area in parts of Shasta County.
- Conducts market research to determine who is currently riding RABA buses, how satisfied they are with the services provided, and priorities for improvements.
- Evaluates the recent performance of existing services.
- Establishes a mission statement, goals, objectives and performance standards.
- Provides service plan and fare recommendations.
- Develops communication strategies to provide RABA information on different market segments.
- Establishes a detailed operating and capital financial plan.

Overview of Existing RABA Services

RABA provides a network of fixed route and demand response services. The following is a brief overview of services provided.

RABA Fixed Route Services

RABA fixed route service consists of ten local routes and three express routes. The local routes operate 12 or 13 service hours per day, Monday - Friday, starting at either 6:00, 6:30, or 7:00 am. Saturday service commences three hours later than the Monday - Friday start time, but ends at the same times. There is no Sunday service.

All local routes depart from one of three RABA transit centers – six routes depart from the Downtown Transit Center, three from the Masonic Transfer Center, and five local routes from the Canby Transfer Center (TC). These routes all complete a loop in the span of one hour, and return to the starting point at the respective transit center with a couple of exceptions.

Very recently RABA started the practice of having the Route 11 bus continue as the Route 14 bus at the Canby Transfer Center. Likewise, Route 14 becomes route 11 at the Canby Transfer Center. With Route 11 being shorter with slack time in the current schedule, it has allowed Route 14 to more often stay on schedule.

The other exception is Route 9 between Anderson and the Downtown Transit Center, which has a frequency of every two hours. Route 9 alternates between one-hour one-way trips from Anderson to the Downtown Redding Transit Center and the reverse trip back to Anderson. The first trip of the day departs from Walmart in Anderson, and the last trip ends in Downtown Redding.

Overall, in FY 2012/13 RABA provided 40,798 vehicle service hours of fixed route service with an annual ridership of 807,894.

RABA Demand Response Services

RABA's demand response transportation service provides origin and destination transportation for individuals who, because of a disability, are not able to utilize a regularly scheduled fixed route bus service. RABA's demand response service provides Americans with Disability Act (ADA) Paratransit service. Demand response service is the same as paratransit service for the purposes of the SRTP. For ease of understanding, the more commonly understood demand response term will be utilized instead of paratransit.

The service area provision for ADA service is limited to ¾ mile of fixed route service. Service is provided during the same operating hours as fixed route services Monday to Saturday.

Overall, the FY 2012/13 RABA demand response service provided 17,327 vehicle service hours and annual ridership of 55,699.

Recent Systemwide Performance Trends

Performance in FY 2012/13 showed very positive improvement in overall performance compared to the past two fiscal years. Overall ridership increased by 20.1% from FY 2009/10 to 869,050 in FY 2012/13. Impressively, overall fare revenue increased by 16.4% while costs were flat over the two past fiscal years, increasing only 1.2% over the past four fiscal years.

These very positive systemwide base statistics had a very positive upward swing to overall performance measures. The farebox recovery ratio systemwide increased from 15.1% to 17.3%. Systemwide productivity increased from 10.8 passengers per hour to 14.6 passengers per hour. Importantly, the cost per trip decreased by 15.8% since FY 2009/10. The subsidy[1] per trip declined by almost one dollar from $6.07 to $5.10 between FY 2010/11 and FY 2011/12 and dropped further to $4.87 in FY 2012/13.

[1] (Operating cost - fare revenue)/fare revenue

Transit Needs And Financial Constraints

RABA Rider Profile

From an onboard survey of RABA passengers, a key finding was that most of RABA's riders are quite dependent upon public transportation. The majority (58%) had neither a driver's license nor a car available for the trip on which they were surveyed, while another 33% lacked either a vehicle or a driver's license.

About two thirds (65%) of RABA riders are employed, students, or both. About 30% are employed non-students, 26% are students only and 9% are employed students. The other third of the ridership is made up of persons with disabilities who are unable to work (16%), unemployed persons (10%), retirees (6%) and homemakers (2%).

Most RABA riders are quite low income. Three quarters (74%) report annual household incomes of under $15,000, while another 12% report household incomes between $15,000 and $20,000.

Desired Passenger Improvements

The onboard survey asked passengers to rate a range of potential improvements to the RABA fixed route service.

Two potential improvements tied for first place:

- Buses running on-time is an improvement to existing service.
- Extended hours on weekdays to 8:30 pm is an expansion of service.

Two additional expansions of service were rated very high by RABA passengers and key stakeholders alike:

- Sunday service
- 30 minute service during key travel times

Financial Constraints to Meeting Transit Needs

Based on input from key stakeholders and RABA Board, the service plan presented in the SRTP is financially constrained to the current budget of vehicle service hours. Therefore, service plan actions that would extend hours to 8:30 pm, Sunday service and 30 minute service during key travel times are not feasible without increasing the budget for RABA.

About 2/3 of funding for RABA is from the Transportation Development Act including the Local Transportation Fund and State Transit Assistance. The Local Transportation Fund (LTF) funding source comes as ¼ cent from the sales tax as authorized by the Transportation Development Act approved in 1971. Therefore, available funds increase when increased local sales tax revenues increase. The LTF funds, per the 1971 law are for public transportation purposes. However, in

some rural counties Including Shasta County, funds can be utilized for streets and roads purposes only when the Shasta Regional Transportation Authority (SRTA) makes a finding that there are no transit unmet needs that are reasonable to meet. This is governed annually by the unmet needs process administered by SRTA. SRTA adopts criteria that defines unmet needs and what is reasonable to meet.

SRTA prepares a detailed Unmet Transit Needs Assessment each year. In the latest SRTA report for FY 2012/13, Figure ES-1 provides a breakdown that shows that only 58% of available TDA funds are utilized for transit purposes. The City of Redding utilizes 87% of funds for transit purposes and Shasta County only utilized 14% for transit purposes in FY 2012/13.

Figure ES-1 Transportation Development Act Transit Funding Apportionments

FY 2012/13	Transit Obligations	Streets and Road (other)	Total Available	Percent Transit use
City of Redding	$ 3,630,751	$ 524,558	$ 4,155,309	87%
City of Shasta Lake	$ 241,991	$ 214,631	$ 456,622	53%
City of Andereson	$ 214,126	$ 232,630	$ 446,756	48%
Shasta County	$ 388,191	$ 2,305,009	$ 2,693,200	14%
Total	$ 4,475,059	$ 3,276,828	$ 7,751,887	58%

Source: p.24 of FY 13/14 SRTA Unmet Transit Needs Assessment

If the SRTA makes a finding that any potential transit need identified above is an unmet need that is reasonable to meet, then the participating RABA agencies are required to increase their respective budgets to total TDA dollars available to meet the transit need. Therefore, the Core Plan in the service plan alternatives and recommended plan are based on the existing RABA budget. Optional services are considered for future implementation if monies become available or are considered desirable by the RABA Board.

RABA Fixed Route Service Alternatives

The goal of the service alternatives was to develop a preliminary service plan that used the extensive market research to achieve the mission of the RABA Board: “Serve transportation disadvantaged populations in the RABA service area in the most cost efficient manner as possible.” The consulting team was directed by RABA Board to design an alternative core RABA route system within existing available vehicle service hours and miles. The preliminary service alternatives were based on the consulting team analysis of the survey data including origin and destination patterns, transfer patterns from the survey data, schedule adherence and boarding and alighting data. Qualitative input from the stakeholder interviews and focus groups was also considered. The preliminary alternatives were data driven and based on both the quantitative and qualitative market research conducted for the study, but needed to be field-tested with input from RABA staff and Veolia staff.

- Passenger travel time by RABA fixed routes is too long between common and origin and destination pairs.
- Transit trips need to be more direct, and less time consuming.
- Service reliability needs to be improved with good schedule adherence.
- Two-way travel along the same route will provide more direct service and improved passenger convenience.
- Bus interlining is an effective operational strategy to help to achieve several of the above objectives.
- There are good cost-effective optional express and mobility management services that could add substantial value to the RABA system, but would exceed the existing vehicle service hour budget.

Based on these design goals, two distinct service alternatives were developed by the consulting team and RABA staff and reviewed first by the RABA Board and then through public input at three community workshops in Anderson, Redding and the City of Shasta Lake in November 2013. In addition, two focus groups were held with CalWorks participants and Shasta College students.

RABA Staff Recommended Fixed Route Service Plan

Based on the review of service alternatives, RABA staff is recommending the service plan shown on the Figure ES-2 map. The Masonic Transfer facility would be replaced with a transfer facility at Waterworks Park, tentatively named the North Redding Transfer Center. The new service plan would be implemented in January 2015.

The following are the proposed key changes to the RABA fixed route structure and are shown in Figure ES-2.

Route 1

- Operates as two-way service between the North Redding Transfer Center and Oasis and Lake Blvd.
- Route 1 remains the same one-way loop on Lake Blvd, north Oasis Blvd, Shasta Dam Blvd, Cascade Blvd, and Oasis Blvd to Lake Blvd.

Route 2

- One-way routing[2] on existing counter-clockwise loop.
- Clockwise loop eliminated.
- New one-way loop to replace current Route 3 loop along Park Marina Drive. Loop extended south to South Market and Ellis.

[2] One-way loop is service in one direction only on the route or the street.

Final Proposed Fixed Route Plan

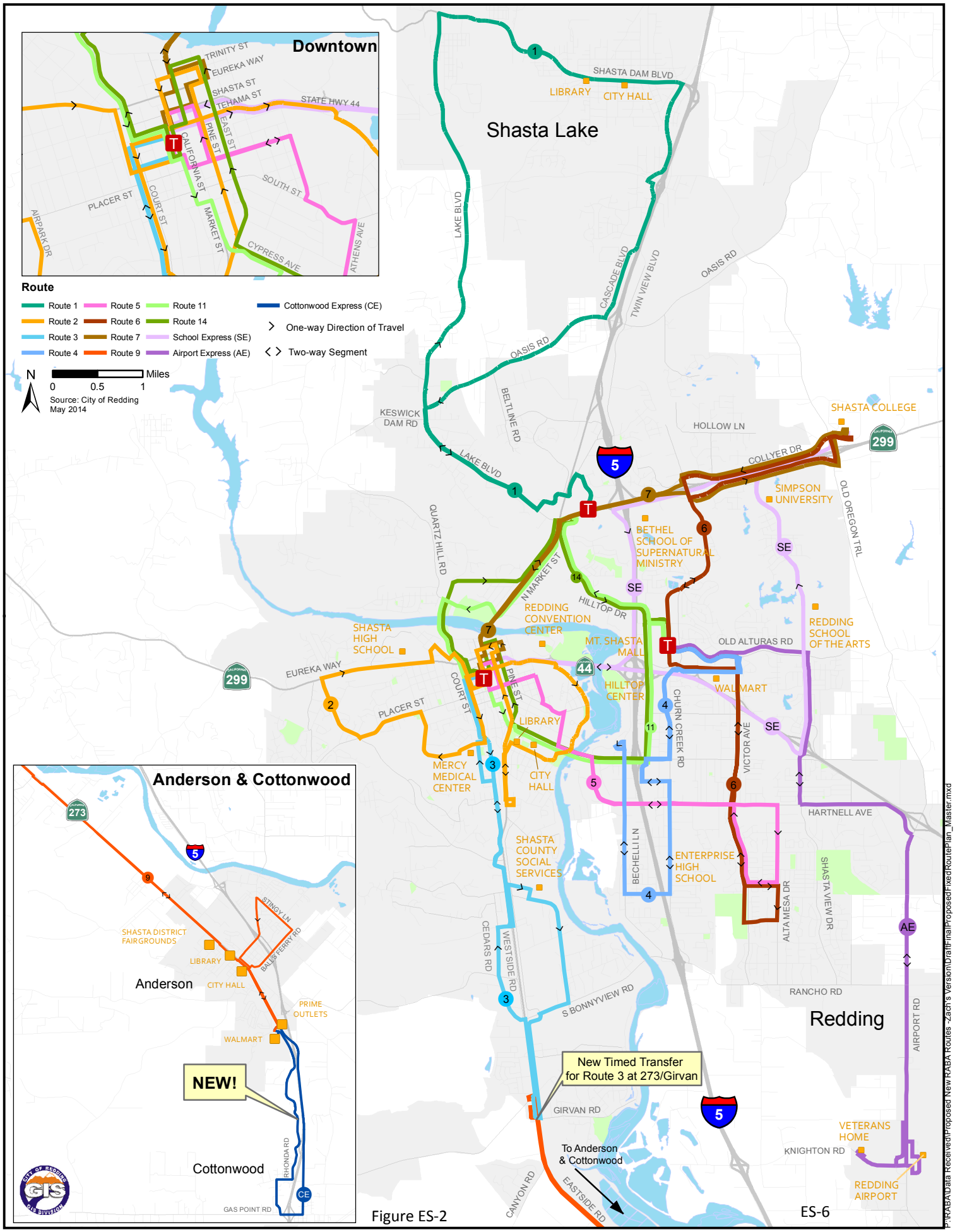

Figure ES-2

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Route 3

- One way loop along Park Marina Drive replaced with Route 2 segment described above.
- Route 3 southbound becomes Route 9 south of Westside and Girvan.
- Route 3 passengers boarding on southbound segment before Westside and Girvan, must transfer to a Route 9 bus that become Route 3 northbound at Westside and Girvan.

Route 4

- Two-way service along Bechelli, Loma Vista, and Churn Creek Rd.
- Route deviates to serve K-Mart and Ross.
- Route 4 north of Canby Transfer Center replaced with Route 6 segment.

Route 5

- Route is same west of Victor Avenue.
- East end loop on Hartnell, Shasta View and Goodwater eliminated.
- Route would travel south on Victor to El Vista, currently served by Route 6. Connects with Route 6 at Galaxy near Victor.

Route 6

- Segment between Canby Transfer Center and Downtown Transfer Center eliminated.
- Southern end of route would remain similar as exiting on Victor Ave and would connect with Route 5 at the southern end.
- Route 6 new segment would extend north from the Canby Transfer up Churn Creek Road and then head to Shasta College.

Route 7

- Provides direct service between Shasta College and Downtown Transit Center.
- Two-way service on Market St. and Lake Blvd.
- Transfer opportunities at North Redding Transfer Center.
- Outbound one-way routing to Shasta College along College View Dr.
- Inbound one-way routing from Shasta College along Collyer Dr.

Route 9

- Route 9 would eliminate section of north of Clear Creek Road on SR 273.
- The northern end of the route would create a timed transfer with Route 3 at Westside and Girvan Road.
- Eliminates two-way service within the City of Anderson.
- Service would be direct along 273 south to Walmart in 20 minutes, then a 20 minute one-way loop through the City of Anderson and return to Walmart, then a 20 minute service north along SR 273 to the Westside and Girvan Road.
- Route 9 and Route 3 would be interlined to provide a one seat ride from the Downtown Transfer Center to Anderson and from Anderson to the DTC.
- One Route 9 run in the morning and one run in the afternoon will originate and terminate in Cottonwood. The route will be interlined with Route 3 and Route 7 for a one-seat ride to and from Shasta College.

Route 11

- Route 11A will start at the Canby Transfer Center and travel counter-clockwise hourly along the existing Route 11 and Route 14 routing.
- Route 11B will start at the Downtown Transfer Center and travel clockwise hourly along the existing Route 14 and Route 11 routing.
- The combined two-way loop will provide a one-seat ride and timed transfers at the Canby Transfer Center, Downtown Transit Center and North Redding Transfer Center.

Airport Express

- Remains the same.

School Express

- Expanded to provide two trips in the morning to Shasta College.
- Existing runs that serve School of the Arts and Simpson University along Shasta View Drive on the way to Shasta College remains the same.

Burney Express

- Remains the same in January 2015, but a third run is added in FY 2015/16.

Optional Fixed Route Services

The following are services that could be considered if financially feasible or meet unmet needs and reasonable to meet criteria**:**

- Provide special routes in partnerships with Far Northern Regional Center, Shasta Opportunity Center, Bethel Spiritual Ministries, Shasta High School, and CalWorks.
- Expand service to 30 minutes on core routes during peak commute times and other times when demand warrants.
- Expand evening hours by one hour on highest demand routes.
- Provide special community route designed for seniors and the disabled in Central Redding.
- 60 minute service during peak period on Route 9 from Anderson to Redding.
- Change schedule for Burney Express for layover in Burney from Redding.
- Freeway express service from Cottonwood and Anderson to Shasta College

Demand Response Recommendations

Eligibility For Senior Nutrition Program Services

According to stakeholders, based on a rule established by the RTPA in 2009, the Shasta Senior Nutrition Program (SSNP) is not able to serve people within the Redding paratransit area who qualify for ADA service. They can serve seniors (60+) who have applied for and been denied ADA certification. They also serve some long time riders who were “grandfathered” in at the time the rule was made. Some seniors in Redding would prefer to use the senior bus (SNP bus) as it is a $1.50 round trip donation instead of a $3.00 one-way fare on RABA’s demand response service.

A policy change that would enable a "win-win" situation for seniors and disabled individuals who currently qualify for ADA Paratransit service would increase revenue and productivity for the coordinated services.

Recommendation

SRTA is sponsoring a coordination study in 2014 among human service agencies and RABA. This issue should be fully addressed in the upcoming Consolidated Transportation Services Agency SRTA Coordination Study.

Contracting with Shasta Senior Nutrition Program for ADA Services in Anderson and City of Shasta Lake

Since the Shasta Senior Nutrition Program's service are not part of the scope of services for the Short Range Transit Plan, the potential for having the Shasta Senior Nutrition Program operate at least a portion of the ADA Paratransit Service provided by RABA has not been fully addressed and analyzed.

At the surface, there appears to be some duplication of service between SSNP and RABA Demand Response Services, especially in the City of Shasta Lake and Anderson. A contract arrangement wherein all ADA service level criteria, as described above, are included could be an excellent means of reducing overall demand response costs in Shasta County.

Recommendation

SRTA is sponsoring a coordination study in 2014 among human service agencies and RABA. This issue should be fully addressed in the upcoming SRTA Coordination Study. Overall, there would appear to be significant potential for better coordination of SNP and RABA demand response services. If SNP can operate ADA Paratransit service at a cheaper price than the current arrangement, then the findings and recommendations of the SRTA Coordination Study should be implemented soon.

Fare Recommendations

Eliminate Zone Change Monthly Pass, Retain Existing Zone Cash Fare

The recommendation is to keep the existing zone fare at $0.75 for regular fares and $0.40 for senior/disabled, but to eliminate the zone change monthly pass. Residents of Shasta Lake and the City of Anderson could purchase the regular monthly pass at $48.25 and the senior/disabled monthly pass at $24 per month.

Replace Existing Punch Card

It is necessary to replace the existing punch card with another multi-ride ticket of a $10 value. The longer-term solution is a stored value magnetic strip or a smart card. In the interim, it is

recommended that three 10-ride ticket books be sold for agency and passenger convenience: 10 ticket books at $7.50 ($0.75 per ticket), $15.00 ($1.50 per ticket), and $22.50 ($2.25 per ticket).

Implement Picture ID Discount Card

It is recommended that RABA implement a picture ID discount card for individuals who want to receive a discount. Due to the very high senior and disabled ridership on the RABA system, it is imperative that RABA management has in place controls to ensure that individuals who receive the discount are legitimate.

Increase the Senior Discount Age from 62 to 65

It is also recommended that the age limit be raised from 62 to 65 years of age. This is when senior are eligible for Medicare and meets the FTA guidelines for half-fares.

Eligibility of Military Veterans for RABA Discounted Fares

The RABA photo ID discount card would enable RABA to issue military veterans a discount card if the RABA Board desires to extend the discount. There is no FTA requirement to require issuance of discount cards to non-disabled veterans, but RABA does have the discretion to provide this to individuals who have served the United States in military service.

Expand Partnerships

There would appear to be significant opportunity to further partnerships with Bethel, Shasta Unified School District, Far Northern Regional Center, Shasta College and the Department of Social Services, including CalWorks. The benefits of these partnerships have been demonstrated with the IASCO partnership.

Guidelines for Considering Future Fare Increases

1. Continue to pursue partnerships that will yield similar results as the IASCO partnership. This will increase ridership, revenue, and farebox recovery without the need for a fare increase. Even if only two of the above suggested partnerships come into fruition over the next couple of years, it will significantly reduce the need for a fare increase during the five year planning horizon of the Short Range Transit Plan.
2. Implement strategies that keep the fixed farebox recovery ratio above or near 19%. Several of the fare policy recommendations are meant to increase the average fare and fare revenue. Increasing the age required to receive a senior discount from 62 to 65 is one such strategy. Implementing a new photo ID discount card will ensure that only eligible individuals receive the half-fare discounts.
3. The new service plan alternatives being considered are meant to reduce the average travel time between key origins and destinations and improve passenger convenience and increase overall ridership. The changes should increase fare revenues but will need at least one to two years to reach its full potential.

4. A fare increase should be considered if every effort in #1 to #3 above are not successful in keeping the fixed route farebox recovery at or above 19% and the farebox recovery level for fixed service falls below 17% in a fiscal year. A fare increase should be considered as a last resort to keeping the combined system farebox recovery above 15%.
5. The cash fares originally proposed in 2011 with the base fare increasing from $1.50 to $1.75 would be the desirable increase in the base fare only if it is not possible to keep the combined system farebox recovery above 15%. The senior/disabled fare would increase from $0.75 to $0.85. The increased base fare of $0.25 is an 18% increase. It is recommended that the monthly pass fare price be raised at half that rate at 9%. This will encourage additional purchases of monthly passes. If that were not successful in achieving revenue objectives, then the monthly pass would be increased by another 9%.

Financial Plan

The following are key findings from the financial plan components:

- Operating Expenses
- Operating Revenues
- Capital Expenditures
- Capital Revenues

It should be noted that the financial plan is a 5-year financial planning document to work from. Based on current circumstances, there may be a need to make adjustments in the annual budget to reflect current conditions.

Operating Expenses

There are four main components of operating costs:

- The amount of service supplied.
- The cost of the operations and maintenance contractor to operate that service.
- Administrative staffing required to manage and communicate RABA services as well as lead the significant capital improvement program and provide ongoing quality assurance to transit operations.
- Fuel costs.

The recommended service plan would actually reduce the number of vehicle service hours supplied by RABA from 59,643 in FY 2012/13 to 59,013 in FY 2018/19. This includes slightly over 3,000 demand response vehicle service hours that would be contracted to the Senior Nutrition Program in FY 2017/18.

Including the new contract with the Senior Nutrition Program and the operations contract with Veolia, contracted operations costs would increase from $3.3 million in FY 2012/13 to just under $4 million in FY 2018/19.

Administrative costs remain at 12% of total operating costs between FY 2012/13 and FY 2018/19. The industry standard is to keep administrative at or below 15% and RABA is well below the industry standard.

Fuel costs are expected to increase at an average of 4% per year, well above recent inflation rates.

Overall RABA operating expenditures are expected to increase from $5.5 million in FY 2012/13 to $6.4 million in FY 2018/19.

Operating Revenues

Operating revenues include:

- Passenger fares
- Local State funding sources
- Federal funding sources

Passenger Fares

Passenger fares are the cumulative total of passenger fares for RABA Fixed Route, Demand Response and the Burney Express.

Fixed route fare estimation is based on several factors, and the true impacts will not be known until the proposals in this SRTP are implemented. The Fixed Route Service Plan is designed to provide more direct and reliable service, and will generally enable more one seat rides and decrease the number of transfers in many cases. The primary exception to this will be increased transfers on Route 3 with the RABA staff proposed Route 3 and 9 alignments. Each time a passenger boards a bus, he or she is counted as a passenger. If a person has to transfer twice for the same trip, it is counted as three passenger trips because they boarded a bus three times. The odd paradox in passenger trip accounting for a transit system is that the fewer transfers, the lower number of passengers trips counted.

Paradoxically, based on the above, the total number of people who utilize RABA is expected to increase when the new service is implemented, but the total number of passenger trips (boardings) is expected to decline by 10% or more. It is projected that there will be short term fare revenue decline, but as the average fare and the total number of people who utilize RABA increases, the fare revenues on RABA fixed route is expected to increase from $684,805 in FY 2012-13 to $821,000 by FY 2018/19. Based on the discussion above, there is a great deal of uncertainty with this projection and assumes the successful implementation and communication of the entire SRTP plan.

Local and State Operating Revenues

Two-thirds of total RABA funding comes from the Transportation Development Act (TDA) consisting of two sources, the Local Transportation Fund and State Transit Assistance.

The Local Transportation Fund (LTF) funding source comes as ¼ cent from the sales tax as authorized by the Transportation Development Act approved in 1971. Therefore, available funds increase when increased local sales tax revenues increase. The LTF funds, per the 1971 law are for public transportation purposes. However, in some rural counties including Shasta County, funds can be utilized for streets and roads purposes only when the SRTA makes a finding that there are no transit unmet needs that are reasonable to meet. This is governed annually by the unmet needs process administered by SRTA. SRTA adopts criteria that defines unmet needs and what is reasonable to meet.

The second source of funding is State Transit Assistance funding which is derived from statewide sales taxes on diesel fuel. Funds are derived from State Public Transportation Account. STA funds can only be utilized for transit purposes, but can be utilized for either operating or capital purposes.

Overall, TDA funding for transit purposes is expected to increase from $3.7 million in FY 2012/13 to $4.2 million in FY 2018/19.

Federal Operating Funding

FTA 5307 funds are federal formula funds administered by Caltrans for small urbanized areas like the RABA service area. Funding for small-urbanized areas under 200,000, and may be utilized for both operating and capital purposes.

Congress will soon be discussing reauthorization of federal transportation funding, including FTA 5307 funding. Historically, FTA 5307 funding has received a 15% increase when reauthorization is approved. Conservatively, the increase is estimated at 10%, with operations funds from federal sources increasing to $825,000 annually.

In recent years, RABA has received $1.4 million annually in FTA 5307 funding and has budgeted $750,000 for operating purposes, with the remainder utilized for capital purposes. Federal funding of operations is expected to increase from $750,000 annually to $825,000.

Capital Expenditures

There are three major categories of capital expenditures:

- Vehicle acquisition and replacement
- Passenger amenity capital procurements
- Equipment and minor facilities

Vehicle Needs and Replacements

In January 2015, there will be a need for fleet peak pullout (the maximum number of vehicle in service at any one time) of 12 full size transit buses and 16 demand response smaller cutaway buses. With necessary spares, the total fleet size will be 36. With the implementation of optional services, there will be a peak pullout of 30 buses in FY 2018/19, two more than today. With the goal of a 20% fleet spare ratio, the total fleet size can be reduced to a total of 36 buses. RABA will replace 21 buses over the next five years at a cost of $3.3 million.

Passenger Amenity Capital Procurements

The passenger amenity capital procurement recommendations are intended to provide RABA with both a management tool and to increase available information to RABA passengers. RABA will be developing a detailed RFP for procurement of a suite of technologies that should be fully integrated, professionally installed and tested, with significant knowledge of bus electronic systems. There are several vendors who provide such a suite of technology applications that should be fully integrated to both meet RABA management and passenger information needs.

At the heart of the hardware is automatic vehicle location or AVL for short. AVL systems are widely used in the public transportation industry as a way to track where vehicles are located in their respective service areas. In simple terms, AVL has two major parts: 1) geographic positioning systems (GPS) that track the real-time location of the bus and 2) software that displays the location of the buses on a map. An AVL tracking system will be procured in FY 2013/14. In FY 2016/17, real time passenger information, video displays at each transfer center, automatic passenger counters, and vehicle annunciators to automatically announce passenger stops will be purchased.

RABA management has done an excellent job in providing bus stop and bus stop sign infrastructure throughout the RABA system. At the bus stop level, stops are clearly marked and heavily utilized stops have bus shelters. There are several important improvements to bus stops that should be made over the next five years:

1) New bus stops for the two-way routing on many RABA routes as part of part of the recommended reconfigured RABA system.
2) Labeling each bus stop with bus stop numbers to enable access to the proposal AVL real-time passenger information system.
3) Strategically adding new bus stop shelters that are not being provided by the bus stop shelter vendor.
4) Providing improved ADA access to and from the bus stop location. This is critically important due to the very high number of disabled individuals who are riding on the RABA Fixed Route system.
5) Relocation of the Masonic Transfer Center to the Waterworks area in a new North Redding Transfer Center. Most of the street improvements are potentially being made as part of a

development proposal and is being currently reviewed as part of the community development approval process. There will be a need for bus shelters, trashcans and wayside information signs.

A total of slightly more than $1,000,000 is being allocated for bus stop improvements. A majority of this funding will need to be utilized to improve pedestrian and ADA-compliant access to and from the bus stop in a strategic manner.

Equipment and Security

There are a number of equipment and security enhancements that RABA will need to procure over the next five years. These include:

- Upgrades to the farebox equipment
- Replacement and upgrades to the Demand Response Mobile Data Terminals (MDTs)
- Security upgrades as part of the bus stop and transfer center upgrades
- Office equipment and computer replacement
- Shop equipment replacement
- Miscellaneous minor equipment

Capital Revenues

RABA currently utilizes four sources of funding, two of which are also utilized for operations funding: Transportation Development Act and Federal Transit Administration 5307 funding.

Transportation Development Act

The source of Transportation Act (TDA) was described above in the Operating Revenues section. TDA funding for capital purposes is needed to provide local match for capital procurements, typically 20% of the capital costs. In the past, RABA has had the flexibility to utilize PTMISEA funding for local match, but PTMISEA ends in FY 2015/16. TDA funds will increasingly need to be utilized for local match in the outer years of the SRTP.

Federal Transit Administration 5307 Funds

As explained above in Operations Revenue, RABA currently receives about $1.4 million in FTA 5307 formula funding and currently utilizes about $750,000 annually for operations. FTA 5307 funds will be increasingly important for vehicle replacements after PTMISEA funds are no longer available. The next round of bus replacements in FY 2020/21 will require RABA to carryover FTA funding in order to have sufficient funds stockpiled for fleet replacement. This requires that a minimum of 50% of the FTA 5307 funds are utilized for capital procurements and set asides for future procurements.

Proposition 1B PTMISEA

As approved by the voters in the November 2006 general election, Proposition 1B enacts the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006. Statewide,

this is a $19.925 billion state general obligation bond that is meant to fund high priority projects. There are 16 different programs under Proposition 1B, and two directly benefit Shasta County for transit purposes. Overall, RABA has had access to $6.7 million in PTMISEA funding for capital procurements of all types including vehicle acquisitions, solar canopy over the maintenance facility parking, Downtown Transit Center improvements, among many others. There are currently $3,169,000 funds remaining that need to be programmed over the next three years.

Proposition 1B CalEMA Security

The Transit System Safety, Security, and Disaster Response Account of Proposition 1B, commonly referred to CalEMA can be utilized for safety and security projects. RABA received $153,000 annually through FY 2016/17, but must utilize the money for eligible safety and security projects.

Financial Plan Summary

Figure ES- 3 is a summary of Operating and Capital expenses and revenue over the five year of the Short Range Transit Plan. During the five year time period a total of $35 million will be expended on RABA services. A combination of passengers fares, local, state, and federal funding sources will provide the necessary revenue to support RABA services.

Figure ES- 3 Summary of 5-Year Operating and Capital Expenses and Revenue

	FY 2014/15 Projected	FY 2015/16 Projected	FY 2016/17 Projected	FY 2017/18 Projected	FY 2018/19 Projected
COSTS					
Operating Costs					
Operating Costs	$ 4,934,127	$ 5,077,993	$ 5,261,984	$ 5,426,706	$ 5,640,259
Administrative Costs	$ 775,860	$ 741,104	$ 730,189	$ 748,544	$ 767,832
Total Operating Costs	$ 5,709,988	$ 5,819,097	$ 5,992,173	$ 6,175,250	$ 6,408,091
Capital Expenditures					
Vehicle Acquistion	$ 180,000	$ 1,519,421	$ 229,910	$ 287,455	$ 269,763
Passenger Amenities	$ 500,000	$ 407,000	$ 322,400	$ 100,000	$ -
Equipment	$ 313,000	$ 508,000	$ 253,000	$ 92,000	$ 10,000
Total Capital Exp.	$ 993,000	$ 2,434,421	$ 805,310	$ 479,455	$ 279,763
Total Costs	$ 6,702,988	$ 8,253,518	$ 6,797,483	$ 6,654,705	$ 6,687,854
REVENUES					
Operating Revenues					
Fares	$ 954,880	$ 946,408	$ 995,968	$ 1,047,744	$ 1,093,088
Local and State	$ 4,005,107	$ 4,047,689	$ 4,171,205	$ 4,302,506	$ 4,490,003
Federal	$ 750,000	$ 825,000	$ 825,000	$ 825,000	$ 825,000
Total Op. Rev.	$ 5,709,988	$ 5,819,097	$ 5,992,173	$ 6,175,250	$ 6,408,091
Capital Revenue					
TDA	$ -	$ (0)	$ 130,462	$ 95,891	$ 55,953
Proposition 1B	$ 993,000	$ 1,160,374	$ 153,000	$ -	$ -
Federal	$ -	$ 1,274,047	$ 521,848	$ 383,564	$ 223,810
Total Capital Revenue	$ 993,000	$ 2,434,421	$ 805,310	$ 479,455	$ 279,763
Total Revenues	$ 6,702,988	$ 8,253,518	$ 6,797,483	$ 6,654,705	$ 6,687,854

1. Introduction

This introductory chapter provides the purpose of the Short Range Transit Plan (SRTP), the methodologies utilized in the planning process, an overview of existing services, recent developments in RABA service, recent performance trends and an overview of the remaining SRTP chapters.

Purpose of Short Range Transit Plan

The Redding Area Bus Authority (RABA) last developed a Short Range Transit Development Plan (SRTP) in October 2007. The primary purpose of the SRTP is to guide the development of fixed and demand response transit for residents, employees and visitors in the RABA service area over the next five years. More specifically, the SRTP process:

- Provides opportunities for public and key stakeholder input into the future of public transportation throughout the RABA service area in parts of Shasta County.
- Conducts market research to determine who is currently riding RABA buses, how satisfied they are with the services provided, and priorities for improvements.
- Evaluates the recent performance of existing services.
- Establishes a mission statement, goals, objectives and performance standards.
- Provides service plan and fare recommendations.
- Develops communication strategies to provide RABA information on different market segments.
- Establishes a detailed operating and capital financial plan based on three financial scenarios.

Overview of Existing RABA Services

RABA provides a network of fixed route and demand response services. A full description, analysis, and recommendations for fixed route services is provided in Chapter 4. For demand response service, a description of eligibility and policies as well as recommendations for the future are included in Chapter 5. The following is a brief overview of services provided.

RABA Fixed Route Services

RABA fixed route service consists of ten local routes and three express routes. The local routes operate 12 or 13 service hours per day, Monday - Friday, starting at either 6:00, 6:30, or 7:00 AM. Saturday service commences three hours later than the Monday - Friday start time, but ends at the same times. There is no Sunday service.

All local routes depart from one of three RABA transit centers – six routes depart from the Downtown Transit Center, three from the Masonic Transfer Center, and five local routes from

the Canby Transfer Center (TC). These routes all complete a loop in the span of one hour, and return to the starting point at the respective transit center with a couple of exceptions.

Very recently RABA started the practice of having the Route 11 bus continue as the Route 14 bus at the Canby Transfer Center. Likewise, Route 14 becomes route 11 at the Canby Transfer Center. With Route 11 being shorter with slack time in the current schedule, it has allowed Route 14 to more often stay on schedule.

The other exception is Route 9 between Anderson and the Downtown Transit Center, which has a frequency of every two hours. Route 9 alternates between one-hour one-way trips from Anderson to the Downtown Redding Transit Center and the reverse trip back to Anderson. The first trip of the day departs from Walmart in Anderson, and the last trip ends in Downtown Redding.

Overall, in FY 2012/13 RABA provided 40,798 vehicle service hours of fixed route service with an annual ridership of 807,894.

RABA Demand Response Services

RABA's demand response transportation service provides curb-to-curb transportation for individuals who, because of a disability, are not able to utilize a regularly scheduled fixed route bus service. RABA's demand response service provides Americans with Disability Act (ADA) Paratransit service. Demand response service is the same as paratransit service for the purposes of the SRTP. For ease of understanding, the more commonly understood demand response term will be utilized instead of paratransit.

The service area provision for ADA service is limited to ¾ mile of fixed route service. Service is provided during the same operating hours as fixed route services Monday to Saturday.

Overall, the FY 2012/13 RABA demand response service provided 17,327 vehicle service hours and annual ridership of 55,699.

Other Transit Services in Shasta County

Shasta County contracts with RABA to provide express service to the community of Burney. The service is for commuters and has limited stops; therefore it is not subject to the requirements for ADA Paratransit service. Burney Express operates Monday to Friday with two round-trips each day. Shasta County provides two ADA-compliant medium size buses for this service. In FY 2012/13, the Burney Express provided 1,518 vehicle service hours and an annual ridership of 5,457.

Shasta County has a second demand response service operated by the Senior Nutrition Program as part of the Consolidated Transportation Service Agency (CTSA) and is completely independent of RABA services. The Short Range Transit Plan does not include the CSTA services, but stakeholder input is included to potentially better coordinate policies between the two demand response services.

SRTP Development Milestones

Kickoff Meeting and Follow-Up Site Visit

A kickoff meeting with the consulting team was held on October 3, 2012 to review the overall SRTP workshop, provide information needed to conduct the SRTP and to define key issues to be addressed in the SRTP. The first start-up tasks including the stakeholder interviews, onboard survey of RABA fixed route passengers, and passenger counts by stop were discussed. A follow-up site visit by the consulting team Project Manager was scheduled to ride buses, talk to passengers and interview drivers in a two day site visit the following week. The results were utilized to draft and finalize a survey instrument for an onboard survey of fixed route RABA passengers.

Onboard Survey

A survey of RABA passengers was conducted on November 13-14, 2012, in conjunction with a comprehensive boarding and alighting count. During the two-day period, every trip on all RABA routes was surveyed once. Trained surveyors distributed and collected a self-administered questionnaire that was available in Spanish as well as English. A total of 1,230 questionnaires were completed and collected. The sample included two types of completions:

- 978 full questionnaires completed by riders encountered for the first time during the survey.
- 351 partial questionnaires (origin/destination questions 1-9 only) completed by riders who had already completed the full questionnaire on a prior trip.

Route	Sample Size
1	81
2	85
3	155
4	78
5	134
6	109
7	38
9	68
11	69
14	120
Airport	74
Sch Exp	15
Burney	15

The survey results reported in this working paper are based on the sample of 978 unduplicated riders who completed the full version of the questionnaire. (Note, as with all self-administered questionnaires, not all respondents completed all questions, therefore the n varies slightly by question.) The origin/destination data from all questionnaires will be used as part of the route analysis in the next phase of the project.

Prior to analysis, the data set was weighted to reflect actual ridership by route. This eliminates any disproportionality in response rates and ensures that the information included in this report is representative of RABA's overall ridership. A sample of this size has an overall margin of error of approximately +/-3.3%.

The findings from the on-board survey have been integrated throughout this report.

Comprehensive Ridecheck

A ridecheck provides important planning information. It involves a count of passengers by stop on every route for every run on a sample day. Forms were prepared in advance so that surveyors could count the number of passengers getting on and off at each bus stop. Included in the counts were the number of wheelchair boardings and bicycle boardings by stop. In addition, the ridecheck was utilized to track how well buses were able to remain on schedule. These results are reported in Chapter 3 under trip characteristics and patterns.

Stakeholder Interviews

A total of 37 stakeholder interviews were conducted representing a cross section of stakeholders interested in RABA services and their customers. All but a handful of the interviews were held during a site visit from November 13-15. Several follow-up phone calls were also made.

- 2 High School Principal and Vice Principals
- 4 RABA Board members
- 2 Shasta Regional Transportation Agency Board members and staff
- 12 City Managers, Public Works Directors, and other senior staff from Redding, Shasta Lake, Anderson and Shasta County
- 8 public sector social service agencies that represent transportation disadvantaged populations
- 5 representatives of non-profit social service agencies representing transportation disadvantaged populations
- 3 representatives of the private sector, including a representative of IASCO, a local mobility advocacy organization and a consultant who has previously worked on communication strategies.
- 1 interview with the Veolia Transit Manager. Driver input was received in two different ways as is described in further detail below.

It should also be noted that after the stakeholder interviews were complete, a survey of Bethel students was received by the consulting team. The results are utilized in Chapter 7 in the evaluation of existing and future transit needs.

Focus Groups and Driver Input

Focus groups of key rider market segments were held to receive qualitative input. In addition, meetings to receive input from drivers were held on separate occasions.

- Shasta College: 6 Shasta College students and one community member
- Senior Center: 4 senior women

- CalWORKS: 9 participants in the CalWORKS program in the facility immediately adjacent to the Downtown Transit Center
- Veolia drivers: 6 Veolia drivers at an evening meeting at the main Veolia operating and maintenance facility and a drop in session at the Downtown Transit Center. 1 driver provided input at both. The consultant also rode buses and spoke with drivers individually.

Board of Directors Workshop

The consulting team presented the results of the market research to the RABA Board on March 18, 2013. A working paper on "RABA Mission Alternatives" was also presented and discussed with the City Council, providing options for the mission and goals of RABA over the next ten years.

Development of Service Alternatives

Based on the results of the market research and input from the City Council, service alternatives were prepared for review by RABA staff. RABA staff also developed some service alternatives. Both service alternatives were presented to the RABA Board on September 16, 2013. The RABA Board authorized RABA staff and the consulting team to provide the opportunity for public input on two distinct service alternatives. Both alternatives are provided in Chapter 4.

Service Alternatives Workshop

Two alternative approaches have been developed for redesigning the fixed route bus route network. A series of three public meetings and stakeholder presentations were held to secure feedback on the proposed options which provide very different approaches to revamping RABA's routes. All workshops were held between 4 and 7 pm to enable in a drop-in format to provide a window of opportunity for input. The workshops were held November 12-14, 2013 at the Cities of Shasta Lake, Anderson and Redding. In addition, focus group meetings were held with Shasta College students and CalWorks participants. A special presentation and discussion was held with social service agencies as well as the Social Services Technical Advisory Council. RABA Staff also made presentations of the alternatives to the City Councils of the Cities of Shasta Lake and Anderson.

Results of workshops and presentations were tabulated and discussed among the consulting team and RABA staff. Efforts were made to provide a blended service plan recommendation. An oral report on progress of the service alternatives was made to the RABA Board.

Development of Draft Final Alternative

RABA staff met with representatives of the City of Shasta Lake, the City of Anderson, Shasta County and the City of Redding to discuss the financial implications of the service alternatives. The Draft Final Service Plan was modified by RABA staff based on these discussions and refinements are included in Chapter 4 as the Draft Final Service Plan.

Systemwide Performance Trends

Figure 1-1 shows the recent performance systemwide for RABA public transportation services. Performance in FY 2012/13 showed very positive improvement in overall performance compared to the past two fiscal years. Overall ridership increased by 20.1% from FY 2009/10 to 869,050 in FY 2012/13. Impressively, overall fare revenue increased by 16.4% while costs were flat over the two past fiscal years, increasing only 1.2% over the past four fiscal years.

These very positive systemwide base statistics had a very positive upward swing to overall performance measures. The farebox recovery ratio systemwide increased from 15.1% to 17.3%. Systemwide productivity increased from 10.8 passengers per hour to 14.6 passengers per hour. Importantly, the cost per trip decreased by 15.8% since FY 2009/10. The subsidy[1] per trip declined by almost one dollar from $6.07 to $5.10 between FY 2010/11 and FY 2011/12 and dropped further to $4.87 in FY 2012/13.

Much of this positive momentum in performance starting in FY 2011/12 and continuing in FY 2012/13 was created by the partnership with IASCO Flight Training (IFT) for the Airport Express. The Airport Express generated 37.4 passengers per hour in FY 2011/12, and had an overall farebox recovery ratio of 54.1%. This is driven by the agreement with IFT to purchase 120 monthly passes every month. The more detailed discussion of route-by-route analysis also shows that Routes 5 and 11 experienced significant ridership gains.

[1] (Operating cost - fare revenue)/fare revenue

FY 2009/10 to FY 2012/13 Systemwide Performance Trends

	FY 2009/010	FY 2010/11	FY 2011/12	FY 2012/13	% Change 09/10-12/13
Base Statistics					
Ridership	723,452	727,094	818,179	869,050	20.1%
Vehicle Service Hours	66,687	65,362	61,675	59,643	-10.6%
Vehicle Service Miles	956,484	991,378	962,003	939,631	-1.8%
Fare Revenue	762,984	786,872	883,688	887,751	16.4%
Operating Costs*	5,059,634	5,203,007	5,054,052	5,118,204	1.2%
Performance					
Passengers/Hour	10.8	11.1	13.3	14.6	34.3%
Passenger/Mile	0.76	0.73	0.85	0.92	22.3%
Average Fare	$ 1.05	$ 1.08	$ 1.08	$ 1.02	-3.1%
Farebox Recovery	15.1%	15.1%	17.5%	17.3%	15.0%
Cost/Hour	$ 75.87	$ 79.60	$ 81.95	$ 85.81	13.1%
Cost/Trip	$ 6.99	$ 7.16	$ 6.18	$ 5.89	-15.8%
Subsidy/Trip	$ 5.94	$ 6.07	$ 5.10	$ 4.87	-18.0%

Figure 1-1 Systemwide Performance Trends

Overview of SRTP Chapters

Chapter 2, Existing and Future Transit Needs, is a summary of the key findings of the systemwide stakeholder interviews, focus groups, demographics, and other factors influencing RABA demand.

Chapter 3, Policy Element, provides overall goals, performance objectives and performance standards.

Chapter 4, RABA Fixed Route Service, provides a description of existing services, key findings of the onboard survey, recent performance trends, service alternatives and a recommended service plan within currently available funding. Priorities are provided for additional service enhancement if additional funding is made available.

Chapter 5, Demand Response Service, provides a description of existing services and eligibility policies, recent performance trends, service alternatives, and service recommendations.

Chapter 6 , Burney Express, provides a description of existing services, fares, recent performance trends, and service recommendation.

Chapter 7, Fare Analysis and Recommendations, evaluates the fare structure of the RABA fixed route service and demand response service and provides a number of recommendations.

Chapter 8, Communications Plan, provides recommendations for improving passenger information to targeted market segments that RABA currently serves.

Chapter 9, Financial Plan, is the recommended operations and capital plan over the next five years.

Chapter 10, Action Plan, provides phased implementation actions for service plan, fare policy, passenger communications, and capital improvements on a year-by-year basis over the next five years.

2. Existing and Future Transit Needs

The evaluation of existing and future transit needs is based on input from a variety of sources and is presented in the following order:

- Stakeholder input on RABA systemwide issues
- Rating of potential service improvements from RABA passengers
- Stakeholder input on potential service improvements
- An analysis of existing and projected demographics in the RABA service area

It should be noted that the Shasta Regional Transportation Authority (SRTA) also conducts an annual unmet needs process that addresses existing and future transit needs. The FY 2012/13 Transit Needs Assessment prepared by the SRTA includes a two-page table on the chronological history since FY 2002/03 of the primary transit need requests and the responses from the SRTA.[1] For easy reader reference, this table is included as Appendix A.

Stakeholder Input on Systemwide Issues

Systemwide issues are those that are not specific to any of three types of services that RABA operates: Fixed Route, Demand Response and Burney Express. Most of the input received was on the RABA fixed route service, and these fixed route issues are summarized in the next section.

The most significant systemwide issues raised were on the RABA mission, the constraint of City of Redding TDA monies, systemwide farebox recovery and systemwide efficiency related to the overall size of the RABA service area.

Stakeholder input on the mission and goals of RABA varied widely, but could generally be included in one of three categories:

A. A mission that emphasizes serving the transportation disadvantaged populations with services designed to match the key origin and destination patterns of very low income residents, youth, elderly and the disabled.

B. A mission that would emphasize efficiency in the core area of the RABA service area and limit resources to where all taxpayers see a reasonable return on their investment in terms of ridership and fare revenues generated. This is essentially the business model approach advocated in the meeting of the RABA/RTPA Board.

[1] SRTA is the designated Regional Transportation Planning Agency that administers the unmet needs process. This is required under the Transportation Development Act.

C. A mission that emphasizes mobility management and an integrated approach to increase integration of transit, pedestrian, bicycle, and ridesharing utilization, as well as land use decisions that support the use of these alternative modes of transportation.

Due to the importance of this issue, a separate working paper on Mission and Goals was prepared and presented to the RABA Board in order to focus on this critical issue. One RABA Board member stressed how the decision on the mission and goals will really help RABA guide its future development. This working paper was discussed at the March 18, 2013 RABA Board meeting. Chapter 3 includes a new proposed mission statement and a succinct set of performance measures and minimum and target standards based on the input received as well as professional judgment from the consulting team.

From elected officials and city managers, there was general consensus that the RABA budget is constrained by the Transportation Development Act (TDA) dollars available. There are two transit funding sources from TDA. The first is the Local Transportation Fund (LTF) which is funded from ¼ cent of the sales tax. The Shasta Regional Transportation Planning Agency (SRTA) is responsible for allocating LTF funds to claimants including the cities and Shasta County. The cost associated with operating RABA is apportioned to each claimant with 80% based on service hours and 20% on each claimant's population within RABA's service area. LTF funds in rural counties like Shasta County are to be used for transit purposes unless the SRTA finds there are no unmet needs that are reasonable to meet. If there are no unmet needs that are reasonable to meet as defined by the SRTA, then monies can be utilized for streets and roads purposes. Most of the LTF dollars utilized for RABA are from the City of Redding and while $250,781 of total LTF allocations in FY 2011/12 were allocated for streets and roads, there is little more that the City of Redding can do to increase transit funding according to City of Redding stakeholders.

The second source of funding from TDA is State Transit Assistance (STA) funding. STA funds can only be utilized for transit operating and capital expenses. The only substantive issue that came up during the stakeholder interviews on TDA financing is how STA dollars are currently allocated. These monies can only be utilized for transit purposes. The SRTA currently allocates STA funds by population, but there is no statutory requirement to do so. Shasta County is allocated these funds and they cannot utilize all that is allocated for the Burney Express, therefore they have compiled a reserve. Shasta County, according to one stakeholder, currently utilizes STA monies for transit purposes and all LTF dollars are utilized for streets and roads purposes. The allocation of STA and TDA monies by the SRTA is not part of the scope of work for the Short Range Transit Plan.

The next issue that was discussed at some length by stakeholders was systemwide farebox recovery and struggles that RABA has had in achieving the issue. Some stakeholders felt it was critical to achieve a minimum systemwide farebox recovery of 19% and in some cases higher. Others felt that way too much energy had been spent on this performance measure and while

they were important targets, the consequences of not meeting the farebox ratio from a practical standpoint were minimal. During the preparation of the Short Range Transit Plan, SRTA adopted a policy reducing the farebox recovery requirement to 15%.

Rating of Potential Service Improvements from Onboard Survey

The onboard survey asked passengers to rate a range of potential improvements to the RABA fixed route service. This input has been carefully considered and was one of the important inputs for priority potential service improvements over the next five years within the available budget.

Figure 2-1 is a summary of the importance of nine potential improvements that were regularly suggested by passengers when the consulting team rode buses and talked to passengers prior to developing the survey instrument. Riders were asked to rate the relative importance of various potential service improvements to them personally. The rating scale was one to five, where 1=not important and 5=very important.

Two potential improvements tied for first place:

- Buses running on-time is an improvement to existing service.
- Extended hours on weekdays to 8:30 pm is an expansion of service.

Two additional expansions of service were rated very similarly:

- Sunday service
- 30 minute service during key travel times

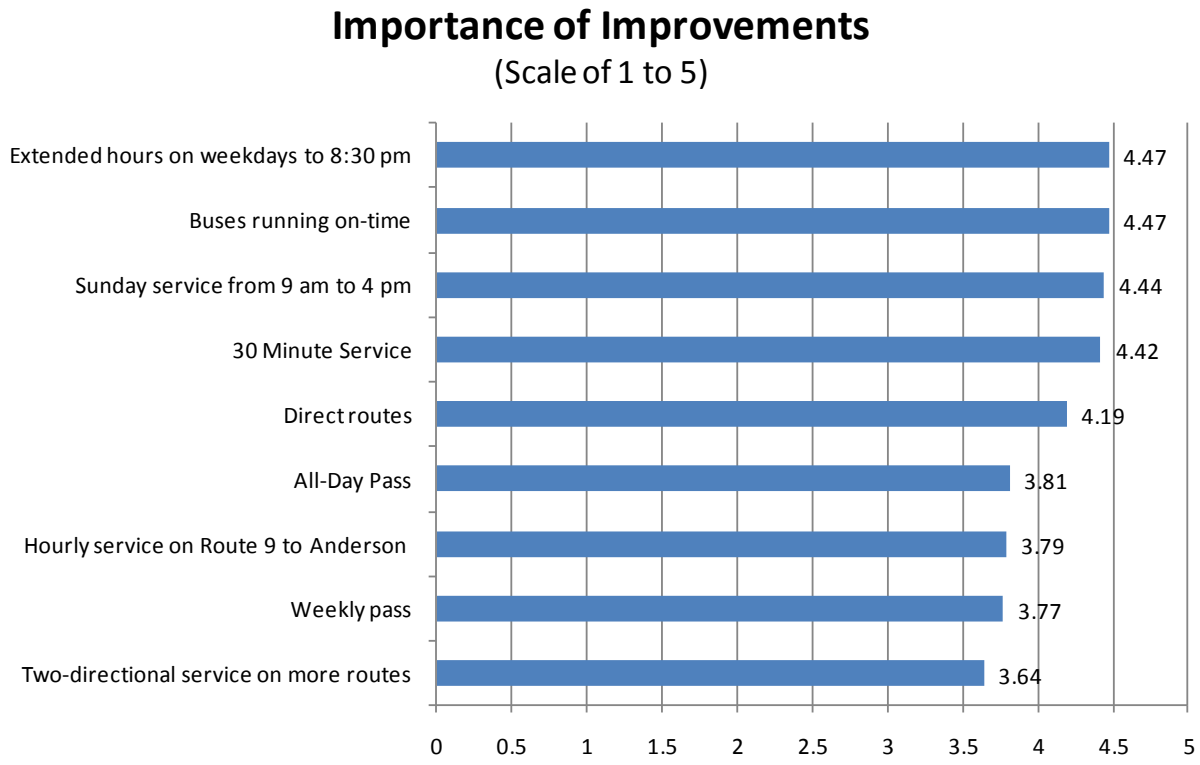
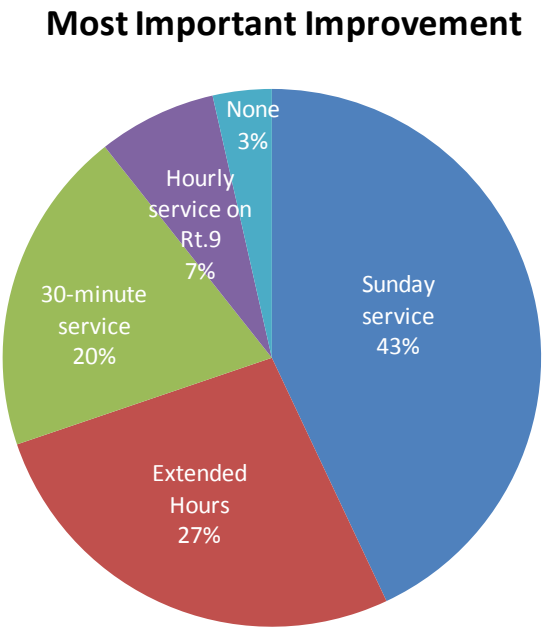


Figure 2-1 Importance of Improvements

Most Important Service Improvements

When asked to select only one from the potential expansions of service, more riders selected Sunday service, despite the fact that extended evening hours were rated as slightly more important.



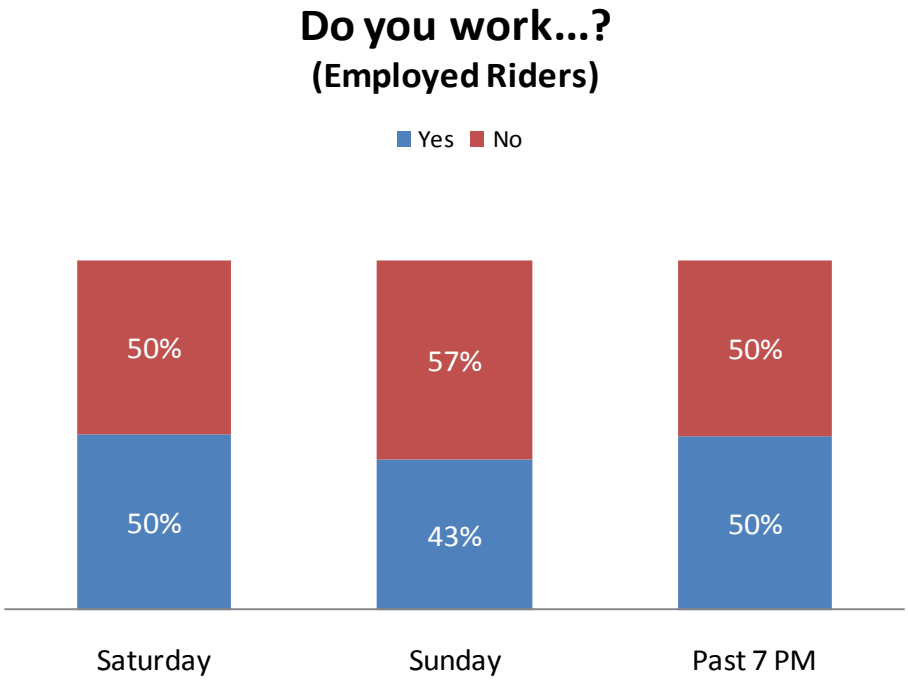


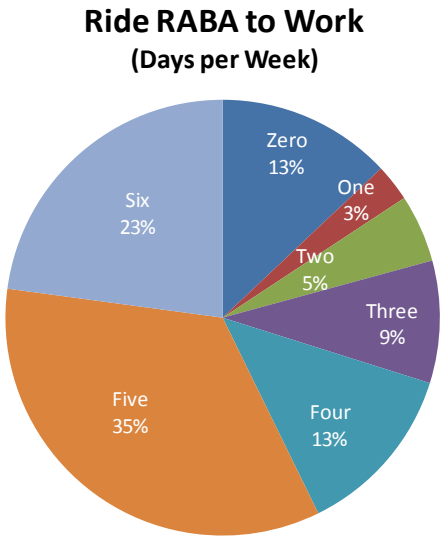
Figure 2-2 Employed Riders Needs

Needs of Employed Riders

The strong desire for expanded evening and weekend transit service often relates to the need to get to retail and service jobs with non-traditional hours. Riders were asked about their work schedules and their use of RABA to commute.

Among riders who are employed, most (71%) use RABA to get to work 4-6 days per week. The pie chart at the right shows the distribution of answers to this question (asked only of employed riders).

About half (50%) of all employed riders must work on Saturday and must work past 7 PM at least one day a week. Forty-three percent (43%) of employed riders work on Sunday.



Demographic Trends

General Countywide Trends

Shasta County's population grew by 8.6% from 2000 to 2010, as shown in Figure 2-4 on the next page, below but close to the California statewide growth rate of 10.0% for that decade. However, the county's three cities - Redding, Shasta Lake, and Anderson - experienced growth above the statewide average, growing between 10% and nearly 13%. Shasta Lake had the highest growth rate, at 12.8%.[2]

Population Forecast to 2020

The population growth of Shasta County is expected to accelerate between 2010 and 2020. While in the past decade, the county's population grew at a slightly lower rate than the state as a whole, in the current decade, between 2010 and 2020, Shasta County is expected to grow at a faster rate than the statewide rate, 10.5% versus 9.4%.[3] Figure 2-3 shows California Department of Finance Projections for Shasta County growth between 2000 and 2030.

Shasta County Population Projections
2000 to 2050

	Estimate		Projections			
	2000	**2010**	**2015**	**2020**	**2025**	**2030**
Total Shasta County	164,150	177,452	185,686	196,087	204,369	210,997

Source: State of California Department of Finance. Interim Projections of Population for California: State and Counties.
Note: 2000 and 2010 figures in this table are CA Dept. of Finance estimates;
the previous table includes U.S. Decennial Census headcounts, so the two do not match.

Figure 2-3 Shasta County Projected Growth

[2] U.S. Census Bureau. 2000 and 2010 Decennial Census.

[3] California Department of Finance. Demographic Research Unit. May 2012.

Shasta County Population Trends
2000 to 2010

	2000 Population	2010 Population	Change	% Change
Total Shasta County	163,256	177,223	13,967	8.6%
Anderson city	9,022	9,932	910	10.1%
Bella Vista CDP	*	2,781		
Big Bend CDP	149	102	(47)	-31.5%
Burney CDP	3,217	3,154	(63)	-2.0%
Cassel CDP	*	207		
Cottonwood CDP	2,960	3,316	356	12.0%
Fall River Mills CDP	648	573	(75)	-11.6%
French Gulch CDP	254	346	92	36.2%
Hat Creek CDP	*	309		
Keswick CDP	*	451		
Lakehead CDP	549	461	(88)	-16.0%
McArthur CDP	365	338	(27)	-7.4%
Millville CDP	610	727	117	19.2%
Montgomery Creek CDP	96	163	67	69.8%
Mountain Gate CDP	*	943		
Old Station CDP	*	51		
Palo Cedro CDP	1,247	1,269	22	1.8%
Redding city	80,865	89,861	8,996	11.1%
Round Mountain CDP	122	155	33	27.0%
Shasta CDP	*	1,771		
Shasta Lake city	9,008	10,164	1,156	12.8%
Shingletown CDP	2,222	2,283	61	2.7%

* Note: CDP data not collected for 2000 Census.
Source: State of California, Department of Finance.
US Census Bureau 2000 and 2010 Decennial Census.

Figure 2-4 Shasta County Population Trends

Demographics of Key Market Segments

The demographic characteristics and geographic distribution of three key market segments are reviewed below:

- Young Adults
- Seniors
- Residents Below the Poverty Level

Young Adults

The ridership survey found that one third of RABA riders are students. Figure 2-5 on the next page is a map showing the Redding – Anderson area's young adult population (as a percentage of total population) by census block group, from 2010 Decennial Census data. Figure 2-6 shows the same, for Shasta Lake. The maps show two areas in which young adults comprise greater than 20% of the population. One area, including Shasta View Drive and Old Oregon Trail, is in the vicinity of several colleges or vocational schools – Shasta College, Simpson University, and Redding School of the Arts. The second area is near Mt. Shasta Mall and the Dana Drive/Old Alturas Road shopping district; this area includes a concentration of multi-family housing units.

RABA - Redding to Anderson

Young Adults (Age 15 to 24) - Percentage of Population by Census Block Group

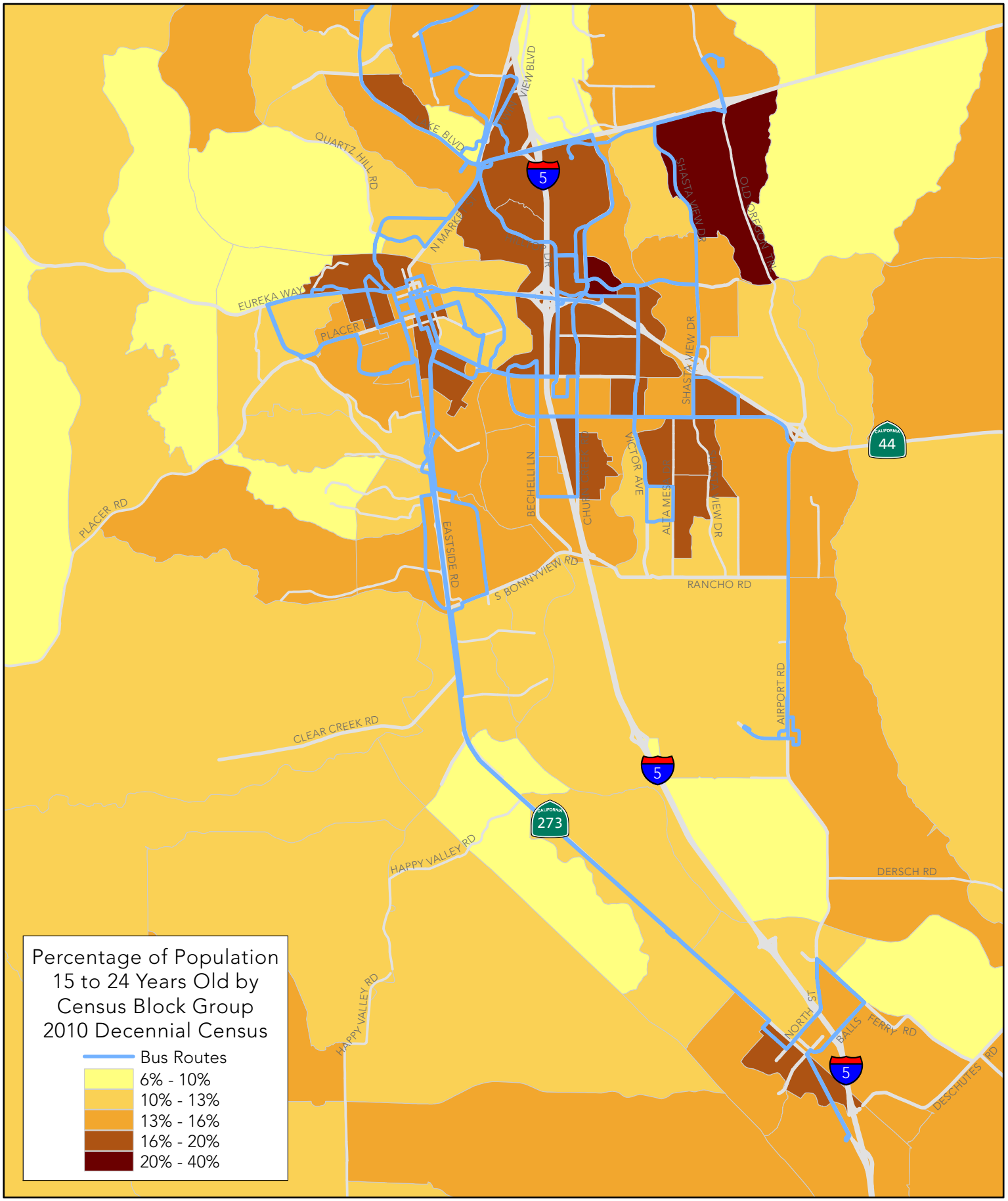


Figure 2-5

Source: U.S. Census Bureau, City of Redding, and Shasta County
January 2013

RABA - Shasta Lake to Redding

Young Adults (Age 15 to 24) - Percentage of Population by Census Block Group

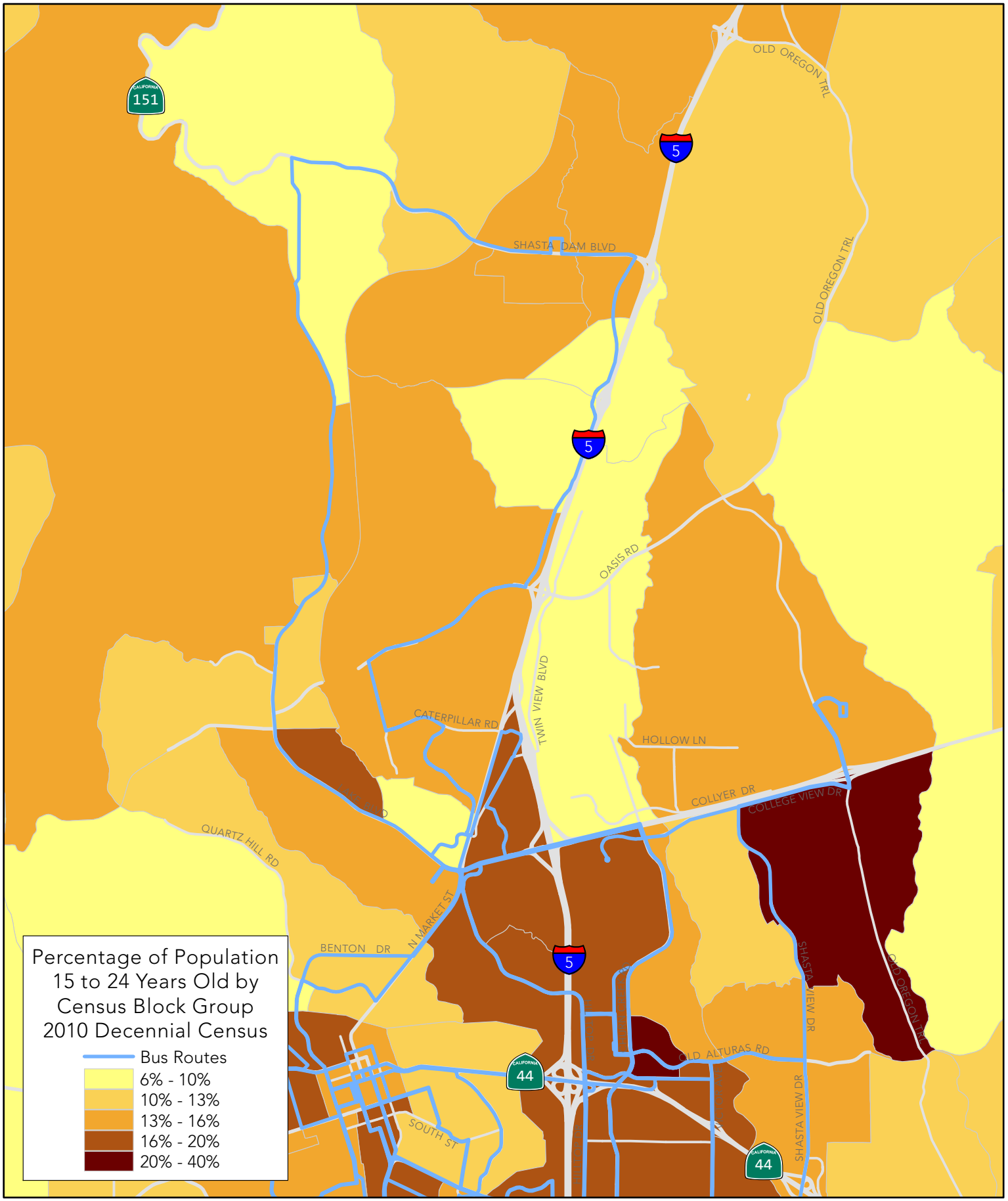


Figure 2-6

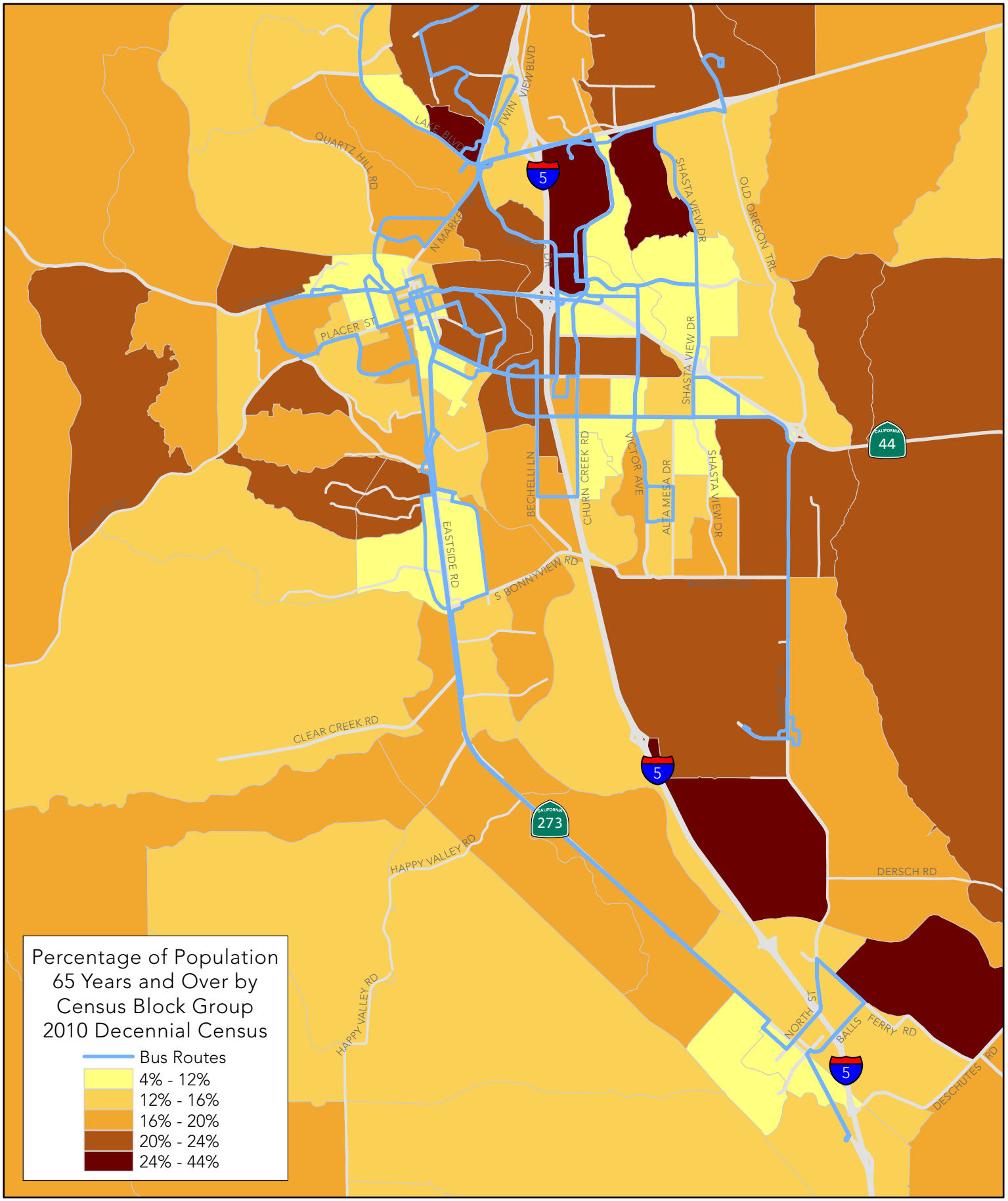
Source: U.S. Census Bureau, City of Redding, and Shasta County
January 2013

Seniors

Seniors (people 65 years old and over) comprise 16.9% of the county population, with the range in the three cities between 12.8% and 16.4%. Ridership survey results, however, showed that this segment of the population did not constitute a large percentage of the fixed route ridership – less than 5%. Many seniors do take advantage of the RABA Demand Response service or the Senior Nutrition Program. Figure 2-7 and Figure 2-8 on the following pages are maps of Redding to Anderson, and Shasta Lake, respectively, showing the concentration of this age group by census block group. There is a concentration of the senior population between Lake Blvd and Hartnell Avenue, north to south, and between Market Street and Shasta View Drive, west to east. This area is at the core of the RABA system, with much of this area served by multiple bus routes. The demographic maps indicate that many seniors have access to buses in their neighborhoods, but are not riding in proportion to their percentage of the population.

RABA - Redding to Anderson

Seniors (Age 65 and Over) - Percentage of Population by Census Block Group



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Miles

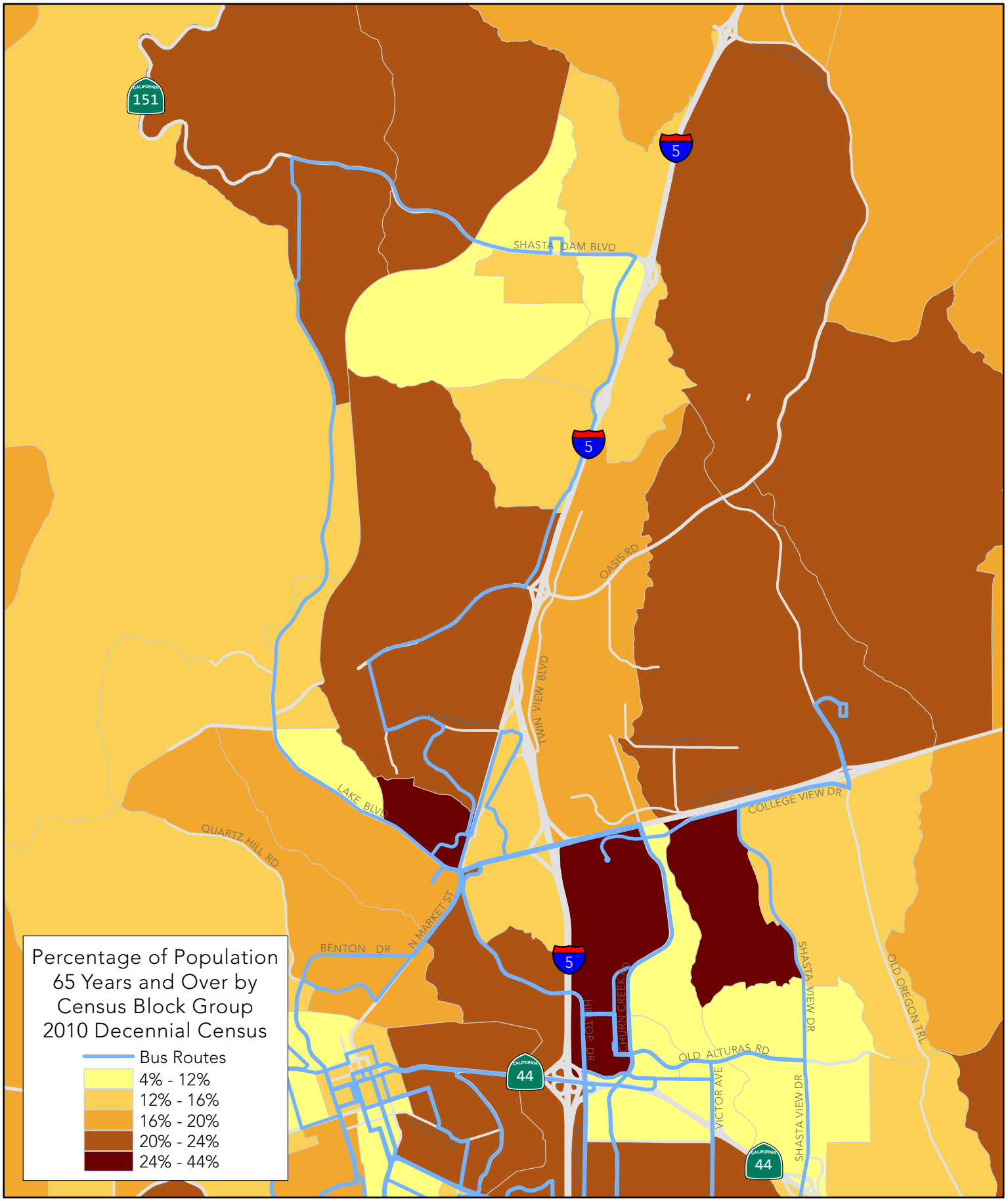
N

Source: U.S. Census Bureau, City of Redding, and Shasta County
January 2013

Figure 2-7

RABA - Shasta Lake to Redding

Seniors (Age 65 and Over) - Percentage of Population by Census Block Group



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Miles

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Source: U.S. Census Bureau, City of Redding, and Shasta County
January 2013

Figure 2-8

Figure 2-9 provides a breakdown of the young adult and senior population of Shasta County by city and census designated place (CDP). The table indicates that in many small communities such as Fall River Mills, Palo Cedro and Shingletown, the percentage of seniors 65+ is over 20% while the countywide average is 16.9%. The cities of Anderson, Redding and Shasta Lake have lower percentages of seniors than the countywide average. Rural Shasta County towns tend to have less youth than the more urbanized areas such as Redding.

Shasta County Young Adults and Seniors
2010

	Total Population	Population 15-24 yrs	% 15-24 yrs	Population 65+ yrs	% 65+ yrs	Median Age (yrs)
Total Shasta County	177,223	23,442	13.2%	29,967	16.9%	41.8
Anderson city	9,932	1,415	14.2%	1,267	12.8%	34.1
Bella Vista CDP	2,781	332	11.9%	499	17.9%	46.2
Big Bend CDP	102	16	15.7%	17	16.7%	50.3
Burney CDP	3,154	351	11.1%	533	16.9%	42.5
Cassel CDP	207	12	5.8%	61	29.5%	57.7
Cottonwood CDP	3,316	479	14.4%	352	10.6%	35.8
Fall River Mills CDP	573	80	14.0%	123	21.5%	41.8
French Gulch CDP	346	35	10.1%	64	18.5%	49.6
Hat Creek CDP	309	30	9.7%	64	20.7%	51.9
Keswick CDP	451	43	9.5%	83	18.4%	46.1
Lakehead CDP	461	46	10.0%	133	28.9%	57.7
McArthur CDP	338	47	13.9%	56	16.6%	39.6
Millville CDP	727	77	10.6%	135	18.6%	47.4
Montgomery Creek CDP	163	27	16.6%	25	15.3%	40.4
Mountain Gate CDP	943	131	13.9%	168	17.8%	46.4
Old Station CDP	51	1	2.0%	19	37.3%	61.9
Palo Cedro CDP	1,269	151	11.9%	285	22.5%	48.3
Redding city	89,861	13,034	14.5%	14,758	16.4%	38.5
Round Mountain CDP	155	16	10.3%	31	20.0%	47.8
Shasta CDP	1,771	182	10.3%	329	18.6%	50.6
Shasta Lake city	10,164	1,263	12.4%	1,465	14.4%	38.8
Shingletown CDP	2,283	198	8.7%	561	24.6%	53.2

Source: U.S. Census Bureau 2010 Decennial Census

Figure 2-9 Shasta County Young Adults and Seniors

Poverty

Poverty rates, the percentage of the population below the federal government's "poverty line", vary widely in the county, with some census block groups below 5%, while others exceed 30%, with the highest at over 50%. As shown in Figure 2-10, of the three cities Anderson has the highest poverty rate at 22.4%, while Shasta Lake has the lowest, at 15.0%.[4]

Shasta County Poverty
2010

Area	Total Population	Population Below Poverty Level	% of Population Below Poverty Level
Total Shasta County	174,104	30,023	17.2
Anderson city	9,780	2,189	22.4
Redding city	87,539	16,137	18.4
Shasta Lake city	10,067	1,512	15.0

Source: 2007-2011 American Community Survey 5-Year Estimates.
Note: Total Population, in this table, is the population for whom poverty status could be determined. The population figures do not necessarily equal the total population for the respective cities and Census Designated Places (CDPs).

Figure 2-10 Shasta County Poverty

However, as seen in the maps of poverty rates by census block group in Figure 2-11 and Figure 2-12 all three cities include areas with a poverty rate that exceeds 30%.[5]

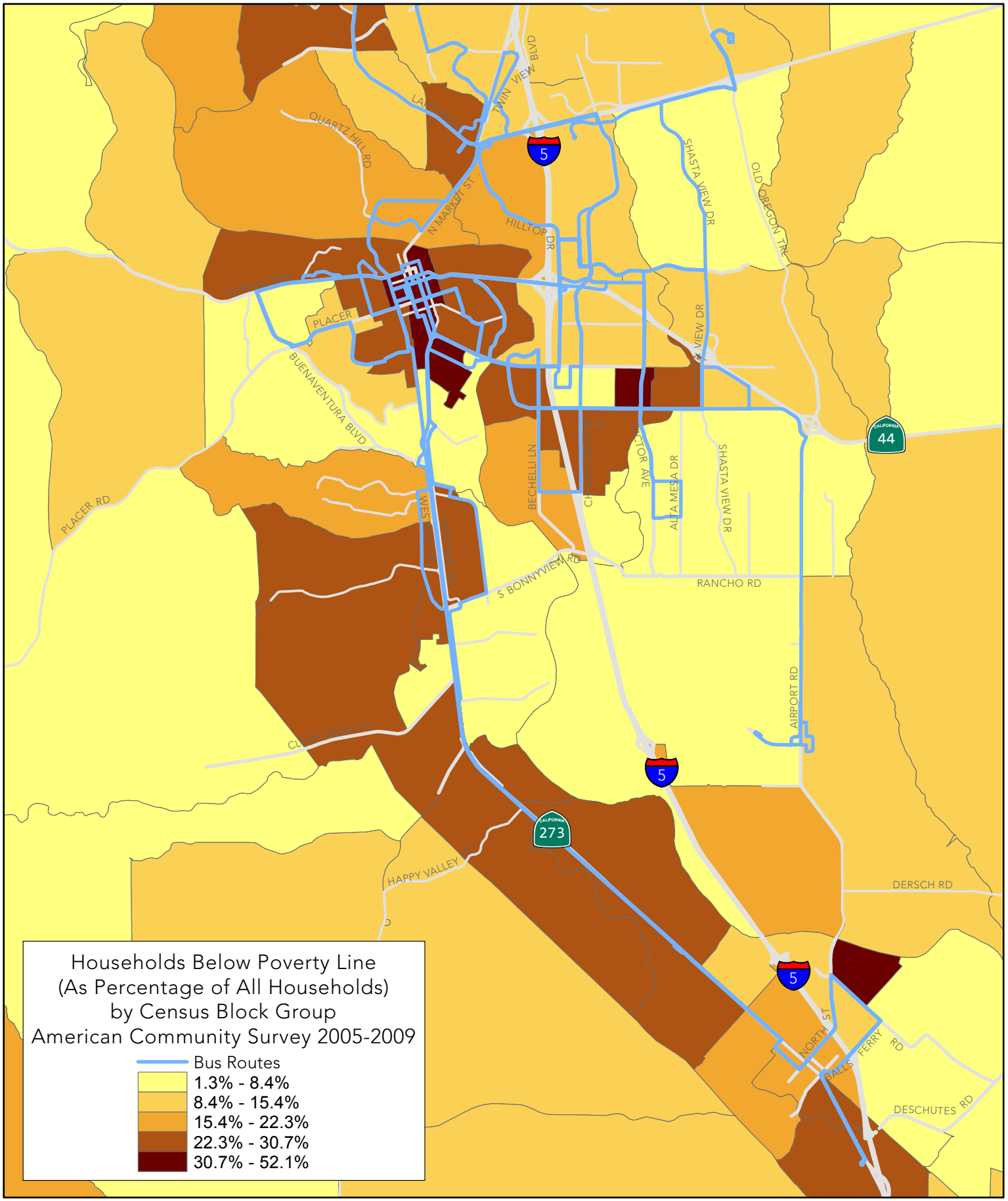
There are many census block groups in central Redding with high rates of poverty. Poverty rates above 20% are found in and near downtown Redding, along Hartnell Avenue, and around Lake Blvd and North Market Street. All of these areas are served by at least one bus route, and many of these areas are served by more than one route, so this population has reasonably good bus access to employment, shopping, social services, and health care. Shasta Lake, Anderson, and the Highway 273 corridor between Redding and Anderson also have many census block groups with poverty rates above 20%. However, these areas have more limited bus service as they are served by only a single route: Route 1 for Shasta Lake and Route 9 for Anderson. For any destinations that are not on that same route, a transfer is required, and the trip just to reach the transfer center is 30 minutes in the case of Shasta Lake and a full hour in the case of Anderson. That adds up to limited access for the poor in these areas, and bus trip times of over an hour for many important destinations.

[4] U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates, Table S1701, Poverty Status in the Past 12 Months, http://factfinder2.census.gov/

[5] U.S. Census Bureau, 2005-2009 American Community Survey 5-Year Estimates, Table S1701, Poverty Status in the Past 12 Months, http://factfinder2.census.gov/

RABA - Redding to Anderson

Percentage of Households Below Poverty Line by Census Block Group

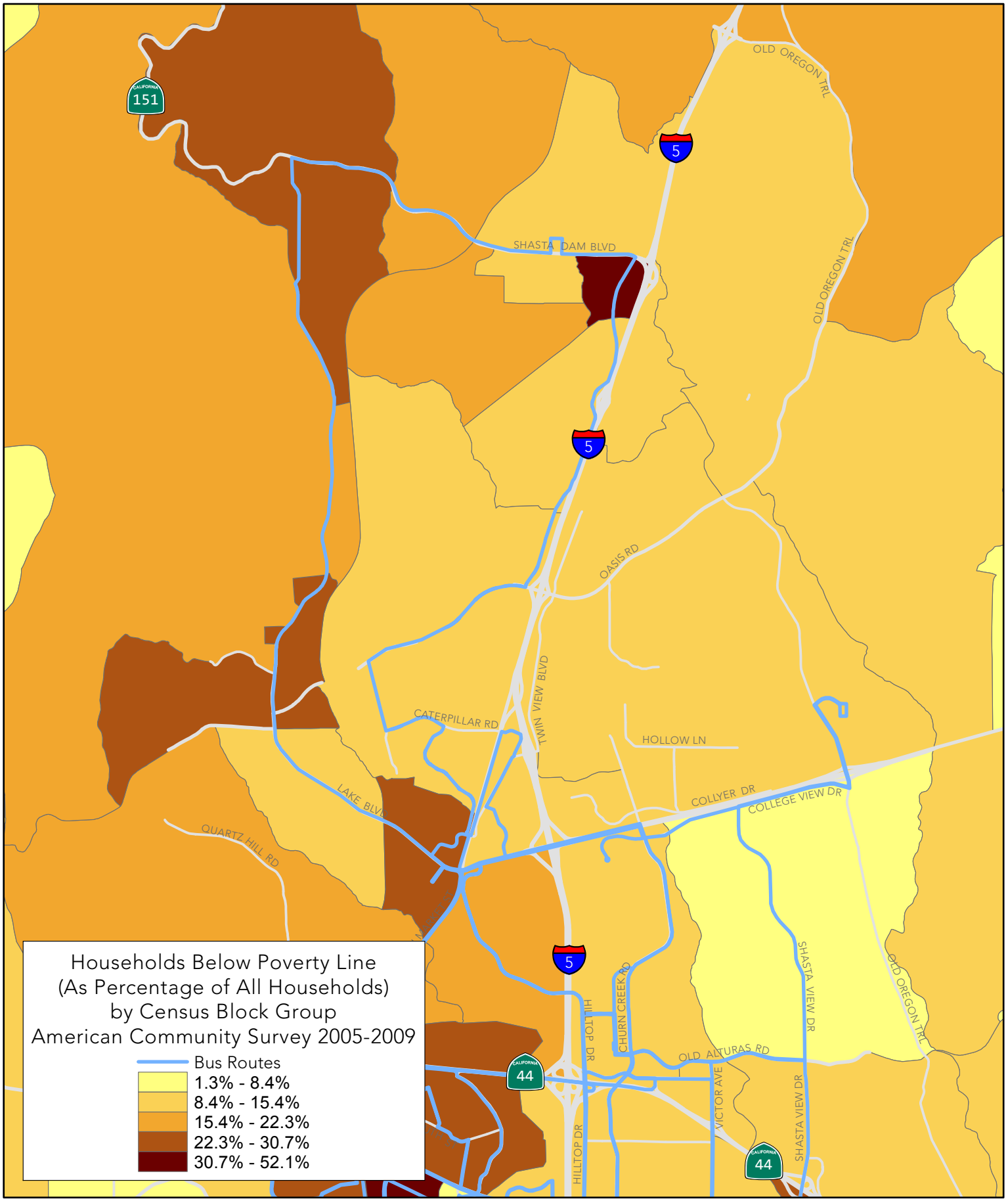


Source: U.S. Census Bureau, City of Redding, and Shasta County
January 2013

Figure 2-11

RABA - Shasta Lake to Redding

Percentage of Households Below Poverty Line by Census Block Group



Source: U.S. Census Bureau, City of Redding, and Shasta County
January 2013

Figure 2-12

Stakeholder Input on Potential Improvements

Potential Partnerships

The recent addition of the Airport Express has provided significant dividends to the overall RABA system performance measures. Several stakeholders felt that additional partnerships along this line would help to improve overall performance. A few potential such partnerships were identified in the public and stakeholder outreach. Route 2 does not serve the bell times in the morning for Shasta High School. Shasta High school has students who live in low income areas of Redding who could utilize a "school tripper." A school tripper is open to the general public but is a special run that matches middle and high school student resident locations with the schools and is coordinated with bell times. In other communities around the United States, such "school trippers" have very high productivity and farebox recovery similar to the Airport Express. The reconfiguration of Route 2 as recommended in Chapter 4 will likely serve a broader array of Shasta High school student better and the partnership might be increase sales of Youth Monthly Passes.

The second potential partnership is with Bethel School. Routes 4 and 7 currently serve the Bethel School Supernatural Ministry (BSSM), but according to the BSSM representative, the stop location at the bottom of the hill makes utilization of the service very difficult. The stop location is necessary because a 40-foot bus cannot turn around at the main campus. The collection of boarding data by stop confirmed that very few people utilize the Bethel stop with a just a couple of riders a day.

Bethel schools off of Churn Creek Road and at the Redding Convention Center have been growing significantly in enrollment. In an online survey conducted by BSSM management of 171 students in response to an inquiry for the Short Range Transit Plan, it was found that only 10% of respondents had even tried a RABA bus. The same online survey found that if more direct, convenient routes were provided and BSSM were to issue monthly bus passes, 80% would utilize the RABA bus more. There would appear to be a significant opportunity for a similar partnership arrangement with BSSM.

During the review of service alternatives, Department of Social Services staff expressed interest in developing a partnership arrangement by guaranteeing a certain volume of trips on a special route, similar to the Airport Express.

Reducing Travel Time on RABA Buses

With limited resources, the RABA route structure was designed to maximize coverage throughout the 100 square mile RABA service area. The system of ten local routes serves the Shasta Lake, Redding and Anderson areas. Stakeholders recognized that the land use patterns in Redding were mostly designed to serve auto trips and make serving public transportation difficult. The current design utilizes many one-way routes with frequencies of 60 minutes in

order to provide some level of coverage throughout the large service area. However, circuitous routing with an emphasis on coverage has been at expense of efficiency for many of the existing routes.

Riders and stakeholders alike feel that the RABA bus takes way too long to get to most key destinations in Redding. This was the most prevalent feedback on the RABA system during the systems analysis effort. Connecting key origin and destination activity centers with a one seat bus ride should be evaluated as part of the alternatives in the next phase of the project. Some students at Shasta College endure two hour trips each way but others have given up or moved, according to a focus group session held there. One of the big problems identified during the stakeholder interviews and confirmed by the onboard survey is the degree of transfers required to get from the passenger origin to the desired destination. Nearly two-thirds of RABA riders (64%) say that they use more than one bus to complete their one-way trip. Forty-five percent (45%) use two buses, while 19% use three buses to get to their destination. Reducing the average number of transfers should be a goal of the RABA system design in the next phase of the study.

Improving the Span of Service

In riding buses, increasing the hours and adding Sunday service was a common theme of existing passengers. Earlier, the onboard survey confirmed these desired improvements with 43% of passengers stating Sunday service was their most important improvement and 27% the second most important. Several social service agency personnel felt that extended hours would be the most important improvement.

According to some stakeholders, RABA does not work well for the working poor. The onboard survey does show that 25% of RABA riders are employed. However, focus groups and stakeholder interviews show that RABA could do a much better job in providing transportation to jobs, but the potential is not being realized. According to key stakeholders, many potential RABA riders seeking employment cannot use the system to get where prospective jobs are located, or the hours and reliability of RABA make it problematic. With most routes ending at 7:00 or 7:30 pm before many service and retail jobs end, it is difficult for many transit dependent workers to get to and from work. The time that buses stop in the evening was the lowest rated service attribute in the passenger survey. According to a senior CalWORKs official, using RABA for work trips is most often very problematic in reliably getting to and from work. The ability to increase the span of service will be dependent on the direction provided by the RABA Board on the future mission of RABA. With finite resources, the ability to increase the span of service would require reductions in service elsewhere.

Addressing Schedule Adherence and Timing Issues

With a very large service area and a system design that requires almost two-thirds of its passengers to transfer at least once to another bus, schedule adherence on routes is critical so

that riders can make connections in a seamless manner. Unfortunately this is not the case and the RABA core routes are not reliable in terms of on-time performance. In the check of schedule adherence conducted for this study, only 68% of the bus timepoints were less than six minutes late or no more than 1 minute early. A bus is considered on time if it is no more than five minutes late and one minute or less early. Route 1 to Shasta Lake is the worst, with only 28% the buses being on time during the schedule adherence check on a sample. The bus was 32 minutes behind schedule in the afternoon. Drivers and stakeholders reported the situation is even worse during the first week of the month. Service reliability is a chronic issue and diminishes potential ridership. In the next phase of the project, the service alternatives need to be designed to ensure better schedule adherence.

To add to the reliability and length of trip issue, there are not timed transfers between all routes at the transfer centers. For example, if you took the bus from Simpson University to the Canby Transfer Center on Route 7 and desire a transfer to Route 11, there is a fifteen wait even if the bus were on time. Such waits of 15-30 minutes are not uncommon.

Input on a RABA vision

There was wide ranging opinion on the future vision for RABA services. The working paper on the RABA Mission and Goals provided three distinct alternatives of a mission that reflects some of the varying visions of RABA. A new mission statement and specific goals and performance standards are recommended in Chapter 3 based on this discussion.

There was general consensus among most stakeholders that there is a need to overhaul RABA's ten local routes to make them both more convenient and reliable for passengers and more cost-effective for the stewards of public resources utilized to subsidize RABA routes. Several stakeholders mentioned that the advertising campaigns had not worked in increasing ridership on local routes and that it is time to try something new.

In one stakeholder interview, input was received that the route system should be contracted to most efficient core routes and that service levels should be improved on the routes with proven ridership. Other stakeholders also suggested a rethinking of routes that did not meet minimum performance standards. A couple of stakeholders also mentioned the importance of the land use decision on RABA ridership and service levels.

Four representatives of Shasta County Social Services made very specific suggestions on how RABA resources might be deployed differently in the mobility management mission scenario. Admittedly, this was a brainstorming session and the feasibility would need to be further explored, but it illustrates some important points. Overall this group advocated for radical changes to RABA service, concluding that the existing circuitous and time consuming system has failed and new ideas are needed. A few of the concepts discussed included:

- There should be better integration of school bus services and RABA. There is a duplication of effort and a waste of resources.

- There are mobility needs from Happy Valley and Cottonwood. A neighborhood van might work as a local collector, perhaps with an online reservation system. It would connect to an express route discussed in the Mission and Goals Working Paper.
- Would like to see express services to Redding from Cottonwood and Anderson. A stakeholder had the idea of utilizing I-5 as the backbone of express intercity service, using freeway off ramps, bike parking and park and ride lots connecting Cottonwood, Anderson, Redding and Shasta Lake. Stops could service the Canby Transfer Center and a similar transfer location in Anderson. A shuttle could provide regular connections to Shasta College.
- "When it's not hot, riding bikes currently beats riding RABA for healthy adults every time," one stakeholder stated. People are forced to walk or ride bikes on highway shoulders that are not pedestrian or bike friendly and are not safe. This should be thought of as part of the mobility solution. There was much appreciation for the bike racks on RABA buses which are often full.
- Bike sharing has become quite popular in major metropolitan areas and "why not Redding?" There was discussion of how a bike share program would be potentially quite popular at the RABA transfer centers. Bicycle trips the last mile or two are feasible. RABA needs to think in multimodal ways.
- Ridesharing (carpools and vanpools) needs to be part of the solution with no subsidy per trip. The stakeholder asked the consultant about the emerging online ridematching systems such as Zimride. This would expand mobility choices without the expense of subsidized traditional transit in outlying areas.

3. Goals and Performance Standards

This chapter provides a recommended framework for establishing overall goals for the Redding Area Bus Authority (RABA), and providing the means for ongoing measurement of achieving these goals.

Draft Mission Statement

RABA will provide efficient and reliable service to the transportation disadvantaged while maximizing revenue through service to demand intensive origins and destinations and fostering partnerships with providers of basic human services.

RABA Transit Goals and Performance Standards

The goals establish a general direction for policies and operation, are value-driven and provide a long-range perspective. The minimum performance standard is the recommended minimum performance standard for achieving the goal. The recommended target performance objective is what RABA should strive to achieve during the next five years. Importantly, the data source for ongoing monitoring is identified for each recommended performance standard.

1. *Continue to provide safe transportation services to the residents of the RABA service area. (Safe transit goal)*

Total Accidents: The minimum standard should be 100,000 miles between accidents with damage more than $1,000 with a target objective of 500,000 between all accidents with damage of $1,000 or more.

Training and Safety Plan: Minimum standard and target objective is 100% compliance with the employee selection, drug testing, and training requirement included in the operator contract. A summary of training and safety compliance should be included in the operator contract and validated by RABA staff.

2. *Provide convenient transit service in the RABA service area for employment, shopping, education and social service trips, so long as service can be provided in a cost-effective manner and is affordable within available financial resources. (Convenient transit goal)*

Important Note: It is recognized that service convenience is a function of funding availability. The target standard for the convenient transit goal are not affordable within available

financial resources. If funding becomes available, the section at the end of Chapter 4 on Fixed Route services provides priorities for expansion of service.

Service Frequency: For fixed route service, the minimum standard is 60 minutes for all routes. The target standard is to provide 30-minute service for routes that achieve an average productivity of 25 passengers per hour or more or exceed a 20% farebox recovery ratio, at a minimum during the peak six service hours.

Span of Service: Minimum standard is to provide access to public transportation within the RABA area between 6:30 am with the last run starting at 6:30 pm on weekdays and 9:30 am to the last runs starting at 6:30 pm on Saturdays. The target objective is to provide public transportation services to residents within the RABA service area between 6:00 am and 9:00 pm on weekdays, service on Saturdays between 8:00 am and 6:30 pm, and Sundays between 9:00 am and 4:00 pm, subject to the service efficiency standards and funding availability.

3. *Ensure than all transit programs can be provided at a high quality of service. Quality of service is more important than expansion of service. (Service quality goal)*

On-time performance: Minimum standard is 0.5% of trips are not early and 95% of time point departures on a random sample day are no more than 5 minutes late. Target objective is zero percent of trips that are not early and 99% of trips that are no more than 5 minutes late. For fixed route services, this should be measured independently at least four times per year. When RABA purchases new AVL equipment for the buses, this can be independently measured and reported on an ongoing basis. For dial-a-ride, the contractor report should provide an analysis based on one randomly selected day per month.

Transfer connection: Minimum standard is to have all connecting buses arrive at the transfer center a minimum of 2 minutes before the scheduled departure time of other connecting buses at the transfer center location 95% of the time. Target standard is to have all connecting buses arrive a minimum of 2 minutes before the schedule departure time of the other connecting buses 99% of the time. Until RABA purchases AVL equipment to independently measure this standard, RABA staff should independently measure four times a year.

Road Calls: A minimum standard of 10,000 miles between road calls for all buses in the fleet that are within their normal useful life. A road call is when the bus is taken out of revenue service due to any mechanical or safety factor. A target objective of 20,000 miles between road calls for all buses in the fleet that are within their normal useful life. The contractor report should report

on road calls for buses within their useful life and any road calls for buses being utilized that are outside their useful life.

Customer Satisfaction: Annually, RABA staff should conduct a brief intercept survey on customer satisfaction at key transfer locations and report the results. The minimum standard for overall satisfaction rating of RABA bus service should be an average of 3.75 on a scale of 1 to 5, with 5 being highly satisfied. The target standard should be 4.5 on a scale of 1 to 5, with 5 being highly satisfied.

4. *Provide an effective level of service in response to demonstrated community market needs. (Service effectiveness goal)*

Service productivity: The following are target objectives and minimum standards for measuring productivity as passengers per vehicle service hour:

	Passengers per Vehicle Service Hour	
	Minimum	Target
Fixed Route Averages		
Redding Route	15.0	20.0
Intercity Route	10.0	16.0
Special/Partnership Routes	25.0	40.0
All Fixed Routes	14.0	20.0
Demand Response	3.0	4.0
Systemwide	11.5	17.0

The following are target objectives and minimum standards for measuring productivity as passengers per vehicle service mile:

	Passengers per Vehicle Service Mile	
	Minimum	Target
Fixed Route		
Redding Route Average	1.0	1.3
Intercity Route	0.60	0.75
Special/Partnership Routes	1.5	1.8
All Fixed Routes	1.1	1.4
Demand Response	0.17	0.2
Systemwide	0.70	1.0

5. *Provide public transportation services that are financially sustainable within existing local, state and federal funding programs and regulations in a cost-efficient manner. (Service cost-efficiency goal)*

Farebox Recovery: The minimum standard adopted by the Shasta Regional Transportation Authority (SRTA) systemwide is 15.0%. The target objective systemwide is 19%. The annual systemwide farebox recovery ratio is provided in the CAFR Report.

The minimum standard for fixed route farebox recovery is 17.0% and the target farebox recovery for fixed route service is 20.0%.

The minimum standard for demand response farebox recovery is 10% and the target farebox recovery ratio is 13%.

Cost Per Vehicle Service Hour: The minimum standard should be no more than 110% of six northern California peer systems. The target objective should be 90% of five northern California peer systems. This data would need to be collected and reported on annual basis by RABA staff from the National Transit Database for the previous fiscal year. Appendix B provides the FY 2011/12 figures for cost per vehicle service hour and service mile.

Cost Per Vehicle Service Mile: The minimum standard should be no more than 110% of six northern California peer systems. The target objective should be 90% of five northern California peer systems.

Figure 3-1 is a summary of the goals, minimum performance standards, and target objectives for RABA.

Figure 3-1 Summary of Goals, Minimum Standards and Target Objectives

Goal	Minimum Standards	Target Standard
1. Continue to provide safe transportation services to the residents of the RABA service area.	Total Accidents: 100,000 miles between accidents Training and safety plan: 100% compliance with the employee selection, drug testing, and training requirement included in the operator contractor.	Total Accidents: 500,000 miles between all accidents. Training and safety plan: Same
2. Provide convenient transit service in the RABA service area for employment, shopping, educations and social service trips.	Span of Service: Provide public transportation within the RABA service area between 6:30 am and 6:30 pm on weekdays and 8:30 to 5:00 pm on Saturdays. Frequency: For local fixed route service, the minimum standard is 60 minutes for all routes.	Span of Service: Provide RABA services between 6:00 am and 9:00 pm on weekdays, Saturdays between 8:00 am and 6:30 pm, and Sundays between 9:00 am and 4:00 pm. (If and when affordable.) Frequency: 30 minute service for all routes that can sustain 25 passengers per hour or more. (If and when affordable)
3. Ensure that all transit programs can be provided at a high quality of service. Quality of service is more important than expansion of service.	On-time performance: 0.5% percent of trips are not early and 95% of time points that are no more than 5 minutes late. Road Calls: 10,000 miles between road calls for all buses in the fleet that are within their normal useful life. Customer Satisfaction Survey: Annually, 3.75 average satisfaction rate on a scale from 1 to 5.	On-time performance: Zero percent of trips that are not early and 99% of trips that are no more than 5 minutes late. Road Calls: 12,500 miles between road calls for all buses in the fleet within their normal useful life. Customer Satisfaction Survey: Annually, 4.50 average satisfaction rate on a scale from 1 to 5.
4. Provide an effective level of service in response to demonstrated community market needs.	Passengers Per Vehicle Service Hour: Systemwide: 11.5 Fixed Route: 14.0 DR: 3.0 Passengers Per Vehicle Service Mile: Systemwide: 0.70 Fixed Route: 1.1 DR: 0.17	Passengers Per Vehicle Service Hour: Systemwide: 17.0 Fixed Route: 20.0 DR: 4.0 Passengers Per Vehicle Service Mile: 1.0 Systemwide: 1.0 Fixed Route: 1.4 DR: 0.2
5. Provide public transportation services that are financially sustainable within existing local, state and federal funding programs in a cost-efficient manner.	Farebox Recovery: The minimum standard systemwide is 15.0%. Cost Per Vehicle Service Hour and Mile: The minimum standard should be no more than 110% of six California peer systems.	Farebox Recovery: Systemwide target is 19%. Cost Per Vehicle Revenue Hour: 90% of six California peer systems.

4. RABA Fixed Route Service

This chapter is organized in the following manner for fixed route services

- Review of the existing route structure and transfer centers
- A profile of existing riders from the on-board survey
- Analysis of trip characteristics
- Performance trends
- Service alternatives
- Recommended service plan

Both qualitative information from the stakeholder interviews and focus groups as well as quantitative data from the on-board survey and the ridecheck counts of boardings and alightings by stop and schedule adherence are included.

Existing Route Structure and Transfer Centers

RABA fixed route service consists of ten local routes and three express routes. The local routes operate 12 or 13 service hours per day, Monday - Friday, starting at either 6:00, 6:30, or 7:00 am. Saturday service commences three hours later than the Monday - Friday start time, but ends at the same times. There is no Sunday service.

Local Service

All local routes depart from one of three RABA transit centers – six routes depart from the Downtown Transit Center, three from the Masonic Transfer Center, and five local routes from the Canby Transfer Center (TC). These routes all complete a loop in the span of one hour, and return to the starting point at the respective transit center. The sole exception is Route 9 between Anderson and the Downtown Transit Center, which has a frequency of every two hours. Route 9 alternates between one-hour one-way trips from Anderson to the Downtown Redding Transit Center and the reverse trip back to Anderson. The first trip of the day departs from Walmart in Anderson, and the last trip ends in Downtown Redding.

The route system depends heavily on transfers: five of the ten local routes make a stop at one of the other transit centers, or return mid-route to the starting point to facilitate transfers. The on-board survey found that nearly two-thirds of RABA riders (64%) say that they use more than one bus to complete their one-way trip.

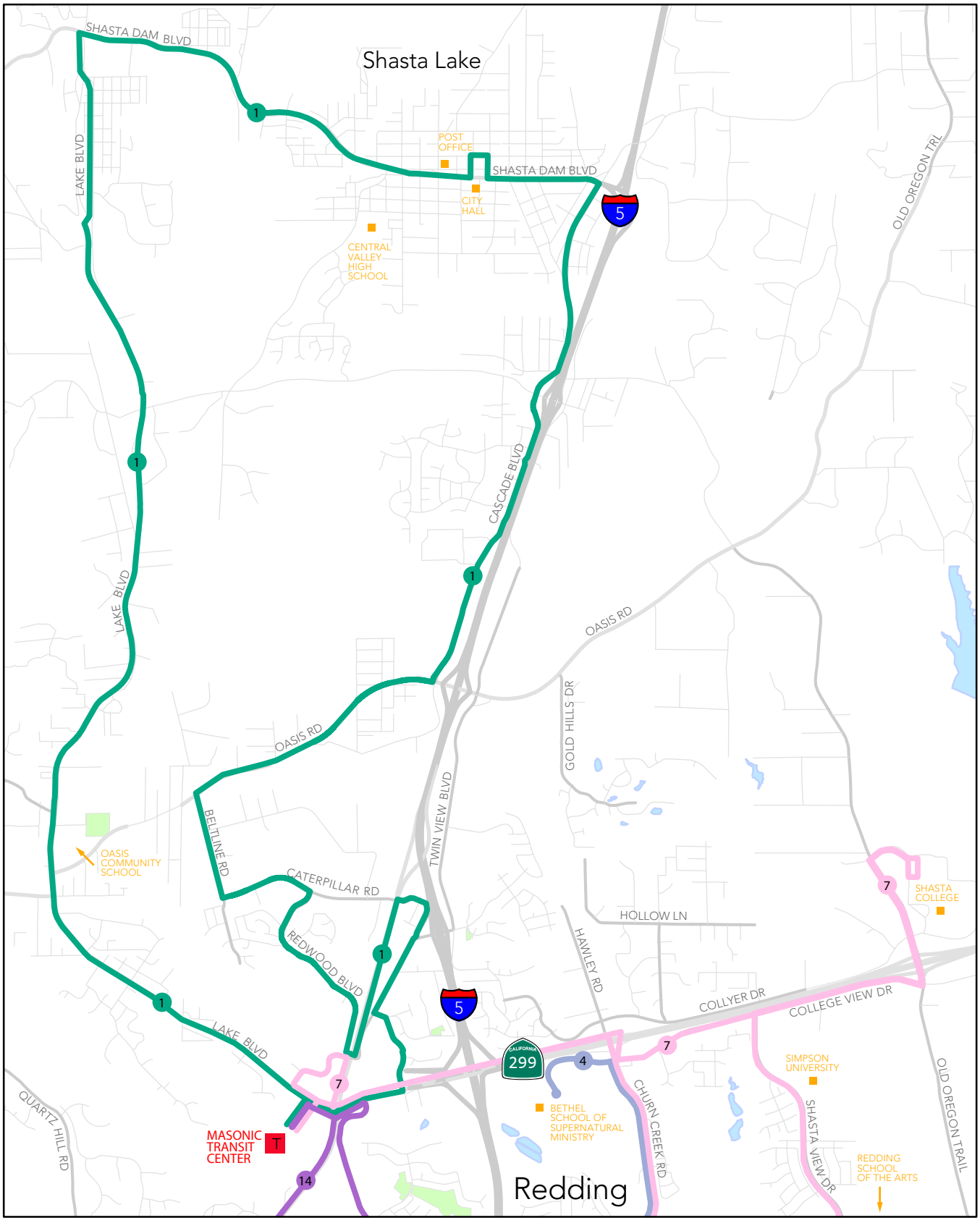
Figure 4-1 is a map of RABA routes in the northern part of the RABA service area, from Shasta Lake to the Masonic Transfer Center. Figure 4-2 is map of the RABA service area from the Masonic Transfer Center south to Anderson.

Route 1 provides local service between northwest Redding and Shasta Lake. It is the only route that serves Shasta Lake. Service is operated hourly Monday - Friday from 6:00 am - 8:00 pm. Saturday service begins at 9:00 am and ends at 8:00 pm. The route begins and ends at the Masonic Transfer Center (Masonic TC) and serves the following key destinations: North Point Plaza shopping center, Oasis Community School, Central Valley High School, Shasta Lake City Hall, the U.S. Post Office, Library, an industrial park, and several mobile home parks and concentrations of apartment complexes. Riders can transfer at Masonic TC to Routes 7 and 14 to reach downtown and the Mt. Shasta Mall area, as well as transfer to the remaining routes in the system.

Route 2 serves downtown and the neighborhood west of downtown between the Sacramento River and Rosaline Ave. Service is operated hourly Monday - Friday from 6:30 am to 7:30 pm. Saturday service begins at 9:30 am and ends at 7:30 pm. Unique to the RABA system, the route is served twice per hour. Departing at :30 on the clock, the route runs in a counterclockwise loop departing from and returning to the Downtown Transit Center (Downtown TC). At the start of the hour (:00), the route runs in a clockwise loop and returns to the Downtown TC by the half hour. Key destinations served by Route 2 include Shasta Regional Medical Center, Mercy Medical Center, Benton Air Field, Shasta and University Prepatory High Schools, and the Shasta County Courthouse.

Route 3 serves downtown Redding, Park Marina Drive, the Civic Center area, and the Highway 273 corridor to Girvan Road, which is approximately the mid-point between Redding and Anderson. Service is operated hourly Monday - Friday from 6:30 am to 7:30 pm. Saturday service begins at 9:30 am and ends at 7:30 pm. The route is a one-way loop, which leaves downtown via Park Marina drive, passes through the Civic Center area along Parkview Avenue, and then proceeds down S. Market Street, E. Bonnyview Road, and Eastside Road to Girvan Road. At Girvan Road, the route returns toward downtown Redding along the west side of the Highway 273 corridor, passing along Cedars Road and Railroad Avenue to return to the Downtown TC. Key destinations served by Route 3 include Shasta Regional Medical Center, Village Plaza Shopping Center, Redding City Hall, Shasta County Library, Shasta County Social Services, and the Shasta County Courthouse. Although not directly along the route, Win-River Casino, the Redding Convention Center and the Mercy Medical Center are key destinations that are reachable by walking from a Route 3 stop.

RABA - Shasta Lake - Masonic TC - Shasta College



Route

- Route 1
- Route 4
- Route 7
- Route 14

Exhibit 4-1

0 0.5 1

Miles

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Source: City of Redding and Shasta County
January 2013

RABA - Redding to Anderson

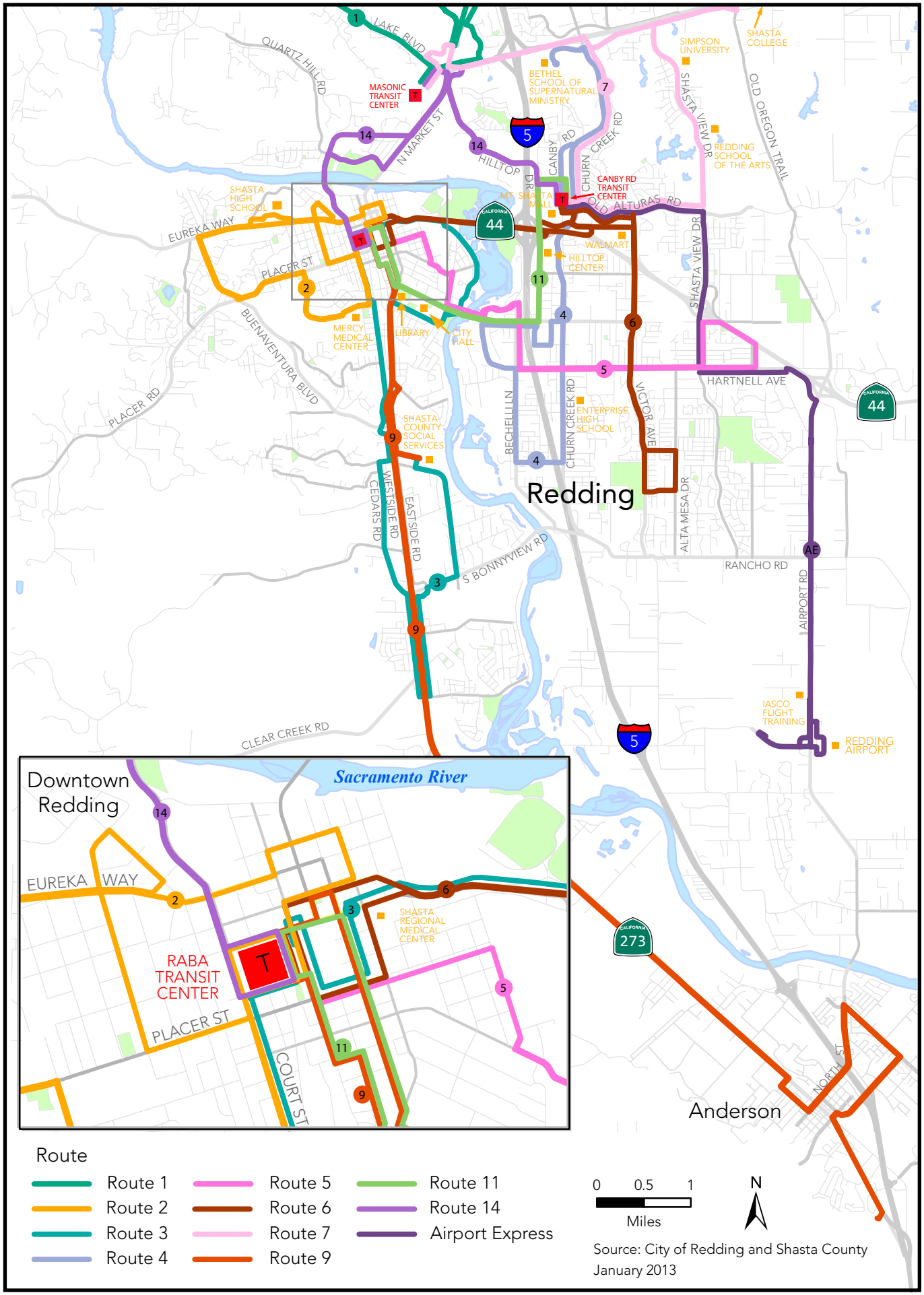


Exhibit 4-2

Route 4 serves shopping and employment areas and residential neighborhoods along Churn Creek Road, Bechelli Lane, and Cypress Avenue, as well as the Bethel Church and School of Supernatural Ministry. Service is operated hourly Monday - Friday from 6:00 am – 8:00 pm. Saturday service begins at 9:00 am and ends at 8:00 pm. The route departs Canby Transfer Center (Canby TC) and runs in a loop that returns to Canby TC in one hour. The loop is a one-way loop on Bechelli Lane, Cypress Avenue, and Churn Creek Road, south of Cypress.

It operates as a two-way loop on Churn Creek Road between Cypress Avenue and College View Dr., with a deviation to the Bethel School and Canby TC. Key destinations served by Route 4 include Mt. Shasta Mall, Hilltop Center, the U.S. Post Office, Enterprise High School, Parsons Middle School, K-Mart and Ross stores, and Bethel Church and School of Supernatural Ministry. At Canby TC, riders can transfer to Routes 6, 7, 11, 14, and the Airport Express. Routes 11, 14, and the Airport Express have a timed transfer on the hour (:00) (although Airport Express does not operate every hour), while connections to Routes 6 and 7 require a 15 to 45 minute wait. Route 4 also crosses Routes 5, 6, and 11, so it is possible to transfer mid-route, although those are not timed connections.

Route 5 serves shopping and employment areas and residential neighborhoods along Hartnell Avenue, Bechelli Lane, and Cypress Avenue, in addition to downtown Redding. Service is operated hourly Monday - Friday from 6:30 am to 7:30 pm. Saturday service begins at 9:30 am and ends at 7:30 pm. The route departs the Downtown TC and runs in a loop that returns to the Downtown TC in one hour. The route is a two-way loop with the exception of a small one-way loop circulating Shasta View Drive, Goodwater Avenue and Hartnell Ave. Key destinations served by Route 5 include Sequoia Middle School, Village Plaza Shopping Center, City Hall, Shasta County Library, shopping and employment along Bechelli Lane, Cypress Avenue and Hartnell Avenue, and residential neighborhoods near Hartnell Avenue. There are timed connections on the half-hour (:30) at the Downtown TC to Routes 2, 3, 6, 9, 11, and 14. The route also crosses Routes 3, 4, 6, 11, and the Airport Express en route, but those connections are not timed.

Route 6 serves downtown Redding, the Mt. Shasta Mall - Dana Drive shopping area, and Victor Avenue. Service is operated hourly Monday - Friday from 6:30 am to 7:30 pm. Saturday service begins at 9:30 am and ends at 7:30 pm. The route departs the Downtown TC on the half-hour (:30) and runs in a loop that passes through Canby TC at a quarter past the hour (:15) and returns to the Downtown TC at the half-hour. The route is a two-way loop along State Highway 44 and along Victor Avenue, with one-way loop deviations between Victor Avenue/Galaxy Way/El Vista Street and from Dana Drive to Old Alturas Road and Canby TC. Key destinations served by Route 6 include Shasta Regional Medical Center, Mt. Shasta Mall, Canby TC, Target, Costco, and Walmart stores, and residential neighborhoods near Victor Avenue. There are timed connections on the half-hour (:30) at the Downtown TC to Routes 2, 3, 5, 9, 11, and 14. Route 6 also stops at Canby TC, where connections are possible to Routes 4, 7, 11, 14, and the Airport Express; however, Route 6 arrives there at a quarter past the hour (:15), not coinciding

with any of the other routes that stop there, so any connections require a 30 to 45 minute wait. Route 6 also crosses Routes 4, 5, and 11 en route. There are no timed connections at the route crossings, but the wait for the transfer could be less than at one of the transfer centers depending on the direction of travel.

Route 7 serves Mt. Shasta Mall, Shasta College and other schools, and the Masonic and Canby Transfer Centers. Service is operated hourly Monday - Friday from 7:00 am to 8:00 pm. Saturday service begins at 10:00 AM and ends at 8:00 PM. The route departs Masonic TC on the hour (:00) and makes a primarily one-way loop out to Shasta College along frontage roads of State Highway 299, along Shasta View Drive to Old Alturas Road and the Canby TC, north on Churn Creek Road, and back to Masonic TC. Key destinations served by Route 7 include North Point Plaza, Shasta College, Simpson University, Mountain View Middle School, Redding School of the Arts, Costco, Target, and Home Depot stores, Mt. Shasta Mall, and the Masonic and Canby Transfer Centers. Route 7 has a timed connection to Route 1 at the top of the hour (:00) at Masonic TC. There is also a connection to Route 14 at Masonic TC, in two directions. Toward the Downtown TC, the transfer time is at ten minutes past the hour (:10), making the wait for a connection ten minutes. For Route 14 heading toward Canby TC, the wait for a transfer is 45 minutes; however, one would only need to make that connection to reach a stop along Hilltop Drive. Otherwise, there is no point in riding Route 14 to Canby TC since Route 7 runs there as well. Route 7 arrives at Canby TC at 45 minutes past the hour (:45), which permits transfers to Routes 4, 11, 14, and the Airport Express with a 15 minute wait until the top of the hour (:00) (Airport Express does not operate every hour). Transfers to Route 6 require a 30 minute wait until 15 minutes past the hour (:15).

Route 9 serves the Market Street/State Highway 273 corridor between Downtown Redding and Anderson. Service is operated Monday - Friday from 6:30 am to 7:30 pm. Saturday service begins at 9:30 am and ends at 7:30 pm. Unlike the majority of the numbered routes (1, 3, 4, 5, 6, 7, 11, and 14), Route 9 does not complete a loop in one hour. Instead, Route 9 begins at the Anderson Walmart and completes a trip to the Downtown Redding TC in one hour, then returns to the Anderson Walmart in the next hour, thus completing a loop in two hours. The final departure from the Anderson Walmart is at 6:30 pm, which arrives at the Downtown TC at 7:30 pm. This last trip does not have a corresponding return trip to Anderson to "complete the loop." The route mostly follows State Highway 273/Market Street, with a deviation in Anderson to Balls Ferry Road, Stingy Lane, and North Street, and another at Breslauer Way in Redding to the Shasta County Social Services offices. Key destinations served by Route 9 include Anderson Walmart, the Prime Outlets stores, Anderson New Technology High School, Anderson City Hall and Library, the U.S. Post Office, Shasta District Fairgrounds, Win-River Casino, Shasta County Social Services, Redding City Hall and Library, and the Downtown TC. At the Downtown TC, there are timed connections on the half-hour (:30) to Routes 2 (counter-clockwise), 3, 5, 6, 11, and 14. Route 3 shares part of the route that Route 9 takes, but the times do not coincide to facilitate transfers except at the scheduled transfer point at the Downtown TC. Transit service

to and from Anderson is constrained by the fact that there is only a single route, and to reach destinations outside of downtown Redding, at least one and sometimes two transfers are required. There are no direct lines between Anderson and the major destinations in the eastern half of Redding such as Mt. Shasta Mall and Shasta College – this despite the fact that Anderson is geographically east of those destinations.

Route 11 serves downtown Redding, Cypress Avenue, Hilltop Drive, Mt. Shasta Mall, and the Canby TC. Service is operated hourly Monday - Friday from 6:30 am to 7:30 pm. Saturday service begins at 9:30 am and ends at 7:30 pm. The route departs the Downtown TC on the half-hour (:30) and runs in a loop that passes through Canby TC on the hour (:00) and returns to the Downtown TC at the half-hour (:30). The route is a two-way loop along Cypress Avenue, Hilltop Dr., Browning Street, and Canby Road, with only a one-way deviation returning to Downtown TC on Pine Street rather than Market Street. Key destinations served by Route 11 include Redding City Hall and Library, Hilltop Center, Mt. Shasta Mall, Canby TC, Kohl's and Best Buy stores, and many other stores and hotels along Hilltop Drive and Cypress Avenue. There are timed connections on the half-hour (:30) at the Downtown TC to Routes 2, 3, 5, 6, 9, and 14. Route 11 also stops at Canby TC, where there are timed connections on the hour (:00) to Routes 4, 14, and the Airport Express (note: Airport Express does not run every hour). There are also connections to Route 6 with a 15 minute wait and Route 7 with a 45 minute wait to transfer. Route 11 also crosses Routes 3, 4, 5, and 6 mid-route. There are no timed connections at the route crossings, but the total trip time could be less transferring at a route crossing than transferring at a transfer center, depending on the destination and direction of travel.

Recently, the outbound bus from the Downtown Transit Center on Route 11 is interlined to continue on as the inbound Route 14 bus back to the Downtown Transit Center. Route 11 is a much shorter route and has a bit of excess capacity in running time. The practice of interlining buses was discussed as part of the service evaluation for the RABA system as part of the SRTP process.

Route 14 serves downtown Redding, N. Court Street, N. Market Street, Masonic TC, Hilltop Drive, and Canby TC. Service is operated hourly Monday - Friday from 6:30 am to 7:30 pm. Saturday service begins at 9:30 AM and ends at 7:30 PM. The route departs the Downtown TC on the half-hour (:30) and runs in a loop along N. Court Street, Benton Drive, N. Market Street, Lake Boulevard to Masonic TC, and Hilltop Drive to Canby TC, then returns along the same route with one exception – Quartz Hill Road instead of Benton Drive. Key destinations served by Route 14 include the Shasta County Courthouse, the Senior Citizens Center, North Point Plaza, Kohl's, Mt. Shasta Mall, Masonic TC, Canby TC, multi-family residential areas between Benton Drive and Quartz Hill Road, and along Hilltop Drive. There are timed connections on the half-hour (:30) at the Downtown TC to Routes 2, 3, 5, 6, 9, and 11. Route 14 also stops twice at Masonic TC, and once at Canby TC. Route 14 stops at Masonic TC at ten minutes and forty-five minutes past the hour (:10 and :45). There are connections on the hour (:00) to Routes 1 and 7 – a fifteen minute wait after Route 11's first arrival to Masonic TC. The second arrival, ten

minutes after the hour (:10) does not permit any useful transfer options. At Canby TC, there are timed connections on the hour (:00) to Routes 4, 11, and the Airport Express (note: Airport Express does not run every hour). There are also connections to Route 6 with a 15 minute wait and Route 7 with a 45 minute wait to transfer. The Route 14 bus becomes the Route 11 bus at the Canby Transfer Center with a destination to the Downtown Transit Center.

Express Services

Airport Express serves the Redding Municipal Airport, flight training schools, CalFire, and businesses located on Airport Road. Currently the service operates six times per day, Monday - Friday, at 6:00 am, 7:00 am, 11:00 am, 1:00 pm, 4:00 pm, and 6:00 pm. Saturday service consists of four trips, at 9:00 am, 1:00 pm, 4:00 pm, and 6:00 pm. Recently the RABA board of directors authorized an increase in service to eight trips per day, Monday - Friday, driven by high ridership and two new schools agreeing to a partnership to provide financial support for the service. The additional trips would be at 8:00 am and 3:00 pm. The route begins in front of Kohl's on Browning Street for the 6:00 am and 7:00 am trips, then proceeds to the Canby TC. The remaining daily trips start from the Canby TC. The route travels on Old Alturas Road, Shasta View Road, Hartnell Avenue, then along Airport Road to Knighton Road, along Lockheed Road to IASCO Flight Training, back to Knighton Road, through the airport passenger terminal, then back along Airport Road toward Canby TC. In 2013, in conjunction with the additional two trips per day, the route will be modified to include a stop at the Shasta Builder's Exchange on Old Highway 44, in the inbound (toward Canby TC) direction only. The service is primarily used by flight training students at IASCO Flight Training. These students reside in apartments located near the route, and use the route to commute to flight school, and for shopping at Mt. Shasta Mall and Dana Drive/Old Alturas Road stores The Veterans Home on Knighton Road is also a new destination. There are timed connections at Canby TC to Routes 4, 11, and 14 on the hour (:00); additionally, Route 6 departs Canby TC 15 minutes after the hour (:15). Airport Express does not operate every hour as the local routes do, but the forthcoming increase in service provides additional opportunities to transfer between local routes and Airport Express. Airport Express also shares with Route 5 a stop at Shasta View Drive and Wilson Ave. In the inbound direction, Airport Express arrives at this stop at forty-five minutes past the hour (:45), and Route 5 arrives just before the hour, so a transfer is possible for someone whose destination is Hartnell Avenue or Bechelli Lane.

School Express provides express service to three college or vocational schools: Shasta College, Simpson University, and Redding School of the Arts. There is one morning, and one afternoon trip, Monday - Friday. The morning trip departs the Downtown TC at 7:30 am and proceeds along State Highway 44 to Shasta View Drive to Redding School of the Arts and Simpson University, then turns on Old Oregon Trail to reach the end of the route, Shasta College. The afternoon trip departs Redding School of the Arts at 2:20 pm on Mondays, and 3:20 pm Tuesday - Friday. The route then proceeds to Simpson University and Shasta College before returning on

State Highway 299, Interstate 5, and State Highway 44 to the Downtown TC. Arrival on Monday is at 3:00 pm, Tuesday - Friday arrival is at 4:00 pm.

Burney Express is a contracted service with Shasta County and is discussed in more detail in Chapter 6.

Rider Profile

The following rider profile is from the results of the on-board survey. This section describes who is riding RABA, their dependency on public transportation and frequency of RABA utilization.

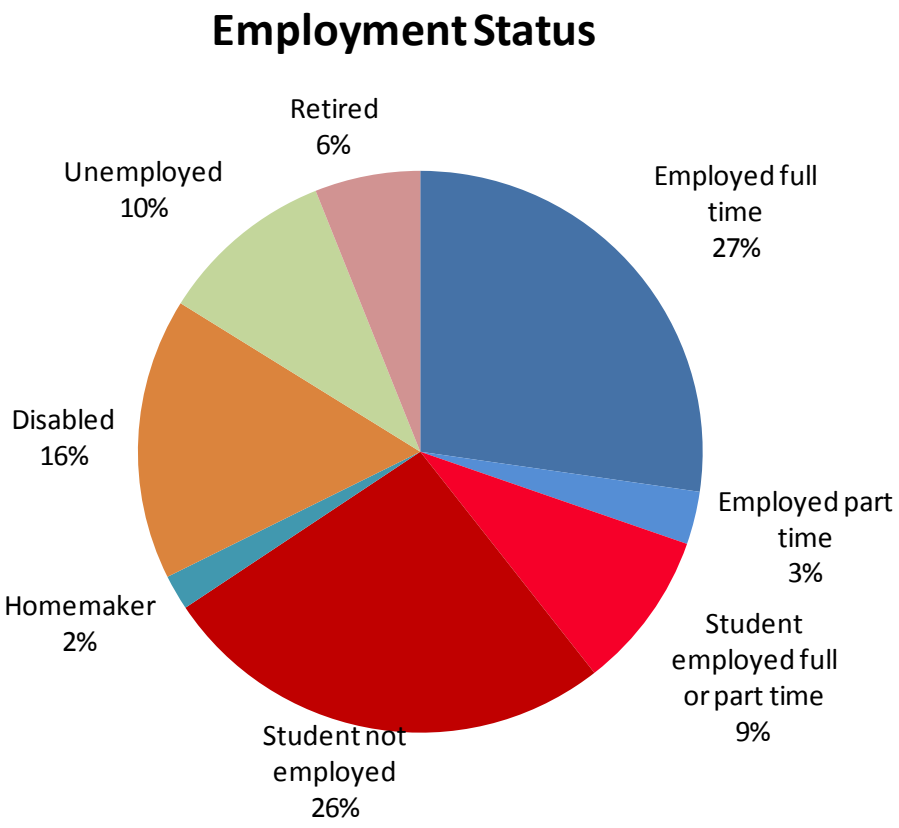


Figure 4-3 Employment Status

Who is Riding RABA?

About two thirds (65%) of RABA riders are employed, students, or both. As the chart above illustrates, 30% are employed non-students, 26% are students only and 9% are employed students. The other third of the ridership is made up of persons with disabilities who are unable to work (16%), unemployed persons (10%), retirees (6%) and homemakers (2%).

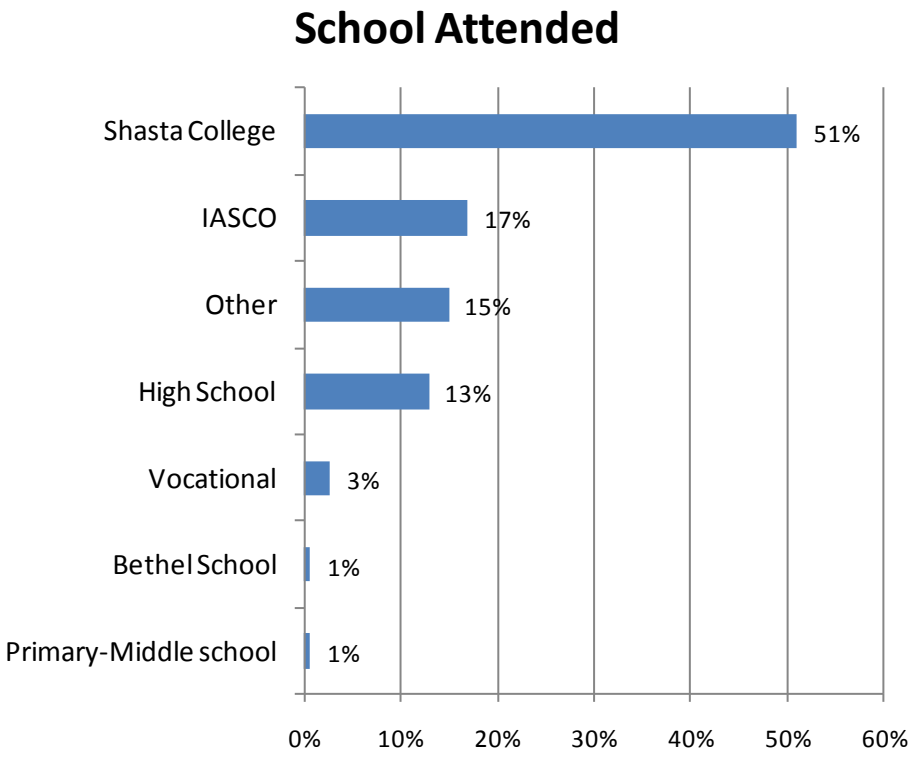
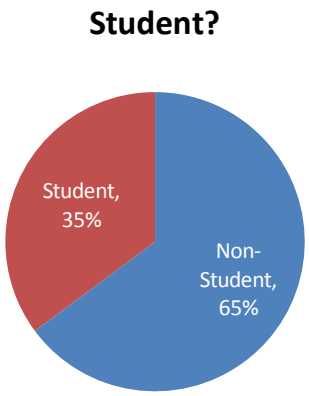


Figure 4-4 Students by School

Students Riding RABA



Students make up more than a third (35%) of RABA's ridership. Riders who said they were students were asked what school or type of school they attend. The chart above shows the distribution within the 35% of respondents who were students. Shasta College represents, by far, the largest segment of students. Shasta College students appear to make up about 18% of RABA's total ridership base.

The other significant components among the student ridership are IASCO flight school students (17%) and high school students (13%).

Among the 15% categorized as "other" students, the following verbatim responses were provided:

- California Heritage Youth Building Academy
- IOT (4)
- Santa Rosa Junior College
- Shasta Adult School
- Shasta Bible College
- Simpson University
- Smart Center
- Work or Work Training (4)

Another 29 respondents were students and responded in the other category y, but did not specify the type of student they were.

Age of Riders

RABA's ridership is made up primarily of non-elderly adults, distributed throughout the age spectrum. The vast majority of survey respondents were between 18 and 64, with only small segments over 65 (3%) or under 18 (4%).

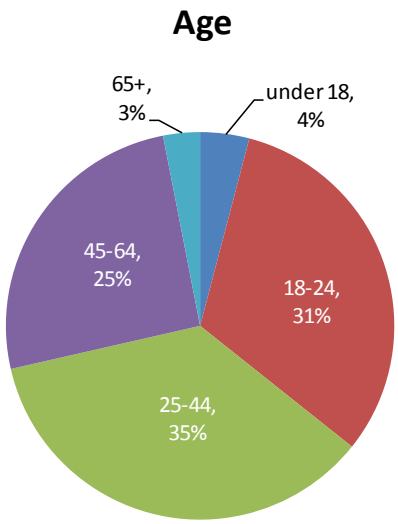


Figure 4-5 Age

Income of Riders

Most RABA riders are quite low income. Three quarters (74%) report annual household incomes of under $15,000, while another 12% report household incomes between $15,000 and $20,000. Only 14% of riders surveyed reported annual household incomes in excess of $20,000.

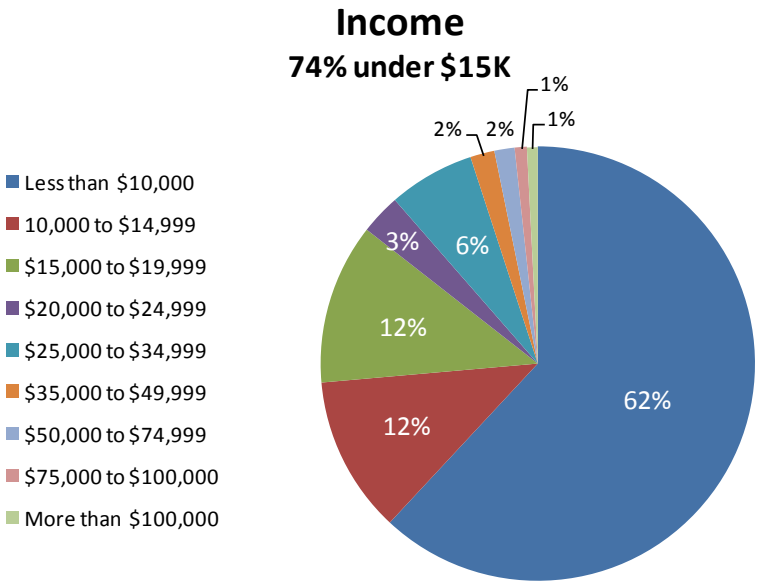


Figure 4-6 Income

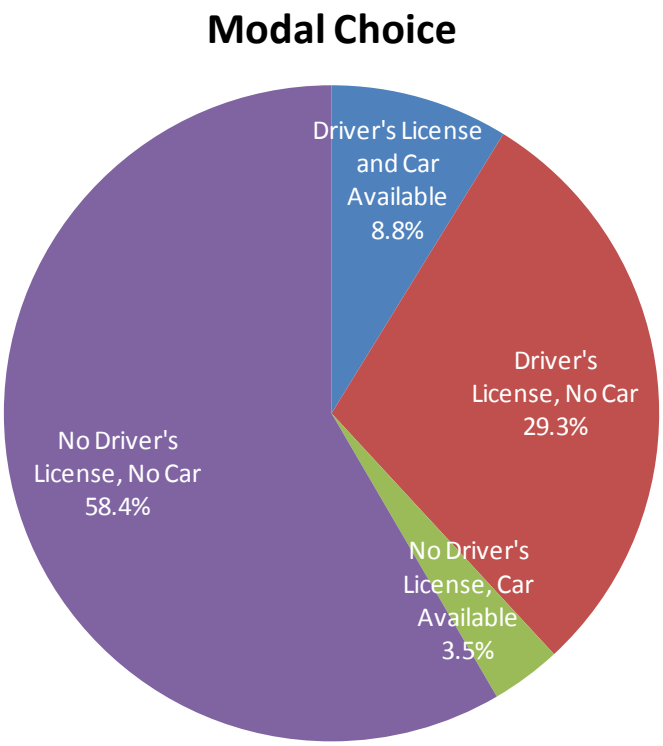
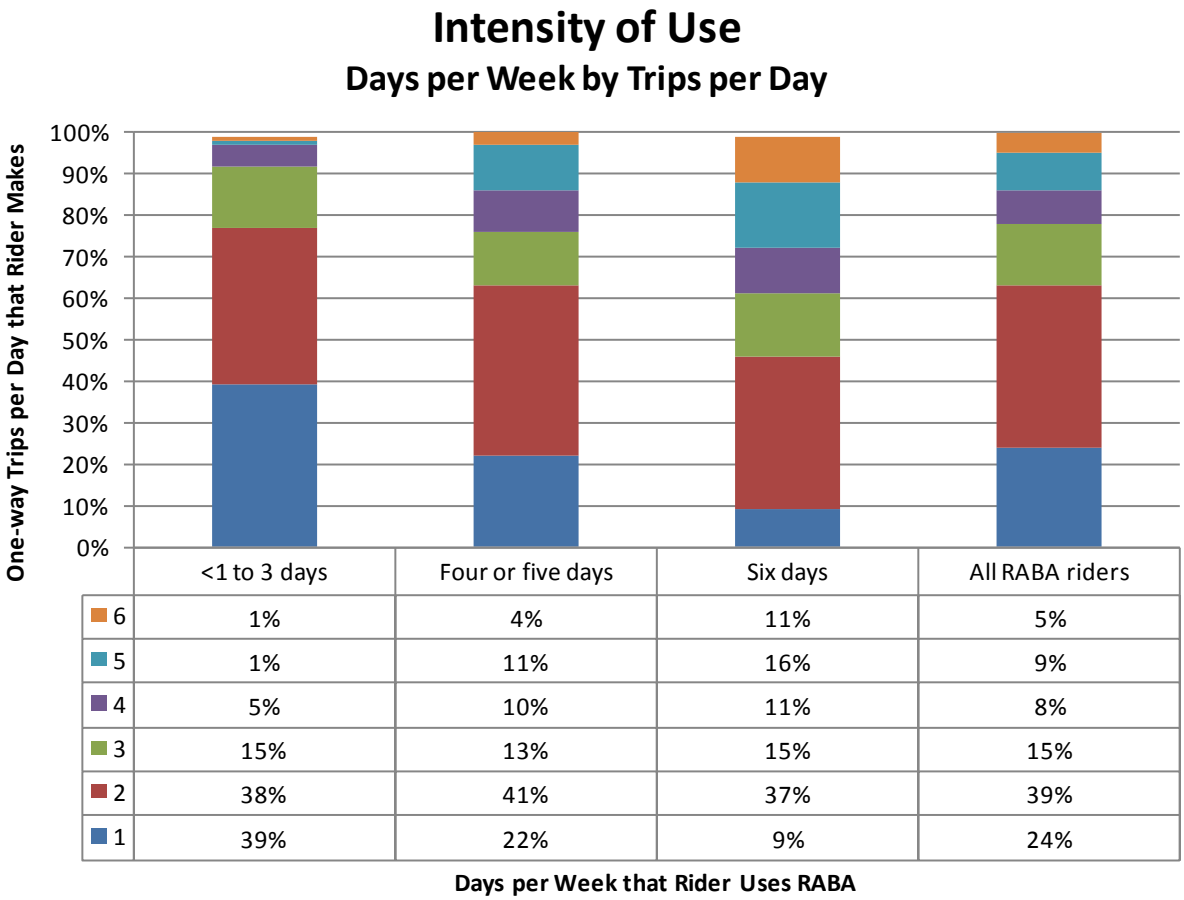


Figure 4-7 Modal Choice

Level of Modal Choice

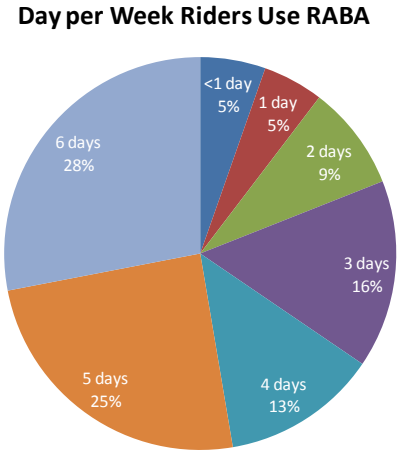
Most of RABA's riders are quite dependent upon public transportation. The majority (58%) had neither a driver's license nor a car available for the trip on which they were surveyed, while another 33% lacked either a vehicle or a driver's license. Less than 9% of riders said they have both a driver's license and had a car available, indicating that they could have made the choice to drive rather than ride RABA.



	<1 to 3 days	Four or five days	Six days	All RABA riders
6	1%	4%	11%	5%
5	1%	11%	16%	9%
4	5%	10%	11%	8%
3	15%	13%	15%	15%
2	38%	41%	37%	39%
1	39%	22%	9%	24%

Figure 4-8 Intensity of Use

How Often do Passengers Ride RABA?

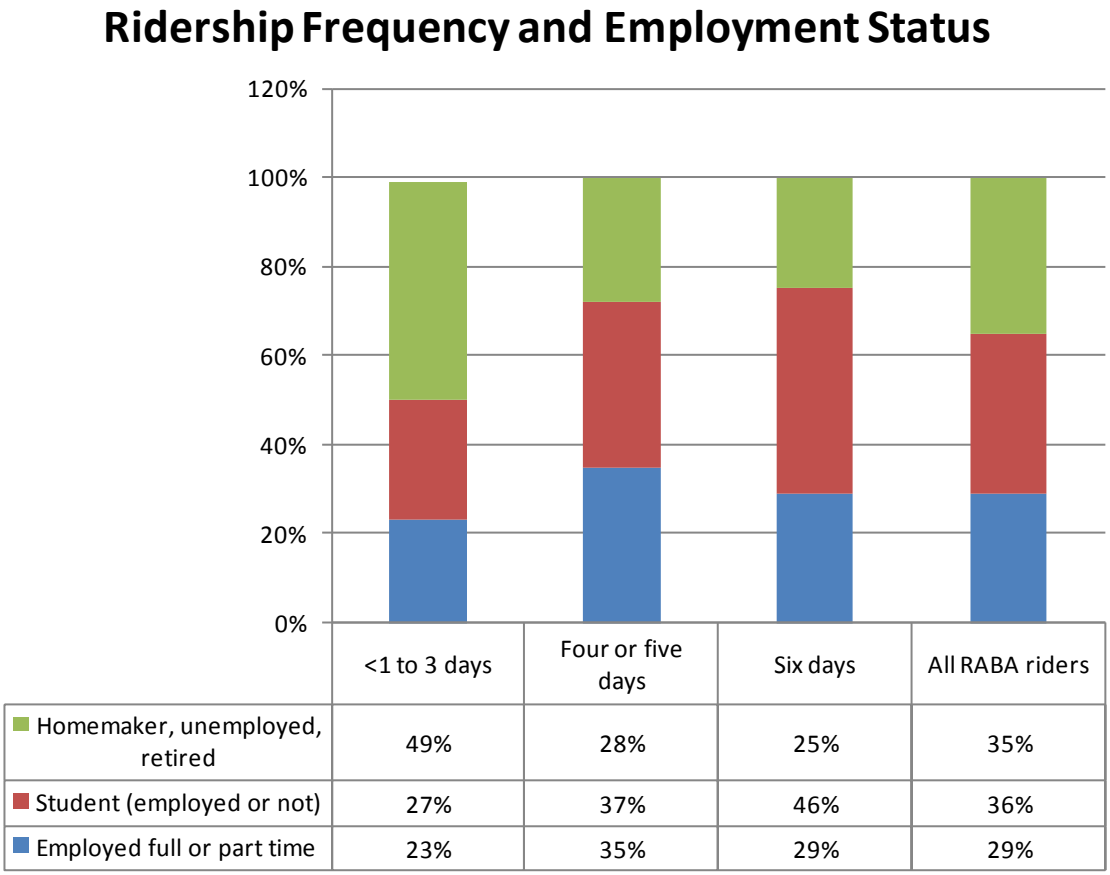


The questionnaire included two questions regarding how frequently riders use the bus – how many days per week a person rides and how many one-way trips they make on RABA on an average day.

The pie chart at the right shows how many days per week riders use the bus. Two thirds of riders use RABA regularly – four or more days per week. Twenty-eight percent (28%) ride six days per week, while 38% ride 4-5 days per week. The remaining third of riders ride three days per week (16%) or less often.

Figure 4-8 above combines the two questions about frequency to better describe how intensively the different segments use RABA. It shows how many trips per day riders make; cross-tabulated by the number of days per week that they ride.

Among all RABA riders, most make only 1-3 one-way trips per average day (78%). However, a quarter of riders (22%) make four or more one-way trips per day. The cross tabulation shows, however, that riders who ride more days per week are also likely to make more trips per day. For example, among riders who ride 6-days per week, 11% made six one way trips on the day they were surveyed. This was true for only 1% of 1-3 day riders and only 4% of 4-5 days riders. This intensity of use reflects the reliance of frequent riders on RABA for all of their mobility needs, and means that they contribute disproportionately to total boardings.



	<1 to 3 days	Four or five days	Six days	All RABA riders
Homemaker, unemployed, retired	49%	28%	25%	35%
Student (employed or not)	27%	37%	46%	36%
Employed full or part time	23%	35%	29%	29%

Figure 4-9 Frequency and Employment Status

Ridership Frequency by Employment Status

Figure 4-9 shows the relationship between employment status and frequency of ridership (days per week). Students who ride RABA are more likely to use the bus six days per week than other groups, while riders who are neither employed nor students are more likely to be occasional riders (1-3 days per week).

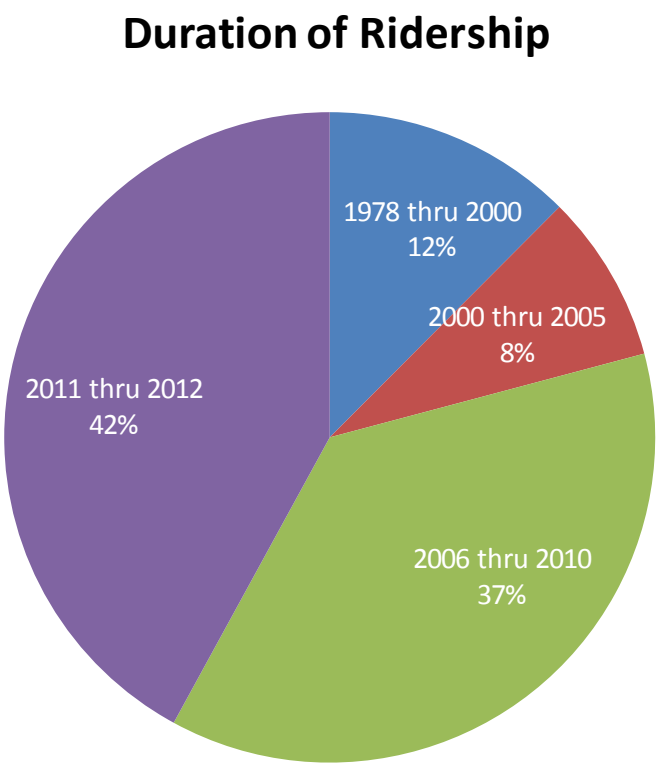


Figure 4-10 Year Rider Starting Riding RABA

Duration of Ridership

Riders were asked what year they started riding RABA. As the chart above shows, 42% of riders just starting using the system in 2011 or 2012 – a two year period. Another 37% of riders began riding in the five years prior (2006-2010), while 20% of riders are long term users – having ridden for more than 7 years.

This is a relatively typical level of "turnover" for transit systems like RABA. Many riders use transit only for a short time – when they are young, when they are students, when their incomes or low or when other lifestyle factors make it advantageous. The transit system must constantly attract new riders in order to maintain, as well as increase, ridership levels. This makes on-going marketing and passenger information efforts very important.

New Riders

Riders who began using RABA over the past two years are young and highly likely to be students. The two charts at the right show the age and employment status distribution of riders who began using RABA during 2011 and 2012, compared to older riders and to all riders.

New riders are much more likely to be under 24 years old (46%) than other riders (17%). They are also much more likely to be students (53%) than longer term riders (26%). Correspondingly they are less likely to be employed or to be among the unemployed, non-student segments.

The income distribution of new riders is very similar to that of other riders – most report household incomes under $15,000 per year.

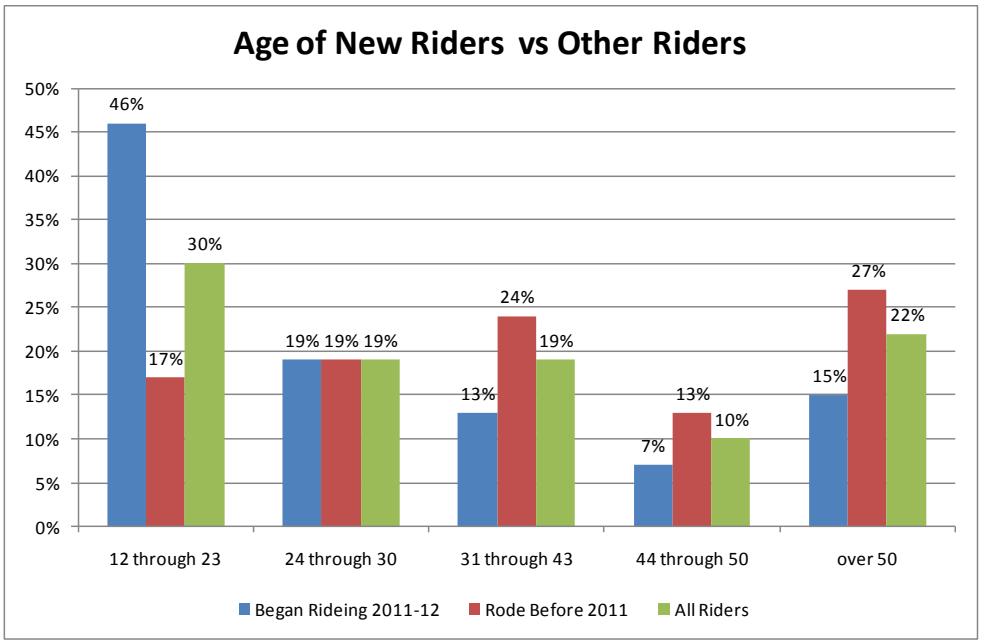


Figure 4-11 New Riders: Age

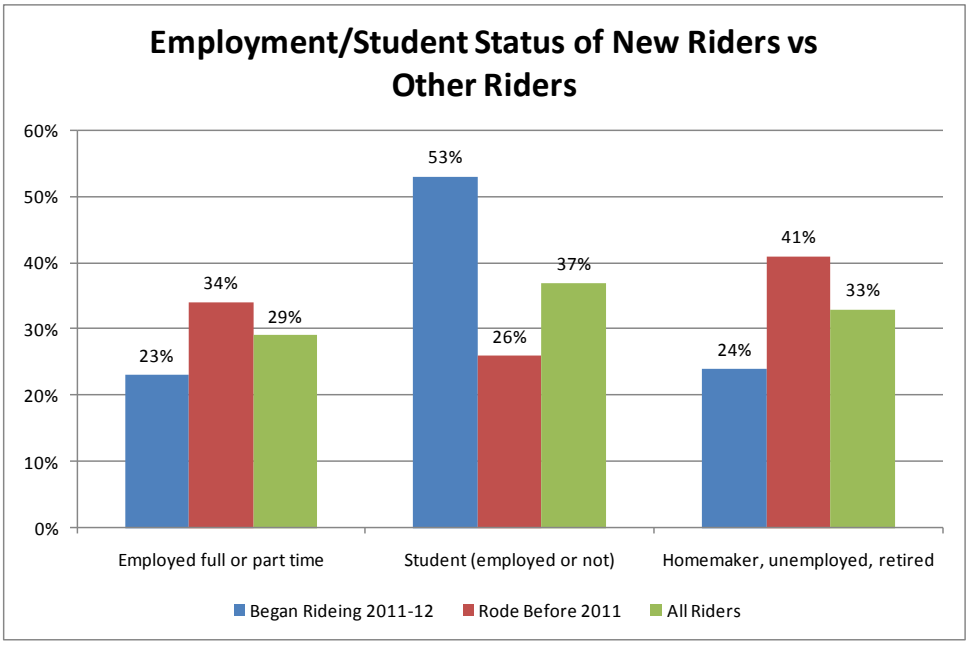


Figure 4-12 New Riders: Employment

Trip Characteristic Profile from On-Board Survey

This section starts with a review of the key trip characteristics from the on-board survey. An analysis of key boarding and alighting patterns are then presented with a series of maps.

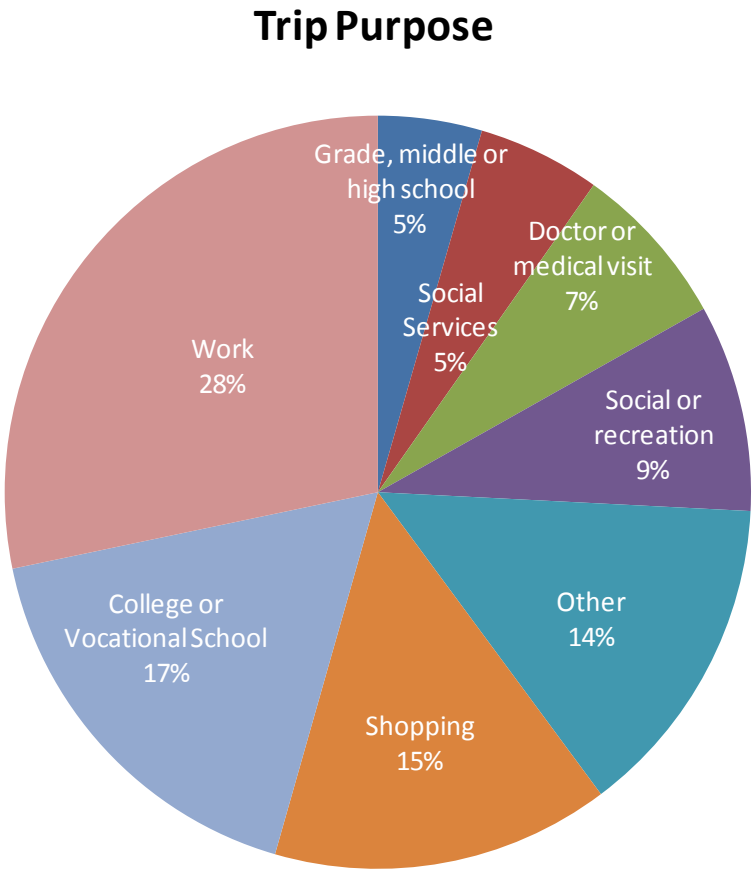
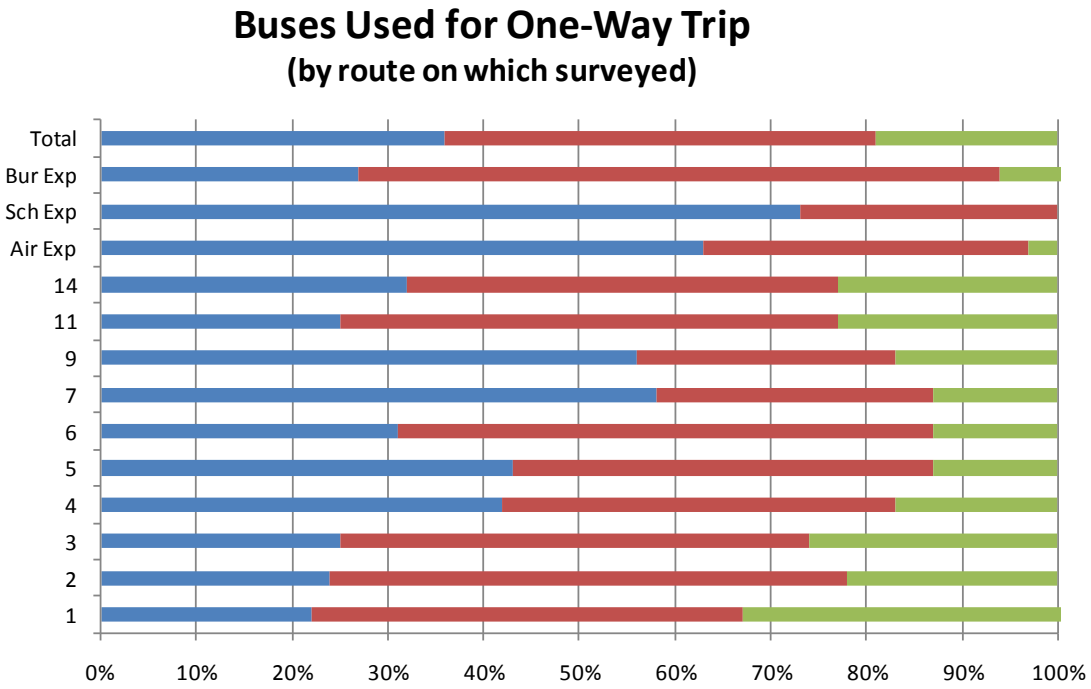


Figure 4-13 Trip Purpose

Main Purpose of Trip

Half of RABA's ridership is commute oriented. When surveyed, 28% of riders where traveling to or from work, 17% to or from college or vocational school and 5% to or from primary or secondary school.

Non-commute riders were traveling for a variety of purposes including shopping (15%), recreation (9%), medical visits (7%), and social service appointments (5%).



	1	2	3	4	5	6	7	9	11	14	Air Exp	Sch Exp	Bur Exp	Total
1 bus-no transfer	22%	24%	25%	42%	43%	31%	58%	56%	25%	32%	63%	73%	27%	36%
2 buses	45%	54%	49%	41%	44%	56%	29%	27%	52%	45%	34%	27%	67%	45%
3 buses	34%	22%	26%	17%	13%	13%	13%	17%	23%	23%	3%	0%	7%	19%

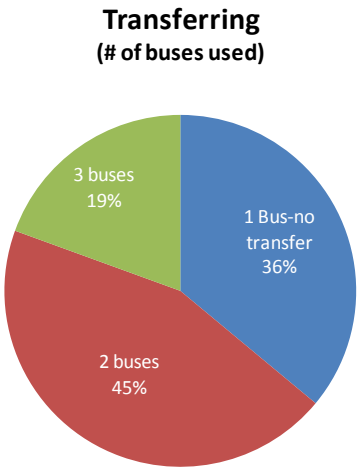
Figure 4-14 Transfer Activity

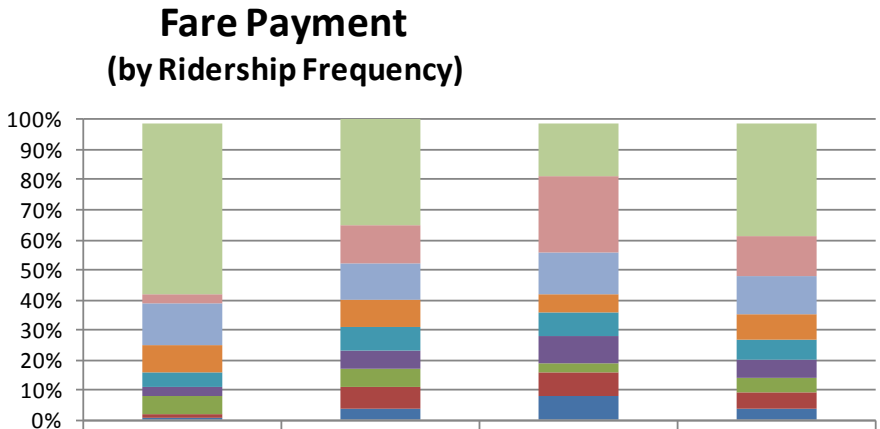
Transfer Activity

Nearly two-thirds of RABA riders (64%) say that they use more than one bus to complete their one-way trip. Forty-five percent (45%) use two buses, while 19% use three buses to get to their destination.

Figure 4-14 shows that the number of buses used varies by RABA route. Riders on the school express and airport express routes are the most likely to have a direct, one-bus trip. On the other hand, riders on routes 1 and 3 are most likely to require three buses.

The need to transfer buses reduces the attractiveness of transit in three ways – it increases the complexity of trip planning, increases travel time and increases the level of uncertainty (e.g. will I make my connection).





	Three Days or less	Four to Five Days	Six days	All RABA riders
Full cash fare	57%	36%	18%	38%
Full priced local monthly pass	3%	13%	25%	13%
Senior/disabled cash fare	14%	12%	14%	13%
Punchcard	9%	9%	6%	8%
Senior/Disabled local monthly pass	5%	8%	8%	7%
Senior/Disabled regional mon pass	3%	6%	9%	6%
Single Ride Ticket	6%	6%	3%	5%
Youth monthly pass	1%	7%	8%	5%
Full priced regional monthly pass	1%	4%	8%	4%

Figure 4-15 Fare Payment

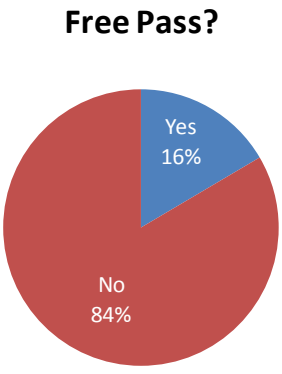
Fare Payment

The chart above shows the distribution of fare media used by riders overall and by frequency segment.

About half of RABA riders are paying their fare in cash – either the full cash fare (38%) or the senior/disabled cash fare (13%). Among full fare riders, the cash fare percentage declines significantly with frequency of ridership – so among 6-day riders only 18% pay cash, compared to 57% among occasional riders.

Thirty percent of riders (30%) have a monthly pass – 20% a local monthly pass and 10% a regional monthly pass. Monthly pass usage is greater among the more frequent riders. Among monthly pass riders, 17% are at the full fare level and 13% at the half-fare level.

Riders were asked if they were riding with a free pass they received from a social service agency or medical provider: 16.5% said yes.



Boarding and Alighting Analysis

The following section analyzes boarding and alighting activity data collected from the on-board ridership count and passenger survey.

Figure 4-16 below shows bus stops with twenty or more passenger activities (combined boardings and alightings), displayed in descending order by number of activities. If a particular bus stop serves more than one route, boardings and alightings have been combined for the two or more routes. In addition, if there are two or more stops within close proximity, such as opposite sides of the same street, or at the same intersection but located on the cross street, the boarding and alighting counts have been also been combined.

By a wide margin, the stops with the highest volume of passenger activities (greater than 500 per day) are the three transit centers: the Downtown Transit Center, Masonic Transfer Center, and Canby Transfer Center. That is to be expected, since, as noted in the ridership profile, 64% of surveyed RABA riders needed to transfer at least once to complete their one-way trip. Additionally, the Downtown Transit Center and Canby Transfer Center are located within walking distance of regional destinations: numerous county offices, medical facilities, and social services are in the vicinity of Downtown Transit Center, and Mt. Shasta Mall and several big-box retail stores are located near Canby Transfer Center.

After the transfer points, there are several stops within the range of 70 - 200 passengers per day. This includes the stop with the next highest passenger activity, Shasta College. The ridership profile cited that 35% of riders are students, and Shasta College students were the largest segment of the student riders. Following Shasta College, three of the next four highest-volume stops are associated with flight training students. As mentioned earlier, IASCO students comprise a significant segment of the ridership. IASCO Parking Lot and Municipal Blvd at Flight Avenue are two stops that serve IASCO facilities. In addition, the Shasta View Drive at Wilson Avenue stop is near one of the two apartment complexes that house the IASCO students. The fourth stop within this tier is Eastside Road and Breslauer Way, which is located near the Shasta County Social Services offices.

After that grouping, there appear to be several different categories of destinations for passengers. Some of the stops are near stores (also retail employment) such as Winco, Food Maxx, and Safeway supermarkets, and the Redding and Anderson Walmart supercenters; some are near civic destinations (e.g. Redding City Hall, the Shasta County Courthouse); and some are near medical facilities (e.g. Shasta Regional Medical Center).

Stops with 20 or More Passenger Activities per Day

Transit Stop (Landmark or Business Near Stop)	Routes Served	Total On (Boardings)	Total Off (Alightings)	Total On + Off (Activities)
Downtown Transit Center	2,3,5,6,9,11,14,BE,SE	892	764	1,656
Masonic Avenue Transfer Facility	1,7,14	348	350	698
Canby Road Transit Center	4,6,7,11,14,AE	310	306	616
Shasta College off Old Oregon Trail at (North Parking Lot)	7,BE,SE	100	67	167
IASCO Parking Lot	AE	73	73	146
Shasta View N/ Wilson	5,AE	54	53	107
Eastside N/ Breslauer	3	40	40	80
Municipal Blvd/ Flight Ave	AE	36	36	72
Dana E/ Bradford at (Wal Mart)	6	27	42	69
Old Alturas W/ Bradford at (Winco)	6,7	38	25	63
Breslauer E/ Veterans at (Social Service Offices)	3,9	25	28	53
Hilltop (2405) S/ Commerce near (IHOP Restaurant)	11	21	31	52
Cypress (777) E/ Civic Center at (City Hall)	11	26	22	48
Eastside S/ Star (west side)	3,9	23	20	43
Placer W/ Continental at (Shasta Community Health Center)	5	20	17	37
Hartnell E/ Victor	5,6	20	16	36
Cypress W/ Beverly at (Big-O-Tires)	4,11	14	19	33
No. Market (842) N/ Quartz Hill at (S.J.Denham)	14	28	3	31
Churn Creek (1330) S/ Old Alturas at (Food Maxx)	4,6,7	25	6	31
Market S/ Grange near (Good News Rescue Mission)	3	16	15	31
Court (1155) N/ Eureka at (YMCA)	14	13	18	31
East S/ Butte at (Shasta Regional Hospital)	6,11	7	20	27
Cypress (2275) E/ Pine at (Safeway)	11	15	11	26
Court (1775) N/ Shasta at (Walgreens)	14	13	13	26
Parkview E/ Grape at (City Hall / near County Library)	3	15	10	25
Hilltop (1691) N/ Presidio at (Chevy's Restaurant)	11	11	14	25
Cascade S/ Shasta Dam at (Rite Aid)	1	14	10	24
Shasta View N/ Hemingway across from (Mountain View Middle School)	7	8	16	24
Placer (3315) E/ Buenventura at (Holiday Market)	2	12	11	23
Court (1450)/ Butte at (County Court House)	2,14	1	21	22
Rhonda S/ Pleasant Hill at (Walmart)	9	16	5	21
Market S/ Lincoln	11	10	11	21
Galaxy E/ Meteor	6	17	3	20
Churn Creek (3550) N/ Echo at (Marquis Shasta Care)	4	13	7	20
Hartnell E/ Northwoods near (Rother School)	5	12	8	20
West N/ Tenth	2	11	9	20
Park Marina S/ Park Marina Circle near (Movies 8)	3	6	14	20
Railroad S/ Grandview	3	6	14	20

Figure 4-16 Stops with 20 or More Passenger Activities per Day

There were a total of 85 stops that had at least one bicycle or wheelchair activity (boarding or alighting) during the ridership count. The stops that had the most bicycle or wheelchair activity – three or more during the ridership count – are listed below in Figure 4-17. The top stops are mostly the same as the passenger total ranking, but the lower half of the list includes some stops that were not among the top volume stops for general passenger activity. This list is slightly more skewed toward destinations in shopping areas than the general list. It is difficult, however, to draw conclusions from such a small sample size.

Stops with 3 or More Passenger Activities Including a Bicycle or Wheelchair on Board

Transit Stop	Routes Served	Total Boardings with Bicycle	Total Alightings with Bicycle	Total Boardings with Wheelchair	Total Alightings with Wheelchair	Total Bicycle and Wheelchair Activities
Downtown Transit Center	2,3,5,6,9,11,14,BE,SE	19	11	17	8	55
Masonic Avenue Transfer Facility	1,7,14	5	7	8	6	26
Canby Road Transit Center	4,6,7,11,14,AE	5	7	5	5	22
Hilltop (2405) S/ Commerce near (IHOP Restaurant)	11	1	1	2	3	7
Shasta College off Old Oregon Trail at (North Parking Lot)	7,BE,SE	0	1	4	1	6
Shasta View S/ Moss	7,SE	2	2	0	0	4
College View E/ Shasta View	7	1	3	0	0	4
Eastside N/ Breslauer	3	1	1	0	1	3
Market S/ Grange near (Good News Rescue Mission)	3	1	0	1	1	3
Rhonda S/ Pleasant Hill at (Walmart)	9	1	0	2	0	3
Market S/ Lincoln	11	3	0	0	0	3
Hilltop (1987) N/ Mistletoe at (Marie Callenders Reataurant)	11	0	1	0	2	3
Bechelli S/ Wilshire at (Best Price Furniture)	4	2	0	1	0	3
Hilltop S/ Browning at (Town & Country Shopping Center)	11	0	3	0	0	3
Cascade (3020) N/ Mulberry at (Elegant Home Furnishing)	1	1	1	1	0	3

Figure 4-17 Stops with 3 or More Passenger Activities Including a Bicycle or Wheelchair on Board

Figure 4-18 and Figure 4-19 below show boarding maps for central Redding and Anderson and from Shasta Lake to northern Redding. The boarding maps show a strong concentration of passenger activity in central Redding, from Market Street on the west to Churn Creek Road on the east, Lake Blvd at the north end, to Breslauer Way and Loma Vista Drive as the southern edge. To the west of the Sacramento River, there are multiple medical centers (Shasta Regional and Mercy), schools (Shasta, North State Independence, and University Preparatory School), and multiple county offices and social services. East of the river, along Hilltop Drive and Churn Creek Road north to Browning Street, is the retail and hospitality hub of Redding. Within that corridor are located the Mt. Shasta Mall, big box stores such as Target, K-Mart, and Walmart, and Hilltop Drive's hotel and restaurant row. At the northern edge, scattered near N. Market Street, Hilltop Drive, and Lake Blvd, there are clusters of apartments which were cited in the surveys as being the residence of many riders.

RABA - Redding to Anderson

Daily Boardings by Stop

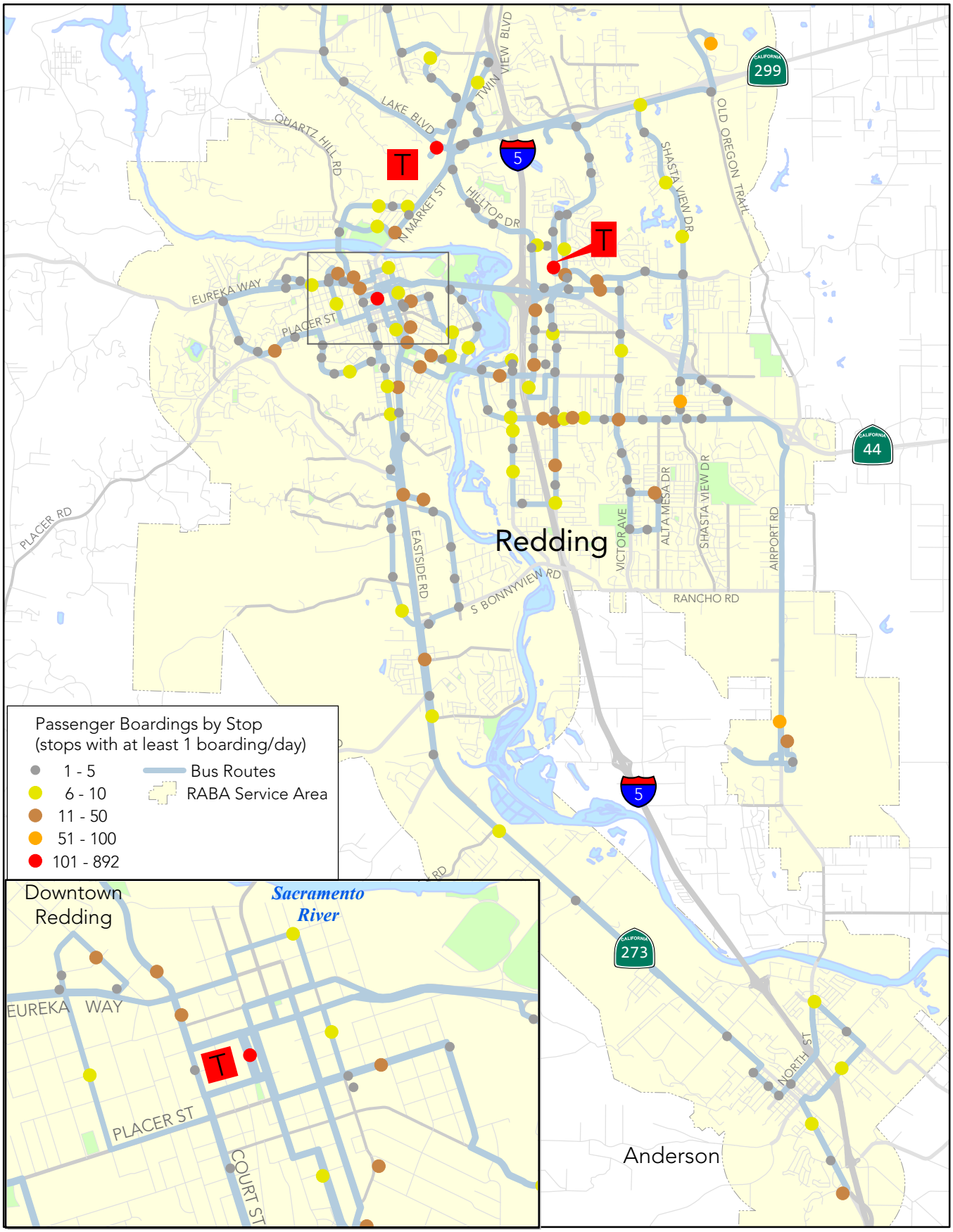


Figure 4-18

0 1 2

Miles

N

Source: Mobility Planners, City of Redding, and Shasta County
January 2013

RABA - Shasta Lake to Redding

Daily Boardings by Stop

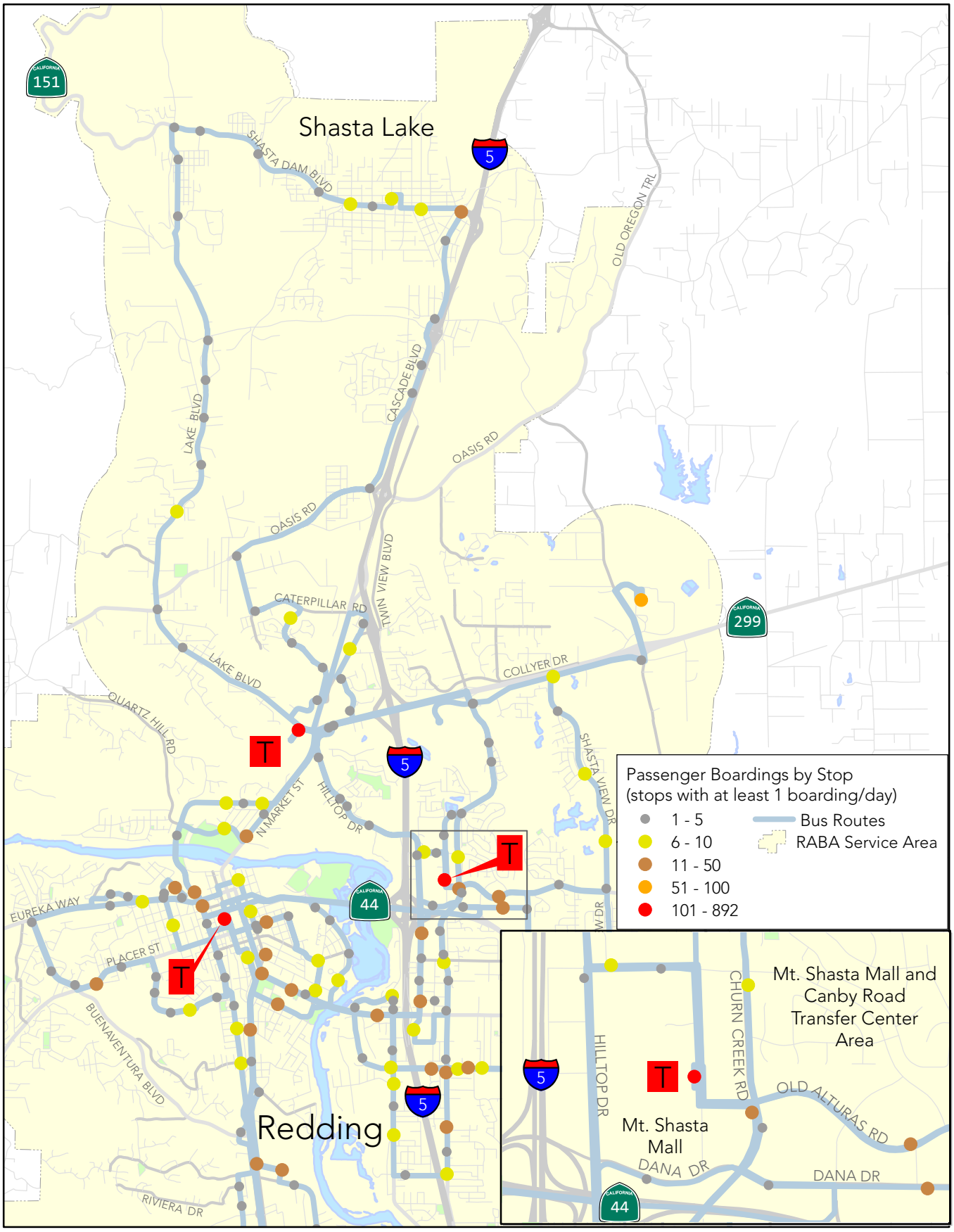


Figure 4-19

0 1 2

Miles

N

Source: Mobility Planners, City of Redding, and Shasta County
January 2013

Similar maps of passenger alightings are included in Appendix A. There are only subtle differences between the boarding and alighting patterns.

Passenger Satisfaction with Fixed Route

Passengers were asked to rate the performance of RABA on twelve different attributes and overall satisfaction with RABA service.

Figure 4-20 Satisfaction Ratings

Satisfaction Ratings

Riders were asked to rate various aspects of service on a scale of one to five, with one being very poor and five being excellent. The chart above shows the average rating for each service element.

Driver courtesy received the highest rating overall (4.21), followed by being able to get to the places you need to (4.09), time the bus starts running in the morning (4.04) and cleanliness of the buses (4.03).

Most other aspects of service received relatively neutral ratings (in the mid 3s).

The lowest ratings were for the time the bus stops running in the evening (3.24) and frequency of service (3.42).

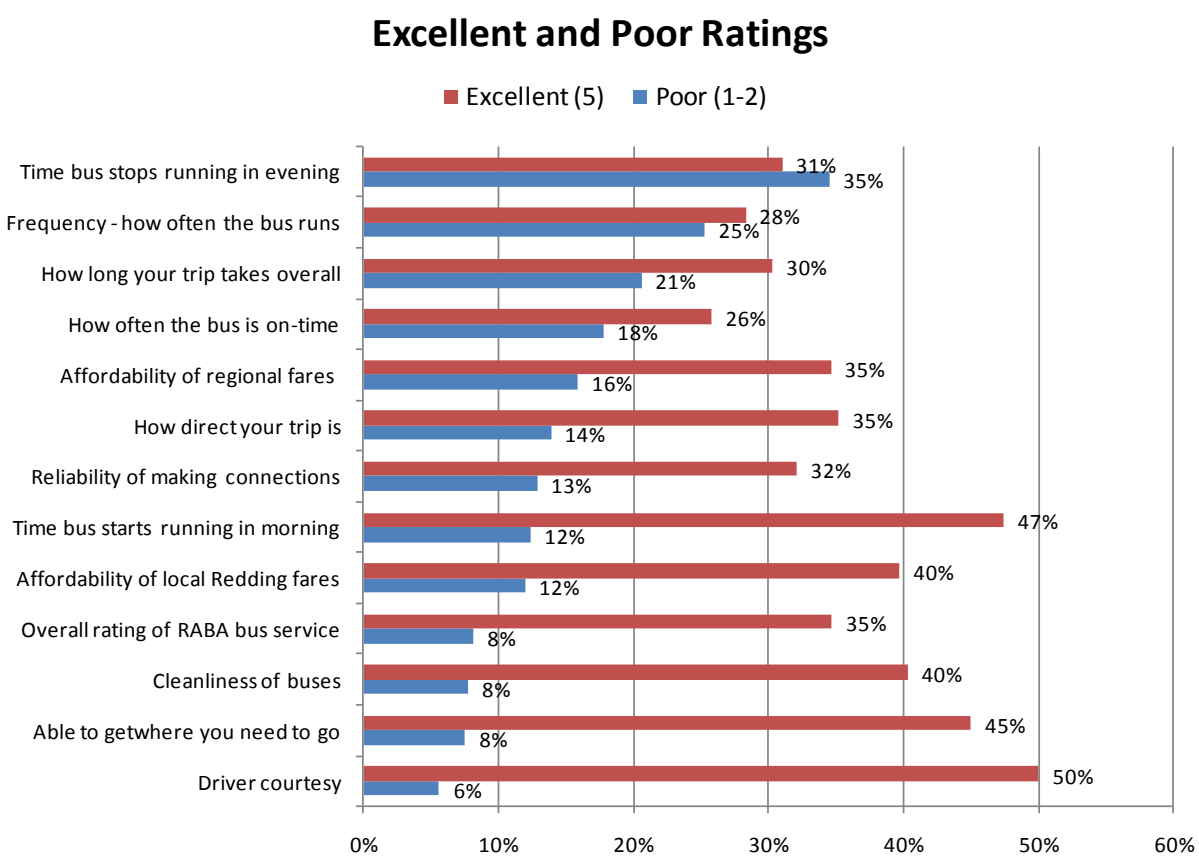


Figure 4-21 Excellent and Poor Ratings

Satisfaction Ratings – Excellent and Poor

Figure 4-21 above breaks out the extreme ratings (excellent=5, poor=1-2) to provide a more descriptive picture of how riders feel about RABA service. Areas of service where a significant minority of riders is dissatisfied include:

- Time bus stops running in the evening (35%)
- Frequency of service (25%)
- How long your trips takes overall (21%)
- How often the bus is on-time (18%)

Stakeholder and Focus Group Findings on Customer Satisfaction

The most frequent feedback the consulting team received in both the stakeholder interviews and focus groups was about the time it takes to utilize the RABA bus.

The CalWORKS manager and focus group participants felt that for many jobs, RABA "does not work for the working poor." Service doesn't start early enough, ends at 7:00 pm, and Sunday service is not offered. For getting to work, the system just doesn't work for many of the jobs the working poor might be able to get.

Several stakeholders mentioned the lack of reliability for trips involving transfers. Due to schedule adherence issues, one bus leaves the transfer center before the connecting bus gets there. Transfers are also only good for one hour. If the bus is late, then the passenger has to pay again even though it was a scheduling problem of the RABA bus.

Performance of Fixed Route Service

Figure 4-22 provides a review of performance of RABA fixed route services over the past three fiscal years.

FY 2009/10 to FY 2012/13 Fixed Route Performance

	FY 2009/010	FY 2010/11	FY 2011/12	FY 2012/13	% Change 09/10-12/13
Base Statistics					
Ridership	654,684	658,906	755,054	807,894	23.4%
Vehicle Service Hours	40,084	40,309	40,893	40,798	1.8%
Vehicle Service Miles	556,479	608,285	578,433	578,826	4.0%
Fare Revenue	$ 555,010	$ 564,626	$ 670,276	$ 684,805	23.4%
Operating Costs	$ 3,200,463	$ 3,309,235	$ 3,349,159	3,486,934	9.0%
Performance					
Passengers/Hour	16.3	16.3	18.5	19.8	21.2%
Passenger/Mile	1.18	1.08	1.31	1.40	18.6%
Average Fare	$ 0.85	$ 0.86	$ 0.89	$ 0.85	0.0%
Farebox Recovery	17.3%	17.1%	20.0%	19.6%	13.2%
Cost/Hour	$ 79.84	$ 82.10	$ 81.90	$ 85.47	7.0%
Cost/Trip	$ 4.89	$ 5.02	$ 4.44	$ 4.32	-11.7%
Subsidy/Trip	$ 4.04	$ 4.17	$ 3.55	$ 3.47	-14.2%

Figure 4-22 Fixed Route Performance

The overall performance trends of fixed route service over the past four fiscal years have been quite positive. Overall ridership is up by 23.4% from 654,684 in FY 2009/10 to 807,894 in FY 2012/13. Overall fare revenues are also up by 23.4% over the same four year span.

On the supply side, this has been accomplished with just a 1.8% overall increase in revenue hours and a 4% increase in revenue miles. Farebox recovery jumped from 17.1% in FY 2010/11 to 20.0% in FY 2011/12. There was a slight decline back to 19.6% in FY 2012/13. The average subsidy per trip declined from $4.04 per trip to $3.47 per passenger trip.

As will be shown in more detail in the next section with the route-by-route analysis, much of the ridership improvement has been the addition of the Airport Express to RABA fixed route services.

Route by Route Analysis

Ridership by Route

Figure 4-23 shows the trends of ridership by route. The Airport Express had ridership of 67,180 in FY 2012/13. The Airport Express was implemented in FY 2011/12. The Airport Express contributed 45% of the total increase in ridership between FY 2010/11 and FY 2012/13. Due to transfers and the monthly passes provided, the Airport Express has a ridership multiplier effect. Since 37% of trips on the Airport Express had transfers from another bus based on the on-board survey, the total ridership[1] attributed to just the Airport Express was approximately 90,000. Since IASCO provides monthly passes to their students, they likely utilize RABA for other trips besides trips to school. While this figure is not known, an illustrative example would be if the average monthly pass user took just 8 RABA one-way trips per month, the additional trips would be about 19,000 annual trips including transfers. It is very likely that 75% or more of the ridership gain in 2011/12 was due to the implementation of the Airport Express. There were strong ridership gains on all routes in FY 2012/13, but the most significant factor was the increase in Airport Express ridership and transfers to and from the Airport Express bus.

Route	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	% Change 09/10-12/13
1	73,255	70,439	60,547	68,457	-6.5%
2	40,295	39,608	43,899	44,878	11.4%
3	78,919	80,026	86,547	92,026	16.6%
4	42,294	44,538	48,802	54,181	28.1%
5	49,978	56,750	59,552	62,449	25.0%
6	59,352	57,801	62,156	68,177	14.9%
7	47,879	49,591	48,319	48,783	1.9%
9	44,732	46,790	45,479	51,218	14.5%
11	86,158	86,428	102,648	102,580	19.1%
14	121,370	116,327	131,565	137,214	13.1%
Airport Express			49,115	67,180	N/A
School Express	6,129	8,547	8,017	8,635	40.9%
Total*	650,361	656,845	746,646	805,778	23.9%

* Does not include charter ridership

Figure 4-23 Fixed Route Ridership by Route

[1] If one passenger transfers from one bus to the Airport Express, the ridership is two passenger trips. If they take two buses and then transfer to the Airport Express (3% had two transfers), then it counts as three passenger trips.

Other than the Airport Express, the most substantial ridership growth were with Routes 4 and 5, with 28.1 and 25% growth in ridership over the past four fiscals years. Both Routes 11 and 14 have both increased ridership by 16,000 riders, impressive gains. It's important to note that both Routes 11 and 5 are 2-directional routes that provide more direct and convenient service between origins and destinations. The School Express increased from 6,129 to 8635, a 41% gain.

The only route to show an actual decline in ridership was Route 1, with a decline in ridership of 6.5% compared to FY 2009/10.

Productivity by Route

Productivity in a fixed route system is typically measured by the number of boardings per hour of service. Figure 4-24 shows the trend in ridership productivity by route. The average route productivity increased from 16.3 passengers to 19.8 passengers per hour, a 21.5% increase. Route 14 is the most productive route, with 35.9 passengers per hour. The second most productive route is the Airport Express with 33.2 passengers per hour. Routes 3 and 11 have productivity of over 24 passengers per hour, which is considered quite good for a small urbanized system like RABA.

The routes with the lowest productivity are Route 2 with an average of 11.7 passengers per hour and Route 9 with a productivity of 13.4 passengers per hour. Route 9 between Anderson and Redding is a much longer intercity route with significant distances between some stops and therefore can be expected to have lower productivity as measured by passengers per hour.

Route	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	% Change 09/10-12/13
1	17.67	16.86	14.48	16.58	-6.2%
2	10.5	10.23	11.34	11.74	11.8%
3	20.56	20.68	22.36	24.08	17.1%
4	11.02	11.51	12.61	14.18	28.7%
5	13.02	14.66	15.38	16.34	25.5%
6	15.46	14.94	16.06	17.84	15.4%
7	12.47	12.81	12.48	12.76	2.3%
9	11.66	12.09	11.75	13.40	14.9%
11	22.45	22.33	26.52	26.84	19.6%
14	31.19	30.06	33.99	35.90	15.1%
Airport Express	N/A	N/A	37.38	33.18	N/A
Fixed Route Avg.	16.30	16.30	18.26	19.80	21.5%

Figure 4-24 Fixed Route Passengers Per Hour by Route

Route 7 serves Shasta College and productivity is lower than might be expected with just 12.8 passengers per hour.

Farebox Recovery By Route

Figure 4-25 provides the farebox recovery ratio by route. Farebox recovery is the fare revenue collected divided by the revenue. The City of Redding utilizes farebox data and adjusts the figures to reflect actual revenues received in order to calculate farebox recovery ratios by route. The overall fixed route farebox recovery ratio has increased from 17.4% in FY 2009/10 to 20.0% in FY 2011/12.

Route	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	% Change 09/10-12/13
1	17.3%	17.8%	18.0%	19.7%	13.9%
2	9.9%	9.9%	10.6%	9.8%	-1.2%
3	21.7%	22.0%	21.5%	20.6%	-5.2%
4	11.6%	12.7%	13.1%	12.8%	10.0%
5	14.5%	16.7%	16.5%	15.9%	9.8%
6	17.3%	16.0%	16.4%	15.9%	-8.0%
7	15.3%	11.4%	15.0%	13.4%	-12.6%
9	14.3%	14.8%	18.6%	18.6%	29.9%
11	22.9%	22.8%	26.5%	24.3%	6.0%
14	32.4%	30.6%	32.4%	31.7%	-2.0%
Airport Express	N/A	N/A	54.1%	42.4%	
School Commute	5.9%	4.6%	20.2%	45.9%	677.7%
Fixed Route Avg.	17.4%	17.1%	20.0%	19.6%	15.3%

Figure 4-25 Farebox Recovery by Route

The new Airport Express has farebox recovery of 42.4%, but is supported by the purchase of an average of 124 monthly passes by IASCO every month. The core routes have a farebox recovery range of 9.8% on Route 2 to 31.7% for Route 14. Both Routes 3 and 11 have a farebox recovery over 20% and the Airport Express and the School Express have a farebox recovery ratio of over 40%.

Subsidy Per Passenger By Route

Figure 4-26 provides the subsidy per passenger by route. Subsidy per passenger is cost per passenger minus the average fare per passenger. It is essentially a measure of how much of the operating costs are supported with government funding. Overall, the subsidy per passenger has declined from an average of $4.07 in FY 2009/10 to $3.58 in FY 2011/12, a 12% reduction since FY 2009/10.

Route	FY 2009/10	FY 2010/11	FY 2011/12	FY 2012/13	% Change 09/10-12/13
1	$ 4.03	$ 4.00	$ 4.64	$ 4.14	2.8%
2	$ 6.79	$ 7.23	$ 6.46	$ 6.57	-3.3%
3	$ 3.01	$ 3.10	$ 2.88	$ 2.82	-6.4%
4	$ 6.35	$ 6.23	$ 5.65	$ 5.26	-17.1%
5	$ 5.19	$ 4.66	$ 4.44	$ 4.40	-15.3%
6	$ 4.24	$ 4.61	$ 4.26	$ 4.03	-4.9%
7	$ 5.37	$ 5.68	$ 5.58	$ 5.80	8.0%
9	$ 5.82	$ 5.78	$ 5.68	$ 5.19	-10.7%
11	$ 2.72	$ 2.84	$ 2.27	$ 2.41	-11.3%
14	$ 1.71	$ 1.90	$ 1.63	$ 1.63	-5.1%
Airport Express	N/A	N/A	$ 1.00	$ 1.48	N/A
School Commute	$ 16.41	$ 11.91	$ 4.56	$ 1.32	-91.9%
Fixed Route Avg.	$ 4.07	$ 4.18	$ 3.58	$ 3.47	-14.7%

Figure 4-26 Subsidy per Passenger by Route

The average subsidy per passenger has declined by 14.7% over the last four fiscal years. Routes 14 and the Airport Express and School Express have subsidies per passenger of under $2. Routes 2, 4, and 7 all have subsidies per passenger of over $5.00 per passenger trip.

Schedule Adherence by Route

RABA has significant problems with on-time performance based on the one day ridecheck in Fall 2012, stakeholder interviews, and input from drivers.

According to data collected during the ridecheck, buses were on-time at 68% of the timepoints. The schedule has timepoints at five major stops along the route. Surveyors noted the time of actual departure at each stop. The industry standard is that a bus is considered “on-time” if the bus is less than 5 minutes late to any timepoint. The ridecheck found a significant occurrence of buses being early to timepoints, and have used a standard of bus departure at more than one minute early for this purpose.

The following is a summary of the schedule adherence by route in Figure 4-27. On an average day, the average route has 14 timepoints that are over 5 minutes late. A timepoint is on the schedule when the bus is supposed to depart a particular stop. According to the ridecheck, the drivers are also more than one minute early at 3 timepoints per day.

Route Number	Percentage On-Time	Maximum Behind Schedule (min)	Daily Time-Points Over 5 min. late	Daily Time-Points More 1 min. early
Route 1	28%	32	38	3
Route 2	53%	11	21	3
Route 3	65%	12	15	3
Route 4	72%	9	9	6
Route 5	91%	8	3	2
Route 6	85%	18	8	0
Route 7	70%	14	13	2
Route 9	80%	8	6	4
Route 11	89%	6	5	1
Route 14	49%	21	17	2
Average Total	**68%**	**14**	**14**	**3**

Figure 4-27 Summary of Route Performance

The RABA system is one that relies on good on-time performance in order for passengers to make needed transfers. Many passengers transfer from Route 1 to either Route 14 or Route 7 to the college.

Route 1 is particularly problematic in on-time performance. A chart of on-time performance is provided in Figure 4-28 (next page). It is only on-time 28% of the time. When the consulting team was riding buses at the beginning of the project, the Project Manager rode Route 14 to catch Route 1. Route 1 was 10 minutes late to the Masonic Transfer Center. In riding the bus, by the time it reached Shasta Lake it was 12 minutes late. Wanting to transfer to Route 7, the Project Manager asked the driver about meeting Route 7, and was told it would not meet the transfer. The Project Manager was told to walk two long blocks to another location where he could catch route 7. In walking to the bus stop with a disabled Shasta College student, she mentioned this was a very regular occurrence.

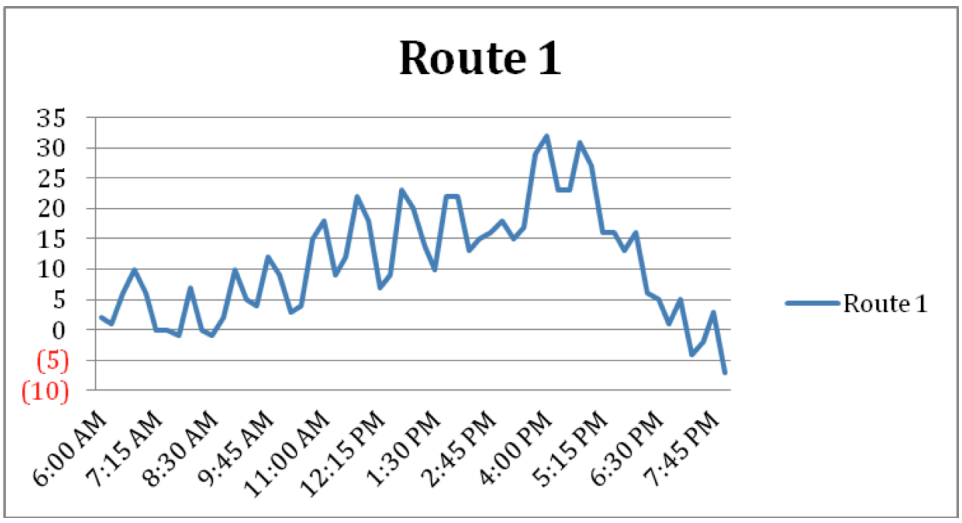


Figure 4-28 Route 1 On-Time Performance

Route 1 has serious on-time performance issues in the afternoon. The chart shows the number of minutes that Route 1 is behind schedule on the left. The bus starts to run as much as 10 minutes late as soon as 9 am, and does not start to recover until around 5 pm. The bus was 32 minutes late at 4 pm.

Route 14 schedule adherence was described by RABA drivers in 2012 as particularly problematic, especially during the peak demand period the first week of the month. During the schedule adherence check, Route 14 was a maximum of 21 minutes behind schedule at 3:30 pm and was more than 5 minutes behind schedule until 6:00 pm. The chart below is from November 2012. Reportedly, schedule adherence was improved in 2013 when Routes 11 and 14 were interlined.

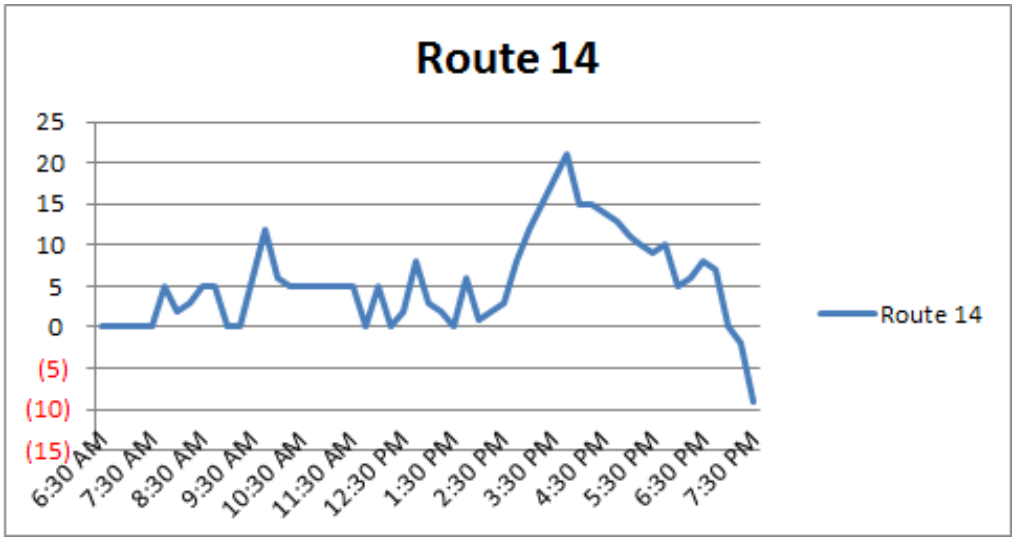


Figure 4-29 Route 14 On-Time Performance

Route 11 is an example of a route that has plenty of time in the schedule. This is a route with very good schedule adherence; however, on its last run it was ten minutes early according to the surveyor data. This is why the route was interlined with Route 14 which has trouble in adhering to the published schedule.

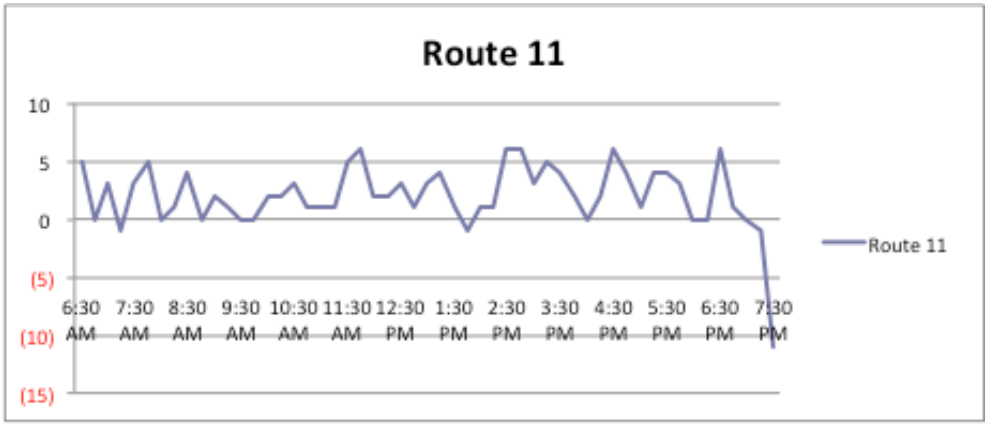


Figure 4-30 Route 11 On-Time Performance

Stakeholder Input on Specific Routes

Several stakeholders and passengers interviewed on the bus noted that Route 1 used to have a companion route 8 that operated in the opposite direction. Everyone mentioned that this made the service to and from Shasta Lake much more inconvenient.

The Shasta High School bell time is at 7:40 am, but students need to be in their seats at 7:35 am. The RABA Route 2 doesn't arrive until 7:45 am, which means students are at least 10 minutes tardy by the time they get to their seats. It simply doesn't work as currently scheduled according to the Shasta High School stakeholder.

Route 9 in Anderson seems to work well for the population that needs it – young welfare recipients and some elderly residents. For most riders, the destination is Redding. Shasta College students in the focus groups said that it took three buses and over two hours each way to get to class. Some had given up because of the time involved. The other stakeholder feedback was that there used to be a local circulator bus in Anderson, but it was discontinued due to cost. The result has been the very circuitous routing in Anderson which makes the service less convenient for those residents residing south of City Hall.

One of the CalWORKS focus group members used to ride Route 5, but it was always late and he couldn't depend on it.

According to drivers and several passengers interviewed on board the bus, schedule adherence is horrible on Route 14 the first week of the month. It throws the entire system off due to the need to transfer to the final destination. Veolia does put an extra bus on the route much of the

time the first week of the month in an attempt to keep the bus on schedule. However, as shown above, even during the sample ridecheck Route 14 was behind schedule.

Service Alternatives

The goal of the service alternatives was to develop a preliminary service plan that used the extensive market research to achieve the RABA as stated earlier in Chapter 3. The consulting team was directed by RABA staff to design an alternative core RABA route system within existing available vehicle service hours and miles. The preliminary service alternatives were based the consulting team analysis of the survey data including origin and destination patterns, transfer patterns from the survey data, schedule adherence and boarding and alighting data. Qualitative input from the stakeholder interviews and focus groups was also considered. The preliminary alternatives were data driven and based on both the quantitative and qualitative market research conducted for the study, but needed to be field-tested with input from RABA staff and Veolia staff. The alternatives addressed the following key issues and design goals:

- Passenger travel time by RABA fixed routes is too long between common and origin and destination pairs.
- Transit trips need to be more direct, and less time consuming.
- Service reliability need to be improved with good schedule adherence.
- Two-way travel along the same route will provide more direct service and improved passenger convenience.
- Bus interlining is an effective operational strategy to help to achieve several of the above objectives.
- There are good cost-effective optional express and mobility management services that could add substantial value to the RABA system, but would exceed the existing vehicle service hour budget.

Based on these design goals, two distinct service alternatives to the Status Quo Alternative were developed by the consulting team and RABA staff and reviewed first by the RABA Board and then through public input at three community workshops in Anderson, Redding and the City of Shasta Lake in November 2013. In addition, two focus groups were held with CalWorks participants and Shasta College students.

Both alternatives were developed within the budgeted amount for FY 2012/13 as provided by the RABA Board of Directors Vision/Mission Workshop . Optional services were developed based on the input from passengers, drivers, and key stakeholders and in many cases are viable alternatives that would have good performance if RABA and its member agencies were to spend additional dollars on public transportation services.

Due to this funding constraint, Alternatives 1 and 2 do not:

- Increase service frequencies and all service frequencies remain at 60 minutes for all routes except Route 9 which remains at 120 minutes.
- Increase the span of service into the later evening.

- Provide for Sunday service.

Many of these improvements are optional service enhancements which were suggested by passengers and stakeholders. However, they are not affordable within the available budget for operating RABA. A list of priorities for improving service are included at end of this chapter if money were to be become available.

Alternative 1

Alternative 1 is shown in Figure 4-31. Alternative 1 had a number of key objectives in the design that distinguished itself from Alternative 2.

Alternative 1 Goals

- Improve service reliability
- Provide more direct travel between key origins and destinations
- Reduce passenger travel time where possible
- Improve RABA rider convenience

Core RABA Service Strategies for Alternative 1

- Reduce the number of transfers by providing direct routing between key origins and destinations
- Eliminate Masonic Drive transfer center
- Two-way routing on most routes
- Direct routing between Downtown Transfer Center and:
    - City of Shasta Lake
    - Shasta College
    - Anderson
    - Burney
    - Many locations within Redding
- Establish core spine route connecting Shasta College, Mt. Shasta Mall and the Downtown Transfer Center
- Pair routes to allow for schedule recovery when routes run behind schedule
- Expand School Express Route to three express trips in the morning and afternoon between the Downtown Transfer Center and Shasta College
- All routes retain service every 60 minutes with existing hours on weekdays and Saturdays

RABA - Alternative #1 Route Adjustments - Page 1

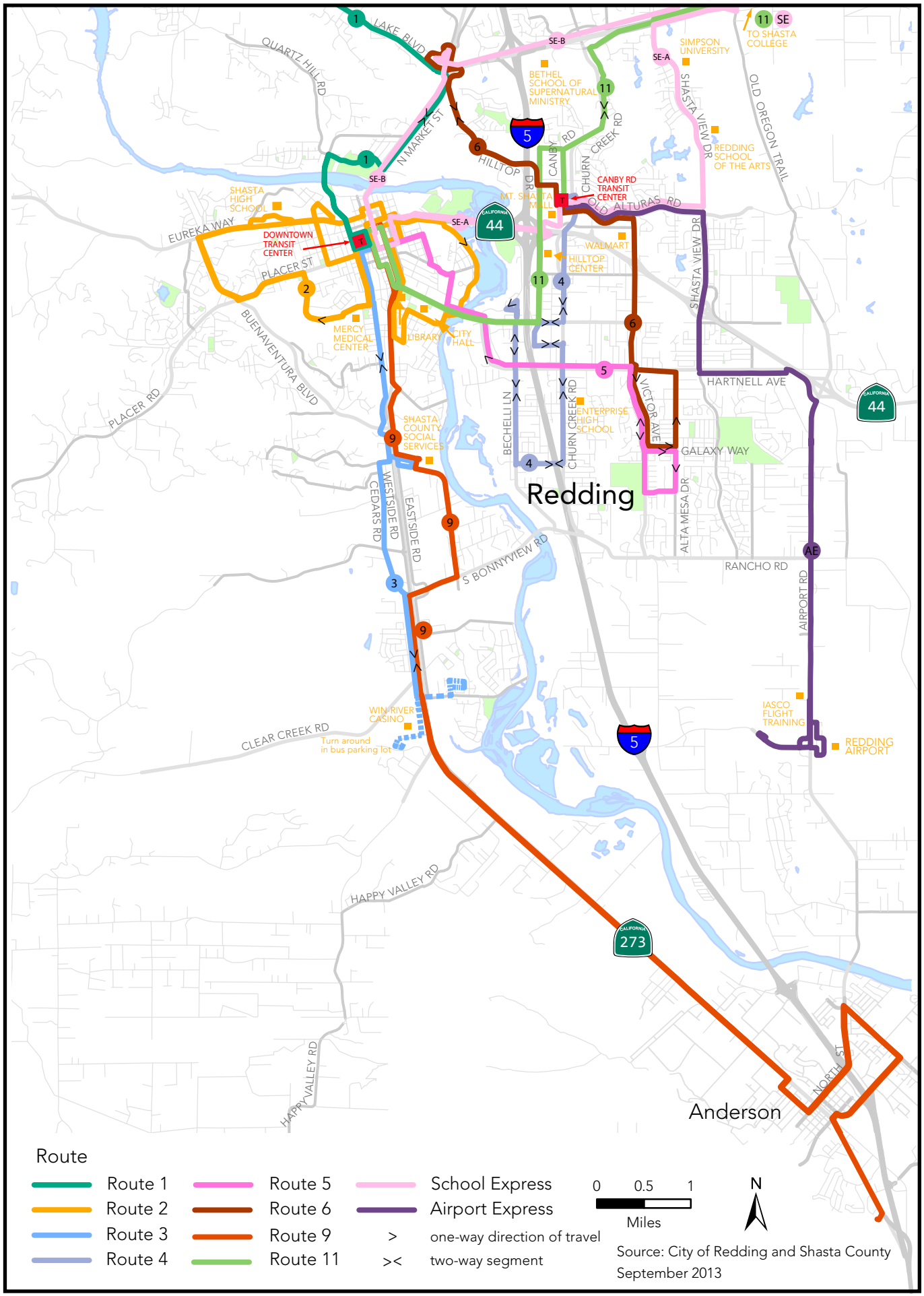
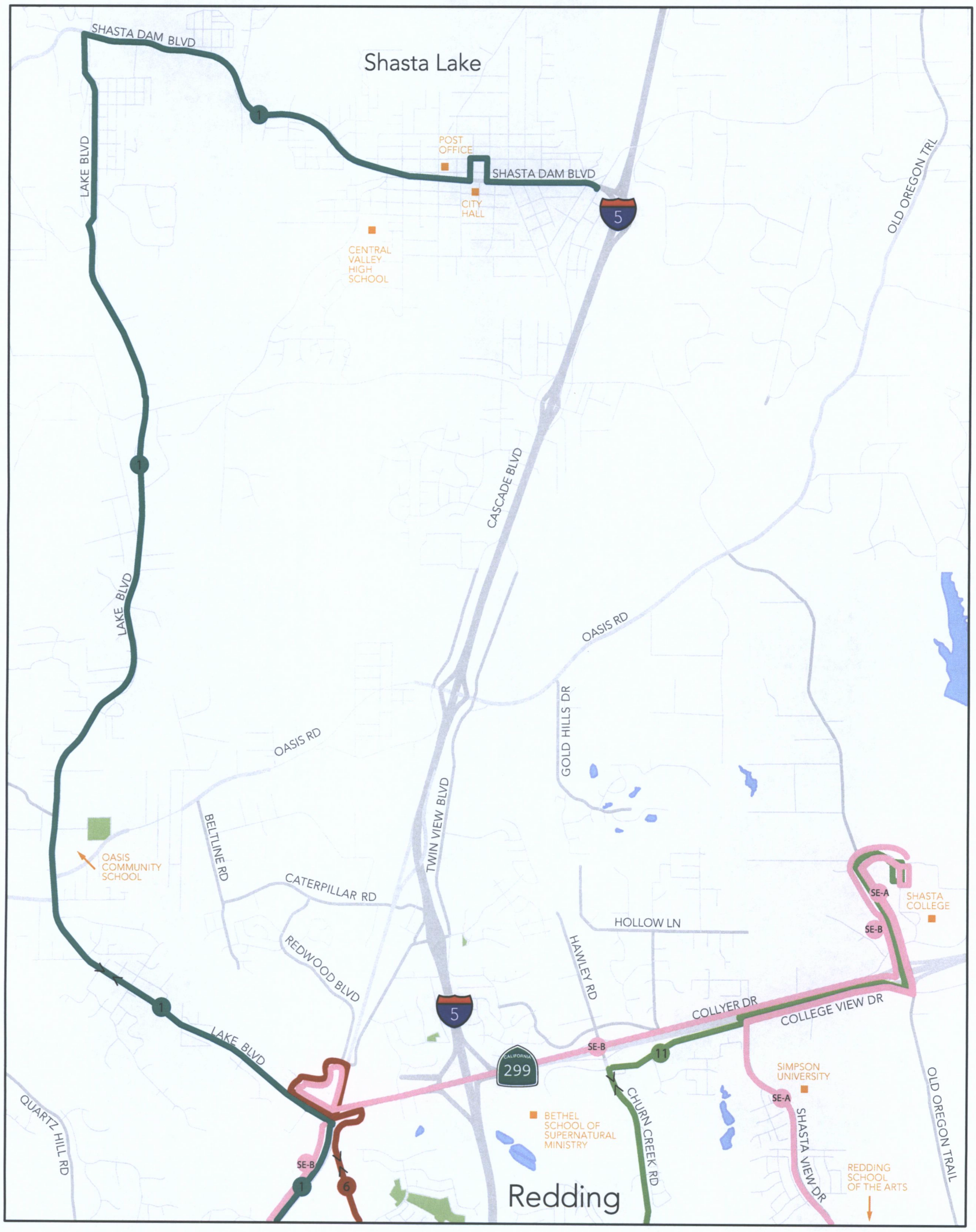


Figure 4-30

RABA - Alternative #1 Route Adjustments - Page 2



Route

Route 1	>	One-way Direction of Travel
Route 6	><	Two-way Segment
Route 11		
School Express		

0 0.5 1

Miles

N

Source: City of Redding and Shasta County
September 2013

Route By Route Guide for Alternative 1

All routes have bus frequencies of every 60 minutes. Weekday and Saturday operating hours would generally remain the same.

Route 1

- Direct service between City of Shasta Lake and Downtown Redding
- Two-way service[2] along Shasta Dam Blvd., Lake Blvd. to Redding
- Segment between Lake Blvd and N. Market replaces Route 14 segment
- Eliminate service along Shasta View Drive, Cascade Blvd., Caterpillar Rd., Beltline Road and Twin View Blvd.

Route 2

- One-way routing[3] on existing clockwise loop
- Counter-clockwise loop eliminated
- Replaced with current Route 3 loop along Marina Drive, Parkview Dr. with new loop back to Downtown Transfer Center.

Route 3

- One-way loop replaced with two-way service
- Serves Court St., Railroad Ave., Shasta County Services, Cedars Rd., and Westside Blvd. in both directions
- Option sound end routing to Win River Casino or Girvan Rd. loop

Route 4

- Two-way service along Bischelli, Loma Vista, and Churn Creek Rd.
- Route deviates to serve K-Mart and Ross
- Route 4 north of Canby Transfer Center replaced with Route 11 segment

Route 5

- Route is same west of Victor Avenue
- East end loop on Hartnell and Sierra Vista eliminated
- Route would travel south on Victor to El Vista Route, currently served by Route 6. Connects with Route 6 at Galaxy near Victor.

Route 6

- Segment between Canby Transfer Center and Downtown Transfer Center eliminated.
- Route 6 segment between Canby Transfer and Lake Blvd will replace Route 14 segment.
- Route 6 south end terminates at Galaxy Avenue and connects with Route 5.

Route 7

- Route is eliminated

Route 9

- Route is the mostly the same
- Route 9 replaces segment currently served by S. Bonnyview and E. Bonnyview to Shasta County Social Services.

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[2] Two-way service is service in both directions on the same street with bus stops generally on opposite sides of the street.

[3] One-way loop is service in one direction only on the route or the street.

Route 11

- Provides new spine route connecting Downtown Transfer Center, Cypress corridor, Hilltop corridor, Canby Transfer Center, and Shasta College.
- Route between Downtown Transfer Center and Canby Transfer Center remains.
- New route segment from Canby Transfer Center along Churn Creek Road and College View Drive to Shasta College.

Airport Express

- Remains the same

School Express

- Expanded to provide three trips in both the morning and afternoon to and from Shasta College.
- Existing runs that serve School of the Arts and Simpson University along Shasta View Drive on the way to Shasta College remain the same.
- Two additional runs in morning and afternoon would travel along N. Market to 299 to Shasta College.

Burney Express

- Remains the same

Alternative 2

Figure 4-32 shows a route of Alternative 2.

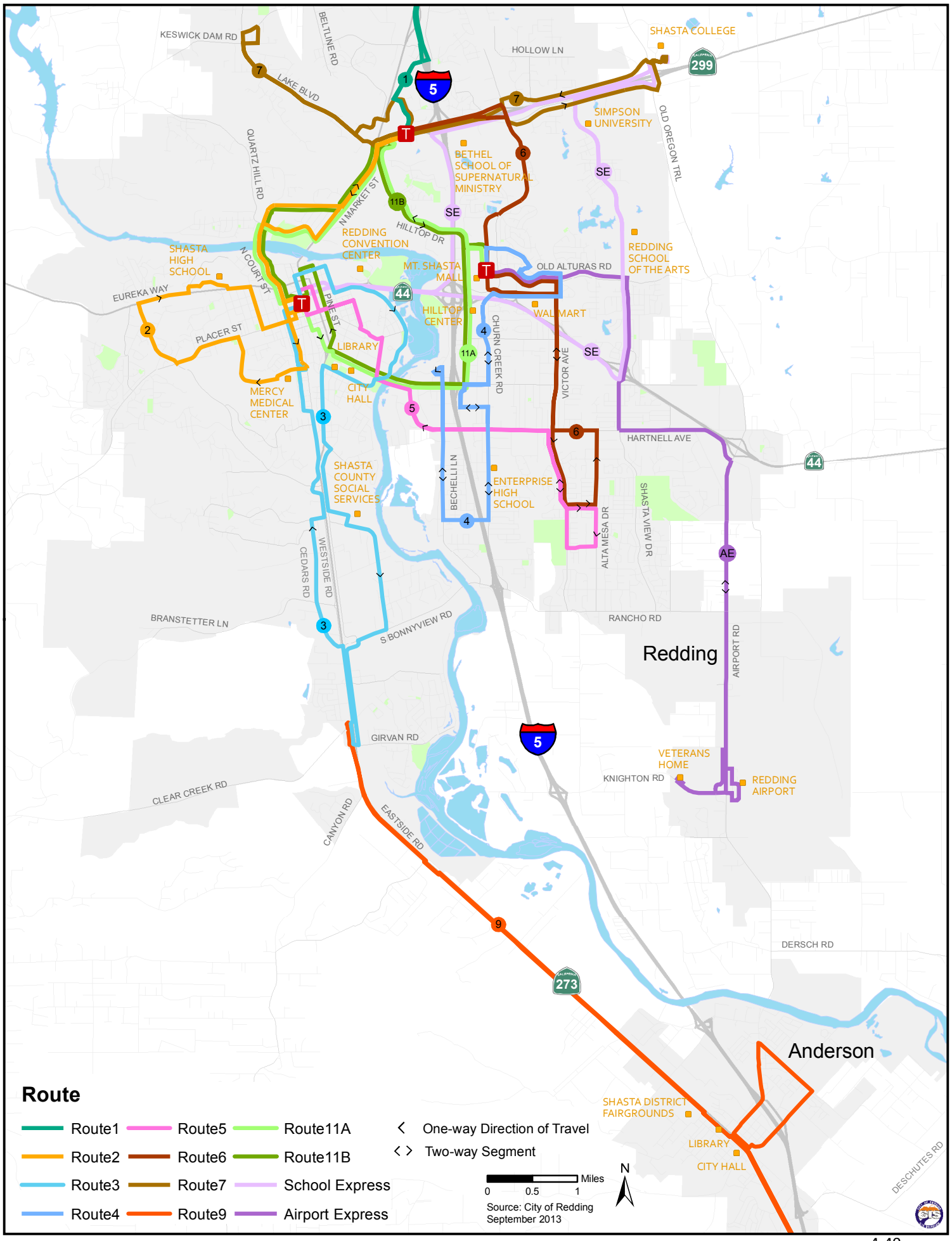
Goals

- Improve service reliability
- Provide more direct travel between key origins and destinations
- Reduce passenger travel time where possible
- Improve RABA rider convenience

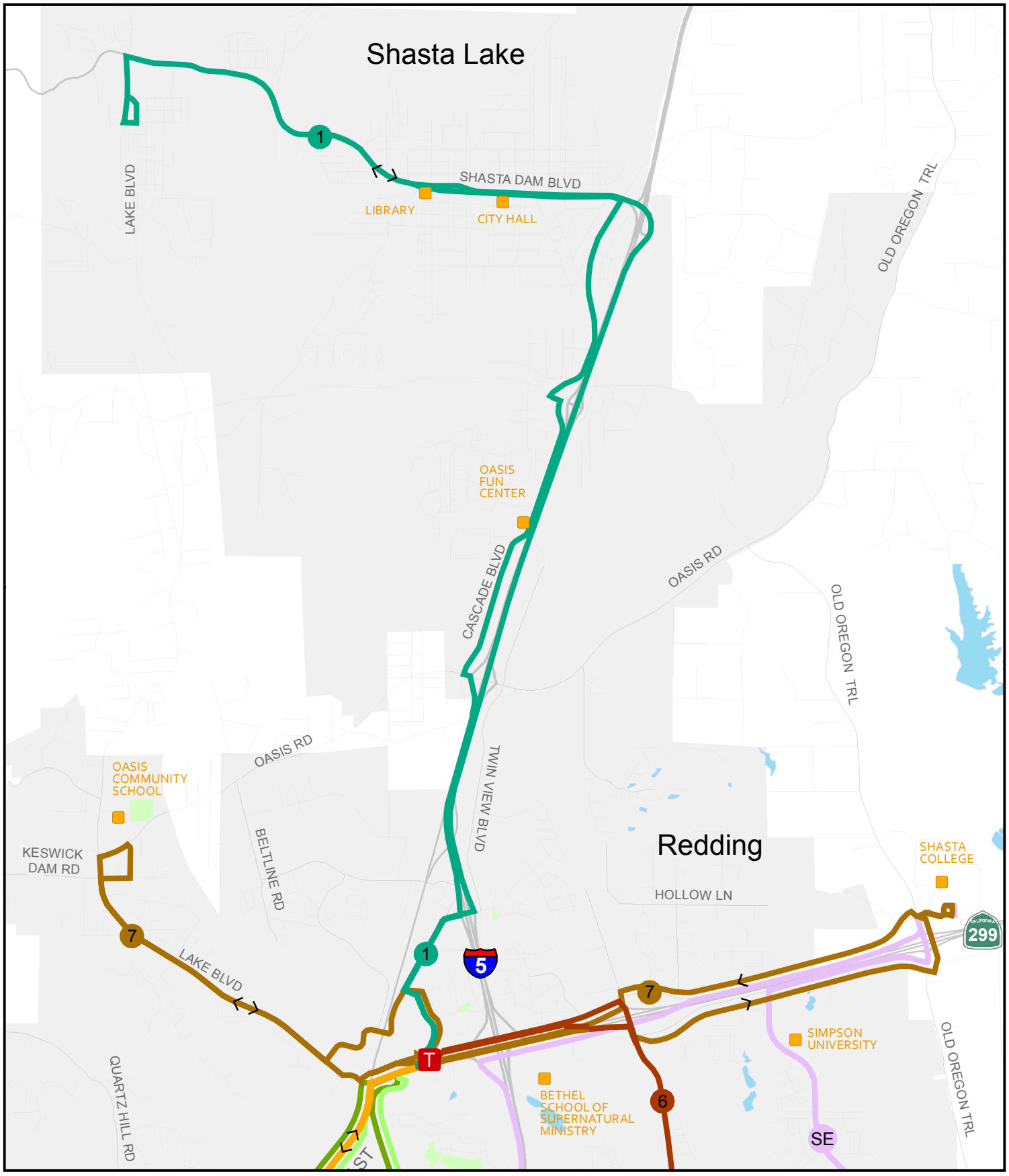
Core RABA Service Strategies for 2014

- Reduce the number of transfers by providing direct routing between key origins and destinations
- Two-way routing when possible
- Manage time transfers to coordinate and reduce wait times
- Direct routing between Downtown Transfer Center and:
    - City of Shasta Lake
    - Shasta College
    - Anderson
    - Burney
    - Many locations within Redding
- Work to establish a more flexible system that can be converted to more frequent timing such as 45 minute or 30 minute headways when possible
- Pair routes to allow for schedule recovery when routes run behind schedule.
- Remove operating hours on underperforming routes on the evenings and weekends and look to add those hours to core routes

RABA - Alternate #2 - Page 1



RABA - Alternate #2 - Page 2



Route

- Route1
- Route2
- Route6
- Route7
- Route11A
- Route11B
- School Express

One-way Direction of Travel

Two-way Segment

0 0.5 1 Miles

N

Source: City of Redding
September 2013

Route By Route Changes for Alternative 2

The Masonic Transfer facility is proposed to be replaced with a new facility on North Boulder Drive and is tentatively named North Redding Transfer Center.. The intercity routes to Shasta Lake City and the City of Anderson may be altered to operate at peak times. In Alternative 2, weekday and Saturday operating hours generally remain the same.

Route 1

- Direct service between City of Shasta Lake and Downtown Redding
- Two-way service[4] along Cascade Blvd. to Redding
- Segment on Lake Blvd between N. Market and Oasis is replaced with a two-way service Route 7 segment with direct service to Shasta College.
- Eliminate service along Caterpillar Rd; Beltline Road and Lake from Oasis Road north to Hill Dr.

Route 2

- One-way routing[5] on existing counter-clockwise loop
- Clockwise loop eliminated
- Clockwise loop replaced with a direct service on North Market to the new North Boulder Transfer Facility
- Interlines with service direct to Shasta Lake City

Route 3

- Remains the same as existing
- Provides for a connection to Route 9 at Westside and Girvan Road

Route 4

- Two-way service along Bechelli, Loma Vista, and Churn Creek Rd.
- Route deviates to serve K-Mart and Ross
- Route 4 north of Canby Transfer Center replaced with Route 6 segment
- Same as Alternative 1

Route 5

- Route is same west of Victor Avenue
- East end loop on Hartnell, Shasta View and Goodwater eliminated
- Route would travel south on Victor to El Vista, currently served by Route 6. Connects with Route 6 at Galaxy near Victor.
- Same as Alternative 1

Route 6

- Segment between Canby Transfer Center and Downtown Transfer Center eliminated
- Southern end of route would remain similar as exiting on Victor Ave and would connect with Route 5 at the southern end
- Route 6 new segment would extend north from the Canby Transfer up Churn Creek Road and then head west on State Route 299 to the new North Boulder Transfer Center.
- Same as Alternative 1

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[4] Two-way service is service in both direction on the same street with bus stops generally on opposite sides of the street.

[5] One-way loop is service in one direction only on the route or the street.

Route 7

- Eliminates service on Shasta View Drive, Old Alturas and Churn Creek Rd.
- Old Alturas is served by Airport Express and Churn Creek Rd by Route 6
- Route would now serve Shasta College directly along College View from the new North Boulder Transfer Center, and return along Collyer Drive to the North Boulder Transfer Center and then head west to provide two-way service along Lake Blvd to Oasis Rd.

Route 9

- Route 9 would eliminate section of north of Clear Creek Road on SR 273
- The northern end of the route would create a timed transfer with Route 3 at Westside and Girvan Road
- Eliminates two-way service within the City of Anderson
- Service would be direct along 273 south to Walmart in 20 minutes, then a 20 minute one-way loop through the City of Anderson and return to Walmart, then a 20 minute service north along SR 273 to the Westside and Girvan Road.
- The one hour loop will operate for 8 hours every day and 6 on Saturdays
- Route 9 and Route 3 would interline to provide a one seat ride from the Downtown Transfer Center to Anderson and from Anderson to the DTC

Route 11

- Route 11 will start at the Canby Transfer Center and travel counter-clockwise hourly around Route 11 and Route 14
- It will provide for timed transfers

Route 14

- Route 14 will start at the Downtown Transfer Center and travel clockwise hourly around Route 14 and Route 11
- It will provide for timed transfers

Airport Express

- Remain the same

School Express

- Expanded to provide two trips in the morning to Shasta College
- Existing runs that serve School of the Arts and Simpson University along Shasta View Drive on the way to Shasta College remains the same

Burney Express

- Remains the same

Option IF Financially Feasible Over Next Five Years

- Provide special routes in partnerships with Far Northern Regional Center, Shasta Opportunity Center, Bethel Spiritual Ministries, Shasta High School, and CalWorks.
- Expand service to 30 minutes on core routes during peak commute times and other times when demand warrants
- Expand evening hours by one hour on highest demand routes
- Provide special community route designed for seniors and the disabled in Central Redding
- 60 minute service during peak period on Route 9 from Anderson to Redding
- Change schedule for Burney Express for layover in Burney from Redding

Summary of Public Input on Service Alternatives

A series of three public meetings and stakeholder presentations were held to secure feedback on the proposed options which provide very different approaches to revamping RABA's routes. All workshops were held between 4 and 7 pm to enable in a drop-in format to provide a window of opportunity for input. The workshops were held from November 12-14, 2013 at the City of Shasta Lake, City of Anderson and City of Redding. In addition, focus group meetings were held with Shasta College students and CalWorks participants. A special presentation and discussion was held with social service agencies as well as the Social Services Technical Advisory Council. RABA Staff also made presentations to the City Councils of the Cities of Shasta Lake and Anderson.

Results of workshops and presentations were tabulated and discussed among the consulting team and RABA staff. In a written questionnaire, participants were asked what they liked and disliked about Alternatives 1 and 2.

Alternative 1

Likes:

- Route 1 directly to downtown to connect with other routes
- Express routes incorporated into system design, particularly to Shasta College
- Less transfers and quicker routes
- Elimination of the Mason Transfer Center
- Future prospect of Sunday service
- Two service on Shasta Blvd. on Route 1
- Pairing of routes for schedule recovery

Dislikes:

- Elimination of service to some areas currently being served, e.g. Route 1
- Elimination of Routes 7 and 14
- Reduction of service to some areas along Route 3
- No service to Cottonwood.
- Lack of evening service to Shasta College

Alternative 2

Likes:

- Provides better service to my neighborhood
- Provides better timing, waiting times less
- Provides more service reliability and reduces passenger travel time
- Replacement of transfer center at Waterworks Park for younger age group
- Retention of Cascade Blvd and two-way service on Shasta Dam Blvd.
- Route 3 and 9 service to and from Walmart
- Better service in Anderson
- Saves time, reduces transfer

Dislikes:

- Fewer destinations at Waterworks Park compared to Masonic
- Possible delays at transfer centers due to more transfers required
- Doesn't meet needs of participant
- Adds more transfers and could be more confusing to passengers
- Route 3 and 9 switch
- Gets ride of Lake Blvd on Route 1
- Disabled and indigent population have less service
- Only one route to Shasta College

The consulting team reviewed the comments and made several changes to the service plan based on comments received. A major change was to Route 7 which under the revised plan would directly link to downtown and Shasta College. Another significant change based on public input was retaining a one-way loop on Route 1 on Oasis Rd and points north to the City of Shasta Lake. Finally, Route 6 was routed to Shasta College for direct service from the east of Redding to Shasta College. RABA staff visited staff at the key partner agencies and reviewed proposed changes and the cost implications.

RABA Staff Recommendation

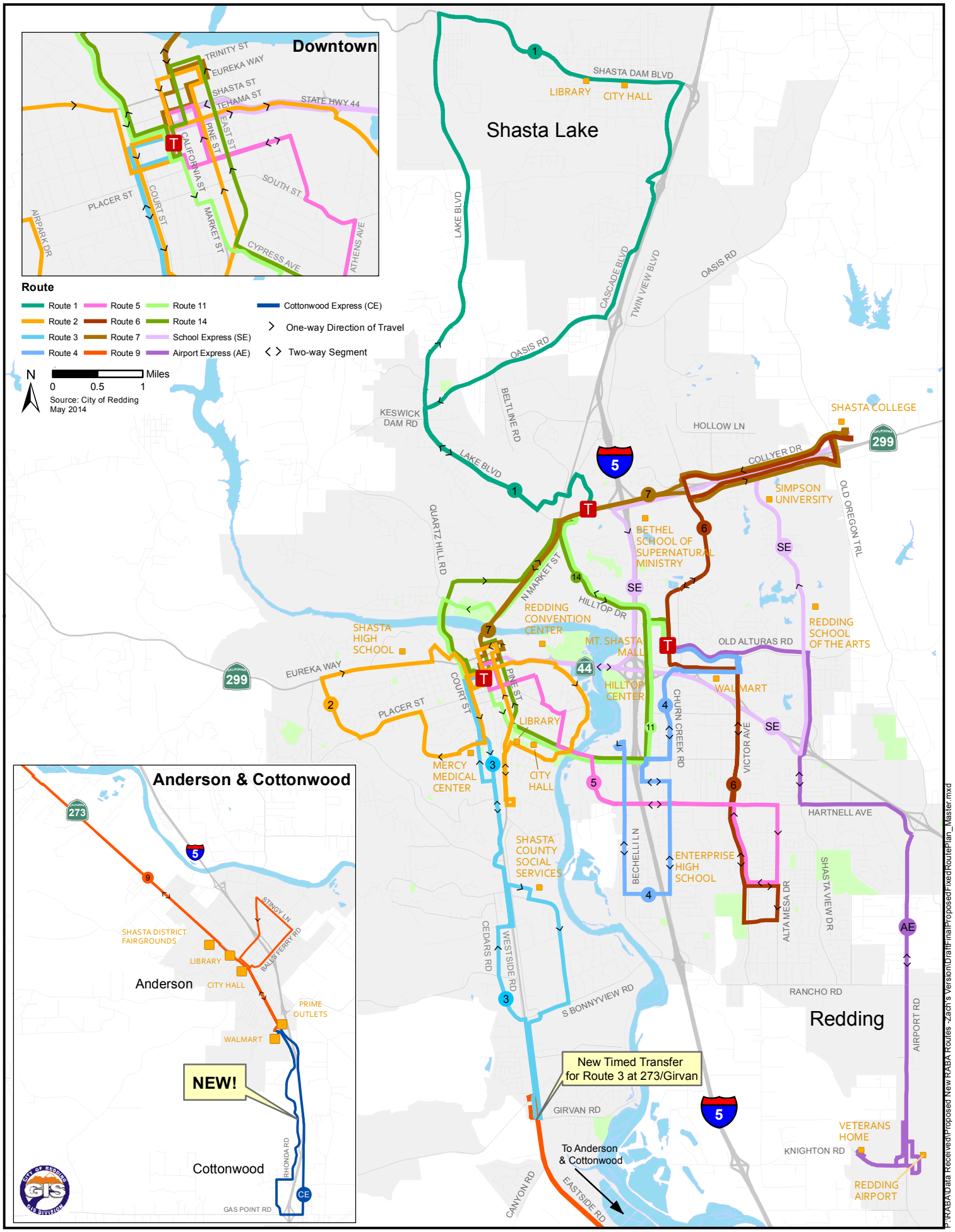
Based on the review of service alternatives and input from the public and community stakeholders, RABA staff is recommending the service plan shown on the Figure 4-33 map. This recommended service plan takes elements of each Alternative and combines them to develop an efficient and affordable route structure that aligns with the key goals. The Masonic Transfer facility would be replaced with a transfer facility at Waterworks Park, tentatively named the North Redding Transfer Center

The following are the proposed key changes to RABA fixed route structure and are shown in Figure 4-33. Individual route maps that show changes to the existing route alignment are included at the end of the chapter. These maps were utilized to solicit public input on proposed changes from April to early June, 2014.

Route 1

Route 1 remains the same north of Oasis Blvd. On Lake Blvd, north of Oasis, the route would continue as a one-way loop. On the inbound trip to the North Redding Transfer Center, on Oasis Blvd, instead of turning right on Beltline Rd, the route would continue on Oasis Rd. to Lake Blvd, and then travel south on Lake Blvd to left on Northpoint Blvd, left on Twin View Blvd, right on Boulder St. to the new Transfer Center. The bus would operate as two-way service between the Waterworks Transfer Center and Oasis and Lake Blvd.

Final Proposed Fixed Route Plan



Route 2

The bi-directional route would be discontinued. Outbound to Mercy Medical Center, the route would only operate in the clockwise direction, serving Mercy Medical Center, Eureka and Buenaventura, Shasta High School before returning to the Downtown Transit. Instead of returning along the same alignment in the counterclockwise direction, the bus would leave on the route that is the current Route 3 on Park Marina Dr. and Parkview Ave. along the backside of City, left on Market St. and turning around with a left on Ellis, right on Mark St., right on Sutter, and right back on Market St., northbound to Pine St. continuing on Pine St., right on Eureka Way, left on East St., left on Trinity, left on California St. back to the Downtown Transit Center.

RABA staff will ensure that schedules are timed with Shasta High School bell times in both the morning and evening when school is in session.

Route 3

Route 3 will be paired with Route 9. The changes are presented later under Route 3/Route 9.

Route 4

Route 4 has some significant changes. The entire route is two-way routing. Route 4 north of the Canby Road Transfer Center is eliminated along Churn Creek Road and replaced with a re-routing of Route 6 to Shasta College. South of the Canby Transfer Center, the route serves Old Alturas Road, Victor Avenue, Dana Rd., Churn Creek Road, Loma Vista Drive, and Bechelli Lane, with service in both directions. The route terminus on Bechelli Lane is a loop around Hemsted Drive and Knollcrest Dr. return back to Canby Transfer Center via Bechelli Lane.

Route 5

Route 5 has three significant changes. First from Cypress, it travels on Hartnell to Alta Mesa Drive. The current loop long Hartnell, Shasta View Dr., and Goodwater Ave. is eliminated. Instead, the route terminates from Altra Mesa, Galaxy Way, and returning to Hartnell on Victor Ave.

Route 6

Most of Route 6 south of the Canby Transfer Center remains the same along Victor Ave. North of the Canby Transfer Center, the route travels along Churn Creek and along College View Drive to Old Oregon Trail to Shasta College. The route returns along Collyer Drive to Churn Creek Rd. back to the Canby Transfer Center. This route re-alignment enables passengers on the eastern side of Redding to travel directly to Shasta College without a transfer at Canby Transfer Center.

Route 7

Route 7 is significantly changed to provide direct service between the Downtown Transfer Center and Shasta College on a single route. The new route 7 will originate at the Downtown Transit Center, and travels north along Market St. to Lake Blvd., serving the new Waterworks Transit Center. At the Waterworks Transit Center, Route 7 continues along Lake Blvd and then College View Dr. to Old Oregon Trail to Shasta College. Inbound, the only difference is that the route travels along Collyer Drive to Lake Blvd.

Route 3/9 (RABA Staff Recommendation)

Route 3 routing from Downtown would eliminate the existing loop along Park Marina Drive that is now served by Route 2. It would have 2-way routing along Court and parts of Railroad Ave to Shasta County services. The route stays on its current alignment to Westside and Girvan, where it would become Route 9 and continue to Anderson. Route 3 passengers wishing to return northbound on Route northbound would need to transfer to Route 9 northbound.

For Route 9, the northern end of the route 9 would create a timed transfer with Route 3 at Westside and Girvan Road. The Route 9 northbound bus would become Route 3 at Westside and Girvan. The proposed realignment eliminates two-way service within the City of Anderson. Service would be direct along 273 south to Walmart in 20 minutes, then a 20 minute one-way loop through the City of Anderson and return to Walmart, then a 20 minute service north along SR 273 to the Westside and Girvan Road. Route 9 and Route 3 would interline to provide a one seat ride from the Downtown Transfer Center to Anderson and from Anderson to the DTC.

One run in the morning and one run in the afternoon on Route 9 will originate from Cottonwood.

Route 11A and 11B

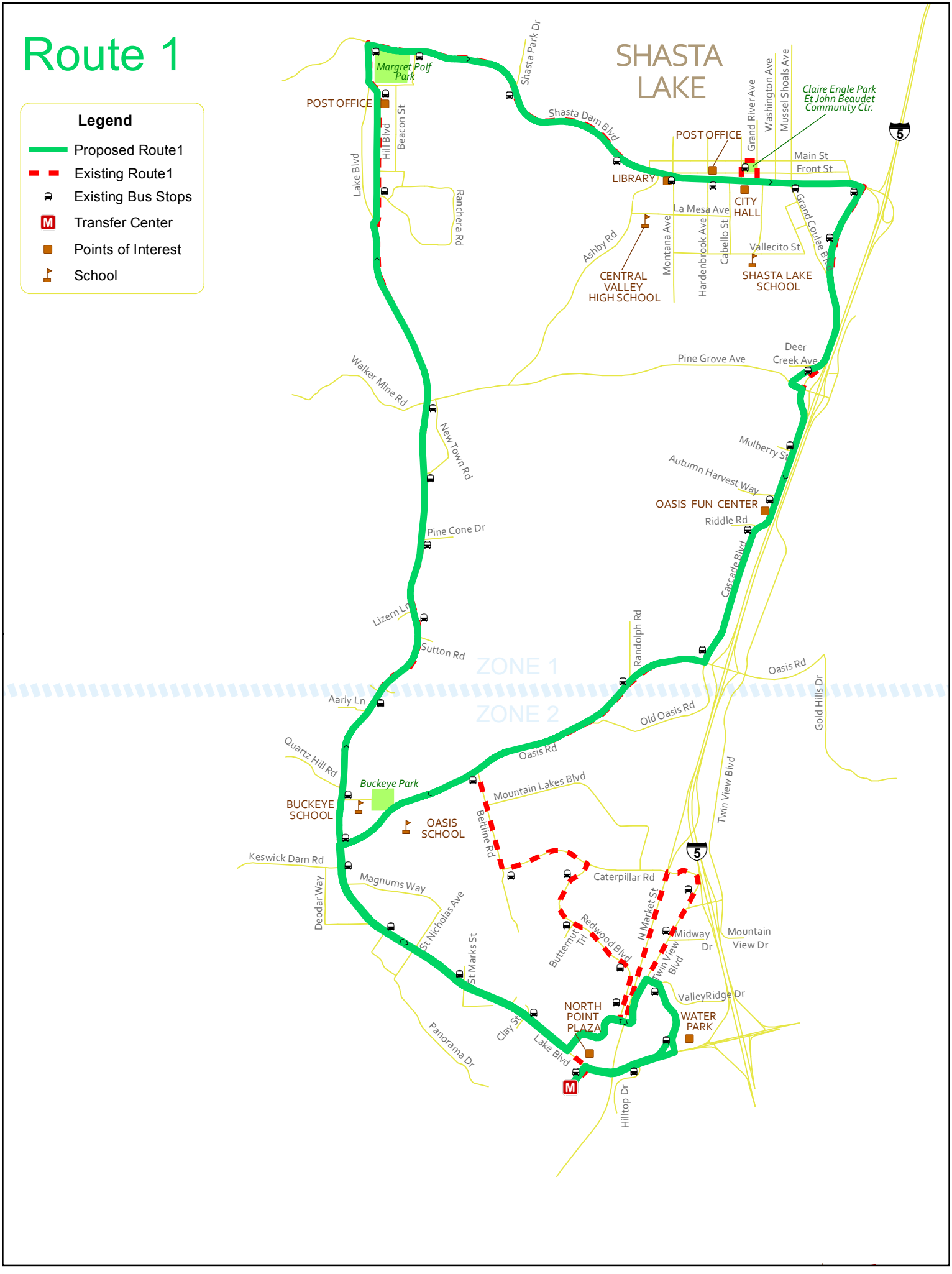
Routes 11 and 14 are combined into a single route with one bus travelling clockwise along the loop and the other bus travelling counter-clockwise on the combined route. This will enable direct service for many passengers without a transfer. A significant benefit is in improved schedule adherence is achieved by combining a shorter route, Route 11, with a longer route, Route 14, that has had historical schedule adherence problems. In practice, RABA currently has been operating this route as Route 11 and Route 14 in the same manner as proposed for the past six months.

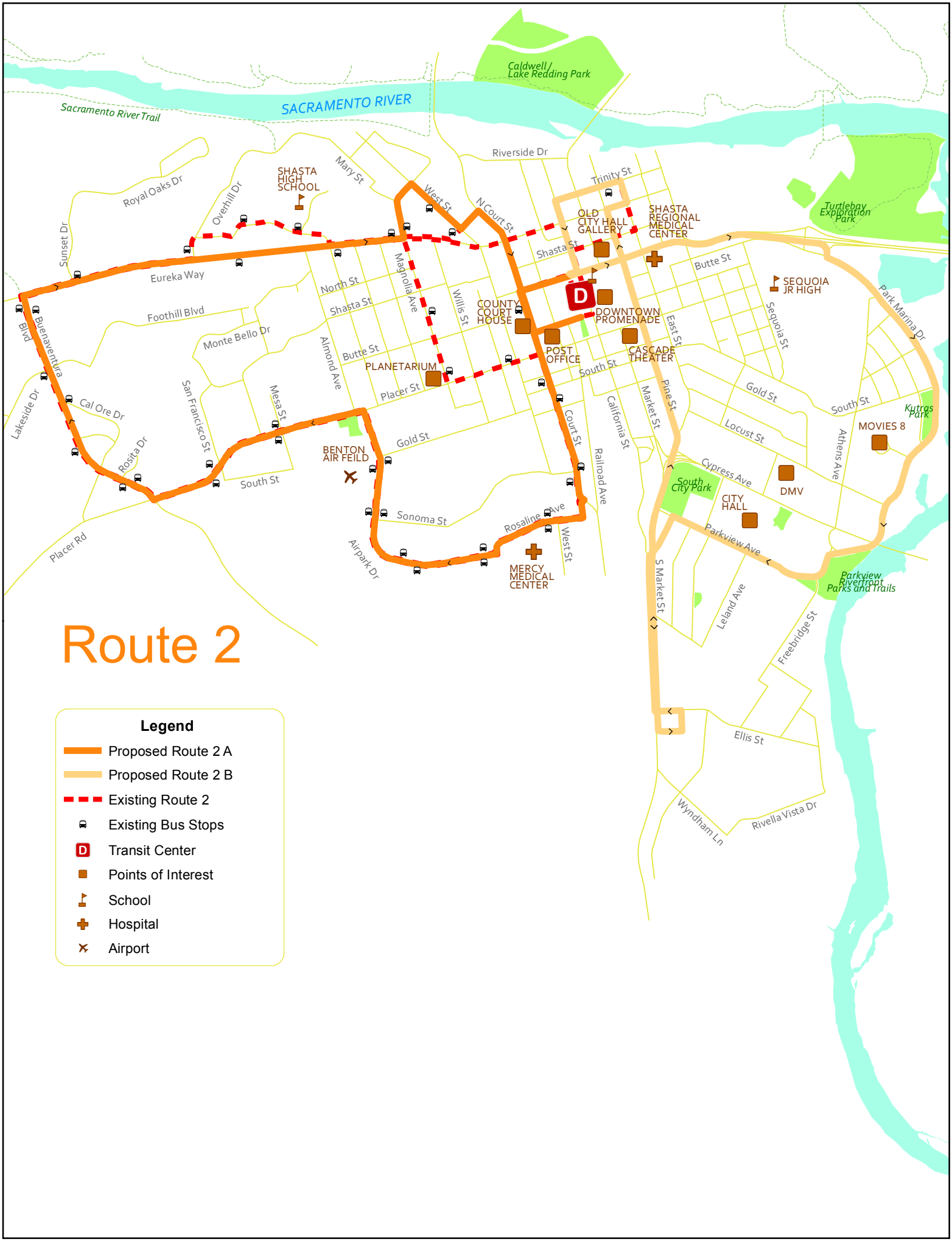
Optional Services

The following are services that could be considered if financially feasible or meet unmet needs and reasonable to meet criteria**:**

- Provide special routes in partnerships with Far Northern Regional Center, Shasta Opportunity Center, Bethel Spiritual Ministries, Shasta High School, and CalWorks.
- Expand service to 30 minutes on core routes during peak commute times and other times when demand warrants
- Expand evening hours by one hour on highest demand routes
- Provide special community route designed for seniors and the disabled in Central Redding
- 60 minute service during peak period on Route 9 from Anderson to Redding
- Change schedule for Burney Express for layover in Burney from Redding

Route 1


Legend
Proposed Route1
Existing Route1
Existing Bus Stops
Transfer Center
Points of Interest
School
SHASTA LAKE
Margret Polf Park
POST OFFICE
Shasta Park Dr
Shasta Dam Blvd
Claire Engle Park Et John Beaudet Community Ctr.
POST OFFICE
LIBRARY
CITY HALL
Main St
Front St
La Mesa Ave
Vallecito St
SHASTA LAKE SCHOOL
CENTRAL VALLEY HIGH SCHOOL
Ashby Rd
Montana Ave
Hardenbrook Ave
Cabello St
Grand Coulee Blvd
Grand River Ave
Washington Ave
Mussel Shoals Ave
Hill Blvd
Beacon St
Lake Blvd
Ranchera Rd
Walker Mine Rd
Pine Grove Ave
Deer Creek Ave
New Town Rd
Mulberry St
Autumn Harvest Way
OASIS FUN CENTER
Riddle Rd
Cascade Blvd
Pine Cone Dr
Lizern Ln
Sutton Rd
ZONE 1
ZONE 2
Randolph Rd
Oasis Rd
Old Oasis Rd
Aarly Ln
Quartz Hill Rd
Buckeye Park
BUCKEYE SCHOOL
OASIS SCHOOL
Mountain Lakes Blvd
Beltline Rd
Twin View Blvd
Gold Hills Dr
Keswick Dam Rd
Magnums Way
Deodar Way
St Nicholas Ave
St Marks St
Caterpillar Rd
Buttermutt Trl
Redwood Blvd
N Market St
Twin View Blvd
Midway Dr
Mountain View Dr
ValleyRidge Dr
NORTH POINT PLAZA
WATER PARK
Clay St
Lake Blvd
Panorama Dr
Hilltop Dr
5

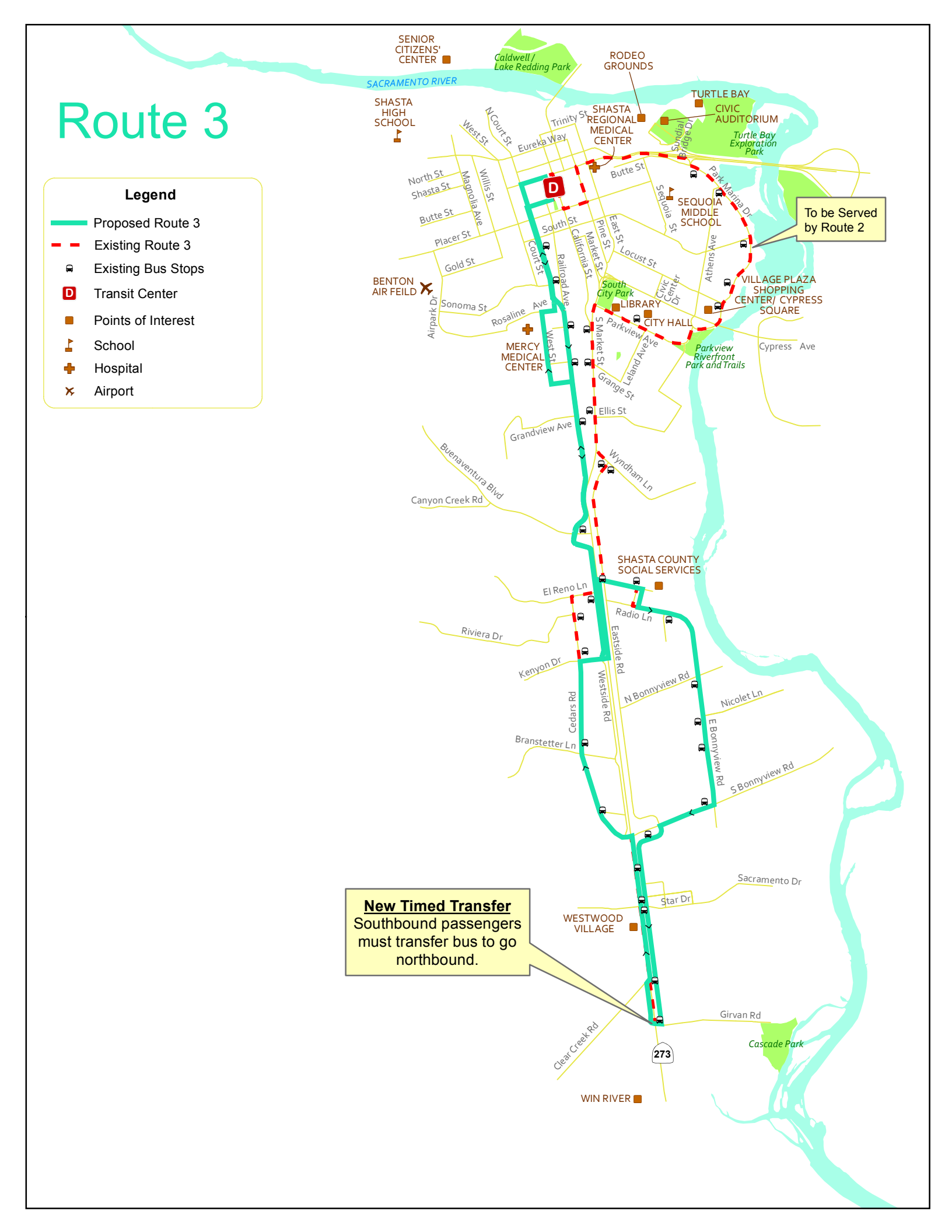


Route 2

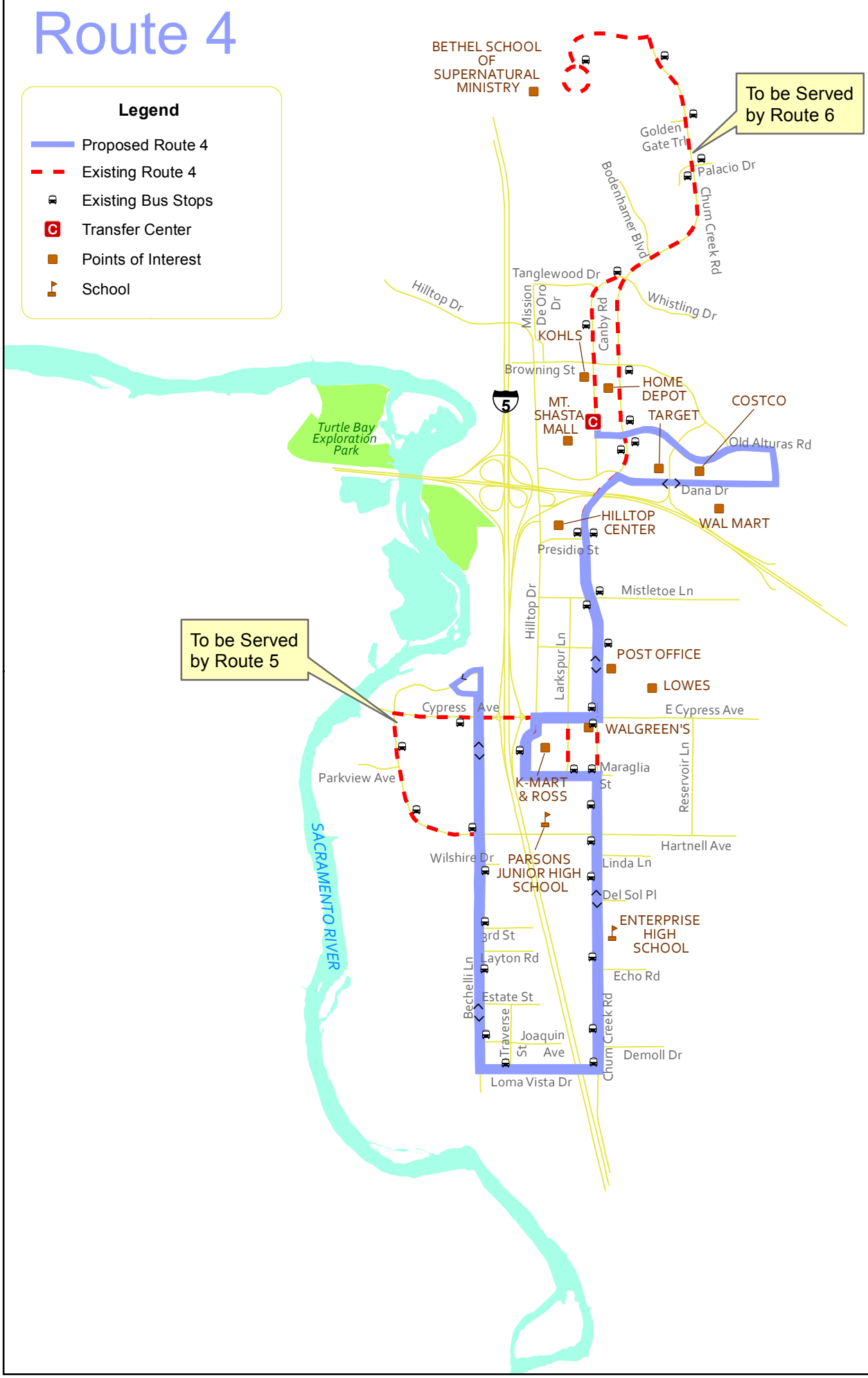
Legend

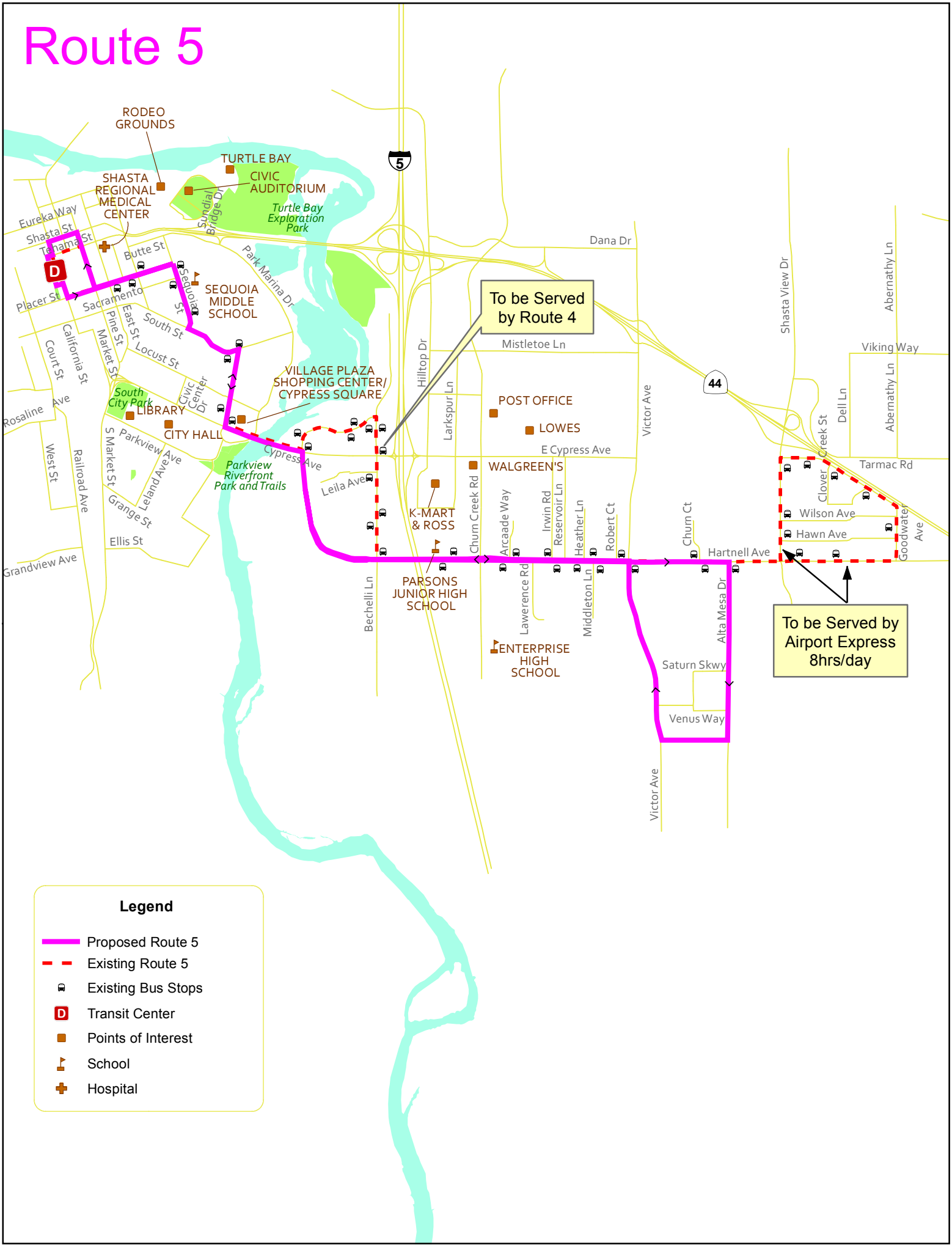
- Proposed Route 2 A
- Proposed Route 2 B
- Existing Route 2
- Existing Bus Stops
- Transit Center
- Points of Interest
- School
- Hospital
- Airport

Route 3

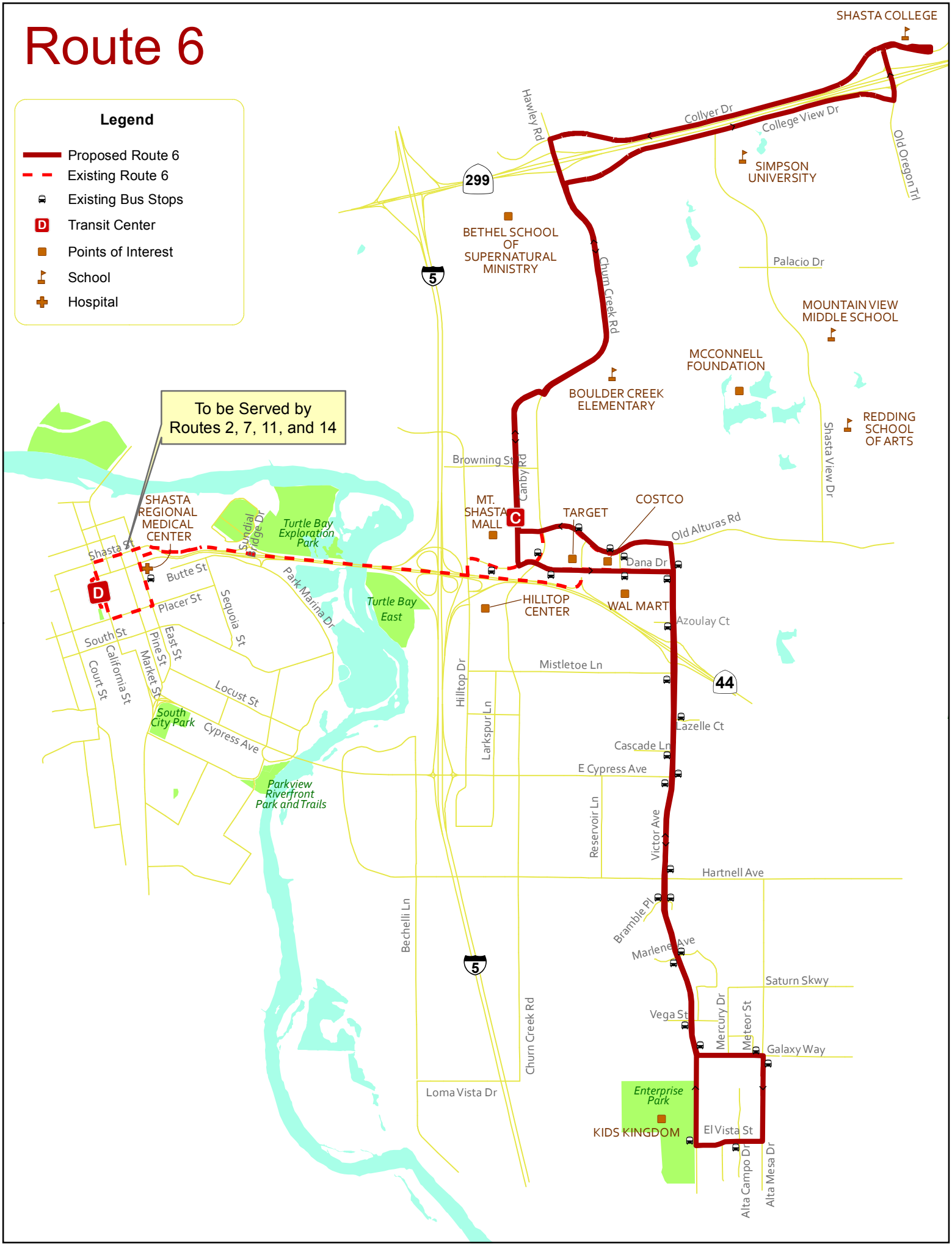

Legend
Proposed Route 3
Existing Route 3
Existing Bus Stops
Transit Center
Points of Interest
School
Hospital
Airport
SENIOR CITIZENS' CENTER
Caldwell / Lake Redding Park
SACRAMENTO RIVER
RODEO GROUNDS
SHASTA HIGH SCHOOL
TURTLE BAY
CIVIC AUDITORIUM
Turtle Bay Exploration Park
SHASTA REGIONAL MEDICAL CENTER
Trinity St
N Court St
West St
Eureka Way
Sundial Bridge Dr
Park Marina Dr
Butte St
North St
Shasta St
Magnolia Ave
Willis St
Placer St
Gold St
Sequoia St
SEQUOIA MIDDLE SCHOOL
To be Served by Route 2
South St
East St
Pine St
Market St
California St
Court St
Railroad Ave
Locust St
Athens Ave
Civic Center Dr
BENTON AIR FEILD
Airpark Dr
Sonoma St
Rosaline Ave
South City Park
LIBRARY
CITY HALL
VILLAGE PLAZA SHOPPING CENTER/ CYPRESS SQUARE
MERCY MEDICAL CENTER
West St
S Market St
S Parkview Ave
Leland Ave
Grange St
Parkview Riverfront Park and Trails
Cypress Ave
Ellis St
Grandview Ave
Buenaventura Blvd
Wyndham Ln
Canyon Creek Rd
SHASTA COUNTY SOCIAL SERVICES
El Reno Ln
Radio Ln
Riviera Dr
Kenyon Dr
Eastside Rd
Westside Rd
N Bonnyview Rd
Nicolet Ln
Cedars Rd
Branstetter Ln
E Bonnyview Rd
S Bonnyview Rd
Sacramento Dr
Star Dr
WESTWOOD VILLAGE
New Timed Transfer
Southbound passengers must transfer bus to go northbound.
Girvan Rd
Clear Creek Rd
273
Cascade Park
WIN RIVER

Route 4

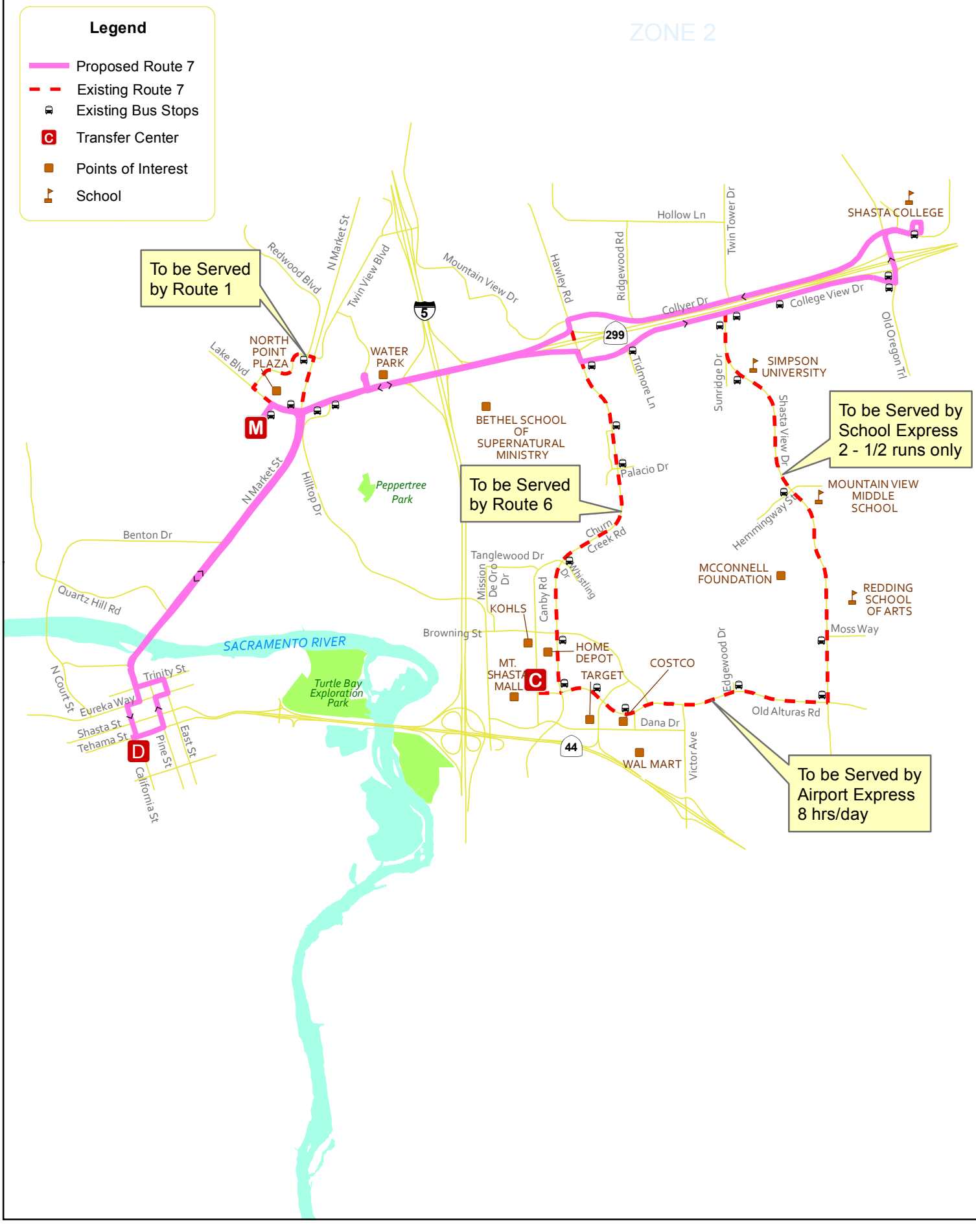

Legend
Proposed Route 4
Existing Route 4
Existing Bus Stops
Transfer Center
Points of Interest
School
BETHEL SCHOOL OF SUPERNATURAL MINISTRY
To be Served by Route 6
Golden Gate Trl
Palacio Dr
Churn Creek Rd
Bodenhamer Blvd
Tanglewood Dr
Hilltop Dr
Mission De Oro Dr
Whistling Dr
Canby Rd
KOHLS
Browning St
HOME DEPOT
COSTCO
MT. SHASTA MALL
TARGET
Old Alturas Rd
Turtle Bay Exploration Park
5
Dana Dr
WAL MART
HILLTOP CENTER
Presidio St
Mistletoe Ln
Hilltop Dr
Larkspur Ln
POST OFFICE
LOWES
To be Served by Route 5
Cypress Ave
E Cypress Ave
WALGREEN'S
Maraglia St
Parkview Ave
K-MART & ROSS
Reservoir Ln
Hartnell Ave
Wilshire Dr
PARSONS JUNIOR HIGH SCHOOL
Linda Ln
Del Sol Pl
ENTERPRISE HIGH SCHOOL
SACRAMENTO RIVER
3rd St
Layton Rd
Echo Rd
Bechelli Ln
Estate St
Traverse St
Joaquin Ave
Churn Creek Rd
Demoll Dr
Loma Vista Dr

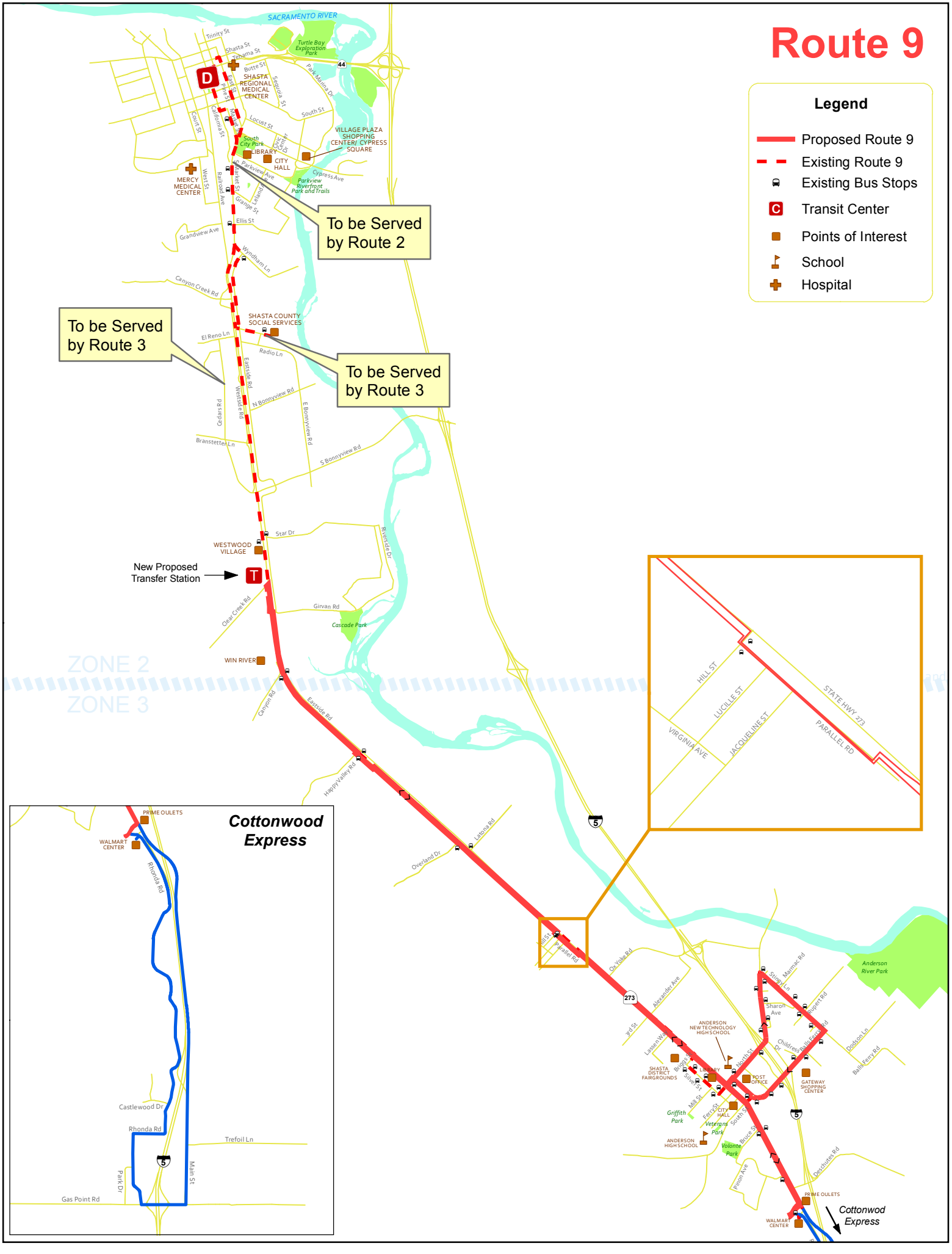

Route 5
RODEO GROUNDS
TURTLE BAY
CIVIC AUDITORIUM
SHASTA REGIONAL MEDICAL CENTER
Turtle Bay Exploration Park
Sundial Bridge Dr
Eureka Way
Shasta St
Tehama St
Butte St
Park Marina Dr
Placer St
Sacramento
Pine St
East St
South St
Locust St
Sequoia St
SEQUOIA MIDDLE SCHOOL
California St
Court St
Market St
Civic Center Dr
South City Park
LIBRARY
CITY HALL
VILLAGE PLAZA SHOPPING CENTER/ CYPRESS SQUARE
Rosaline Ave
S Market St
Parkview Ave
Leland Ave
West St
Railroad Ave
Grange St
Ellis St
Grandview Ave
Parkview Riverfront Park and Trails
Cypress Ave
Leila Ave
Bechelli Ln
PARSONS JUNIOR HIGH SCHOOL
K-MART & ROSS
WALGREEN'S
E Cypress Ave
POST OFFICE
LOWES
Larkspur Ln
Hilltop Dr
Mistletoe Ln
To be Served by Route 4
Dana Dr
Churn Creek Rd
Arcade Way
Irwin Rd
Reservoir Ln
Heather Ln
Robert Ct
Churn Ct
Hartnell Ave
Lawerence Rd
Middleton Ln
Alta Mesa Dr
ENTERPRISE HIGH SCHOOL
Saturn Skwy
Venus Way
Victor Ave
Shasta View Dr
Abernathy Ln
Viking Way
Dell Ln
Creek St
Tarmac Rd
Clover
Wilson Ave
Hawn Ave
Goodwater Ave
To be Served by Airport Express 8hrs/day
Legend
Proposed Route 5
Existing Route 5
Existing Bus Stops
Transit Center
Points of Interest
School
Hospital

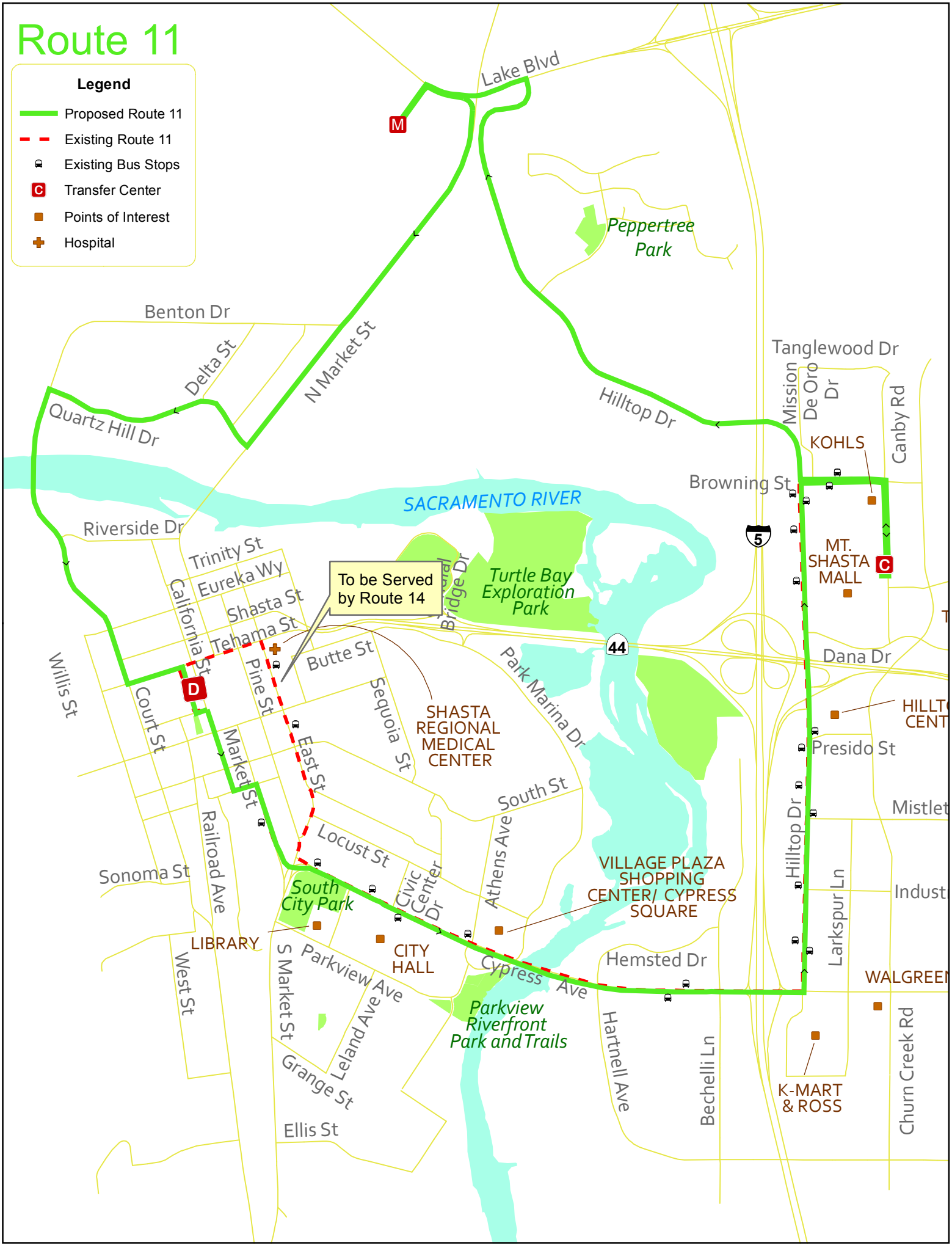
Route 6

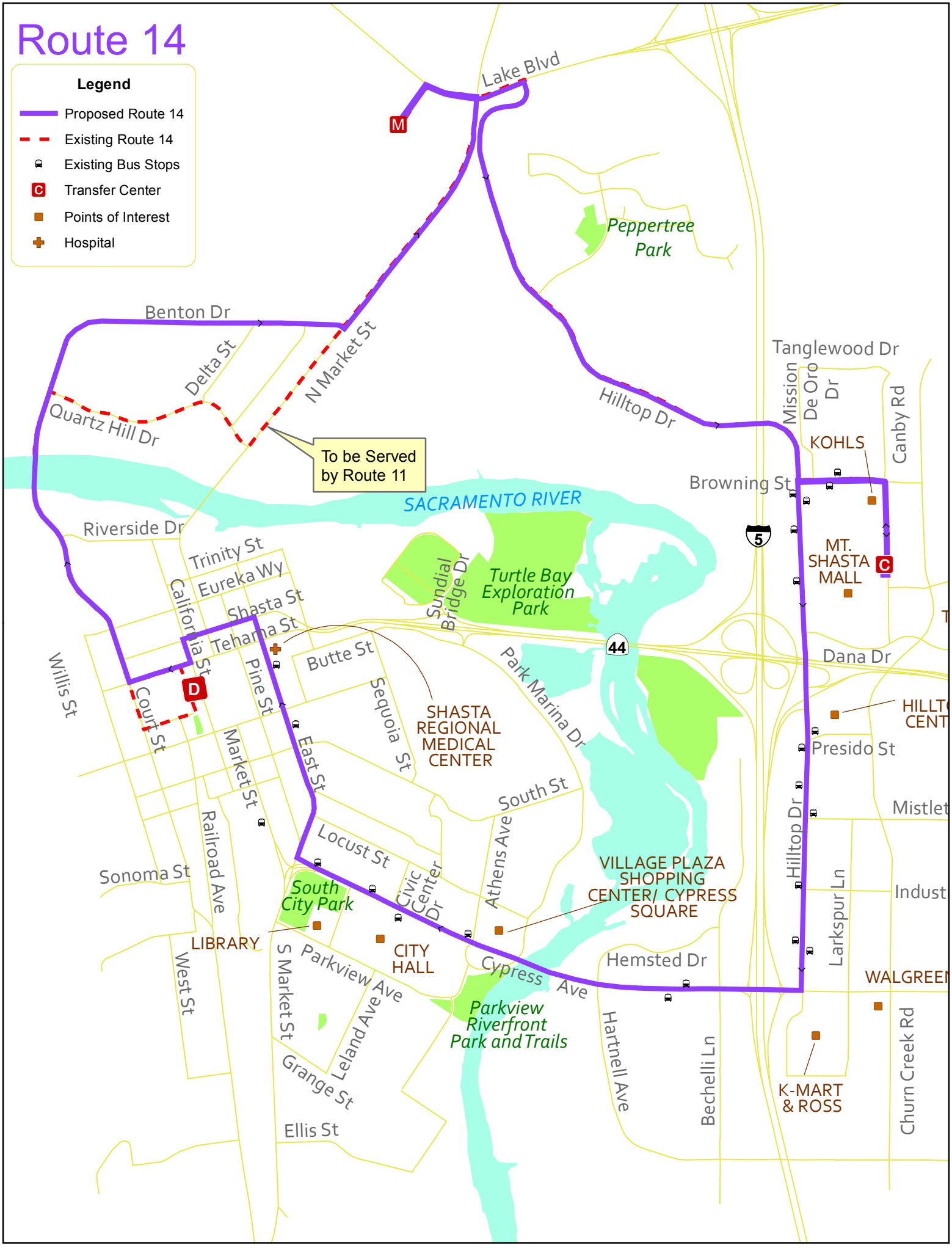

Legend
Proposed Route 6
Existing Route 6
Existing Bus Stops
Transit Center
Points of Interest
School
Hospital
To be Served by Routes 2, 7, 11, and 14
SHASTA COLLEGE
Collyer Dr
College View Dr
Old Oregon Trl
Hawley Rd
299
SIMPSON UNIVERSITY
BETHEL SCHOOL OF SUPERNATURAL MINISTRY
5
Churn Creek Rd
Palacio Dr
MOUNTAIN VIEW MIDDLE SCHOOL
MCCONNELL FOUNDATION
BOULDER CREEK ELEMENTARY
REDDING SCHOOL OF ARTS
Shasta View Dr
Browning St
Canby Rd
MT. SHASTA MALL
C
TARGET
COSTCO
Old Alturas Rd
Dana Dr
WAL MART
HILLTOP CENTER
Azoulay Ct
Mistletoe Ln
44
Lazelle Ct
Cascade Ln
E Cypress Ave
Hilltop Dr
Larkspur Ln
Reservoir Ln
Victor Ave
Hartnell Ave
Bramble Pl
Marlene Ave
Saturn Skwy
Vega St
Mercury Dr
Meteor St
Galaxy Way
Enterprise Park
KIDS KINGDOM
El Vista St
Alta Campo Dr
Alta Mesa Dr
Loma Vista Dr
Bechelli Ln
SHASTA REGIONAL MEDICAL CENTER
Shasta St
Sundial Bridge Dr
Turtle Bay Exploration Park
Park Marina Dr
Turtle Bay East
Butte St
Placer St
Sequoia St
South St
East St
Pine St
Market St
California St
Court St
Locust St
South City Park
Cypress Ave
Parkview Riverfront Park and Trails
D

Route 7


ZONE 1
ZONE 2
Legend
Proposed Route 7
Existing Route 7
Existing Bus Stops
Transfer Center
Points of Interest
School
To be Served by Route 1
To be Served by Route 6
To be Served by School Express 2 - 1/2 runs only
To be Served by Airport Express 8 hrs/day
SHASTA COLLEGE
Hollow Ln
Twin Tower Dr
Redwood Blvd
N Market St
Twin View Blvd
Mountain View Dr
Hawley Rd
Ridgewood Rd
Collyer Dr
College View Dr
Old Oregon Trl
Lake Blvd
NORTH POINT PLAZA
WATER PARK
5
299
Tidmore Ln
Sunridge Dr
SIMPSON UNIVERSITY
Shasta View Dr
BETHEL SCHOOL OF SUPERNATURAL MINISTRY
Palacio Dr
MOUNTAIN VIEW MIDDLE SCHOOL
Hemmingway St
Peppertree Park
Hilltop Dr
Benton Dr
Churn Creek Rd
Tanglewood Dr
Mission De Oro Dr
Whistling Dr
Canby Rd
MCCONNELL FOUNDATION
REDDING SCHOOL OF ARTS
Moss Way
Quartz Hill Rd
KOHLS
Browning St
SACRAMENTO RIVER
HOME DEPOT
MT. SHASTA MALL
TARGET
COSTCO
Edgewood Dr
Old Alturas Rd
Trinity St
N Court St
Eureka Way
Shasta St
Tehama St
Pine St
East St
California St
Turtle Bay Exploration Park
Dana Dr
44
WAL MART
Victor Ave


Route 9
Legend
Proposed Route 9
Existing Route 9
Existing Bus Stops
Transit Center
Points of Interest
School
Hospital
To be Served by Route 2
To be Served by Route 3
To be Served by Route 3
New Proposed Transfer Station
Cottonwood Express
Cottonwood Express
ZONE 2
ZONE 3
SACRAMENTO RIVER
SHASTA REGIONAL MEDICAL CENTER
MERCY MEDICAL CENTER
VILLAGE PLAZA SHOPPING CENTER/ CYPRESS SQUARE
CITY HALL
LIBRARY
SHASTA COUNTY SOCIAL SERVICES
WESTWOOD VILLAGE
WIN RIVER
Turtle Bay Exploration Park
Parkview Riverfront Park and Trails
Cascade Park
South City Park
HILL ST
LUCILLE ST
JACQUELINE ST
VIRGINIA AVE
STATE HWY 273
PARALLEL RD
PRIME OUTLETS
WALMART CENTER
Castlewood Dr
Rhonda Rd
Trefoil Ln
Gas Point Rd
Park Dr
Main St
ANDERSON NEW TECHNOLOGY HIGH SCHOOL
SHASTA DISTRICT FAIRGROUNDS
ANDERSON HIGH SCHOOL
POST OFFICE
GATEWAY SHOPPING CENTER
Griffith Park
Veterans Park
Volonte Park
Anderson River Park


Route 11
Legend
Proposed Route 11
Existing Route 11
Existing Bus Stops
Transfer Center
Points of Interest
Hospital
Lake Blvd
M
Peppertree Park
Benton Dr
Delta St
N Market St
Quartz Hill Dr
Hilltop Dr
Tanglewood Dr
Mission De Oro Dr
Canby Rd
KOHLS
Browning St
SACRAMENTO RIVER
Riverside Dr
Trinity St
Eureka Wy
California St
Shasta St
Tehama St
To be Served by Route 14
Bridge Dr
Turtle Bay Exploration Park
5
MT. SHASTA MALL
C
Butte St
44
Dana Dr
Willis St
Court St
D
Pine St
Sequoia St
SHASTA REGIONAL MEDICAL CENTER
Park Marina Dr
HILLT CENT
Presido St
Market St
East St
South St
Mistlet
Railroad Ave
Locust St
Hilltop Dr
Sonoma St
South City Park
Civic Center Dr
Athens Ave
VILLAGE PLAZA SHOPPING CENTER/ CYPRESS SQUARE
Larkspur Ln
Indust
LIBRARY
CITY HALL
Parkview Ave
Hemsted Dr
WALGREEN
West St
S Market St
Leland Ave
Cypress Ave
Parkview Riverfront Park and Trails
Hartnell Ave
Bechelli Ln
K-MART & ROSS
Churn Creek Rd
Grange St
Ellis St


Route 14
Legend
Proposed Route 14
Existing Route 14
Existing Bus Stops
Transfer Center
Points of Interest
Hospital
Lake Blvd
M
Peppertree Park
Benton Dr
Delta St
N Market St
Quartz Hill Dr
To be Served by Route 11
Hilltop Dr
Tanglewood Dr
Mission De Oro Dr
Canby Rd
KOHLS
Browning St
SACRAMENTO RIVER
Riverside Dr
Trinity St
Eureka Wy
California St
Shasta St
Tehama St
Sundial Bridge Dr
Turtle Bay Exploration Park
5
MT. SHASTA MALL
C
44
Dana Dr
Butte St
Pine St
Sequoia St
SHASTA REGIONAL MEDICAL CENTER
Park Marina Dr
Willis St
Court St
D
Market St
East St
Railroad Ave
South St
Presido St
Mistlet
Locust St
Athens Ave
Civic Center Dr
Sonoma St
South City Park
VILLAGE PLAZA SHOPPING CENTER/ CYPRESS SQUARE
Hilltop Dr
Larkspur Ln
Indust
LIBRARY
CITY HALL
West St
S Market St
Parkview Ave
Leland Ave
Grange St
Cypress Ave
Hemsted Dr
WALGREEN
Parkview Riverfront Park and Trails
Hartnell Ave
Bechelli Ln
K-MART & ROSS
Churn Creek Rd
Ellis St

5. Demand Response Service

The focus of this chapter is the Americans with Disability Act Paratransit service operated by RABA. Shasta County has a second demand response service operated by the Senior Nutrition Program as part of the Consolidated Transportation Service Agency (CTSA) and is completely independent of RABA services. The Short Range Transit Plan scope of work does not include the CSTA services, but stakeholder input is included to potentially better coordinate policies between the two demand response services.

RABA's demand response transportation service provides origin and destination transportation for individuals who, because of a disability, are not able to utilize a regularly scheduled fixed route bus service. RABA's demand response service provides Americans with Disability Act (ADA) Paratransit service. Demand response service is the same as paratransit service for the purposes of the SRTP. For ease of understanding, the more commonly understood demand response term will be utilized instead of paratransit.

ADA Demand Response Policies

ADA demand response regulations have specific service criteria for the provision of ADA demand response services. RABA can exceed the ADA service criteria but must meet minimum requirements. The following is a review of what the minimum requirements are and how RABA is providing the service.

ADA Demand Response Service Area

ADA demand response service must "provide complementary paratransit service to origins and destinations within corridors with a width of three-fourths of a mile on each side of each fixed route." There are exceptions to this rule. Of particular importance is the designation of a commuter which is exempt from ADA demand response regulations: "Commuter bus service may also include other service, characterized by a limited route structure, limited stops and a coordinated relationship to another mode of transportation."

The service area provision for ADA service is limited to ¾ mile of fixed route service. Figure 5-1 is a map of the ADA demand response service for RABA, approved in 2009.[1] In practice, RABA provides service within the boundaries even in the cases of the doughnut hole areas, for example near Shasta Lake. The Burney Express meets the definition of a commuter route and is not required to provide ADA demand response service. The new Airport Express is considered a commuter bus service by RABA management with a limited stop structure and is not included in the ADA Paratransit service area.

[1] The source of the ADA Service Area map is the RABA website.

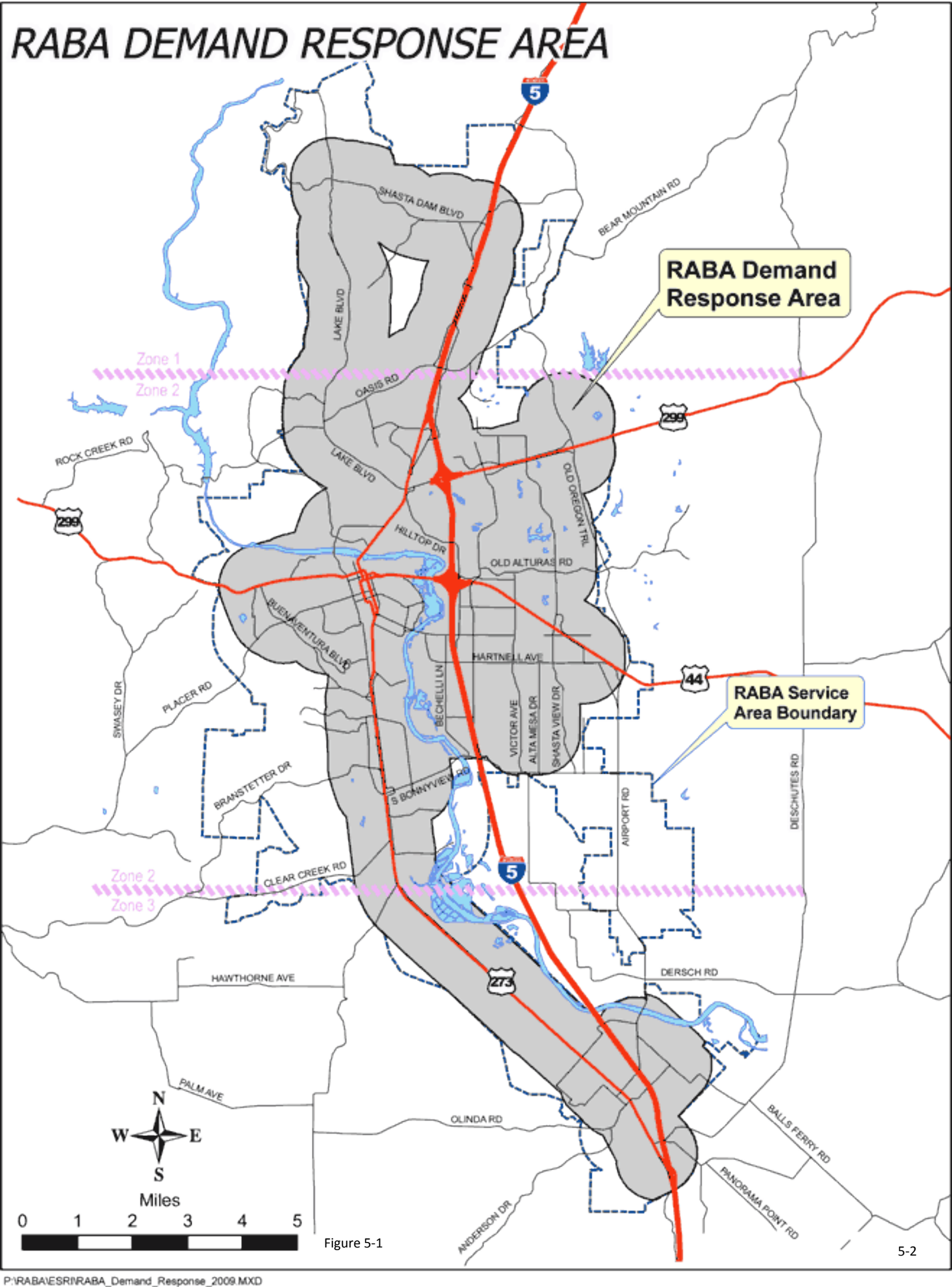


Figure 5-1

P:\RABA\ESRI\RABA_Demand_Response_2009.MXD

The existing Demand Response service area may change once the final changes to the fixed route service are adopted.

The Senior Nutrition Program provides service to individuals who do not qualify for ADA Demand Response service, including areas outside of the ADA demand response boundaries. This is part of the lifeline service established by the County of Shasta in 1996. Lifeline intends to provide transportation services to medical appointments for older adults living outside the RABA service area in Anderson, Cottonwood, Happy Valley, Shasta Lake and in some areas of Redding.

Fares

ADA demand response regulations require that the "fare for a trip charged to an ADA Paratransit eligible user of the complementary Paratransit service shall not exceed twice the fare charged to an individual paying full fare (i.e. without regard to discounts) for a trip of similar length, at a similar time of day, on the entity's fixed route system."

RABA's fares for demand response service are $3.00 for a single zone plus $1.50 for an additional zone. RABA fares meet the ADA requirements as the base fare for the RABA fixed route is $1.50

Senior Nutrition fares for lifeline service have a suggested donation of $1.50.

RABA is in compliance with ADA demand response regulations for fares.

Hours and Days of Service

ADA demand response regulations require that "the complementary paratransit service shall be available throughout the same hours and days as the entity's fixed route service."

On weekdays, RABA demand response service is available at the same time as fixed route services. On Saturday, RABA fixed route service starts at 9:00 am and demand response service is also available then.

RABA is in compliance with ADA demand response regulations for hours and days of service.

Trip Purpose

ADA demand response regulations state that an ADA demand response service "shall not impose restrictions or priorities based on trip purpose." According to RABA staff, ADA eligible individuals can utilize ADA demand response service for any trip purpose. RABA is in compliance with ADA demand response regulations for trip purpose.

Response Time

ADA complementary paratransit regulations require "the entity shall schedule and provide paratransit service to any ADA paratransit eligible person at any requested time on a particular day in response to a request for service made the previous day." The regulations specifically require that a reservation service be made available during business hours, but also "as well as

during times, comparable to normal business hours, on a day when the entity's offices are not open before a service day." Other response time provisions include:

- "…may negotiate pickup times with the individual, but the entity shall not require an ADA paratransit eligible individual to schedule a trip to begin more than one hour before or after the individual's departure time."
- "..may permit advance reservations up to 14 days in advance…"

The RABA reservation policy is currently the following:

> "To use the service, the rider or his/her representative must make a reservation at least 24 hours in advance. Reservations may be made up to 14 days in advance."

The RABA website also needs to be updated to reflect actual operating procedures. RABA is available on next day reservations. A person wanting a 6:30 am reservation, for example, can call up to 5 pm the previous day for a trip. On Sundays, trips requests can be made for Monday.

RABA is in compliance with ADA demand response regulations. However, the RABA website needs to be updated to reflect actual operating policies and procedures.

Capacity Constraints

ADA demand response regulations require transit agencies to "not limit the availability of complementary paratransit service to ADA paratransit eligible individuals by any of the following:

1. Restrictions on the number of trips an individual will be provided.
2. Waiting lists for access to the service.
3. Any operation pattern or practice that significantly limits the availability of service to ADA paratransit eligible persons."

Interviews with key stakeholders did not reveal any pattern of capacity constraints on the RABA demand response service. RABA staff confirmed that they rarely have a demand response trip denial.

RABA is in compliance with ADA regulations on capacity constraints.

Subscription Service

ADA Paratransit regulations do not allow more than 50% subscription trips. According to the RABA operator of the demand response service, subscription trips are regularly under 50%.

ADA Paratransit Eligibility

There are three categories for ADA eligibility:

"(1) Any individual with a disability who is unable, as the result of a physical or mental impairment (including a vision impairment), and without the assistance of another individual

(except the operator of a wheelchair lift or other boarding assistance device), to board, ride, or disembark from any vehicle on the system which is readily accessible to, and usable by, individuals with disabilities.

(2) Any individual with a disability who needs the assistance of a wheelchair lift or other boarding assistance device and is able, with such assistance, to board, ride and disembark from any vehicle which is readily accessible to and usable by individuals with disabilities if the individual wants to travel on a route on the system during the hours of operation of the system at a time, or within a reasonable period of such time, when such a vehicle is not being used to provide designated public transportation on the route.

(3) Any individual with a disability who has a specific impairment-related condition which prevents such individual from traveling to a boarding location or from a disembarking location on such system."

As a practical matter, RABA buses are all wheelchair accessible and the second category of eligibility does not apply to RABA.

Anyone who is permanently or temporarily mobility impaired, generally defined as a person of any age who is functionally unable to use the regularly scheduled fixed route system for one or more of the following reasons:

- Unable to utilize a regular public transit bus. ("Unable" means that performing the function is absolutely impossible or causes severe, continuing pain; it does not mean discomfort or occasional pain.)
- Unable to walk from place of origin or destination to the nearest bus stop.
- Unable to utilize a regular public transit bus to reach a source of life sustaining activities.

To use RABA's Demand Response Service, a person is required to fill out an application, with a physician's verification, in order to obtain an identification card. The card is to be in the immediate possession of the rider, as the rider may be required to show proof of eligibility to ride.

RABA appears to in compliance with ADA eligibility requirements. RABA may exceed the requirements as many transit systems conduct functional tests instead of relying on physician validations.

Performance Trends

Figure 5-2 is a summary of the RABA demand response performance trends. Ridership has dropped from 64,715 in FY 2009/10 to 55,699 in FY 2012/13. The supply of demand response service dropped significantly with the number of hours provided dropping from 25,067 in FY 2009/10 to 17,327 in FY 2012/13, a 30.9% drop. However, the number of vehicle service miles has declined by only 11/3%. Overall productivity increased 24.5% from 2.6 to 3.2 passengers per hour.

The recent implementation of split shifts by the operator, improved dispatching software, and better screening of ADA demand response applicants are three reasons cited by RABA management on why vehicle hours have been reduced and productivity as measure by passengers per hour have improved. The first is a new software dispatching system with maps that allow direct communication with the driver with mobile data terminals. The second is that drivers now have split shifts to accommodate peak morning and afternoon trip patterns. Finally, new procedures are in place to screen eligibility for ADA demand response service.

The cost per vehicle service hour has increased from $69.11 to $86.29 between FY 2009/10 and FY 2012/13, an increase of 24.9%. This compares to only a 7.0% increase in the cost per hour for fixed route services. The cost per hour increase has offset the improvement in productivity such that cost per demand response trip and subsidy per passenger trip have remained flat over the past four years.

	FY 2009/010	FY 2010/11	FY 2011/12	FY 2012/13	% Change 09/10-12/13
Base Statistics					
Ridership	64,716	61,848	56,951	55,699	-13.9%
Vehicle Service Hours	25,067	23,505	19,240	17,327	-30.9%
Vehicle Service Miles	341,637	324,953	324,974	303,131	-11.3%
Fare Revenue	$ 193,276	$ 197,260	$ 186,362	$ 179,594	-7.1%
Operating Costs	$ 1,732,308	$ 1,749,909	$ 1,562,029	1,495,111	-13.7%
Performance					
Passengers/Hour	2.6	2.6	3.0	3.2	24.5%
Passenger/Mile	0.19	0.19	0.18	0.18	-3.0%
Average Fare	$ 2.99	$ 3.19	$ 3.27	$ 3.22	8.0%
Farebox Recovery	11.2%	11.3%	11.9%	12.0%	7.7%
Cost/Hour	$ 69.11	$ 74.45	$ 81.19	$ 86.29	24.9%
Cost/Trip	$ 26.77	$ 28.29	$ 27.43	$ 26.84	0.3%
Subsidy/Trip	$ 23.78	$ 25.10	$ 24.16	$ 23.62	-0.7%

Figure 5-2 Demand Response Performance Trends

Stakeholder Input on Demand Response Services

RABA management would like a review of the deployment of demand response vehicles in the next phase of the SRTP process when service alternatives are evaluated. The general question is whether RABA needs to continue a fleet of twenty demand response vehicles.

A Shasta College student requiring oxygen bottles is eligible for ADA demand response service and has used it, but found it to be expensive for her budget.

According to one stakeholder, based on a rule established by the SRTA/RTPA, the Senior Nutrition Program is not able to serve people within the RABA service area if that person qualifies for ADA service. The Senior Nutrition Program can serve seniors (60+) who have applied for and been denied ADA certification. The Senior Nutrition Program also serves some long time riders who were "grandfathered" in at the time the rule was made. Some seniors in Redding would prefer to use the senior bus as it is a $1.50 round trip donation instead of a $3.00 one-way fare. They said that it is frustrating to seniors that some can use senior bus while others must use RABA's demand response service.

Service, Policy, and Fleet Alternatives

The provision of ADA Paratransit Service is a federal mandate, and there are no alternatives to meeting the specific criterion for meeting ADA Paratransit service criteria described above. However, RABA has the policy choice of exceeding ADA Paratransit service criteria and providing service options that can reduce ADA Paratransit service costs.

Eligibility For Senior Nutrition Program Services

A significant issue is the size of the RABA Demand Response service area. According to stakeholders, based on a rule established by the RTPA in 2009, they are not able to serve people within the Redding paratransit area who qualify for ADA service. They can serve seniors (60+) who have applied for and been denied ADA certification. They also serve some long time riders who were "grandfathered" in at the time the rule was made. Some seniors in Redding would prefer to use the senior bus as it is a $1.50 round trip donation instead of a $3.00 one-way fare.

A policy change that would enable a "win-win" situation for seniors and disabled individuals who currently qualify for ADA Paratransit service would increase revenue and productivity for coordination services.

Recommendation

SRTA is sponsoring a coordination study in 2014 among human service agencies and RABA. This issue should be fully addressed in the upcoming SRTA Coordination Study.

Contracting with Senior Nutrition Program for ADA Services in Anderson and City of Shasta Lake

Since the Senior Nutrition Programs service are not part of the scope of services for the Short Range Transit plan, the potential for having the Senior Nutrition Program operate at least a portion of the ADA Paratransit Service provided by RABA has not been fully addressed and analyzed.

At the surface, there appears to be some duplication of service between SNP and RABA Demand Response Services, especially in the City of Shasta Lake and Anderson. A contract arrangement wherein all ADA service level criteria, as described above, are included could be an excellent means of reducing overall demand response costs in Shasta County.

Recommendation

SRTA is sponsoring a coordination study in 2014 among human service agencies and RABA. This issue should be fully addressed in the upcoming SRTA Coordination Study. Overall, there would appear to be significant potential for better coordination of SNP and RABA demand response services. If SNP can operate ADA Paratransit service at a cheaper price than the current arrangement, then the findings and recommendations of the SRTA Coordination Study should be implemented soon.

Community Service Route

A community service route is a service that operates on a fixed schedule, over a mostly fixed route, but is often designed to provide access to some of the same destinations that are frequently accessed through demand-response service: senior housing complexes, medical facilities, community centers, adult day care centers, shopping centers, and libraries. The benefit for passengers is that one does not need to pre-arrange a ride, and the fare is lower than demand-response; in many cases, community service routes are provided free to the passenger.

In Menlo Park, CA a community service route is operated by the City of Menlo with a contract provider. It serves senior housing complexes, medical offices, downtown Menlo Park, the library, grocery shopping and the Stanford Shopping Center. The small cutaway bus drops passenger off at the front door of destination, e.g. directly in front of the Safeway. Many seniors and ADA eligible individuals are able to utilize the community service route. The route has 9 passengers per hour and operates for a subsidy of under $10 per trip.

For the transit provider, some of the community service route trips replace what would otherwise be demand-response trips, which are more expensive to provide. While there is a cost to provide the service, a successful implementation would reduce demand-response costs by more than enough to cover the cost of operating the community service route. In addition, customers would have the benefit of increased flexibility in being able to choose between two services: one that is self-service, but less expensive and does not require advance planning, and

the other that does require advance planning and reservation, but provides the most accessible option to those with a disability or limited mobility.

Several options were evaluated in the RABA Service area:

Proposed Community Service Route – Option 1

Option 1 would operate six hours per day on clock headway and provide service between the Opportunity Center, Senior Center, the two hospitals (and clinics surrounding), the Downtown Transit Center, and the Canby Transfer Facility.

This 13.4 mile one way loop encompasses some of the highest volume demand-response destinations such as hospitals and the Opportunity Center. At 13.4 miles, it would have to operate at the speed of a regular fixed-route bus to complete the loop within the hour. This would preclude any deviations from the route, and would not allow time for drivers to assist passengers any more than on a normal fixed route.

Proposed Community Service Route – Option 2

Option 2 would operate six hours per day on clock headway and provide service between the Downtown Transit Center, the Civic Center on Cypress Avenue, medical and other professional offices along Hartnell Avenue and Bechelli Lane, shopping along Hilltop Drive, adult day care on Mistletoe Lane, and Walmart, WinCo, Target, and the Mt. Shasta Mall along Dana Drive; medical offices on Park Marina Dr, and ending back at the RABA Transit Center.

This route is 8.9 miles, and includes a different set of popular demand-response destinations. This shorter route would allow a slower pace that should allow plenty of time for wheelchair boardings. Some community service routes deviate from the on-street route to drop off passengers closer to their destination. A shorter route may make that a possibility.

Proposed Community Service Route – Option 3

Option 3 combines the shorter, slower-paced route of Option 2, with a “tripper” service to the Opportunity Center – a high-volume destination for demand-response trips, but one that it located too far from the core to reasonably include in a single community service route.

A conceptual map of a Community Service Route is shown in Figure 5-3 that includes elements of all three options described above. The map shows a conceptual routing based on the origins and destination trips for a week sample of trips. Unfortunately, the home end or production trips are way too dispersed to make a community service route work well.

Recommendation

Based on the August 2013 data sample, a community service route is not viable in the Redding service area. There is an insufficient number of housing complexes with senior and disabled individuals to make this service cost-effective as an alternative to demand response service.

Fleet Size

The RABA fleet currently has twenty demand response vehicles with a peak pullout of 16 demand response vehicles (maximum number of demand response vehicles in service at any one time). In FY 2012/13, RABA operated 17,327, which means the fleet operated a total of 1,100 vehicle service hours per peak pullout vehicle, including Saturday service. While there is a need to have a sufficient supply of vehicles, a fleet with an average of between 1,300 and 1,600 vehicle service hours per peak vehicle would be a more reasonable range.

RABA has already reduced the number of demand response vehicles they plan to replace from 20 to 18.

Recommendation

The fleet size can be potentially be further reduced depending on the outcome of the SRTA Coordination Study that will commence in April 2014 and be completed by June 2014. For the purposes of the SRTP, a total of 18 vehicles is currently planned, but could be adjusted after completion of the Coordination Plan.

RABA - Community Service Route Concept

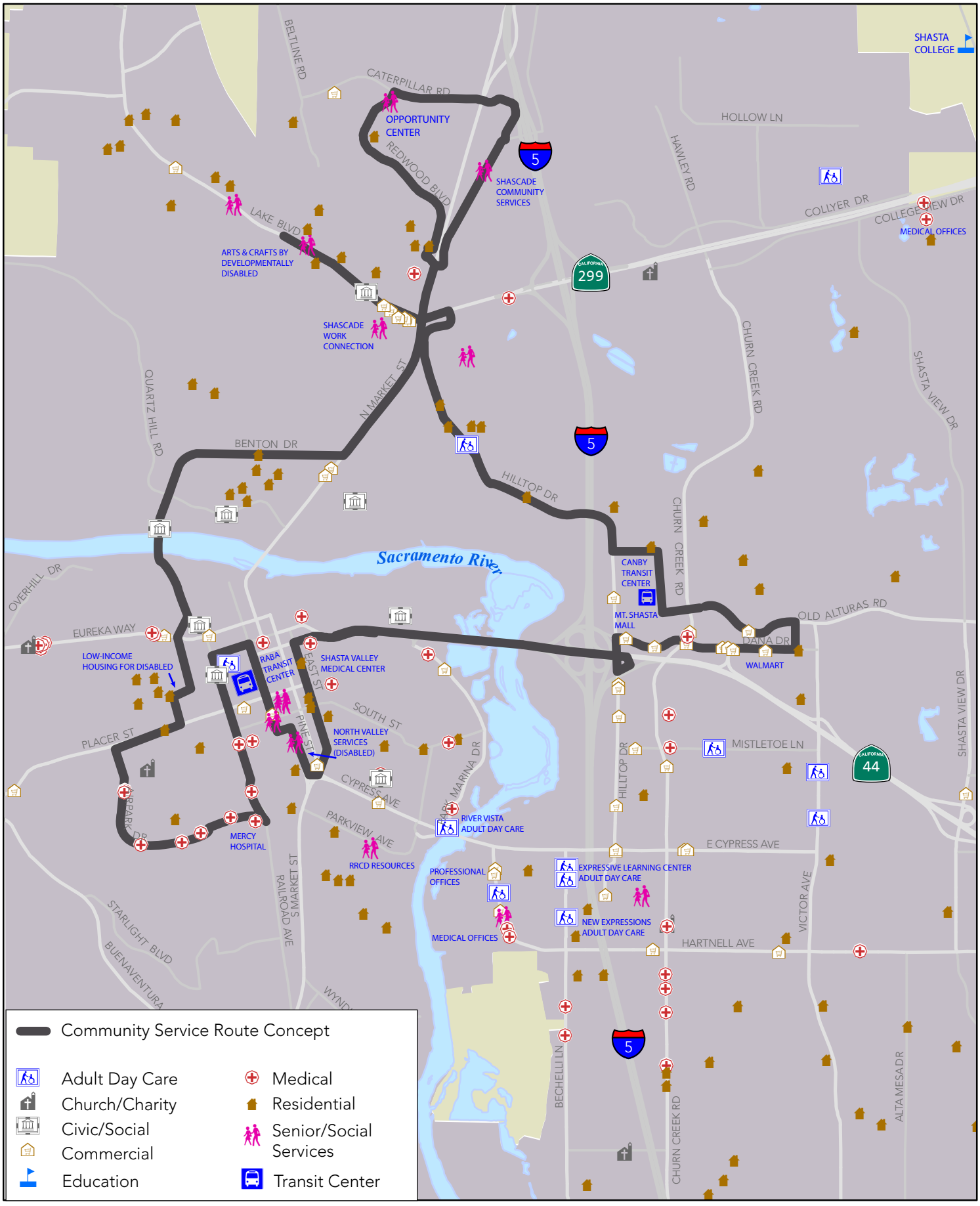


Figure 5-3

Source: Mobility Planners, City of Redding, and Shasta County
Based on data from RABA demand-response trips August 5-10, 2013
November 2013

6. Burney Express

Background

The County of Shasta's contract with RABA is to provide express service to the community of Burney. The service is for commuters and has limited stops; therefore it is not subject to the requirements for ADA Paratransit service. Burney Express operated Monday to Friday with two round-trips each day. Shasta County provides two ADA-compliant medium size buses for this service.

The Burney Express route is operated by RABA with the driver starting in Burney. The last run ends at Burney and the bus is parked overnight there. The schedule is shown in Figure 6- 1.

Burney Express Shuttle

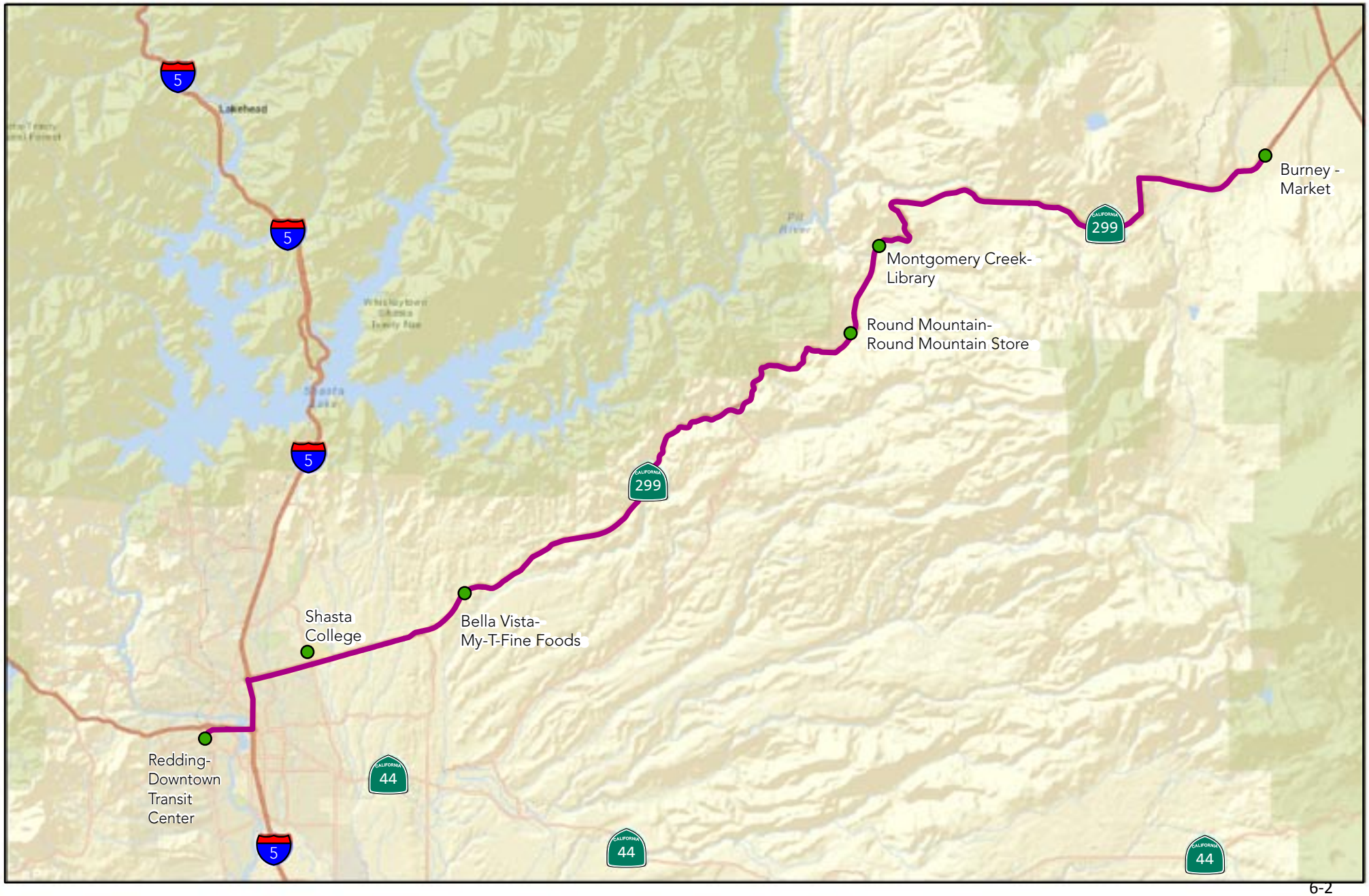
Westbound Schedule			
Community	Place	Community	Place
Burney	Burney Market	6:00 AM	12:00 PM
Montgomery Creek	Library	6:25 AM	12:25 PM
Round Mountain	Round Mountain Store	6:35 AM	12:35 PM
Bella Vista	My T Fine Food	7:05 AM	1:05 PM
Shasta College	Main Bus Stop	7:15 AM	1:15 PM
Redding	Downtown Transit Center	7:25 AM	1:25 PM

Eastbound Schedule			
Redding	Downtown Transit Center	10:35 AM	5:45 PM
Shasta College	Main Bus Stop	10:45 AM	5:55 PM
Bella Vista	My T Fine Food	10:55 AM	6:05 PM
Round Mountain	Round Mountain Store	11:25 AM	6:35 PM
Montgomery Creek	Library	11:35 AM	6:45 PM
Burney	Burney Market	12:00 PM	7:10 PM

Figure 6- 1 Burney Express Shuttle Schedule

Figure 6- 2 on the next page shows the map and stops for the Burney Express

Burney Express



6-2

Figure 6-2

Burney Express

0 5 10

Miles

N

Source: City of Redding, Shasta County, ESRI ArcGIS Online map service January 2013

Figure 6- 3 shows the Burney fares. The fare structure is very simple and charges $5.00 between Burney and Redding. No discount fares are offered for senior or disabled passengers.

Burney Express Fares

Community to Community	Fares
Burney-Redding	$5.00
Round Mountain-Montgomery Creek-Redding	$3.50
Burney-Round Mountain/Montgomery Creek	$2.00

Figure 6- 3 Burney Express Fares

The Burney Express fares were increased by $0.25 on July 1, 2011 and another $0.25 again on July 1, 2012.

Ridership Profile

Fifteen Burney Express riders completed the on-board survey. Following is a brief profile of those riders.

Burney Express ridership is dominated by Shasta College Students.

- 87% of riders said their trip purpose was to go to or from college or vocational school.
- 92% were students, not employed.
- 57% were new riders (had begun riding in the past two years).

The trip characteristics of Burney Express riders are:

- Most ride fairly regularly - 93% ride 3 or more days per week.
- Three quarters of Burney Express riders transfer.
- None of the riders surveyed on the Burney Express were riding on a free pass.

Asked about their views on service improvements and fares, Burney Express riders responded as follows:

- The most important improvement to them is Extended Hours (46%).
- 27% said they would stop riding if the fare increased, however only 25% have a drivers license and only 18% had a car available.

Performance Trends

Figure 6- 4 shows the performance trends of the Burney Express between FY 2009/10 and FY 2012/13. Overall, the trends are very positive, with ridership jumping by over 35% since FY 2009/10. Overall fare revenue increased by 59%, while costs increased by 7% primarily due to increased fuel costs.

Since the route and revenue hours and miles stayed the same, productivity as measured by passengers per hour and passengers per mile increased at the same rate as ridership growth, 52.4%. The average fare increased by 21% meaning that a higher percentage of passengers are travelling between Burney and Redding. The farebox recovery ratio increased from 11.6% to 18.9%, a very impressive increase over three fiscal years. This in part was due to the fare increase of $0.25 on July 1, 2011.

In terms of cost-effectiveness, the cost per revenue hour increased to $89.70 compared to $81.90 per hour for RABA fixed route services. Longer routes like the Burney Express typically have higher hourly costs due to the mileage costs of increased fuel and maintenance.

With significantly increased ridership and productivity, the cost per passenger declined from $31.31 in FY 2009/10 to $24.95 in FY 2012/13. The subsidy per passenger declined from $27.68 to $20.67 during the same time period.

	FY 2009/010	FY 2010/11	FY 2011/12	FY 2012/13	% Change 09/10-12/13
Base Statistics					
Ridership	4,052	6,340	6,174	5,457	34.7%
Vehicle Service Hours	1,536	1,548	1,542	1,518	-1.2%
Vehicle Service Miles	58,368	58,140	58,596	57,674	-1.2%
Fare Revenue	$ 14,698	$ 24,986	$ 27,050	$ 23,352	58.9%
Operating Costs	$ 126,863	$ 143,863	$ 142,864	136,159	7.3%
Performance					
Passengers/Hour	2.6	4.1	4.0	3.6	52.4%
Passenger/Mile	0.07	0.11	0.11	0.09	51.8%
Average Fare	$ 3.63	$ 3.94	$ 4.38	$ 4.28	20.8%
Farebox Recovery	11.6%	17.4%	18.9%	17.2%	63.4%
Cost/Hour	$ 82.27	$ 92.93	$ 92.65	$ 89.70	12.6%
Cost/Trip	$ 31.31	$ 22.69	$ 23.14	$ 24.95	-26.1%
Subsidy/Trip	$ 27.68	$ 18.75	$ 18.76	$ 20.67	-32.2%

Figure 6- 4 Burney Express Performance Trends

Stakeholder Input on the Burney Express

In addition to the intercity route to Redding, Burney residents have a shuttle for seniors operated by the Shasta Nutrition Program. The service is open to the disabled if there is sufficient capacity. The bus provides trips within Burney and service to the senior nutrition site. Fares are donation based.

County staff were pleased that the Burney Express is meeting minimum farebox recovery requirements.

An email was received by RABA requesting that the driver layover in the afternoon so that a person can travel to Burney from Redding, conduct some business, and then travel back to Redding. This is not possible at this time.

Recommendation

With recent positive productivity and farebox recovery, a third round trip from Burney should be considered.

7. Fare Analysis and Recommendations

This chapter first presents information on existing fares, provides a recent history on RABA fare considerations, provides market research information on fares, presents information on ridership by fare media, and then provides an analysis of fare issues with recommendations.

Existing Fares

Fixed Route Fares

RABA provides single ride fares and monthly passes. Figure 7-1 below shows the regular fares and discounted fares for both single ride and monthly passes.

Figure 7-1 Fixed Route Fares

Fixed Route Fares	Pricing
Single Ride Fares	
Regular Fares	
Base Fare (6-61) Cash	$1.50
Base Fare Punch Card	$1.50
Regular Fare Free Day	$0.00
Regular Fare Single Trip	$1.50
Zone Change Cash	$0.75
Zone Change Punch Card	$0.75
Children (under 6)/Attendant	Free
Transfers	Free
Discounted Fares	
Senior/Disabled	$0.75
Senior/Disabled Punch Card	$0.75
Senior Disabled Zone Cash	$0.40
Senior/Disabled Zone Punch Card	$0.40
Discount (M Brown)	$0.35
Monthly Passes	
Redding or One Zone	
Local Regular	$48.25
Local Senior/Disabled	$24.00
Redding-Shasta Lake or Anderson	
2-Zone Regular	$82.00
2-Zone Senior Disabled	$41.00
Youth All Zones	$29.00

Demand Response Fares

ADA demand response regulations require that the "fare for a trip charged to an ADA Paratransit eligible user of the complementary Paratransit service shall not exceed twice the fare charged to an individual paying full fare (i.e. without regard to discounts) for a trip of similar length, at a similar time of day, on the entity's fixed route system."

RABA's fares for demand response service are $3.00 for a single zone plus $1.50 for an additional zone. RABA fares meet the ADA requirements as the base fare for the RABA fixed route is $1.50.

RABA is in compliance with ADA demand response regulations for fares.

Shasta Senior Nutrition Program (SSNP) also provides door to door van service to the elderly and disabled persons as the area's Consolidated Transportation Services Agency. Their service is typically for patrons outside the RABA service area or those who do not qualify for RABA's Demand Response service. Their service has a suggested donation of $1.50. There appears to be some duplication of service with RABA and SSNP – See Chapter 5 for further discussion.

Burney Express Fares

Figure 7-2 shows the Burney Express fares. The fare structure is very simple and charges $5.00 between Burney and Redding. No discount fares are offered for senior or disabled passengers.

Figure 7-2 Burney Express Fares

Burney Express Fares

Community to Community	Fares
Burney-Redding	$5.00
Round Mountain-Montgomery Creek-Redding	$3.50
Burney-Round Mountain/Montgomery Creek	$2.00

The $3.50 fare also includes service between Burney and Shasta College/Montgomery Creek.

Recent History of Fare Increases and RABA Board Discussions on Fare Increases

2005 and 2006 RABA Base Fare Increases

RABA fixed route fares were last increased in July 2006 as part of a two-phase program. The base fare was increased from $1.00 to $1.25 on October 1, 2005 and then increased from $1.25 to $1.50 on July 1, 2006.

2011 and 2012 Burney Express Fare Increases

The Burney Express fares were increased by $0.25 on July 1, 2011 and another $0.25 on July 1, 2012.

July 2011 RABA Board Fare Increase Discussion

At the June 26, 2011 RABA Board meeting, the Board directed RABA staff to bring fare increases forward for consideration. On July 18, 2011, RABA staff presented a fare increase plan that would generate an estimated $74,700 annually in fare revenue to ensure that RABA meets the RTPA required farebox ratios.

The fare increase proposal was to increase the base fare from $1.50 to $1.75, the senior/disabled rate from $0.75 to $0.85, the demand response rate from $3.00 to $3.50, the regular monthly pass from $48.25 to $52, and the senior disabled pass from $24 to $26.

A majority of the Board voted against setting a public hearing regarding the fare increase. The Board pointed to the update of the Short Range Transit Plan for guidance on long-term strategies for fare polices.

SRTA Fare Policy

The Shasta Regional Transportation Authority (SRTA) establishes farebox recovery requirements under the guidance of Section 1331.2 of the Transportation Development Act. That section of the Transportation Development Act enables the Regional Transportation Planning Agency (SRTA in Shasta County) counties with less than 500,000 residents (such as the county of Shasta) to reduce the fare box ratio requirement to 15% after providing proper justification (CCR Section 6633.2 and 6645).

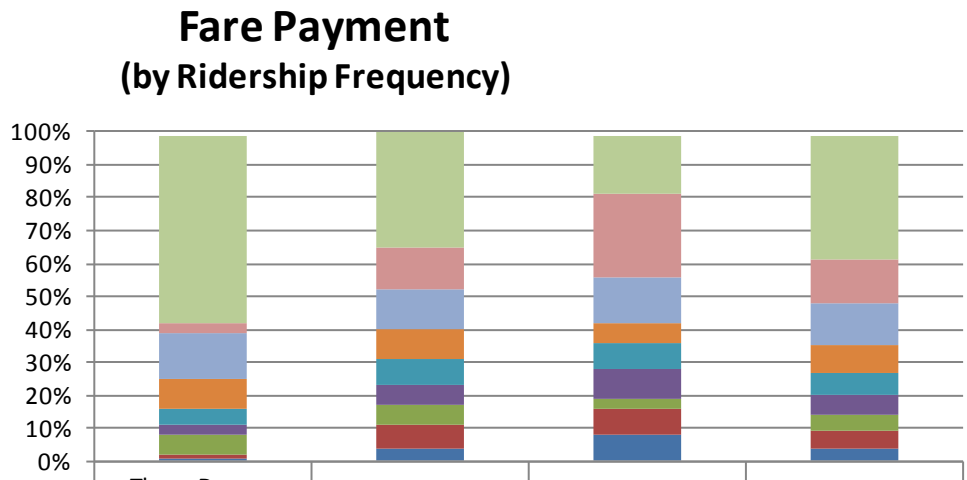
Until recently, SRTA required RABA to meet a 19% fare box standard for the combined fixed route and demand response systems. Other than immediately following fare increases, the system has struggled to meet this requirement and has fallen into the penalty year per TDA regulations twice in the past decade. In response and based on the 2007 Short Range Transit Plan, SRTA allowed for a graduated timeline for RABA to meet the 19% standard. However, following a joint workshop between the RABA and SRTA Boards, SRTA approved a 15% required

fare box ratio for the RABA fixed route service. Per the SRTA Board, RABA is to strive to obtain a 19% fare box ratio on fixed route service. This minimum and target performance standard was incorporated into Chapter 3, Goals and Performance Standards.

Onboard Survey Information

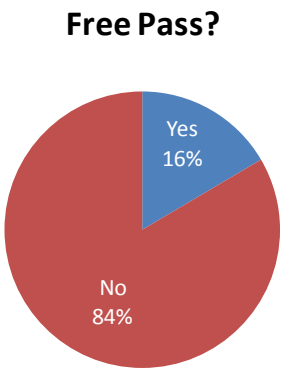
Fare Payment

Figure 7-3 below shows the distribution of fare media used by riders overall and by frequency segment.



	Three Days or less	Four to Five Days	Six days	All RABA riders
Full cash fare	57%	36%	18%	38%
Full priced local monthly pass	3%	13%	25%	13%
Senior/disabled cash fare	14%	12%	14%	13%
Punchcard	9%	9%	6%	8%
Senior/Disabled local monthly pass	5%	8%	8%	7%
Senior/Disabled regional mon pass	3%	6%	9%	6%
Single Ride Ticket	6%	6%	3%	5%
Youth monthly pass	1%	7%	8%	5%
Full priced regional monthly pass	1%	4%	8%	4%

Figure 7-3 Fare Payment

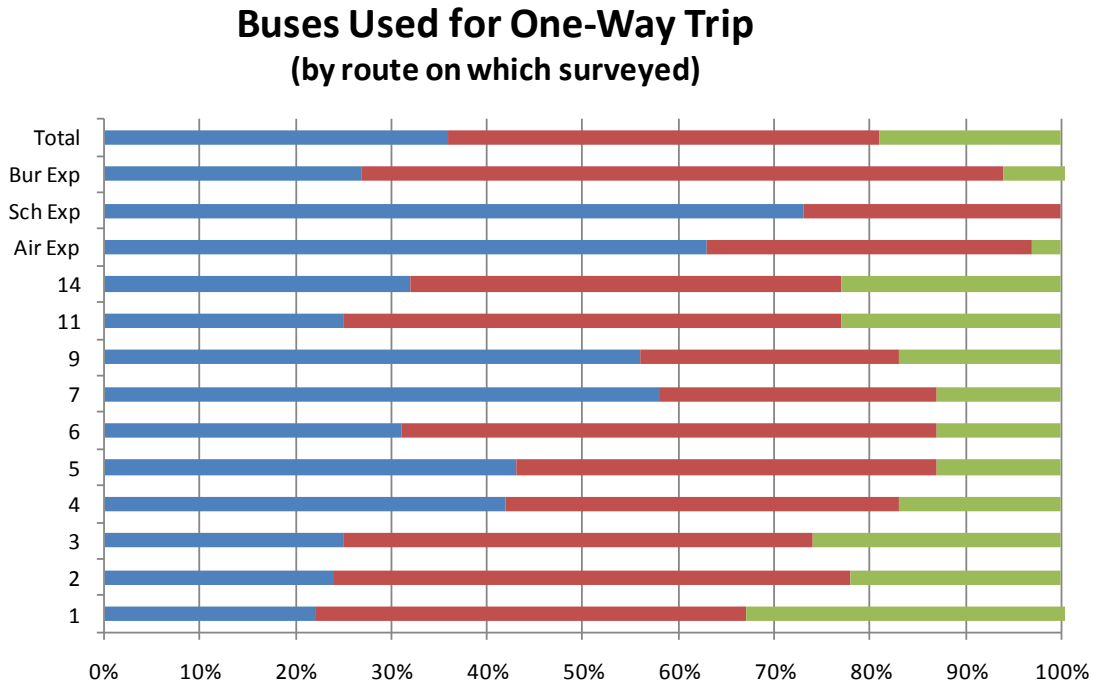


About half of RABA riders are paying their fare in cash – either the full cash fare (38%) or the senior/disabled cash fare (13%). Among full fare riders, the cash fare percentage declines significantly with frequency of ridership – so among 6-day riders only 18% pay cash, compared to 57% among occasional riders.

Riders were asked if they were riding with a free pass they received from a social service agency or medical provider: 16.5% said yes.

Thirty percent of riders (30%) have a monthly pass – 20% a local monthly pass and 10% a regional monthly pass. Monthly pass usage is greater among the more frequent riders. Among monthly pass riders, 17% are at the full fare level and 13% at the half-fare level.

Figure 7-4 Transfer Activity



	1	2	3	4	5	6	7	9	11	14	Air Exp	Sch Exp	Bur Exp	Total
1 bus-no transfer	22%	24%	25%	42%	43%	31%	58%	56%	25%	32%	63%	73%	27%	36%
2 buses	45%	54%	49%	41%	44%	56%	29%	27%	52%	45%	34%	27%	67%	45%
3 buses	34%	22%	26%	17%	13%	13%	13%	17%	23%	23%	3%	0%	7%	19%

Transfer Activity

Nearly two-thirds of RABA riders (64%) say that they use more than one bus to complete their one-way trip. Forty-five percent (45%) use two buses, while 19% use three buses to get to their destination.

Figure 7-4 shows that the number of buses used varies by RABA route. Riders on the school express and airport express routes are the most likely to have a direct, one-bus trip. On the other hand, riders on routes 1 and 3 are most likely to require three buses.

The need to transfer buses reduces the attractiveness of transit in three ways – it increases the complexity of trip planning, increases travel time and increases the level of uncertainty (e.g. will I make my connection).

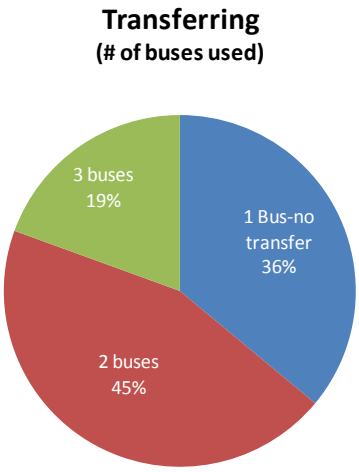
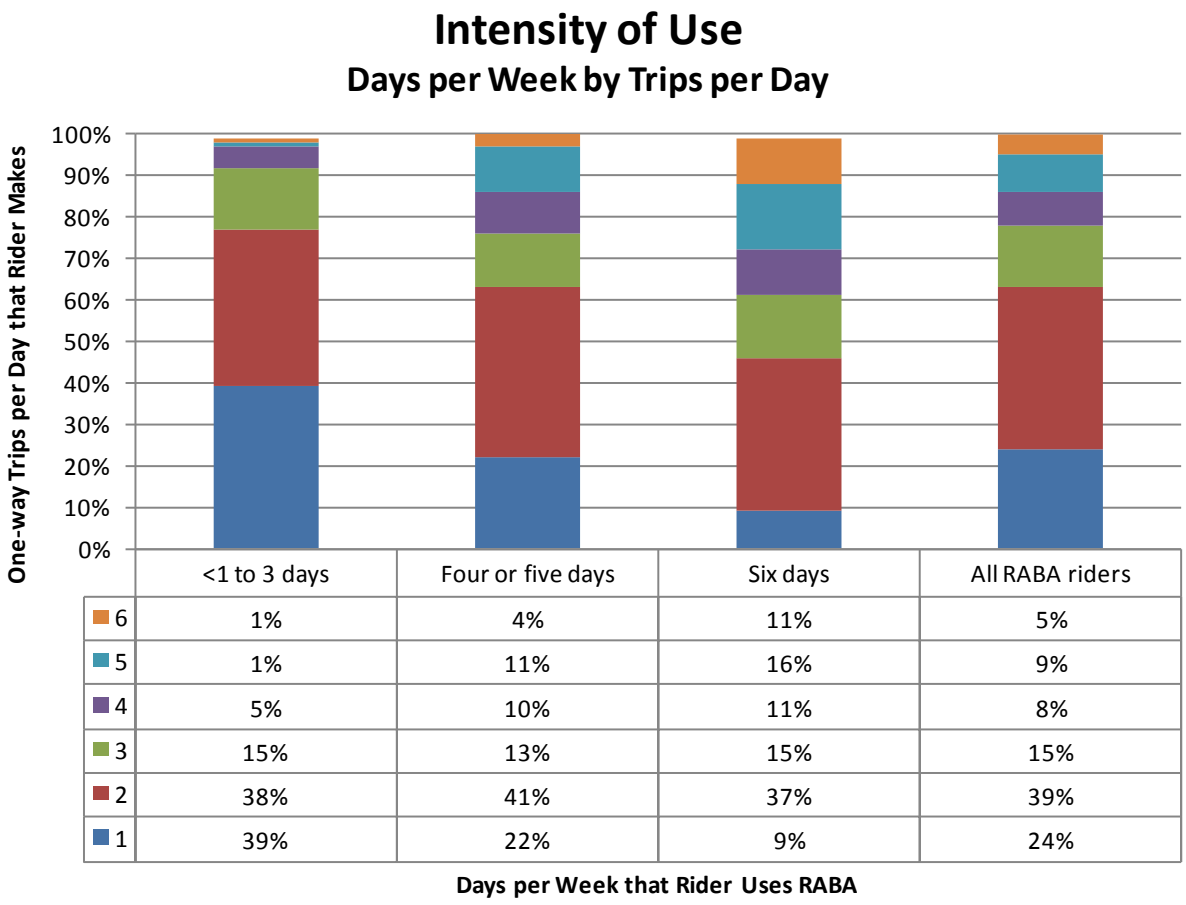


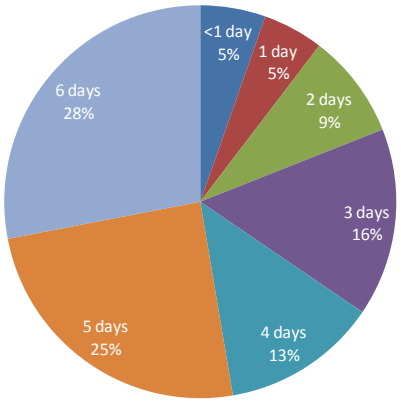
Figure 7-5 Intensity of Use



	<1 to 3 days	Four or five days	Six days	All RABA riders
6	1%	4%	11%	5%
5	1%	11%	16%	9%
4	5%	10%	11%	8%
3	15%	13%	15%	15%
2	38%	41%	37%	39%
1	39%	22%	9%	24%

How Often do Passengers Ride RABA?

Day per Week Riders Use RABA



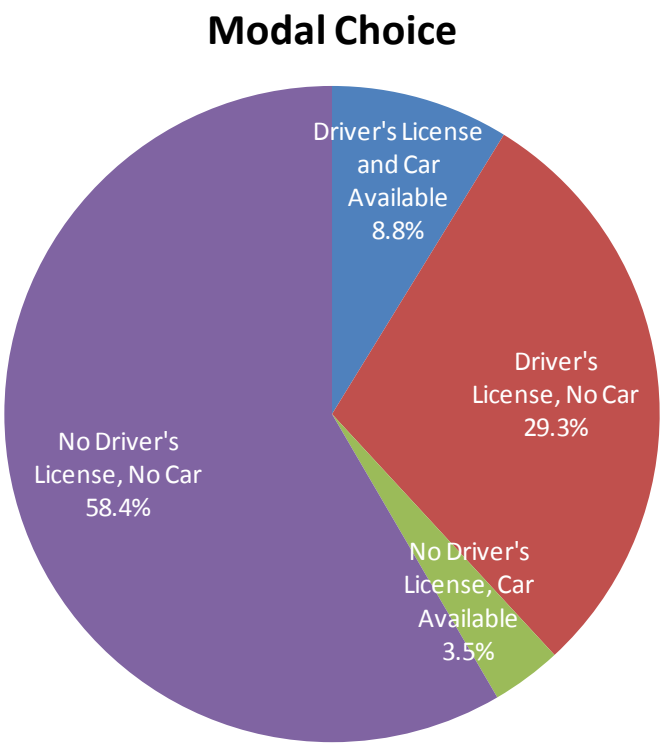
The questionnaire included two questions regarding how frequently riders use the bus – how many days per week a person rides and how many one-way trips they make on RABA on an average day.

The pie chart at the right shows how many days per week riders use the bus. Two thirds of riders use RABA regularly – four or more days per week. Twenty-eight percent (28%) ride six days per week, while 38% ride 4-5 days per week. The remaining third of riders ride three days per week (16%) or less often.

Figure 7-5 above combines the two questions about frequency to better describe how intensively the different segments use RABA. It shows how many trips per day riders make; cross-tabulated by the number of days per week that they ride.

Among all RABA riders, most make only 1-3 one-way trips per average day (78%). However, a quarter of riders (22%) make four or more one-way trips per day. The cross tabulation shows, however, that riders who ride more days per week are also likely to make more trips per day. For example, among riders who ride 6-days per week, 11% made six one way trips on the day they were surveyed. This was true for only 1% of 1-3 day riders and only 4% of 4-5 days riders. This intensity of use reflects the reliance of frequent riders on RABA for all of their mobility needs, and means that they contribute disproportionately to total boardings.

Figure 7-6 Modal Choice



Level of Modal Choice

Most of RABA's riders are quite dependent upon public transportation as shown in Figure 7-6 above. The majority (58%) had neither a driver's license nor a car available for the trip on which they were surveyed, while another 33% lacked either a vehicle or a driver's license. Less than 9% of riders said they have both a driver's license and had a car available, indicating that they could have made the choice to drive rather than ride RABA.

Ridership and Fare Media and Performance

In Chapter 4, the positive performance trends for fixed route services were shown. The following section provides a more detailed profile of ridership and revenue by fare category.

Ridership and Revenue by Fare Category

Figure 7-7 shows fixed route fares, ridership and fare revenues by fare category for both FY 2011/12 and FY 2012/13. While only preliminary FY 2012/13 figures were available when the analysis was conducted, they do provide an important benchmark and help to explain some of the overall very positive performance trends described above.)

There are a number of important facts to highlight:

- Ridership and fare revenue by cash fares has declined in the last two fiscal years. There is a corresponding increase in ridership in local regular monthly pass ridership. This is a very positive trend since increased monthly pass usage speeds boarding and helps with on time performance.
- Local regular and senior/disabled ridership by monthly pass ridership exceeds the single ride cash and punch card ridership totals.
- The average fares of the local regular monthly pass and 2-zone monthly pass are quite high, with the 2-zone monthly pass average fare of $2.89 exceeding the regular cash fare price of $2.25. As will be explained more in the next section, this is due to the fact that social service agencies are purchasing a majority of the monthly passes, and many of these social service distributed monthly pass holders are not making frequent trips on RABA.

Figure 7-7 Ridership, Fare Revenue and Average Fare By Fare Media

		FY 2011/12			FY 2012/13 Prelminary		
Fixed Route Fares		Riders	Revenues*	Avg. Fare	Riders	Revenues*	Avg. Fare
Regular Fares							
Base Fare (6-61) Cash	$1.50	115,639	$173,459	$1.50	107,965	$161,948	$1.50
Base Fare Punch Card	$1.50	29,346	$44,019	$1.50	29,028	$43,542	$1.50
Regular Fare Free Day	$0.00	1,713	$0	$0.00	860	$0	$0.00
Regular Fare Single Trip	$1.50	10,965	$16,448	$1.50	11,893	$17,840	$1.50
Zone Change Cash	$0.75	22,668	$17,001	$0.75	21,532	$16,149	$0.75
Zone Change Punch Card	$0.75	4,468	$3,351	$0.75	4,747	$3,560	$0.75
Children (under 6)/Attendant	Free	32,717	$0	$0.00	43,632	$0	$0.00
Transfers	Free	112,334	$0	$0.00	116,581	$0	$0.00
Discounted Fares							
Senior/Disabled	$0.75	79,737	$59,803	$0.75	80,997	$60,748	$0.75
Senior/Disabled Punch Card	$0.75	22,668	$17,001	$0.75	23,389	$17,542	$0.75
Senior Disabled Zone Cash	$0.40	9,858	$3,943	$0.40	12,115	$4,846	$0.40
Senior/Disabled Zone Punch Card	$0.40	2,475	$990	$0.40	3,678	$1,471	$0.40
Discount (People of Progress)	$0.35	13,678	$4,787	$0.35	14,642	$5,125	$0.35
Other		5,158	$6,192		9,010		
Monthly Passes							
Redding or One Zone							
Local Regular	$48.25	106,283	$124,704	$ 1.17	124,609	$ 134,328	$ 1.08
Local Senior/Disabled	$24.00	152,075	$94,884	$ 0.62	166,640	$ 106,656	$ 0.64
Reding-Shasta Lake or Anderson							
2-Zone Regular	$82.00	8,235	$23,786	$ 2.89	8,967	$ 30,176	$ 3.37
2-Zone Senior Disabled	$41.00	14,718	$19,603	$ 1.33	13,918	$ 24,682	$ 1.77
Youth All Zones	$29.00	11,176	$16,657	$ 1.49	13,691	$ 19,720	$ 1.44
Subtotal Fixed Route		755,911	$626,627	$ 0.83	807,894	$ 648,332	$ 0.80
*Unadjusted revenues from the GFI farebox and pass sales. Actual farebox revenues based on CAFR were higher in FY 2011/12							

The following three figures summarize the fixed route ridership by fare category and revenue. These figures help to explain why the average fare for fixed route service is almost one half of the base fare for RABA of $1.50. It also shows how important the monthly pass sales to RABA partners are to increases in ridership, fare revenues and improved farebox recovery levels.

Figure 7-8 compares the three primary ways that passengers ride RABA fixed routes: payment with monthly passes, payment for a single ride, and ride free. Single ride payment includes cash, punch pass, and single ride tickets. Free includes paper transfer and children who ride free. The reader should remember that many passengers utilizing a monthly pass also transfer and these transfers are included in the monthly pass ridership. It's important to note that monthly passes now account for 42% of ridership and 49% of total revenue. Figure 7-8 also shows that the paid single ride is 36% of the ridership, but represents 51% of the fare revenue.

Figure 7-8 Ridership and Revenue by Three Fare Categories

Fare Category	Ridership*	Percentage	Fare Rev.	Pct.
Monthly Passes	313,907	42%	$315,562	49%
Paid Single Ride	267,914	36%	$332,770	51%
Free (Transfer, Children, Att.)	161,073	22%	0	0%
Total	742,894	100%	$648,332	100%

* Excludes zone change ridership which appears to be double-counted in ridership.

Figure 7-9 breaks down the sales of monthly passes. In Fiscal Year 2012/13, RABA sold a total of 8,802 monthly passes. The average person utilized the pass for 35.7 one-way trips. This is just slightly above the break-even point for a monthly pass. For example, the regular monthly pass user has to utilize the monthly pass 32 times (48.25/1.50) in order to break even compared to paying $1.50 cash fare for each trip. Overall, the sale of monthly passes is financially very important to RABA.

Purchase of regular monthly passes is mostly by partners including IASCO and CalWorks. The transit operator Veolia only sells about 21% of the regular monthly passes to the general public.

RABA is unusual compared to most other public transit systems as it sells many more senior/disabled monthly passes than regular monthly passes. The Far Northern Regional Center purchases the most monthly passes of any vendor, with 2,029 annual sales. Veolia sells four times as many senior/disabled passes as regular monthly passes with annual sales of 2,875 monthly passes.

Figure 7-9 Monthly Pass Sales Breakdown

Pass Sales FY 2012/13	Annual Passes Sold	Monthly Average	Annual Revenue
Regular Monthly			
IASCO	1,483	123.6	$ 71,555
CalWorks	813	67.8	$ 47,988
Veolia General	650	54.2	$ 33,556
SMART	195	16.3	$ 10,995
Subotal Regular Monthly	3,141	261.8	$ 164,094
Senior Disabled Monthly			
Far Northern Regional Center	2,029	169.1	$ 53,779
Veolia Sales	2,875	239.6	$ 73,233
Subtotal Senior Disabled	4,904	408.7	$ 127,012
Youth			
RSA	83	6.9	$ 2,407
Shasta Unified School District	72	6.0	$ 2,088
Subtotal Youth	155	12.9	$ 4,495
Other Sales	602	50.2	$ 19,961
Total	8,802	733.5	$ 315,562

Overall, discounted fares including cash, punch passes, and monthly passes are 40% of RABA ridership as shown in

Figure 7-10. Regular fares including all fare media are 38% of the ridership but account for 60.9% of the fare revenue. Free fares including paper transfer and young children are 22% of the total.

Figure 7-10 Ridership and Revenue by Regular, Discounted and Free Fares

	Ridership*	Percentage	Fare Rev.	Pct.
Regular Fare	282,462	38%	$394,954	60.9%
Discounted Fares	299,359	40%	$244,443	37.7%
Free	161,073	22%	$-	0.0%
Total	742,894	100%	$648,332	100.0%

The 60% of the combined discounted and free fares on the RABA system are a primary reason why the overall average fare is estimated at $0.84 for the fixed route service when the base fare is $1.50.

Evaluation of Peers

Figure 7-11 provides a comparison of cash and monthly fares for RABA and six other peer transit agencies. RABA is at the high end of cash general fares at $1.50, with fares ranging from $1.00 to $1.50. Due to Federal Transit Administration requirements senior and disabled fares must be 50% of the general cash fares, so this is very consistent.

The general public monthly pass price of $48.25 is about the median for the peer systems. Federal guidelines also require a senior and disabled monthly passes to be 50% of general monthly pass price.

Three of the peer systems provide ticket books, and two of these provide small discounts. This will be discussed further in the next section of the chapter.

Figure 7-11 Peer Comparison of Fares

	Redding (RABA)	Yuba-Sutter Transit	Fairflield Fa (FAST)	Napa Cty. (Vine)	Merced Cty. (The Bus)	Santa Maria (SMAT)	Visalia (VCC)
Cash Fares							
General cash fare	$1.50	$1.00	$1.50	$1.50	$1.50	$1.25	$1.25
Discounted cash fares (Seniors)	$0.75	$0.50	$0.75	$0.75	$0.75	$0.60	$1.00
Senior Age Range	62+	62+	65+	65+	62+	60+	60+
Discounted cash fares (Disabled)	$0.75	$0.50	$0.75	$0.75	$0.75	$0.60	$1.00
Discounted cash fares (Youth)	N/A	$0.50	N/A	$1.00	N/A	$1.00	N/A
Youth Age Range	N/A	5 to 12	N/A	6 to 18	N/A	Students	N/A
Children	FREE	FREE	N/A	FREE	FREE	FREE	FREE
Children Age Range	Under 6	Under 4	N/A	Under 5	Under 46"	Under 6	N/A
Monthly Passes							
General monthly pass	$48.25	$30.00	$50.00	$48.00	$60.00	$40.00	$40.00
General monthly pass fare equiv.	32	30	33	32	40	32	32
Discounted monthly pass (Seniors)	$24.00	$5.00	$25.00	$24.00	$30.00	$20.00	$30.00
Discounted monthly pass (Disabled)	N/A	$5.00	$25.00	$24.00	$30.00	$20.00	$30.00
Discounted monthly pass (Youth)	$29.00	$5.00	N/A	$33.00	$45.00	$25.00	N/A
Ridebook (per ticket)	N/A	$0.83	$1.50	$1.38	N/A	N/A	N/A

Fare Issue Analysis

This section includes the evaluation of six fare policy issues:

1. Implications of changing or eliminating fare zones
2. Replacing the multi-denomination punch card
3. Evaluation of the potential for a day pass
4. Review of discount eligibility
5. Guidelines for expanding RABA's partnerships
6. Guidelines for consideration of future fare increases

There is also a need to consider upgraded farebox equipment to facilitate potentially new fare media such as smart cards and stored value cards. The financial plan in Chapter 8 provides consideration of new farebox equipment.

Implications of Changing or Eliminating Fare Zones

RABA has three established fare zones: Redding, the City of Shasta Lake, and the City of Anderson. The City of Shasta Lake Zone starts north of Oasis Rd to Shasta Lake. The Anderson zone starts south of the Win-River Rancheria. If a passenger travels within these two zones, they need to pay a base fare of $2.25 for regular fares, and $1.15 for senior/disabled fares. The regular monthly pass in Redding is $48.25 and the monthly pass to Shasta Lake or Anderson is $82.

The policy rationale for the fare zones is that the average trip length within the Redding zone is much less than the average trip distance with origins from the City of Shasta Lake and City of Anderson. A review of origin-destination patterns from the onboard survey would support the

fact that the overall average trip length is longer to and from the City of Shasta Lake and Anderson than internal Redding trips.

However, there are individual trips across two zones that are actually less than one zone trips within Redding. For example, a one-zone trip from Girvan and Eastside Rd to Shasta College is 10.2 miles. A trip from the City of Shasta Lake to the Downtown Transit Center via Surface Street is 9.9 miles and a two-zone trip. The trip from Anderson to the downtown Transit Center is 11.8 miles via Highway 273.

There are several options for reconsidering the fare zone policy:

1. Retain the status quo with the existing zones and two-tier fare structure.
2. Consider changing the fare zone boundaries.
3. Lower the zone change fare from $0.75 to $0.50.
4. Keep the zone change fare $0.75 but eliminate the zone monthly pass, such that all monthly passes are $48.25 per month.
5. Eliminate the fare zones and raise the base fare and monthly pass fare to make up the difference in revenue loss.

Each of these options is evaluated below.

Retain the Status Quo

The status quo has the following ridership and revenue for two zone trips. As shown in Figure 7-12, two zone trips have an annual ridership of 64,957, just 8% of the RABA total.

Figure 7-12 2-Zone Ridership and Revenue by Fare Category

	FY 2012/13 Prelminary			
Single Trips	Price	Riders	Tot. Rev.	Net Rev.*
Regular Zone Change Cash	$2.25	21,532	$ 48,447	$16,149
Regular Zone Change Punch Card	$2.25	4,747	$ 10,681	$3,560
Senior Disabled Zone Cash	$1.15	12,115	$ 13,932	$4,846
Senior/Disabled Zone Punch Card	$1.15	3,678	$ 4,230	$1,471
Subtotal Single Trips		42,072	77,290	$ 26,026
Monthly Passes				
2-Zone Regular General Public	$82.00	8,967	$ 5,330	$ 2,194
2-Zone Agency Purchase	$82.00		$ 24,846	$ 10,226
2-Zone Senior Disabled Public	$41.00	13,918	$ 10,209	$ 4,233
2-Zone Senior Disalbed Agency	$41.00		$ 14,473	$ 6,001
Subtotal Monthly passes		22,885	54,858	$ 22,654
Total		64,957	$ 132,148	$ 48,680
* Net revenue is the additional revenue above the base fare				

There are relevant points to make from Figure 7-12 include:

- The total revenue of general public sales of the $82 regional pass was just $5,330 for the entire FY 2012/13 fiscal year. This is just 65 monthly passes or a little over five per month.
- Agency 2-zone regular monthly sales were 303 monthly passes in FY 2012/13, and CalWorks purchased most of 2-zone regular monthly passes.
- Sales of the general public senior/disabled monthly passes were significantly higher, with 249 of the $41 passes sold. Agency purchases also exceeded general public purchases with 353 annual passes sold, mostly by the Far Northern Regional Center.

With the demographic analysis in the Market Research Report, there are significant transit needs in both Anderson and City of Shasta Lake. However, on a transit trip per capita basis, there are 6.5 transit trips per capita in Redding and just 5.5 transit trips per capita for the combined 2010 Census population of Anderson and City of Shasta Lake. The higher cash fares and monthly passes are one factor in why the per capita trip rate in the City of Shasta and Anderson is lower than the City of Redding.

The overall conclusion of the analysis of the status quo option is that there is a need to consider some changes to the current zone policy.

Modify the Zone Boundaries

The zone boundaries could be modified such that the average trip lengths for 2-zone trips are higher and provide increased policy rationale for having the three zones for RABA. One option is to move the boundaries to the corresponding city limits of the Cities of Shasta Lake and

Anderson. The northern boundary approximates the southern boundary of the City of Shasta Lake. The southern zone does not correspond with the northern boundary of the City of Anderson. One option is to move the southern zone to Anna Rd., which corresponds to the northern City limit of Anderson.

As a practical matter, there are few transit trips generated between the existing southern boundary and the northern boundary of the City of Anderson. It would have little impact and therefore changing the zone boundaries is not recommended.

Lower the Zone Single Fares

There are two options for lowering the current zone fare:

1) Lower the zone single fare surcharge from $0.75 to $0.50

2) Lower the zone single fare surcharge from $0.75 to $0.25

The policy rationale for the current $0.75 surcharge is that the average trip length from the City of Shasta Lake and City of Anderson is 50% longer than the average trip length for the Redding zone. Lowering the fare surcharge to $0.50 likely is more accurate as the average trip length based on the review of origin-destination data from the onboard survey is likely closer to 33% more than the average trip length in Redding. A detailed analysis of average trip length, however, has not been conducted.

The financial impact of lowering the zone surcharge would be partially offset by increased ridership. For a very transit dependent population such as in the RABA service area, there would a price elasticity of approximately +0.2 for a reduction in fares. Therefore for every 10% decrease in fares, there should be a 2% increase in ridership. Therefore, a 33% reduction in fares for a reduction from $0.75 to $0.50 would result in about a 7% increase in overall ridership to Shasta Lake and Anderson, based on nationwide experience.

Retain the $0.75 Zone Change, and Eliminate Higher Cost Zone Monthly Pass

In this policy option, the single ride fare for zone changes would be retained at $0.75 for regular fares and $0.40 for seniors/disabled. However, the $82 regular monthly pass and $41 senior/disabled monthly pass would be eliminated and the $48.25 regular and $24 senior/disabled monthly pass would be good for all zones.

This would encourage regular RABA users from Shasta Lake and Anderson to purchase monthly passes. Based on existing monthly pass sales, there would be a loss of $22,654 in the cost difference between the zone change monthly pass and the regular monthly passes. There would likely be a loss in cash fare revenue of about $13,000 annually. However, the $35,654 in anticipated lost revenue from existing pass sales would be partially offset by a significant increase in monthly pass sales from Shasta Lake and Anderson residents. This is because the fare equivalent for a monthly pass from the Cities of Shasta Lake and Anderson would be just 21 one-way trips ($48.25/$2.25). This would mean that a person taking 11 round trips monthly

would break even and additional trips would be free. Remember, existing sales at $82 were quite low to the general public with only an average of slightly over five per month. A total increase of 50 monthly passes from both Shasta Lake and Anderson is a reasonable estimate of future sales, and would generate approximately $29,000 in new revenue from monthly pass sales and significantly more ridership from both communities. It would take an average of a net increase of 61 monthly passes from both the Cities of Shasta Lake and Anderson to have this policy change be revenue neutral.

The average increase in monthly pass sales is admittedly a speculative assumption and a more conservative assumption would be a net revenue loss of $20,000 to $25,000 under this policy option if the average monthly pass sales does not reach an average of 50 per month.

Eliminate the Zones and Zone Fares

In this policy option, the zones and zone fare changes would be eliminated. Based on existing usage patterns, there would be a loss of $48,680 in fare revenues, which again would be partially offset by increased ridership from the Cities of Shasta Lake and Anderson. A reasonable assumption is that the purchase patterns of residents of the Cities of Shasta Lake and Anderson would approximate the rest of the RABA service area under this alternative. In this alternative, monthly pass sales would be significantly less since the cash fare would be $1.50 instead of $2.25.

As stated earlier, the transit trips per capita for Anderson and the City of Shasta Lake is 5.5 compared to 6.5 for Redding. If Anderson and the City of Shasta Lake were to increase to 6.5 annual trips per capita the net loss in fare revenues would be $14,000 ($48,680 minus $34,680 in expected revenue in increasing from 5.5 to 6.5 transit trips per capita).

Utilizing a fare elasticity methodology, the 50% reduction in fares would result in an increase of 10% in ridership, or 71,452 annual riders from both Anderson and the City of Shasta Lake. Applying the average fare of $0.82, the resulting fare revenue would be just $58,591 from Shasta Lake and the City of Anderson. This would result in an annual revenue loss of $73,556 ($132,148 - $58,591.21). The existing average fare for Anderson and City of Shasta Lake is $2.03, which helps to explain the reason for the anticipated large revenue loss by eliminating the fare zones.

A systemwide fare increase to make up the difference of a $35,000 to $74,000 revenue loss is one possible sub option of this alternative. However, there is no policy rationale of having Redding residents pay for the reduction in fares to City of Shasta Lake and Anderson residents and is not recommended.

Recommendation

The recommendation is to keep the existing zone fare at $0.75 for regular fares and $0.40 for senior/disabled, but to eliminate the zone change monthly pass. Residents of Shasta Lake and

the City of Anderson could purchase the regular monthly pass at $48.25 and the senior/disabled monthly pass at $24 per month.

This recommendation is somewhat of a risk with a potential revenue loss of $20,000 to $25,000, but it is quite possible that increased pass sales and increased ridership would offset the revenue loss. As citied earlier it would take an average of 61 new monthly pass sales from both Anderson and the City of Shasta Lake to have this policy change be revenue neutral. With an expected continued growth in partnership sales of monthly passes, there is a reasonable probability that the recommendation will be at least revenue neutral with increased monthly pass sales.

An alternative policy option would be to lower the 2-zone monthly pass from $82 to $64 per month. This is the midpoint between $48.25 regular monthly pass price and the $82 2-zone pass. While this option is less of a risk for fare revenue loss, it would likely achieve significantly more monthly pass sales compared to the $48.25 pricing.

The recommended policy option is quite consistent with RABA's overall strategy for increasing monthly pass sales.

Replace Existing Multi-Denomination Punch Card

The existing punch card requires drivers to punch the correct denomination for the trip the passenger is making. The existing punch card has 10 $0.50 punches, 10 $0.25 punches, 10 $.10 punches and 20 $0.5 punches. The punch passes can be utilized both the fixed route and demand response service.

The punch passes are heavily utilized on the RABA system. In FY 2012/13, there were a total of 60,842 passengers utilizing the punch pass. This antiquated punch system really slows down the boarding process, as the driver has to punch the pass as least three times and often 5 or more times depending on the value left on the pass. It is a very arduous and time consuming task and can take ten times longer than a passenger boarding with a monthly pass. There is also no validation for the fare value when accounting for fares. During the stakeholder interview process, several drivers suggested eliminating the punch card.

There are a number of potential solutions to having the multi-denominational $10.00 punch pass. The low-tech options include selling 10 ride ticket books, with $0.75, $1.50 and $2.25 and $3.00 (for demand response) ticket books made available. Instead of ticket books, a 10-ride ticket punch card could also be sold, requiring the driver to punch the card just once for the trip being made.

The more technologically advanced option is to sell a stored value card of $10.00. This requires an upgrade to the RABA fareboxes to enable this. The more advanced farebox technology is evaluated and recommendations for both fixed route and demand response buses are made in Chapter 10.

Recommendation

It is necessary to replace the existing punch card with another multi-ride ticket of a $10 value. The longer-term solution is a stored value magnetic strip or a smart card. In the interim, it is recommended that three 10-ride ticket books be sold for agency and passenger convenience: 10 ticket books at $7.50 ($0.75 per ticket), $15.00 ($1.50 per ticket), and $22.50 ($2.25 per ticket).

Day Pass Potential

A day pass allows passengers to make as many trips in a day as they desire. Passengers who normally pay cash fares can economize and group trips on a single day. Similar to a weekly or monthly pass, passengers can make unlimited trips for the day the day pass is issued. A day pass is typically priced at three times the base fare, which would be $4.50 for the regular local fare and $2.25 for the senior/disabled fare. The day pass for the zone change regular fare would be $6.75 for trips to and from Anderson or the City of Shasta Lake and $3.35 for the senior/disabled fare.

The day pass is particularly advantageous to occasional users who would like to group trips. The onboard survey found that 5% of passengers utilize RABA less than once a week, 5% utilize RABA once a week, and 9% utilize RABA twice a week. Therefore the market potential for a day pass in the RABA is about 20% of the total passenger base.

From a transit agency perspective, one of the important advantages of implementing a day pass is to eliminate transfers and the potential for the abuse of transfers. A transit agency only really cares about eliminating transfers for those who pay cash fares, the ones who are issued paper transfers and use the transfer for the return trip. The onboard survey found that only 36% of passengers utilize one bus for the trip they need to make. The service alternatives currently being evaluated will increase this figure but transfers will continue to be a significant portion the RABA ridership. The number of passengers who are issued and utilize a free paper transfer slip is 14% of the total ridership. Since the onboard passenger survey found that 64% of passengers surveyed take two or three buses to their final destination, this means that many of the passengers are currently utilizing a monthly pass for transfers. This is consistent with the fact that 42% of passengers trip utilize a monthly pass for their fare based on the 2012/13 ridership statistics.

A day pass would add an additional discounted fare media to RABA. Since the average fare for all passenger trips is estimated at $0.84 in FY 2012/13, the average fare is already heavily discounted compared to the $1.50 base fare for local Redding trips and $2.25 for Anderson and City of Shasta Lake trips. From a financial planning perspective, it is not desirable to introduce a fare media that would further reduce the average fare.

Recommendation

A day pass is not recommended for the RABA service area for the following reasons:

1. It would add significant complexity to the RABA offerings of fare media with limited market potential.
2. It would decrease the average fare, which is already quite low compared to the base fare of $1.50.
3. Given the design of the RABA system and what is being considered in the service alternatives, RABA is not going to be able to eliminate paper transfers. There are simply too many transfers required in the system to eliminate them. If transfers were eliminated in favor of a day pass, it would especially penalize RABA riders who are making one-way trips.
4. It would detract from RABA's overall successful strategy of encouraging the sale of monthly passes.

Discount Fare Eligibility

As stated previously, the ridership figures show that 40% of RABA ridership receive discounted fares for being a senior or disabled passenger. Another 22% receive a free fare for either transferring or a young child under 6 rides free. Therefore only 38% of RABA passengers currently pay the regular or full fare.

The actual ridership figures contradict the results of the onboard survey. The 2012 passenger survey found that 16% of passengers self-reported as disabled and another 6% reported being retired. It is quite possible that the disabled population is among the heaviest users of the transit system and that some individuals who would qualify for a disabled fare do not self-report as disabled.

At present, Veolia drivers require that passengers be asked to provide the following cards: RABA issued Blue card, Veterans Disability Card, Med-Care card or a valid ID that has their birth date for the senior discount. When a disabled passenger purchases a monthly pass at the downtown transit center, Veolia staff checks for a valid disabled identification number and writes the customer's name on the back of the card. RABA management does not audit Veolia for compliance or check onboard buses to ensure that drivers are complying with the adopted procedures.

RABA management has suggested that Veterans might be added to the list of individuals who qualify for discounted fares. Many transit systems allow military in active service wearing their uniform to ride free. This is easy to monitor and validate. One transit system allows all military veterans to receive a discount card if they present a Department of Defense Form 214 and a picture ID to receive a discount card.

RABA offers seniors a discount at age 62 and the Federal Transit Administration (FTA) requirement is age 65 and older. FTA allows systems like RABA to have a more liberal age policy such as age 62.

Recommendation

It is important that eligible individuals receive the half-fare they are entitled based on RABA Board policies guided by FTA policies and regulations. However, due to the very high senior and disabled ridership on the RABA system, it is imperative that RABA management has in place controls to ensure that individuals who receive the discount are legitimate. Fares with a 50% discount are a very strong incentive to abuse the system. While there is no evidence of any abuse at the present time, the fact is that Veolia sells over 2,800 annual senior and disabled monthly passes and social service agencies sell another 2,200 annual senior and disabled monthly passes; this is an important reason to ensure there are adequate controls in place. Another 128,000 annual passengers receive discounted senior and disabled single ride fares onboard the buses. The objective of having good management controls in place is to minimize the potential for abuse of discounted fares by individuals who should not be receiving the discount.

It is recommended that RABA implement a picture ID discount card for individuals who want to receive a discount. The Federal Transit Administration regulations allow the following for administration of the half-fare discount card:

> "A grantee may require passengers to obtain a special identification card as the sole basis for paying the half-fare. A valid Medicare card must be considered sufficient proof of eligibility for obtaining the identification card. Obtaining a special identification card must be relatively easy. For example, though not strictly prohibited, requiring individuals to travel to a single office, which may be inconveniently located, is not consistent with the intent of this requirement. In order to ensure that the person presenting a Medicare card is the authorized individual, the grantee may request proof of identity (another card with a photograph)."

In order to make it convenient for residents of the Cities of Shasta Lake and Anderson to procure a photo ID discount card, Veolia should offer the service at least once a week in locations in the City of Shasta Lake and Anderson. This may require that the Redding location only offers photo ID and registration three days a week.

Yuba-Sutter Transit charges a $5.00 fee to cover the material costs of the photo ID and lamination costs. The discount identification card should be good for a three-year period if there is a permanent disability. The expiration month and year should be prominently displayed in red letters on the photo ID so that driver can easily validate that the card is not expired. A similar $5.00 charge should be made at the time of discount card issuance.

Agencies selling discounted fares should also require their clients to have photo ID discount cards. Large agencies such as the Far Northern Regional Center could be authorized to issue the photo ID cards themselves, but the information would need to be included in a centralized database.

Passengers boarding the bus who desire a discounted cash fare or are utilizing a monthly pass should be required to have a RABA issued valid photo ID discount card and drivers should validate that the person boarding is the person on the photo ID.

RABA management should randomly audit Veolia and agencies authorized to issue the ID card to ensure compliance with discount card policies and procedures. RABA management should validate a random sample of cards to ensure that they were legitimately issued. The random audit should include anonymous secret riders on all routes to ensure that drivers are fully complying with the procedures.

It is also recommended that the age limit be raised from 62 to 65 years of age. This is when senior are eligible for Medicare and meets the FTA guidelines for half-fares.

The RABA photo ID discount card would enable RABA to issue military veterans a discount card if the RABA Board desires to extend the discount. There is no FTA requirement to require issuance of discount cards to non-disabled veterans, but RABA does have the discretion to provide this to individuals who have served the United States in military service.

It is recommended that RABA provide a three-month notice once the photo IDs discount infrastructure is in place. The implementation date should be widely communicated with posters on the bus as well as provided when individuals purchase single ride tickets in a half page flyer (once a week prior to the deadline) and every month when an individual purchases the pass.

While the above procedures may sound somewhat draconian, it is imperative that those receiving discounts are eligible for receiving half-fares. It is necessitated by the fact that 40% of existing passengers boarding RABA buses are receiving a half fare discount.

A significant benefit of the photo ID process is that it will speed boarding compared to having drivers check the more difficult to read driver's license or a Medicare card in combination with a photo ID card.

Expanding RABA Partnerships

The March 2013 Systems Analysis Report reported that ridership increased by 13.1% to 818,179. Impressively, overall fare revenue increased by 15.8% while costs were flat over the two past fiscal years.

RABA management has made significant efforts to increase fare revenues and ridership with partnerships with both public and private partners. It has resulted in overall positive trends in increased fare revenues, increased ridership and increased farebox recovery.

IASCO Flight Center

Much of this positive momentum in performance over the past two years was created by the partnership with IASCO Flight Training (IFT) for the Airport Express. The Airport Express

generated 37.4 passengers per hour in FY 2011/12, and had an overall farebox recovery ratio of 54.1%. This is driven by the agreement with IFT to purchase 120 monthly passes every month.

In FY 2012/13, preliminary ridership figures on the Airport Express indicate that ridership increased from 49,915 in FY 2011/12 to 67,180 in FY 2012/13. IASCO purchased an average of 124 monthly and over $73,000 in monthly transit passes. This momentum is continuing in FY 2013/14.

Monthly Pass Sales with Vendors

As part of this fare analysis, a detailed review was conducted of monthly pass sales. The Far Northern Regional Center, as discussed earlier, purchases even more monthly transit passes than IASCO with an average of 169 monthly passes. CalWorks purchases an average of 68 monthly passes worth $48,000. These three vendors generate a significant amount of annual ridership for RABA and all should be considered very important RABA partners.

Other regular purchasers of monthly passes are the RSA School, Shasta Unified School District, and Smart, but these sales were less than an average of 16 monthly pass purchases. RABA should nurture these relationships and attempt to continue to provide growth in monthly pass sales.

Shasta College

To RABA management's credit, RABA worked closely with the Shasta College student body to establish a pilot demonstration program in the spring of 2011 for a student fee program. The students offered $15,000, half of their revenue total from the sale of 3,000 ID cards.

In return all students with Shasta College ID were allowed to ride RABA on an unlimited basis regardless of zone change.

The pilot program was very successful in terms of overall ridership with more than 36,000 students riding during the Spring 2011 semester. It accounted for 12.8% of the total RABA system ridership and 55.3% of ridership on Route 7 that serves the college. However, an analysis of the program found that RABA averaged only $0.42 per ride, less than half the systemwide average of $0.91 average fare at the time. It was determined it was not financially advantageous to RABA, the Student Senate could not sustain even the $15,000 contribution, and the College has chosen not to provide support from their operating budget due to their economic situation. Therefore, the program was discontinued.

The service alternatives currently being discussed would significantly improve Shasta College service. There could be an opportunity for a more sustainable student fee program in the future.

Stakeholder Input on Partnerships

The recent addition of the Airport Express has provided significant dividends to the overall RABA system performance measures. Several stakeholders felt that additional partnerships along this

line would help to improve overall performance. A few potential such partnerships were identified in the public and stakeholder outreach. Route 2 does not serve the bell times in the morning for Shasta High School. Shasta High school has students who live in low-income areas of Redding who could utilize a "school tripper." A school tripper is open to the general public but is a special run that matches middle and high school student resident locations with the schools and is coordinated with bell times. In other communities around the United States, such "school trippers" have very high productivity and farebox recovery similar to the Airport Express.

The second potential partnership is with Bethel School. Routes 4 and 7 currently serve the Bethel School Supernatural Ministry (BSSM), but according to the BSSM representative, the stop location at the bottom of the hill makes utilization of the service very difficult. The stop location is necessary because a 40-foot bus cannot turn around at the main campus. The collection of boarding data by stop confirmed that very few people utilize the Bethel stop with a just a couple of riders a day.

Bethel schools off of Churn Creek Road and at the Redding Convention Center have been growing significantly in enrollment. In an online survey conducted by BSSM management of 171 students in response to an inquiry for the Short Range Transit Plan, it was found that only 10% of respondents had even tried a RABA bus. The same online survey found that if more direct convenient routes were provided and BSSM were to issue monthly bus passes, 80% would utilize the RABA bus more. There would appear to be a significant opportunity for a similar partnership arrangement with BSSM. Bethel provided RABA with a distribution of where the 2012 students were living that RABA has mapped.

During the review of service alternatives, Department of Social Services staff expressed interest in developing a partnership arrangement by guaranteeing a certain volume of trips on a special route, similar to the Airport Express.

Recommendations

There would appear to be significant opportunity to further partnerships with Bethel, Shasta Unified School District, Far Northern Regional Center, Shasta College and the Department of Social Services, including CalWorks. The benefits of these partnerships have been demonstrated with the IASCO partnership. However, old relationships need to be nurtured, and new relationships need to be developed. Due to the financial importance of these partnerships, it is recommended that RABA establish a 0.5 FTE Account Manager who would be dedicated for nurturing and fostering old and new partnership relationships. However, RABA Staff indicates that Board Direction on recent marketing programs would not support additional funding. RABA Staff will utilize existing personnel to foster these partnerships concentrating on targeted opportunities.

The Short Range Transit Plan is a not a forum for developing specific program details. That should be done in collaboration with existing and prospective partners. However, the following are general guidelines from experience elsewhere on what might work.

1. RABA staff has conceptually developed a service alternative that is a shuttle service between the Downtown Transit Center, the two Bethel campuses and the Canby Transit Center. While such a service makes sense, it will be important to sit down with Bethel to work out a desired schedule. Based on the schedule, there should be a commitment from Bethel for a minimum of monthly pass sales that guarantee a 50% farebox recovery ratio before the service is initiated. Like the Airport Express, the service should be open to the general public, especially for trips to Turtle Bay and for the trips between the two transit centers.

2. RABA staff should sit down with Shasta High School staff to plan both a route and schedule for a "school tripper" service. Many school trippers that jointly plan with the school and the transit system quickly reach capacity and achieve a very high farebox recovery ratio, often above 50%. However, the average monthly sales of 50 Youth Passes at $29 should yield sufficient revenue to justify two trips in the morning and two trips in the afternoon. Shasta High School will not be able to guarantee the pass sales, so the service should be introduced at the beginning of the school year and operate for the entire school year. If sufficient $29 Youth monthly passes are not sold by the end of the following Spring Semester, then the pilot program would be discontinued.

3. Assuming that the final RABA service plan will significantly increase service levels to Shasta College, there should be renewed discussion for a student fee program or a discounted semester pass. Even before the service plan is finalized, it might be useful to sit down again with representatives of the student body and the College administration to discuss discounted student fee options that might be introduced in concert with the service improvements.

   In the past what has stalled many student fee programs is the student fee amount. Copper Mountain Community College in San Bernardino County decided not to put a student fee to a vote, but instead contributes $15,000 to Morongo Basin Transit Authority and students pay $0.25 per boarding. The students will soon be asked to contribute $0.50 per boarding. The combination of a discounted student fare of $0.50 plus a more moderate guarantee from the student body and/or Shasta College administration could be considered.

   An alternative to the student fee program is a semester pass. In Merced, The Bus offers a student pass at $45 per month compared to $60.00 for the full pass. A semester pass is also offered for a semester at $180 per semester or a five- month pass for the price of four monthly student passes. For Shasta College a special student pass might be offered at $36

per month or $140 per semester.

4. At the review of service alternatives meeting, there was strong interest among several social service agencies in developing a partnership for expanded service with the IASCO model in mind. Social service agencies already purchase monthly passes. RABA staff should provide technical assistance in developing a service plan and then negotiating a commitment of a guarantee to sell sufficient monthly passes to achieve a 50% farebox recovery for the special service over a two-year period.

5. The Far Northern Regional Center is RABA's best customer. Before the service alternatives are finalized, it will be important to receive direct input on how the service alternative will affect their ridership. There may be a need to also plan a potential special tripper to accommodate the needs of the developmentally disabled population on a subscription basis. The Mendocino Transit Authority and The Bus in Merced County have successfully implemented such subscription services.

Guidelines for Considering Future Fare Increases

The increase in fare revenue and ridership through RABA partnerships has increased the fixed route farebox recovery ratio to almost 20% based on preliminary 2012/13 figures. However, normal inflation including adjustments to the operating contract, fuel costs, and overall administration costs will naturally erode the farebox recovery ratio. The following are important guidelines for considering a future fare increase:

1. Continue to pursue partnerships that will yield similar results as the IASCO partnership. This will increase ridership, revenue, and farebox recovery without the need for a fare increase. Even if only two of the above suggested partnerships come into fruition over the next couple of years, it will significantly reduce the need for a fare increase during the five year planning horizon of the Short Range Transit Plan.

2. Implement strategies that keep the fixed farebox recovery ratio above or near 19%. Several of the fare policy recommendations are meant to increase the average fare and fare revenue. Increasing the age required to receive a senior discount from 62 to 65 is one such strategy. Implementing a new photo ID discount card will ensure that only eligible individuals receive the half-fare discounts.

3. The new service plan alternatives being considered are meant to reduce the average travel time between key origins and destinations and improve passenger convenience and increase overall ridership. The changes should increase fare revenues but will need at least one to two years to reach its full potential.

4. A fare increase should be considered if every effort in #1 to #3 above are not successful in keeping the fixed route farebox recovery at or above 19% and the farebox recovery level for fixed service falls below 17% in a fiscal year. A fare increase should be considered as a last resort to keeping the combined system farebox recovery above 15%.

5. The cash fares originally proposed in 2011 with the base fare increasing from $1.50 to $1.75 would be the desirable increase in the base fare. The senior/disabled fare would increase from $0.75 to $0.85. The increased base fare of $0.25 is an 18% increase. It is recommended that the monthly pass fare price be raised at half that rate at 9%. This will encourage additional purchases of monthly passes. If that were not successful in achieving revenue objectives, then the monthly pass would be increased by another 9%.

8. Communications Focus

Communications strategies for a transit agency form a hierarchy from basic communications necessary simply to support operations to aggressive promotional marketing efforts designed to attract discretionary ridership. The transit communications hierarchy includes the following "levels" of effort:

The Basics

- Branding
- Basic Passenger Information
    - Print Materials
    - Website
    - Bus Stop Information
- Enhanced Passenger Information
    - Trip Planning
    - Real Time Information
    - Mobile Apps

Targeted Outreach and Promotion

- Stakeholder Outreach
    - Community Leaders
    - Gatekeepers (Social Service, Education, Workforce Development)
- Targeted Promotion to high potential target groups such as college students, social service clients, ESL populations and other transportation disadvantaged populations.

Broad based Marketing

- Low Cost
    - News Releases
    - Participation in community events
- High Cost
    - Media Advertising
    - Promotional Events

During its previous marketing campaign, RABA utilized strategies in all levels of the hierarchy with the objective of attracting discretionary ridership. Significant resources were committed to rebranding the system, enhancing basic passenger information tools and aggressively promoting the service through media advertising as well as some targeted ridership programs. While the campaign resulted in an

enhanced visual brand and improved visibility for the system, it did not result in the anticipated level of ridership growth. As noted in the Market Research report, this was not because of any inherent flaw in the marketing plan itself, but because the service being promoted did not meet the needs or expectations of the audiences to whom it was being targeted – largely non-transit dependent individuals. Those with modal choice are unwilling to take multiple buses and increase their travel time by 100-200% in order to utilize public transit.

The service alternatives recommended in the SRTP are designed to improve the directness of travel, coordination of transfers, and as a result, reduce travel times. If implemented, these strategies will result in improved customer satisfaction, better customer retention and increased attractiveness of the service. However, the levels of service which RABA is able to offer will still not be fully competitive with a private vehicle. Therefore it is recommended that RABA focus its communications efforts on enhancing the passenger experience through user-friendly passenger information programs and promoting its services to those target groups to which it offers distinct economic and mobility benefits – students, low income workers and other transportation disadvantaged groups.

Recommended Communications Strategies

Passenger Information

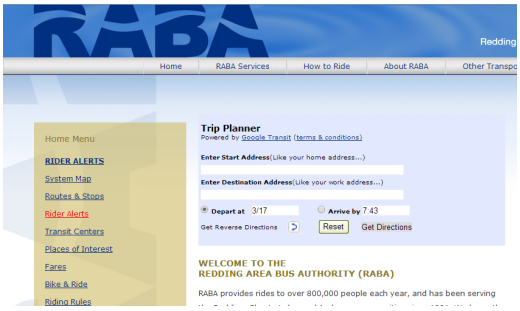
Providing user-friendly passenger information in easily accessible formats is the single communications effort that will do the most to encourage RABA ridership. Following are several strategies that offer distinct advantages.

Google Transit

Use of on-line services such as Google Maps to get directions is one of the most common internet practices (behind only email and basic searches). Google Transit allows potential transit riders to get information in a trip planner format that is already familiar to most people. For a very modest investment of resources to maintain up-to-date GTFS data, RABA can be part of Google Maps and Google Transit which offers passengers a number of advantages:

- Provides easy access to RABA information on smart phones and tablets as well as on computers.
- Avoids the difficulty that many potential riders have understanding transit schedules to plan trips, particularly those requiring transfers.
- Provides coordinated information for making trips that include RABA and connecting transit services (Amtrak, Trinity Transit, Sage Stage) that are also part of Google Transit.
- Provides social service workers with an easy way to plan and print trip information for their clients.

RABA has recently updated its GTFS data and restored the trip planner to its website homepage. It is strongly recommended that RABA commit to maintaining up-to-date GTFS data. The GTFS data can be maintained by staff or through the use of a consultant. Either way, it is likely the most cost effective marketing tool that RABA has at its disposal.



Website

A transit agency's website is, increasingly, where new passengers go looking for information. RABA's ridership is quite young – including many students. Hence the website has the potential to be the most critical communications tool. Four important guidelines for an effective public transit website are:

- New and on-going transit passengers should be the primary focus of the homepage.
- The homepage should provide easy access to trip planning information, with the most important information located at the top of the page (no scrolling needed).
- Timely information about service changes and anomalies should be easily accessible from the homepage.
- Text should be minimized – web users scan, they don't read.

RABA's website was designed as part of the comprehensive marketing program implemented in 2010 and 2011. It was quite attractive and customer focused and included a Google Transit Trip Planner. Subsequently, it was made less customer friendly by removal of the trip planner and various other elements. Recently, RABA has renewed the website with the reintroduction of the Trip Planner as well as a clear menu of offerings. The website currently offers comprehensive information about the system though not all information is delivered in the most useful form. While the website is currently quite functional, following are a number of ways in which it could be made more user friendly and a better ridership building tool.

Home Page

The homepage is prime real estate on a website. It should quickly provide the information most visitors are seeking, and should utilize key graphic elements, rather than text that few people will read. At the right is a website for Mendocino Transit which is designed around this concept. The homepage includes a trip planner, interactive system map with routes linked to their schedules, quick links to timetables, fares and other key topics, and service alerts. The visitor can find and access these key pieces of information with a minimum of reading and no scrolling.

RABA's home page could be made more quickly useful through:

- Addition of a system map thumbnail for quick access to the full sized system map.
- Better use of the navigation bar at the top of the page. The RABA Services button should be renamed Maps and Schedule and go directly to the list of routes. A Fares button might be added.
- Make the page generally more graphic and less text intensive. The Helping Hearts logo with a link underneath, currently on the website, is a good example of how to provide information quickly.

System Map

The system map is currently a static image from the passenger guide. Making the system map interactive, such that the user could click on a route line to access the schedule for that route, would greatly increase its usefulness. Example of an interactive graphic map: www.mendocinotransit.org.

Another option for enhancing the system map would be to create a system map in Google Maps that would allow the viewer to zoom in to see the location of bus stops relative to their destination. Example of Google system map: http://sctransit.com/maps-schedules/.

Schedule Pages

Currently, it takes two to three clicks to get to a schedule page for an individual route. This should be reduced such that the rider can access a schedule page directly from the home page.

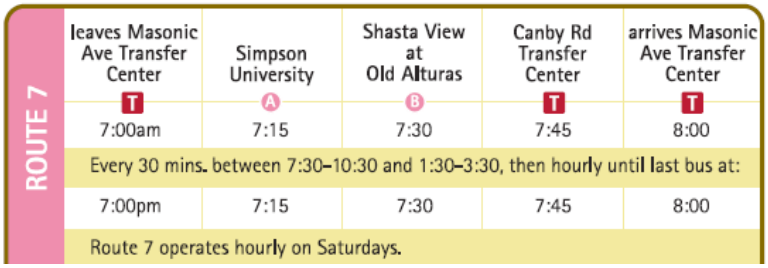
Once at a schedule page, the information provided is very complete – including the route map, schedule and list of bus stops. The schedule provided is the same format as in the passenger guide and thus suffers from the same limitations that are discussed in the next section.

Passenger Guide

RABA's current passenger guide is attractive and has a number of positive features:

- The system map clearly defines the routes and shows bus stop locations as well as key destinations.
- The schedules are color coded to the map for easy reference.
- The schedules use the clockface headways to provide schedule information in a very concise form.

However, the very abbreviated format of the schedules make it difficult for novice riders to use the guide for trip planning purposes. The schedules are so concise, that they provide only four timepoints on routes which are often quite complex. For example, the



schedule shown above is for Route 7 which serves Shasta College, one of RABA's key destinations. The route is a long loop with about 25 stop locations, the primary of which is Shasta College. However, the schedule shows only four timepoints and does not include the college as one of them. This makes it challenging for new riders to figure out exactly when the bus comes to their location. Changes which would increase the usability of the passenger schedules include the following:

- Increase the number of timepoints shown for each route, from four to six or eight depending on the length of the route.
- Always use key destinations as timepoints (such as college, shopping centers, medical facilities, transit centers) rather than simply intersections where the bus will be on the quarter hour. Below is an example of the time points for a loop route in Merced which is quite similar to many of RABA's routes.

Monday - Friday Schedule

Merced Transpo (1)	The bus (MCAG) Office (2)	Amtrak Station (3)	Courtyard Marriott / Comfort Inn (4 / 5)	Rancho San Miguel (6)	Hampton / Holiday Inn Express (GV High) (7)	Best Western / Days Inn (4 / 5)	Amtrak Station (3)	Merced Transpo (1)

- Continue to include the complete list of stops for each route. Possibly, color code the headers on the list to correspond to the system map and schedules.

Bus Stop Displays

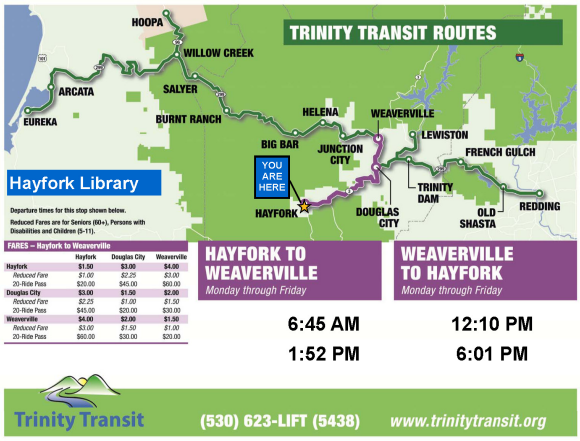
Bus stop signage and information serves several important functions. It increases visibility of the system, provides an easy reference for regular riders and encourages new or spontaneous ridership. At the stop, information can be provided using static signage and displays as well as mobile access to the website, Google maps and real-time information.

Static Displays

Information displays which RABA has installed at many bus stops are a highly valued passenger amenity and an excellent information tool both for regular riders and occasional users. Currently the displays provide a systemwide map and schedule. While this is an excellent resource, it is important to consider readability under bus stop conditions. On stops served by only a single route, it might be more functional to provide only information about that route, in order to increase the size and readability of the display.

Often the piece of information that riders want most at the stop is when does the bus come HERE? Unless they are at one of the four timepoints on each route, the current displays don't really provide that information. An alternative would be to

have an element of the signage at each stop that is customized to the specific location and shows the minutes past the hour when that stop is served. Below is an example of a panel display used at bus stops in neighboring Trinity County. It is customized for the specific bus stop (Hayfork Library) and shows the times that the bus serves that location.



This concept is important at transit centers as well. Placing the departure times for a given route immediately at the bay where the route departs from makes it easier for passengers who are catching the bus or transferring.

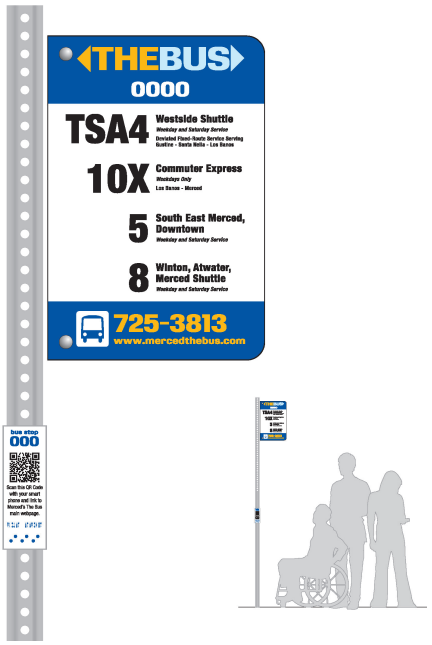
Real Time Information

RABA's capital plan calls for the implementation of a real-time information system which has the capacity to significantly increase customer satisfaction. Once real-time or next-bus information is available, it will be important to make it easily accessible to passengers through various channels.

- Unique bus stop numbers should be posted at each stop to allow passengers to easily access next bus information for that specific stop. At the right is an example of a bus stop sign with a bus stop number (added as a decal).
- Using the bus stop number or location, passengers should be able to access the real-time information in multiple ways:
    - Via the RABA website (preferably a mobile oriented page or app that can be easily viewed on a smart phone)
    - Via text message
    - Via automated phone system

  Having these three options makes the information available to those with varying levels of communications technology.

- GPS data can also be integrated into Google Maps allowing those making trip plans to see real-time information.



Gatekeeper Outreach and Education

Many organizations serve as gatekeepers for potential transit riders. These include social service agencies, schools and colleges, youth programs, support organizations for the disabled and medical services. RABA understands the importance of these gatekeepers and has previously conducted some outreach to them. This should be an on-going effort.

These organizations, and particularly their front line employees, are often charged with identifying transportation options for getting their clients to programs, appointments, training, classes, interviews and jobs. As a result, they have the potential to serve as "salespeople" for public transit. In interviews conducted as part of the outreach for the SRTP, it was noted that many such gatekeepers are eager for more information about and more interaction with the RABA, so that they can better educate their constituents about how transit can meet their transportation needs. Some have tried using transit themselves or planning trips for clients and been discouraged by the difficulty. Therefore it will be important to educate them about changes which will make the RABA system easier to use. It will also be important to educate them about how to use Google Transit to make trip planning easier.

To capitalize on the potential of gatekeepers as marketing partners, RABA should consider the following three element program.

Establish and Maintain Gatekeeper Network

Create a list of gatekeeper contacts that can be reached via e-mail. This list should include:

- Social Service Agencies
- Disability Support Programs
- Colleges and Vocational Schools (Shasta College, Bethel College, etc.)
- Secondary Schools
- Senior Centers and Senior Complexes
- Youth Programs
- Veterans Programs
- Medical Clinics

These individuals should be provided with regular updates about changes in the RABA system and programs. When appropriate, e-mails can include an 8 ½" X 11" PDF flyer for printing and posting or distributing to co-workers and/or clients.

For example, when RABA makes the route and schedule changes associated with implementation of the SRTP, the stakeholders should be provided with a summary of the changes, an advance copy of the new passenger guide and a PDF "poster/flyer" for letting their constituents know about the changes and when they will take place.

Conduct Travel Training with Gatekeeper Staff

Many gatekeepers are not personally familiar with using RABA and have trouble planning trips for their constituents. They welcome the idea of transit travel training for their staff people – an overview of the transit network and how it works, combined with detailed guidance on trip planning and the opportunity for an interactive discussion and Q&A session.

As service changes called for in the SRTP are implemented, RABA should seek to educate front line staff about the revised transit services. This can be accomplished by arranging and making presentations:

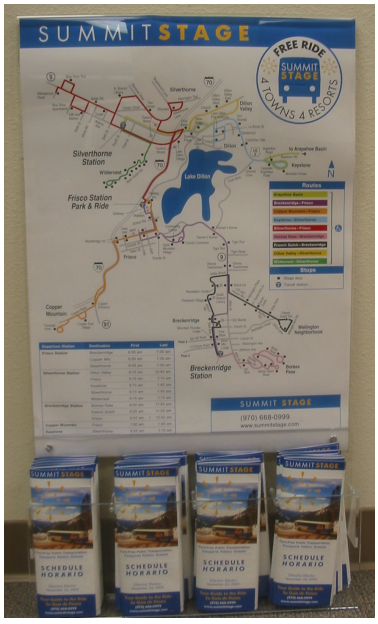
- Organization-specific staff meetings (such as meetings of case workers in the Welfare to Work program, Behavioral Health or Veterans Affairs).
- Social service councils or groups where representatives from a variety of organizations come together around a specific population (such as a homeless coalition). These types of presentations can provide an entrée to get invited to speak to front line employees at the member organizations.

This initial round of presentations should focus on how the system is changing, how to use the revised passenger guide and how to use Google Transit for trip planning. However, the presentations should be repeated at least annually to refresh the knowledge and reach new employees. It is particularly appropriate for them to be timed to coincide with any service adjustments.

Provide Gatekeepers with Tools for Use in Travel Training Constituents

To assist gatekeepers in their role as "salespeople" for RABA, provide them with tools which will help them to educate constituents about RABA's services. These can include:

- Transit displays for lobbies at social service offices, clinics and other high traffic locations. Many organizations are more than willing to provide space in their lobby for a transit display. These displays can be created using standard prefabricated display fixtures and digitally printed posters. The posters can be easily updated whenever there are service changes. At the right is an example of such a display. A good selection of display fixtures can be found at www.displays2go.com or www.beemak.com.
- Passenger guides for distribution. The gatekeepers should always have a supply of passenger guides for display in their lobbies and for distribution to individual clients they are working with.



- Customizable PowerPoint presentation about how to use RABA and how to plan trips using Google Transit. RABA may wish to create a PowerPoint presentation which gatekeepers can present to groups of constituents (such as Welfare to Work clients in their job club classes).
- Customized flyers for inclusion in "new client" folders. Include information about how to use the bus to get to locations of specific relevance to the target group.

Targeted Ridership Promotion

The most effective strategies for building transit ridership are those which target high potential users with customized appeals and information. The more targeted the message, the more likely it is to impact behavior. It is therefore recommended that, rather than purchasing broad media advertising, RABA work with community partners to directly targeted specific market segments most likely to find RABA's service useful.

IASCO Trainees

The Airport Express is an excellent example of what targeted marketing combined with effective service can accomplish. IASCO both purchases passes and educates their students about how to use RABA, not just for trips to the school but for all of their local travel. RABA should continue to work closely with IASCO to support the program.

Shasta College Students

The on-board survey found that Shasta College students make up nearly 20% of RABA's ridership. A focus group with college students indicated that if service to the college were more convenient, even more students would use RABA. Total enrollment at Shasta College is approximately 11,000.

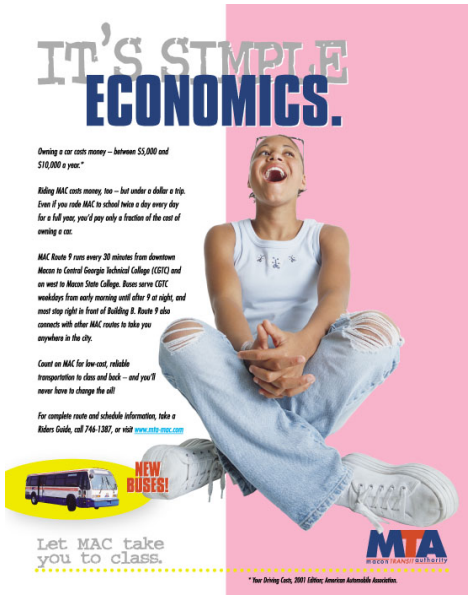
Implementation of the SRTP changes will improve the convenience of service to Shasta College, increasing the potential for building ridership among the student population. It will be important to re-educate students about the ease of using RABA to commute to campus as it will now offer:

- Direct bus service between Shasta College and the Downtown Redding Transit Center
- Direct service from the eastern half of Redding to Shasta College
- One seat rides in each direction from both Cottonwood and Anderson
- More reliable service with fewer transfers to the College

It is recommended that RABA staff meet with Student Services at Shasta College to discuss these enhancements and to identify effective channels for communicating with students about the enhanced service.

Targeted communication channels for reaching students which should be explored include:

- On-campus poster campaign to highlight the enhanced services and promote the benefits that RABA offer students:
    - Easier, quicker rides to campus
    - Savings on gas and car costs
    - No need to search for a parking place
    - Time to study on the way to class
    - Good for the environment



- On campus transit information displays (at high traffic locations such as the bookstore or food court)
- A link to RABA from the Shasta College homepage (link already exists, although it is somewhat buried under Resources>Transportation)
- Inclusion of a RABA "ad" in the printed class schedule
- Participation in registration or orientation events
- Inclusion of a RABA flyer in orientation packets to new students

Of course, the ideal marketing strategy for a college population is a pre-paid fare program under which each student pays a small transit charge as part of their student fees, and all students are able to ride fare-free using their student ID. The per-student contribution for a pre-paid program is generally based on the average fare and anticipated utilization. RABA previously had such a program with Shasta College but it was discontinued a number of years ago. As service to the college is enhanced and ridership grows, it may be time to revisit this strategy.

Prepaid programs have been highly successful in building transit usage at Colleges and Universities throughout the US. Such a program would provide guaranteed income to RABA and a strong incentive for students to use transit.

Prepaid programs must generally be initiated with a vote of the students. To generate support for a transit fee among students, transit agencies often pair the implementation of such programs with service level enhancements (e.g. implementation of more frequent or later service to the college).

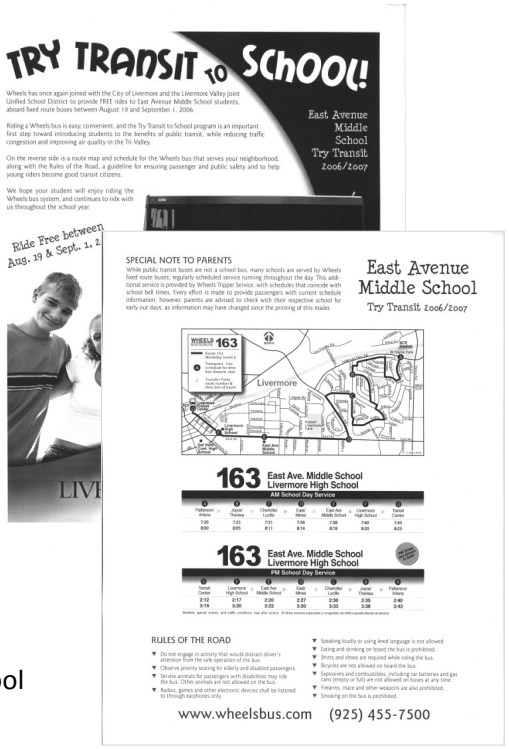
If a universal pre-paid program cannot be implemented in the short term, an alternative is the establishment of a Semester Pass which is valid for the full semester and offers students a discount for pre-payment. This pass could be sold through the Campus bookstore or cashier at the start of the term, allowing students to pre-pay their semester's transportation at the same time they pay their tuition and buy their books (e.g. when they receive their financial aid). It should be aggressively marketed on campus. At the right is an example of a semester pass which Capital Metro offers at Austin Community College.

Shasta High School Students

When the SRTP is implemented, service to Shasta High School will be improved and better coordinated with bell times. The enhanced service combined with the availability of the $29 student monthly pass is an excellent opportunity for targeted marketing.

It is recommended that RABA ask the school administration to distribute a targeted promotional flyer to parents in advance of the school year. This flyer (to be produced and provided by RABA) should include the following elements:

- Promotional appeal letting parents know that RABA offers a safe, easy, inexpensive alternative to driving their teens to school.
- Clear map of the route serving Shasta High School with key neighborhoods highlighted.
- Schedule which highlights when the bus serves the high school adjacent to bell times.
- Promotion of the $29 monthly pass and how it can be purchased.



At the right above is a sample of a similar flyer used by LAVTA (Livermore). They include a free pass good for the first week of classes to encourage trial ridership.

Apartment Residents Along Routes

Apartment complexes located close to RABA routes are home to large numbers of potential riders. Consider working with apartment managers at large complexes to implement a targeted promotional program for their residents. You could provide customized flyers for distribution to all residents that include:

- A free ride coupon, discount coupon for a monthly pass or some other incentive to try RABA.
- Highlights of the route that serves the complex and what time each hour or half hour it stops there.
- Information about using the Google Transit trip planner on the RABA website.

Bethel Students

If, in the future, RABA develops a fare program with Bethel School of Supernatural Ministry, strategies similar to those described for Shasta College will be appropriate.

Public Relations

Activities which generate positive news coverage and visibility can provide a low cost means of enhancing RABA's image.

News Release Calendar

As RABA moves forward to implement the SRTP recommendations there will be significant opportunities for news coverage of the service changes. To maximize positive news coverage, a systematic news release calendar is recommended.

- Identify those activities each month which are news worthy. These might include:
  - Service changes which will make the system more convenient.
  - Introduction of a new passenger guide or enhancements to the website (Google Transit trip planner).
  - Introduction of targeted fare media (such as a prepaid program with Shasta College, Bethel College or any other educational institution).
  - Capital improvements (new buses or bus stop amenities).
- Prepare and distribute news releases on a regular timely basis.
- Follow-up with local media contacts to insure that releases are going to the appropriate individuals.

Pass Fund Drives

RABA has been successful at generating support from local organizations, businesses and residents to purchase bus passes for Veterans and other charitable organizations. This is an excellent PR strategy that builds awareness of RABA's important role in the community as well greatly benefiting the beneficiaries. To enhance these efforts, RABA may wish to consider:

- Allow for on-line donations – this will make it easier for individuals and businesses to participate.
- Utilize social media (Facebook and Twitter) to promote these events. By having the participating organizations post it on their Facebook pages and link to RABA's, you will increase the systems exposure greatly at no cost.

Social Media

Social Media, such as Facebook, Twitter and Instagram can provide a vehicle for direct and regular communications with RABA passengers.

- Facebook provides an opportunity for two-way communications with riders. RABA can use it inform riders about service changes, encourage ridership to special events, promote pass sales and such. Riders can use it to provide feedback to RABA about their experiences using the system.
- Twitter can be used to provided updates about detours or service interruptions which riders can get on their smart phones. However, this can be accomplished more effectively by allowing riders to sign up on the website to receive email or text alerts which will not get lost in the heavy flow of tweets.

- Other social media platforms, such as Instagram, Pinterest, Tumblr and Flickr can be used to share photos with riders and engage them in a fun way.

It should be noted that it is easy to expend a great deal of time and energy on social media activities for minimal return in the way of ridership gains. It is recommended that RABA focus its primary marketing effort on the basics of passenger information described above. The two "social media" with the most value for RABA would be Rider Alerts and Google Maps.

Communications Staff

The strategies outlined here are largely low cost in nature. They do not require a significant advertising or promotion budget. However, they do require the time and attention of staff to maintain up-to-date passenger information tools and to establish relationships with community partners who can help to market RABA's services. It is recommended that approximately 15-20 hours of staff time (or contractor time) per week be allocated for this purpose, along with adequate budget to maintain the passenger information tools and create customized promotional tools as needed (approximately $50,000 per year). It is recognized, however, that staff time and marketing budgets are limited and RABA staff will have to prioritize targeted outreach efforts as time and budget allows.

9. Financial Plan

The financial plan has five distinct sections:

- Operating Costs
- Operating Revenues
- Capital Expenditures
- Capital Revenues
- Summary of Total Costs and Revenues

It should be noted that operating and capital costs and revenues are projected based on known conditions in March 2014. The financial plan of the SRTP is a planning document that provides a financial framework for RABA. Individual RABA budgets may differ from this planning framework based on changing conditions and new information available when the budget is prepared.

Operating Costs

There are four main components of operating costs:

- The amount of service supplied
- The cost of the operations and maintenance contractor to operate that service
- Administrative staffing required to manage and communicate RABA services as well as lead the significant capital improvement program and provide ongoing quality assurance to transit operations
- Fuel costs

The number of vehicle service hours of service is the primary variable that determines operating costs. Chapter 4 on RABA Fixed Route service and Chapter 5 on Demand Response services provide primary inputs on the amount of service to be supplied.

Service Supply with Proposed Service Reconfiguration

As shown in Figure 9-1, all fixed routes except the Airport Express have some of change to the routing. However, in order to keep within the existing RABA budget as instructed by the RABA Board, the service frequency and hours of operation of RABA routes essentially remain the same. Due to improved efficiencies in the new system, the proposed configuration would reduce the number of vehicle service hours to 39,385 from the 2012/13 figure of 40,798, a reduction of slightly more than 1,400 fixed route service hours.

Figure 9-1 Fixed Route Service Supply By Route

Staff Modified Core Routes	Avg. Speed	Route Length	Frequency	Buses	Weekday Service Hours	Sat. Svc. Hours	Calculated Svc. Hours	Calculated Svc. Miles
1 - Modified	27	18.92	60	1	14	11	4,156	78,632
2 - Modified	16	12.04	60	1	13	10	3,848	46,330
3 - Minor Mods	16	12.4	60	1	13	10	3,720	46,128
4 - Modified	16	11.7	60	1	13	10	3,848	45,022
5 - Minor Mods	14	9.35	60	1	13	10	3,848	35,979
6 - Modified	19	16.65	60	1	13	10	3,848	64,069
7 - Modified	16	11.96	60	1	12	10	3,592	42,960
9 - Modified	25	18.94	60	1	7.33	5.33	2,154	40,790
11 - Modified	14	10.6	60	1	13	10	3,848	40,789
14 - Minor Mods	14	10.75	60	1	13	10	3,848	41,366
Airport Exp. -No Change	24	21	8 times	1	8	6	2,360	49,560
School Exp. -Modified	24	15.28	1	1	1	0	210	2,995
Ctwd Express	21	7.4	1	0	0.5	0	105	725
Total				12	133	102	39,385	535,344

Figure 9-2 shows the proposed supply of vehicle service hours between FY 2012/13 and FY 2018/19. The proposed new RABA service plan is recommended for implementation in January 2015. In FY 2015/16, the number of vehicle service hours is expected to drop from 59,643 in FY 2012/13 to 59,153 in FY 2015/16, a reduction of approximately 500 vehicle service hours. The 59,153 vehicle services provide the core RABA system including RABA fixed route, Demand Response, and the Burney Express.

After the new core system is implemented and evaluated, then optional services that are based on potential partnerships would be evaluated for implementation. A separate approval process would determine whether or not the Crosstown Express based on the potential partnership with Bethel and Work Training Tripper service based on the potential partnership with Shasta County Department of Social Services come to fruition. If both were determined to be feasible, then the vehicle service hours would be increased to 60,525 in FY 2016/17.

In FY 2017/18, it would be determined if a partnership with the Shasta Senior Nutrition Program (SSNP) could contractually provided ADA Paratransit services in Anderson and the City of Shasta Lake. If proven feasible, this would reduce RABA service supply by approximately 3,048 vehicle service hours, but would increase contract costs. These costs would need to be negotiated, and an estimate is provided in the contractor expense category later in this chapter.

Figure 9-2 Vehicle Service Hours By Fiscal Year

	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19
	Actual	Budgeted	Projected	Projected	Projected	Projected	Projected
RABA Core Services							
Fixed Route	40,798	40,798	40,091	39,385	40,757	41,781	42,293
Demand Response	17,327	17,327	17,500	17,500	17,500	14,452	14,452
Burney Express	1,518	1,518	1,518	2,268	2,268	2,268	2,268
Total	59,643	59,643	59,109	59,153	60,525	58,501	59,013
Additional Services Proposed							
Third run on Burney Exp.				750			
Crosstown Express					588		
Work Training Tripper					784		
Partnership with SNP for demand response services						-3048	
Additional morning and evening Route 9 run						1024	
Shasta College Freeway Express							512

Breakdown of Costs By Fiscal Year

Figure 9-3 provides a detailed breakdown of operating costs by fiscal year. The operations and maintenance contractor costs are based on a fixed monthly fee plus a variable cost. The variable cost is multiplied by the number of vehicle service hours. For example, in FY 2014/15, annual fixed cost under the contract is $1,717,441 and the variable cost per hour is $27.86. Adding the fixed cost to $27.86 times the 59,109 vehicle service hours shown earlier in Figure 9-2 equals a total contractor cost of $3,364,227. The contractor costs assume that the current contractor has the maximum number of option years granted in the current contract through FY 2017/18. In FY 2017/18 and FY 2018/19, for planning purposes, estimated contract costs are added for a contract with SNP to provide demand response services in the City of Shasta and Anderson.

Overall, based on the contractor terms and an inflationary factor utilized for FY 2018/19 when a new operations and maintenance contract would come into play, contractor costs are expected to increase from $3.3 million in FY 2012/13 to almost $4.0 million in FY 2018/19. This assumes that the optional RABA services beyond the core routes are implemented. It also assumes the contracting to the Senior Nutrition Program demand response services for Anderson and City of Shasta Lake.

Fuel costs are based on miles of service operated and expected inflationary costs of fuel. Overall, fuel is expected to increase at a higher rate than historical inflation.

Figure 9-3 RABA Operating Expenditures FY 2012/13 to FY 2018/19

Operations Expenditures	FY 2012/13 Budgeted	FY 2013/14 Projected	FY 2014/15 Projected	FY 2015/16 Projected	FY 2016/17 Projected	FY 2017/18 Projected	FY 2018/19 Projected
Services: Contractor	$ 3,300,000	$ 3,350,000	$ 3,364,227	$ 3,457,322	$ 3,600,826	$ 3,793,289	$ 3,982,954
Fuel and Lubricants	$ 800,000	$ 800,000	$ 792,842	$ 793,423	$ 811,826	$ 784,677	$ 791,545
Tires Tubes	$ 55,000	$ 55,000	$ 54,508	$ 54,548	$ 55,813	$ 53,947	$ 54,419
Vehicle Parts/Supplies	$ 350,000	$ 350,000	$ 346,868	$ 347,122	$ 355,174	$ 343,296	$ 346,301
Facility and General Maintenance	$ 48,500	$ 44,000	$ 45,320	$ 46,680	$ 48,080	$ 49,522	$ 51,008
Casualty and Liability: Insurance	$ 55,000	$ 56,650	$ 58,350	$ 60,100	$ 61,903	$ 63,760	$ 65,673
Utilities: electric, gas, water, sewer	$ 85,000	$ 87,550	$ 90,177	$ 92,882	$ 95,668	$ 98,538	$ 101,494
Technology annual fees and maintenance			$ 37,500	$ 77,250	$ 79,568	$ 81,955	$ 84,413
Other Operations Expenditures	$ 164,550	$ 140,133	$ 144,337	$ 148,667	$ 153,127	$ 157,721	$ 162,453
Total Operations Expenditures	$ 4,858,050	$ 4,883,333	$ 4,934,127	$ 5,077,993	$ 5,261,984	$ 5,426,706	$ 5,640,259
Administration Expenditures							
RABA Staff	$ 300,000	$ 300,820	$ 320,280	$ 328,287	$ 327,118	$ 335,296	$ 343,679
Professional Services			$ 60,000	$ 30,000	$ 30,900	$ 31,827	$ 32,782
Communications/Printing	$ 30,000	$ 30,000	$ 90,000	$ 70,000	$ 55,251	$ 56,980	$ 59,223
Civic Center Rent	$ 16,110	$ 16,110	$ 16,110	$ 16,110	$ 16,110	$ 16,110	$ 16,110
Fixed Redding General Support	$ 63,440	$ 63,880	$ 65,477	$ 67,114	$ 65,477	$ 67,114	$ 68,792
Usage interdepartmental charges	$ 79,400	$ 127,850	$ 131,046	$ 134,322	$ 137,680	$ 141,122	$ 144,651
SRTA Overall Work Program	$ 140,770	$ 61,680	$ 63,222	$ 64,803	$ 66,423	$ 68,083	$ 69,785
Other Administrative Expenses	$ 26,000	$ 29,000	$ 29,725	$ 30,468	$ 31,230	$ 32,011	$ 32,811
Total Administrative Expenses	$ 655,720	$ 629,340	$ 775,860	$ 741,104	$ 730,189	$ 748,544	$ 767,832
Total Operating & Admin. Expenditures	$ 5,513,770	$ 5,512,673	$ 5,709,988	$ 5,819,097	$ 5,992,173	$ 6,175,250	$ 6,408,091

A new cost category has been added to the expenditures table. With the expected purchase of Automatic Vehicle Locator (AVL) equipment and the capability to provide passengers with real time information on the location of the buses, there will be ongoing annual technology fees and maintenance costs to maintain the systems. When fully implemented in FY 2016/17, these costs are expected to be approximately $75,000 in 2014 dollars. This is a planning amount, and actual costs will be determined in a competitive procurement process.

RABA's administrative costs were budgeted at $655,720 in FY 2012/13 and represented 11.9% of total operating costs. In the short-term, there will be a need to increase overall administrative costs to assist with the significant number of procurement tasks such as the AVL and real time transit information system as well as the details of implementing and communicating the significant changes to the fixed route system. The professional service line item is for outsourcing of these implementation tasks, estimated at $60,000 next fiscal year.

There is also an anticipated significant increase in the production of communication materials for implementation of the proposed reconfigured RABA services, increasing the communications budget to almost $90,000 in FY 2014/15. In the long term, communication costs are estimated at 1% of the total RABA budget.

Operating Revenue

Operating revenues include:

- Passenger fares
- Local State funding sources
- Federal funding sources

Passenger Fares

Passenger fares are the cumulative total of passenger fares for RABA Fixed Route, Demand Response and the Burney Express.

Fixed route fare estimation is based on several factors, and the true impacts will not be known until the proposals in this SRTP are implemented. The Fixed Route Service Plan is designed to provide more direct and reliable service, and will generally enable more one seat rides and decrease the number of transfers in many cases. The primary exception to this will be increased transfers on Route 3 with the RABA staff proposed Route 3 and 9 alignments. Each time a passenger boards a bus, he or she is counted as a passenger. If a person has to transfer twice for the same trip, it is counted as three passenger trips because they boarded a bus three times. The odd paradox in passenger trip accounting for a transit systems is that the fewer transfers, the lower number of passengers trips counted.

The second factor that was discussed in some detail in Chapter 7 was the average fare. Even though the one-way fare is $1.50 for the general public, the actual average fare paid was just $0.85 in FY

2012/13. This is due to the high number of free transfers on RABA, the heavy utilization of monthly passes, and the unusually high number (as a percentage) of passengers who pay the discounted fare of $.75. The system design for fewer transfers, the implementation of the photo ID requirement for discounted fares, and more convenient service that should increase the number of people using RABA should result in a higher average fare of approximately $0.95.

Paradoxically, based on the above, the total number of people who utilize RABA is expected to increase when the new service is implemented, but the total number of passenger trips (boardings) is expected to decline by 10% or more. It is projected that there will be short term fare revenue decline, but as the average fare and the total number of people who utilize RABA increases, the fare revenues on RABA fixed route is expected to increase from $684,805 in FY 2012-13 to a projected $821,000 by FY 2018/19 based on the above assumptions and anticipated ridership levels. Based on the discussion above, there is a great deal of uncertainty with this projection and assumes the successful implementation and communication of the entire SRTP plan.

For Demand Response service, a new dispatching system and more efficient vehicle scheduling has resulted in 31% less vehicle service hours and a decline in passengers by 14%. However, due to the aging population, the passenger demand for RABA Demand Response service will continue to grow. Overall, RABA Demand Response fare revenues are expected to increase from $179,594 in FY 2012/13 to $232,803 in FY 2018/19

Local and State Operating Revenues

Two-thirds of total RABA funding comes from the Transportation Development Act consisting of two sources, the Local Transportation Fund and State Transit Assistance.

The Local Transportation Fund (LTF) funding source comes as ¼ cent from the sales tax as authorized by the Transportation Development Act approved in 1971. Therefore, available funds increase when increased local sales tax revenues increase. The LTF funds, per the 1971 law are for public transportation purposes. However, in some rural counties Including Shasta County, funds can be utilized for streets and roads purposes only when the SRTA makes a finding that there are no transit unmet needs that are reasonable to meet. This is governed annually by the unmet needs process administered by SRTA. SRTA adopts criteria that defines unmet needs and what is reasonable to meet.

The second source of funding is State Transit Assistance funding which is derived from statewide sales taxes on diesel fuel. Funds are derived from State Public Transportation Account. STA funds can only be utilized for transit purposes, but can be utilized for either operating or capital purposes.

SRTA prepares a detailed Unmet Transit Needs Assessment each year. In the latest SRTA report for FY 2012/13, Figure 9- 4 provides a breakdown that shows that only 58% of available TDA funds are utilized for transit purposes. The City of Redding utilizes 87% of funds for transit purposes and Shasta County only utilized 14% for transit purposes in FY 2012/13.

Figure 9- 4 Transportation Development Act Transit Funding Apportionments

FY 2012/13	Transit Obligations	Streets and Road (other)	Total Available	Percent Transit use
City of Redding	$ 3,630,751	$ 524,558	$ 4,155,309	87%
City of Shasta Lake	$ 241,991	$ 214,631	$ 456,622	53%
City of Andereson	$ 214,126	$ 232,630	$ 446,756	48%
Shasta County	$ 388,191	$ 2,305,009	$ 2,693,200	14%
Total	$ 4,475,059	$ 3,276,828	$ 7,751,887	58%

Source: p.24 of FY 13/14 SRTA Unmet Transit Needs Assessment

Overall, TDA funding for transit purposes is expected to increase from $3.7 million in FY 2012/13 to $4.2 million FY 2018/19. The service plan and financial plan are based on direction from the RABA Board to keep services within the FY 2012/13 budget of available hours. However, if the SRTA were to make a finding that some of the transit needs identified in this plan including increased frequency on high ridership routes such as Routes 11 and 14, improved service to Anderson, express service to Shasta College, Sunday service, and later evening hours are unmet needs that are reasonable to meet, some of the available 42% TDA funds could be utilized for transit purposes.

Federal Funding

FTA 5307 funds are federal formula funds administered by Caltrans for small urbanized areas like the RABA service area. Funding for small-urbanized areas under 200,000, and may be utilized for both operating and capital purposes.

Congress will soon be discussing reauthorization of federal transportation funding, including FTA 5307 funding. Historically, FTA 5307 funding has received a 15% increase when reauthorization is approved. Conservatively, the increase is estimated at 10%, with operations funds from federal sources increasing to $825,000 annually.

In recent years, RABA has received $1.4 million annually in FTA 5307 funding and has budgeted $750,000 for operating purposes, with the remainder utilized for capital purposes. Figure 9-5 is a summary of expected RABA operating revenues through FY 2018/19. The operating revenues match the expected operating expenditures each of the five SRTP plan years.

Auxiliary Income

Raba received auxiliary and other income come from outdoor advertising on bus shelters, vending machines and other miscellaneous income. In FY 2012/13, this was about $65,000 per year.

Figure 9-5 Operating Revenues FY 2012/13 to FY 2018/19

	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19
Revenue Source	**Actual**	**Projected**	**Projected**	**Projected**	**Projected**	**Projected**	**Projected**
Fares							
Fixed Route	$ 684,805	$ 755,381	$ 737,607	$ 711,835	$ 749,667	$ 789,127	$ 821,541
Demand Response	$ 179,594	$ 174,116	$ 191,527	$ 201,104	$ 211,159	$ 221,717	$ 232,803
Burney Express	$ 23,352	$ 24,520	$ 25,746	$ 33,469	$ 35,143	$ 36,900	$ 38,745
Subtotal Fares	$ 887,751	$ 954,016	$ 954,880	$ 946,408	$ 995,968	$ 1,047,744	$ 1,093,088
Local and State							
Transportation Development Act	$ 3,668,770	$ 3,543,235	$ 3,734,685	$ 3,778,772	$ 3,896,621	$ 4,022,135	$ 4,203,721
Shasta County (Burney Express)	$ 100,700	$ 100,700	$ 102,000	$ 104,040	$ 106,121	$ 108,243	$ 110,408
SRTA OWP	$ 54,080	$ 61,680	$ 63,320	$ 57,672	$ 59,114	$ 60,592	$ 62,107
Real Estate Rental	$ 18,000	$ 28,000	$ 28,560	$ 29,131	$ 29,714	$ 30,308	$ 30,914
Auxiliary and Other Revenue	$ 75,042	$ 75,042	$ 76,543	$ 78,074	$ 79,635	$ 81,228	$ 82,852
Subtotal Local and State	$ 3,916,592	$ 3,808,657	$ 4,005,107	$ 4,047,689	$ 4,171,205	$ 4,302,506	$ 4,490,003
Federal							
FTA 5307	$ 750,000	$ 750,000	$ 750,000	$ 825,000	$ 825,000	$ 825,000	$ 825,000
Total	$ 5,554,343	$ 5,512,673	$ 5,709,988	$ 5,819,097	$ 5,992,173	$ 6,175,250	$ 6,408,091

Capital Expenditures

There are three major categories of capital expenditures:

- Vehicle Acquisition
- Passenger Amenity capital procurements
- Equipment and Minor Facilities

Vehicle Acquisition

The discussion will start with a discussion and tables summarizing the:

- Breakdown of the existing fleet.
- Five year fleet needs
- Recommended vehicle acquisition schedule

Figure 9-6 is a summary of the RABA fleet. Only vehicles that are in useful condition[1] are included. RABA currently has 13 35-foot transit buses and 4 40-foot transit buses utilized in fixed route service. There are a total of 20 small buses (typically referred to as cutaway buses) utilized for Demand Response service and two vehicle purchased by Shasta County for the Burney Express service.

Figure 9-6 Existing Fleet Inventory Summary

Quant.	Size Cat.	Used for:	Model Year	Manuf.	Seated Pass*.	Life years	Low Floor	Fuel Type	Replacement Year
3	35 foot	Fixed Route	1999	Gillig	35	12	No	Diesel	FY 2013/14
3	35 foot	Fixed Route	2003	Gillig	35	12	No	Diesel	FY 2015/16
1	40 foot	Fixed Route	2009	Gillig	37	12	Yes	Diesel	FY 2021/22
3	40 foot	Fixed Route	2010	Gillig	37	12	Yes	Diesel	FY 2022/23
4	35 Foot	Fixed Route	2011	Gillig	32	12	Yes	Diesel	FY 2023/24
3	35 Foot	Fixed Route	2013	Gillig	32	12	Yes	Diesel	FY 2023/24
17	*Subtotal Transit Buses*								
2	Cutaway	Demand Resp.	2006	Chevrolet	10	5	No	Gasoline	FY 2013/14
4	Cutaway	Demand Resp.	2009	Chevrolet	10	5	No	Gasoline	FY 2015/16
4	Cutaway	Demand Resp.	2010	Chevrolet	8	5	No	Gasoline	FY 2016/17
4	Cutaway	Demand Resp.	2010	Chevrolet	10	5	No	Gasoline	FY 2016/17
4	Cutaway	Demand Resp.	2011	Chevrolet	16	7	No	Gasoline	FY 2018/19
2	Cutaway	Burney Express	2010	Ford	16	7	No	Gasoline	FY 2017/18
20	Subtotal Cutaway Buses								
37	Total Fleet								

Figure 9-7 is a summary of fleet needs. There are three distinct sections to this table. The first is the fleet for 2013/14 buses, the existing fleet inventory summarized in Figure 9-6. The 2015/16 fleet needs are when the proposed RABA service plan detailed in Chapter 4 is expected to be fully implemented.

[1] As indicated in the fleet inventory as Good, OK or Extra Vehicle

Figure 9-7 Fleet Needs to FY 2018/19

FY 2013/14 Buses	**Inventory**
35 foot bus	12
40 foot Bus	4
Cutaway	20
Total	36
Peak Pullout Fixed Route	11
Peak Pullout Demand Response	16
Peak Pullout Burney Express	1
Total Peak Pullout	28

FY 2015/16 Fleet Needs

Peak Pullout	Total Buses	35 Foot	40 foot	Cutaway
35 Foot bus	10	10		
40 foot bus	2		2	
Demand Response	16			16
Burney Express	1			1
Total Peak Pullout	29	10	2	17
Spares				
Fixed Route	4	2	2	
Demand Response	2			2
Burney Express	1			1
Total Spares	7	2	2	3
Fleet Bus Needs	36	12	4	20

FY 2018/19 Fleet Objectives

Peak Pullout	Total Buses	35 Foot	40 foot	Cutaway
35 Foot bus	11	11		
40 foot bus	3		3	
Demand Response	14			14
Burney Express	2			2
Total Peak Pullout	30	11	3	16
Spares				
35 Foot bus	2	2		
40 foot bus	1		1	
Demand Response	2			2
Burney Express	1			1
Total Spares	6	2	1	3
Total Bus Fleet Need	36	13	4	19

In January 2015, there will be a need for fleet peak pullout (the maximum number of vehicle in service at any one time) of 12 full size transit buses and 16 demand response smaller cutaway buses. With necessary spares, the total fleet size will be 36. With the implementation of optional services, there will be a peak pullout of 30 buses, two more than today. With the goal of a 20% fleet spare ratio, the total fleet size can be reduced to a total of 36 buses.

Based on the bus replacement schedule in Figure 9-6 and the future fleet needs identified in Figure 9-7, there will be a need for the acquisition of 21 buses of different sizes between FY 2013/14 and FY 2018/19. The bus acquisitions are shown year-by-year with guidelines on the type and size of vehicle to be purchased. Overall, the procurement of the 21 buses is estimated to cost $3.3 million.

Passenger Amenity Capital Procurement

Improving passenger convenience and providing reliable service is one of the primary goals of the SRTP. The following capital procurements will help to achieve this objective.

Automatic Vehicle Location (AVL) System

In Chapter 4, the data collection effort conducted during the onboard survey found that there were significant issues with schedule adherence with missed connections being a common theme of passengers.

The passenger amenity capital procurement recommendations are intended to provide RABA with both a management tool and to increase available information to RABA passengers. RABA will be developing a detailed RFP for procurement of a suite of technologies that should be fully integrated, professionally installed and tested, with significant knowledge of bus electronic systems. There are several vendors who provide such a suite of technology applications that should be fully integrated to both meet RABA management and passenger information needs.

At the heart of the hardware is automatic vehicle location or AVL for short. AVL systems are widely used in the public transportation industry as a way to track where vehicles are located in their respective service areas. In simple terms, AVL has two major parts: 1) geographic positioning systems (GPS) that track the real-time location of the bus and 2) software that displays the location of the buses on a map. AVL is normally accurate to within 30 feet, which is sufficient for transit purposes. The AVL tool enables a number of features that can be integrated with this base technology.

Figure 9-8 Existing and Recommended Replacement Vehicle Schedule

Del. Year (# Existing)	Replacement Vehicle Year	Manufacturer	Size (seati capacity)	Order Year	Recommend Quantity	Replaces Bus #s	Recommend Type
FY 2013/14							
3	1999	Gillig	35 foot (35)	FY 2012/13	2	36,43	Heavy Duty 35 foot Low Floor
FY 2014/15							
4	2006	Chevy GMT 600	Cutaway	FY 2013/14	2	244-247	2 not replaced, Class E-27.5 ft
FY 2015/16							
3	2003	Gillig	35 foot (35)	FY 2014/15	3	45-47	Heavy Duty 35 foot Low Floor
4	2009	Chevy GMT 600	Cutaway	FY 2015/16	3	248-250	2 Class C and 1 Class E-30 ft.
FY 2016/17							
4	2010	Chevy GMT 600	Cutaway	FY 2016/17	3	251-253	2 Class C and 1 Class B
FY 2017/18							
4	2010	Chevy GMT 600	Cutaway	FY 2017/18	3	254-256	1 Class B, 1 Class C and 1 Class E 27.5
2	2010	Ford	Burney Express	FY 2017/18	2	305-306	2- Class E 30 Foot (Shasta County)
FY 2018/19							
4	2011	Chevy GMT	Cutaway	FY 2018/19	3	257-259	1 Class B, 1 Class C, 1 Class E-27.5

Schedule Performance Tracking is one of the primary features that will benefit both RABA management and passengers. At present, there is no way to objectively monitor on an ongoing basis how many buses are on-time, within existing performance standards, or are late causing missed connections. Chapter 3 sets both minimum and target performance standards for schedule adherence and transfer connections. A good schedule performance system will enable RABA management to compare the timepoint schedule with when the bus actually departs from each timepoint and provide a daily summary of the percent of timepoints that are on time. It will also enable RABA management to ensure that no buses are leaving early from timepoints. The AVL system provides an accurate means of providing on-time performance from a management perspective. This will also be important for providing passengers with accessing real time information on the location of their bus. This is discussed later in the passenger information paragraph. All buses should be equipped with mobile data terminals that enable real-time performance checks by the drivers, but also two-way messaging with dispatchers. This is essential in operations management by the operations and maintenance contractor.

Automatic Passenger Counting is the second important function for AVL systems. This provides an array of data on both boarding and alightings at every RABA stop in the fixed route system. Laser sensors are typically installed above the doorways and electronically counts the number of passengers boarding and alighting the bus automatically. The counts are only automatic when the door is open. Typical systems have 95 percent accuracy, which is acceptable for transit management purposes. It is important that this system be integrated with a RABA database of stop and schedules so that management can, for example, monitor if boarding and alighting activity is causing schedule adherence problems.

Stop Annunciation Systems provide ADA compliant onboard stop announcements through both a public address system and visually inside the bus on a LED screen. The system announces stops ahead of time and typically include automatic text-to-speech feature that eliminates the need for manually recording the information. The stop annunciation system can also be programmed to provide custom announcements at the three primary transfer center in the RABA systems. RABA management can also program in public service announcements as desired that could promote, for example, the purchase of monthly passes.

Dispatching Management becomes an important tool for the operations contractor to utilize the information in real time to manage operations. It provides the capability of managing buses that are significantly off schedule as the dispatcher can visually see how buses are arriving and departing from each stop along the route in real time. For example, it provides a management tool for inserting an extra bus during the first week of the month on Route 14, responding to real time information on passenger loads and schedule adherence of the buses. If roadwork or accidents are delaying departures, texts can be sent to drivers on how to avoid the delays and fix schedule problems before missed connections are made.

Real-Time Passenger Information is the final integrated application for the AVL system. Simply put, riders want to know where their bus is, and they want to know it as soon as possible. This information can be provided on desktop, laptop and table computers, flip phones, smart phones, and LED displays at key transfer centers and possibly heavily utilized stops. The system requires that each bus stop sign have an identifying number. At the low tech end, the flip phone user can text or call in their bus stop location and find out when the next bus(es) will arrive at their stop. At the high end, a person with a smart phone or tablet can literally see the progress of the bus on their route as it approaches their stop. At the transfer centers, LED displays will show when the next buses will arrive and depart the transfer center in a real-time manner.

The graphic below from one of the vendors in the industry provides an excellent summary of how the passenger information system works.

SRTA is developing a technology plan that will provide more detailed specification for a RFP process and this information should be available in June 2014. This will enable RABA to receive competitive bids on an integrated system in FY 2016/17. The AVL tracking system would be purchased in FY 2013/14. The SRTP has utilized industry mid-point cost estimates for the RABA procurements. The SRTA Technology Plan will enabled a more detailed review of both capital and ongoing operating and

maintenance costs. However, the actual costs will not be determined until vendor bids are reviewed and a contractor is selected. The annunciator costs are higher due to the complexity of making this system work well, and includes significant time and expense for field testing.

A total of $407,000 is planned for the integrated AVL system, including the procurement of video display of real-time passenger information and displays for the contractor and RABA management.

Bus Stop Improvements

RABA management has done an excellent job in providing bus stop and bus stop sign infrastructure throughout the RABA system. At the bus stop level, stops are clearly marked and heavily utilized stops have bus shelters. There are several important improvements to bus stops that should be made over the next five years:

1) New bus stops for the two-way routing on many RABA routes as part of part of the recommended reconfigured RABA system.

2) Labeling each bus stop with bus stop numbers to enable access to the proposal AVL real-time passenger information system.

3) Strategically adding new bus stop shelters that are not being provided by the bus stop shelter vendor.

4) Providing improved ADA access to and from the bus stop location. This is critically important due to the very high number of disabled individuals who are riding on the RABA Fixed Route system.

5) Relocation of the Masonic Transfer Center to the Waterworks area in a new North Redding Transfer Center. Most of the street improvement are potentially being made as part of development proposal and is being currently reviewed as part of the community development approval process. There will be a need for bus shelters, trashcans and wayside information signs.

A total of slightly more than $1,000,000 is being allocated for bus stop improvements. A majority of this funding will need to be utilized to improve pedestrian and ADA-compliant access to and from the bus stop in a strategic manner.

Equipment and Security

There are a number of equipment and security enhancements that RABA will need to procure over the next five years. These include:

- Upgrades to the farebox equipment
- Replacement and upgrades to the Demand Response Mobile Data Terminals (MDTs)
- Security upgrades as part of the bus stop and transfer center upgrades
- Office equipment and computer replacement
- Shop equipment replacement.
- Miscellaneous minor equipment

Upgrade Farebox Equipment

For farebox equipment, there is essentially a monopoly in North America for farebox equipment through SPX Genfare. At a minimum, the RABA fixed route system should upgrade to an Odyssey Electronic Validating Farebox. These fareboxes handle coins and bills in an efficient manner. It also returns unacceptable coins, token and bills that helps to minimize fare evasion.

These fareboxes would also allow for the flexibility of moving to magnetic stored value strip cards for monthly passes and multi-ride tickets. If in the future, RABA decides to start accepting SMART cards, the fareboxes provide this flexibility The SPX Genfare also provides an optional interface with the AVL system so that fare collection by stop, for example, could also be monitored.

The SPX Genfare also has significantly more advanced data collection and reporting capability than the current RABA fareboxes.

SPX Genfare also has a more advanced technology with their Fast Fare Technology. It enables the potential for e-fare, mobile ticketing, and other emerging technology. An identified need for this farebox was not identified during the SRTP process and is not recommended.

Replace Demand Response MDTs

There will be a need to replace the Demand Response Mobility Data terminals over the next five years. The MDTs could be integrated into the recommended AVL system in a second phase. The potential interface between the recommended AVL system with the StrataGen dispatching software that RABA currently utilizes. This should also receive more detailed evaluation as part of the upcoming SRTA technology review.

Security and Safety Improvement

RABA has implemented security systems at the operations and maintenance facility, downtown Transfer Center, and has installed video surveillance on all RABA buses. There are several identified needs to provide improved security during the SRTP process including:

- Improved security and lighting at the new North Redding Transfer Center
- Solar lighting at all major bus stop locations
- Improved lighting at the Canby Transfer Center

Shop Equipment Replacement

There is a need to upgrade and replace a bus lift at the maintenance facility. A new bus wash system and brake lathe is also needed. There is also a number of minor shop equipment that will need to be replaced over the next five years.

Office Equipment and Computer Upgrades

Over the next five years, RABA management will need to replace office equipment and upgrade computer on a regular basis.

As will be shown in Figure 9-9, there is a total of $6.4 million in capital expenditures that will need to be made over the next five fiscal years.

Capital Revenues

RABA currently utilizes four sources of funding, two of which are also utilized for operations funding: Transportation Development Act and Federal Transit Administration 5307 funding.

Transportation Development Act

The source of Transportation Act (TDA) was described above in the Operating Revenues section. TDA funding for capital purposes is needed to provide local match for capital procurements, typically 20% of the capital costs. In the past, RABA has had the flexibility to utilize PTMISEA funding for local match but PTMISEA sunsets in FY 2015/16. TDA funds will increasingly need to be utilized for local match in the outer years of the SRTP.

Federal Transit Administration 5307 Funds

As explained above in Operations Revenue, RABA currently receives about $1.4 million in FTA 5307 formula funding and currently utilizes about $750,000 annually for operations. FTA 5307 funds will be increasing important for vehicle replacements after PTMISEA funds are no longer available. The next round of bus replacements in FY 2020/21 will require RABA to carryover FTA funding in order to have sufficient funds stockpiled for fleet replacement. This requires that a minimum of 50% of the FTA 5307 funds are utilized for capital procurements and set asides for future procurements.

Proposition 1B PTMISEA

As approved by the voters in the November 2006 general election, Proposition 1B enacts the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006. Statewide, this is a $19.925 billion state general obligation bond that is meant to fund high priority projects. There are 16 different programs under Proposition 1B, and two directly benefit Shasta County for transit purposes. Overall, RABA has had access to $6.7 million in PTMISEA funding for capital procurements of all type including vehicle acquisitions, solar canopy over the maintenance facility parking, Downtown Transit Center improvements, among many others. There are currently $3,169,000 PTMISEA funds remaining that are programmed over the next three years.

Proposition 1B CalEMA Security

The Transit System Safety, Security, and Disaster Response Account of Proposition 1B, commonly referred to CalEMA can be utilized for safety and security projects. RABA received $153,000 annually through FY 2016/17, but must utilize the money for eligible safety and security projects.

Figure 9-9 provides a summary of the capital expenditures and revenues between FY 2013/14 and FY 2018/19. Over this period of time, there will be a total of $6,038,089 in capital funds utilized by the RABA system.

Figure 9-9 Capital Expenditures and Revenues

Capital Expenditures	FY 2013/14 Budgeted	FY 2014/15 Projected	FY 2015/16 Projected	FY 2016/17 Projected	FY 2017/18 Projected	FY 2018/19 Projected	SRTP Total
Vehicle Acquistion*							
35 foot Buses	$ 780,000		$ 1,241,253				$ 2,021,253
40 Foot buses							$ -
Cutaways		$ 180,000	$ 278,168	$ 229,910	$ 236,807	$ 269,763	$ 1,194,648
Support vehicles					$ 50,648		$ 50,648
Passenger Amenities							
AVL Tracking	$ 85,000						$ 85,000
Video Displays (1)				$ 128,000			$ 128,000
Automatic Passenger Counter (1)				$ 50,400			$ 50,400
Annunciators (1)				$ 144,000			$ 144,000
Bus shelter, benches, access		$ 400,000	$ 407,000				$ 807,000
Transfer center upgrades		$ 100,000			$ 100,000		$ 200,000
Equipment & Security							
Fare equipment upgrades			$ 265,000				$ 265,000
Mobile data terminal replacement				$ 90,000			$ 90,000
Security updades	$ 153,000	$ 153,000	$ 153,000	$ 153,000			$ 612,000
Office equipment, computers	$ 28,140		$ 30,000		$ 32,000		$ 90,140
Shop equipment replacement		$ 150,000	$ 50,000		$ 50,000		$ 250,000
Miscellaneious Equipment		$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 50,000
Capital Expenditures Total	$ 1,046,140	$ 993,000	$ 2,434,421	$ 805,310	$ 479,455	$ 279,763	$ 6,038,089

(1) assumes package procurement with AVL/Real time information systems

* Cost accrued in vehicle delivery year

Capital Revenues							
Transportation Development Act			$ (0)	$ 130,462	$ 95,891	$ 55,953	$ 282,306
Federal Tranist Administration 5307	$ 737,140	$ -	$ 1,274,047	$ 521,848	$ 383,564	$ 223,810	$ 3,140,409
PTMISEA (1B)	$ 156,000	$ 840,000	$ 1,007,374				$ 2,003,374
Proposiiton 1B Safety and Security	$ 153,000	$ 153,000	$ 153,000	$ 153,000			$ 612,000
Capital Revenues Total	$ 1,046,140	$ 993,000	$ 2,434,421	$ 805,310	$ 479,455	$ 279,763	$ 6,038,089

Summary of Costs and Revenues

Figure 9-10 is a summary of operating and capital costs and revenues between FY 2014/15 and FY 2018/19. Over the five year planning horizon of the SRTP, there will be total of $35.5 million in costs and revenues for transit in the RABA service area.

Figure 9-10 Summary of Operating and Capital Costs and Revenues

	FY 2014/15 Projected	FY 2015/16 Projected	FY 2016/17 Projected	FY 2017/18 Projected	FY 2018/19 Projected
COSTS					
Operating Costs					
Operating Costs	$ 4,934,127	$ 5,077,993	$ 5,261,984	$ 5,426,706	$ 5,640,259
Administrative Costs	$ 775,860	$ 741,104	$ 730,189	$ 748,544	$ 767,832
Total Operating Costs	$ 5,709,988	$ 5,819,097	$ 5,992,173	$ 6,175,250	$ 6,408,091
Capital Expenditures					
Vehicle Acquistion	$ 180,000	$ 1,519,421	$ 229,910	$ 287,455	$ 269,763
Passenger Amenities	$ 500,000	$ 407,000	$ 322,400	$ 100,000	$ -
Equipment	$ 313,000	$ 508,000	$ 253,000	$ 92,000	$ 10,000
Total Capital Exp.	$ 993,000	$ 2,434,421	$ 805,310	$ 479,455	$ 279,763
Total Costs	$ 6,702,988	$ 8,253,518	$ 6,797,483	$ 6,654,705	$ 6,687,854
REVENUES					
Operating Revenues					
Fares	$ 954,880	$ 946,408	$ 995,968	$ 1,047,744	$ 1,093,088
Local and State	$ 4,005,107	$ 4,047,689	$ 4,171,205	$ 4,302,506	$ 4,490,003
Federal	$ 750,000	$ 825,000	$ 825,000	$ 825,000	$ 825,000
Total Op. Rev.	$ 5,709,988	$ 5,819,097	$ 5,992,173	$ 6,175,250	$ 6,408,091
Capital Revenue					
TDA	$ -	$ (0)	$ 130,462	$ 95,891	$ 55,953
Proposition 1B	$ 993,000	$ 1,160,374	$ 153,000	$ -	$ -
Federal	$ -	$ 1,274,047	$ 521,848	$ 383,564	$ 223,810
Total Capital Revenue	$ 993,000	$ 2,434,421	$ 805,310	$ 479,455	$ 279,763
Total Revenues	$ 6,702,988	$ 8,253,518	$ 6,797,483	$ 6,654,705	$ 6,687,854

10. Action Plan

This chapter provides recommended actions for the Short Range Transit Plan in the following categories:

- Service Plan Actions
- Fare Policy Actions
- Capital Plan Actions
- Partnership Actions
- Communication Actions

FY 2013/14

Service Plan Actions

- Review and adopt the Short Range Transit Plan
- Develop work scope, budget and recruit for 2-year contract for service plan implementation, schedule and run cuts, technology procurement, outreach and communications assistance

Capital Plan Actions

- Complete negotiations for North Redding Transfer Center improvements
- Receive delivery on two heavy duty low floor 35 foot buses
- Implement safety and security improvements at ten bus stops
- Purchase upgraded office equipment and computers
- Procure AVL bus tracking system

Partnership Actions

- Participate in SRTA Consolidated Transportation Services Agency Coordination Plan
- Participate in SRTA technology review and technical memo with IBI consultants

FY 2014/15

Service Plan Actions

- Prepare new RABA schedule and run cuts for adopted SRTP service plan. Ensure that school bell times and Shasta College students have convenient schedules.
- Develop service plan minor refinements based on community outreach efforts.
- Work with service provider to train drivers on new service plan.

- Implement adopted SRTP service plan and new schedules in January 2015

Fare Actions

Conduct public hearings on proposed fare actions in FY 2015/16, including:

- Elimination of fare zone change monthly pass for Redding-Anderson and Redding-City of Shasta Lake. Residents of Anderson and the City of Shasta Lake would be able to purchase a monthly pass at $48.25 for the general public and $24 for seniors/disabled.
- Elimination of punch card and replacement with discount ticket book: 11 rides for the price of 10.
- Development of picture ID discount card for senior and disabled individuals eligible for discount. Add veterans to the list of individuals eligible for discount fares.
- Increase eligible age for discounts from 62 to 65.

Capital Plan Actions

- Develop new bus stops for adopted SRTP service plan. Provide bus stop shelters and access improvements to 16-20 key stops.
- Provide new stop numbers on all bus stops for real-time transit information.
- Install transfer center improvements at North Redding Transit Center.
- Procurement of two cutaways buses with a minimum of 16 passenger seating.
- Procurement of bus lift and bus wash system

Partnership Actions

- Promote January 2015 implementation of new service plan to IASCO, Regional Center, and CalWorks.
- Explore potential semester pass or prepaid fare program with Shasta College based on improved services to Shasta College in January 2015.
- Participate in SRTA Consolidated Transportation Services Agency Coordination Plan
- Participate in SRTA technology review and technical memo with IBI consultants

Communication Actions

- Provide community outreach to key stakeholder groups on implementation plan for adopted SRTP service plan in January 2015.
- Hire consultant to update GTFS data for Google Transit and ongoing maintenance for service refinements.
- Development of new passenger guide.
- Develop marketing campaign to launch adopted SRTP service plan in January 2015. Prepare collateral materials.
- Upgrade website based on Chapter 7 recommendations including new interactive map. The upgraded website with the new passenger information should be available by January 1, 2015.

- Provide panel displays of when the bus stops at the top 50 boarding and alighting locations.
- Conduct travel training with Gatekeeper Staff.
- Target ridership promotion of new adopted service plan with IASCO employees, Shasta College students, Shasta High School students, and apartment residents along routes.
- Provide news releases on new adopted RABA service plan, availability of new passenger guide, and capital improvements including real time information.

FY 2015/16

Service Plan Actions

- Monitor performance with new AVL schedule adherence tracking system.

Capital Plan Actions

- Procurement of three heavy duty low floor 35 foot transit buses to replace existing fleet
- Procurement of four cutaway buses for demand response service to replace existing fleet
- Procurement of new farebox equipment
- Security upgrades of solar panel lighting at key bus stops

Fare Actions

Depending on the outcome of the public hearing conducted in FY 2014/15, implement:

- Elimination of fare zone change monthly pass for Redding-Anderson and Redding-City of Shasta Lake. Residents of Anderson and the City of Shasta Lake would be able to purchase a monthly pass at $48.25 for the general public and $24 for seniors/disabled.
- Elimination of punch card and replacement with discount ticket book: 11 rides for the price of 10.
- Development of picture ID discount card for senior and disabled individuals eligible for discount. Add veterans to the list of individuals eligible for discount fares.
- Increase eligible age for discounts from 62 to 65.

Partnership Actions

- Develop partnership arrangements and potential agreement with Bethel.
- Develop partnership arrangements and potential agreement with Department of Social Service agencies.
- Promote monthly pass sales to key partners, with objective of increasing partner sales of monthly passes by 100 or 1,200 new annual pass sales compared to FY 2014/15.

Communication Actions

- Add information panels on when the bus stops to 25 new bus stops.
- Conduct travel training with Gatekeeper staff.

FY 2016/17

Service Plan Actions

- If partnership agreement is executed with Bethel, implement new Crosstown Express service, with service open and available to the general public.
- If partnership agreement successful with Shasta County Department of Social, implement new services.
- Evaluate service plan implementation. Consider route and schedule refinements.
- Consider plan and conduct public hearing on additional evening and morning run on Route 9.

Capital Plan Actions

- Procure new technology package to include:
    - AVL equipment on all buses and administrative tracking
    - Automatic Passenger Counter
    - Schedule adherence tracking
    - On-board stop annunciators
    - Video displays at three transfer centers
- Procurement of three cutaway buses for demand response service to replace existing fleet.
- Replacement of minor shop equipment.
- Update passenger guide based on refinements to adopted SRTP service plan.
- Purchase new heavy duty low floor 40 bus if approval is provided for implementation of two additional runs on Route 9.

Partnership Actions

- Evaluate existing partnership service levels and performance to make appropriate service level adjustments.
- Conduct joint promotional campaigns to increase ridership on existing services.

Communication Actions

- Add information panels at 25 new bus stops
- Conduct travel training with Gatekeeper Staff

- Ongoing communication and targeted promotions to RABA ridership market segments

FY 2017/18

Service Plan Actions

- Implement recommendations of the SRTA Coordination Plan including contracted service with Senior Nutrition Program for demand response service in Anderson and City of Shasta Lake.
- Evaluate service and determine need for Shasta College Freeway express service from Cottonwood, Anderson, and City of Shasta Lake.
- Add additional morning and evening run on Route 9.

Capital Plan Actions

- Procurement of three cutaway buses for demand response service to replace existing fleet.
- If Shasta College Freeway Express proves feasible, amend capital plan to purchase peak period bus.

Partnership Actions

- Ongoing communication and promotions with existing partners

Communication Actions

- Update passenger guide to reflect changes in RABA service plan refinements
- Add information panels at 25 new bus stops
- Conduct travel training with Gatekeeper Staff
- Ongoing communication and targeted promotions to RABA ridership market segments

Appendix A

FY 2012/13 Unmet Needs

Chronology of Unmet Needs from FY 2002/03 to FY 2010-11

APPENDIX 5: TABLE OF CHRONOLOGICAL HISTORY

Hearing Year/ Primary Requests	RTPA Response or Action
2002/2003	
1. Service to Palo Cedro and Lakehead 2. Sunday service and longer hours	1. These areas are low density and not "reasonable to meet." 2. The 2000/01 farebox ratio was 18.8% falling below the required 19% farebox ratio.
2003/2004	
1. Service to Shasta College 2. Service to outlying areas 3. Longer hours 4. Sunday service	1, 2. RABA implemented a pilot service to Shasta College thru regular operations. 2: Due to lack of ridership and farebox ratio recovery trial services implemented in 2001/02 were terminated. Farebox ratios were Fall River Mills—3.7%, Cottonwood—3% and Airport Road Corridor—1.5%. RABA did meet the farebox ratio requirement of 16.5% in 2001/02. 3, 4: An extended hour analysis was performed by the SCRTPA using an elasticity of demand theory. The analysis yielded a 14.7% farebox ratio, which does not meet the "reasonable to meet" definition. To obtain data for the analysis, SCRTPA staff performed an on-board survey of riders for both RABA demand-response and CTSA.
2004/2005	
1. Service to Happy Valley and Mountain Gate 2. Longer hours 3. Sunday service	1. Service can be provided to outlying areas where the CTSA operator has service, providing that persons are over 60 years of age or mobility-impaired. 2, 3. See discussions in 2003/2004.
2005/2006	
1. Service to Stillwater and Shingletown	These areas are low density and not "reasonable to meet." SCRTPA staff met with SSNP to discuss the feasibility of providing senior transportation to Shingletown. SSNP and community medical center will continue these discussions.
1. Reduce one-hour headways 2. Longer Hours 3. Sunday Service	RABA is currently operating below the required 19% farebox ratio. RABA developed a 10-year financial plan that is projected to achieve the required farebox ratio of 19% in 2006/07.
RTPA Additional Actions: The SCRTPA board approved a temporary one-year farebox ratio reduction to 15% for 2005/2006.SCRTPA board approved funding from the 2005/2006 Overall Work Program to update the 2001 RABA Short-and Long-Range Transit Plan.	
2006/2007	
1. Service to Cottonwood 2. Service Old Alturas Road/Boyle Road	These services are outside of the RABA service area. Referred to CTSA.
3. Additional stops on Burney Express	Shasta County approved two additional stops for Burney Express at Pit River Casino and Diddy Wells.
4. Support of Anderson Express	A combination of the Anderson-Only service and Anderson Express is on a six-month trial operation.

2007/2008	
1. Longer hours	RABA is currently operating below the required 19% farebox ratio. RABA developed a 7-year financial plan that is projected to achieve the required farebox ratio of 19% in 2014/15.
2. Service to Shingletown	This is a low density population area. Previously the county operated a vanpool service which failed due to lack of riders.
3. Stop at Round Mountain	In the process of establishing.
4. Increase service to Anderson	As a member of the JPA, Anderson requested the Anderson-only trial service return to the prior service hours.
5. Stop at Shasta County Public Health	A bus stop location has been established.
2008/2009	
1. Sunday service and longer hours	Under temporary farebox reduction. 15.5% required – actual 17.8% farebox return. The City of Redding is at a point where TDA revenue may no longer be able to sustain the current level of transit provided in Redding. Much will depend on the economy and the state budget.
2009/2010	
1. Service to Burney Falls	The area of Burney is served by an express commuter service with limited stops. Burney Falls is approx. 20-minutes from Burney. Adding this stop will add 45-minutes to the service and affect the existing headways.
2. Service to Cottonwood	This is a low density population area. In 2001/02 a trial service was implemented. Due to lack of ridership and farebox ratio recovery (3%) the service was terminated.
3. Service to Redding Airport	The SSTAC recommends exploring the feasibility of an express or pilot service on this corridor. RABA is operating under a temporary farebox ratio reduction of 16.2% - actual farebox return FY 09/10 was 15.2%. Exploring service to the airport is not likely until the economy recovers.
2010/2011	
1. Weekend service for Burney Express	Saturday service is projected at half of the week day service. Weekend service is not feasible at this time.
2. Service during Intermountain Fair (Burney Express)	Specialty services can be provided if privately chartered.
3. Accept Shasta College bus passes (Burney Express)	The college program has since been discontinued.
4. Service to Shingletown	Transit service has been attempted in this area and has failed to meet performance requirements.
5. Service to Cottonwood	Service to Cottonwood was attempted in the past and failed to meet the required farebox ratio. Express routes to Cottonwood will be considered in RABA's next transit plan update.
6. Service to Old Shasta	Trinity Transit serves Old Shasta while en-route to Redding.
7. Service to Millville	Millville is one of the least populated census tracts. Such low population density cannot support farebox requirements.
8. New stops	The request was forwarded to RABA and SSNP for review.
9. Extended hours of service	Extended hours are not economically feasible at this time. RABA's transit plan update will include a review of frequency of service on popular routes.

Appendix B

Peer Group Performance Summary

REDDING AREA BUS AUTHORITY
FYE 2012 Performance Measures Comparison for Transit Modal Information

		-- Fixed RouteBus --					
		Service Efficiency		Cost Effectiveness		Service Effectiveness	
Agency	Statistics	Operating Expense/ Vehicle Revenue Mile	Operating Expense/ Vehicle Revenue Hour	Operating Expense/ Passenger Mile	Operating Expense/ Unlinked Passenger Trip	Unlinked Passenger Trips/Vehicle Revenue Mile	Unlinked Passenger Trips/Vehicle Revenue Hour
Redding (RABA)							
Population	117,478						
Square Miles	100	$5.16	$72.84	$0.85	$5.23	0.99	13.94
Density	1,175						
Yuba-Sutter Transit (YSTA)							
Population	119,240						
Square Miles	817	$5.39	$62.64	$2.65	$3.30	1.63	18.98
Density	146						
Fairfield (FAST)							
Population	133,683						
Square Miles	40	$5.24	$100.27	$1.08	$9.29	0.56	10.79
Density	3,342						
Napa (NCTPA)							
Population	138,000						
Square Miles	45	$5.13	$69.87	$2.15	$7.52	0.68	9.29
Density	3,067						
Merced (The Bus)							
Population	120,000						
Square Miles	30	$4.25	$70.39	$3.29	$6.26	0.68	11.25
Density	4,000						
Santa Maria (SMAT)							
Population	120,097						
Square Miles	34	$4.26	$82.56	$0.67	$4.42	0.96	18.65
Density	3,532						
Visalia (VCC)							
Population	126,000						
Square Miles	36	$5.02	$69.88	$1.00	$5.03	1.00	13.90
Density	3,500						
Average		**$4.92**	**$75.49**	**$1.67**	**$5.86**	**0.93**	**13.83**

- Better Than Average
- Below Average

REDDING AREA BUS AUTHORITY
FYE 2012 Performance Measures Comparison for Transit Modal Information

		-- Demand Response --					
		Service Efficiency		Cost Effectiveness		Service Effectiveness	
Agency	Statistics	Operating Expense/ Vehicle Revenue Mile	Operating Expense/ Vehicle Revenue Hour	Operating Expense/ Passenger Mile	Operating Expense/ Unlinked Passenger Trip	Unlinked Passenger Trips/Vehicle Revenue Mile	Unlinked Passenger Trips/Vehicle Revenue Hour
Redding (RABA)							
Population	117,478						
Square Miles	100	$5.39	$74.81	$5.29	$28.22	0.19	2.65
Density	1,175						
Yuba-Sutter Transit (YSTA)							
Population	119,240						
Square Miles	817	$4.59	$60.69	$4.60	$19.66	0.23	3.09
Density	146						
Fairfield (FAST)							
Population	133,683						
Square Miles	40	$7.42	$112.63	$7.75	$63.12	0.12	1.78
Density	3,342						
Napa (NCTPA)							
Population	138,000						
Square Miles	45	$7.52	$81.93	$4.51	$33.57	0.22	2.44
Density	3,067						
Merced (The Bus)							
Population	120,000						
Square Miles	30	$4.53	$70.73	$2.31	$14.51	0.31	4.88
Density	4,000						
Santa Maria (SMAT)							
Population	120,097						
Square Miles	34	$4.33	$57.89	$3.92	$21.63	0.2	2.68
Density	3,532						
Visalia (VCC)							
Population	126,000						
Square Miles	36	$6.66	$82.34	$3.33	$24.82	0.27	3.32
Density	3,500						
Average		**$5.78**	**$77.29**	**$4.53**	**$29.36**	**0.22**	**2.98**

- Better Than Average
- Below Average

Source: *National Transit Database*

REDDING AREA BUS AUTHORITY
FYE 2012 Performance Measures Comparison for Transit Modal Information

		-- Systemwide Total --					
		Service Efficiency		Cost Effectiveness		Service Effectiveness	
Agency	Statistics	Operating Expense/ Vehicle Revenue Mile	Operating Expense/ Vehicle Revenue Hour	Operating Expense/ Passenger Mile	Operating Expense/ Unlinked Passenger Trip	Unlinked Passenger Trips/Vehicle Revenue Mile	Unlinked Passenger Trips/Vehicle Revenue Hour
Redding (RABA)							
Population	117,478						
Square Miles	100	$5.24	$73.49	$1.18	$7.20	0.73	10.21
Density	1,175						
Yuba-Sutter Transit (YSTA)							
Population	119,240	Includes Commuter Bus					
Square Miles	817	$4.84	$72.31	$0.73	$5.03	0.96	14.39
Density	146						
Fairfield (FAST)							
Population	133,683						
Square Miles	40	$5.45	$101.72	$1.22	$10.45	0.52	9.74
Density	3,342						
Napa (NCTPA)							
Population	138,000						
Square Miles	45	$5.46	$71.88	$2.39	$8.82	0.62	8.15
Density	3,067						
Merced (The Bus)							
Population	120,000	Includes Demand-Response (Taxi)					
Square Miles	30	$4.35	$70.56	$2.84	$7.95	0.55	8.87
Density	4,000						
Santa Maria (SMAT)							
Population	120,097						
Square Miles	34	$4.27	$79.05	$0.73	$4.81	0.89	16.43
Density	3,532						
Visalia (VCC)							
Population	126,000						
Square Miles	36	$5.15	$70.96	$1.07	$5.46	0.94	0.94
Density	3,500						
Average		**$4.97**	**$77.14**	**$1.45**	**$7.10**	**0.74**	**9.82**

- Better Than Average
- Below Average

Source: *National Transit Database*