AECOM **Transportation**

Report
Draft Final Report

May 29, 2013

Submitted to
Victor Valley Transit Authority

Submitted By
AECOM Technical Service, Inc.

Comprehensive Operational Analysis and Short Range Transit Plan of Victor Valley Transit Authority

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Executive Summary

Introduction

Victor Valley Transit Authority (VVTA) has commissioned AECOM to perform a Comprehensive Operational Analysis (COA) and Short Range Transit Plan (SRTP) of the Victor Valley Transit Authority. The study looks at the current performance Victor Valley Transit services as well as development in the Victor Valley area to determine how effective the current services are and what service modifications will be needed to serve the Victor Valley community in the coming years.

Transit Service Baseline and Ridership Analysis

The transit service baseline and ridership analysis provides a description and analysis of current VVTA services. The transit service overview provides a description of VVTA governance, budget, service trends, service changes, and fare policy. The fixed route service descriptions provide an overview of the service and the operating statistics including service span, service frequency, ridership, revenue hours, revenue miles, operating expenses, fare revenue, and fare payment. A similar analysis was performed on the Direct Access System. An analysis of on-time performance for the fixed route was conducted based on information provided by the DataPoint system.

Service and financial indicators were used to analyze VVTA's services. The indicators used included:

1. Passengers per Hour
2. Passengers per Mile
3. Cost per Hour
4. Cost per Mile
5. Cost per Peak Vehicle
6. Revenue per Passenger
7. Farebox Recovery

An inventory of capital assets was also conducted. The capital assets include the revenue vehicle fleet, service vehicles, transit centers, bus stops, and the operations and maintenance facility in Hesperia. A description of the capital program was also included as part of the capital assets.

VVTA Passenger Survey

Two surveys of VVTA passengers were conducted as part of the Comprehensive Operational Analysis (COA): an onboard survey for fixed route passengers and a telephone survey of ADA

Direct Access passengers. These surveys served a number of purposes including providing a profile of current VVTA riders, noting the perception that VVTA customers have of the bus service provided, identifying the types of improvements customers would like to see, and identifying the factors that influence passengers use of the bus. Besides these stated purposes, the COA survey was used to understand transfer patterns of VVTA passengers. Finally, the survey satisfied Federal reporting requirements under Title VI of the Civil Rights Act of 1964.

Local and Regional Development Patterns

The local and regional development chapter provides an overview of demographic, socioeconomic, employment, and commuting characteristics of the study area population and employees. This overview was based on data collected from the 2010 United States Census, the Longitudinal Employment-Household Dynamics Program (2010/US Census Bureau), and San Bernardino Associated Governments (SANBAG).

The demographics and socio-economic section looks at a number of indicators to develop a transit success score which highlights those areas within the VVTA service area where residents are more likely to use transit services.

The community profiles help to better understand where transit has the highest probability of success in the service area. Further analysis of demographic and socioeconomic data identifies specific locations of more transit dependent populations.

Travel patterns to work were examined in the employment locations and commute patterns section. Home and employment locations were looked at within the study area and throughout a five county area (San Bernardino, Riverside, Orange, Los Angeles and Kern Counties) to show local and regional commuting dynamics.

Identification of Service Issues

The identification of service issues was undertaken through a public outreach effort to form a better understanding of areas where VVTA service can improve. The public outreach process included interviews with local stakeholders, customers, and VVTA bus drivers. Based on the interviews, service issues relevant to travel along specific routes, general service provision, bus safety and employee relations were ascertained.

The purpose of the initial outreach process was to gather information regarding the perception and issues with VVTA services, and how to improve service while enhancing what the public likes about VVTA. The major concerns heard during the public outreach process centered on the following themes: overall Satisfaction with service, desire for Sunday service, service “Down the Hill,” ensuring Buses Run On-time, more frequent service and later evening hours,

additional service, improving service for students, increasing passenger comfort at bus stops, need for additional communication and education, additional accommodations for passengers.

Needs and Opportunities Analysis

The needs and opportunities analysis identified the issues and opportunities facing Victor Valley Transit. This analysis included information presented in the first four chapters of the report, including the service analysis, the on-board survey, socio-demographic and planned development information, the congruency analysis, and the public outreach process. The issues identified were used to craft service standards for VVTA and were an input into the route recommendations presented later in the report.

Current and Projected Funding Levels

Funding and cost projections for Victor Valley Transit through FY 2019/2020 are presented in Chapter 5. Operating revenue sources are described and available funding levels was supplied by San Bernardino Associated Governments (SANBAG). Operating cost items and levels are based on projections from the most recent VVTA Short Range Transit Plan (SRTP). Capital funding is also presented in this chapter.

Performance Guidelines

Chapter 6 proposes performance guidelines for the Victor Valley Transit Authority (VVTA) to use to monitor the performance of the various routes and services that they operate. Performance guidelines are an important planning tool as they will allow VVTA to judge and improve individual routes and the network to meet VVTA's goals and objectives.

System-wide performance guidelines were created as well as standards that are specific to the service type. Six service types were identified:

- Local Fixed Route: Routes 31, 32, 41, 43, 44, 45, 48, 51, 52 and 52
- Flex Routes/Circulator: Routes 33, 40, 46, 47 and 54
- County Route: Routes 21, 22 and 23
- Lifeline (Inter-City Human Service): B-V Link and San Bernardino Lifeline
- Commuter (Inter-City Commuter): NTC Commuter
- Paratransit: Direct Access

System-wide performance guidelines apply to the VVTA system as a whole or are guidelines that apply to all individual routes. There were five general themes established for system-wide performance guidelines: service coverage, operating effectiveness, vehicle and maintenance efficiency, labor efficiency, and customer service.

Identification of Service Alternatives

A large number of route recommendations are proposed for VVTA. The route recommendations include alignment changes, span of service changes, and frequency changes. These service alternatives were developed based on findings from earlier chapters of the study, where services were analyzed to determine what the strengths and weakness, as well as the future needs are for VVTA. An analysis of the Unmet Transit Needs Hearings was another tool used to create the route alternatives. Some of the key considerations in developing service alternatives were to maintain service where it is utilized, address bus crowding, address on-time performance issues, removal of one-way service loops, and consideration of ADA service impacts.

An initial route planning memo was delivered to VVTA to outline initial service concepts. A route planning workshop was held on September 13, 2012 to discuss the initial service concepts. This route planning workshop was a daylong event attended by members of the VVTA technical advisory committee, VVTA staff, key staff from each JPA member, SANBAG, and the consultant project manager. At the route planning workshop, JPA members provided guidance to the study team on preferred and not preferred concepts, as well as ideas for other route concepts to be evaluated.

The following is a presentation and analysis of the service alternatives for VVTA. This plan is a cost constrained plan that addresses many of the issues and will form a blueprint for future services for VVTA. The plan was presented to the public through customer drop-in session at major bus stops. Some of the proposed changes are scheduled to begin in 2014, while several new routes and route changes are proposed for implementation in 2016. Below is a summary of the route changes.

<u>Fiscal Year 2014</u>

- Route 21 – There are three recommended changes for this route. The first change is to reverse the loop in Phelan which will move the left turn from the unsignalized Clovis/Phelan Road intersection to the signalized Sheep Creek/Clovis Road intersection. The second change is in response to the large number of deviations in the Tri-Community area which impacts running time which is the implementation of a demand response service that would allow for circulation throughout Phelan, Piñon Hills, and Wrightwood (new Route 20) and would meet Route 21 buses in Phelan to connect to the fixed route system. The third change is to the alignment of the route on the eastern end to serve the Super Target in Hesperia.
- Route 23 – The Lucerne Valley circulator is proposed to be eliminated. Areas that are served today via the circulator would still have service via deviations along the current Route 23.

- Route 32 – The proposal is to change cycle time to two hours, extend service to Muskrat and El Mirage, and operate to the Southern California Logistics Airport (SCLA). These changes will allow the SCLA to be served directly, the Victorville Civic Center and courts to be served in both directions, and allow for improved service reliability.
- Route 33 – Three modifications are proposed to the current Route 33. The first modification is a route extension to serve a new key generator, the new Adelanto High School located by the intersection of Verbena and Mojave. The other route modifications are also proposed in northern Adelanto. In conjunction with changes to Route 32, Route 33 would be shortened and no longer serve Muskrat and El Mirage. Service along parts of Chamberlaine Way and on Jonathan Street will be eliminated and served by Route 32. The route would also operate along Air Expressway only as far as Aster Road, cutting back service along Stevens and Kemper to shorten the route and keep service off of smaller residential streets.
- Route 40 – This route is proposed to provide service to Granite Hills High School by serving the intersection of Central Road and Esaws Avenue. This can be accomplished by rerouting the route from Pawnee and Ramona to Goshute Avenue, Pioneer Road and Esaws Avenue to Central Road. There would no longer be service on Pawnee north of Goshute and no service at all along Ramona.
- Route 41 – The recommendation for Route 41 is to modify the route to serve town hall in both directions. This can be done by eliminating the deviation into the old Walmart that will close when the Super Walmart opens at the intersection of Dale Evans Parkway and Bass Hill Road. This route has been identified for 30-minute service during peak periods.
- Route 43 – Route 43 will undergo a slight route modification to better serve the shopping areas in Jess Ranch, resulting in the removal of the bus stop at Bear Valley Road and Reata Road. Westbound service would utilize Apple Valley Road, Town Center Drive, and Jess Ranch Parkway instead of Bear Valley Road in this area of Apple Valley.
- Route 44 – In FY 2014 a route modification in Victorville is proposed. The approach to the mall terminal would be modified by serving Cottonwood Avenue north of Bear Valley Road to Mariposa Road and crossing I-15 via the new Nisqualli/La Mesa overpass and accessing the mall via Amargosa.
- Route 45 – The proposal for Route 45 divides the route into two routes that each operate once per hour, however, each route would operate at the same time in the hour to better meet transfers and serve people going to Victor Valley College. This alternative presents the greatest opportunity to reduce crowding between 7th and Lorene and Victor Valley College without adding significant resources. The route that would continue to Hesperia (Route 45) would operate from the Seventh and Lorene Transfer point and operate via Burning Tree, Green Tree, Yates, Mariposa, Nisqualli and Hesperia Road to serve the college. The other route (Route 55) would operate from Seventh and Lorene to the college via La Paz, Hughes, Rodeo, Seneca, Hesperia, Green Tree, Arrowhead,

Seventh Avenue, and Jasmine. These modifications should have no impact in vehicles operated in maximum service and very little impact on operating cost.

- Route 51 – As proposed, Route 51 would be bi-directional but it will serve only the northern half of the current alignment. Service will be provided between the Seventh and Lorene Transfer Center and Victor Valley Community Hospital.
- Route 52 – To address the on-time performance and crowding concerns, 30-minute peak service is recommended with no change in alignment.
- Route 53 – There are two recommendations for this route. The first would change the route so service remains on Bear Valley Road in both directions between Second Street and Hesperia Road. The other is to begin 30-minute service two hours earlier in the day.
- Route 54 – This route is proposed to be extended to the Mall of Victorville and will also serve the Walmart on Amargosa Road. This route would be shortened by modifying the loop west of US-395 by reversing the loop direction and only going as far south as La Mesa instead of Olivine. In Adelanto, modification to the service to Molina Medical by having the northbound service operate via US-395 and have the southbound service operate via Cactus to Jonathan returning to US-395 at Seneca.
- B-V Link – There are two recommendations for B-V Link service. The first recommendation is to operate service five days a week between Barstow and San Bernardino. The second recommendation is to add a 6:00PM departure from San Bernardino to Barstow.
- ADA Direct Access – Currently, the ADA service provided by VVTA, known as Direct Access does not have defined boundaries. Based on feedback from VVTA staff, boundaries were proposed for the ADA service. The proposal maintains the zone system currently employed, with Zone 1 fares applied within ¾ miles of a fixed rout which is consistent with ADA rules. Zone 2 fares would apply for trips operating between ¾ miles and 1½ miles from a fixed route, and Zone 3 fares would apply to trips that originate or terminate between 1½ miles and two miles of a fixed route. ADA service will not be provided beyond the boundary of Zone 3, or more than two miles from a fixed route.
- Sunday Service – A Sunday service concept has been created whereby key routes would operate on a reduced schedule with Direct Access ADA open to the general public in certain parts of the VVTA service area to connect passengers to fixed route services. Sunday operations would include fixed route service on sixteen (16) of the twenty-one (21) VVTA routes. They are 21, 22, 23, 24 31, 32, 41, 43, 44, 45, 48, 49, 51, 52, 53, and 55. Service will operate once per hour on regional routes and once every 2 hours on County routes between 8:00AM and 6:00PM. Direct Access ADA service will be available to the general public within ¾ mile of Routes 33, 40, 46, 47, and 54.

Fiscal Year 2016

- Route 44 – In FY 2016, service in Hesperia will change. Route 44 segments would be eliminated along Willow and Live Oak Street. Instead, this would be served by the new Oak Hills route. The Oak Hills Route will also serve the 3rd/Mesa/7th Streets area.
- Route 48 – The City of Hesperia has a goal for Route 48 to be a Main Street only service. To achieve this goal, the recommendation for the route is to remove service from Escondido Avenue to provide a "straight shot" between the transfer point and Super Target. See Figure 7-16. Service along Escondido Avenue will be provided by a new Oak Hills area service in Fiscal Year 2016.
- New Route 24 – This new route would operate between the Oak Hills, south of Hesperia, and the Hesperia transfer point. The route would serve segments of existing routes that are proposed to be eliminated by service recommendations. The route will operate along the Willow Street corridor as far west as Topaz, serving neighborhoods no longer served by Route 44. The route will also serve the Escondido Avenue portion of Route 48. In Oak Hills, which is an unincorporated county area, the route will operate along Escondido, Ranchero, Mariposa, and then return back to Main Street and Willow Street. This route will provide service to San Joaquin Valley College as well as Oak Hills High School.
- New Route 49 – A new route will operate along Apple Valley Road between Apple Valley Town Hall and Victor Valley College. The route would also serve the Jess Ranch area near the intersection of Bear Valley Road and Apple Valley Road.

Below are system maps for Fiscal Years 2014 and 2016. Figure ES-1 presents a map of the 2014 route network as proposed. Figure ES-2 presents a map of the 2016 route network as proposed.

Fare Policy Recommendations

VVTA is required to maintain a 20 percent farebox recovery for regional route services and a 10 percent recovery for Direct Access services. VVTA plans on introducing new passes in Fiscal Year 2014 that will allow riders to access all services including B-V Link Lifeline services and NTC Services. Beyond these new passes, fare adjustments are proposed in 2015 and 2019 to respond to growth in service costs. Details of the fare levels for each service are provided in Table ES-1.

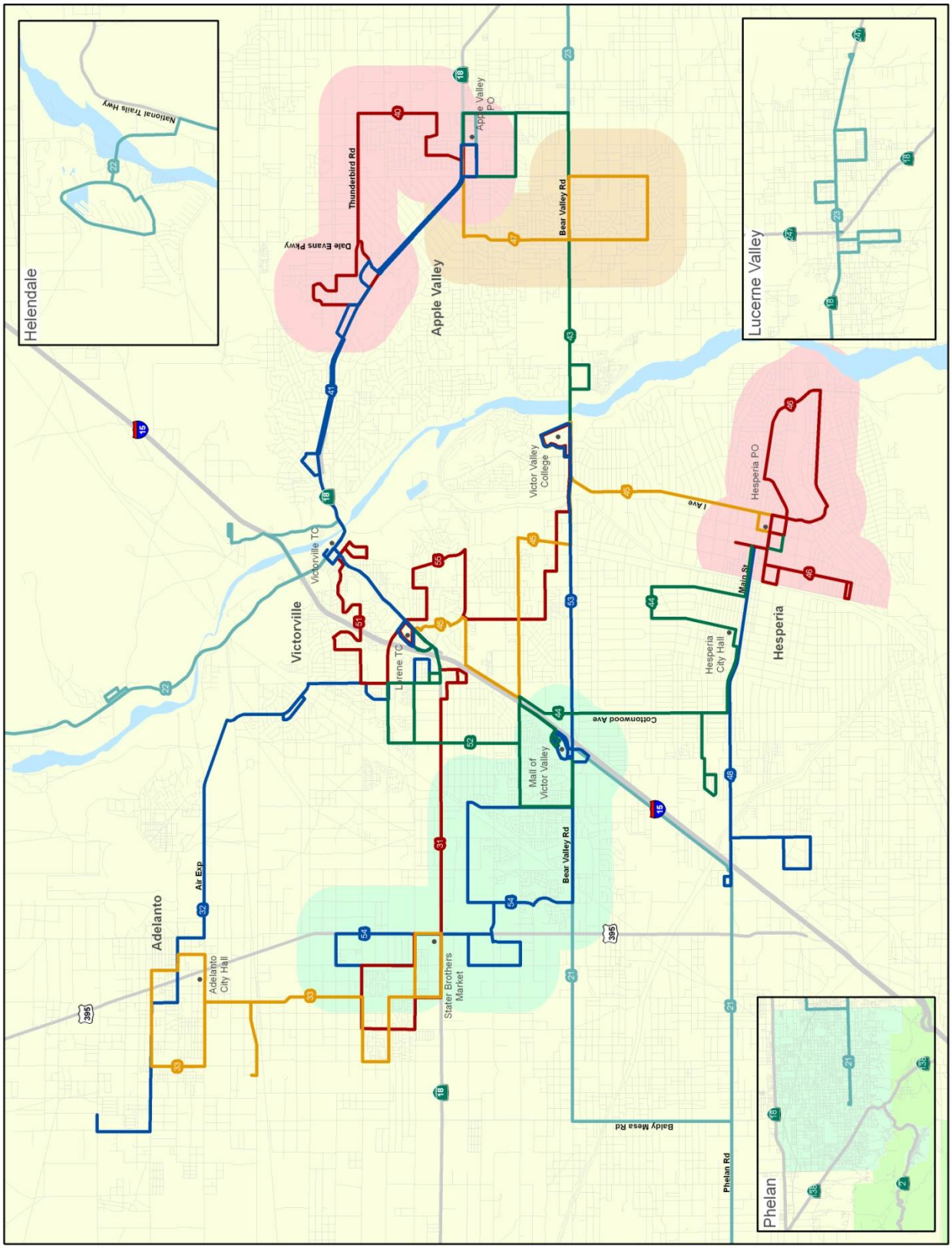


Figure ES-1: Proposed 2014 System Map

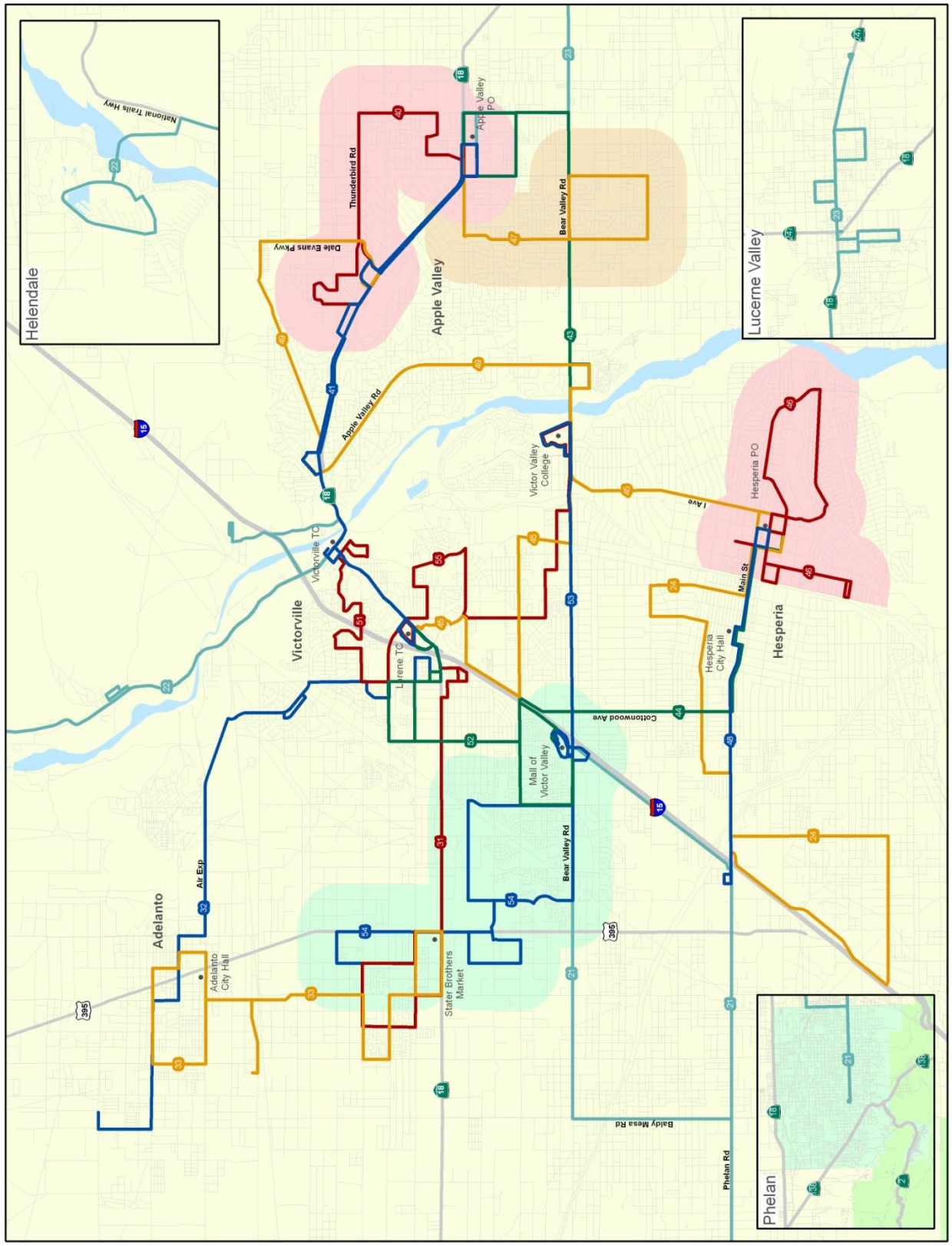


Figure ES-2: Proposed 2016 System Map

Table ES-1: Proposed Fare Structure

Fare Type	Current	2015	2019
Regular Route			
Base Fare	$1.25	$1.35	$1.50
Student Fare	$1.00	$1.10	$1.25
Senior/Disabled/Medicare	$0.60	$0.65	$0.75
Regular/Student Deviation surcharge	$2.00	$2.00	$2.25
Senior/Disabled/Medicare Deviation surcharge	$1.00	$1.00	$1.10
Base Day Pass	$3.50	$3.75	$4.00
Student Day Pass	$2.00	$2.25	$2.50
Senior/Disabled/Medicare Day Pass	$1.00	$1.10	$1.25
Regular 31 Day Pass	$50.00	$54.00	$60.00
Student 31 Day Pass	$40.00	$44.00	$50.00
Senior/Disabled/Medicare 31 Day Pass	$25.00	$27.00	$30.00
County Route			
Base Fare	$2.25	$2.35	$2.50
Student Fare	$2.00	$2.10	$2.25
Senior/Disabled/Medicare	$1.00	$1.10	$1.25
Base Day Pass	$5.50	$5.75	$6.00
Student Day Pass	$4.50	$4.75	$5.00
Senior/Disabled/Medicare Day Pass	$2.75	$3.00	$3.25
Regular 31 Day Pass	$75.00	$78.00	$83.00
Student 31 Day Pass	$65.00	$70.00	$75.00
Senior/Disabled/Medicare 31 Day Pass	$35.00	$36.00	$41.00
Direct Access Service			
Zone 1/within ¾ mile of a fixed route[1]	$2.50	$2.75	$3.00
Zone 2/ between ¾ mile and 1½ miles of a fixed route	$4.50	$4.75	$5.00
Zone 3/ between 1½ mile and 3 miles of a fixed route	$6.00	$6.25	$6.50
B-V Link			
Barstow to Victor Valley	$6.00	$6.00	$7.00
Barstow to San Bernardino Valley	$12.00	$12.00	$13.00
Victor Valley to San Bernardino Valley	$6.00	$6.00	$7.00
Barstow to Victor Valley Senior/Disabled/Medicare	$3.00	$3.00	$3.50
Barstow to San Bernardino Valley Senior/Disabled/Medicare	$6.00	$6.00	$6.50
Victor Valley to San Bernardino Valley Senior/Disabled/Medicare	$3.00	$3.00	$3.50
NTC Service			
One-Way	$12.00	$12.00	$13.00
Special Military MTBP 31 Day Pass	$245.00	$245.00	$245.00
VVTA Mega Pass			
VVTA Mega Pass	$175.00	$175.00	$185.00
Elderly/Disabled Mega Pass	$87.50	$87.50	$92.50

[1] Passengers who are within ¾ mile of Routes 33, 40, 46, 47, and 54 may use Direct Access Service to connect to a fixed route on Sunday and would be the Zone 1 fare

Capital Needs

The new and expanded services will increase the number of vehicles operated in maximum service (VOMS). The primary concern for VOMS is on weekdays as weekday VOMS are higher than the expected VOMS on Saturday or Sunday. Below is a list of additional VOMS required.

- Fiscal Year 2014
    - 12 year/500,000 miles – 4 additional vehicles
        - Route 32 – 1
        - Route 41 – 2
        - Route 52 – 1
    - 7 year/200,000 miles – 1 additional vehicle
        - Tri-Community Circulator – 1

- Fiscal Year 2016
    - 7 year/200,000 miles – 4 additional vehicles
        - Oak Hills (Route 24) – 2
        - Apple Valley Road (Route 49) – 2

Approximately one hundred-forty (140) bus stop changes, additions, subtractions and adjustments, will be needed throughout Victor Valley to support the COA proposals. These include bus stops along new route alignments, bus stop adjustments to the opposite side of the street to support bi-directional services being implemented, and evaluation of the additional bus stop needs to meet the bus stops spacing guidelines.

Summary of Community Outreach Activities for Potential Bus Route Alternatives

The focus of the second round of outreach activities was to obtain public input on potential bus route alternatives. A system map that displayed the route recommendations was made available for public review on VVTA's website prior to and during the spring 2013 community outreach activities. Outreach activities were undertaken during the week of April 15, 2013. There were 640 participants in these activities, which included in-person customer comment sessions and employee input sessions. It should be noted that of the 965 total comments recorded there were only 3, or 0.3 percent, who commented that they would no longer able to get to destination while an astounding 689, or 71.4 percent, commented it would be easier. In all 900, or 93.3 percent, stated that the service would be easier or have no impact.

Strategic Changes Through 2020

While specific strategic changes through Fiscal Year 2020 were not identified in Chapter 7, a number of service need themes were heard through the public outreach process. These themes

represent items that VVTA will need to monitor over the next five years to see if these themes become service needs and if there is an ability to fund these service needs. The items that VVTA should be monitor include: later evening service, more frequent service, service along Mojave Drive, service along Hesperia Road, additional Sunday services, on-time performance, limited stop service , Hesperia Transit Center, and the 7th/Lorene Transit Center

Staffing

The need for five additional VVTA administrative employees was identified in Chapter 7. The need for these positions was confirmed by various other audits conducted on VVTA, including the FTA Triennial Review. These positions are needed to respond to growth in the VVTA system, critical function support, improve the ability of VVTA staff to respond to the board and the general public questions and concerns, and finally to support data reporting requirements. The additional positions needed are an Account I, a fleet/facility analyst, marketing assistant, a staff clerk, and a procurement/civil rights officer. Three of these positions should be added in FY 2014.

Financial Plan

The financial plan presents costs and LTF revenues for implementing the recommendations of the COA. Costs were estimated based on VVTA's current cost structure and hours of service that are projected to operate. Non-fare revenue projections were provided by San Bernardino Associated Governments (SANBAG) based on their projections to 2020. These costs and revenues provide a planning level estimate of costs and revenues. Planning level cost estimates tend to be higher than actual cost since these estimates are based on broad assumptions regarding cost increases. Costs and revenues will be refined each year as part of the budgeting process.

Implementation of all recommendations from the COA will not require the use of all LTF available in Victor Valley. Based on cost and revenue projections, all communities will still have LTF available for street maintenance for as long as policy allows surplus transit LTF to be spent on streets. Table ES-2 presents a summary of the estimated amount LTF required for transit and LTF remaining for streets based on the implementation of the COA.

Table ES-2: Summary of LTF Impacts

Jurisdiction	LTF Use	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
County	Transit	$1,286,696	$1,447,349	$1,581,692	$1,612,256	$1,667,225	$1,690,670	$1,734,109
	Streets	$1,230,341	$1,190,506	$1,182,779	$1,284,910	$1,369,005	$1,491,300	$1,600,595
	Total Available	$2,517,037	$2,637,855	$2,764,472	$2,897,167	$3,036,231	$3,181,970	$3,334,704
	Transit Percent	51.12%	54.87%	57.21%	55.65%	54.91%	53.13%	52.00%
Adelanto	Transit	$951,014	$980,454	$958,832	$988,053	$1,114,830	$1,155,250	$1,215,999
	Streets	$190,461	$215,812	$294,855	$325,811	$262,100	$287,772	$296,288
	Total Available	$1,141,475	$1,196,266	$1,253,687	$1,313,864	$1,376,929	$1,443,022	$1,512,287
	Transit Percent	83.31%	81.96%	76.48%	75.20%	80.96%	80.06%	80.41%
Apple Valley	Transit	$2,092,754	$2,226,108	$2,569,163	$2,621,165	$2,961,741	$3,097,931	$3,278,376
	Streets	$418,195	$405,367	$188,622	$268,994	$67,146	$76,342	$48,263
	Total Available	$2,510,949	$2,631,475	$2,757,786	$2,890,159	$3,028,887	$3,174,274	$3,326,639
	Transit Percent	83.35%	84.60%	93.16%	90.69%	97.78%	97.59%	98.55%
Hesperia	Transit	$1,682,025	$1,772,126	$2,195,628	$2,209,188	$2,479,205	$2,573,963	$2,710,604
	Streets	$1,587,889	$1,654,744	$1,395,732	$1,554,557	$1,465,200	$1,559,773	$1,621,552
	Total Available	$3,269,914	$3,426,870	$3,591,360	$3,763,745	$3,944,405	$4,133,736	$4,332,155
	Transit Percent	51.44%	51.71%	61.14%	58.70%	62.85%	62.27%	62.57%
Victorville	Transit	$3,371,101	$3,564,465	$3,431,992	$3,556,070	$4,058,354	$4,232,956	$4,483,126
	Streets	$853,665	$863,090	$1,208,085	$1,306,730	$1,037,861	$1,107,878	$1,114,068
	Total Available	$4,224,766	$4,427,554	$4,640,077	$4,862,801	$5,096,215	$5,340,834	$5,597,194
	Transit Percent	79.79%	80.51%	73.96%	73.13%	79.63%	79.26%	80.10%
Total	Transit	$9,383,591	$9,990,501	$10,737,307	$10,986,734	$12,281,355	$12,750,771	$13,422,214
	Streets	$4,280,551	$4,329,519	$4,270,074	$4,741,002	$4,201,312	$4,523,064	$4,680,765
	Total Available	$13,664,142	$14,320,020	$15,007,381	$15,727,736	$16,482,667	$17,273,835	$18,102,979
	Transit Percent	68.67%	69.77%	71.55%	69.86%	74.51%	73.82%	74.14%

Capital Plan

As part of the annual budget process, VVTA identifies capital needs for the upcoming years and the funding plan for each item. The Capital Plan provides an overview of capital items needed to support VVTA service through 2020. The VVTA capital plan is funded through a combination of federal and state funding sources. The finance plan presents LTF needed to support the capital plan. Items included in the capital plan are revenue vehicles, major vehicle component replacement, transit enhancements, facility lease payments, mobility management projects, and security expenditures. The vehicle purchase program is presented on Table ES-3.

Table ES-3: Vehicle Purchase Program

Year	12 Year/500,000 Mile			7 Year/200,000 Mile			5 Year/ 150,000 Mile	4 Year/ 100,000 Mile	Total
	Replacement	Expansion	Total	Replacement	Expansion	Total	Replacement	Replacement	
FY 2014	0	2	2	4	1	5	8	4	19
FY 2015	2	2	4	0	3	3	0	4	11
FY 2016	0	0	0	0	0	0	5	0	5
FY 2017	4	0	4	2	0	2	0	0	6
FY 2018	0	0	0	5	0	5	0	8	13
FY 2019	4	0	4	0	0	0	0	0	4
FY 2020	4	0	4	2	0	2	4	4	16
Total	14	4	18	13	4	17	17	20	72

Conclusion

Many transit agencies in California and throughout the nation are struggling with funding to maintain service levels and others are actually cutting transit service. Conversely, VVTA has entered into an era of constrained growth that allows the agency improve service to meet the needs of the transit dependent rider, develop services for the choice rider such as the NTC Fort Irwin Commuter, and introduce new services such as vanpools for the non-traditional transit customer. Finally, the addition of a Mobility Management component to the agency positions it to provide assistance to human service transportation providers to help reduce ADA trips/expenses as well as provide travel training also with the goal of controlling ADA expenses.

With all this in place, VVTA should also see a significant increase in its FTA section 5307 apportionment funding. As an example for FY 2013 VVTA's 5307 apportionment was $1.02 million dollars more than the SANBAG estimate of $2,508,500. That is almost a 30 percent increase.

1.0 Transit Service Baseline and Ridership Analysis

1.1 Introduction

Victor Valley Transit Authority (VVTA) has commissioned AECOM to perform a Comprehensive Operational Analysis (COA) and Short Range Transit Plan (SRTP) of the Victor Valley Transit Authority. The study will look at the current performance Victor Valley Transit services as well as development in the Victor Valley area to determine how effective the current services are and what service modifications will be needed to serve the Victor Valley community in the coming years.

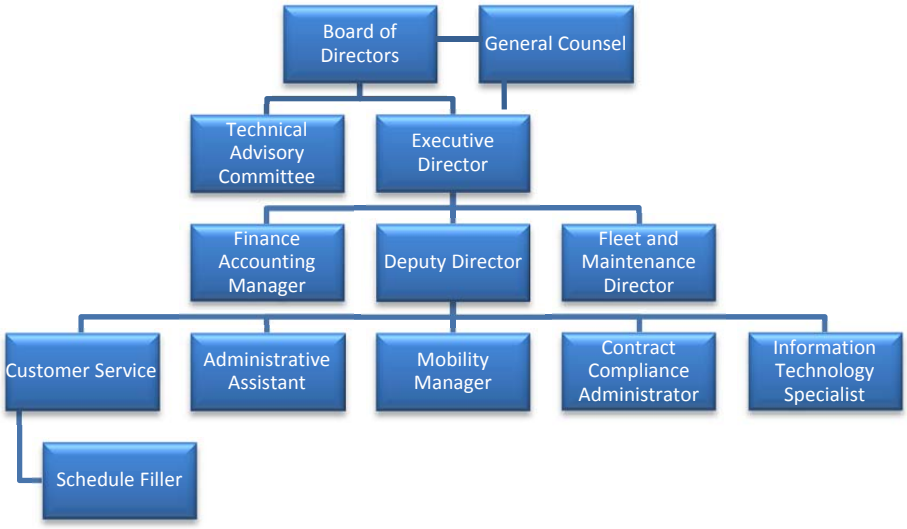
This chapter provides an overview of transit service provided by VVTA, a detailed description of existing fixed route services, ADA Direct Access service, and capital assets. The transit service overview describes VVTA governance, budget, recent service changes, and passenger fares. The data detailed in the fixed route and Direct Access sections include route descriptions, ridership statistics, on-time performance, and service and financial indicators. The capital assets section provides information relating to the VVTA fleet, bus stops, facilities and capital projects. The analysis of existing conditions and operations will provide a basis for analyses and recommendations presented in subsequent tasks.

1.2 Transit Service Overview

1.2.1 Victor Valley Transit Governance

Victor Valley Transit is governed by a Joint Powers Agreement (JPA) between San Bernardino County, Adelanto, Apple Valley, Hesperia, and Victorville. VVTA is governed by a five-member board of directors made up of an elected official from each member of the JPA. A Technical Advisory Committee is comprised of staff from each of the JPA members, is a working group that provides input and expertise to VVTA staff in developing projects, budgets, procedures, and policies that are then recommended to the VVTA board. See Figure 1-1 for the VVTA organizational chart.

Figure 1-1: VVTA Organizational Chart



Source: VVTA

1.2.2 Budget

Fixed route expenses were the largest portion of operating expenses in FY2011-2012, accounting for 51.1 percent of all operating expenses. Paratransit service represented 26.9 percent and county routes accounted for 9.4 percent of the operating budget. About 10.5 percent of the operating budget was directed to administration.

The largest sources of operating revenues were the Local Transportation Fund (LTF) and passenger fares. LTF represented about two-thirds of the operating revenues and passenger fares accounted for 20.4 percent of revenues. Table 1-1 shows the VVTA operating budget for the current fiscal year.

Table 1-1: VVTA Operating Budget, FY2011-2012

Operating Expenses		Operating Revenues	
Fixed Route	$5,177,963	Section 5311	$232,865
Complementary Paratransit	$2,724,410	LTF	$5,933,218
Community Routes	$953,251	Measure I	$649,870
B-V Link	$110,529	CMAQ Demonstration	$94,529
VVTA Yard/Facilities	$109,020	Fare Subsidy (Measure I)	$22,500
VVTA Administration	$1,062,108	AB2766	$99,800
TOTAL	$10,137,281	Passenger Fares	$1,813,000
Operating Capital	($1,266,249)	Other	$25,250
TOTAL	$8,871,032	TOTAL	$8,871,032

Source: VVTA Annual Operating and Capital Budget, FY2011-2012

The largest capital expenses were for fixed route services and administration, representing 48.7 and 39.5 percent of the capital expenses, respectively. By far, the largest share of capital revenues came from the federal government, 49.4 percent from Section 5307 and 26.5 percent from Congestion Mitigation and Air Quality (CMAQ). See Table 1-2 for the VVTA capital budget.

Table 1-2: VVTA Capital Budget, FY2011-2012

Capital Expenses	
Fixed Route	$2,472,172
Complementary Paratransit	$586,251
Community Routes	$12,500
B-V Link	-
VVTA Yard/Facilities	-
VVTA Administration	$2,002,164
Miscellaneous Capital	-
TOTAL	$5,073,087

Capital Revenues	
Section 5307	$2,508,500
Section 5316	$155,800
Section 5317	$71,800
Section 5310	-
AB 2766	-
LTF	$672,683
CMAQ	$1,345,114
Other Proposition 1B	$319,189
STAF	-
TOTAL	$5,073,086

Source: VVTA Annual Operating and Capital Budget, FY2011-2012

Adelanto contributes the highest percentage of its LTF funds to transit. The county contributes the lowest proportion, with fewer than 50 percent of LTF funds directed to transit in the service area. See Table 1-3 for LTF funding apportionments by jurisdiction.

Table 1-3: LTF Funding Apportionment

Jurisdiction	Annual Apportionment	LTF for Transit	Percent for Transit
Adelanto	$819,274	$681,762	83%
Apple Valley	$2,010,580	$1,345,593	67%
Hesperia	$2,539,893	$1,468,968	58%
Victorville	$3,217,876	$2,239,326	70%
San Bernardino County	$1,994,100	$870,252	44%

Source: VVTA Annual Operating and Capital Budget, FY2011-2012

The amount of operating LTF revenues supplied for fixed route, ADA and county routes by the San Bernardino County and the towns in the service area was based on the percentage of service hours or service miles operated in each respective area. For fixed route service, Victorville paid the highest percentage and Adelanto paid the lowest. Paratransit operating LTF was more evenly divided between Victorville, Hesperia and Apple Valley. The operating LTF for county routes was supported by contributions by the county and Victorville, with the county paying the majority of the LTF. B-V Link service was entirely financed by a CMAQ Demonstration Project Grant and passenger fares. In terms of capital LTF expenditures, Victorville paid the highest percentage while the county paid the lowest percentage. See Table 1-4 for the percent of LTF expenditure for all service types by jurisdiction.

Table 1-4: Percent of FY2011-2012 LTF Expenditures by Service Type and Jurisdiction

Jurisdiction	Fixed Routes	ADA Paratransit	County Routes	Capital
Adelanto	9.3%	6.3%	0%	17.1%
Apple Valley	20.6%	27.8%	0%	20.0%
Hesperia	23.6%	30.1%	0%	21.5%
Victorville	46.5%	35.1%	11.6%	29.1%
San Bernardino County	0%	0.6%	88.4%	12.3%

Source: VVTA Annual Operating and Capital Budget, FY2011-2012

Revenues for the VVTA administration, fueling yard and other facility costs were evenly split amongst the members of the JPA. Adelanto, Apple Valley, Hesperia, Victorville and San Bernardino County each contributed 20 percent.

1.2.3 Victor Valley Transit Trends and Service Changes

Trends

Table 1-5 shows the VVTA service profile trends from 2000 to 2010. This data comes from the National Transit Database (NTD). NTD data for 2011 was in draft form and not complete at the time at the time of this analysis. Between 2000 and 2010, the increase in operating expenses outpaced increases in service provided, measured in revenue hours, revenue miles, and ridership. Most of the increase in operating expenses occurred during the first half of the decade, including significant increases between 2000 and 2003 when costs increased by about 20 percent annually.

Ridership and the number of revenue hours and miles operated increased overall. Year to year, ridership numbers fluctuated, increasing in some years and decreasing in others. There was a relatively strong gain in ridership between 2008 and 2010 after the implementation of a number of route and frequency changes. A large increase in revenue hours and miles from 2002 to 2003 was followed by a decrease in revenue hours between 2004 and 2006 and a decrease in revenue miles from 2004-2007. Since 2006 and 2007, respectively, the number of revenue hours and revenue miles operated increased.

Table 1-5: VVTA Trends

Numerical				
Year	Ridership	Revenue Hours	Revenue Miles	Operating Expenses
2000	1,025,205	93,298	1,800,420	$3,915,086
2001	1,101,002	95,765	1,873,016	$4,741,793
2002	1,064,472	97,687	1,884,449	$5,610,405
2003	1,094,195	122,541	2,386,733	$6,837,064
2004	1,208,018	122,925	2,425,636	$6,950,041
2005	1,071,153	112,634	2,150,919	$7,797,079
Change 2000-2005	+45,948	+19,336	+350,499	+$3,881,993
2006	1,037,338	109,200	2,047,870	$6,916,551
2007	1,096,965	111,544	2,023,796	$7,094,470
2008	1,123,283	122,063	2,115,337	$8,024,338
2009	1,345,659	135,783	2,263,031	$8,771,557
2010	1,482,515	141,077	2,351,163	$9,105,751
Change 2005-2010	+411,362	+28,443	+200,244	+$1,308,672
Change 2000-2010	+457,310	+47,779	+550,743	+$5,190,665

Percent Change				
Year	Ridership	Revenue Hours	Revenue Miles	Operating Expenses
2000-2001	+7.4%	+2.6%	+4.0%	+21.1%
2001-2002	-3.3%	+2.0%	+0.6%	+18.3%
2002-2003	+2.8%	+25.4%	+26.7%	+21.9%
2003-2004	+10.4%	+0.3%	+1.6%	+1.7%
2004-2005	-11.3%	-8.4%	-11.3%	+12.2%
Change 2000-2005	+4.5%	+20.7%	+19.5%	+99.2%
2005-2006	-3.2%	-3.0%	-4.8%	-11.3%
2006-2007	+5.7%	+2.1%	-1.2%	+2.6%
2007-2008	+2.4%	+9.4%	+4.5%	+13.1%
2008-2009	+19.8%	+11.2%	+7.0%	+9.3%
2009-2010	+10.2%	+3.9%	+3.9%	+3.8%
Change 2005-2010	+38.4%	+25.3%	+9.3%	+16.8%
Change 2000-2010	+44.6%	+51.2%	+30.6%	+132.6%

Source: NTD

Service Changes

The history of service changes was analyzed to determine how VVTA responded to changing transit markets and contained operating costs. Major service changes included route modifications, route eliminations, route additions or extensions, service frequency adjustments, service span adjustments, and any changes in service provision. Most major VVTA service changes within the past five years consisted of route modifications. The greatest number of route modifications occurred in 2009 when three routes saw reductions in service frequencies and another route had an increase in frequency. There were few route changes in the other years for which data was provided. Major services changes between 2008 and 2011 as cited by VVTA service change notices include:

- 2008
  - Modification of Route 21: Bus stop and route change in Phelan
  - Modification of Route 44: Added service along Willow/Live Oak loop
  - New Route 48 service introduced
  - New Route 54 service introduced
  - Increase weekday service frequency from hourly to half hourly on Routes 43, 45 and 53 between the hours of 10:00AM and 4:00PM
- 2009
  - Modification of Route 23: Route change in Apple Valley
  - Reduction of Saturday service on Routes 43, 45 and 53: Reduced service to 60 minute headways all day
  - Increase weekday service on Route 45: Add morning frequencies on Route 45
  - Modification of Route 52: Eliminate outbound segment on Hook Bl. and add outbound segment on Seneca Rd.

- Modification of Route 54: Loop in Mountain View Acres modified
- Modification of Route 46: Route change to serve new VVTA offices and at Sultana Street and G Avenue, route change to serve East Santa Fe Avenue and Olive Street in Hesperia, route change at Hesperia Post Office
- Modification and interlining of Routes 45 and 48: Route change at Hesperia Post Office for interlining of routes and improved connections

- 2010
  - Route deviation allowance of Route 46 to serve senior complex upon request only
- 2011
  - Modification of Route 52: Route change to serve the Department of Children Services in Victorville
  - Introduction of B-V Link service
  - Modification of Route 46: Route will serve VVTA offices on Smoketree Street
  - Modification of Route 45: Route no longer deviates to serve VVTA offices on Smoketree Street
  - Modification of B-V Link: Route adjustments in Barstow

1.2.4 Fare/Transfer Policy

VVTA fares vary by service type: local fixed route services, county route services, deviated route services, B-V Link and Direct Access. The regular cash fare is $1.25 for local fixed route service. The regular fare for county services is $2.25. The regular fare for deviated route services is $2.00. Discounted fares are available for students, seniors, the disabled and Medicare card holders with valid identification. Children aged five and under ride for free on local fixed route and county services. Transfers are not provided for cash passengers.

A regular B-V Link Day Pass is $6.00. The B-V Link Pass can be used for unlimited rides on VVTA and limited rides on Barstow Area Transit services, excluding ADA services, on the day of travel. There is a discounted fare for seniors and the disabled.

Day passes and 31-day passes are available for local fixed route and county service. Passes cannot be used on deviated services. See Table 1-6 for the full breakout of VVTA fares.

Table 1-6: VVTA Fares

Service	Regular	Student	Senior/ Disabled	Child
Local Fixed Route	$1.25	$1.00	$0.60	Free
County Route	$2.25	$2.00	$1.00	Free
Deviated Route	$2.00	$2.00	$1.00	Free
Local Fixed Route Day Pass	$3.50	$3.25	$1.75	n/a
County Day Pass	$5.50	$4.50	$2.75	n/a
B-V Link Pass	$6.00	n/a	$3.00	n/a
Local Fixed Route 31-Day Pass	$50.00	$40.00	$25.00	n/a
County 31-Day Pass	$75.00	$65.00	$35.00	n/a

Source: VVTA

Direct Access fares are determined by how far a customer pick up or drop off location is from a fixed route bus stop. Zone 1 fares are charged for locations within ¾ miles of a fixed route bus stop. Zone 2 fares are charged between ¾ miles and 1½ miles of a fixed route bus stop. And, zone 3 fares are charged for locations between 1½ and 2¼ miles of a fixed route bus stop. See Table 1-3 for Direct Access fares. See Table 1-7 for Direct Access fares.

Table 1-7: Direct Access Fares

Number of Zones	Fare
Zone 1	$2.50
Zone 2	$4.50
Zone 3	$6.00

Source: VVTA

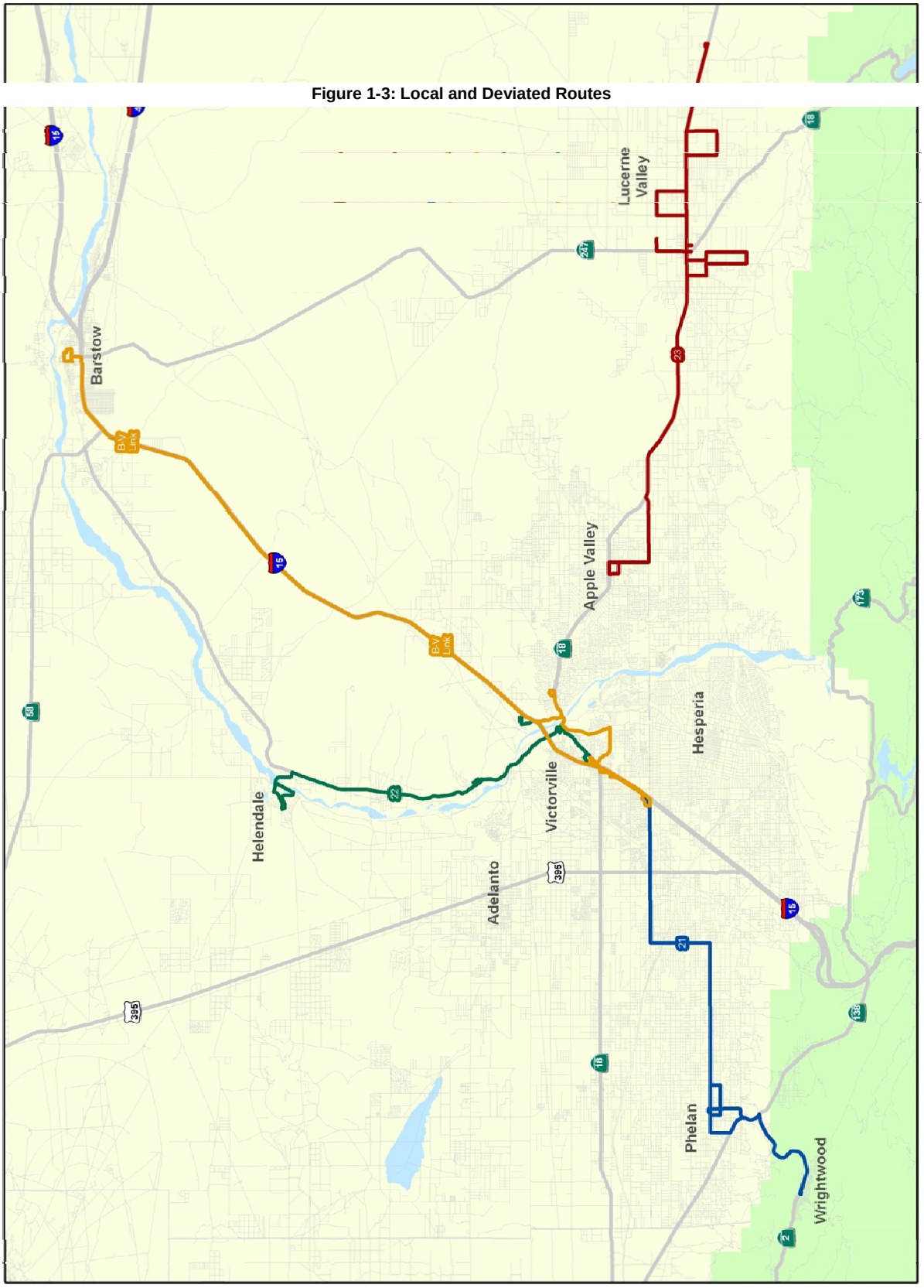
1.3 Fixed Route Service

VVTA provides three types of fixed route services: county routes, local fixed routes and local deviated routes. VVTA provides three county routes in the service area. County routes are longer distance routes that serve unincorporated areas surrounding the fixed route service area. See Figure 1-2 for a map of VVTA county routes. Also included in Figure 1-2 is B-V Link service which connects Victorville and Apple Valley with Barstow. B-V Link service operates on three out of five weekdays only, Monday, Wednesday and Thursday. B-V Link service was introduced in January 2011 and the statistics presented in the following sections represent figures from the last six months of FY2011.

Local fixed routes operate service along a set route within the area of Adelanto, Apple Valley, Hesperia, and Victorville. Local deviated routes provide service to areas within ¾ mile of a base route. There are 11 local fixed routes and four local deviated routes operated in the VVTA service area. See Figure 1-3 for a map of VVTA local fixed and deviated routes.

Figure 1-2: County Routes and B-V Link

Figure 1-3: Local and Deviated Routes



1.3.1 Service Span and Frequency

Table 1-8 presents service span and frequency for all routes in the VVTA network.

Table 1-8: Service Span and Frequency

Route	Route Name	Span		Frequency (min.)	
		Weekday	Saturday	Weekday	Saturday
21	Tri-Community	5:25AM-8:55PM	6:35AM-8:00PM	90	90
22	Helendale	5:45AM-8:00PM	7:00AM-8:00PM	120	120
23	Lucerne Valley	5:45AM-8:28PM	7:00AM-8:28PM	100	100
31	Adelanto-Victorville	6:00AM-8:55PM	7:00AM-7:55PM	30 Peak/ 60 Non-Peak	60
32	Adelanto-Victorville North	6:00AM-8:57PM	7:00AM-7:57PM	60	60
33	Adelanto Circulator	5:50AM-8:50PM	6:50AM-7:50PM	60	60
40	Apple Valley North	6:00AM-8:55PM	7:00AM-7:55PM	60	60
41	Apple Valley-Victorville	6:00AM-8:55PM	7:00AM-7:55PM	60	60
43	Apple Valley-Victorville College	6:00AM-8:54PM	7:00AM-7:54PM	30 Peak/ 60 Non-Peak	60
44	Victor Valley Mall-Hesperia	5:50AM-8:57PM	6:50AM-7:57PM	60	60
45	Victorville-Hesperia	6:00AM-8:58PM	7:00AM-7:58PM	30 Peak/ 60 Non-Peak	60
46	Hesperia Route Deviation	6:00AM-8:50PM	7:00AM-7:50PM	60	60
47	Apple Valley South Route Deviation	6:00AM-8:57PM	7:00AM-7:57PM	60	60
48	Hesperia West	6:00AM-9:07PM	7:00AM-8:07PM	60	60
51	Victorville Circulator	6:00AM-8:55PM	7:00AM-7:55PM	60	60
52	Victorville-Mall	6:00AM-8:55PM	7:00AM-7:55PM	60	60
53	Victor Valley College-Victor Valley Mall	6:00AM-8:57PM	7:00AM-7:57PM	30 Peak/ 60 Non-Peak	60
54	Victorville West	6:23AM-9:18PM	7:23AM-8:18PM	60	60
B-V Link	B-V Link	7:50AM-6:00PM*	n/a	3 EB Trips/ 3 WB Trips*	n/a

*Operates on Monday, Wednesday and Thursday only.
Source: VVTA Public Timetables

1.3.2 School Tripper Service

VVTA does not operate any school trippers. VVTA provides a second full size bus to Serrano High School in Phelan on select weekday trips of Route 21 to handle the crowds generated by the high school. Trips are scheduled at key times of the school day to meet the needs of students.

1.3.3 System Ridership

In 2011, VVTA had an annual ridership of about 1.5 million passenger trips, including fixed route, deviated route and Direct Access services. Weekdays, the fixed and deviated routes with the highest ridership were Routes 45, 41 and 31. Each of these routes had more than 150,000 passengers annually and greater than 600 passengers on an average weekday. The B-V Link

had the fewest number of riders, an average of eight passengers on an average weekday when the service operated. Other than the B-V Link, the routes with the fewest riders Routes 54, 23 and 22 with about 20,000 annual riders or less in 2011 and under 80 passengers on an average weekday.

Saturday, the routes with the highest ridership were Routes 41, 52 and 45. The routes with the lowest Saturday ridership were Route 21, 54 and 23. See Table 1-9 for 2011 annual weekday and Saturday ridership by route. See Table 1-10 for average daily ridership by route.

Table 1-9: Annual Ridership by Route (2011)

Route Number	Route Name	Annual Ridership		
		Weekdays	Saturday	Total
Fixed Routes and Deviated Routes				
45	Victorville-Hesperia	192,295	16,925	209,220
41	Apple Valley-Victorville	178,229	23,604	201,833
31	Adelanto-Victorville	157,617	15,567	173,184
52	Victorville-Mall	121,546	20,521	142,067
43	Apple Valley-Victorville College	127,001	14,671	141,672
53	Victor Valley College-Victor Valley Mall	126,535	14,019	140,554
48	Hesperia West	80,602	7,692	88,294
32	Adelanto-Victorville North	71,801	10,010	81,811
44	Victor Valley Mall-Hesperia	67,848	10,049	77,897
51	Victorville Circulator	67,855	7,578	75,433
33	Adelanto Circulator	45,731	6,215	51,946
40	Apple Valley North	37,713	5,353	43,066
21	Tri-Community	29,054	2,209	31,263
46	Hesperia Route Deviation	27,719	3,523	31,242
47	Apple Valley South Route Deviation	23,387	3,462	26,849
22	Helendale	20,126	2,998	23,124
23	Lucerne Valley	17,394	2,337	19,731
54	Victorville West	17,338	2,269	19,607
B-V Link*	B-V Link	1,219*	n/a	1,219*
Total	All Fixed Routes and Deviated Routes	1,411,010	169,002	1,580,012
Demand Response				
ADA	Direct Access	59,779	5,436	65,215
Overall				
Total	All Routes and Services	1,470,789	174,438	1,645,227

*B-V Link service commenced in January 2011. Annual ridership shows ridership reported between months of January and June 2011.
Source: TransTrack

Table 1-10: Average Daily Ridership by Route (2011)

Route Number	Route Name	2011 Average Daily Ridership	
		Weekdays	Saturday
Fixed Routes and Deviated Routes			
45	Victorville-Hesperia	748	339
41	Apple Valley-Victorville	693	472
31	Adelanto-Victorville	613	311
43	Apple Valley-Victorville College	494	293
53	Victor Valley College-Victor Valley Mall	492	280
52	Victorville-Mall	473	410
48	Hesperia West	314	154
32	Adelanto-Victorville North	279	200
51	Victorville Circulator	264	152
44	Victor Valley Mall-Hesperia	264	201
33	Adelanto Circulator	178	124
40	Apple Valley North	147	107
21	Tri-Community	113	44
46	Hesperia Route Deviation	108	70
47	Apple Valley South Route Deviation	91	69
22	Helendale	78	60
23	Lucerne Valley	68	47
54	Victorville West	67	45
B-V Link*	B-V Link	8*	n/a
Total	All Fixed Routes and Deviated Routes	5,492	3,378
Demand Response			
ADA	Direct Access	233	109
Overall			
Total	All Routes and Services	5,725	3,487

*B-V Link service commenced in January 2011. Average daily ridership reflects service provision on three out of five weekdays.
Source: TransTrack

1.3.4 Revenue Service Hours and Miles

In 2011, VVTA operated about 120,000 revenue service hours on weekdays and 15,000 revenue hours on Saturdays. Fixed and deviated routes accounted for about three quarters of the revenue hours provided and Direct Access service accounted for the other quarter. On weekdays, the most revenue hours were operated on Route 45, with almost 10,000 annual revenue hours. After Route 45, the most revenue hours were operated on Route 44 and Route 41. The lowest numbers of revenue hours were operated on the B-V Link, Route 22, Route 23 and Route 46. On Saturday, the routes with the greatest number of revenue service hours were Routes 45, 44, and 41. The routes with the lowest number of revenue hours on Saturday were Routes 43, 46 and 31. The number of revenue hours operated on the majority of routes ranged

between 3,500 and 4,000 on weekdays and between 650 and 700 on Saturday. See Table 1-11 for 2011 revenue hours by route.

Table 1-11: Revenue Hours by Route (2011)

Route Number	Route Name	2011 Revenue Hours		
		Weekdays	Saturday	Total
Fixed Routes and Deviated Routes				
45	Victorville-Hesperia	9,938	1,400	11,338
44	Victor Valley Mall-Hesperia	7,635	1,342	8,977
41	Apple Valley-Victorville	7,452	1,305	8,757
53	Victor Valley College-Victor Valley Mall	7,278	1,024	8,302
31	Adelanto-Victorville	6,084	670	6,754
43	Apple Valley-Victorville College	5,321	665	5,986
21	Tri-Community	4,415	675	5,090
48	Hesperia West	3,838	676	4,514
54	Victorville West	3,836	675	4,511
33	Adelanto Circulator	3,826	674	4,500
47	Apple Valley South Route Deviation	3,826	673	4,499
52	Victorville-Mall	3,822	673	4,495
32	Adelanto-Victorville North	3,821	673	4,494
40	Apple Valley North	3,819	672	4,491
51	Victorville Circulator	3,817	672	4,489
46	Hesperia Route Deviation	3,795	666	4,461
23	Lucerne Valley	3,735	699	4,434
22	Helendale	3,643	675	4,318
B-V Link*	B-V Link	630*	n/a	630*
Total	All Fixed Routes and Deviated Routes	90,531	14,509	105,040
Demand Response				
ADA	Direct Access	27,533	2,764	30,297
Overall				
Total	All Routes and Services	118,064	17,273	135,337

*B-V Link service commenced in January 2011. Hours were reported for the months from January to June 2011. B-V Link service operates on three out of five weekdays only.
Source: TransTrack

VVTA operated 2.2 million revenue miles in 2011. Route 45, with over 150,000 revenue miles on weekdays and over 20,000 revenue miles on Saturday, operated the most revenue miles of any route on weekdays and Saturday. Following Route 45 were Routes 21 and 31. The routes that operated the lowest number of revenue miles on both weekdays and Saturday were the B-V Link, Route 46, Route 51 and Route 47. See Table 1-12 for 2011 revenue miles by route.

Table 1-12: Revenue Miles by Route (2011)

Route Number	Route Name	2011 Revenue Miles		
		Weekdays	Saturday	Total
Fixed Routes and Deviated Routes				
45	Victorville-Hesperia	150,494	20,348	170,842
21	Tri-Community	115,577	15,932	131,509
23	Lucerne Valley	109,734	17,112	126,846
31	Adelanto-Victorville	112,806	12,663	125,469
44	Victor Valley Mall-Hesperia	103,587	18,214	121,801
22	Helendale	97,784	18,498	116,282
41	Apple Valley-Victorville	94,424	16,617	111,041
43	Apple Valley-Victorville College	96,744	12,433	109,177
32	Adelanto-Victorville North	82,437	14,534	96,971
48	Hesperia West	77,521	13,655	91,176
53	Victor Valley College-Victor Valley Mall	79,441	10,208	89,649
33	Adelanto Circulator	70,735	13,604	84,339
54	Victorville West	69,045	12,152	81,197
52	Victorville-Mall	64,435	11,351	75,786
40	Apple Valley North	60,275	10,613	70,888
47	Apple Valley South Route Deviation	49,140	8,646	57,786
51	Victorville Circulator	46,442	8,180	54,622
46	Hesperia Route Deviation	45,294	7,968	53,262
B-V Link*	B-V Link	20,265*	n/a	20,265*
Total	All Fixed Routes and Deviated Routes	1,546,180	242,728	1,732,341
Demand Response				
ADA	Direct Access	438,506	44,648	483,154
Overall				
Total	All Routes and Services	1,984,686	287,376	2,215,495

*B-V Link service commenced in January 2011. Miles were reported for the months from January to June 2011. B-V Link service operates on three out of five weekdays only.
Source: TransTrack

1.3.5 Operating Expenses

In 2011, VVTA spent a total of about $8.5 million on operations: $7.5 million on fixed and deviated routes and $1.0 million on Direct Access service. Weekdays and Saturday, the routes with the highest operating costs were Routes 45, 44 and 41. The routes with the lowest operating costs were the B-V Link and Routes 46, 51 and 47. Direct Access accounted for about 25 percent of operating expenditures. See Table 1-13 for operating expenses by route.

Table 1-13: Operating Expenses by Route (2011)

Route Number	Route Name	Weekdays	Saturday	Total
Fixed Routes and Deviated Routes				
45	Victorville-Hesperia	$594,703	$84,388	$679,091
44	Victor Valley Mall-Hesperia	$452,903	$80,381	$533,284
41	Apple Valley-Victorville	$441,260	$78,150	$519,410
53	Victor Valley College-Victor Valley Mall	$427,547	$60,187	$487,734
31	Adelanto-Victorville	$370,298	$41,365	$411,663
21	Tri-Community	$337,639	$49,858	$387,498
43	Apple Valley-Victorville College	$324,194	$41,096	$365,291
23	Lucerne Valley	$287,369	$51,306	$338,675
22	Helendale	$276,172	$51,039	$327,211
32	Adelanto-Victorville North	$235,514	$42,148	$277,662
48	Hesperia West	$234,727	$41,922	$276,648
33	Adelanto Circulator	$234,315	$42,249	$276,563
54	Victorville West	$233,202	$41,614	$274,816
52	Victorville-Mall	$230,641	$41,131	$271,772
40	Apple Valley North	$229,554	$40,896	$270,449
47	Apple Valley South Route Deviation	$226,896	$40,341	$267,237
51	Victorville Circulator	$225,409	$40,077	$265,486
46	Hesperia Route Deviation	$223,231	$39,553	$262,784
B-V Link*	B-V Link	$69,915*	n/a	$69,915*
Total	All Fixed Routes and Deviated Routes	$5,655,489	$907,701	$6,563,189
Demand Response				
ADA	Direct Access	$1,901,144	$190,916	$2,092,060
Overall				
Total	All Routes	$7,556,633	$1,098,617	$8,655,249

*B-V Link service commenced in January 2011. Shows operating expenses reported between months of January and June 2011.
Source: TransTrack

1.3.6 Fare Revenues

In 2011, the VVTA system generated about $1.7 million in passenger fare revenues. Passenger fare revenues were highest on Routes 45, 41 and 31 on weekdays. The routes with the lowest weekday fare revenue were B-V Link and Route 54, 47 and 46. Saturday, the routes with the highest fare revenue were Routes 41, 52 and 45. The lowest fare revenues were generated by Routes 54, 47 and 46 on Saturday. See Table 1-14 for fare revenue by route.

Table 1-14: Fare Revenue by Route (2011)

Route Number	Route Name	Weekdays	Saturday	Total
Fixed Routes and Deviated Routes				
45	Victorville-Hesperia	$166,540	$14,812	$181,352
41	Apple Valley-Victorville	$156,179	$20,607	$176,786
31	Adelanto-Victorville	$137,912	$13,650	$151,562
52	Victorville-Mall	$106,816	$18,022	$124,838
43	Apple Valley-Victorville College	$110,656	$12,851	$123,507
53	Victor Valley College-Victor Valley Mall	$110,936	$12,300	$123,236
21	Tri-Community	$76,466	$6,006	$82,472
48	Hesperia West	$71,520	$6,792	$78,311
32	Adelanto-Victorville North	$63,188	$8,838	$72,026
44	Victor Valley Mall-Hesperia	$59,688	$8,933	$68,821
51	Victorville Circulator	$59,259	$6,648	$65,907
22	Helendale	$54,841	$8,334	$63,174
23	Lucerne Valley	$46,710	$6,166	$52,876
33	Adelanto Circulator	$40,258	$5,470	$45,727
40	Apple Valley North	$33,125	$4,694	$37,819
46	Hesperia Route Deviation	$24,451	$3,127	$27,579
47	Apple Valley South Route Deviation	$20,581	$3,043	$23,623
54	Victorville West	$15,328	$2,013	$17,341
B-V Link*	B-V Link	$6,553*	n/a	$6,553*
Total	All Fixed Routes and Deviated Routes	$1,361,007	$162,306	$1,523,510
Demand Response				
ADA	Direct Access	$196,785	$17,013	$213,797
Overall				
Total	All Routes	$1,557,792	$179,319	$1,737,307

*B-V Link service commenced in January 2011. Shows fare revenue reported between months of January and June 2011.
Source: TransTrack

1.3.7 Fare Payment Type

The most popular type of fare collected by VVTA was the student fare. Regular fares and regular 1-day passes were also popular means of fare payment, as were 31-day student passes. The fare types that were collected the least were deviated route fares and the variety of county fare types. See Table 1-15 for fare types collected annually.

Table 1-15: Annual Fare Type, FY2011

Fare Type	Annual	%
Regular	198,392	13.8%
Senior/Disabled	59,036	4.1%
Student	258,158	18.0%
Deviated Regular	281	0.0%
Deviated Senior/Disabled	2,702	0.2%
Deviated Student	51	0.0%
1-Day Regular Pass	196,656	13.7%
1-Day Senior/Disabled Pass	108,402	7.5%
1-Day Student Pass	78,611	5.5%
1-Day County Pass	10,046	0.7%
1-Day County Senior/Disabled	6,384	0.4%
1-Day County Student	5,439	0.4%
31-Day Regular Pass	119,775	8.3%
31-Day Senior/Disabled Pass	113,785	7.9%
31-Day Student Pass	169,513	11.8%
31-Day County Pass	15,145	1.1%
31-Day County Senior Disabled	13,591	0.9%
31-Day County Student	12,625	0.9%
B-V Link Regular	358	0.0%
B-V Link Senior/Disabled	424	0.0%
Children Under 5	68,199	4.7%

Source: TransTrack

1.4 On-Time Performance

On-time performance is shown in Table 1-16. The table shows the percentage of buses departing timepoints early, on-time and late for each route. A bus is considered on-time if it departs from a time point between the scheduled time and up to five minutes after the scheduled time. Early buses depart before the schedule time and late buses depart more than five minutes late. Route 47 had the most on-time trips. Route 52 had the fewest trips operating on-time, with more than half of trips operating late. Over 15% of Route 46 trips were early.

Table 1-16: On-Time Performance

Route	Early	On-Time	Late
47	2.0%	85.0%	13.0%
48	0.8%	79.1%	20.1%
40	1.2%	77.4%	27.4%
54	4.9%	75.2%	20.0%
41	0.3%	70.1%	29.6%
46	16.7%	69.1%	14.2%
51	0.4%	67.8%	31.8%
32	2.3%	64.8%	32.9%
44	0.8%	64.7%	34.5%
33	0.9%	62.3%	36.8%
21	5.8%	61.0%	33.2%
B-V Link	0.0%	59.1%	40.9%
22	1.9%	55.9%	42.3%
43	0.3%	55.6%	44.1%
53	1.5%	54.1%	44.4%
23	2.8%	52.8%	44.4%
31	0.3%	51.5%	48.2%
45	6.4%	51.3%	42.3%
52	0.3%	44.4%	55.3%
Total	2.0%	60.9%	37.1%

Source: VVTA DataPoint, October 2011

1.5 Service and Financial Indicators

1.5.1 Service Indicators

Service indicators are used to measure the productivity of transit service. Productivity is measured using two variables: passengers per hour and passengers per mile. More productive routes will have a higher number of passengers per hour, mile and peak vehicle. See Table 1-17 for service indicators.

Passengers per Hour

A passenger per hour represents the number of passengers per revenue hour of service provided.

$$\frac{\text{Unlinked Passenger Trips}}{\text{Revenue Hours}}$$

- Systemwide, there were 12.16 passengers per hour in FY2011, 12.46 on weekdays and 10.10 on Saturday.

- Fixed and deviated routes carried 15.59 passengers per hour on weekdays and 11.65 passengers per hour on Saturday.
    - Weekdays, Route 52 was the most productive route with 31.80 passengers per hour followed by Route 31 with 25.91 passengers per hour and Route 41 with 23.92 passengers per hour.
    - The routes with the lowest productivity on weekdays were the B-V Link with 1.93 passengers per hour followed by Route 54 and Route 23 with 4.52 and 4.66 passengers per hour, respectively.
    - Saturday, Routes 52, 31 and 43 had the highest number of passengers per hour. The routes that carried the lowest numbers of passengers per hour on Saturday were Routes 21, 23 and 54 which all carried fewer than 3.50 passengers per revenue hour.
    - All three county routes had a relatively low number of passengers per hour on weekdays and Saturday.
- The Direct Access ADA service carried 2.17 passengers per hour on weekdays and 1.97 passengers per hour on Saturday. According to data from the National Transit Database (NTD), VVTA Direct Access performed better than the 2010 national average of 1.95 passengers per hour for demand response services.

Passengers per Mile

Passengers per mile represents the number of passengers per revenue mile of service operated.

$$\frac{\text{Unlinked Passenger Trips}}{\text{Revenue Miles}}$$

- Systemwide, there were 0.74 passengers per mile in FY2011, 0.74 on weekdays and 0.61 on Saturday.
- Fixed and deviated routes carried 0.91 passengers per mile on weekdays and 0.70 passengers per hour on Saturday.
    - Weekdays, Routes 41 and 52 were the most productive routes with 1.89 passengers per mile. They were followed by Route 53 with 1.59 passengers per mile and Route 51 with 1.46 passengers per mile.
    - Weekdays, the fewest passengers per mile were carried by the B-V Link and Routes 23 and 22, with 0.06, 0.16 and 0.21 passengers per mile, respectively.
    - Saturday, Routes 52, 41 and 53 had the most passengers per mile. The three county routes had the lowest number of passengers per mile of all fixed or deviated routes on Saturday.
- The Direct Access ADA service carried 0.14 passengers per mile on weekdays and 0.12 passengers per mile on Saturday. Direct Access performed slightly better than the 2010 national average of 0.13 passengers per mile based on data from NTD.

Table 1-17: Service Indicators

Route	Passengers per Hour		Passengers per Mile	
	Weekday	Saturday	Weekday	Saturday
21	6.58	3.27	0.25	0.14
22	5.52	4.44	0.21	0.16
23	4.66	3.34	0.16	0.14
31	25.91	23.23	1.40	1.23
32	18.79	14.87	0.87	0.69
33	11.95	9.22	0.65	0.46
40	9.88	7.97	0.63	0.50
41	23.92	18.09	1.89	1.42
43	23.87	22.06	1.31	1.18
44	8.89	7.49	0.65	0.55
45	19.35	12.09	1.28	0.83
46	7.30	5.29	0.61	0.44
47	6.11	5.14	0.48	0.40
48	21.00	11.38	1.04	0.56
51	17.78	11.28	1.46	0.93
52	31.80	30.49	1.89	1.81
53	17.39	13.69	1.59	1.37
54	4.52	3.36	0.25	0.19
B-V Link	1.93	n/a	0.06	n/a
Total	15.59	11.65	0.91	0.70
Direct Access	2.17	1.97	0.14	0.12
Total	12.46	10.10	0.74	0.61

Source: TransTrack

1.5.2 Financial Indicators

Financial indicators are used to measure the efficiency of transit service. For this study, the efficiency of the VVTA system and routes were measured using six indicators, four targeting expenses and two targeting revenues. The expense indicators include operating cost per hour, operating cost per mile, operating cost per passenger and operating cost per peak vehicle. The two revenue indicators include revenue per passenger and farebox recovery. Table 1-18 shows expense indicators and Table 1-19 shows financial indicators.

Cost per Hour

Cost per hour shows the operating cost per revenue hour of service operated. The indicator is used to determine financial efficiency.

$$\frac{\text{Operating Cost}}{\text{Revenue Hours}}$$

- The systemwide cost per hour for FY2011 was $63.95.
- Overall, the fixed and deviated route average operating cost per hour was $62.48.
    - Weekdays, the fixed and deviated routes with the lowest cost per hour were Routes 53 ($58.75), 46 ($58.82), and 51 ($59.05).
    - The routes with the highest cost per hour on weekdays were the B-V Link with a cost of $110.98 per hour, and the three county routes.
    - In general, Saturday costs per hour were similar to those on weekdays. The routes with the lowest costs per hour on Saturday were Route 53, Route 46 and Route 51. The routes with the highest costs per hour on Saturday were the three county routes, Routes 22, 21 and 23.
    - Costs per revenue hour were comparable among all regular fixed routes on weekdays and Saturday. Costs per revenue hour were comparable among the county routes on weekdays and Saturday.
- The overall Direct Access operating cost per hour was $69.05.

Cost per Mile

Cost per mile shows the operating cost per revenue mile of service operated. The indicator shows financial efficiency of routes.

$$\frac{\text{Operating Cost}}{\text{Revenue Miles}}$$

- The systemwide cost per mile for FY2011 was $3.91.
- Overall, the fixed and deviated route average operating cost per mile was $3.79.
    - Weekdays, the fixed and deviated routes with the lowest cost per mile were Routes 23, 22, and 21, the three county routes, all with costs below $3.00 per mile.
    - The routes with the highest cost per mile on weekdays were Routes 53, 46 and 51 which operate the fewest miles per vehicle assigned to the route.
- Saturday, the routes with the lowest costs per mile were Routes 22, 32 and 23. The routes with the highest costs per mile on Saturday were the same routes with the highest weekday costs, Routes 53, 46 and 51.
- The overall Direct Access operating cost per mile was $4.33.

Cost per Passenger

Cost per passenger represents the operating expense per passenger.

$$\frac{\text{Operating Cost}}{\text{Unlinked Passenger Trips}}$$

- The systemwide cost per passenger for FY2011 was $5.26. Weekdays, the systemwide cost per passenger was $5.14 and, on Saturday, the systemwide cost was $6.30.
- Overall, the fixed and deviated route average operating cost per passenger was $4.15.

    - Weekdays, the fixed and deviated routes with the lowest cost per passenger were Routes 52, 31 and 41 with costs per passenger of $1.90, $2.35 and $2.48, respectively.
    - On weekdays, the B-V Link, Route 23 and Route 22 had the highest costs per passenger. The B-V Link have a much higher cost per passenger than any other route with a cost of $57.35 per passenger.
- Saturday, the routes with the lowest costs per passenger were Routes 52, 31 and 43, all with costs below $3.00 per passenger. The routes with the highest costs per passenger were Route 21, 23 and 54.
- The overall Direct Access operating cost per passenger was $32.08.

Cost per Peak Vehicle

Cost per peak vehicle represents the operating expense per peak vehicle operated. This represents the incremental cost of adding a bus to the route.

$$\frac{\text{Operating Cost}}{\text{Number of Peak Vehicles}}$$

- The overall cost per peak vehicle for fixed and deviated routes was $218,773 for FY2011.
    - Weekdays, the fixed and deviated routes with the lowest cost per peak vehicle were the B-V Link and Routes 48 and 53. The B-V Link had a very low cost per peak vehicle at $34,958 compared to other routes.
    - On weekdays, Routes 23 had the highest cost per peak vehicle at $287,369 followed by Routes 22 and 32.
- Saturday, the routes with the lowest costs per peak vehicle were Routes 48 ($20,961), 53 ($30,094) and 41 ($39,075). The routes with the highest costs per peak vehicle on Saturday were Routes 22 and 23 with cost of over $50,000 per peak vehicle.

Table 1-18: Expense Indicators

Route	Cost per Hour		Cost per Mile		Cost per Passenger		Cost per Peak Vehicle	
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
Fixed Routes and Deviated Routes								
21	$76.48	$73.86	$2.92	$3.13	$11.62	$22.57	$168,820	$49,858
22	$75.81	$75.61	$2.82	$2.76	$13.72	$17.02	$276,172	$51,039
23	$76.94	$73.40	$2.62	$3.00	$16.52	$21.95	$287,369	$51,306
31	$60.86	$61.74	$3.28	$3.27	$2.35	$2.66	$185,149	$41,365
32	$61.64	$62.63	$2.86	$2.90	$3.28	$4.21	$235,514	$42,148
33	$61.24	$62.68	$3.31	$3.11	$5.12	$6.80	$234,315	$42,249
40	$60.11	$60.86	$3.81	$3.85	$6.09	$7.64	$229,554	$40,896
41	$59.21	$59.89	$4.67	$4.70	$2.48	$3.31	$220,630	$39,075
43	$60.93	$61.80	$3.35	$3.31	$2.55	$2.80	$162,097	$41,096
44	$59.32	$59.90	$4.37	$4.41	$6.68	$8.00	$226,452	$40,191
45	$59.84	$60.28	$3.95	$4.15	$3.09	$4.99	$198,234	$42,194
46	$58.82	$59.39	$4.93	$4.96	$8.05	$11.23	$223,231	$39,553
47	$59.30	$59.94	$4.62	$4.67	$9.70	$11.65	$226,896	$40,341
48	$61.16	$62.01	$3.03	$3.07	$2.91	$5.45	$117,364	$20,961
51	$59.05	$59.64	$4.85	$4.90	$3.32	$5.29	$225,409	$40,077
52	$60.35	$61.12	$3.58	$3.62	$1.90	$2.00	$230,641	$41,131
53	$58.75	$58.78	$5.38	$5.90	$3.38	$4.29	$142,516	$30,094
54	$60.79	$61.65	$3.38	$3.42	$13.45	$18.34	$233,202	$41,614
B-V Link	$110.98	n/a	$3.45	n/a	$57.35	n/a	$34,958	n/a
Total	$62.47	$62.56	$3.66	$3.74	$4.01	$5.37	$188,516	$39,465
Demand Response								
Direct Access	$69.05	$69.07	$4.34	$4.28	$31.80	$35.12	n/a	n/a
Overall								
Total	$64.00	$63.60	$3.81	$3.82	$5.14	$6.30	n/a	n/a

Source: TransTrack

Revenue per Passenger

Revenue per passenger shows the average amount of revenue generated by each passenger. The indicator is also known as the average fare. To note, the fare for County Routes 21, 22 and 23 is higher than the fare for local fixed and deviated routes which may explain relatively higher revenues per passenger.

$$\frac{\text{Fare Revenue}}{\text{Unlinked Passenger Trips}}$$

- Overall, the average amount of revenue per passenger was $1.06 for the VVTA network.
- The fixed and deviated route average revenue per passenger was $0.96 in FY2011.

    - Weekdays, the fixed and deviated routes with the highest average revenue per passenger were the B-V Link and the county routes. All other routes had similar revenue per passenger which ranged between $0.87 and $0.89.
    - Saturday, the routes with the highest average fares were the county routes, all with average fares around $2.70 per passenger. All other routes showed a similar range in average revenue per passenger as on weekdays.
- The Direct Access average fare was $3.28.

Farebox Recovery

The farebox recovery rate represents the percentage of costs expended on service provision that are recovered by fare revenue.

$$\frac{\text{Fare Revenue}}{\text{Operating Expenses}}$$

- The systemwide farebox recovery was 20.1 percent in FY2011. The systemwide farebox recovery was 20.6 percent on weekdays and 16.3 percent on Saturday.
- Overall, the farebox recovery of fixed and deviated routes was 23.2 percent.
    - Weekdays, the fixed and deviated routes with the highest farebox recovery were Routes 52 which recovered 43.8 percent of the operating costs. Routes 31 and 43 had the next highest farebox recoveries at 37.2 and 35.4 percent, respectively.
    - The routes with the lowest weekday farebox recovery rates were Route 54, Route 47 and the B-V Link. Each of these routes recovered less than 10 percent of their operating costs in fare revenues.
    - Saturday, the routes with the highest farebox recoveries were also Routes 52, 31 and 43. The routes with the lowest farebox recoveries were Routes 54, 47 and 46 on Saturday.
- The farebox recovery for Direct Access ADA services was 10.2 percent in FY2011.

Table 1-19: Revenue Indicators

Route	Revenue per Passenger		Farebox Recovery	
	Weekday	Saturday	Weekday	Saturday
Fixed Routes and Deviated Routes				
21	$2.63	$2.72	22.6%	12.0%
22	$2.72	$2.78	19.9%	16.3%
23	$2.69	$2.64	16.3%	12.0%
31	$0.87	$0.88	37.2%	33.0%
32	$0.88	$0.88	26.8%	21.0%
33	$0.88	$0.88	17.2%	12.9%
40	$0.88	$0.88	14.4%	11.5%
41	$0.88	$0.87	35.4%	26.4%
43	$0.87	$0.88	34.1%	31.3%
44	$0.88	$0.89	13.2%	11.1%
45	$0.87	$0.88	28.0%	17.6%
46	$0.88	$0.89	11.0%	7.9%
47	$0.88	$0.88	9.1%	7.5%
48	$0.89	$0.88	30.5%	16.2%
51	$0.87	$0.88	26.3%	16.6%
52	$0.88	$0.88	46.3%	43.8%
53	$0.88	$0.88	25.9%	20.4%
54	$0.88	$0.89	6.6%	4.8%
B-V Link	$5.38	n/a	9.4%	n/a
Total	$0.96	$0.96	24.1%	17.9%
Demand Response				
Direct Access	$3.29	$3.13	10.4%	8.9%
Overall				
Total	$1.06	$1.03	20.6%	16.3%

Source: TransTrack

1.5.3 Transfers

VVTA does not have a transfer policy. Customers who pay with cash and do not hold a fare pass must pay another fare to transfer between routes. Table 1-20 shows the number of transfers between routes for all routes in the VVTA system. The highest numbers of passenger transfers were from Route 31 to Route 45, Route 41 to Route 45, and Route 41 to Route 43. Percentagewise, over 50 percent of Route 40 passengers transferred to Route 43, one-third of B-V Link (Route 15) riders transferred to Routes 31 and 45, and just over 30 percent of Route 23 riders transferred to Route 43. Generally, high percentages of passengers did not transfer from any one route to another route.

Table 1-20: Transfers

From Route \ To Route	15	21	22	23	31	32	33	40	41	43	44	45	46	47	48	51	52	53	54	No X-fer	Total
15	0	0	1	0	3	0	0	0	1	0	0	3	0	0	0	0	1	0	0	0	8
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	39	0	66	113
22	0	0	0	0	0	14	0	0	14	0	0	7	0	0	0	0	7	0	0	35	78
23	0	0	0	0	0	0	0	0	16	21	0	0	0	0	0	0	0	0	0	31	68
31	8	0	0	0	0	11	57	0	65	0	0	153	0	0	0	15	46	0	8	249	613
32	4	0	0	0	11	0	22	0	26	0	0	63	0	0	0	4	22	0	0	126	279
33	0	0	0	0	48	19	0	0	0	0	0	0	0	0	0	0	0	0	14	96	178
40	0	0	0	0	0	0	0	0	31	80	0	0	0	13	0	0	0	0	0	22	147
41	15	0	18	7	47	29	0	22	0	91	7	95	0	18	0	11	44	0	0	288	693
43	0	0	0	6	0	0	0	24	87	0	3	60	0	15	0	0	0	63	0	235	494
44	13	3	0	0	0	0	0	0	0	0	0	13	7	0	23	3	13	20	0	168	264
45	18	0	5	0	64	49	0	0	51	67	15	0	23	0	46	46	54	46	0	264	748
46	0	0	0	0	0	0	0	0	0	3	11	28	0	0	9	0	0	0	0	57	108
47	0	0	0	0	0	0	0	0	24	20	0	0	0	0	0	0	0	0	0	47	91
48	0	0	10	0	0	0	0	0	0	5	15	39	29	0	0	0	5	0	5	206	314
51	8	0	0	0	32	12	0	0	20	4	0	32	0	0	0	0	41	4	0	110	264
52	9	0	0	0	38	19	0	0	47	3	34	63	0	0	3	44	0	56	0	157	473
53	13	16	0	3	0	6	0	0	3	63	13	54	0	0	0	0	76	0	6	238	492
54	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	7	22	0	22	67

Percent of Total Passengers

0 - 5.0% | 5.1 - 10.0% | 10.1 - 25.0% | 25.1 - 50.0% | 50.1% +

1.6 Route Profiles

1.6.1 Route 21 Tri Community

Route 21 is a county route that operates between the Mall of Victor Valley and Phelan via Mall Boulevard, Bear Valley Road, Baldy Mesa Road and Phelan Road. Select trips continue to Wrightwood. Thirty-two foot cutaway buses operate along the route. The route serves the Mall of Victor Valley and Stater Brothers Shopping Center, with select trips operating to Serrano High School in Phelan and Wrightwood Community Center in Wrightwood. Route 21 layovers are performed at:

- The Mall of Victor Valley
- Phelan Road at Clovis Road

See Table 1-21 for Route 21 service details and Table 1-22 for Route 21 operation information.

Table 1-21: Route 21, Service Details

Route 21	Weekdays	Saturday
Span	5:25AM-8:55PM	6:35AM-8:00PM
Frequency	90	90

Source: VVTA Public Timetables

Table 1-22: Route 21, Annual Operation Information

Route 21	Weekdays	Saturday	Total
Ridership	29,054	2,209	31,263
Hours	4,415	675	5,090
Miles	115,577	15,932	131,509
Operating Expenses	$337,639	$49,858	$387,498
Fare Revenue	$76,466	$6,006	$82,472

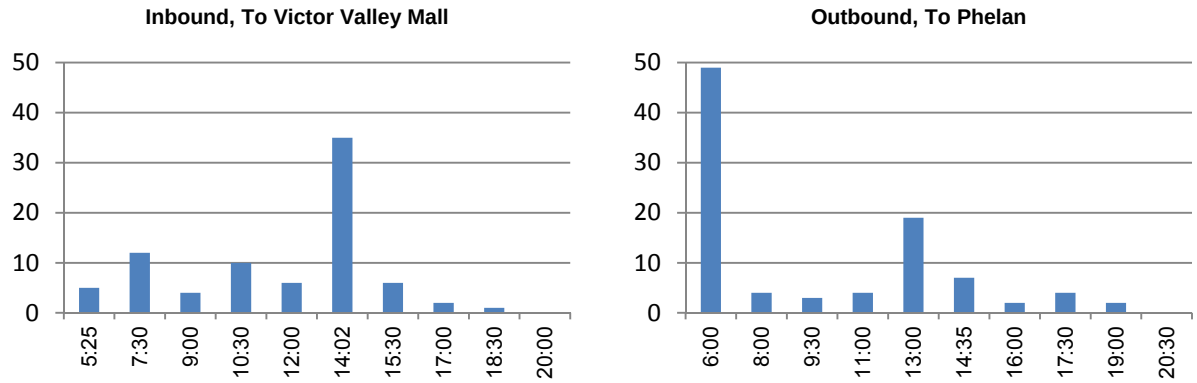
Source: VVTA

Ridership by Trip

Route 21 weekday ridership by trip is shown in Figure 1-4. The ridership pattern shows trip that provide service to Serrano High School, the 6:00 and 13:00 outbound trips and the 14:02 inbound trip, had the most ridership by far. The 6:00 outbound trip operates a double section to serve the high volume of passengers. In general, other trips had fewer than 10 passengers.

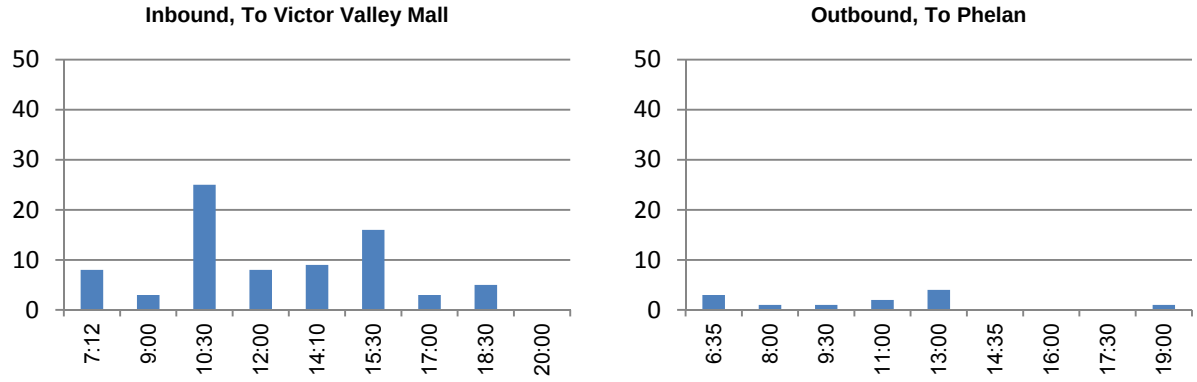
Saturday, ridership varied by trip. In the inbound direction, the trips with the highest ridership were in the late morning and afternoon. Outbound, the trips with the highest ridership were in the early morning and early afternoon. Overall, there was a much greater amount of passengers in the inbound direction. See Figure 1-5 for Route 21 Saturday ridership by trip.

Figure 1-4: Route 21, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-5: Route 21, Saturday Ridership by Trip



Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Ridership is generally low at most bus stops along Route 21, with less than 10 average daily boardings and alightings. The bus stops with the most activity were located at Phelan Road and Sheep Creek Road, Serrano High School and at Palmdale Road and Topaz Road. See Figure 1-6 for Route 21 monthly ridership by bus stop. The maximum load point for the route was located at Bear Valley Road at Topaz Road.

According to TransTrack, Route 21 carried 2,577 passengers during the month of October 2011. During that same month, 186 passengers utilized deviated bus stop locations on the route, accounting for 7.2 percent of the monthly ridership.

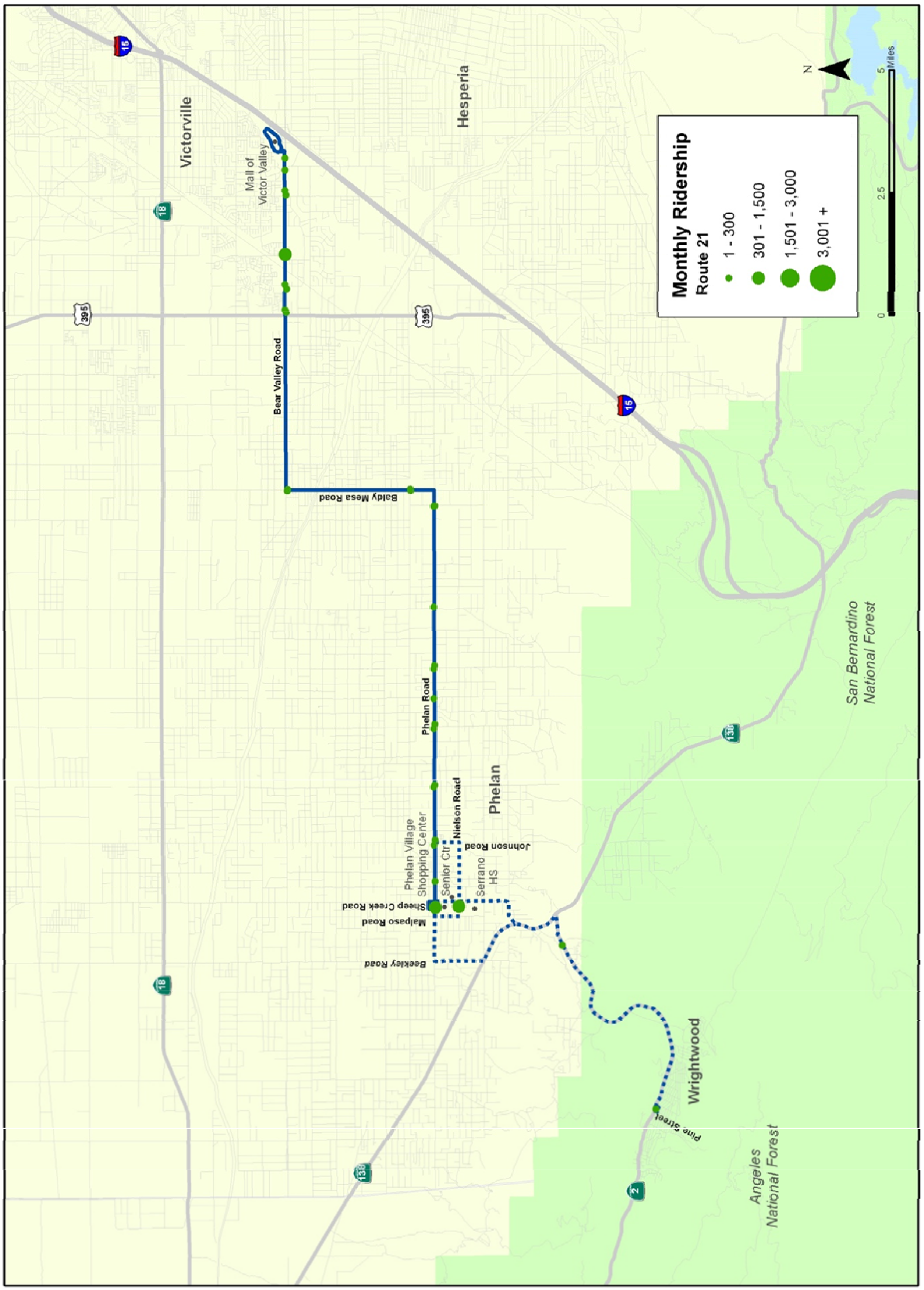


Figure 1-6: Route 21, Monthly Ridership by Bus Stop

On-Time Performance and Running Time Analysis

Route 21 operates on-time 61% of the time. The route operated late about one third of the time. The route ranked at about the median of all VVTA routes in on-time performance. See Table 1-23 for Route 21 on-time performance.

Table 1-23: Route 21, On-Time Performance

Route	Early	On-Time	Late	Rank
21	5.8%	61.0%	33.2%	11 of 19

Source: VVTA DataPoint, October 2011

In the inbound direction, on both weekdays and Saturday, there were few Route 21 trips where actual running time adhered to scheduled running time. Most minimum running times were greater than scheduled running times and most daily trips ran behind schedule. On-time performance is particularly poor for the 12:00 inbound trip, weekdays and Saturdays, whose mean and median running times were more than 20 minutes greater than the 30 minute scheduled running time and maximum running times were more than double the scheduled time. Route 21, generally, met scheduled running times in the outbound direction. See Table 1-24 for Route 21 weekday running time and Table 1-25 for Route 21 Saturday running time. The data does not include time for layover. This shows that there may be running time issues for this route, especially due to the large number of deviations. Data was not available for all trips.

Table 1-24: Route 21, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
5:25	25	34	44	42	42	53	6:00	90	45	78	87	n/a	89
7:30	30	28	33	33	34	42	6:00	35	32	35	35	35	41
9:00	30	38	39	39	n/a	40	8:00	60	57	58	58	n/a	59
10:30	30	30	38	39	34	46	9:30	60	25	54	56	59	59
12:00	30	37	56	58	n/a	74	11:00	60	30	55	58	58	59
14:02	28	36	43	44	46	50	13:00	70	28	55	55	n/a	81
14:10	20	25	35	35	35	49	14:35	25	31	44	46	46	50
15:30	30	34	36	36	n/a	37	16:00	60	0	n/a	n/a	n/a	0
17:00	30	35	36	36	n/a	36	17:30	60	0	n/a	n/a	n/a	0
18:30	30	0	n/a	n/a	n/a	0	19:00	60	0	n/a	n/a	n/a	0
20:00	30	31	31	31	n/a	31	20:30	25	30	30	30	n/a	30

Source: VVTA DataPoint, October 2011

Table 1-25: Route 21, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:30	30	27	31	31	n/a	35	6:35	55	46	46	46	n/a	46
9:00	30	30	31	31	n/a	31	8:00	60	57	58	58	n/a	59
10:30	30	29	34	33	n/a	40	9:30	60	37	48	48	n/a	58
12:00	30	40	53	53	n/a	65	11:00	60	16	43	55	n/a	58
14:10	20	30	34	34	n/a	38	13:00	70	0	n/a	n/a	n/a	0
15:30	30	0	n/a	n/a	n/a	0	14:35	25	0	n/a	n/a	n/a	0
17:00	30	0	n/a	n/a	n/a	0	16:00	60	0	n/a	n/a	n/a	0
18:30	30	0	n/a	n/a	n/a	0	17:30	60	0	n/a	n/a	n/a	0
							19:00	60	0	n/a	n/a	n/a	0

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 21 are presented in Table 1-26. Financial indicators are presented in Table 1-27. The rank shows how well the route compares to other routes in the VVTA fixed route network. To note, county routes 21, 22 and 23 have a higher fare than local fixed and deviated routes and likely tend to rank higher in revenue per passenger for that reason.

Table 1-26: Route 21, Service Indicators

Route 21	Weekdays	Saturday	Total	Rank
Passengers per Hour	6.58	3.27	6.14	14 of 19
Passengers per Mile	0.25	0.14	0.24	15 of 19

Source: VVTA

Table 1-27: Route 21, Financial Indicators

Route 21	Weekdays	Saturday	Total	Rank
Cost per Hour	$76.48	$73.86	$76.13	17 of 19
Cost per Mile	$2.92	$3.13	$2.95	15 of 19
Cost per Passenger	$11.62	$22.57	$12.39	15 of 19
Cost per Peak Vehicle	$168,820	$49,858	$193,749	5 of 19
Revenue per Passenger	$2.63	$2.72	$2.64	4 of 19
Farebox Recovery	22.6%	12.0%	21.3%	10 of 19

Source: VVTA

1.6.2 Route 22 Helendale

Route 22 is a county route. The route operates between Victorville (Seventh and Lorene Transfer Center) and Helendale via National Trails Highway. Thirty-two foot cutaway buses serve the route. Generators served by the route include Victor Plaza Shopping Center, Victorville Transit Center and Silver Lakes Market. This route also serves residential areas along Stoddard Wells Road in Victorville. Route 22 layovers are performed at:

- Lorene Drive at Valley Center Drive (Seventh and Lorene Transfer Center)
- Vista Road at Helendale Road

Route 22 service details are presented in Table 1-28. See Table 1-29 for Route 22 operation information.

Table 1-28: Route 22, Service Details

Route 22	Weekdays	Saturday
Span	5:45AM-8:00PM	7:00AM-8:00PM
Frequency	120	120

Source: VVTA Public Timetables

Table 1-29: Route 22, Annual Operation Information

Route 22	Weekdays	Saturday	Total
Ridership	20,126	2,998	23,124
Hours	3,643	675	4,318
Miles	97,784	18,498	116,282
Operating Expenses	$276,172	$51,039	$327,211
Fare Revenue	$54,841	$8,334	$63,174

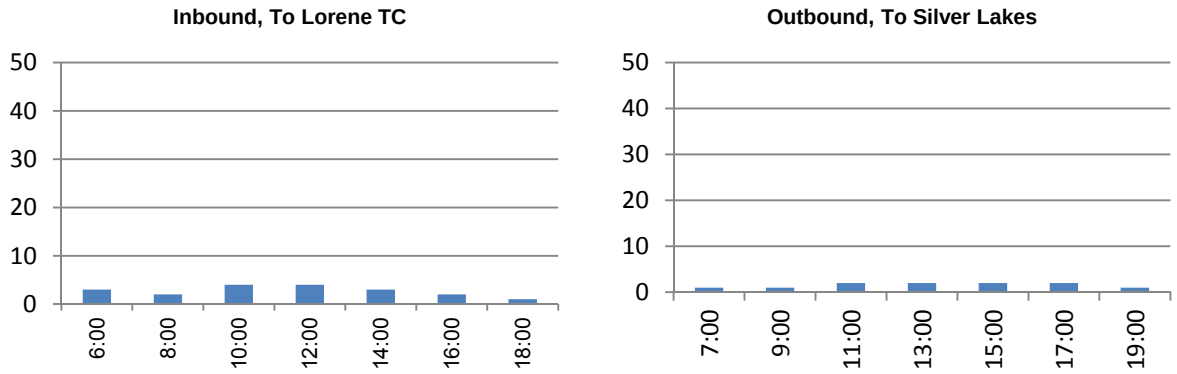
Source: VVTA

Ridership by Trip

The trips with the highest number of riders, the 10:00 and 12:00 inbound trips, had four riders on an average weekday. All other weekday trips, inbound and outbound, carried fewer than four riders. See Figure 1-7 for Route 22 weekday ridership by trip.

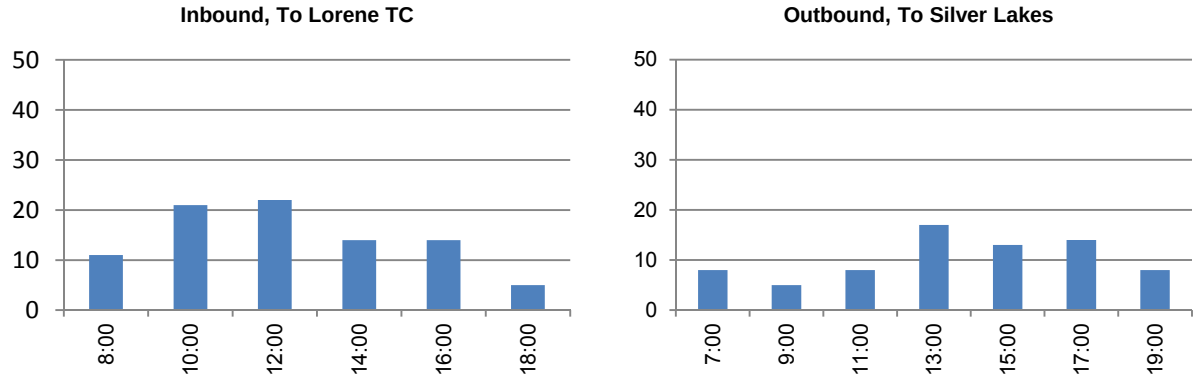
Saturday trips saw higher ridership than those on weekdays. Inbound the Saturday trips with the highest ridership operated at noon and just before noon. Outbound, ridership varied by trip. The highest outbound ridership trip operated in the early afternoon. See Figure 1-8 for Route 22 Saturday ridership by trip.

Figure 1-7: Route 22, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-8: Route 22, Saturday Ridership by Trip



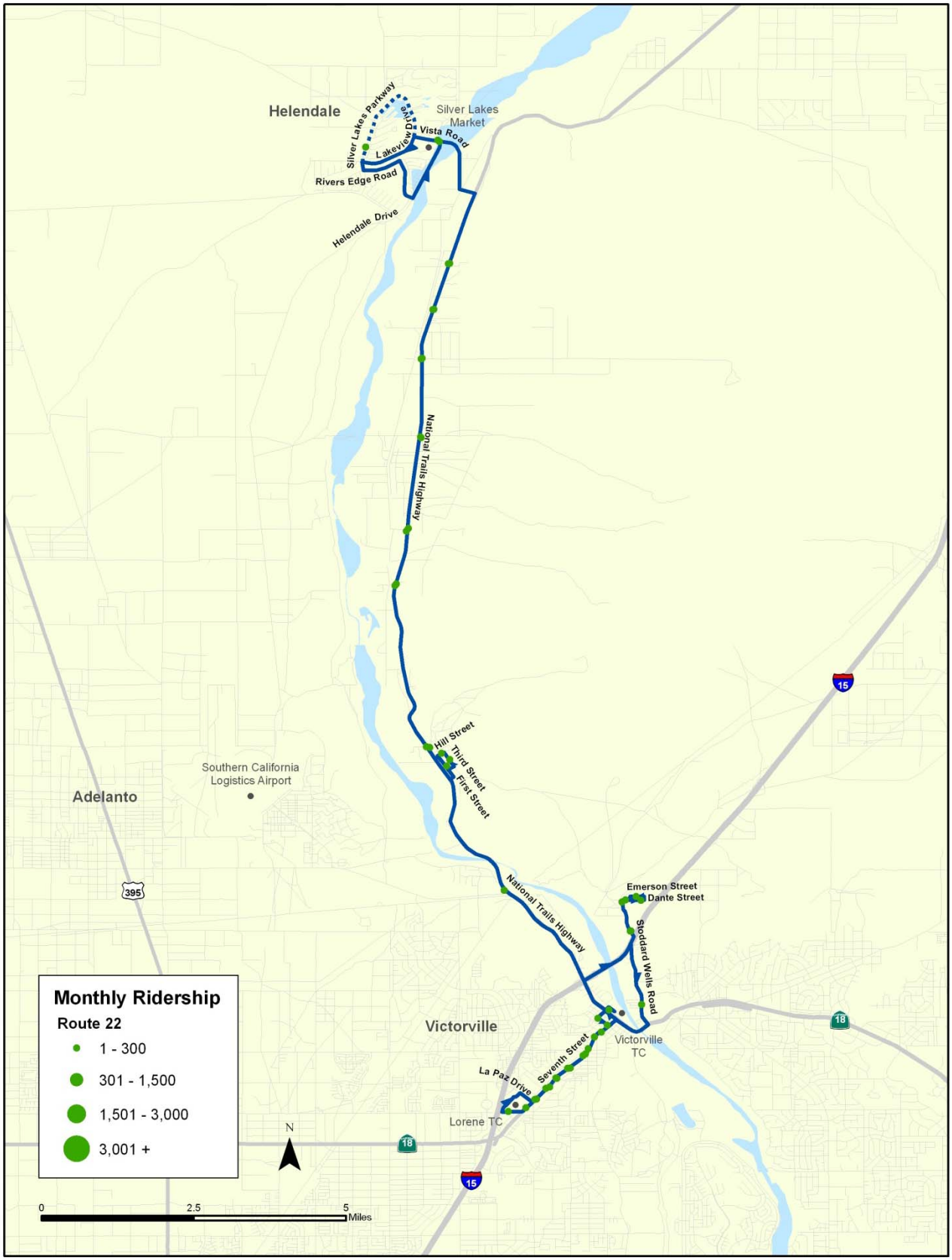
Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

There were low ridership levels at all Route 22 bus stops. The highest ridership bus stops were located at the Seventh and Lorene Transfer Center and the Victorville Transit Center at the Victorville train station. All other stops had 50 or fewer boardings and alightings per month. See Figure 1-9 for Route 22 monthly bus stop activity. The maximum load point was located at the Stoddard Wells Mobile Home Park.

According to TransTrack, in October 2011, there were 1,764 total passengers on Route 22. Of those passengers, 25 passengers utilized deviated bus stop locations, or 1.4 percent of monthly riders.

Figure 1-9: Route 22, Monthly Ridership by Bus Stop



Source: VVTA APC Data, October 2011

On-Time Performance and Running Time Analysis

Route 22 operated on-time about 56% of the time. The route departed late from timepoints over 40 percent of the time. See Table 1-30 for Route 22 on-time performance.

Table 1-30: Route 22, On-Time Performance

Route	Early	On-Time	Late	Rank
22	1.9%	55.9%	42.3%	13 of 19

Source: VVTA DataPoint, October 2011

Inbound, Route 22 performed well with actual running times keeping closely to scheduled running time. Outbound, actual running times did not meet scheduled times. Weekdays, the running times of outbound trips in the afternoon was about 10 minutes greater than the scheduled time and, on Saturday, the running time of most trips exceeded the scheduled time, but by a small margin. See Table 1-31 for Route 22 weekday running time and Table 1-32 for Route 22 Saturday running time. The running times shown do not include layover.

Table 1-31: Route 22, Weekday Running Time

Inbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:00	60	59	59	59	59	60
8:00	60	51	54	53	n/a	59
10:00	60	58	60	60	n/a	62
12:00	60	50	50	50	n/a	50
14:00	60	59	59	59	n/a	59
16:00	60	61	61	61	n/a	61
18:00	60	58	58	58	n/a	58

Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
5:45	15	0	n/a	n/a	n/a	0
7:00	45	48	50	50	n/a	51
9:00	45	45	46	46	n/a	47
11:00	45	45	45	45	n/a	45
13:00	45	53	53	53	n/a	53
15:00	45	55	55	55	n/a	55
17:00	45	55	55	55	n/a	55
17:45	15	8	8	8	n/a	8
19:00	45	52	52	52	n/a	52

Source: VVTA DataPoint, October 2011

Table 1-32: Route 22, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
8:00	60	60	61	61	n/a	62	7:00	45	47	50	50	n/a	52
10:00	60	63	64	64	n/a	64	7:45	15	8	12	12	n/a	16
12:00	60	51	58	58	n/a	64	9:00	45	48	54	54	n/a	60
14:00	60	49	54	54	n/a	58	11:00	45	45	52	52	n/a	59
16:00	60	62	63	63	n/a	64	13:00	45	56	57	57	n/a	57
18:00	60	59	61	61	n/a	62	15:00	45	54	55	55	n/a	55
							17:00	45	46	49	49	n/a	52
							17:45	15	9	10	10	n/a	11
							19:00	45	44	47	47	n/a	49

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 22 are presented in Table 1-33. Financial indicators are presented in Table 1-34. The rank shows how well the route compares to other routes in the VVTA fixed route network. To note, county routes 21, 22 and 23 have a higher fare than local fixed and deviated routes and likely tend to rank higher in revenue per passenger for that reason.

Table 1-33: Route 22, Service Indicators

Route 22	Weekdays	Saturday	Total	Rank
Passengers per Hour	5.52	4.44	5.36	16 of 19
Passengers per Mile	0.21	0.16	0.20	17 of 19

Source: VVTA

Table 1-34: Route 22, Financial Indicators

Route 22	Weekdays	Saturday	Total	Rank
Cost per Hour	$75.81	$75.61	$75.78	16 of 19
Cost per Mile	$2.82	$2.76	$2.81	2 of 19
Cost per Passenger	$13.72	$17.02	$14.15	17 of 19
Cost per Peak Vehicle	$276,172	$51,039	$327,211	18 of 19
Revenue per Passenger	$2.72	$2.78	$2.73	2 of 19
Farebox Recovery	19.9%	16.3%	19.3%	11 of 19

Source: VVTA

1.6.3 Route 23 Lucerne Valley

Route 23 is a county route that operates between Apple Valley and Lucerne Valley. The route also operates as a Lucerne Valley town circulator. Between Apple Valley and Lucerne Valley, the route operates primarily via State Route 18, Central Road, and Bear Valley Road. Thirty-two foot cutaway buses operate along the route. The route serves the Apple Valley Post Office, Crossroads Center and Lucerne Valley High School. Route 23 layovers are performed at:

- Quinault Road at Outer Highway 18S (SR-18)
- Barstow Road at State Route 18

See Table 1-35 for Route 23 service details and Table 1-36 for Route 23 operation information.

Table 1-35: Route 23, Service Details

Route 23	Weekdays	Saturday
Span	5:45AM-8:28PM	7:00AM-8:28PM
Frequency	100	100

Source: VVTA Public Timetables

Table 1-36: Route 23, Annual Operation Information

Route 23	Weekdays	Saturday	Total
Ridership	17,394	2,337	19,731
Hours	3,735	699	4,434
Miles	109,734	17,112	126,846
Operating Expenses	$287,369	$51,306	$338,675
Fare Revenue	$46,710	$6,166	$52,876

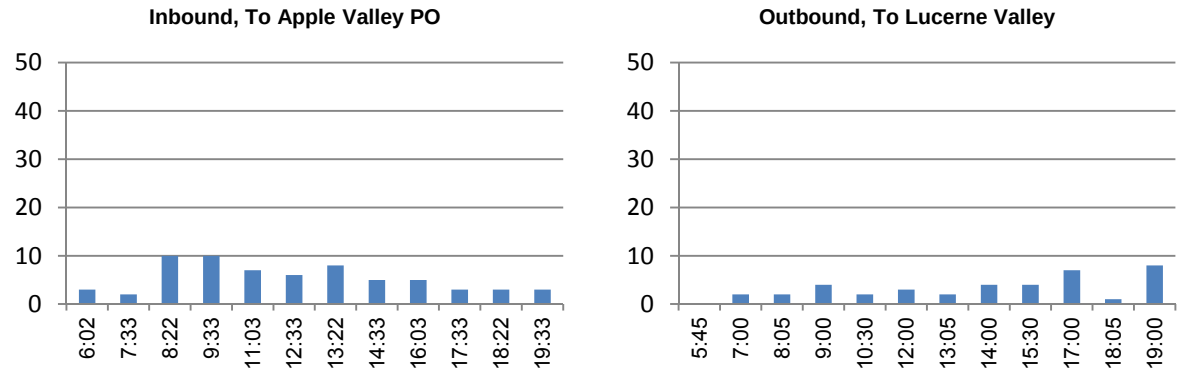
Source: VVTA

Ridership by Trip

Typically, in the inbound direction, weekday ridership on Route 23 was highest on morning trips and decreased throughout the day. In the outbound direction, ridership was highest on afternoon trips. See Figure 1-10 for Route 23 weekday ridership by trip.

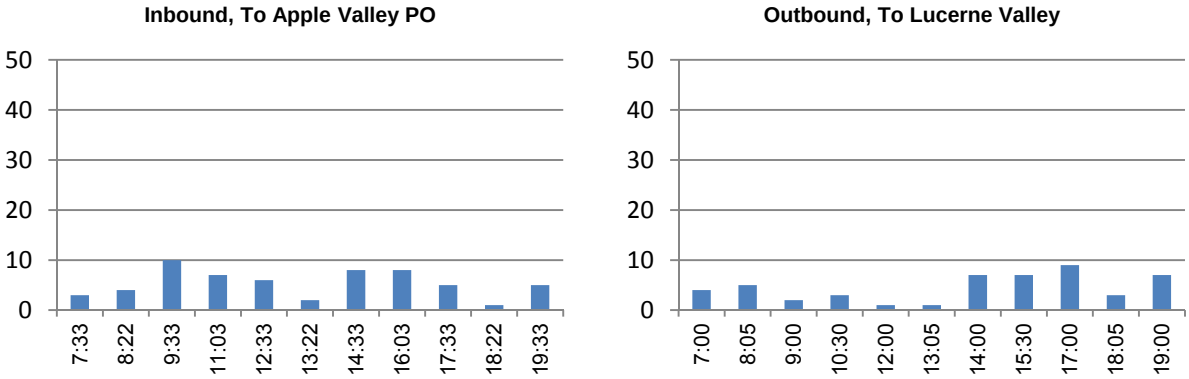
Saturday, ridership varied by trip in both directions of service. Inbound, the highest ridership trip was in the morning. Outbound, afternoon trips had the highest ridership. See Figure 1-11 for Route 23 Saturday ridership by trip.

Figure 1-10: Route 23, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-11: Route 23, Saturday Ridership by Trip



Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

The majority of bus stops along Route 23 had low ridership numbers. The stops with the highest ridership were at the Apple Valley Post Office, Highway 18 at High Road and at the Lucerne Valley Market. The higher ridership at Highway 18 at High Road was notable since the bus stop is surrounded by vacant land and there are few residences located in the area. See Figure 1-12 for Route 23 monthly ridership by bus stop. The bus stop at the Lucerne Valley Market was the route's maximum load point.

According to TransTrack, Route 23 had 1,753 passengers during the month of October 2011. Of those trips, 10 passengers utilized deviated bus stop locations along the route, accounting for 0.6 percent of the monthly ridership.

Source: VVTA APC Data, October 2011

Figure 1-12: Route 23, Monthly Ridership by Bus Stop

On-Time Performance

Route 23 has issues regarding on-time performance. The route departed on-time from timepoints just over 50 percent of the time and ranked 16th out of 19 routes. See Table 1-37 for Route 23 on-time performance.

Table 1-37: Route 23, On-Time Performance

Route	Early	On-Time	Late	Rank
23	2.8%	52.8%	44.4%	16 of 19

Source: VVTA DataPoint, October 2011

Weekdays, mean (average), median (middle value), and mode (most frequent observation) running times on Route 23 were typically close to the scheduled running time with some being below and some at or above the scheduled time. In both the inbound and outbound directions, the first trip of the day did not have enough scheduled running time. See Table 1-38 for Route 23 weekday running time. Saturday, inbound running times were generally on or close to scheduled running times. The inbound trips that did not have enough scheduled running time were typically those with 25 or 30 minutes scheduled running times. Running times for outbound Saturday trips were typically slightly longer than scheduled. See Table 1-39 for Saturday running time. Times in both tables do not include layover.

Table 1-38: Route 23, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:02	47	53	56	56	n/a	58	5:45	17	18	26	27	n/a	31
7:33	25	27	29	29	28	32	7:00	33	31	36	36	36	40
8:22	30	26	34	36	32	39	8:05	17	13	17	16	15	22
9:33	55	46	53	53	53	57	9:00	33	34	37	37	40	40
11:03	55	25	54	55	54	60	10:30	33	33	36	35	34	44
12:33	25	27	30	30	31	33	12:00	33	31	34	33	32	41
13:22	30	20	28	27	35	38	13:05	17	12	21	23	26	26
14:33	55	47	53	54	52	59	14:00	33	32	35	35	38	38
16:03	55	48	53	54	55	56	15:30	33	32	34	34	33	37
17:33	25	27	29	29	29	31	17:00	33	30	34	34	33	39
18:22	30	35	42	43	43	47	18:05	17	10	15	15	14	19
19:33	55	45	48	48	48	50	19:00	33	33	37	37	36	43

Source: VVTA DataPoint, October 2011

Table 1-39: Route 23, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:33	25	27	29	30	30	31	7:00	33	35	36	35	35	38
8:22	30	33	36	35	n/a	39	8:05	17	15	18	18	n/a	22
9:33	55	51	53	54	54	54	9:00	33	35	36	35	35	37
11:03	55	52	55	56	n/a	58	10:30	33	34	35	35	n/a	36
12:33	25	30	30	30	n/a	30	12:00	33	34	34	34	n/a	34
13:22	30	21	21	21	n/a	21	13:05	17	26	26	26	n/a	26
14:33	55	53	54	54	53	56	14:00	33	33	34	34	n/a	35
16:03	55	48	53	53	n/a	56	15:30	33	32	35	35	n/a	38
17:33	25	28	29	29	29	31	17:00	33	32	34	33	32	37
18:22	30	34	41	43	43	46	18:05	17	16	19	20	n/a	23
19:33	55	45	48	49	49	51	19:00	33	34	36	34	34	44

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 23 are presented in Table 1-40. Financial indicators are presented in Table 1-41. The rank shows how well the route compares to other routes in the VVTA fixed route network. To note, county routes 21, 22 and 23 have a higher fare than local fixed and deviated routes and likely tend to rank higher in revenue per passenger for that reason.

Table 1-40: Route 23, Service Indicators

Route 23	Weekdays	Saturday	Total	Rank
Passengers per Hour	4.66	3.34	4.45	17 of 19
Passengers per Mile	0.16	0.14	0.16	18 of 19

Source: VVTA

Table 1-41: Route 23, Financial Indicators

Route 23	Weekdays	Saturday	Total	Rank
Cost per Hour	$76.94	$73.40	$76.38	18 of 19
Cost per Mile	$2.62	$3.00	$2.67	1 of 19
Cost per Passenger	$16.52	$21.95	$17.16	18 of 19
Cost per Peak Vehicle	$287,369	$51,306	$338,675	19 of 19
Revenue per Passenger	$2.69	$2.64	$2.68	3 of 19
Farebox Recovery	16.3%	12.0%	15.6%	13 of 19

Source: VVTA

1.6.4 Route 31 Adelanto South

Route 31 is a fixed route service that operates between Victorville (Seventh and Lorene Transfer Center) and South Adelanto. The route operates primarily via Palmdale Road (SR-18). Thirty-five or forty foot buses serve the route. Trip generators served by the route are Victor Plaza Shopping Center, Silverado High School and the Adelanto Marketplace. Layovers are performed at:

- Lorene Drive at Valley Center Drive (Seventh and Lorene Transfer Center)
- US-395 (Three Flags Highway) at Palmdale Road

See Table 1-42 for Route 31 service details. See Table 1-43 for Route 31 operation information.

Table 1-42: Route 31, Service Details

Route 31	Weekdays	Saturday
Span	6:00AM-8:55PM	7:00AM-7:55PM
Frequency	30 Peak/ 60 Non-Peak	60

Source: VVTA Public Timetables

Table 1-43: Route 31, Annual Operation Information

Route 31	Weekdays	Saturday	Total
Ridership	157,617	15,567	173,184
Hours	6,084	670	6,754
Miles	112,806	12,663	125,469
Operating Expenses	$370,298	$41,365	$411,663
Fare Revenue	$137,912	$13,650	$151,562

Source: VVTA

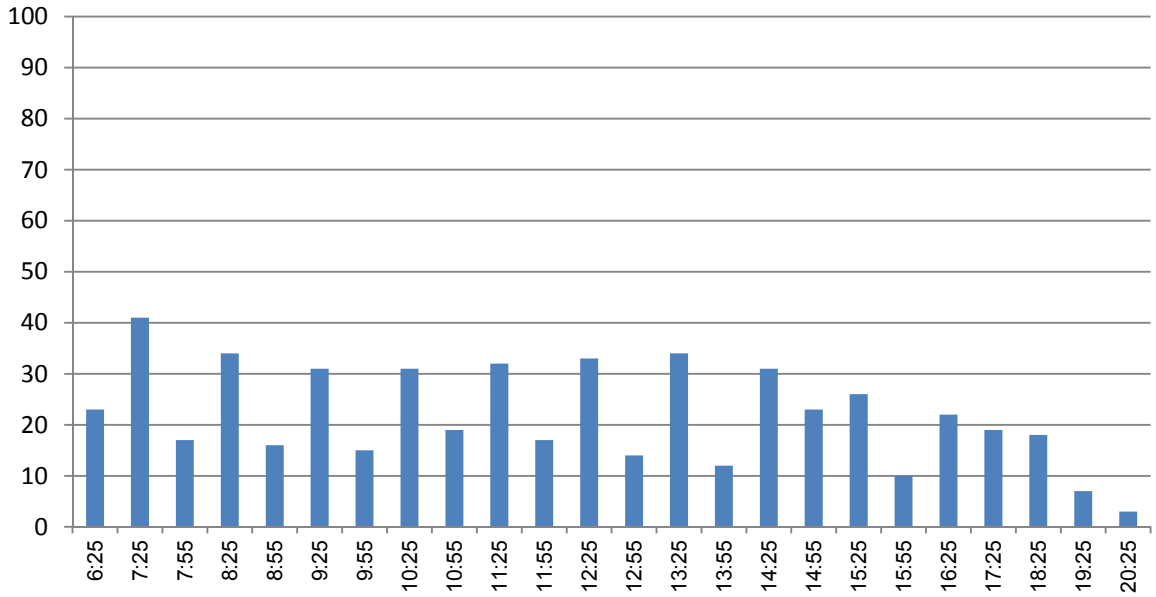
Ridership by Trip

Ridership on Route 31 followed a distinct pattern of being higher on every other trip throughout the day. This alternating of higher and lower ridership trips may be due to timed connections to and from Routes 33 and 54 in Adelanto. Overall, there was much higher ridership on outbound trips to Adelanto than inbound trips. See Figure 1-13 for inbound Route 31 weekday ridership by trip and Figure 1-14 for outbound Route 31 weekday ridership by trip.

Saturday, inbound ridership had two peaks, one in the morning and one in the afternoon. In the outbound direction ridership increased throughout the day and was highest on trips operating in the later afternoon and early evening. Outbound ridership on Saturday was much higher than inbound ridership on Saturday. See Figure 1-15 for Route 31 inbound ridership by trip and Figure 1-16 for Route 31 outbound ridership by trip.

Figure 1-13: Route 31, Weekday Ridership by Trip, Inbound

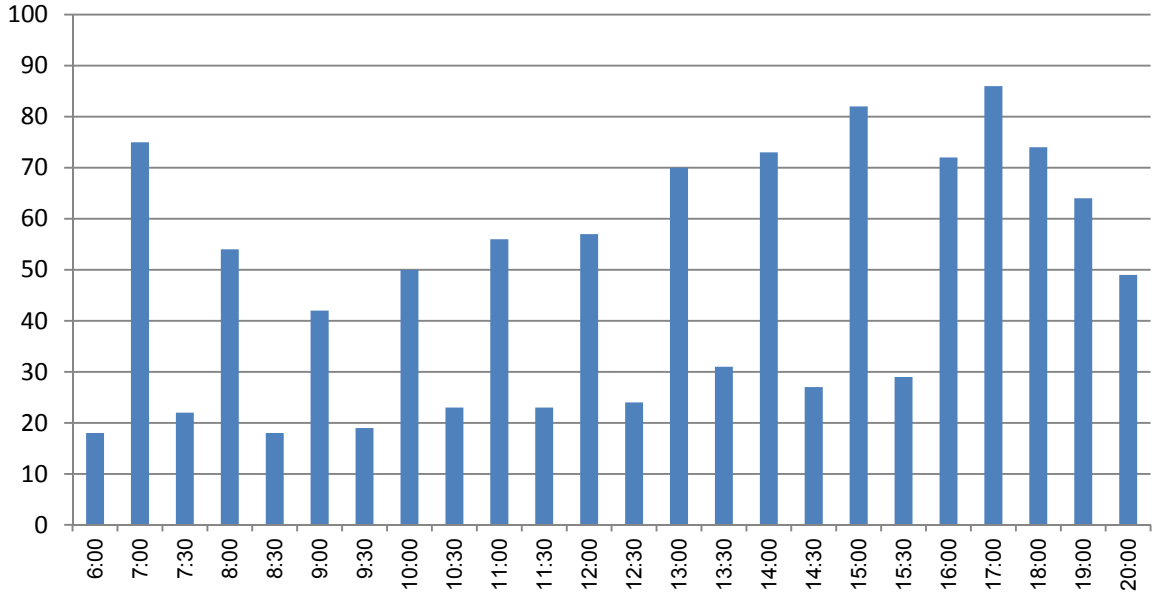
To Lorene TC



Source: VVTA APC Data, October 2011

Figure 1-14: Route 31, Weekday Ridership by Trip, Outbound

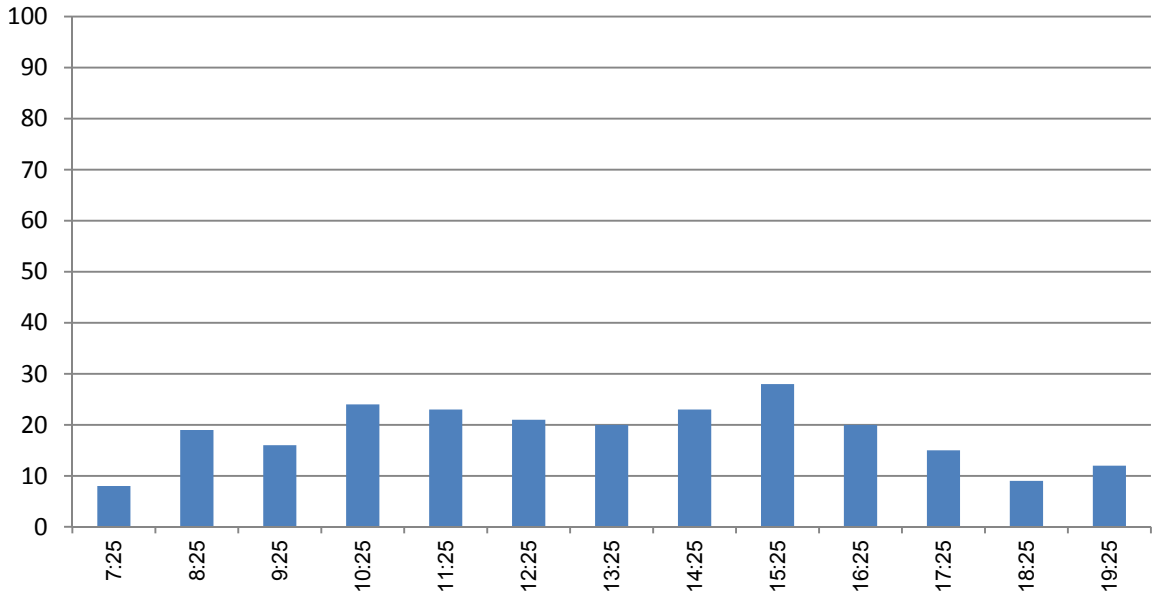
To Adelanto



Source: VVTA APC Data, October 2011

Figure 1-15: Route 31, Saturday Ridership by Trip, Inbound

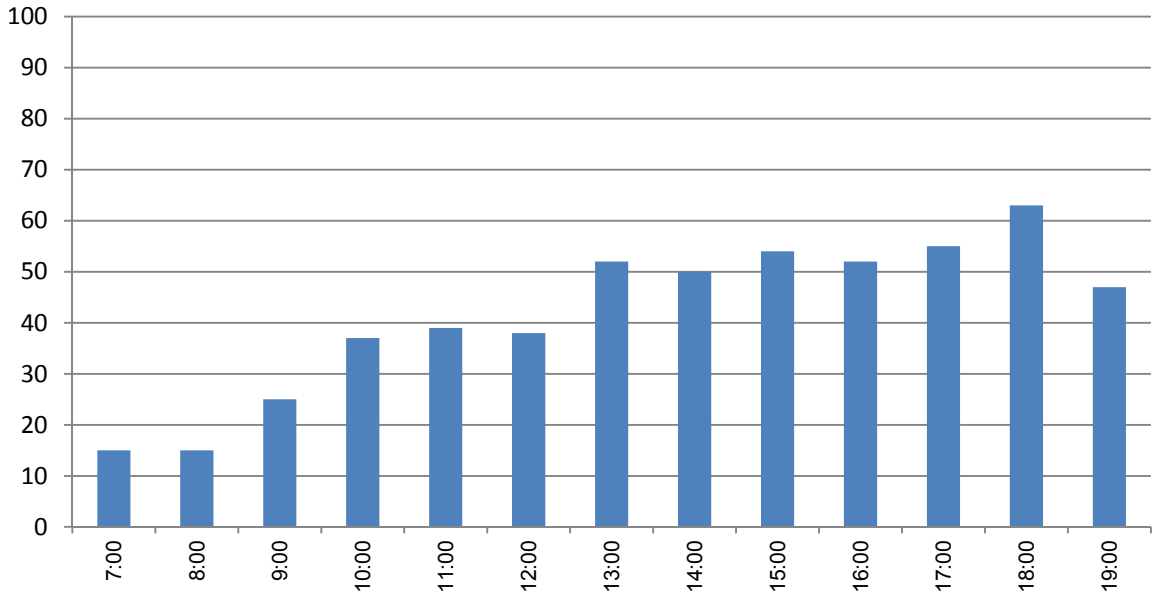
To Lorene TC



Source: VVTA APC Data, October 2011

Figure 1-16: Route 31, Saturday Ridership by Trip, Outbound

To Adelanto



Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Route 31 had moderate ridership at most bus stops along its route. The highest ridership bus stops were located at the Seventh and Lorene Transfer Center, with 13,522 monthly boardings and alightings, and at Palmdale Road at US-395, with 3.458 monthly boardings and alightings. See Figure 1-17 for Route 31 monthly ridership activity by bus stop. The maximum load was located at the Seventh and Lorene Transfer Center.

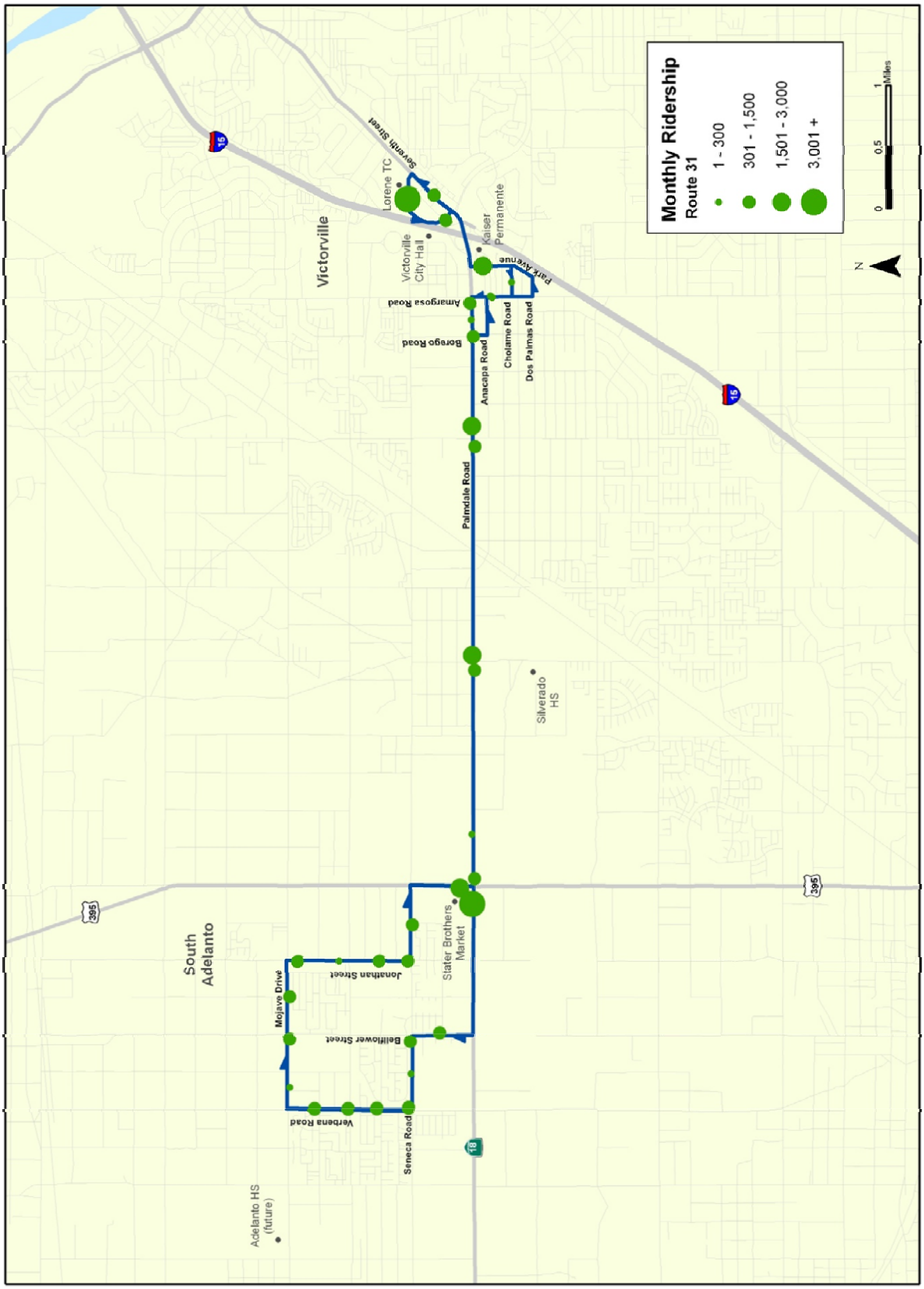


Figure 1-17: Route 31, Monthly Ridership by Bus Stop

On-Time Performance and Running Time Analysis

Route 31 does have issues regarding on-time performance. The route ranked 17th out of 19 routes. The route operated late almost 50 percent of the time. See Table 1-44 for Route 31 on-time performance.

Table 1-44: Route 31, On-Time Performance

Route	Early	On-Time	Late	Rank
31	0.3%	51.5%	48.2%	17 of 19

Source: VVTA DataPoint, October 2011

Route 31 had enough scheduled running time in the inbound direction but not enough in the outbound direction. Weekdays and Saturday, running times on inbound trips were below the scheduled running time. The maximum running time was greater than the scheduled running time on select trips but means, medians and mode running times all remained at or below scheduled running times. Outbound trips, on both weekdays and Saturday, had higher average and minimum running times than scheduled. See Table 1-45 for Route 31 weekday running time and Table 1-46 for Saturday running time. Times do not include layover.

Table 1-45: Route 31, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:25	30	20	26	26	30	30	6:00	25	31	35	34	32	47
7:25	30	19	24	23	23	32	7:00	25	30	38	38	38	44
7:55	30	20	24	24	23	29	7:30	25	32	38	38	38	42
8:25	30	20	23	23	22	29	8:00	25	29	36	36	38	43
8:55	30	17	25	26	27	31	8:30	25	29	34	33	36	42
9:25	30	17	25	25	27	30	9:00	25	31	36	35	35	42
9:55	30	19	26	25	30	33	9:30	25	29	35	34	32	42
10:25	30	19	25	25	25	30	10:00	25	30	35	35	37	40
10:55	30	20	28	28	29	34	10:30	25	32	34	33	33	46
11:25	30	19	24	23	22	31	11:00	25	31	37	37	40	41
11:55	30	19	25	25	25	29	11:30	25	29	35	35	39	41
12:25	30	20	25	24	24	29	12:00	25	33	38	38	38	42
12:55	30	20	25	26	27	31	12:30	25	30	35	36	37	40
13:25	30	17	22	22	22	27	13:00	25	32	38	39	39	43
13:55	30	18	24	24	23	31	13:30	25	29	38	38	39	50
14:25	30	20	23	22	21	28	14:00	25	31	37	37	35	42
14:55	30	22	26	25	23	30	14:30	25	32	36	37	37	41
15:25	30	19	23	23	20	26	15:00	25	35	38	38	40	43
15:55	30	18	22	21	21	30	15:30	25	31	35	34	34	42
16:25	30	21	23	23	22	29	16:00	25	25	35	36	33	39
17:25	30	19	22	22	22	24	17:00	25	31	37	37	36	40
18:25	30	19	25	23	21	33	18:00	25	30	35	35	35	41
19:25	30	17	25	25	25	32	19:00	25	30	34	34	33	40
20:25	30	11	19	21	n/a	24	20:00	25	29	31	30	30	37

Source: VVTA DataPoint, October 2011

Table 1-46: Route 31, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:25	30	24	26	26	n/a	29	7:00	25	31	33	34	35	35
8:25	30	24	28	29	n/a	32	8:00	25	30	32	31	31	36
9:25	30	24	26	26	26	27	9:00	25	34	35	34	34	36
10:25	30	23	26	25	25	29	10:00	25	35	37	37	37	40
11:25	30	21	24	24	25	25	11:00	25	33	36	36	36	39
12:25	30	21	25	24	21	30	12:00	25	31	37	38	n/a	43
13:25	30	23	24	24	23	26	13:00	25	5	30	37	37	38
14:25	30	18	21	20	n/a	27	14:00	25	38	39	39	38	41
15:25	30	18	23	23	27	27	15:00	25	33	37	36	n/a	42
16:25	30	22	25	26	27	27	16:00	25	32	35	34	37	37
17:25	30	24	25	25	n/a	25	17:00	25	33	35	35	35	37
18:25	30	24	27	25	n/a	31	18:00	25	34	35	36	36	36
19:25	30	15	18	18	n/a	20	19:00	25	30	32	33	n/a	34

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 31 are presented in Table 1-47. Financial indicators are presented in Table 1-48. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-47: Route 31, Service Indicators

Route 31	Weekdays	Saturday	Total	Rank
Passengers per Hour	25.91	23.23	25.64	2 of 19
Passengers per Mile	1.40	1.23	1.38	4 of 19

Source: VVTA

Table 1-48: Route 31, Financial Indicators

Route 31	Weekdays	Saturday	Total	Rank
Cost per Hour	$60.86	$61.74	$60.95	11 of 19
Cost per Mile	$3.28	$3.27	$3.28	6 of 19
Cost per Passenger	$2.35	$2.66	$2.38	2 of 19
Cost per Peak Vehicle	$185,149	$41,365	$205,832	6 of 19
Revenue per Passenger	$0.87	$0.88	$0.88	4 of 19
Farebox Recovery	37.2%	33.0%	36.8%	2 of 19

Source: VVTA

1.6.5 Route 32 Adelanto North

Route 32 is a fixed route that operates between Victorville (Seventh and Lorene Transfer Center) and North Adelanto operating primarily via Amargosa Road, Village Drive, and Air Expressway. Thirty-five or forty foot buses serve the route. Trip generators served by the route are Victor Plaza Shopping Center, Victorville Civic Center, Adelanto City Hall and Adelanto Library. This route serves the periphery of the Southern California Logistics Airport Layover locations for Route 32 are located at:

- Lorene Drive at Valley Center Drive (Seventh and Lorene Transfer Center)
- Bartlett Avenue at Greening Street

Route 32 service details are presented in Table 1-49. Operation information for the route is presented in Table 1-50.

Table 1-49: Route 32, Service Details

Route 32	Weekdays	Saturday
Span	6:00AM-8:57PM	7:00AM-7:57PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-50: Route 32, Annual Operation Information

Route 32	Weekdays	Saturday	Total
Ridership	71,801	10,010	81,811
Hours	3,821	673	4,494
Miles	82,437	14,534	96,971
Operating Expenses	$235,514	$42,148	$277,662
Fare Revenue	$63,188	$8,838	$72,026

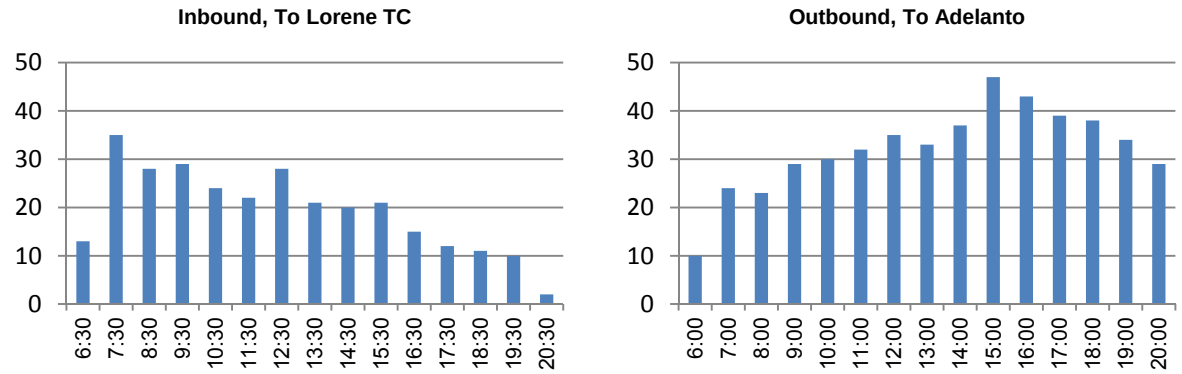
Source: VVTA

Ridership by Trip

Weekdays, inbound ridership on Route 32 was highest in the morning and, generally, decreased over the course of the day. Outbound, ridership peaked in the afternoon. Overall, ridership volume was greater in the outbound direction of travel. See Figure 1-18 for Route 32 weekday ridership by trip.

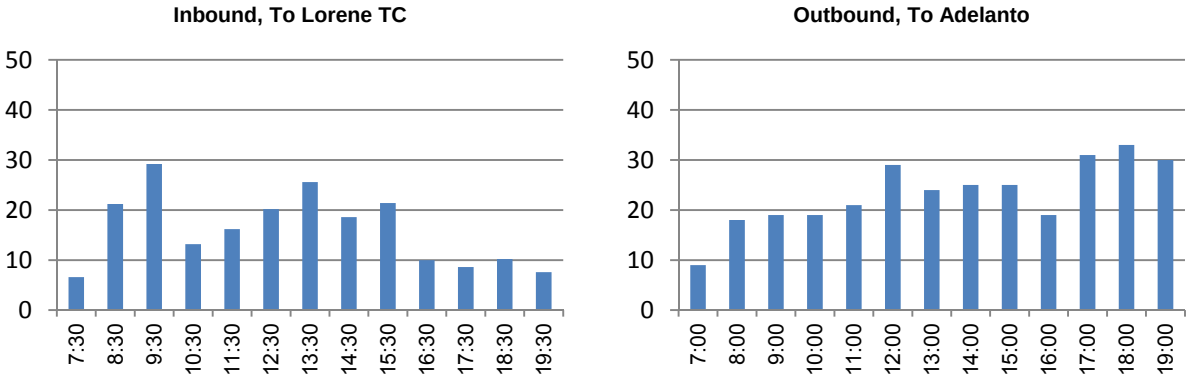
Saturday, ridership varied by trip in inbound direction. The highest ridership trips were in the morning and early afternoon. Outbound, ridership generally increased throughout the day and was highest on the last three trips of the day. See Figure 1-19 for Route 32 Saturday ridership by trip.

Figure 1-18: Route 32, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-19: Route 32, Saturday Ridership by Trip



Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Ridership on Route 32 was typically low to moderate at most bus stops along the route. The highest ridership bus stop was at the Seventh and Lorene Transfer Center. Moderate ridership was concentrated along the two terminal loops and along Village Drive. There were lower ridership levels along the Amargosa Road and Air Expressway corridors. See Figure 1-20 for Route 32 ridership activity by bus stop. Route 32's maximum load point was located at the Seventh and Lorene Transfer Center.

Figure 1-20: Route 32, Monthly Ridership by Bus Stop

On-Time Performance

Route 32 performed better than the median in terms of on-time performance, ranking eighth of 19 routes. Still, the on-time performance was poor. See Table 1-51 for Route 32 on-time performance.

Table 1-51: Route 32, On-Time Performance

Route	Early	On-Time	Late	Rank
32	2.3%	64.8%	32.9%	8 of 19

Source: VVTA DataPoint, October 2011

Weekdays, several trips had a mean, median and mode running time slightly higher than the scheduled running time. Other than evening trips, outbound trips consistently did not have enough scheduled running time. See Table 1-52 for Route 32 weekday running time. Saturday, there was not enough scheduled running time for most inbound trips. Outbound, morning trips did not have enough scheduled running time. See Table 1-53 for Route 32 Saturday running time. Running times do not include layover.

Table 1-52: Route 32, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:30	27	23	27	26	28	31	6:00	30	27	33	33	32	37
7:30	27	22	27	27	27	33	7:00	30	30	34	34	34	42
8:30	27	20	24	25	27	31	8:00	30	24	30	30	30	35
9:30	27	25	28	28	28	32	9:00	30	30	33	33	31	37
10:30	27	25	29	29	29	31	10:00	30	29	32	32	32	41
11:30	27	23	28	28	28	38	11:00	30	28	32	31	31	43
12:30	27	21	26	26	25	35	12:00	30	28	33	33	32	37
13:30	27	22	27	27	24	33	13:00	30	23	32	34	29	39
14:30	27	24	28	28	28	31	14:00	30	26	31	31	29	36
15:30	27	18	26	26	28	33	15:00	30	26	32	32	31	38
16:30	27	11	26	28	28	30	16:00	30	29	33	32	31	39
17:30	27	25	29	29	29	34	17:00	30	27	30	30	31	34
18:30	27	24	31	30	32	40	18:00	30	26	29	29	28	34
19:30	27	25	31	29	28	65	19:00	30	25	29	29	29	34
20:30	27	21	25	24	22	44	20:00	30	25	28	28	29	33

Source: VVTA DataPoint, October 2011

Table 1-53: Route 32, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:30	27	22	27	29	29	30	7:00	30	30	31	31	31	33
8:30	27	24	26	25	24	30	8:00	30	31	34	32	32	39
9:30	27	21	23	23	n/a	25	9:00	30	29	31	30	29	33
10:30	27	26	29	30	31	31	10:00	30	30	33	32	n/a	36
11:30	27	26	28	28	n/a	31	11:00	30	28	31	31	31	35
12:30	27	22	25	25	27	27	12:00	30	30	32	32	n/a	35
13:30	27	25	29	30	n/a	32	13:00	30	28	30	30	30	35
14:30	27	26	29	30	30	31	14:00	30	29	30	30	29	31
15:30	27	24	28	28	n/a	31	15:00	30	27	30	30	30	32
16:30	27	30	31	32	32	32	16:00	30	26	28	28	30	30
17:30	27	29	36	30	29	52	17:00	30	29	30	30	29	33
18:30	27	27	31	32	32	33	18:00	30	29	30	31	31	31
19:30	27	22	22	22	22	22	19:00	30	27	29	29	29	31

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 32 are presented in Table 1-54. Financial indicators are presented in Table 1-55.

Table 1-54: Route 32, Service Indicators

Route 32	Weekdays	Saturday	Total	Rank
Passengers per Hour	18.79	14.87	18.20	7 of 19
Passengers per Mile	0.87	0.69	0.84	9 of 19

Source: VVTA

Table 1-55: Route 32, Financial Indicators

Route 32	Weekdays	Saturday	Total	Rank
Cost per Hour	$61.64	$62.63	$61.79	15 of 19
Cost per Mile	$2.86	$2.90	$2.86	3 of 19
Cost per Passenger	$3.28	$4.21	$3.39	7 of 19
Cost per Peak Vehicle	$235,514	$42,148	$277,662	17 of 19
Revenue per Passenger	$0.88	$0.88	$0.88	6 of 19
Farebox Recovery	26.8%	21.0%	25.9%	7 of 19

Source: VVTA

1.6.6 Route 33 Adelanto Circulator

Route 33 is a fixed route that operates as an Adelanto circulator. The route operates primarily via Chamberlain Way, Bellflower Street, and US-395 (Three Flags Highway). Thirty-three foot cutaway buses operate along the route. The route serves the Adelanto Correctional Facility, San Bernardino County Jobs and Employment Services and Adelanto Marketplace. The route layover is located at:

- El Mirage Road at Muskrat Avenue

Route 33 service details are shown in Table 1-56. See Table 1-57 for operation information.

Table 1-56: Route 33, Service Details

Route 33	Weekdays	Saturday
Span	5:50AM-8:50PM	6:50AM-7:50PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-57: Route 33, Annual Operation Information

Route 33	Weekdays	Saturday	Total
Ridership	45,731	6,215	51,946
Hours	3,826	674	4,500
Miles	70,735	13,604	84,339
Operating Expenses	$234,315	$42,249	$276,563
Fare Revenue	$40,258	$5,470	$45,727

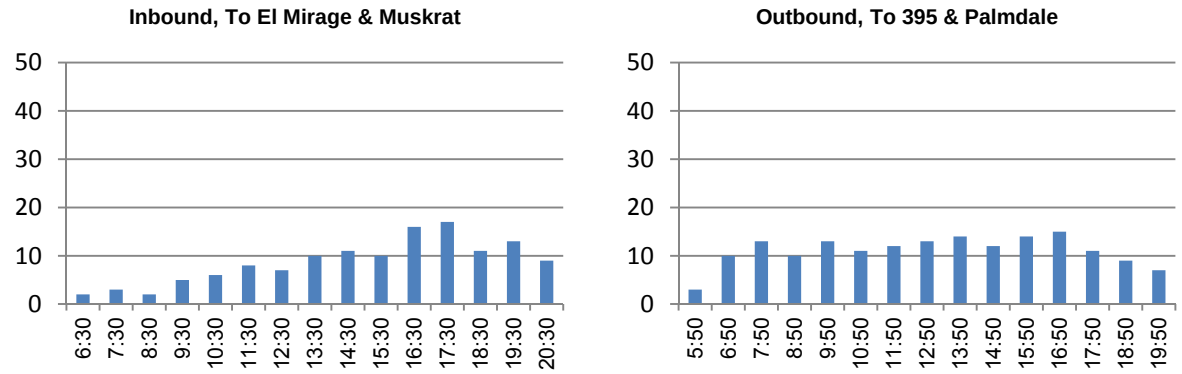
Source: VVTA

Ridership by Trip

Weekdays, in the inbound direction, ridership increased throughout the day and peaked in the afternoon. Outbound, other than the first and last couple of daily trips, ridership was pretty consistent throughout most of the day. See Figure 1-21 for Route 33 weekday ridership by trip.

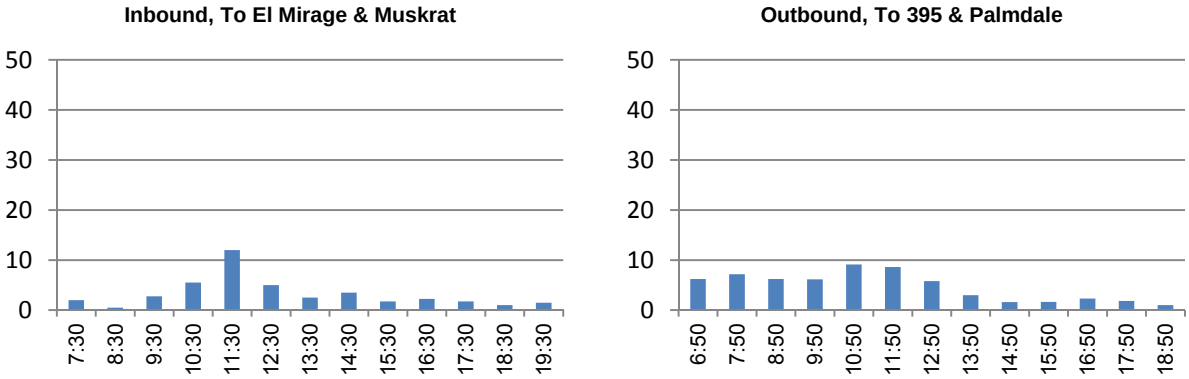
Saturday, ridership in both the inbound and outbound directions was generally low. The trips with the greatest ridership numbers operated in the late morning, just before noon. See Figure 1-22 for Route 33 Saturday ridership by trip.

Figure 1-21: Route 33, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-22: Route 33, Saturday Ridership by Trip

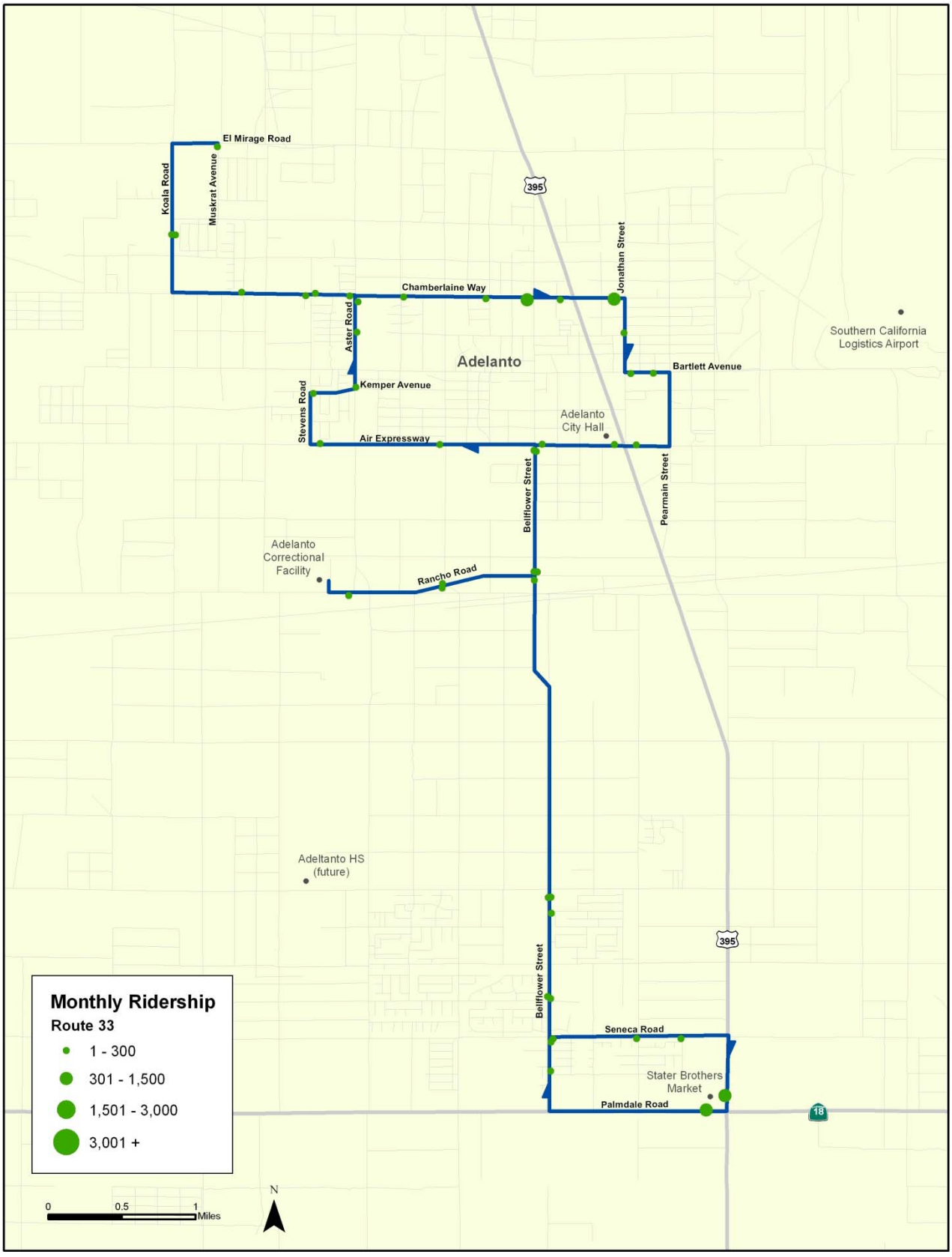


Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Ridership activity was typically low at Route 33 bus stops. There was more moderate ridership levels at bus stops located on Palmdale Road and US-395 at the Stater Brothers Market and along Chamberlaine Way. See Figure 1-23 for Route 33 monthly ridership by bus stop. The maximum load point was located at El Mirage at Muskrat.

Figure 1-23: Route 33, Monthly Ridership by Bus Stop



Source: VVTA APC Data, October 2011

On-Time Performance and Running Time Analysis

Route 33 performed at about the median on all VVTA routes in on-time performance. The route operated on-time a little over 60 percent of the time, which is a poor on-time performance. See Table 1-58 for Route 33 on-time performance.

Table 1-58: Route 33, On-Time Performance

Route	Early	On-Time	Late	Rank
33	0.9%	62.3%	36.8%	10 of 19

Source: VVTA DataPoint, October 2011

Weekdays and Saturday, scheduled running time was insufficient for almost all trips in both directions of service. See Table 1-59 for Route 33 weekday running time and Table 1-60 for Route 33 Saturday running time. Data was not available for all trips. Layover time is not included in the times displayed in the charts.

Table 1-59: Route 33, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:30	20	20	24	24	24	27	5:50	32	36	41	39	39	50
7:30	20	21	23	22	22	28	6:50	32	30	34	34	30	42
8:30	20	20	24	23	22	32	7:50	32	28	34	32	32	41
9:30	20	20	24	23	23	32	8:50	32	31	37	37	37	46
10:30	20	19	24	24	23	30	9:50	32	29	37	36	36	45
11:30	20	20	24	23	21	30	10:50	32	31	37	38	38	42
12:30	20	21	23	24	21	26	11:50	32	32	36	36	35	41
13:30	20	21	24	23	23	33	12:50	32	27	33	32	31	42
14:30	20	19	23	24	25	25	13:50	32	32	36	37	37	38
15:30	20	20	25	24	24	28	14:50	32	30	39	36	35	91
16:30	20	21	24	24	25	27	15:50	32	29	36	37	39	39
17:30	20	20	24	24	27	27	16:50	32	28	34	34	35	37
18:30	20	22	24	24	24	27	17:50	32	29	35	35	36	38
19:30	20	20	25	25	22	29	18:50	32	33	41	40	38	51
20:30	20	21	22	21	21	24	19:50	32	25	36	35	35	60

Source: VVTA DataPoint, October 2011

Table 1-60: Route 33, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:30	20	21	23	23	23	25	6:50	32	38	40	39	39	46
8:30	20	20	22	22	n/a	23	7:50	32	29	31	31	29	34
9:30	20	20	22	22	n/a	24	8:50	32	28	35	31	n/a	45
10:30	20	22	23	23	23	25	9:50	32	34	36	36	34	37
11:30	20	22	24	25	25	26	10:50	32	35	38	39	39	40
12:30	20	24	25	24	24	29	11:50	32	33	34	34	34	36
13:30	20	23	23	23	n/a	23	12:50	32	30	31	31	30	33
14:30	20	24	24	24	n/a	24	13:50	32	36	36	36	n/a	36
15:30	20	22	22	22	n/a	22	14:50	32	37	37	37	n/a	37
16:30	20	0	n/a	n/a	n/a	0	15:50	32	40	40	40	n/a	40
17:30	20	24	24	24	n/a	24	16:50	32	31	31	31	n/a	31
18:30	20	21	21	21	n/a	21	17:50	32	40	40	40	n/a	40
19:30	20	0	n/a	n/a	n/a	0	18:50	32	37	37	37	n/a	37

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 33 are presented in Table 1-61. Financial indicators are presented in Table 1-62.

Table 1-61: Route 33, Service Indicators

Route 33	Weekdays	Saturday	Total	Rank
Passengers per Hour	11.95	9.22	11.54	10 of 19
Passengers per Mile	0.65	0.46	0.62	11 of 19

Source: VVTA

Table 1-62: Route 33, Financial Indicators

Route 33	Weekdays	Saturday	Total	Rank
Cost per Hour	$61.24	$62.68	$61.46	14 of 19
Cost per Mile	$3.31	$3.11	$3.28	6 of 19
Cost per Passenger	$5.12	$6.80	$5.32	10 of 19
Cost per Peak Vehicle	$234,315	$42,249	$276,563	16 of 19
Revenue per Passenger	$0.88	$0.88	$0.88	6 of 19
Farebox Recovery	17.2%	12.9%	16.5%	12 of 19

Source: VVTA

1.6.7 Route 40 Apple Valley North Route Deviation

Route 40 is a deviated route that operates in northern areas of Apple Valley. The route follows the general path of Ramona Avenue, Central Road, Thunderbird Road, Rancherias Road, and Dale Evans Parkway. Twenty-seven foot cutaway buses serve the route. The route serves the Apple Valley Post Office, Walmart, and Apple Valley Civic Center. The layover for the route is located at:

- Quinault Road at Outer Highway 18S (SR-18)

See Table 1-63 for Route 40 service details. See Table 1-64 for Route 40 operation information.

Table 1-63: Route 40, Service Details

Route 40	Weekdays	Saturday
Span	6:00AM-8:55PM	7:00AM-7:55PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-64: Route 40, Annual Operation Information

Route 40	Weekdays	Saturday	Total
Ridership	37,713	5,353	43,066
Hours	3,819	672	4,491
Miles	60,275	10,613	70,888
Operating Expenses	$229,554	$40,896	$270,449
Fare Revenue	$33,125	$4,694	$37,819

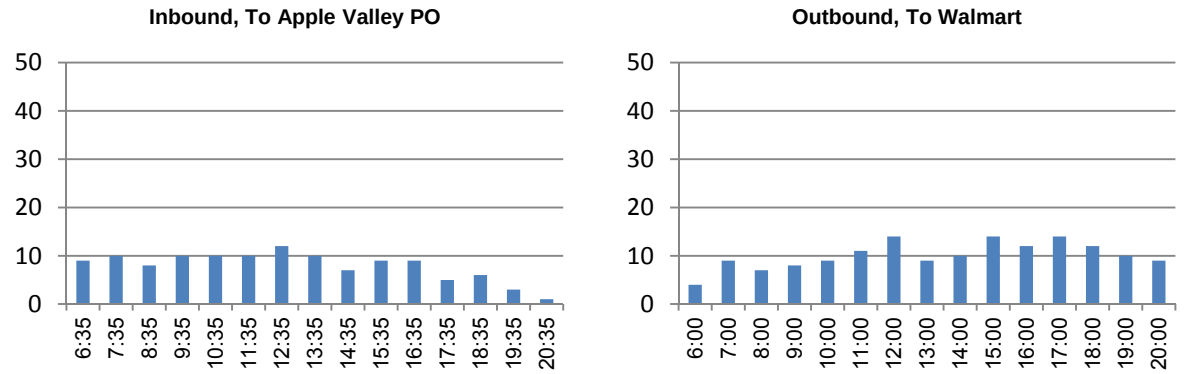
Source: VVTA

Ridership by Trip

On weekdays, Route 40 carried about 10 passengers per trip in the inbound direction for most of the day. Inbound ridership on the route declined after the 4:35PM trip. Outbound, ridership was greatest on the noon trip and on afternoon trips between 3:00PM and 6:00PM. See Figure 1-24 for Route 40 weekday ridership by trip.

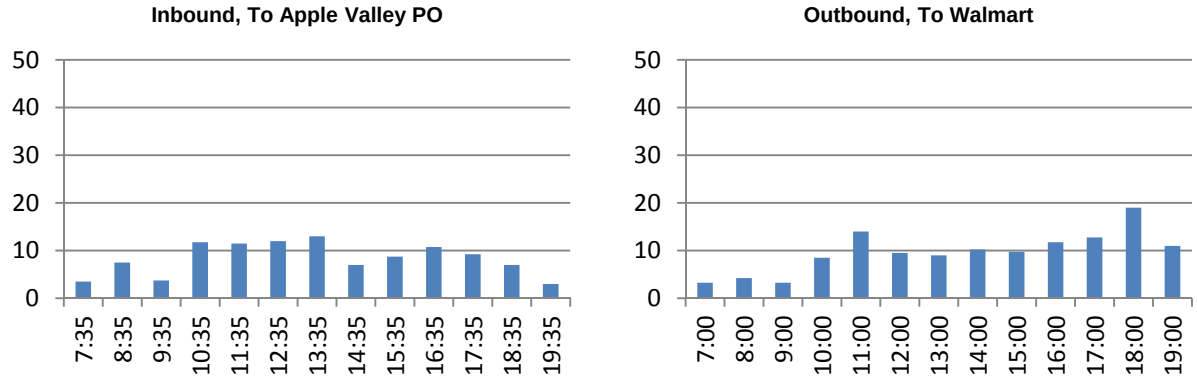
Saturday, in the inbound direction, Route 40 ridership was highest in the late morning and early afternoon. Outbound, there were two peaks in ridership, one in the late morning and the other in the late afternoon/early evening. See Figure 1-25 for Route 40 Saturday ridership by trip.

Figure 1-24: Route 40, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-25: Route 40, Saturday Ridership by Trip



Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

The highest ridership bus stops on Route 40 were located at Walmart, Apple Valley Town Hall and the Apple Valley Post Office. Ridership along most route segments showed lower ridership. See Figure 1-26 for Route 40 ridership at bus stops and deviated stops. The maximum load point for Route 40 was located at Dale Evans Parkway at SR-18.

According to TransTrack, Route 40 had 4,099 total riders in the month of October 2011. The ridership at deviated bus stop locations represented 77 of those 4,099 riders or 1.9 percent of the monthly ridership.

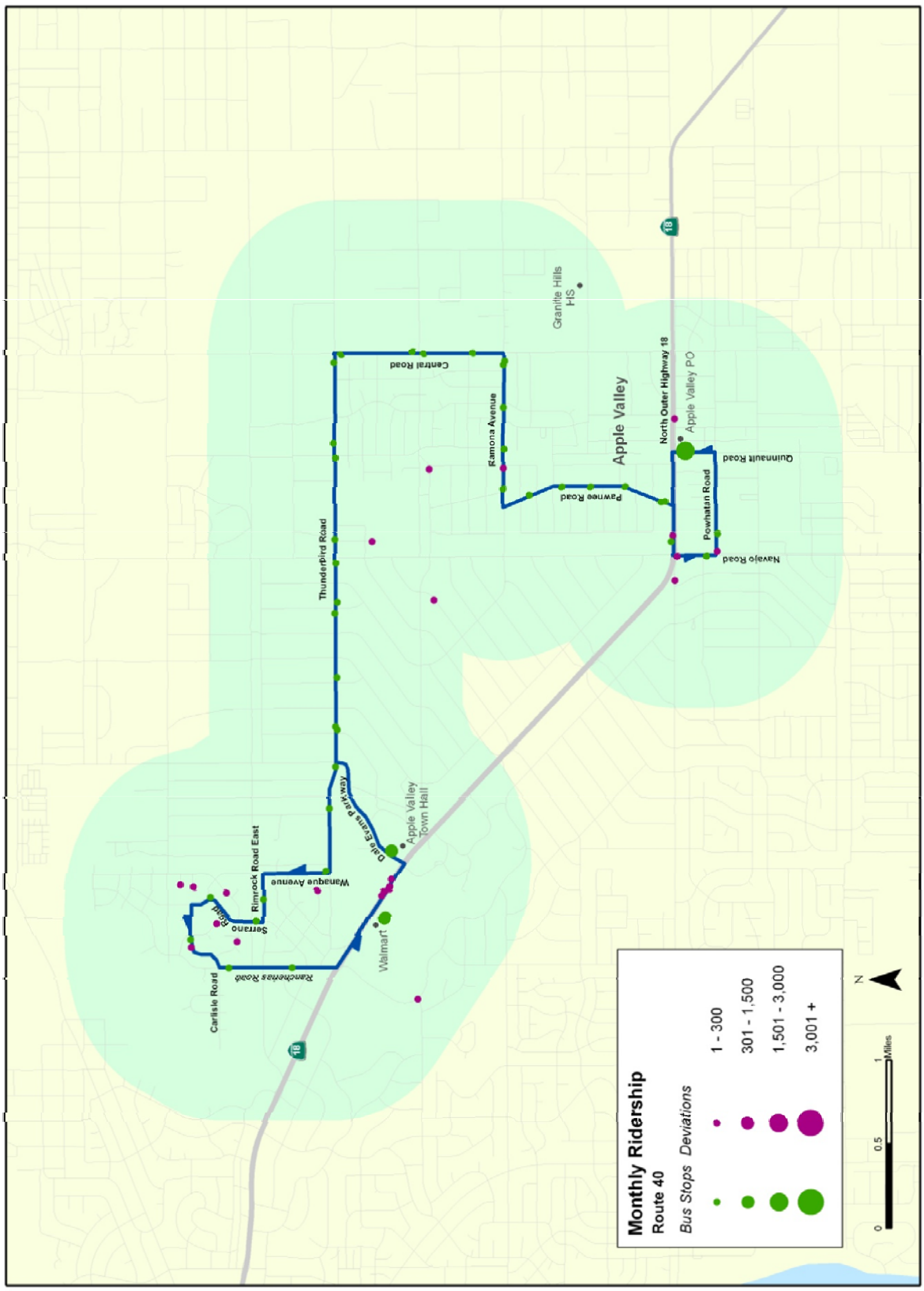


Figure 1-26: Route 40, Monthly Ridership by Bus Stop

On-Time Performance and Running Time Analysis

Route 40 ranked third of all 19 VVTA route in on-time performance. However, the route operated on-time only 77% of the time, operating late over a quarter of the time. See Table 1-65 for Route 40 on-time performance.

Table 1-65: Route 40, On-Time Performance

Route	Early	On-Time	Late	Rank
40	1.2%	77.4%	27.4%	3 of 19

Source: VVTA DataPoint, October 2011

There was not enough scheduled running time for almost all trips in the inbound direction on weekdays and Saturday. Outbound, the scheduled running time was adequate for most trips except the first trip and last two trips of the day on both weekdays and Saturday. See Table 1-66 for Route 40 weekday running time. See Table 1-67 for Route 40 Saturday running time.

Table 1-66: Route 40, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:35	20	20	25	25	22	32	6:00	35	32	37	38	40	40
7:35	20	20	26	27	27	32	7:00	35	30	34	34	32	42
8:35	20	21	27	28	27	31	8:00	35	28	33	33	33	36
9:35	20	18	26	27	27	33	9:00	35	29	34	34	34	44
10:35	20	15	23	23	23	29	10:00	35	29	33	33	30	40
11:35	20	21	25	25	23	30	11:00	35	29	34	35	35	37
12:35	20	18	21	21	22	24	12:00	35	31	35	34	34	40
13:35	20	22	27	28	29	33	13:00	35	29	34	33	33	41
14:35	20	21	28	29	29	33	14:00	35	27	31	31	31	34
15:35	20	16	23	24	25	28	15:00	35	29	34	33	32	45
16:35	20	17	24	23	20	34	16:00	35	27	33	34	34	39
17:35	20	19	28	30	31	33	17:00	35	28	33	33	32	41
18:35	20	27	30	30	30	37	18:00	35	28	31	30	28	38
19:35	20	17	23	24	24	27	19:00	35	28	36	36	36	44
20:35	20	12	14	14	14	18	20:00	35	32	37	37	37	49

Source: VVTA DataPoint, October 2011

Table 1-67: Route 40, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:35	20	22	25	25	n/a	28	7:00	35	37	39	39	39	40
8:35	20	24	27	28	n/a	29	8:00	35	28	30	30	30	32
9:35	20	21	24	23	n/a	31	9:00	35	32	34	32	32	41
10:35	20	18	23	23	n/a	28	10:00	35	30	33	33	n/a	37
11:35	20	19	22	21	n/a	26	11:00	35	38	38	38	38	39
12:35	20	20	21	22	22	22	12:00	35	33	36	36	n/a	39
13:35	20	28	29	29	n/a	30	13:00	35	29	30	30	n/a	32
14:35	20	27	28	28	27	30	14:00	35	30	31	31	31	32
15:24	20	19	23	23	n/a	26	15:00	35	31	33	33	n/a	34
16:35	20	20	22	22	20	24	16:00	35	32	34	34	n/a	35
17:35	20	24	25	25	24	26	17:00	35	31	35	36	n/a	37
18:35	20	18	23	25	25	25	18:00	35	38	41	41	43	43
19:35	20	12	14	14	n/a	15	19:00	35	33	42	42	n/a	49

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 40 are presented in Table 1-68. Financial indicators are presented in Table 1-69. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-68: Route 40, Service Indicators

Route 40	Weekdays	Saturday	Total	Rank
Passengers per Hour	9.88	7.97	9.59	11 of 19
Passengers per Mile	0.63	0.50	0.61	12 of 19

Source: VVTA

Table 1-69: Route 40, Financial Indicators

Route 40	Weekdays	Saturday	Total	Rank
Cost per Hour	$60.11	$60.86	$60.22	8 of 19
Cost per Mile	$3.81	$3.85	$3.82	12 of 19
Cost per Passenger	$6.09	$7.64	$6.28	11 of 19
Cost per Peak Vehicle	$229,554	$40,896	$270,449	13 of 19
Revenue per Passenger	$0.88	$0.88	$0.88	6 of 19
Farebox Recovery	14.4%	11.5%	14.0%	14 of 19

Source: VVTA

1.6.8 Route 41 Apple Valley – Victorville

Route 41 is a fixed route that operates between Victorville (Seventh and Lorene Transfer Center) and Apple Valley. Between Victorville and Apple Valley, the route operates primarily along, State Route 18. Thirty-five or forty foot buses serve the route. Trip generators served by the route include Victor Plaza Shopping Center, Victorville Transit Center, Saint Mary Medical Center, Walmart, and the Apple Valley Post Office. Layovers are performed at:

- Lorene Drive at Valley Center Drive (Seventh and Lorene Transfer Center)
- Quinault Road at Outer Highway 18S (SR-18)

Table 1-70 presents Route 41 service details. See Table 1-71 for Route 41 operation information.

Table 1-70: Route 41, Service Details

Route 41	Weekdays	Saturday
Span	6:00AM-8:55PM	7:00AM-7:55PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-71: Route 41, Annual Operation Information

Route 41	Weekdays	Saturday	Total
Ridership	178,229	23,604	201,833
Hours	7,452	1,305	8,757
Miles	94,424	16,617	111,041
Operating Expenses	$441,260	$78,150	$519,410
Fare Revenue	$156,179	$20,607	$176,786

Source: VVTA

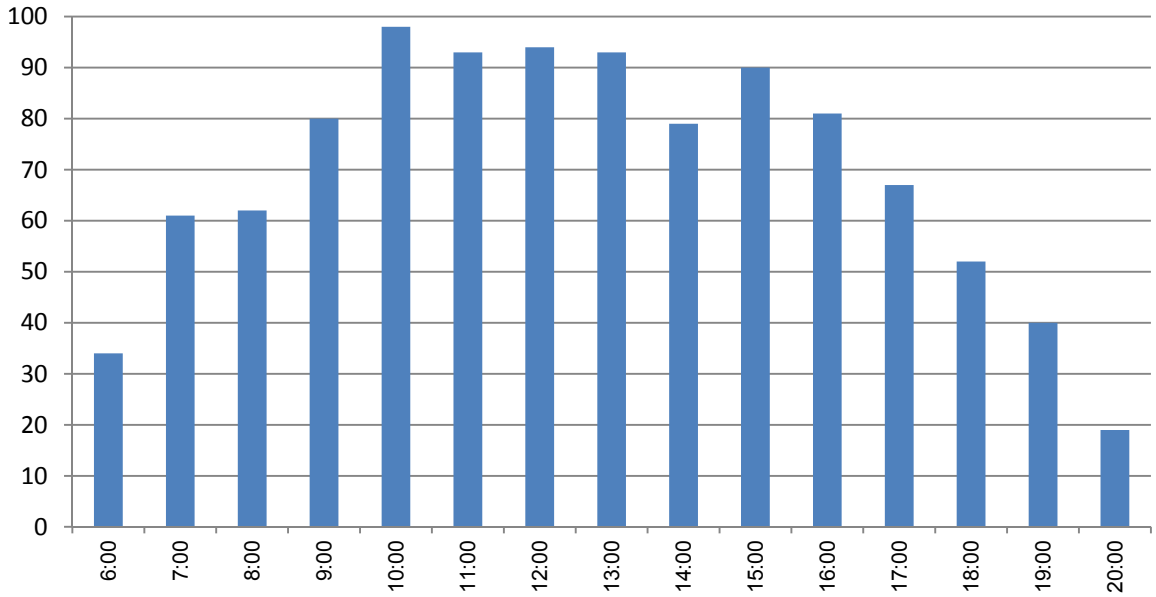
Ridership by Trip

Weekday ridership on Route 41 showed peaks around noon in both directions of service. Inbound, the peak was just before noon, in the late morning. Outbound, the peak occurred afternoon. See Figure 1-27 for Route 41 weekday ridership by trip in the inbound direction. See Figure 1-28 for Route 41 weekday ridership by trip in the outbound direction.

Saturday, ridership varied by trip more than on weekdays. In the inbound direction, the highest ridership trip was at noon. Outbound, the highest ridership trips were in the in afternoon. See Figure 1-29 for Route 41 Saturday ridership by trip in the inbound direction and Figure 1-30 for Route 41 Saturday ridership by trip in the outbound direction.

Figure 1-27: Route 41, Weekday Ridership by Trip, Inbound

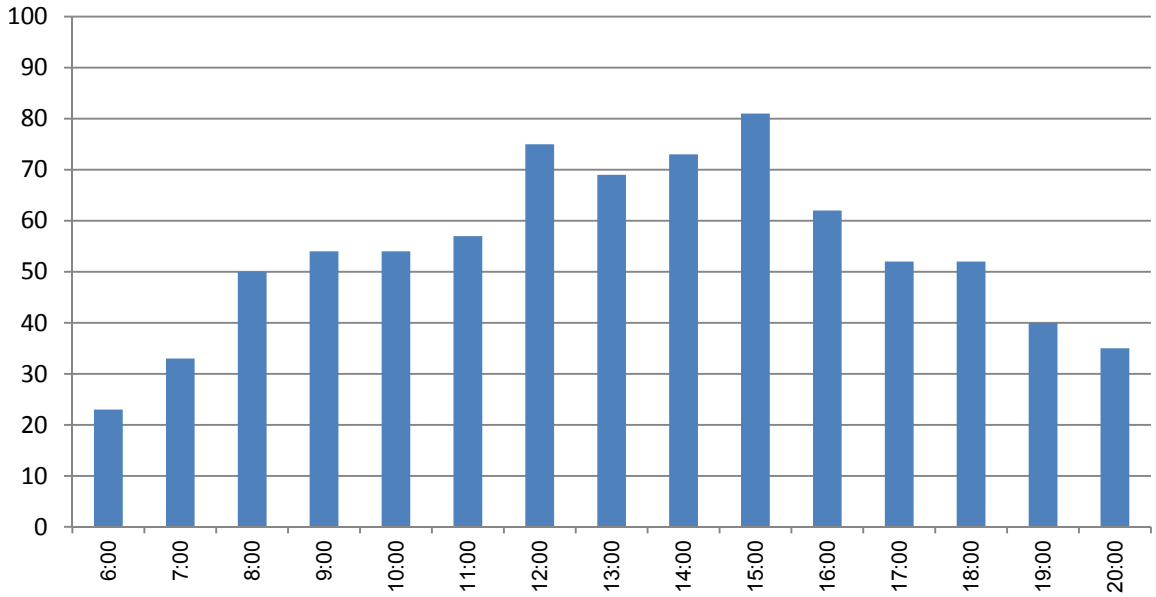
To Lorene TC



Source: VVTA APC Data, October 2011

Figure 1-28: Route 41, Weekday Ridership by Trip, Outbound

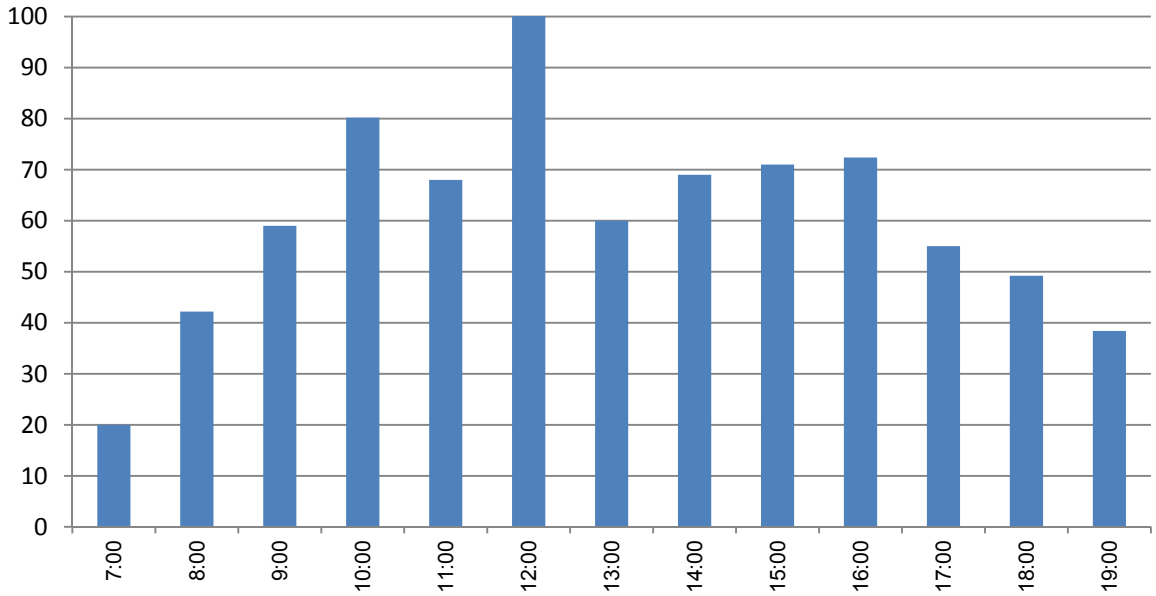
To Apple Valley PO



Source: VVTA APC Data, October 2011

Figure 1-29: Route 41, Saturday Ridership by Trip, Inbound

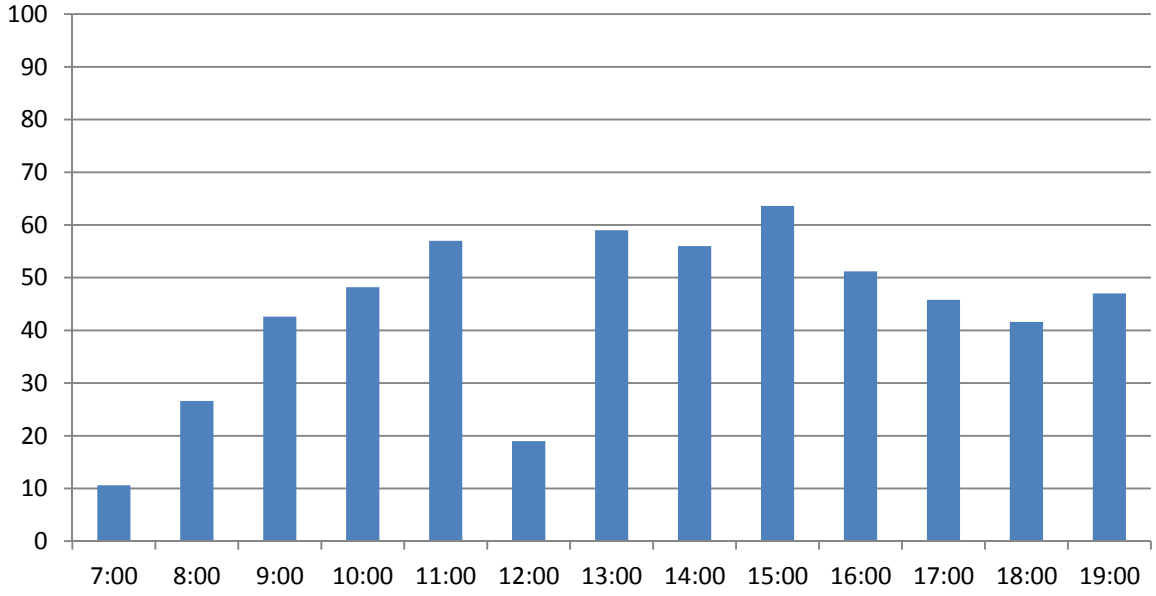
To Lorene TC



*The 12:00 trip had an average daily ridership of 104 passengers.
Source: VVTA APC Data, October 2011

Figure 1-30: Route 41, Saturday Ridership by Trip, Outbound

To Apple Valley PO



Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

There was moderate to high ridership at Route 41 bus stops in the Victorville portion of the route and at select bus stops in Apple Valley. The highest ridership bus stops were the Seventh and Lorene Transfer Center, Walmart, and the Apple Valley Post Office. See Figure 1-31 for Route 41 monthly ridership by trip. The maximum load point for the route was located at the Seventh and Lorene Transfer Center.

Source: VVTA APC Data, October 2011

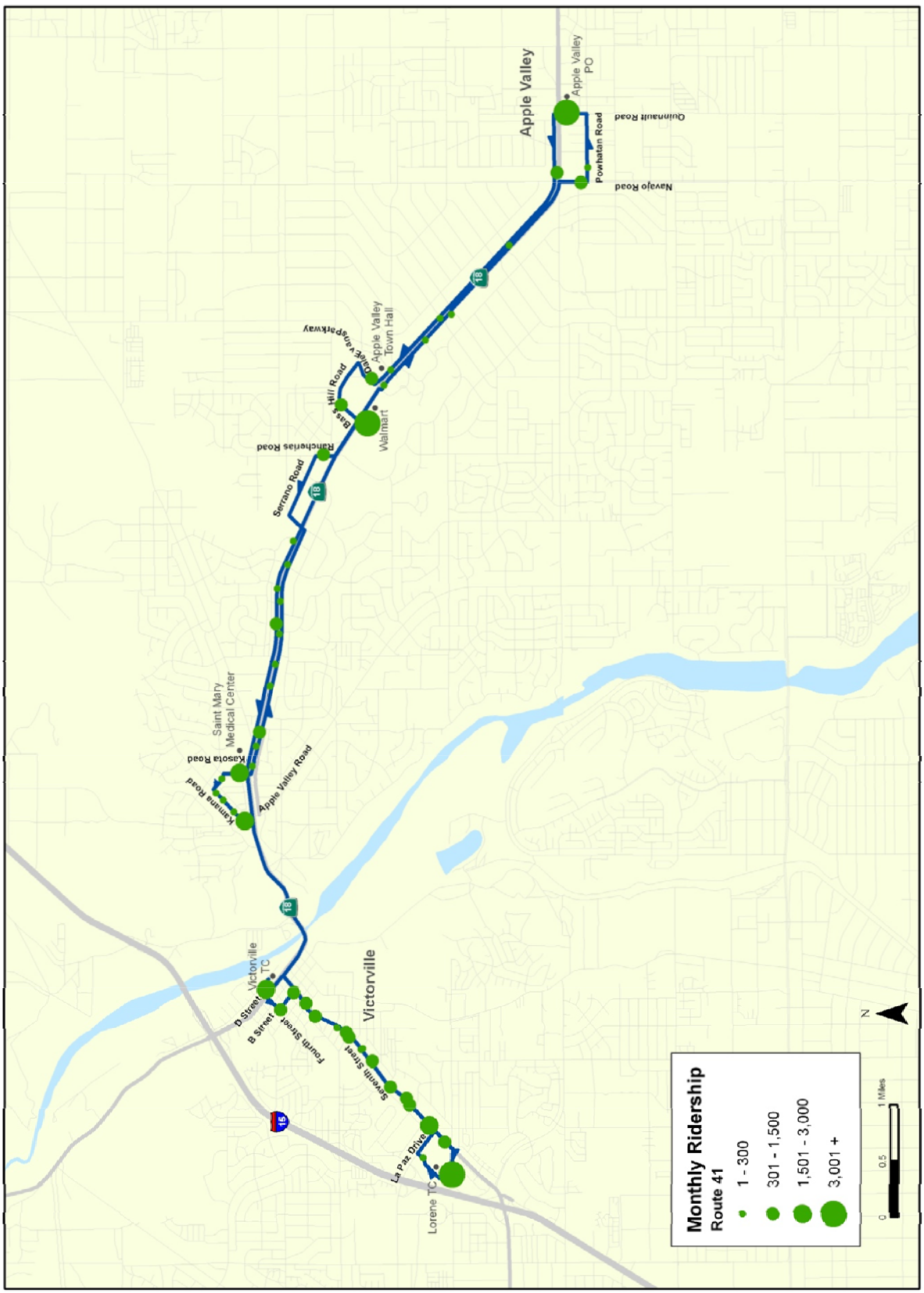


Figure 1-31: Route 41, Monthly Ridership by Bus Stop

On-Time Performance and Running Time Analysis

Route 41, one of the better performing VVTA routes in on-time performance, did not perform well. The route departed on-time from timepoints and terminals only about 70 percent of the time. See Table 1-72 for Route 41 on-time performance.

Table 1-72: Route 41, On-Time Performance

Route	Early	On-Time	Late	Rank
41	0.3%	70.1%	29.6%	5 of 19

Source: VVTA DataPoint, October 2011

Weekdays and Saturday, scheduled running time was insufficient on all inbound and outbound trips except for the last trip of the day. While select minimum running times were below scheduled running times, the mean, median and mode were higher than scheduled running times. See Table 1-73 for Route 41 weekday running time and Table 1-74 for Route 41 Saturday running time. Running times do not include layover.

Table 1-73: Route 41, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:00	52	57	61	61	61	77	6:00	55	50	62	62	62	70
7:00	52	53	61	61	60	66	7:00	55	57	60	60	59	63
8:00	52	53	56	56	56	65	8:00	55	53	59	59	58	63
9:00	52	54	56	57	58	60	9:00	55	60	62	63	64	65
10:00	52	51	55	55	56	59	10:00	55	51	58	59	60	62
11:00	52	57	61	60	60	65	11:00	55	54	59	59	58	62
12:00	52	51	56	57	57	62	12:00	55	51	54	54	54	58
13:00	52	58	62	61	61	66	13:00	55	56	59	59	59	64
14:00	52	56	60	60	58	64	14:00	55	53	59	59	60	62
15:00	52	50	55	54	52	63	15:00	55	56	60	60	59	63
16:00	52	48	56	56	56	62	16:00	55	52	57	57	55	60
17:00	52	47	55	55	54	63	17:00	55	52	60	60	57	66
18:00	52	52	61	60	60	71	18:00	55	57	61	61	62	68
19:00	52	49	60	58	55	91	19:00	55	53	58	58	58	69
20:00	52	37	45	45	43	55	20:00	55	31	48	49	49	52

Source: VVTA DataPoint, October 2011

Table 1-74: Route 41, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:00	52	55	58	58	58	60	7:00	55	62	64	64	64	67
8:00	52	53	57	56	56	61	8:00	55	61	62	62	62	62
9:00	52	48	53	53	n/a	59	9:00	55	58	62	64	64	66
10:00	52	53	55	55	n/a	57	10:00	55	58	61	62	n/a	64
11:00	52	50	55	55	n/a	61	11:00	55	56	59	60	60	61
12:00	52	53	56	54	54	63	12:00	55	0	n/a	n/a	n/a	0
13:00	52	55	61	61	n/a	66	13:00	55	56	59	60	60	61
14:00	52	58	61	60	63	63	14:00	55	56	60	61	61	62
15:00	52	50	51	52	52	52	15:00	55	55	59	60	n/a	64
16:00	52	52	56	55	55	61	16:00	55	55	59	58	n/a	65
17:00	52	54	56	55	57	57	17:00	55	56	59	59	n/a	63
18:00	52	60	69	67	n/a	82	18:00	55	50	57	61	61	61
19:00	52	41	46	46	n/a	51	19:00	55	45	49	50	50	53

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 41 are presented in Table 1-75. Financial indicators are presented in Table 1-76. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-75: Route 41, Service Indicators

Route 41	Weekdays	Saturday	Total	Rank
Passengers per Hour	23.92	18.09	23.05	4 of 19
Passengers per Mile	1.89	1.42	1.82	2 of 19

Source: VVTA

Table 1-76: Route 41, Financial Indicators

Route 41	Weekdays	Saturday	Total	Rank
Cost per Hour	$59.21	$59.89	$59.31	4 of 19
Cost per Mile	$4.67	$4.70	$4.68	16 of 19
Cost per Passenger	$2.48	$3.31	$2.57	3 of 19
Cost per Peak Vehicle	$220,630	$39,075	$259,705	8 of 19
Revenue per Passenger	$0.88	$0.87	$0.88	6 of 19
Farebox Recovery	35.4%	26.4%	34.0%	3 of 19

Source: VVTA

1.6.9 Route 43 Apple Valley – Victor Valley College

Route 43 is a fixed route that operates between Apple Valley and Victor Valley College. The route operates primarily via Central Road and Bear Valley Road. Thirty-five or forty foot buses serve the route. Trip generators served by the route include Apple Valley High School, Target and Victor Valley Community College. Route 43 layovers are performed at:

- Quinault Road at Outer Highway 18S (SR-18)
- Jacaranda Avenue at Victor Valley College

Table 1-77 presents Route 43 service details. See Table 1-78 for Route 43 operation information.

Table 1-77: Route 43, Service Details

Route 43	Weekdays	Saturday
Span	6:00AM-8:54PM	7:00AM-7:54PM
Frequency	30 Peak/ 60 Non-Peak	60

Source: VVTA Public Timetables

Table 1-78: Route 43, Annual Operation Information

Route 43	Weekdays	Saturday	Total
Ridership	127,001	14,671	141,672
Hours	5,321	665	5,986
Miles	96,744	12,433	109,177
Operating Expenses	$324,194	$41,096	$365,291
Fare Revenue	$110,656	$12,851	$123,507

Source: VVTA

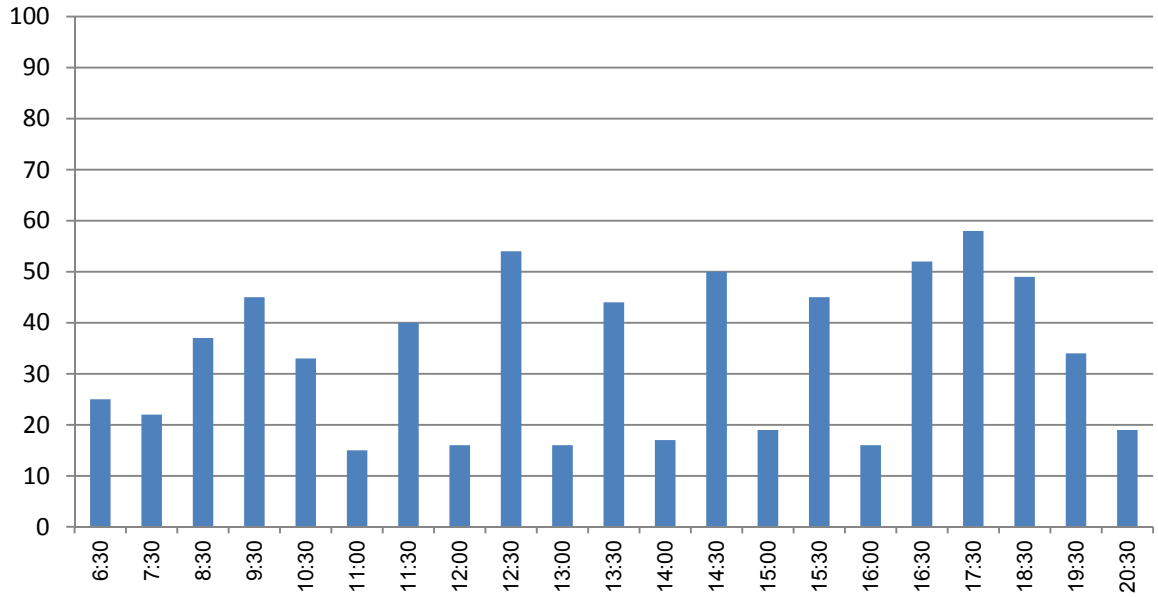
Ridership by Trip

Weekdays, the highest ridership in the inbound direction was on midday and afternoon peak trips. Outbound, the highest ridership was on morning and midday trips. Both directions of service showed a pattern with higher ridership on every other trip at times when there were 30 minute headways. This may be due to timed connections to other routes, including Routes 45 and 46. See Figure 1-32 for Route 43 ridership by trip in the inbound direction and Figure 1-33 for Route 43 ridership by trip in the outbound direction.

Saturday, inbound ridership was highest in the afternoon. In the outbound direction, ridership was highest on the noon trip and on select afternoon trips. See Figure 1-34 for Route 43 Saturday ridership by trip.

Figure 1-32: Route 43, Weekday Ridership by Trip, Inbound

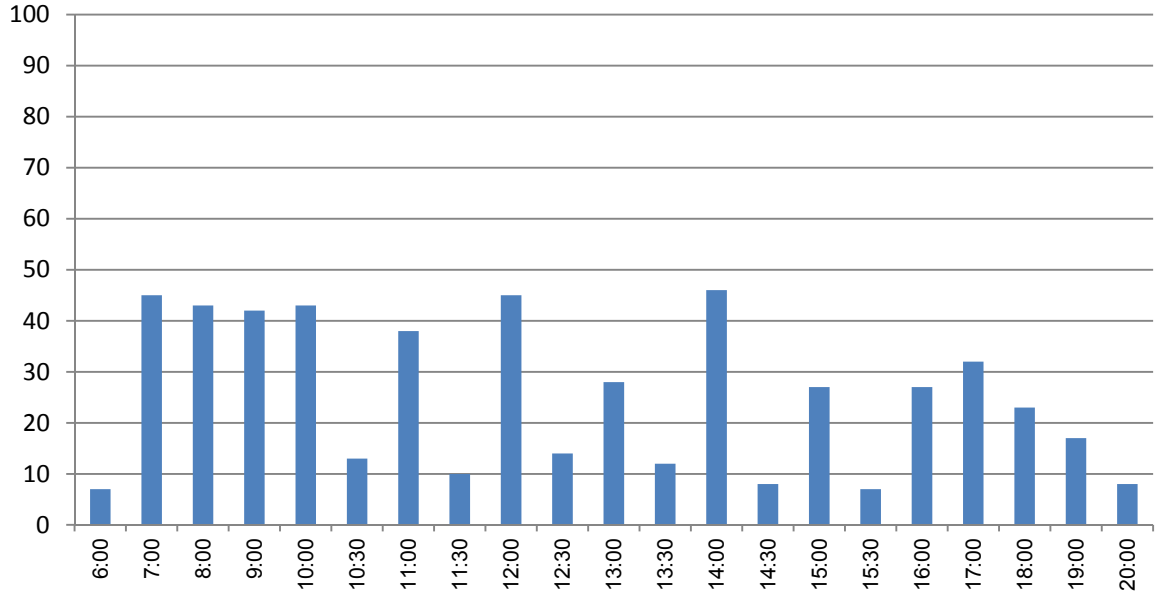
To Apple Valley PO



Source: VVTA APC Data, October 2011

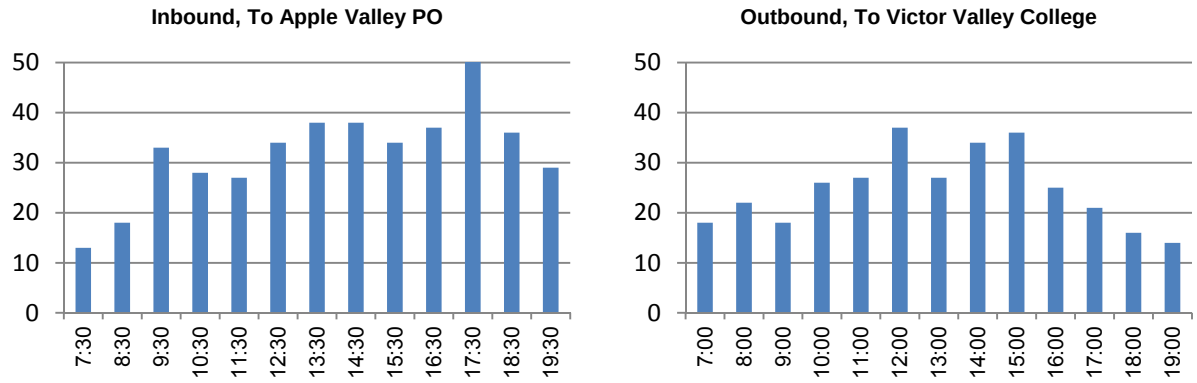
Figure 1-33: Route 43, Weekday Ridership by Trip, Outbound

To Victor Valley College



Source: VVTA APC Data, October 2011

Figure 1-34: Route 43, Saturday Ridership by Trip



*The 17:30 inbound trip had an average daily ridership of 51 passengers.
Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Route 43 ridership was highest at the two route terminals, Apple Valley Post Office and Victor Valley College. There was moderate ridership along Navajo Road and along Bear Valley Road at stops near major shopping centers and schools. See Figure 1-35 for Route 43 monthly ridership by bus stop. The maximum load point was located at the Apple Valley Post Office.

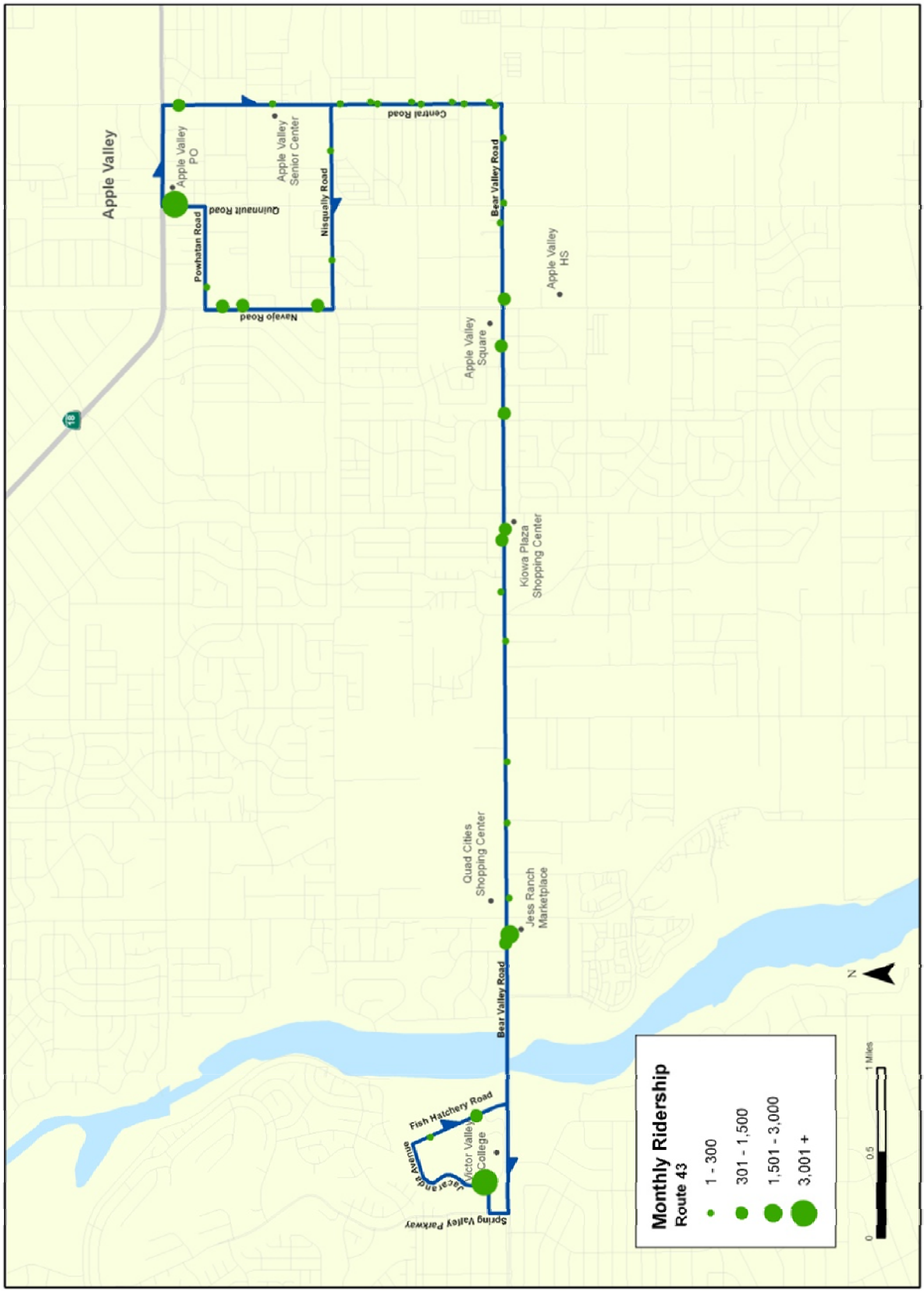


Figure 1-35: Route 43, Monthly Ridership by Bus Stop

On-Time Performance and Running Time Analysis

Route 43 operates on-time only a little more than half of the time. See Table 1-79 for Route 43 on-time performance.

Table 1-79: Route 43, On-Time Performance

Route	Early	On-Time	Late	Rank
43	0.3%	55.6%	44.1%	14 of 19

Source: VVTA DataPoint, October 2011

Scheduled running times for outbound trips of Route 43 on weekdays and Saturday were generally adequate for the route. There was not enough scheduled running time for inbound trips on weekdays and Saturday. The minimum running time exceeded the scheduled running time in almost all cases. See Table 1-80 for Route 43 weekday running time and Table 1-81 for Route 43 Saturday running time.

Table 1-80: Route 43, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:30	24	27	32	32	31	39	6:00	30	23	29	30	30	35
7:30	24	25	30	30	30	33	7:00	30	23	29	30	26	35
8:30	24	25	29	29	27	33	8:00	30	27	30	30	29	33
9:30	24	25	30	29	29	35	9:00	30	26	31	32	30	35
10:30	24	27	29	29	29	33	10:00	30	24	29	28	28	33
11:00	24	25	29	29	30	31	10:30	30	25	31	31	32	35
11:30	24	27	30	30	30	35	11:00	30	23	29	29	31	33
12:00	24	26	31	31	31	35	11:30	30	27	30	30	30	34
12:30	24	27	30	30	29	34	12:00	30	26	30	30	30	33
13:00	24	27	29	29	28	33	12:30	30	25	31	32	32	35
13:30	24	28	30	30	29	35	13:00	30	22	27	27	26	32
14:00	24	29	31	30	29	34	13:30	30	21	26	25	26	35
14:30	24	28	31	31	33	33	14:00	30	24	29	30	30	33
15:00	24	28	31	30	29	38	14:30	30	24	29	30	30	36
15:30	24	26	31	31	32	37	15:00	30	25	29	29	29	34
16:00	24	27	31	30	28	39	15:30	30	25	28	28	30	32
16:30	24	28	32	31	30	41	16:00	30	20	29	29	29	32
17:30	24	26	30	30	29	36	17:00	30	22	29	29	28	33
18:30	24	27	32	32	32	39	18:00	30	23	29	29	29	34
19:30	24	27	31	31	32	40	19:00	30	22	28	28	28	36
20:30	24	22	28	25	25	76	20:00	30	20	29	29	29	54

Source: VVTA DataPoint, October 2011

Table 1-81: Route 43, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:30	24	32	34	34	34	37	7:00	30	27	29	28	30	30
8:30	24	24	29	30	31	31	8:00	30	25	26	26	25	28
9:30	24	28	31	29	29	36	9:00	30	26	28	28	28	30
10:30	24	29	31	32	32	32	10:00	30	27	29	28	31	31
11:30	24	28	31	31	31	32	11:00	30	24	28	29	31	31
12:30	24	27	31	30	n/a	36	12:00	30	26	29	30	30	32
13:30	24	26	30	31	32	32	13:00	30	26	28	27	26	31
14:30	24	28	32	31	n/a	39	14:00	30	28	29	30	30	30
15:00	24	29	31	32	32	34	15:00	30	25	27	28	25	30
16:00	24	27	31	29	29	35	16:00	30	25	28	29	29	30
17:30	24	24	28	28	n/a	30	17:00	30	23	27	27	n/a	30
18:30	24	28	31	31	33	33	18:00	30	27	32	31	n/a	38
19:30	24	23	25	25	n/a	26	19:00	30	25	39	29	n/a	83

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 43 are presented in Table 1-82. Financial indicators are presented in Table 1-83.

Table 1-82: Route 43, Service Indicators

Route 43	Weekdays	Saturday	Total	Rank
Passengers per Hour	23.87	22.06	23.67	3 of 19
Passengers per Mile	1.31	1.18	1.30	6 of 19

Source: VVTA

Table 1-83: Route 43, Financial Indicators

Route 43	Weekdays	Saturday	Total	Rank
Cost per Hour	$60.93	$61.80	$61.02	12 of 19
Cost per Mile	$3.35	$3.31	$3.35	8 of 19
Cost per Passenger	$2.55	$2.80	$2.58	4 of 19
Cost per Peak Vehicle	$162,097	$41,096	$182,646	4 of 19
Revenue per Passenger	$0.87	$0.88	$0.87	17 of 19
Farebox Recovery	34.1%	31.3%	33.8%	4 of 19

Source: VVTA

1.6.10 Route 44 Mall of Victor Valley - Hesperia

Route 44 is a fixed route that operates between Hesperia and the Mall of Victor Valley. The route operates primarily via Main Street, Third Avenue, Seventh Avenue, and Cottonwood Avenue. Thirty-five or forty foot buses serve the route. The route serves Hesperia Post Office, Sultana High School, Midtown Square Shopping Center, Hesperia Civic Center, Hesperia Library, Hesperia High School and the Mall of Victor Valley. Layovers for Route 44 are performed at:

- G Avenue at Olive Street
- The Mall of Victor Valley

Table 1-84 presents Route 44 service details. Operation information for Route 44 is presented in Table 1-85.

Table 1-84: Route 44, Service Details

Route 44	Weekdays	Saturday
Span	5:50AM-8:57PM	6:50AM-7:57PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-85: Route 44, Annual Operation Information

Route 44	Weekdays	Saturday	Total
Ridership	67,848	10,049	77,897
Hours	7,635	1,342	8,977
Miles	103,587	18,214	121,801
Operating Expenses	$452,903	$80,381	$533,284
Fare Revenue	$59,688	$8,933	$68,821

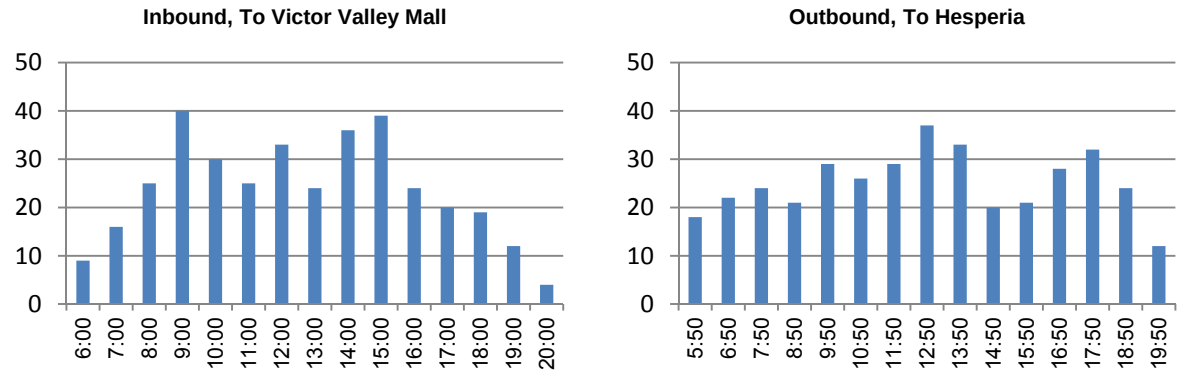
Source: VVTA

Ridership by Trip

Weekdays, Route 44 inbound ridership varied throughout the day with the highest ridership on the 9:00AM and 3:00PM trips. Outbound, ridership also varied throughout the day with midday trips just after noon having the highest ridership. See Figure 1-36 for Route 44 weekday ridership by trip.

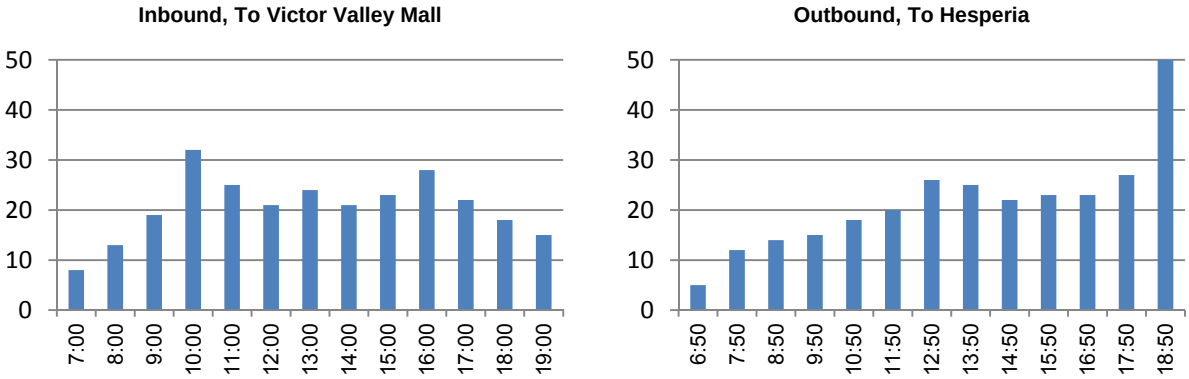
Saturday, inbound ridership had two slight peaks, one in the morning and the other in the afternoon. In the outbound direction, ridership was highest on the last trip of the day. There was also a slight ridership peak in the early afternoon. See Figure 1-37 for Route 44 Saturday ridership by trip.

Figure 1-36: Route 44, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-37: Route 44, Saturday Ridership by Trip



*The 18:50 outbound trip had an average daily ridership of 50 passengers.
Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Ridership along Route 44 was typically low at most bus stops along the route. The greatest amount of activity occurred at the bus stop at the Mall of Victor Valley. There was moderate ridership at bus stops near trip generators including the Hesperia Post Office, Hesperia City Hall, high schools and shopping centers. See Figure 1-38 for Route 44 ridership by bus stop. The route's maximum load point was located at Willow Street at Cottonwood Avenue.

Figure 1-38: Route 44, Monthly Ridership by Bus Stop

On-Time Performance and Running Time Analysis

Route 44 operates on-time approximately 65% of the time. The route departed late from timepoints more than one-third of the time. See Table 1-86 for Route 44 on-time performance.

Table 1-86: Route 44, On-Time Performance

Route	Early	On-Time	Late	Rank
44	0.8%	64.7%	34.5%	9 of 19

Source: VVTA DataPoint, October 2011

There was not enough scheduled running time for Route 44 trips operating in the inbound direction on weekdays or Saturday. Weekdays and Saturday, outbound running times were generally equal to or below scheduled running time. See Table 1-87 for Route 44 weekday running time and Table 1-88 for Route 44 Saturday running time.

Table 1-87: Route 44, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:00	46	50	54	54	53	58	5:50	67	64	68	68	67	73
7:00	46	47	55	55	56	70	6:50	67	62	68	68	66	73
8:00	46	41	47	47	43	56	7:50	67	57	66	67	69	74
9:00	46	44	50	49	50	55	8:50	67	60	64	64	64	69
10:00	46	42	49	49	48	56	9:50	67	58	64	65	62	73
11:00	46	50	55	56	57	62	10:50	67	62	67	68	68	74
12:00	46	46	55	54	54	63	11:50	67	60	65	65	65	72
13:00	46	50	56	57	57	60	12:50	67	50	65	65	70	72
14:00	46	45	53	53	53	59	13:50	67	60	65	65	68	69
15:00	46	46	54	53	58	61	14:50	67	55	62	64	64	69
16:00	46	54	58	58	59	62	15:50	67	51	60	61	63	66
17:00	46	53	56	56	57	61	16:50	67	53	60	60	60	70
18:00	46	44	60	61	61	67	17:50	67	58	62	62	67	67
19:00	46	50	57	56	54	67	18:50	67	47	55	55	55	64
20:00	46	37	43	43	44	46	19:50	67	44	54	54	54	57

Source: VVTA DataPoint, October 2011

Table 1-88: Route 44, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:00	46	52	54	55	55	56	6:50	67	63	66	67	n/a	69
8:00	46	51	54	54	51	58	7:50	67	63	65	66	66	66
9:00	46	44	46	46	44	50	8:50	67	60	66	67	n/a	70
10:00	46	42	48	48	48	53	9:50	67	62	64	63	62	67
11:00	46	42	47	48	48	49	10:50	67	62	65	64	64	69
12:00	46	47	57	59	n/a	63	11:50	67	61	66	68	68	68
13:00	46	51	55	54	54	63	12:50	67	56	64	64	n/a	74
14:00	46	47	54	57	57	58	13:50	67	49	61	64	66	66
15:00	46	53	57	59	59	61	14:50	67	62	65	63	63	71
16:00	46	53	56	55	n/a	63	15:50	67	56	61	58	58	69
17:00	46	53	58	59	n/a	61	16:50	67	59	63	65	n/a	67
18:00	46	59	64	62	62	69	17:50	67	61	62	62	62	65
19:00	46	39	50	51	54	54	18:50	67	47	56	54	54	64

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 44 are presented in Table 1-89. Financial indicators are presented in Table 1-90.

Table 1-89: Route 44, Service Indicators

Route 44	Weekdays	Saturday	Total	Rank
Passengers per Hour	8.89	7.49	8.68	12 of 19
Passengers per Mile	0.65	0.55	0.64	10 of 19

Source: VVTA

Table 1-90: Route 44, Financial Indicators

Route 44	Weekdays	Saturday	Total	Rank
Cost per Hour	$59.32	$59.90	$59.41	6 of 19
Cost per Mile	$4.37	$4.41	$4.38	14 of 19
Cost per Passenger	$6.68	$8.00	$6.85	12 of 19
Cost per Peak Vehicle	$226,452	$40,191	$266,642	11 of 19
Revenue per Passenger	$0.88	$0.89	$0.88	6 of 19
Farebox Recovery	13.2%	11.1%	12.9%	15 of 19

Source: VVTA

1.6.11 Route 45 Victorville – Hesperia

Route 45 operates fixed route service between Victorville (7th and Lorene Transfer Center) and Hesperia. The route is interlined with Route 48. Select Route 45 trips operate solely between the Seventh and Lorene Transfer Center and Victor Valley Community College, and do not continue to Hesperia. The route operates primarily via I Avenue, Bear Valley Road, Industrial Boulevard, Jasmine Street, and Nisqualli Road. Thirty-five or forty foot buses serve the route. The route serves Hesperia Post Office, Victor Valley Community College, Desert Valley Hospital, Victor Valley Town Center and Victor Plaza Shopping Center. Route 45 layovers are performed at:

- Lorene Drive at Valley Center Drive (Seventh and Lorene Transfer Center)
- G Avenue at Olive Street

See Table 1-91 for Route 45 service details and Table 1-92 for operation information.

Table 1-91: Route 45, Service Details

Route 45	Weekdays	Saturday
Span	6:00AM-8:58PM	7:00AM-7:58PM
Frequency	30 Peak/ 60 Non-Peak	60

Source: VVTA Public Timetables

Table 1-92: Route 45, Annual Operation Information

Route 45	Weekdays	Saturday	Total
Ridership	192,295	16,925	209,220
Hours	9,938	1,400	11,338
Miles	150,494	20,348	170,842
Operating Expenses	$594,703	$84,388	$679,091
Fare Revenue	$166,540	$14,812	$181,352

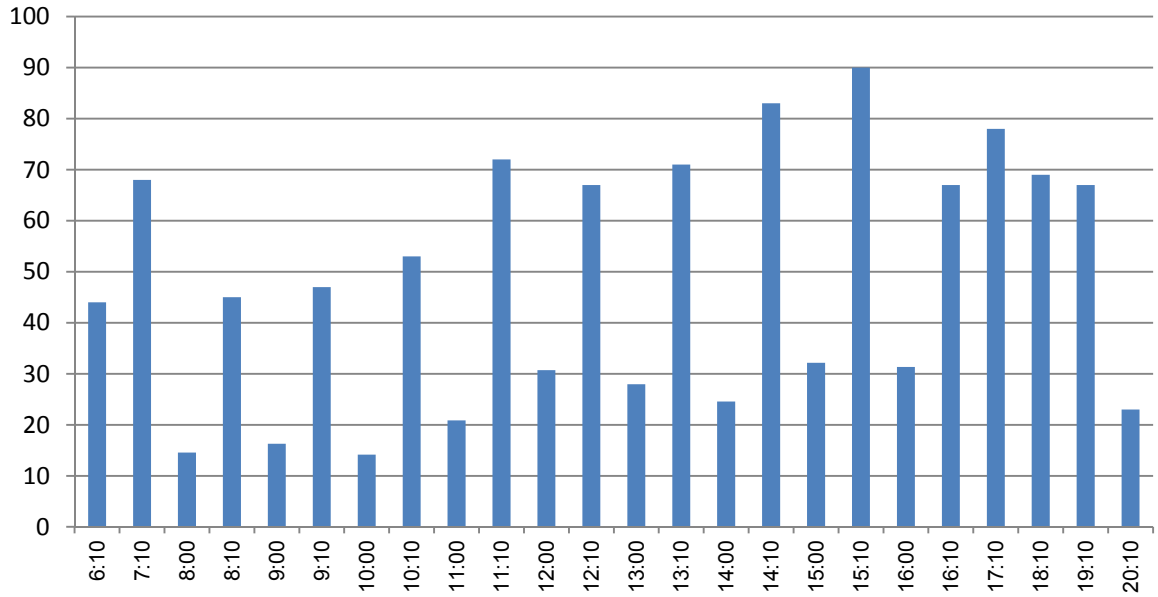
Source: VVTA

Ridership by Trip

In both directions of service, Route 45 weekday ridership varied by trip. In the inbound direction, ridership was highest on afternoon trips. In the outbound direction, ridership was highest on morning trips. Inbound and outbound, trips operating short turns between the Lorene Transfer Center and Victor Valley College had, comparatively, much lower ridership than those operating the full route between the Lorene Transfer Center and Hesperia. This may be partly due to the availability of timed connections at 7th to routes that operate once per hour, class schedules at Victor Valley College, and serving passengers in Hesperia. See Figure 1-39 for Route 45 weekday ridership by trip in the inbound direction and Figure 1-40 for Route 45 weekday ridership by trip in the outbound direction.

Figure 1-39: Route 45, Weekday Ridership by Trip, Inbound

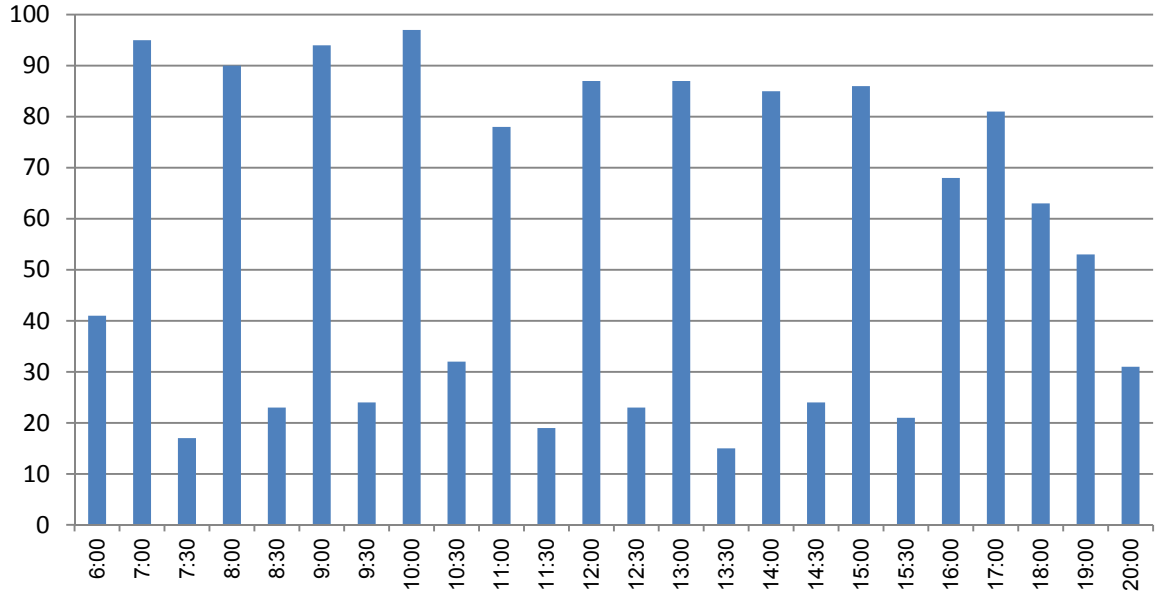
To Lorene TC



Source: VVTA APC Data, October 2011

Figure 1-40: Route 45, Weekday Ridership by Trip, Outbound

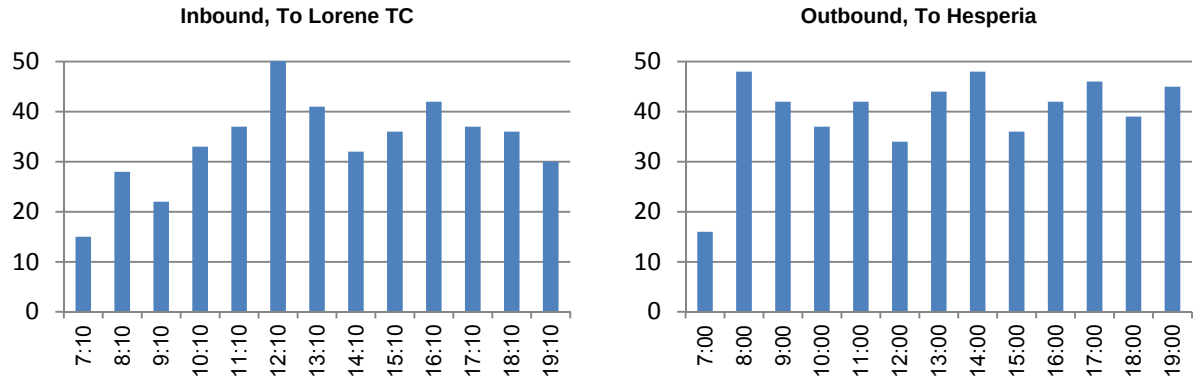
To Hesperia



Source: VVTA APC Data, October 2011

Saturday, inbound ridership had three peaks, a small morning peak, a larger peak around noon, and a mid-range peak in the afternoon. Outbound, ridership varied by trip and was high on select trips throughout the day. See Figure 1-41 for Route 45 Saturday ridership by trip.

Figure 1-41: Route 45, Saturday Ridership by Trip

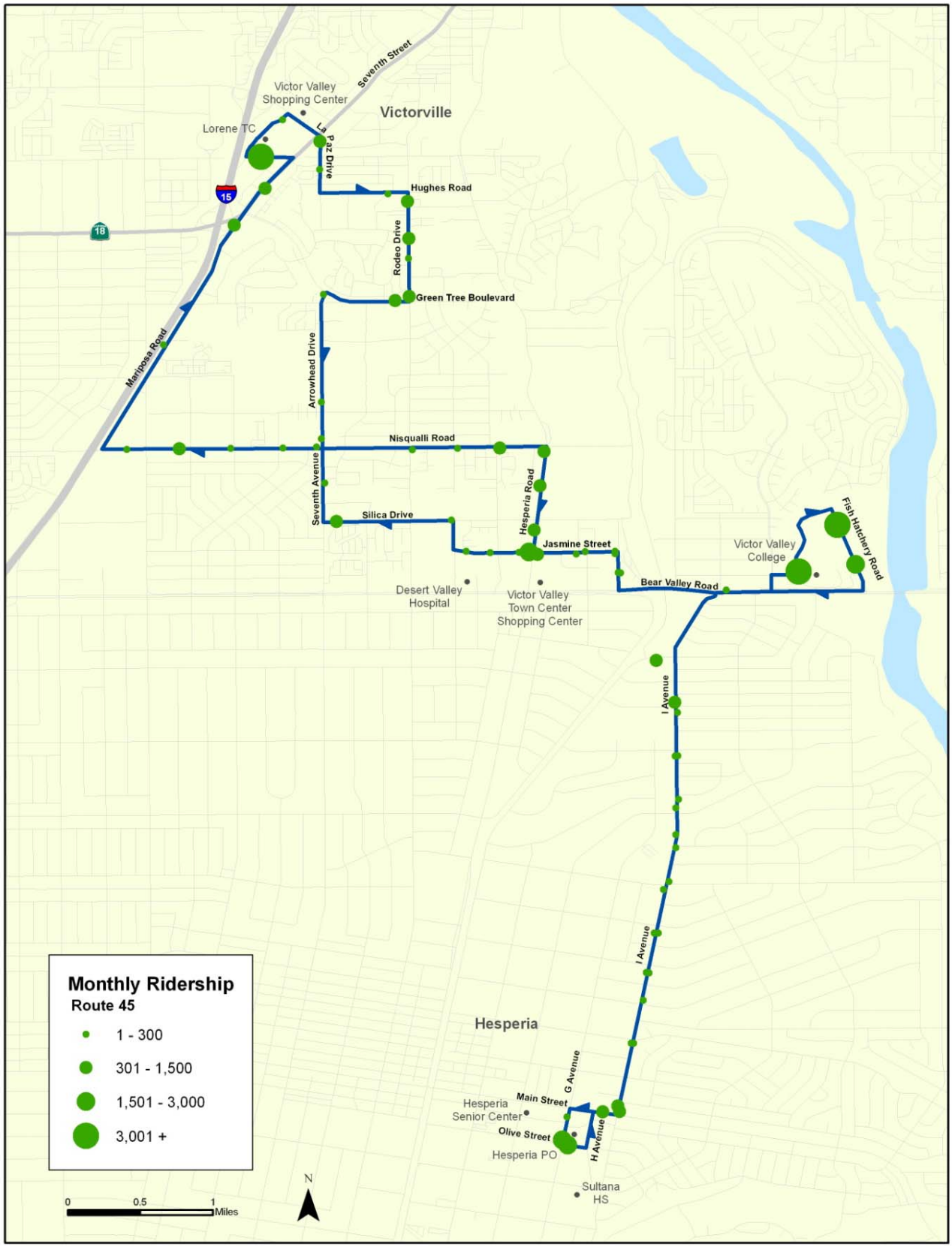


*The 12:10 inbound trip had an average daily ridership of 51 passengers.
Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Activity at bus stops along Route 45 was higher at key trip generators along the route including the Seventh and Lorene Transfer Center and Victor Valley College. There was moderate ridership activity at the Hesperia Post Office and on the Seventh Street, Rodeo Drive, Hesperia Road, and Main Street corridors. Bus stop in other areas showed mostly low ridership. See Figure 1-42 for Route 45 monthly ridership by bus stop. The Seventh and Lorene Transfer Center was the maximum load point for the route.

Figure 1-42: Route 45, Monthly Ridership by Bus Stop



Source: VVTA APC Data, October 2011

On-Time Performance and Running Time Analysis

Route 45 buses operated on-time about half of the time. Early buses are an issue for this route with buses operating early more than six percent of the time. In most cases, operating early can be more of an inconvenience to riders, as those who arrive at the bus stop at the scheduled time will have to wait for the next scheduled bus. See Table 1-93 for Route 45 on-time performance.

Table 1-93: Route 45, On-Time Performance

Route	Early	On-Time	Late	Rank
45	6.4%	51.3%	42.3%	18 of 19

Source: VVTA DataPoint, October 2011

The amount of scheduled running time was not sufficient on weekdays or Saturday, in both directions of travel. Scheduled running time was only sufficient for a few select trips throughout the day. See Table 1-94 for Route 45 weekday running time and Table 1-95 for Saturday running time. Times noted in the tables do not include layover.

Table 1-94: Route 45, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:10	48	50	51	50	50	54	6:00	55	59	61	60	60	64
7:10	48	50	53	53	53	55	7:00	55	58	61	61	61	64
8:00	28	23	31	31	29	36	7:30	30	25	35	35	35	42
8:10	48	49	52	52	54	57	8:00	55	57	59	58	57	63
9:00	28	27	31	30	29	39	8:30	30	23	28	28	30	33
9:10	48	50	54	54	54	62	9:00	55	53	58	58	57	61
10:00	28	27	31	31	31	35	9:30	30	23	27	26	26	35
10:10	48	51	54	54	53	61	10:00	55	55	59	58	60	69
11:00	28	26	31	31	30	38	10:30	30	25	29	29	30	32
11:10	48	50	53	53	54	59	11:00	55	48	57	58	60	62
12:00	28	28	33	32	31	39	11:30	30	22	28	28	30	44
12:10	48	47	55	55	56	64	12:00	55	48	56	56	61	61
13:00	28	26	32	31	30	41	12:30	30	24	29	29	28	33
13:10	48	48	53	54	55	57	13:00	55	49	57	57	52	64
14:00	28	27	31	31	34	34	13:30	30	24	29	29	27	35
14:10	48	50	54	53	53	63	14:00	55	55	59	59	59	64
15:00	28	26	32	32	32	35	14:30	30	21	29	29	29	35
15:10	48	50	54	55	57	58	15:00	55	51	59	59	59	66
16:00	28	26	32	32	32	41	15:30	30	25	29	29	28	32
16:10	48	47	53	53	51	61	16:00	55	52	57	57	58	61
17:10	48	48	53	53	50	61	17:00	55	49	58	59	59	62
18:10	48	45	54	53	53	67	18:00	55	53	60	61	62	66
19:10	48	49	55	52	51	84	19:00	55	49	58	58	60	64
20:10	48	45	48	46	46	69	20:00	55	37	48	50	51	55

Source: VVTA DataPoint, October 2011

Table 1-95: Route 45, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:10	48	49	53	51	n/a	60	7:00	55	60	61	61	61	61
8:10	48	48	50	50	50	53	8:00	55	60	61	61	60	62
9:10	48	50	51	51	51	52	9:00	55	60	61	61	61	62
10:10	48	50	54	55	n/a	57	10:00	55	59	60	60	60	62
11:10	48	47	50	51	52	52	11:00	55	51	54	54	n/a	56
12:10	48	48	51	53	54	54	12:00	55	54	59	58	58	64
13:10	48	51	53	53	53	56	13:00	55	53	58	59	59	61
14:10	48	50	53	52	55	55	14:00	55	54	58	58	60	60
15:10	48	51	54	53	n/a	58	15:00	55	57	59	60	60	62
16:10	48	51	52	52	52	54	16:00	55	54	58	59	59	60
17:10	48	53	59	53	53	70	17:00	55	59	61	61	62	62
18:10	48	52	60	57	n/a	76	18:00	55	42	54	59	n/a	61
19:10	48	45	46	47	47	47	19:00	55	41	46	47	n/a	51

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 45 are presented in Table 1-96. Financial indicators are presented in Table 1-97. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-96: Route 45, Service Indicators

Route 45	Weekdays	Saturday	Total	Rank
Passengers per Hour	19.35	12.09	18.45	6 of 19
Passengers per Mile	1.28	0.83	1.22	7 of 19

Source: VVTA

Table 1-97: Route 45, Financial Indicators

Route 45	Weekdays	Saturday	Total	Rank
Cost per Hour	$59.84	$60.28	$59.90	7 of 19
Cost per Mile	$3.95	$4.15	$3.97	13 of 19
Cost per Passenger	$3.09	$4.99	$3.25	6 of 19
Cost per Peak Vehicle	$198,234	$42,194	$226,364	7 of 19
Revenue per Passenger	$0.87	$0.88	$0.87	17 of 19
Farebox Recovery	28.0%	17.6%	26.7%	6 of 19

Source: VVTA

1.6.12 Route 46 Hesperia Circulator Route Deviation

Route 46 is a deviation route that circulates around Hesperia. Route 46 generally operates Olive Street, C Avenue, Sultana Street, Main Street, Arrowhead Lake Road, and Danbury Avenue. Route 46 is served by a mix of 27 foot and 33 foot cutaway buses. Trip generators served by the route include Hesperia Post Office and Sultana High School. Layovers are performed at:

- G Avenue at Olive Street

See Table 1-98 for Route 46 service details. See Table 1-99 for Route 46 operation information.

Table 1-98: Route 46, Service Details

Route 46	Weekdays	Saturday
Span	6:00AM-8:50PM	7:00AM-7:50PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-99: Route 46, Annual Operation Information

Route 46	Weekdays	Saturday	Total
Ridership	27,719	3,523	31,242
Hours	3,795	666	4,461
Miles	45,294	7,968	53,262
Operating Expenses	$223,231	$39,553	$262,784
Fare Revenue	$24,451	$3,127	$27,579

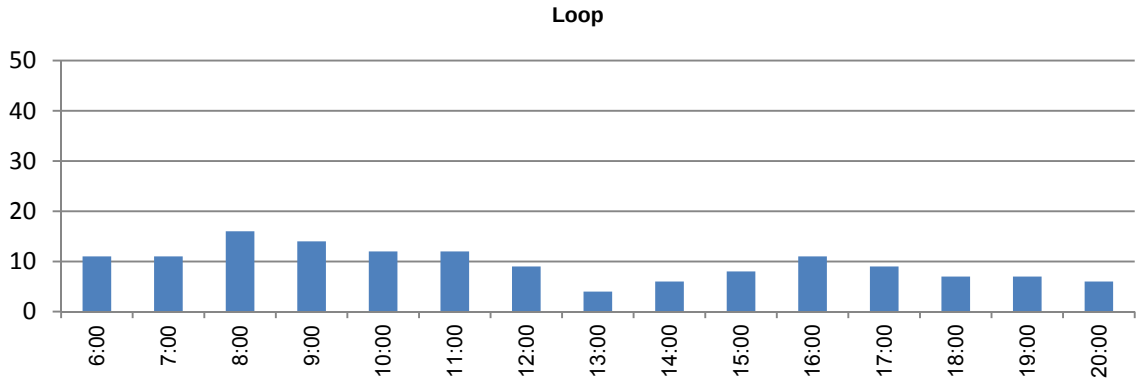
Source: VVTA

Ridership by Trip

In general, Route 46 had low ridership for most of the day with select morning and afternoon trips having higher ridership. See Figure 1-43 for Route 46 weekday ridership by trip.

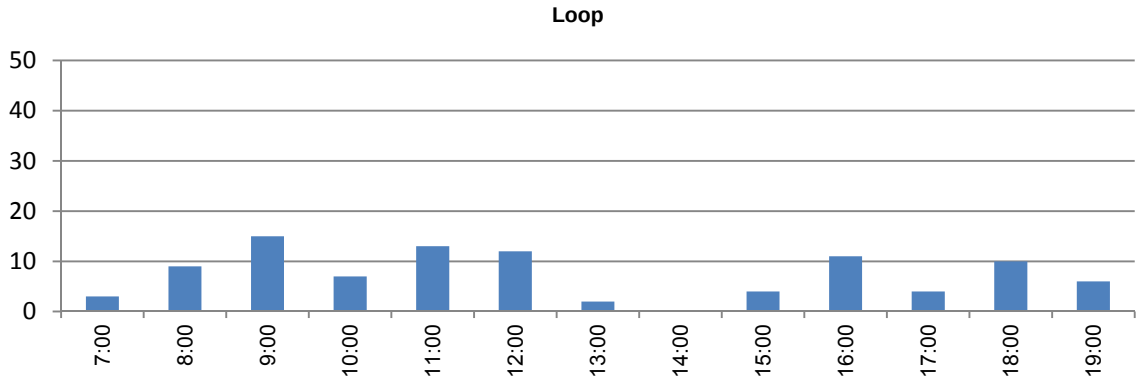
Saturday ridership showed a similar pattern though ridership varied more by trip. Ridership was concentrated in the morning and later afternoon with trips in the early afternoon having low ridership. See Figure 1-44 for Route 46 Saturday ridership by trip.

Figure 1-43: Route 46, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-44: Route 46, Saturday Ridership by Trip



Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Ridership activity was mostly low at bus stops along Route 46. The bus stop with the most ridership activity was at the Hesperia Post Office. See Figure 1-45 for Route 46 monthly ridership by bus stop and deviated stop. The maximum load point was located at G Avenue at Olive Street, adjacent to the Hesperia Post Office.

According to TransTrack, Route 46 had 2,733 total riders during the month of October 2011. Ridership at deviated bus stop locations accounted for 139 of the 2,733 passengers or 5.1 percent.

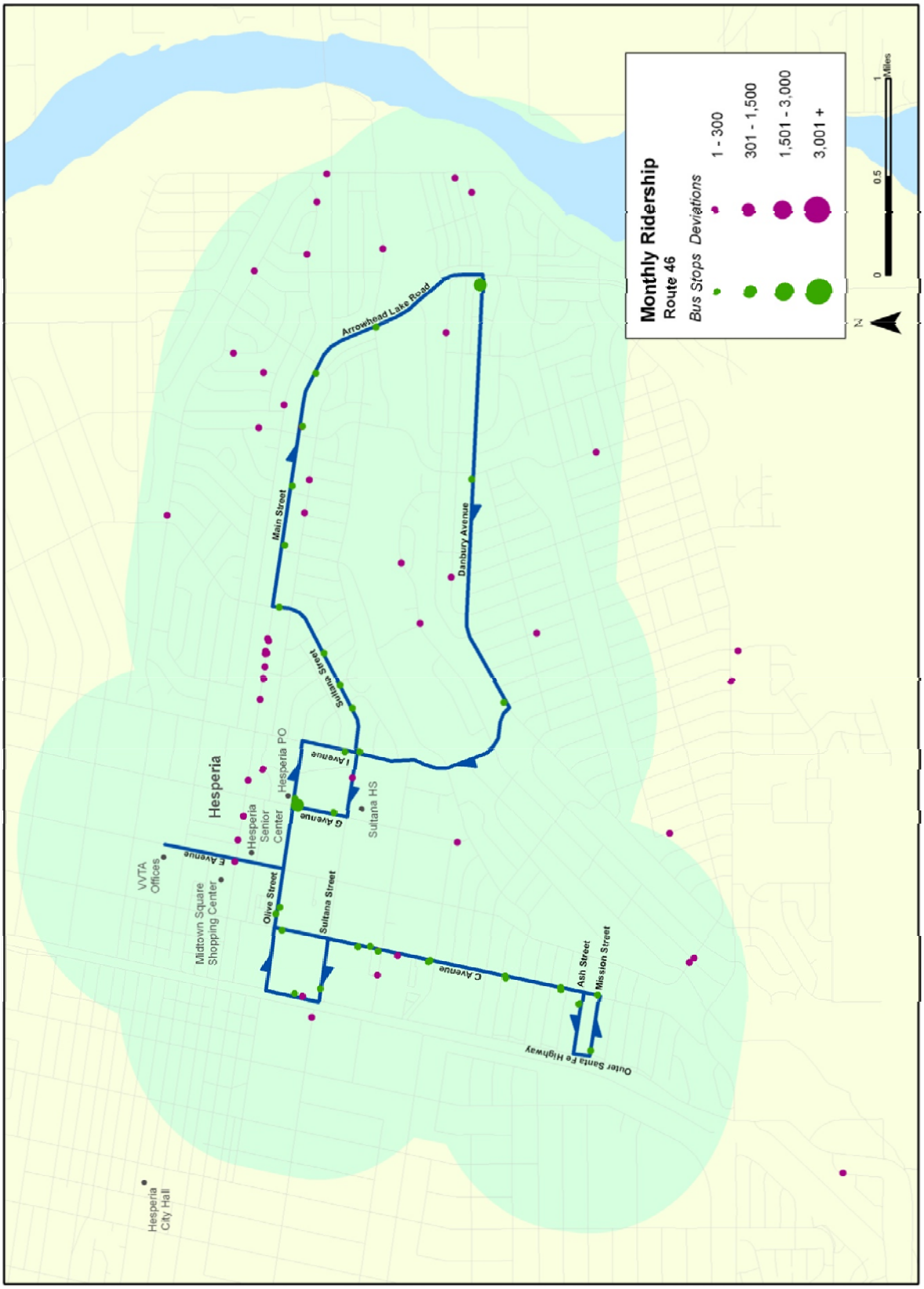


Figure 1-45: Route 46, Monthly Ridership by Bus Stop

On-Time Performance and Running Time Analysis

Although Route 46 had a better performance record than many other VVTA routes in terms of on-time performance, the route operates on-time about 70% of the time. The other 30 percent was pretty equally distributed between early and late operations. The route had the highest percentage of early operations of any VVTA route, which is a serious problem. See Table 1-100 for Route 46 on-time performance.

Table 1-100: Route 46, On-Time Performance

Route	Early	On-Time	Late	Rank
46	16.7%	69.1%	14.2%	6 of 19

Source: VVTA DataPoint, October 2011

Based on an analysis of actual running times, there was not enough running time built into the schedule. Weekdays and Saturday, only the final trips of the day had enough scheduled running time. See Table 1-101 for Route 46 weekday running time and Table 1-102 for Route 46 Saturday running time. Data was not available for all trips. Times do not include layover.

Table 1-101: Route 46, Weekday Running Time

Loop						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:00	50	51	58	59	59	62
7:00	50	43	59	61	64	69
8:00	50	47	65	65	71	83
9:00	50	41	58	57	54	76
10:00	50	42	59	60	60	65
11:00	50	38	56	58	62	62
12:00	50	60	70	67	60	86
13:00	50	41	57	58	60	76
14:00	50	56	63	62	62	76
15:00	50	58	64	62	63	79
16:00	50	54	59	58	58	68
17:00	50	60	62	62	61	66
18:00	50	58	61	62	60	65
19:00	50	54	59	58	54	65
20:00	50	44	49	47	44	67

Source: VVTA DataPoint, October 2011

Table 1-102: Route 46, Saturday Running Time

Loop						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:00	50	53	59	61	n/a	63
8:00	50	61	68	67	n/a	77
9:00	50	51	54	54	54	56
10:00	50	60	60	60	60	60
11:00	50	59	60	60	60	62
12:00	50	56	60	60	n/a	64
13:00	50	0	n/a	n/a	n/a	0
14:00	50	0	n/a	n/a	n/a	0
15:00	50	2	2	2	n/a	2
16:00	50	44	55	59	n/a	61
17:00	50	60	60	60	60	60
18:00	50	60	60	60	60	60
19:00	50	47	47	47	47	47

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 46 are presented in Table 1-103. Financial indicators are presented in Table 1-104. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-103: Route 46, Service Indicators

Route 46	Weekdays	Saturday	Total	Rank
Passengers per Hour	7.30	5.29	7.00	13 of 19
Passengers per Mile	0.61	0.44	0.59	13 of 19

Source: VVTA

Table 1-104: Route 46, Financial Indicators

Route 46	Weekdays	Saturday	Total	Rank
Cost per Hour	$58.82	$59.39	$58.91	2 of 19
Cost per Mile	$4.93	$4.96	$4.93	18 of 19
Cost per Passenger	$8.05	$11.23	$8.41	13 of 19
Cost per Peak Vehicle	$223,231	$39,553	$262,784	9 of 19
Revenue per Passenger	$0.88	$0.89	$0.88	6 of 19
Farebox Recovery	11.0%	7.9%	10.5%	16 of 19

Source: VVTA

1.6.13 Route 47 Apple Valley South Route Deviation

Route 47 is a deviated route that circulates in southern areas of Apple Valley. The route operates along Yucca Loma Road, and Kiowa Road. The route is served by 32 foot cutaway buses. Major trip generators served by the route include the Apple Valley Post Office and Kiowa Plaza Shopping Center. Layovers are performed at:

- Quinault Road at Outer Highway 18S (SR-18)

See Table 1-105 for Route 47 service details. See Table 1-106 for Route 47 operation information.

Table 1-105: Route 47, Service Details

Route 47	Weekdays	Saturday
Span	6:00AM-8:57PM	7:00AM-7:57PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-106: Route 47, Annual Operation Information

Route 47	Weekdays	Saturday	Total
Ridership	23,387	3,462	26,849
Hours	3,826	673	4,499
Miles	49,140	8,646	57,786
Operating Expenses	$226,896	$40,341	$267,237
Fare Revenue	$20,581	$3,043	$23,623

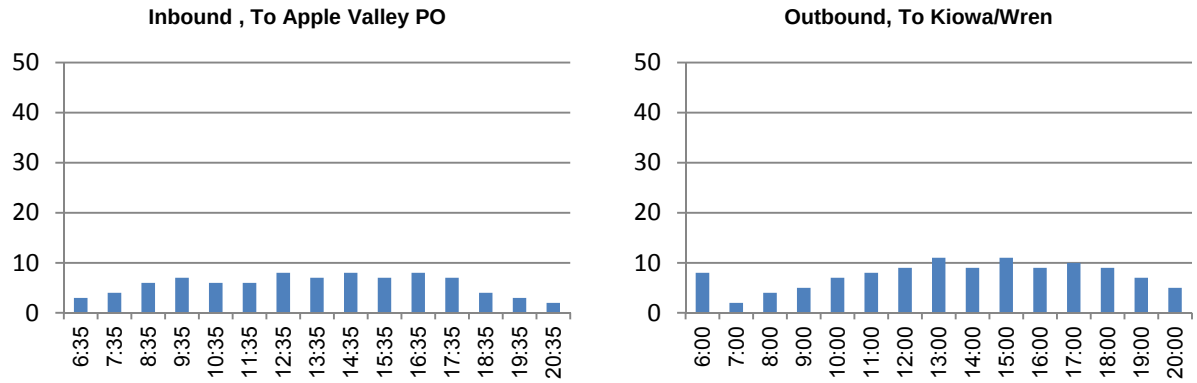
Source: VVTA

Ridership by Trip

Weekdays, ridership in the inbound direction on Route 47 was highest in the afternoon. Outbound, ridership peaked in the afternoon with the first trip of the day having relatively high ridership for the route. See Figure 1-46 for Route 47 weekday ridership by trip. See Figure 1-46 for Route 47 weekday ridership by trip.

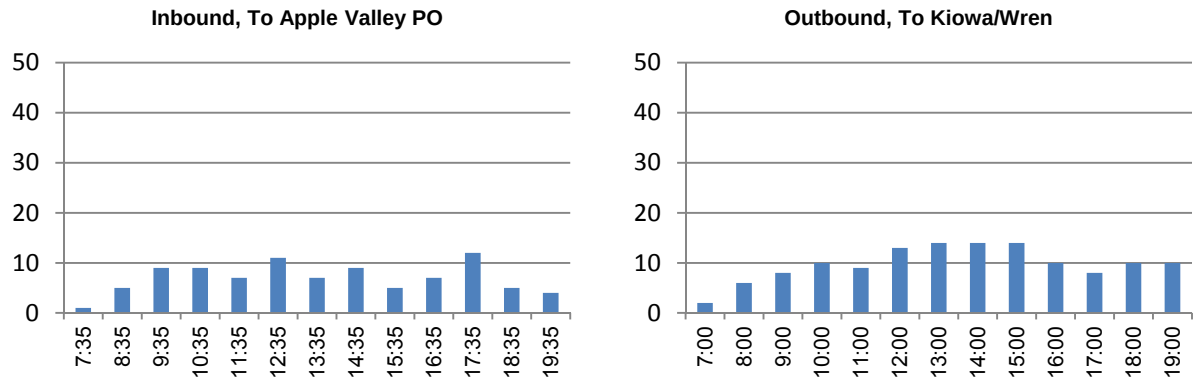
Saturday, inbound ridership varied by trip. The highest inbound trips were in the afternoon. Outbound, ridership was also highest on trips operating in the afternoon. See Figure 1-47 for Route 47 Saturday ridership by trip.

Figure 1-46: Route 47, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-47: Route 47, Saturday Ridership by Trip



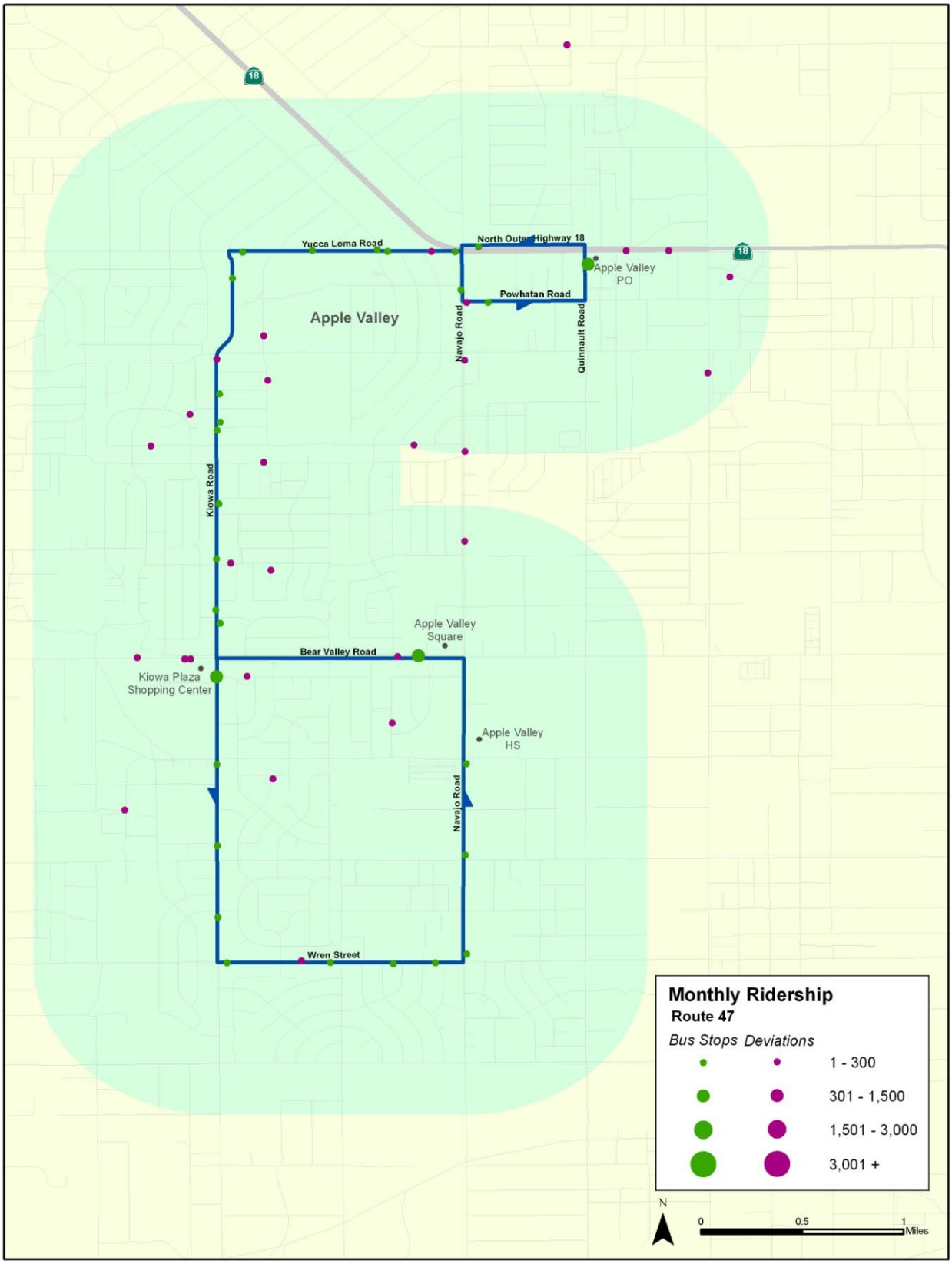
Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Ridership activity at bus stops along Route 47 was light, in general. The bus stops with the highest ridership were located at the Apple Valley Post Office and near commercial areas along Bear Valley Road. See Figure 1-48 for Route 47 monthly ridership by bus stop. Bear Valley Road at Navajo Road was the maximum load point for the route.

According to TransTrack, there were 2,400 total passengers on Route 47 during the month of October 2011. Ridership at deviated bus stop locations accounted for 105 of those passengers, or 4.4 percent of the monthly ridership.

Figure 1-48: Route 47, Monthly Ridership by Bus Stop



Source: VVTA APC Data, October 2011

On-Time Performance and Running Time Analysis

Route 47 was the best performer of any VVTA route, in terms of on-time performance. Still, a total of 15 percent of trips on the route departed early or late from timepoints. See Table 1-107 for Route 47 on-time performance.

Table 1-107: Route 47, On-Time Performance

Route	Early	On-Time	Late	Rank
47	2.0%	85.0%	13.0%	1 of 19

Source: VVTA DataPoint, October 2011

Overall, there was not enough scheduled running time in the inbound direction on weekdays and Saturday. Outbound, there was enough scheduled running time for all weekday trips and most Saturday trips. The running time of select outbound afternoon Saturday trips was greater than scheduled. See Table 1-108 for Route 47 weekday running time and Table 1-109 for Route 47 Saturday running time. Times do not include layover.

Table 1-108: Route 47, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:35	22	21	26	27	27	30	6:00	35	32	34	34	34	39
7:35	22	20	26	27	27	29	7:00	35	31	34	33	33	36
8:35	22	16	24	24	24	31	8:00	35	30	34	34	34	40
9:35	22	18	23	21	19	30	9:00	35	27	32	33	33	35
10:35	22	20	27	28	29	32	10:00	35	29	35	34	n/a	45
11:35	22	21	28	28	28	32	11:00	35	27	32	32	32	37
12:35	22	18	23	23	29	31	12:00	35	26	32	32	29	46
13:35	22	23	29	30	31	31	13:00	35	30	32	30	30	35
14:35	22	23	29	28	28	35	14:00	35	28	31	30	29	41
15:35	22	20	26	27	28	32	15:00	35	28	34	33	33	41
16:35	22	19	26	27	27	32	16:00	35	30	33	33	30	38
17:35	22	16	25	25	29	33	17:00	35	28	32	30	30	41
18:35	22	22	29	29	29	34	18:00	35	26	33	32	31	40
19:35	22	25	28	27	27	33	19:00	35	25	30	29	29	37
20:35	22	7	14	14	15	17	20:00	35	26	31	31	31	39

Source: VVTA DataPoint, October 2011

Table 1-109: Route 47, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:35	22	25	30	31	n/a	34	7:00	35	27	33	34	n/a	36
8:35	22	20	25	25	27	27	8:00	35	27	30	31	32	32
9:35	22	17	27	29	n/a	33	9:00	35	33	33	33	n/a	33
10:35	22	23	26	26	n/a	30	10:00	35	29	33	31	n/a	38
11:35	22	26	29	29	29	35	11:00	35	27	29	29	30	30
12:35	22	23	29	28	n/a	34	12:00	35	27	31	31	n/a	36
13:35	22	20	25	25	25	29	13:00	35	46	50	50	n/a	54
14:35	22	21	26	28	n/a	31	14:00	35	30	33	31	31	36
15:35	22	14	25	28	28	28	15:00	35	29	33	31	31	40
16:35	22	22	26	26	n/a	32	16:00	35	30	37	33	n/a	52
17:35	22	20	27	28	n/a	30	17:00	35	28	31	31	n/a	33
18:35	22	23	28	26	23	34	18:00	35	33	36	36	36	38
19:35	22	2	9	11	n/a	13	19:00	35	26	34	33	n/a	44

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 47 are presented in Table 1-110. Financial indicators are presented in Table 1-111. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-110: Route 47, Service Indicators

Route 47	Weekdays	Saturday	Total	Rank
Passengers per Hour	6.11	5.14	5.97	15 of 19
Passengers per Mile	0.48	0.40	0.46	14 of 19

Source: VVTA

Table 1-111: Route 47, Financial Indicators

Route 47	Weekdays	Saturday	Total	Rank
Cost per Hour	$59.30	$59.94	$59.40	5 of 19
Cost per Mile	$4.62	$4.67	$4.62	15 of 19
Cost per Passenger	$9.70	$11.65	$9.95	14 of 19
Cost per Peak Vehicle	$226,896	$40,341	$267,237	12 of 19
Revenue per Passenger	$0.88	$0.88	$0.88	6 of 19
Farebox Recovery	9.1%	7.5%	8.8%	18 of 19

Source: VVTA

1.6.14 Route 48 Hesperia West

Route 48 is a fixed route that operates between the Hesperia Post Office and Super Target at Main Street and Catba Road. The route operates primarily via Main Street. Thirty-five or forty foot buses serve the route. Trip generators served by the route include the Hesperia Post Office, Hesperia Civic Center and Super Target. The route is interlined with Route 45 to provide access to Victor Valley College. Route 48 layovers are performed at:

- G Avenue at Olive Street

Table 1-112 presents Route 48 service details and Table 1-113 presents Route 48 operation information.

Table 1-112: Route 48, Service Details

Route 48	Weekdays	Saturday
Span	6:00AM-9:07PM	7:00AM-8:07PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-113: Route 48, Annual Operation Information

Route 48	Weekdays	Saturday	Total
Ridership	80,602	7,692	88,294
Hours	3,838	676	4,514
Miles	77,521	13,655	91,176
Operating Expenses	$234,727	$41,922	$276,648
Fare Revenue	$71,520	$6,792	$78,311

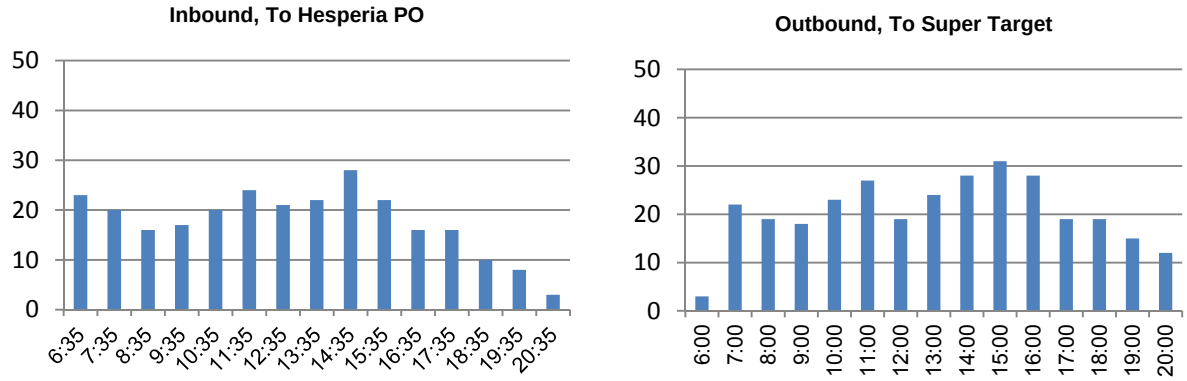
Source: VVTA

Ridership by Trip

Weekday ridership on Route 48 varied by trip. Trips operating in the early morning, the late morning, and in the afternoon had the highest ridership. These trips are influenced by bell times at Hesperia High School. Ridership declined on trips operating after 3:00PM in both directions. See Figure 1-49 for Route 48 weekday ridership by trip.

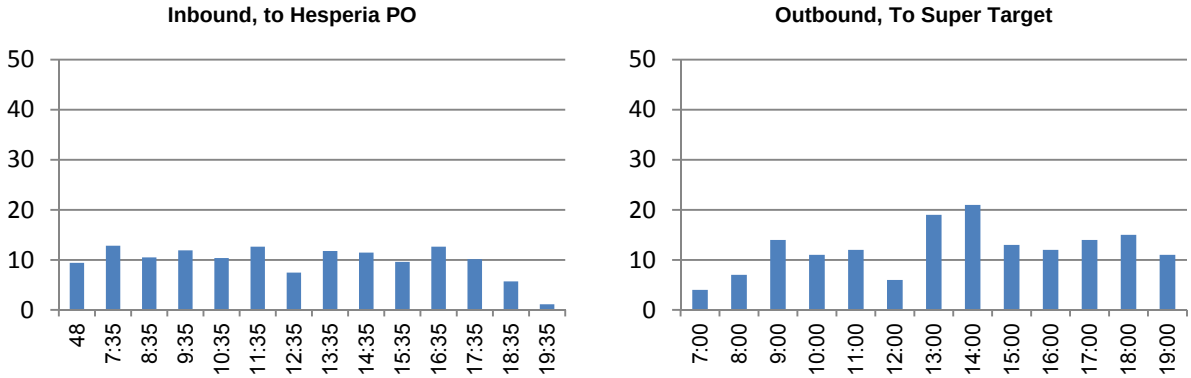
Generally, in the inbound direction, on Saturday, Route 48 ridership was consistent with about 10 riders per trip. Outbound, ridership varied by trip and was highest in the early afternoon. See Figure 1-50 for Route 48 Saturday ridership by trip.

Figure 1-49: Route 48, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-50: Route 48, Saturday Ridership by Trip



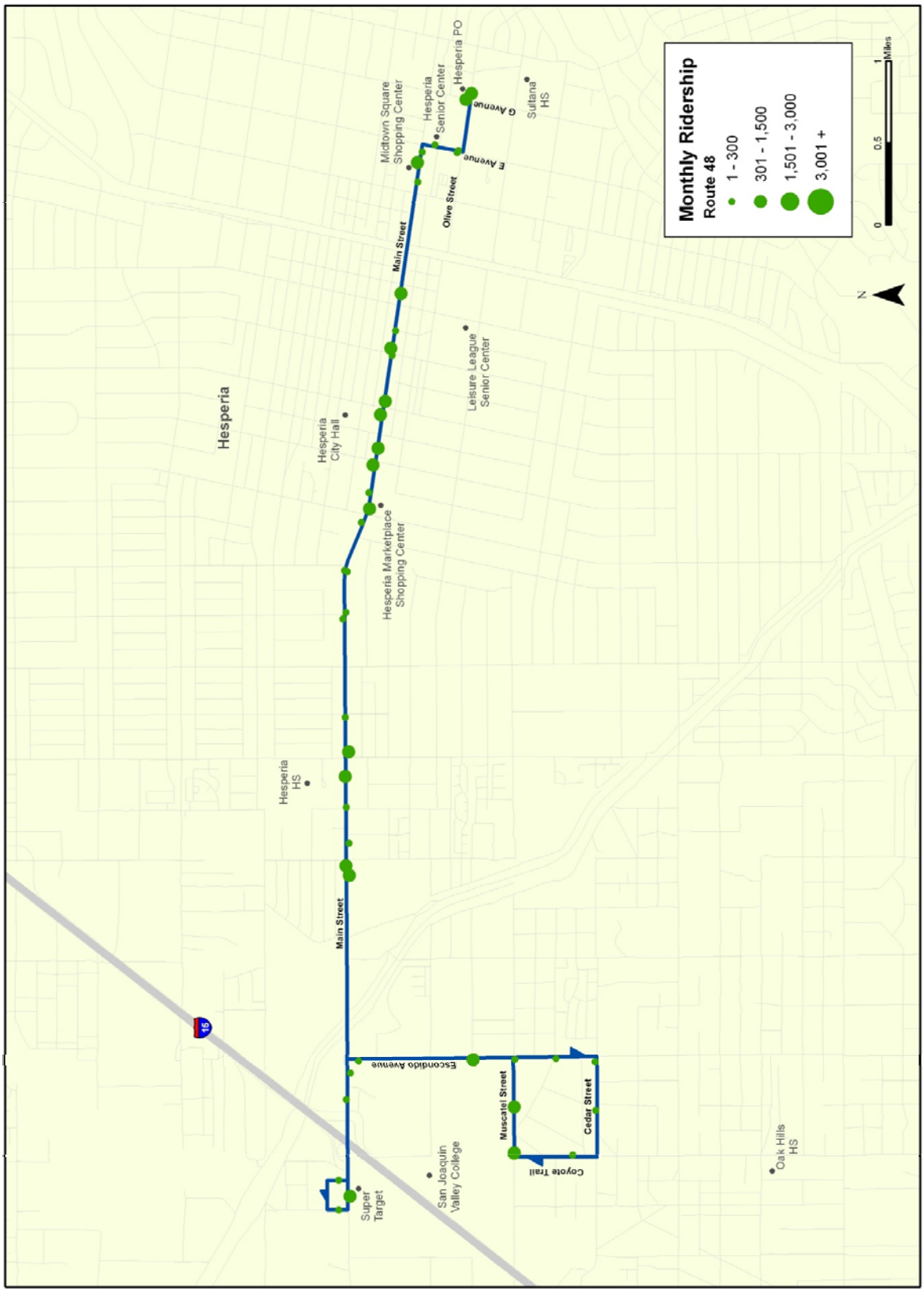
Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Route 48 had low to moderate ridership activity at bus stops along its route. The stops with the highest ridership were located at the Hesperia Post Office, Main Street at Key Pointe Avenue (Super Target), Main Street at Seventh Avenue (Hesperia City Hall). See Figure 1-51 for Route 48 ridership by bus stop. The bus stop located at G Avenue at Olive Street, by the Hesperia Post Office, was the maximum load point for the route.

Figure 1-51: Route 48, Monthly Ridership by Bus Stop

Source: VVTA APC Data, October 2011



On-Time Performance and Running Time Analysis

Route 48 had one of the best on-time performance records of any VVTA route. The route operated on-time just about 80 percent of the time. See Table 1-114 for Route 48 on-time performance.

Table 1-114: Route 48, On-Time Performance

Route	Early	On-Time	Late	Rank
48	0.8%	79.1%	20.1%	2 of 19

Source: VVTA DataPoint, October 2011

Weekdays and Saturday, the running time for most trips, inbound and outbound, was the same as or a few minutes more than the scheduled running time. See Table 1-115 for Route 48 weekday running time and Table 1-116 for Route 48 Saturday running time.

Table 1-115: Route 48, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:35	32	30	34	35	35	37	6:00	35	32	35	34	34	40
7:35	32	31	34	34	35	36	7:00	35	32	36	36	35	39
8:35	32	31	33	34	35	35	8:00	35	31	35	35	36	38
9:35	32	33	34	35	33	36	9:00	35	32	34	34	34	37
10:35	32	30	34	35	35	37	10:00	35	34	36	35	35	38
11:35	32	25	32	32	34	38	11:00	35	32	35	35	33	46
12:35	32	20	31	31	32	35	12:00	35	28	35	35	34	43
13:35	32	25	32	32	35	35	13:00	35	32	36	35	34	41
14:35	32	28	32	33	33	36	14:00	35	30	35	35	33	41
15:35	32	20	30	30	31	34	15:00	35	35	39	39	41	43
16:35	32	20	29	29	31	34	16:00	35	34	38	38	37	47
17:35	32	27	33	33	35	39	17:00	35	33	37	37	34	41
18:35	32	24	31	32	31	35	18:00	35	32	36	36	37	40
19:35	32	26	32	33	33	35	19:00	35	28	34	34	34	41
20:35	32	0	n/a	n/a	n/a	0	20:00	35	28	33	34	35	38

Source: VVTA DataPoint, October 2011

Table 1-116: Route 48, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:35	32	31	34	35	35	37	7:00	35	34	35	35	35	36
8:35	32	30	32	31	30	35	8:00	35	34	37	38	34	39
9:35	32	32	34	34	n/a	36	9:00	35	34	36	35	35	38
10:35	32	33	34	35	35	35	10:00	35	32	34	34	n/a	36
11:35	32	27	30	30	30	34	11:00	35	35	39	39	n/a	43
12:35	32	29	31	31	n/a	34	12:00	35	37	38	38	n/a	39
13:35	32	31	33	32	32	34	13:00	35	33	34	34	35	35
14:35	32	32	33	32	32	35	14:00	35	34	35	34	34	37
15:35	32	33	34	34	35	35	15:00	35	33	34	35	35	35
16:35	32	30	33	34	34	35	16:00	35	32	34	33	32	38
17:35	32	30	33	34	34	36	17:00	35	33	36	36	37	37
18:35	32	27	31	33	33	35	18:00	35	32	36	35	n/a	40
19:35	32	22	24	25	25	25	19:00	35	33	35	33	33	38

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 48 are presented in Table 1-117. Financial indicators are presented in Table 1-118. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-117: Route 48, Service Indicators

Route 48	Weekdays	Saturday	Total	Rank
Passengers per Hour	21.00	11.38	19.56	5 of 19
Passengers per Mile	1.04	0.56	0.97	8 of 19

Source: VVTA

Table 1-118: Route 48, Financial Indicators

Route 48	Weekdays	Saturday	Total	Rank
Cost per Hour	$61.16	$62.01	$61.29	13 of 19
Cost per Mile	$3.03	$3.07	$3.03	5 of 19
Cost per Passenger	$2.91	$5.45	$3.13	5 of 19
Cost per Peak Vehicle	$117,364	$20,961	$138,324	2 of 19
Revenue per Passenger	$0.89	$0.88	$0.89	5 of 19
Farebox Recovery	30.5%	16.2%	28.3%	5 of 19

Source: VVTA

1.6.15 Route 51 Victorville Circulator

Route 51 is a fixed route that circulates around Victorville. The route operates as a one-way loop. The route operates via La Paz Drive, Mojave Drive, Hesperia Road, Green Tree Boulevard, and Burning Tree Drive. Thirty-five or forty foot buses serve the route. Trip generators served by the route include Victor Plaza Shopping Center, Valley Center Shopping Center, Victor Valley High School and Victor Valley Community Hospital. Layovers are performed at:

- Lorene Drive at Valley Center Drive (Seventh and Lorene Transfer Center)

See Table 1-119 for Route 51 service details and Table 1-120 for Route 51 operation information.

Table 1-119: Route 51, Service Details

Route 51	Weekdays	Saturday
Span	6:00AM-8:55PM	7:00AM-7:55PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-120: Route 51, Annual Operation Information

Route 51	Weekdays	Saturday	Total
Ridership	67,855	7,578	75,433
Hours	3,817	672	4,489
Miles	46,442	8,180	54,622
Operating Expenses	$225,409	$40,077	$265,486
Fare Revenue	$59,259	$6,648	$65,907

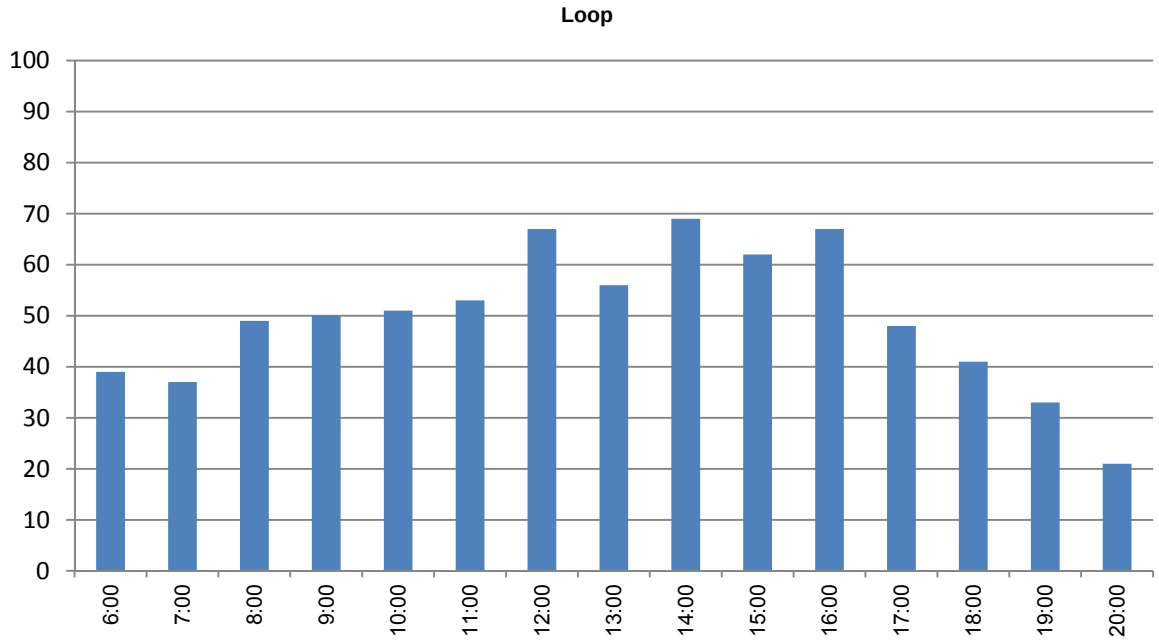
Source: VVTA

Ridership by Trip

The highest ridership weekday trips on Route 51 were at noon and in the afternoon. Other than the first two trips of the day, morning trips had a consistent number of riders. Ridership declined steadily after the 4:00PM trip. See Figure 1-52 for Route 51 weekday ridership by trip.

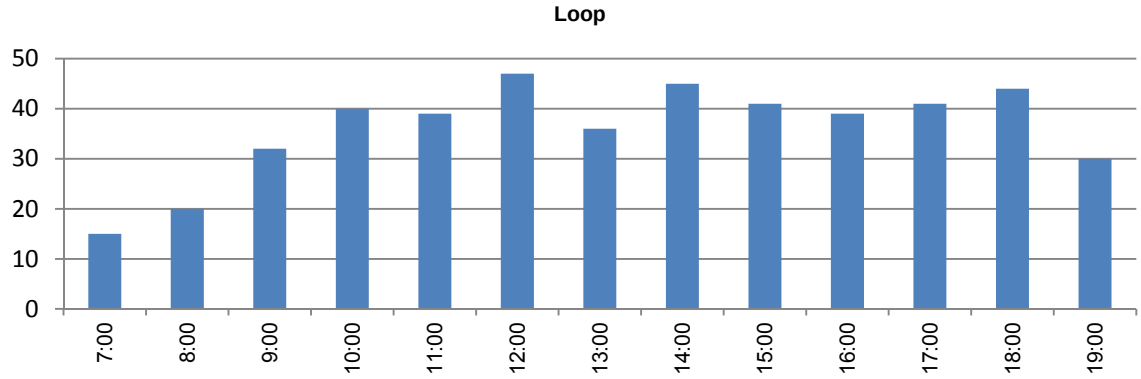
Saturday, the highest ridership trips were also at noon and in the afternoon. See Figure 1-53 for Route 51 Saturday ridership by trip.

Figure 1-52: Route 51, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-53: Route 51, Saturday Ridership by Trip



Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Bus stops along Route 51 generally had low to moderate ridership activity. The bus stop with the highest ridership was at the Seventh and Lorene Transfer Center. Other bus stops that had higher ridership were located near Victor Valley High School and Victor Valley Community Hospital. See Figure 1-54 for Route 51 monthly ridership by bus stop. The maximum load point for the route was located at the Seventh and Lorene Transfer Center.

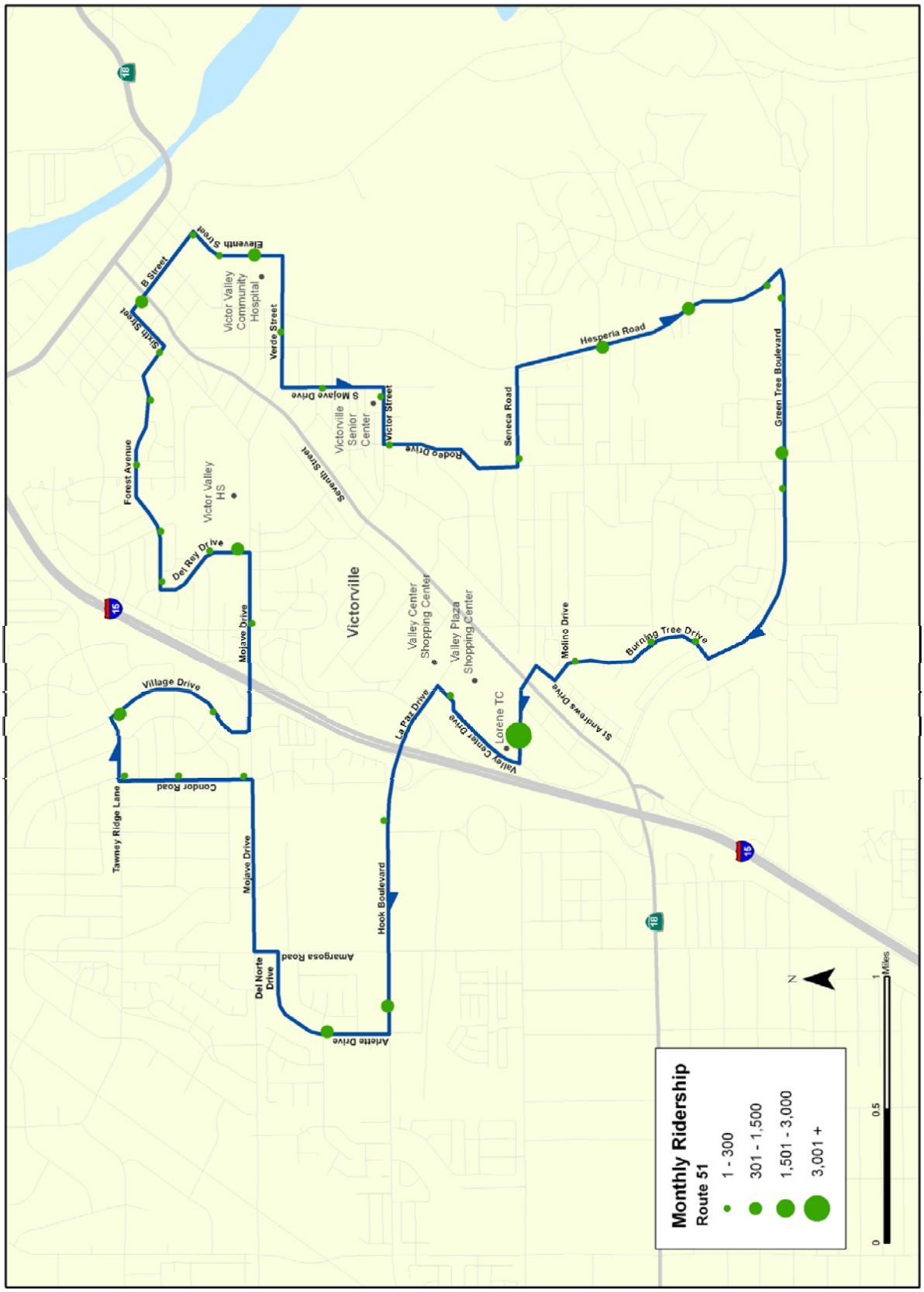


Figure 1-54: Route 51, Monthly Ridership by Bus Stop

On-Time Performance and Running Time Analysis

The on-time performance of Route 51 was better than the median for all VVTA routes. The route operated on-time about two-thirds of the time. See Table 1-121 for Route 51 on-time performance.

Table 1-121: Route 51, On-Time Performance

Route	Early	On-Time	Late	Rank
51	0.4%	67.8%	31.8%	7 of 19

Source: VVTA DataPoint, October 2011

There was not enough running time scheduled for Route 51 on weekdays. Minimum running times were higher than the scheduled running time for many trips. See Table 1-122 for Route 51 weekday running time. Saturday, the issue was more pronounced with the mean, median and mode running times for only the last trip of the day being at or below the scheduled running time. See Table 1-123 for Saturday running time on Route 51. Times do not include layover.

Table 1-122: Route 51, Weekday Running Time

Loop						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:00	55	59	60	60	60	63
7:00	55	59	62	61	61	64
8:00	55	57	60	60	58	64
9:00	55	11	58	60	59	65
10:00	55	57	62	61	61	88
11:00	55	39	59	60	60	62
12:00	55	52	62	63	63	67
13:00	55	4	56	59	59	62
14:00	55	57	60	60	59	66
15:00	55	55	60	60	59	64
16:00	55	10	54	59	58	62
17:00	55	57	59	59	59	61
18:00	55	49	60	60	60	71
19:00	55	56	62	59	59	89
20:00	55	39	48	49	48	54

Source: VVTA DataPoint, October 2011

Table 1-123: Route 51, Saturday Running Time

Loop						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:00	55	59	60	60	59	60
8:00	55	60	61	60	60	63
9:00	55	58	60	60	60	62
10:00	55	59	61	62	62	62
11:00	55	56	59	59	n/a	64
12:00	55	55	61	63	63	63
13:00	55	59	59	59	59	60
14:00	55	58	60	58	58	62
15:00	55	45	57	60	61	61
16:00	55	58	62	60	58	73
17:00	55	57	67	62	n/a	79
18:00	55	43	59	61	n/a	65
19:00	55	38	47	47	n/a	53

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 51 are presented in Table 1-124. Financial indicators are presented in Table 1-125. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-124: Route 51, Service Indicators

Route 51	Weekdays	Saturday	Total	Rank
Passengers per Hour	17.78	11.28	16.80	9 of 19
Passengers per Mile	1.46	0.93	1.38	4 of 19

Source: VVTA

Table 1-125: Route 51, Financial Indicators

Route 51	Weekdays	Saturday	Total	Rank
Cost per Hour	$59.05	$59.64	$59.14	3 of 19
Cost per Mile	$4.85	$4.90	$4.86	17 of 19
Cost per Passenger	$3.32	$5.29	$3.52	9 of 19
Cost per Peak Vehicle	$225,409	$40,077	$265,486	10 of 19
Revenue per Passenger	$0.87	$0.88	$0.87	17 of 19
Farebox Recovery	26.3%	16.6%	24.8%	9 of 19

Source: VVTA

1.6.16 Route 52 Victorville – Mall

Route 52 is a fixed route that operates between Victorville (7th and Lorene Transfer Center) and the Mall of Victor Valley. The route operates primarily via El Evado Road, La Mesa Road, and Amargosa Road. Thirty-five or forty foot buses serve the route. The route serves Victor Valley Shopping Plaza, Valley Center Shopping Center, Victorville Civic Center and the Mall of Victor Valley. Route 52 layovers are performed at:

- Lorene Drive at Valley Center Drive (Seventh and Lorene Transfer Center)

See Table 1-126 for Route 52 service details and Table 1-127 for Route 52 operation information.

Table 1-126: Route 52, Service Details

Route 52	Weekdays	Saturday
Span	6:00AM-8:55PM	7:00AM-7:55PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-127: Route 52, Annual Operation Information

Route 52	Weekdays	Saturday	Total
Ridership	121,546	20,521	142,067
Hours	3,822	673	4,495
Miles	64,435	11,351	75,786
Operating Expenses	$230,641	$41,131	$271,772
Fare Revenue	$106,816	$18,022	$124,838

Source: VVTA

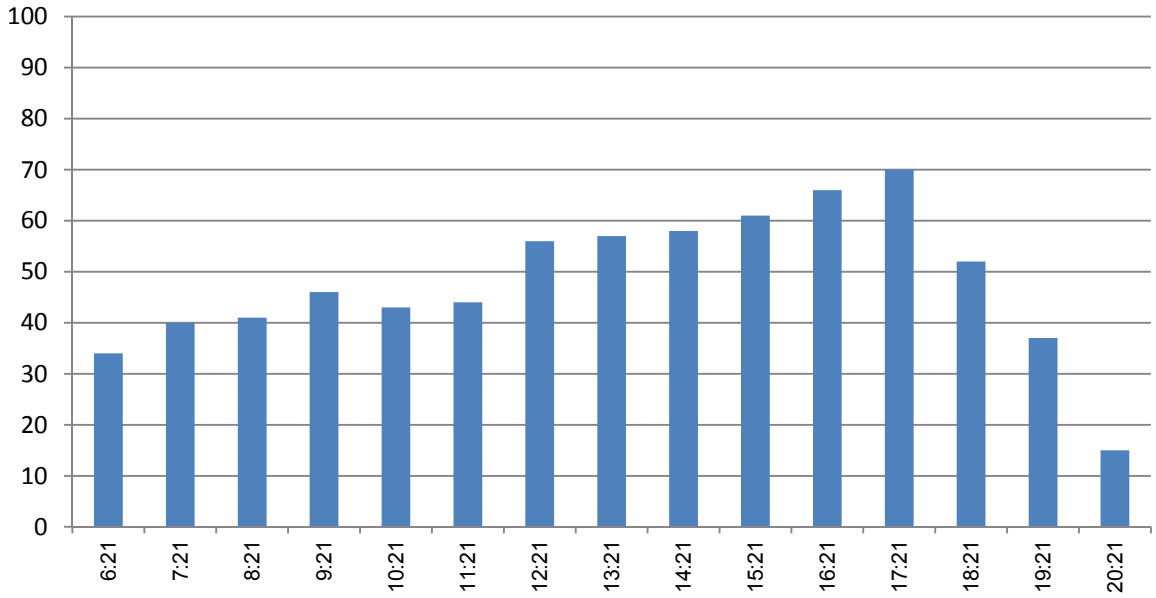
Ridership by Trip

Weekdays, inbound ridership was greatest on late afternoon trips. Following the 5:21PM trip, the highest ridership trip, ridership steadily declined. In the outbound direction, see Figure 1-55 for Route 52 weekday ridership by trip in the inbound direction. Outbound, on weekdays, ridership was greatest on afternoon trips. See Figure 1-56 for Route 52 weekday ridership by trip in the outbound direction.

The ridership by trip pattern on Saturday was similar to the weekday pattern. Inbound, ridership increased throughout much of the day and was highest in the late afternoon, then decreased after the 5:21PM trip. Outbound, there were just two peaks in ridership, in the late morning and in the afternoon. See Figure 1-57 for Route 52 Saturday inbound ridership by trip. See Figure 1-58 for Route 52 Saturday outbound ridership by trip.

Figure 1-55: Route 52, Weekday Ridership by Trip, Inbound

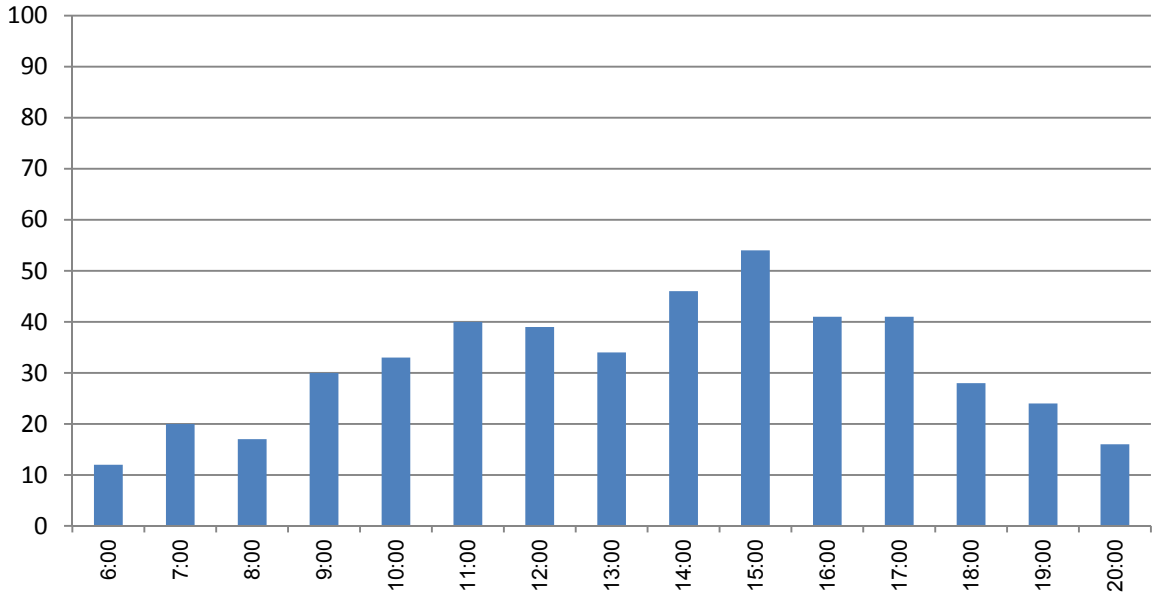
To Lorene TC



Source: VVTA APC Data, October 2011

Figure 1-56: Route 52, Weekday Ridership by Trip, Outbound

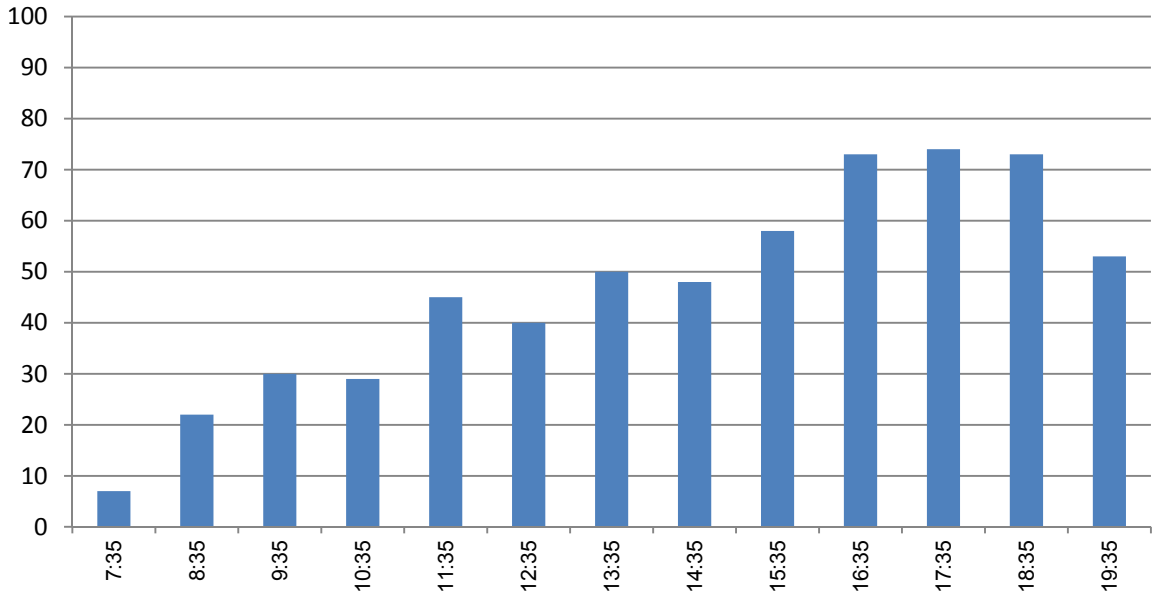
To Victor Valley Mall



Source: VVTA APC Data, October 2011

Figure 1-57: Route 52, Saturday Ridership by Trip, Inbound

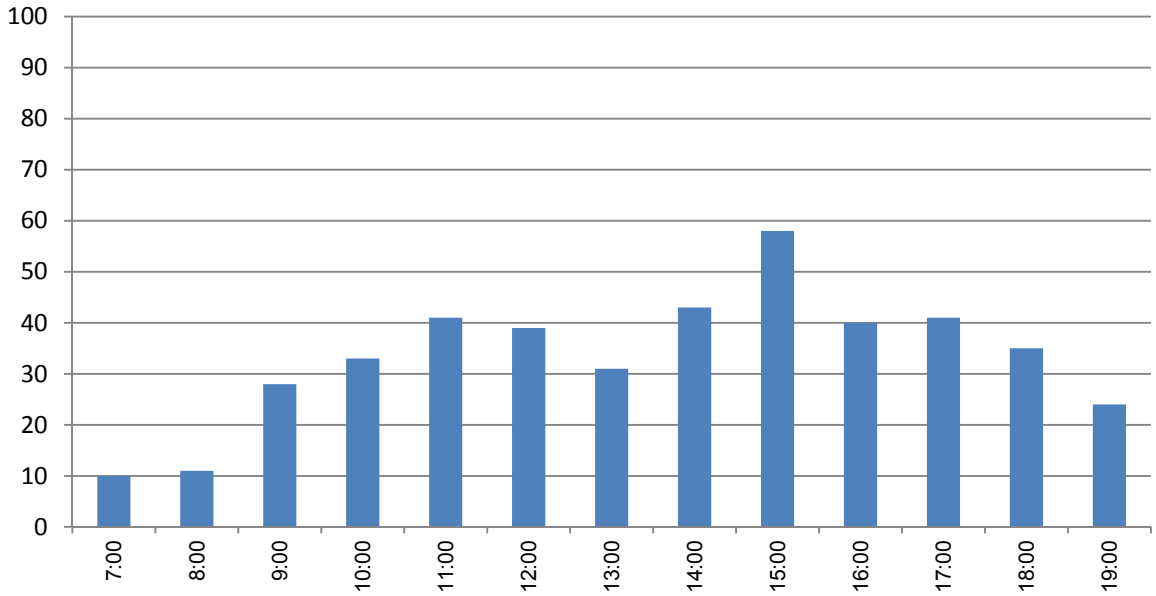
To Lorene TC



Source: VVTA APC Data, October 2011

Figure 1-58: Route 52, Saturday Ridership by Trip, Outbound

To Victor Valley Mall



Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Ridership activity on Route 52 was high at the two route termini, the Seventh and Lorene Transfer Center and The Mall of Victor Valley. The rest of the route saw mostly moderate ridership activity. See Figure 1-59 for Route 52 monthly ridership by bus stop. The Seventh and Lorene Transfer Center was the maximum load point for Route 52. Due to the high passenger volume at the ends of the route and little ridership activity at intermediate points, this route does have high passenger loads throughout the route.

Figure 1-59: Route 52, Monthly Ridership by Bus Stop

Source: VVTA APC Data, October 2011

On-Time Performance and Running Time Analysis

Route 52 has issues with on-time performance. The route operated late more than half of the time. See Table 1-128 for Route 52 on-time performance.

Table 1-128: Route 52, On-Time Performance

Route	Early	On-Time	Late	Rank
52	0.3%	44.4%	55.3%	19 of 19

Source: VVTA DataPoint, October 2011

Running time data was not available for Route 52.

Service and Financial Indicators

Service indicators for Route 52 are presented in Table 1-129. Financial indicators are presented in Table 1-130. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-129: Route 52, Service Indicators

Route 52	Weekdays	Saturday	Total	Rank
Passengers per Hour	31.80	30.49	31.61	1 of 19
Passengers per Mile	1.89	1.81	1.87	1 of 19

Source: VVTA

Table 1-130: Route 52, Financial Indicators

Route 52	Weekdays	Saturday	Total	Rank
Cost per Hour	$60.35	$61.12	$60.46	9 of 19
Cost per Mile	$3.58	$3.62	$3.59	11 of 19
Cost per Passenger	$1.90	$2.00	$1.91	1 of 19
Cost per Peak Vehicle	$230,641	$41,131	$271,772	14 of 19
Revenue per Passenger	$0.88	$0.88	$0.88	6 of 19
Farebox Recovery	46.3%	43.8%	45.9%	1 of 19

Source: VVTA

1.6.17 Route 53 Victor Valley College – Mall of Victor Valley

Route 53 is a fixed route service that operates between the Mall of Victor Valley and Victor Valley College. The route operates primarily via Bear Valley Road. Thirty-five or forty foot buses serve the route. Major trip generators served by the route include the Mall of Victor Valley, Walmart, Victor Valley Town Center, Desert Valley Hospital, and Victor Valley Community College. Layovers are performed at:

- The Mall of Victor Valley
- Jacaranda Avenue at Victor Valley College

See Table 1-131 for Route 53 service details. Operation information for Route 53 is presented in Table 1-132.

Table 1-131: Route 53, Service Details

Route 53	Weekdays	Saturday
Span	6:00AM-8:57PM	7:00AM-7:57PM
Frequency	30 Peak/ 60 Non-Peak	60

Source: VVTA Public Timetables

Table 1-132: Route 53, Annual Operation Information

Route 53	Weekdays	Saturday	Total
Ridership	126,535	14,019	140,554
Hours	7,278	1,024	8,302
Miles	79,441	10,208	89,649
Operating Expenses	$427,547	$60,187	$487,734
Fare Revenue	$110,936	$12,300	$123,236

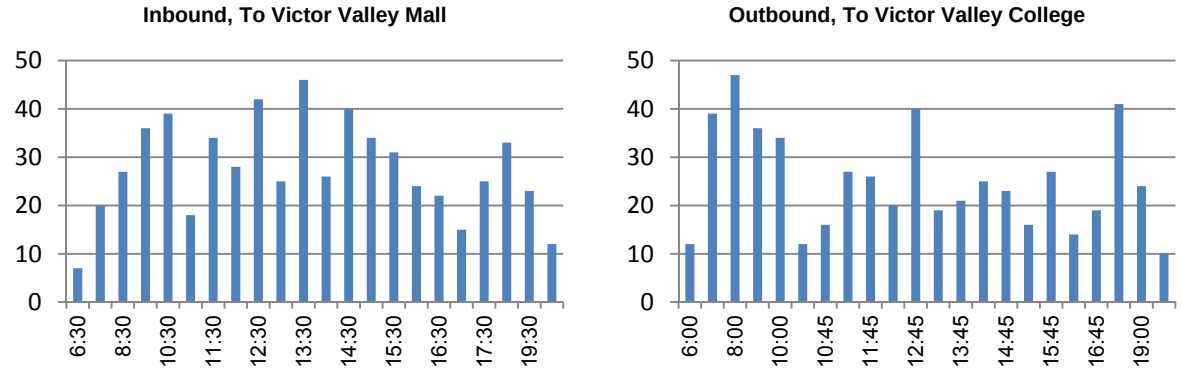
Source: VVTA

Ridership by Trip

Weekday ridership on Route 53 varied by trip in both the inbound and outbound directions. The highest ridership inbound trips were in the early afternoon and the highest ridership outbound trip was in the morning. See Figure 1-60 for Route 53, weekday ridership by trip.

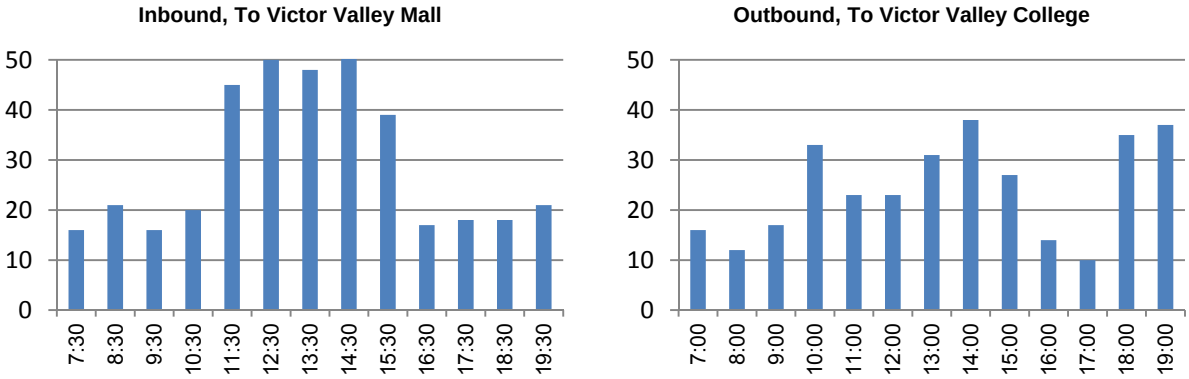
Saturday, inbound ridership was relatively strong, with the highest ridership Saturday trips having more riders than on weekdays. Inbound, midday trips had the highest ridership with select trips having 50 or more passengers. Outbound, ridership varied by trip and was highest in the early afternoon and on the last two trips of the day. See Figure 1-61 for Route 53 ridership by trip.

Figure 1-60: Route 53, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-61: Route 53, Saturday Ridership by Trip



*The 12:30 inbound trip had an average daily ridership of 50 passengers and the 14:30 inbound trip had an average daily ridership of 56 passengers.
Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

The highest ridership bus stops on Route 53 were at the two ends of the route, the Mall of Victor Valley and Victor Valley College. There was moderate ridership at many bus stops along Bear Valley Road and Hesperia Road. See Figure 1-62 for Route 53 ridership by bus stop. The maximum load point was located at Jasmine Street at Hesperia Road.

ource:
VVTA
APC
Data,
October
2011

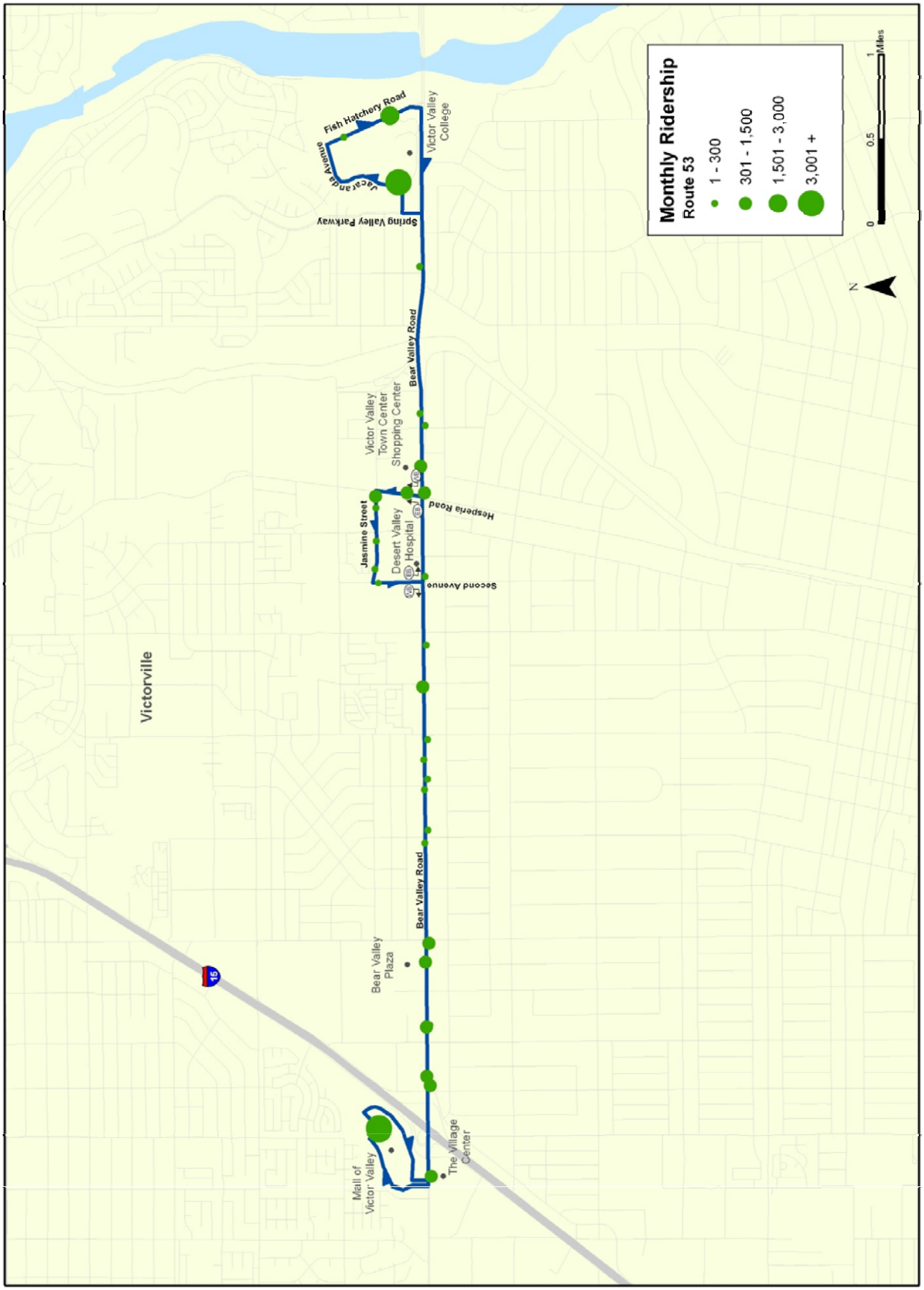


Figure 1-62: Route 53, Monthly Ridership by Bus Stop

On-Time Performance and Running Time Analysis

Route 53 does have issues with on-time performance. The route departed on-time from timepoints about 54 percent of the time. See Table 1-133 for Route 53 on-time performance.

Table 1-133: Route 53, On-Time Performance

Route	Early	On-Time	Late	Rank
53	1.5%	54.1%	44.4%	15 of 19

Source: VVTA DataPoint, October 2011

Weekdays, Route 53 did not have enough scheduled running time inbound or outbound. There was not enough scheduled running time allotted on Saturday either, inbound or outbound. Several trips, on weekdays and Saturday, had running times over 50 percent higher than scheduled. See Table 1-134 for Route 53 weekday running time and Table 1-135 for Route 53 Saturday running time. Times do not include layover.

Table 1-134: Route 53, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
6:30	27	27	31	31	31	32	6:00	25	21	28	28	27	31
7:30	27	29	31	31	31	35	7:00	25	22	27	27	25	34
8:30	27	27	32	31	29	38	8:00	25	25	29	29	28	36
9:30	27	29	32	33	34	37	9:00	25	26	30	30	28	34
10:30	27	35	42	42	42	50	10:00	25	20	29	29	29	34
11:00	27	43	45	46	46	49	10:15	25	42	45	45	46	48
11:30	27	41	45	44	43	49	10:45	25	37	45	46	46	49
12:00	27	33	45	46	46	48	11:15	25	34	43	43	43	47
12:30	27	41	45	45	45	50	11:45	25	43	45	45	44	49
13:00	27	42	46	46	44	49	12:15	25	40	44	44	43	48
13:30	27	41	44	44	43	48	12:45	25	27	32	31	30	40
14:00	27	34	44	44	43	47	13:15	25	26	43	44	46	61
14:30	27	42	45	45	43	49	13:45	25	39	45	46	46	48
15:00	27	42	45	44	44	49	14:15	25	35	45	46	46	48
15:30	27	43	46	45	44	54	14:45	25	39	45	46	47	47
16:00	27	33	44	45	46	48	15:15	25	39	44	45	45	49
16:30	27	29	46	46	n/a	62	15:45	25	40	45	45	44	49
17:00	27	33	42	43	47	49	16:15	25	40	43	43	43	43
17:30	27	33	40	40	38	46	16:45	25	36	44	45	47	49
18:30	27	24	33	34	37	41	18:00	25	26	31	32	30	36
19:30	27	25	29	29	28	35	19:00	25	21	27	27	24	34
20:30	27	21	24	24	24	29	20:00	25	28	32	30	28	57

Source: VVTA DataPoint, October 2011

Table 1-135: Route 53, Saturday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
7:30	27	30	31	31	31	33	7:00	25	28	29	29	29	30
8:30	27	27	30	31	31	32	8:00	25	21	24	23	n/a	27
9:30	27	30	32	32	32	33	9:00	25	26	29	29	29	30
10:30	40	47	58	61	n/a	65	10:00	25	28	31	30	n/a	37
11:30	40	63	66	66	69	69	10:35	35	50	54	53	53	57
12:30	40	48	53	52	n/a	61	11:35	35	50	54	54	56	56
13:30	40	62	65	64	n/a	68	12:35	35	32	50	53	n/a	57
14:30	40	64	66	65	68	68	13:35	35	44	52	53	n/a	56
15:30	40	63	66	66	66	67	14:35	35	53	55	56	56	57
16:30	40	85	85	85	n/a	85	15:35	35	51	51	51	n/a	51
17:30	40	37	44	45	n/a	47	16:35	35	48	52	53	n/a	55
18:30	27	31	44	34	34	82	18:00	25	28	33	32	38	38
19:30	27	23	24	24	23	25	19:00	25	21	26	27	n/a	30

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for Route 53 are presented in Table 1-136. Financial indicators are presented in Table 1-137. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-136: Route 53, Service Indicators

Route 53	Weekdays	Saturday	Total	Rank
Passengers per Hour	17.39	13.69	16.93	8 of 19
Passengers per Mile	1.59	1.37	1.57	3 of 19

Source: VVTA

Table 1-137: Route 53, Financial Indicators

Route 53	Weekdays	Saturday	Total	Rank
Cost per Hour	$58.75	$58.78	$58.75	1 of 19
Cost per Mile	$5.38	$5.90	$5.44	19 of 19
Cost per Passenger	$3.38	$4.29	$3.47	8 of 19
Cost per Peak Vehicle	$142,516	$30,094	$162,578	3 of 19
Revenue per Passenger	$0.88	$0.88	$0.88	6 of 19
Farebox Recovery	25.9%	20.4%	25.3%	8 of 19

Source: VVTA

1.6.18 Route 54 Victorville West Route Deviation

Route 54 is a fixed route that operates circulator service in western areas of Victorville. The route operates primarily via US-395 (Three Flags Highway), Mesa View Drive, Dos Palmas Road, Amethyst Road, and Bear Valley Road. Twenty-seven foot cutaway buses operate along the route. The route serves Silverado High School, Liberty Village Shopping Center, Adelanto Marketplace and Molina Medical Center. Route 54 layovers are performed at:

- US-395 (Three Flags Highway) at Palmdale Road

See Table 1-138 for Route 54 service details and Table 1-139 for Route 54 operation information.

Table 1-138: Route 54, Service Details

Route 54	Weekdays	Saturday
Span	6:23AM-9:18PM	7:23AM-8:18PM
Frequency	60	60

Source: VVTA Public Timetables

Table 1-139: Route 54, Annual Operation Information

Route 54	Weekdays	Saturday	Total
Ridership	17,338	2,269	19,607
Hours	3,836	675	4,511
Miles	69,045	12,152	81,197
Operating Expenses	$233,202	$41,614	$274,816
Fare Revenue	$15,328	$2,013	$17,341

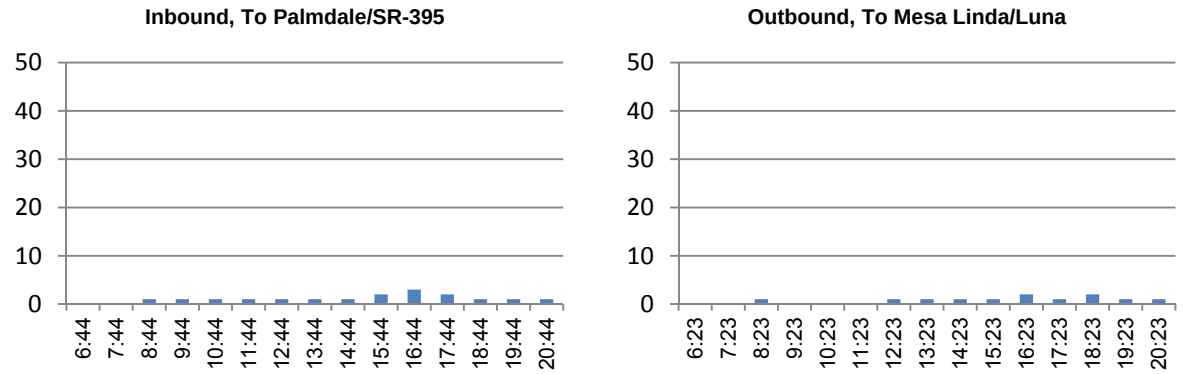
Source: VVTA

Ridership by Trip

Route 54 carried very few riders on weekdays. Inbound, the highest ridership trip carried three passengers on average. Outbound, no trip carried more than two riders. Several inbound and outbound trips carried no passengers at all. See Figure 1-63 for Route 54 weekday ridership by trip.

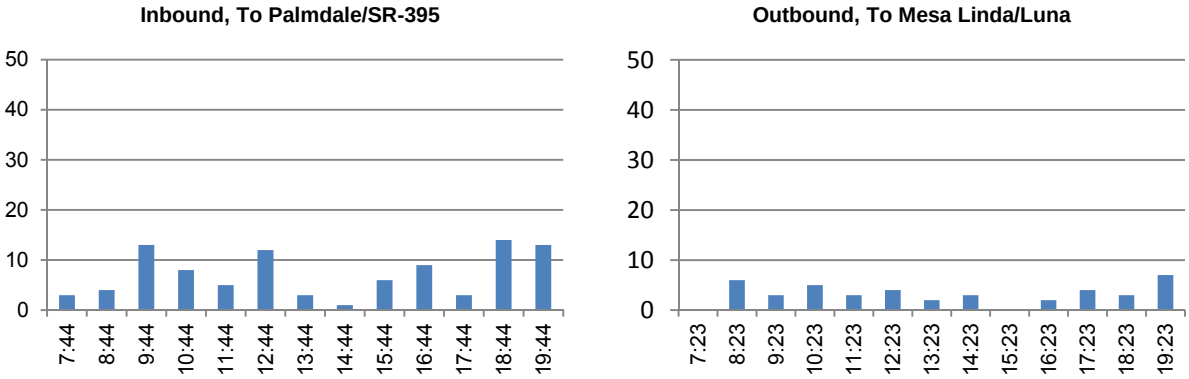
Saturday ridership was also rather low, but higher than on weekdays. Several trips operating in the inbound direction carried more than ten passengers, which was a relatively high number for this route. See Figure 1-64 for Route 64 Saturday ridership by trip.

Figure 1-63: Route 54, Weekday Ridership by Trip



Source: VVTA APC Data, October 2011

Figure 1-64: Route 54, Saturday Ridership by Trip



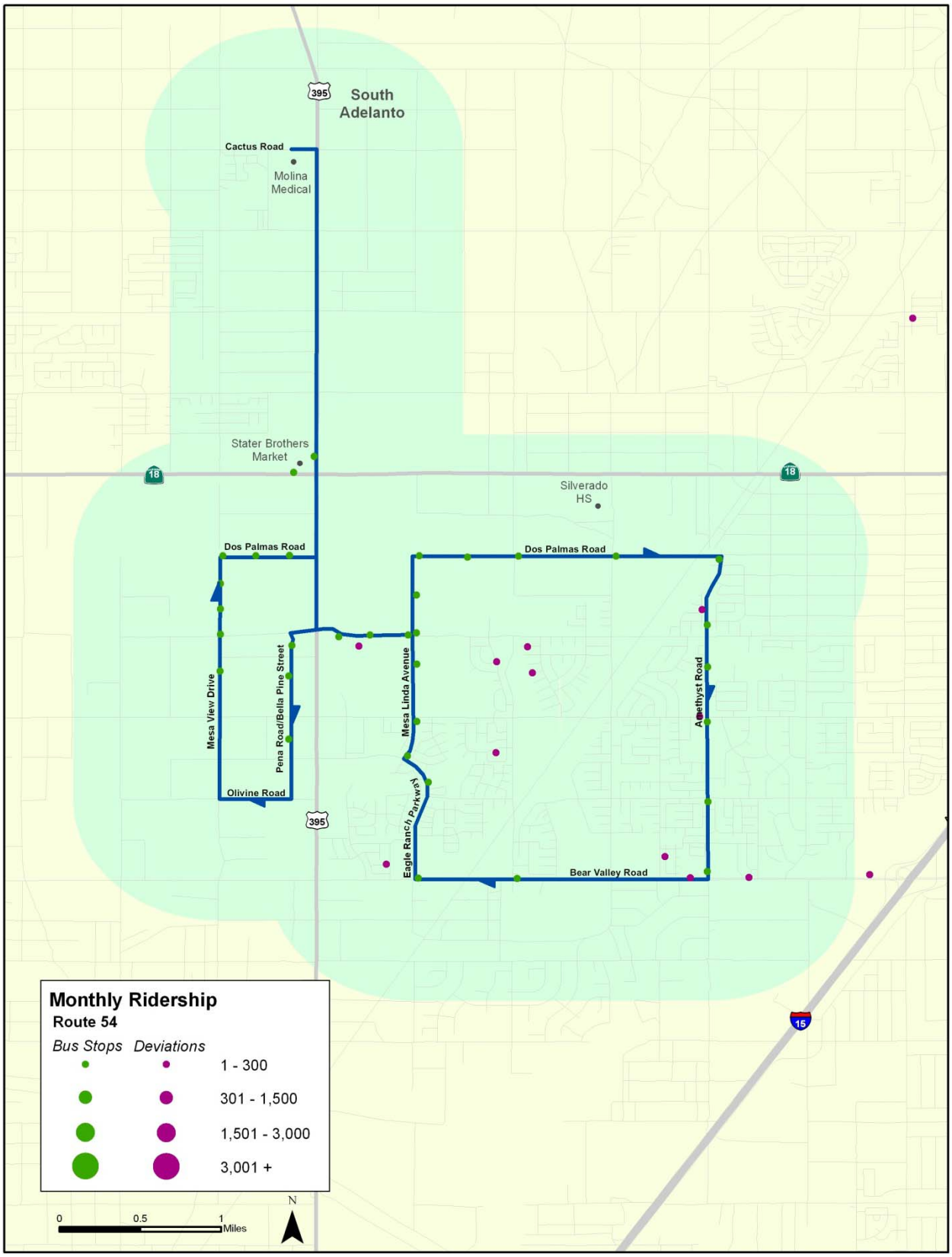
Source: VVTA APC Data, October 2011

Ridership Activity by Bus Stop

Route 54 ridership activity was low at all bus stops along the route. The highest ridership bus stops were located on US-395 at Palmdale Road (SR-18) at the Stater Brothers Market and on Amethyst Road at Bear Valley Road. All other bus stops had fewer than 50 monthly boardings and alightings. See Figure 1-65 for Route 54 ridership by bus stop. The maximum load point for the route was located at Mesa Linda Avenue at Luna Road.

According to TransTrack, Route 54 carried 1,821 passengers during the month of October 2011. Ridership at deviated bus stop locations accounted for 12 of the monthly passenger total, or 0.7 percent.

Figure 1-65: Route 54, Monthly Ridership by Bus Stop



Source: VVTA APC Data, October 2011

On-Time Performance and Running Time Analysis

Route 54 was one of the better routes in the VVTA network in terms of on-time performance. The route achieved an on-time performance of about 75 percent. See Table 1-140 for Route 54 on-time performance.

Table 1-140: Route 54, On-Time Performance

Route	Early	On-Time	Late	Rank
54	4.9%	75.2%	20.0%	4 of 19

Source: VVTA DataPoint, October 2011

Running time data was not provided for Route 54.

Service and Financial Indicators

Service indicators for Route 54 are presented in Table 1-141. Financial indicators are presented in Table 1-142. The rank shows how well the route compares to other routes in the VVTA fixed route network.

Table 1-141: Route 54, Service Indicators

Route 54	Weekdays	Saturday	Total	Rank
Passengers per Hour	4.52	3.36	4.35	18 of 19
Passengers per Mile	0.25	0.19	0.24	15 of 19

Source: VVTA

Table 1-142: Route 54, Financial Indicators

Route 54	Weekdays	Saturday	Total	Rank
Cost per Hour	$60.79	$61.65	$60.92	10 of 19
Cost per Mile	$3.38	$3.42	$3.38	9 of 19
Cost per Passenger	$13.45	$18.34	$14.02	16 of 19
Cost per Peak Vehicle	$233,202	$41,614	$274,816	15 of 19
Revenue per Passenger	$0.88	$0.89	$0.88	6 of 19
Farebox Recovery	6.6%	4.8%	6.3%	19 of 19

Source: VVTA

1.6.19 Route 15 B-V Link

The B-V Link is a fixed route service between Barstow and Victorville which was implemented in September, 2011. The B-V Link utilizes thirty three foot cutaway buses. The B-V Link operates on Mondays, Wednesdays and Thursday only. Within the VVTA service area, between Barstow and the Apple Valley/Victorville area utilizing Interstate 15. Trip generators served by the route include Saint Mary Medical Center, Victor Plaza Shopping Center, Kaiser Permanente, Pacific Eye Institute, and the Mall of Victor Valley. In Barstow, the route serves Barstow Community Hospital, Barstow Senior Center and the Barstow Transit Center. Buses do not layover on this route. See Table 1-143 for B-V Link service details and Table 1-144 for operation information.

Table 1-143: B-V Link, Service Details

B-V Link	Weekdays	Saturday
Span	7:50AM-6:00PM*	n/a
Frequency	3 EB Trips/ 3 WB Trips*	n/a

*Operates on Mondays, Wednesdays and Thursdays only.
Source: VVTA Public Timetables

Table 1-144: B-V Link, Annual Operation Information

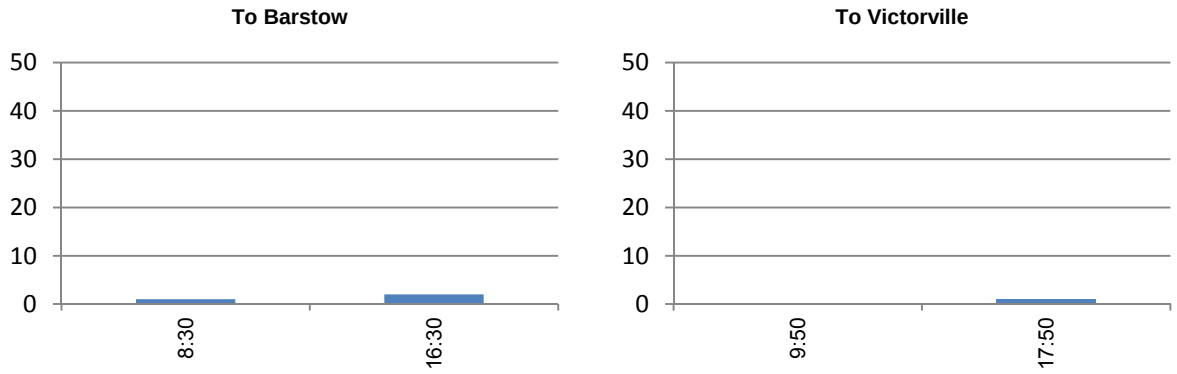
B-V Link	Weekdays	Saturday	Total
Ridership	1,219	n/a	1,219
Hours	630	n/a	630
Miles	20,265	n/a	20,265
Operating Expenses	$69,915	n/a	$69,915
Fare Revenue	$6,553	n/a	$6,553

Source: VVTA

Ridership by Trip

On an average weekday, when the service is in operation, the B-V Link carried very few riders. To Barstow, the 8:30AM trip carried one rider and the 4:30PM trip carried two riders, on average. To Victorville, the 9:50AM trip carried no riders and the 5:50PM trip carried one rider, on average. See Figure 1-67 for the B-V Link weekday ridership by trip. To note, there are currently three scheduled B-V Link trips in each direction. All trips are not represented.

Figure 1-66: B-V Link, Weekday Ridership by Trip



Source: VVTA, October 2011

Ridership Activity by Bus Stop

The B-V Link had very low monthly ridership at all bus stops along the route. The highest ridership bus stop, at the Seventh and Lorene Transfer Center had 19 riders for the month. All other bus stops had fewer than 10 monthly riders. Many bus stops saw no ridership activity. See Figure 1-68 for B-V Link ridership by bus stop. The maximum load point for the B-V Link was located at Mountain View Street at Melissa Street in Barstow.

Figure 1-67: B-V Link, Monthly Ridership by Bus Stop

Source: VVTA APC Data, October 2011

On-Time Performance and Running Time Analysis

The B-V Link has issues with on-time performance. The route operated late about 40 percent of the time. See Table 1-145 for B-V Link on-time performance.

Table 1-145: B-V Link, On-Time Performance

Route	Early	On-Time	Late	Rank
B-V Link	0.0%	59.1%	40.9%	12 of 19

Source: VVTA DataPoint, October 2011

Data was not provided for several trips. Inbound, there was not enough scheduled running time for one of the two trips for which data was provided. Outbound, the one trip with data did not have enough scheduled running time. See Table 1-146 for B-V Link weekday running time. Times do not include layover.

Table 1-146: B-V Link, Weekday Running Time

Inbound							Outbound						
Time	Scheduled	Minimum	Mean	Median	Mode	Maximum	Time	Scheduled	Minimum	Mean	Median	Mode	Maximum
8:30	80	85	85	85	n/a	85	7:50	85	0	n/a	n/a	n/a	0
14:30	80	0	n/a	n/a	n/a	0	9:50	85	0	n/a	n/a	n/a	0
16:30	80	39	63	63	n/a	86	15:50	100	0	n/a	n/a	n/a	0
							17:50	10	15	19	19	n/a	22

Source: VVTA DataPoint, October 2011

Service and Financial Indicators

Service indicators for the B-V Link 54 are presented in Table 1-147. Financial indicators are presented in Table 1-148. The rank shows how well the B-V Link compares to other routes in the VVTA fixed route network.

Table 1-147: B-V Link, Service Indicators

B-V Link	Weekdays	Saturday	Total	Rank
Passengers per Hour	1.93	n/a	1.93	19 of 19
Passengers per Mile	0.06	n/a	0.06	19 of 19

Source: VVTA

Table 1-148: B-V Link, Financial Indicators

B-V Link	Weekdays	Saturday	Total	Rank
Cost per Hour	$110.98	n/a	$110.98	19 of 19
Cost per Mile	$3.45	n/a	$3.45	10 of 19
Cost per Passenger	$57.35	n/a	$57.35	19 of 19
Cost per Peak Vehicle	$34,958	n/a	$34,958	1 of 19
Revenue per Passenger	$5.38	n/a	$5.38	1 of 19
Farebox Recovery	9.4%	n/a	9.4%	17 of 19

Source: VVTA

1.7 Direct Access Service

Direct Access is VVTA's ADA curb-to-curb demand response paratransit service. Direct Access users must make a reservation at least one day in advance in order to utilize the service. Currently, Direct Access service area boundaries are not defined.

Customers must be ADA certified in order to use the service. In order to become certified for Direct Access service, prospective paratransit users must fill out an application and provide details about their impairment that can be verified by their health care provider. Those eligible for Direct Access service may have a physical health, mental health, or mobility issue that precludes them from using regular fixed route service. Some customers may be able to use Direct Access on temporary or conditional basis depending on the nature of the disability but be required to use fixed route service at other times.

Direct Access fares are determined by how far a customer pick up or drop off location is from a fixed route bus stop. Zone one fares are charged for locations within ¾ miles of a fixed route bus stop. Zone two fares are charged between ¾ miles and 1½ miles of a fixed route bus stop. And, zone three fares are charged for locations between 1½ and 2¼ miles of a fixed route bus stop. Personal care attendants may ride for free. Customers may ride with a fare paying companion as long as another Direct Access customer is not displaced. See Table 1-149 for Direct Access fares.

Table 1-149: Direct Access Fares

Number of Zones	Fare
Zone 1	$2.50
Zone 2	$4.50
Zone 3	$6.00

Source: VVTA

Table 1-150 presents Direct Access operation information, including ridership, revenue hours, revenue miles, operating expenses and fare revenues.

Table 1-150: Direct Access, Annual Operation Information

Direct Access	Weekdays	Saturday	Total
Ridership	59,779	5,436	65,215
Hours	27,533	2,764	30,297
Miles	438,506	44,648	483,154
Operating Expenses	$1,901,144	$190,916	$2,092,060
Fare Revenue	$196,785	$17,013	$213,797

Source: VVTA

On-Time Performance

Direct Access service has a good on-time performance record. A trip is deemed on-time if it arrives between 10 minutes before or 30 minutes after the scheduled pick up time. In October 2011, Direct Access trips were on-time over 95 percent of the time. Of trips samples, none operated early. See Table 1-151 for Direct Access on-time performance.

Table 1-151: Direct Access, On-Time Performance

Service	Early (>10 min. early)	On-Time	Late (>30 min. late)	Rides Sampled
Direct Access	0.0%	95.5%	4.5%	9,095

Source: Veolia Monthly Reports, October 2011

Performance Indicators

Direct Access performance indicators are shown in Table 1-152.

Table 1-152: Direct Access, Performance Indicators

Direct Access	Weekdays	Saturday	Total
Passengers per Hour	2.17	1.97	2.15
Passengers per Mile	0.14	0.12	0.13
Cost per Hour	$69.05	$69.07	$69.05
Cost per Mile	$4.34	$4.28	$4.33
Cost per Passenger	$31.80	$35.12	$32.08
Revenue per Passenger	$3.29	$3.13	$3.28
Farebox Recovery	10.4%	8.9%	10.2%

Source: VVTA

1.8 Capital Assets

1.8.1 Fleet Information

The VVTA fleet consists of revenue vehicles that are used for providing transit services and non-revenue vehicles that support VVTA operations. This section provides an overview of the fixed route, non-revenue, and contract fleet as of October, 2011. The fixed route fleet operates on fixed routes and deviated routes. The Direct Access fleet operates ADA services. The non-revenue fleet includes staff vehicles and other vehicles not used to operate revenue service.

Fixed Route Fleet

There are 52 vehicles in VVTA's fixed route fleet. The majority of the fleet is owned by VVTA. The fixed route revenue fleet consists primarily of 35 and 40-foot Bluebird buses and 40-foot NABI low floor buses. The age of the fleet ranges from one to twelve years old. In terms of service years, no vehicles exceed their 12-year useful life. However, in terms of service mileage,

18 buses exceed their service life, including two New Flyer 40 LF buses owned by VVTA, all three New Flyers owned by Veolia, three of the 2002 NABI 40 foot buses, the Bluebird XCEL 102 bus, all of the El Dorado Aero Elite fleet, and one of the 2004 NABI 40LFW buses. Most of the current fleet uses compressed natural gas as a fuel source, but there are some unleaded powered buses in the fleet. The fixed route fleet inventory is presented in Table 1-153.

Table 1-153: Fixed Route Fleet Inventory

Year	Make and Model	Length	Capacity/Wheelchair	Fuel	Number of Vehicles	Owner
2000	New Flyer 40 LF	40 feet	31/2	CNG	5	VVTA
2001	New Flyer 40 LF	40 feet	31/2	CNG	3	Veolia
2001	Bluebird	35 feet	21/2	CNG	1	VVTA
2001	Bluebird	40 feet	32/2	CNG	4	VVTA
2002	NABI	40 feet	33/2	CNG	4	VVTA
2003	Bluebird XCEL 102	35 feet	27	Diesel	1	VVTA
2004	NABI 40LFW	40 feet	33/2	CNG	2	VVTA
2006	Bluebird	35 feet	24/2	CNG	5	VVTA
2008	El Dorado Aero Elite	27 feet	16/2	Gas	4	VVTA
2008	NABI 40LFW	40 feet	33/2	CNG	7	VVTA
2009	El Dorado Aero Elite	32 feet	24/2	Gas	4	VVTA
2010	NABI 40LFW	40 feet	33/2	CNG	6	VVTA
2011	Glaval Entourage	33 feet	24/2	CNG	6	VVTA

Source: VVTA Fleet Inventory

Direct Access Fleet

There are 44 vehicles in the VVTA Direct Access fleet. Seven of the vehicles in the current fleet are not in use. The majority of vehicles consist of 22-foot El Dorado/Aerotech 220 vehicles and 25-foot El Dorado/Aerotech 240 vehicles. The oldest vehicles in the Direct Access fleet are seven years old. The youngest vehicles were built in 2011. The El Dorado/Aerotech 220 vehicles built in 2005 passed their service life in terms of years and miles (4 years or 100,000 miles). No other vehicles have passed their service life though the 2008 Ford's should be retired in 2013. Most of the fleet runs on gas with some vehicles using compressed natural gas as a fuel source. Caltrans holds the title to the El Dorado/Aerotech 240 vehicles and VVTA is the owner of all other ADA vehicles. Table 1-154 presents the Direct Access fleet inventory.

Table 1-154: Direct Access Fleet Inventory

Year	Make and Model	Length	Capacity/Wheelchair	Fuel	Number of Vehicles	Owner
2005	El Dorado/Aerotech 220	22 feet	12/2	Gas	12 (6 not in use)	VVTA
2007	El Dorado/Aerotech 220	22 feet	12/2	Gas	2	VVTA
2008	Ford E 450/Starcraft	24 feet	12/2	Gas	7 (1 not in use)	VVTA
2010	Ford E 450/Starcraft	24 feet	12/2	Gas	1	VVTA
2010	ARBOC	26 feet	13/2	CNG	6	VVTA
2011	El Dorado/Aerotech 240	25 feet	12/2	Gas	8	Caltrans
2011	Dodge Caravan	17 feet	3/1	Gas	8	VVTA

Note: 3 El Dorado/Aerotech 220's (2005) operate both ADA and deviated fixed route services.
Source: VVTA Fleet Inventory and Vehicle Status Report (8/22/2012)

Non-Revenue Fleet

VVTA has 19 vehicles in the non-revenue fleet. Non-revenue vehicles include administrative and operations vehicles. The non-revenue fleet consists of a variety of vehicle types. The vehicles age of the fleet ranges from twelve years old to less than one year old. Several non-revenue fleet vehicles are hybrids, while other run on gas or compressed natural gas. VVTA owns all of the vehicles in the non-revenue fleet. The inventory of the non-revenue fleet is found in Table 1-155.

Table 1-155: Non-Revenue Fleet Inventory

Year	Make and Model	Capacity/Wheelchair	Fuel	Number of Vehicles	Owner
2000	Ford F150	6	Bio-Fuel	1	VVTA
2005	Ford Escape	5	Hybrid	2	VVTA
2007	Honda Accord	5	Hybrid	2	VVTA
2007	Ford F-150	6	Gas	1	VVTA
2008	Ford Escape	5	Hybrid	1	VVTA
2008	Ford Escape	6	Hybrid	1	VVTA
2008	Chevy Low-floor van	3/1	Gas	1	VVTA
2011	Dodge Caravan	3/1	Gas	2	VVTA
2011	Honda Civic	5	CNG	4	VVTA
2011	Ford Flex	NA	Gas	1	VVTA
2012	Ford Flex	NA	Gas	1	VVTA
2012	Ford Escape	5	Hybrid	2	VVTA

Source: VVTA Fleet Inventory and Vehicle Status Report (8/22/2012)

1.8.2 Transit Centers

The main transit center in the VVTA service area is the 7th and Lorene Transfer Center in Victorville. The transfer center is equipped with six berths in a shallow sawtooth configuration. Customer amenities at the Seventh and Lorene Transfer Center include bus stop signs, bus shelters, benches and trash receptacles. The routes using the Seventh and Lorene Transfer Center include Routes 22, 31, 32, 41, 45, 51, 52 and the B-V Link.

There are several other timed transfer locations throughout the VVTA service area including Victor Valley College in Victorville, the Apple Valley Post Office in Apple Valley, the Hesperia Post Office in Hesperia, and Stater Brothers Market in Adelanto (US-395 and Palmdale Road). The Mall of Victor Valley in Victorville is not a timed transfer location, although a number of routes do meet at this location.

The bus stop at Victor Valley College is also a major destination and transfer point. The bus stop includes four bus berths in a shallow sawtooth configuration. Amenities at the stop include bus stop signs, a sheltered waiting area, benches, a water fountain and trash receptacles. Routes using the bus stop include Routes 43, 45 and 53. A shelter and trash receptacle is located at the Apple Valley Post Office bus stop. The stop is served by Routes 23, 40, 41, 43 and 47. The Hesperia Post Office is served by two bus stops located kitty-corner from each other. Amenities at the stops include a bus stop sign, bus shelter, benches and trash receptacle. The two bus stops are served by Routes 44, 45, 46 and 48. The two bus stops located at Stater Brothers Market in Adelanto, one on US-395 and the other on Palmdale Road, have no customer amenities. The stops are served by Routes 31, 33 and 54. The bus stop at the Mall of Victor Valley has shelters and access to the mall for waiting. The bus stop serves Routes 21, 44, 52 and 53.

1.8.3 Bus Stop Information

There are about 667 bus stops in the VVTA service area not including deviated bus stop locations. Most bus stops are indicated by a blue sign with a white bus symbol. While, some bus stops have a bus shelter to indicate the bus stop location but no bus stop sign, at other bus stop locations there are no indications that there is a bus stop. In particular, the majority of bus stops along Route 23 east of Apple Valley have no sign or shelter. Amenities at bus stops include shelters, benches, trash receptacles and lighting. Shelters with benches and trash receptacles are located at many bus stops. A few of the bus stops are equipped with solar powered lighting.

Accessibility to bus stops is an issue. Bus stops on streets adjacent to walled communities make bus stop access more difficult. Also, sidewalks are not present at all bus stops. Of those bus stops without sidewalks, some have a paved boarding area but without full sidewalks for access to the bus stop. Other bus stops have no sidewalk or paved area. In Apple Valley, this may be by design as the town identifies itself as equestrian-friendly.

1.8.4 Operations and Maintenance Facility

VVTA recently opened a new operations and maintenance facility on Smoke Tree Street in Hesperia. The facility houses VVTA administrative offices and provides space for maintenance and storage for the VVTA fleet. This replaces the previous facility on Santa Fe Avenue with a new modern energy efficient facility. This new facility is served by Route 46.

1.8.5 Capital Program

The current VVTA capital program includes projects related to facilities, fleet maintenance, fleet replacement, bus stop enhancements and security. In 2012, the capital program cost a total of $4,871,498. Total expenditures between 2011 and 2017 are presently estimated at $13,583,784. The Capital Plan will be updated based on recommendations in phase II of the study. See Table 1-156 for a list of VVTA capital projects.

Table 1-156: VVTA Capital Program Expenditures, FY2011-2017

Project Description	2011	2012	2013	2014	2015	2016	2017	Total Cost
Bus Facility Capital Lease	$2,239,434	$1,711,664	$2,236,834	$2,239,034	$2,240,034	$2,238,284	-	$6,187,932
Replacement Coaches (2)	-	-	$964,388	-	-	-	-	$964,388
ADA Paratransit Buses (3)	-	$1,292,000	$555,000	-	-	-	-	$1,847,000
FTA Preventative Maintenance	$833,479	$1,266,249	-	-	-	-	-	$2,099,728
Major Components	-	-	$95,000	-	-	-	-	$95,000
Mobility Management Program	-	$284,500	$284,500	$284,500	$284,500	$284,500	$284,500	$1,707,000
Shelters/Accessibility Improve.	$51,356	$170,000	$52,076	$52,076	$52,076	$52,076	$52,076	$403,855
Security (1% min. set aside)	-	$147,085	$26,285	$26,321	$26,358	$26,396	$26,436	$278,881
TOTAL	$3,124,269	$4,871,498	$4,214,083	$2,601,931	$2,602,968	$2,601,256	$363,012	$13,583,784

Source: VVTA Annual Operating and Capital Budget, FY2011-2012

2.0 VVTA Passenger Survey

2.1 Introduction

Two surveys of VVTA passengers were conducted as part of the Comprehensive Operational Analysis (COA): an onboard survey for fixed route passengers and a telephone survey of ADA Direct Access passengers. These surveys served a number of purposes including providing a profile of current VVTA riders, noting the perception that VVTA customers have of the bus service provided, identifying the types of improvements customers would like to see, and identifying the factors that influence passengers use of the bus. Besides these stated purposes, the COA survey was used to understand transfer patterns of VVTA passengers. Finally, the survey satisfied Federal reporting requirements under Title VI of the Civil Rights Act of 1964.

This chapter provides highlights of the findings from the passenger survey. Copies of the questionnaires used for the survey are provided in Appendix A. Appendix B provides a full summary of the findings of both the onboard passenger survey and the ADA Direct Access telephone survey.

2.2 Methodology

VVTA and the survey team coordinated in the development of a survey form. This form was based on previous VVTA surveys and updated to ensure that questions would allow for geocodable addresses, a transfer matrix would be possible to construct, and all relevant questions were asked to satisfy the requirements of Title VI of the Civil Rights act of 1964. Surveys were conducted in both English and Spanish.

Surveys were conducted between March 22 and March 28, 2012 onboard VVTA fixed route buses and via telephone for the ADA Direct Access Survey. The survey sample plan called for 1,200 completed surveys aboard fixed route buses with the returned surveys on each route representing 10 percent of that route's daily ridership. A total of 1,712 surveys were collected.

2.3 Onboard Fixed Route Passenger Survey

There were three categories of questions asked on the onboard fixed route passenger survey; rider characteristic questions, rider's satisfaction questions, and rider demographic questions. This section presents some of the key findings from the survey. Full survey response details are presented in Appendix B.

The rider characteristic questions asked riders about their use of the bus. Most riders are relatively new with more riding less than a year (34 percent) than 5+ years (27 percent). A majority of passengers (53 percent) ride a VVTA bus five or more days per week. A majority of

riders (83 percent) are transit dependent or choose not to own a car. Fifty-one percent transfer at least once with an average of 1.6 buses per one-way trip

The rider satisfaction section asked riders how important and how satisfied they are with various aspects of VVTA's service and amenities. Seventy-five percent of bus riders provide VVTA with an overall positive rating while only ten percent of bus riders provide VVTA with an overall negative rating. The categories that had a higher proportion of negative scores, which are important to riders, were span of service, bus stop lighting, and bus frequency.

The rider demographic questions provide a profile of VVTA fixed route users. Riders 18-24 years old represent 11 percent of county population but make up 39 percent of riders. Those of Hispanic origin make up 49 percent of county population and 41 percent of riders. African Americans are 9 percent of county population and 37 percent of riders. Of all riders, 85 percent have an annual household income below $25,000. Fifty-five percent of riders either identified their work/school status as a student or identified their trip origin or destination as college/school.

2.4 Telephone ADA Direct Access Survey

The same three categories of questions asked on the onboard fixed route passenger survey were asked on the ADA telephone survey; rider characteristic questions, rider's satisfaction questions, and rider demographic questions. This section presents some of the key findings from the survey. Full survey response details are presented in Appendix B.

ADA passengers' characteristics are different than fixed route riders. Eighty-one percent of Access riders are not licensed drivers. Medical care is the predominant trip purpose at 50 percent. Seventy-six percent do not use fixed route bus service ever and stated that this is due to a disability. Only 12 percent say free fixed route service would increase their likelihood of use (six percent somewhat and six percent much more likely).

Overall, Direct Access riders' are satisfied with the service. A vast majority of riders (91 percent) provide a positive overall satisfaction rating. The service categories that received the lowest scores were total trip time and on-time pickup. Only 15 percent rated the ADA certification process negatively. Fifty-four percent of Access riders are NOT aware they can make same day reservations.

As passengers need to be certified to use Direct Access services, the demographics of Direct Access passengers are different than the fixed route riders. Of survey participants, 71 percent were female. A majority of Access riders, 63 percent, earn less than $25,000 per year. Seventy-three percent of Access riders are retired. Fifty-four percent of Access riders identify themselves as Caucasian and 24 percent as African American.

3.0 Local and Regional Development Patterns

3.1 Introduction

This chapter provides an overview of demographic, socioeconomic, employment and commuting characteristics of the study area population and employees, based upon data collected from the 2010 United States Census, the Longitudinal Employment-Household Dynamics Program (2010/US Census Bureau), and San Bernardino Associated Governments (SANBAG).

In the community profile section, data is presented for each of the Joint Powers Authority Members: Adelanto, Apple Valley, Hesperia, and Victorville; as well as four communities that are served by the county routes: Helendale, Lucerne Valley, Phelan, and Wrightwood. In order to better understand where transit has the highest probability of success in the service area, demographic and socioeconomic data are further analyzed by block group to identify specific locations of more transit dependent populations in the demographic and socioeconomic characteristics section.

Travel patterns to work are examined in the employment locations and commute patterns section. Home and employment locations are looked at within the study area and throughout a five county area (San Bernardino, Riverside, Orange, Los Angeles and Kern Counties) to show local and regional commuting dynamics.

3.2 Community Profiles

The eight cities, towns and unincorporated areas within the VVTA service area are profiled below. The community sections detail the demographic, socioeconomic, housing, and employment characteristics of each city. Table 3-1 and Table 3-2 list overview statistics for cities, towns and unincorporated areas in the study area and are followed by more detailed descriptions.

Table 3-1: Community Profiles, Local Route Area

Statistic	San Bernardino County	Victorville	Apple Valley	Adelanto	Hesperia
Population (2010)	2,035,210	115,903	69,135	31,765	90,173
Land Area	20,057.9	73.2	73.2	56.0	73.1
Population Density (2010)	101.5	1,583.90	944.6	567.1	1,233.6
Population Change (2000-2010)	325,767	51,874	14,896	13,635	27,321
% Population Change (2000-2010)	19.1%	81.0%	27.5%	75.2%	44.1%
Population (2000)	1,709,434	64,029	54,239	18,130	62,582
Projected Population (2035)	3,133,801	190,100	109,000	68,400	132,500
Projected Employment (2035)	1,254,749	66,400	22,500	10,600	28,700
Median Age (2010)	31.7	29.5	37.0	25.3	30.5
% of Population Under Age 18 (2010)	29.2%	32.8%	27.9%	37.2%	32.3%
% of Population Age 65 and Over (2010)	8.9%	8.1%	15.4%	4.4%	9.0%
Households (2010)	611,618	32,558	23,598	7,809	26,431
Household Change (2000-2010)	83,024	11,665	5,041	3,095	6,461
% Household Change (2000-2010)	15.7%	55.8%	27.2%	65.7%	32.4%
Households (2000)	528,594	20,893	18,557	4,714	19,970
Average Household Size (2010)	3.3	3.4	3.0	3.7	3.3
% Vacant Housing Units (2010)	12.6%	11.2%	9.6%	14.1%	8.9%
% of Residents that Use Public Transit (2010)	1.9%	1.1%	1.2%	2.8%	2.0%
Mean Travel Time to Work, minutes (2010)	29	34	32	38	37
Median Household Income (2010)	$52,607	$47,937	$51,826	$46,024	$53,801
% of Residents Living in Poverty (2010)	18.0%	20.8%	13.3%	29.8%	23.7%
% Minority (2010)	43.3%	51.5%	30.9%	56.2%	38.9%
Jobs (2010)	640,497	31,147	14,479	3,611	10,265
Job Change (2009-2010)	-12,343	-502	-236	-57	+109
Average Salary per Job (2009)	$38,445	$35,970	$35,434	$36,411	$34,964
Retail Sales (2009, in $ thousands)	$16,330,138	$1,184,284	$404,042	$37,292	$404,581

Source: US Census Bureau, US Census LEHD, SCAG Local Profiles, SCAG Draft 2012 Integrated Growth Forecast

3.2.1 Victorville

Victorville is the most populous city in the study area. Its population in 2010 was 115,903, up 81.0 percent since the 2000 Census. This growth rate is much higher than the overall growth rate of San Bernardino County. From 2000 to 2015, the 21-34 age group is expected to see the most growth while the 5-20 age group is projected to experience the greatest decline. In 2008, there were 30,444 students enrolled in Victorville K-12 public schools.

In 2010, Victorville was home to 32,558 households (up 55.8 percent since 2000) and 36,655 housing units. The homeownership rate was 65.6 percent and the average household size was 3.4, an increase of 5.5 percent from 2000. The homeownership rate was slightly higher than the 63.9 countywide homeownership rate. Between 2000 and 2010, 15,385 permits were issued for new residential units, most in the earlier part of the decade. Median home sale prices increased by 233 percent between 2000 and 2006, and then dropped by 63.3 percent between 2006 and 2010. Median household income was $47,937 in 2010. Fifty-two percent of Victorville residents earn less than $50,000 annually.

Regarding employment and commuting statistics, 81.3 percent of Victorville residents drove alone to work in 2010, a 5.9 percent increase since 2000. The mean travel time to work was 34 minutes. There were 21,929 jobs in Victorville, a decrease of 1.6 percent from 2009 and 9.9 percent since 2007. The average salary per job was $35,970 in 2009, a 22.6 percent increase from the 2003 average salary. Retail sales, in 2009, totaled $1,184,284, slightly lower than in 2000 and about 40 percent below the 2005 peak in sales.

Overall, Victorville is very supportive of development. The main goal of the *City of Victorville General Plan 2030* is to maintain Victorville's status as the as the regional commercial hub by planning for balanced growth while maintaining and improving quality of life. The plan lists 12 Specific Plans identifying areas that are targeted for future development:

- Vista Verde
- Brentwood
- Mesa Verde
- Foxfire Ranch
- Rancho Tierra
- Talon Ranch
- The Crossings
- Mojave Vistas
- West Creek
- Old Town
- Southern California Logistics Airport (SCLA)
- Desert Gateway

The *Desert Gateway Specific Plan* (2009), the largest of these developments, is located in the northeast of Victorville along I-15 and Stoddard Wells Road. The plan lays out a vision of transit oriented development encompassing 10,203 acres with an estimated population of over 80,000 when fully built. Currently, developers have not approached the city to start development and the city believes that any development will not likely take place in the next five years. The *Southern California Logistics Airport Specific Plan (2004)* covers an area greater than 8,500

acres and calls for an expansion of airport facilities, and the development of business park and industrial districts within the SCLA. Additional development is likely beyond the five year time frame of this study.

In addition to the specific plans, a Super Walmart will be constructed along with other retail stores as part of the Crossroads Shopping Center located on the northeast corner of Palmdale Road and US-395. Construction is due to begin this year and the shopping center will open in 2013-2014.

3.2.2 Apple Valley

The Town of Apple Valley, 2010 population 69,135, lies across the Mojave River and to the east of Victorville. The population grew by 27.5 percent since the 2000 Census, which was about 50 percent higher than the growth rate of the county during the same period. Between 2000 and 2015, the 21-34 age group is projected to have the most growth while the 35-54 age group is expected to experience the greatest decline. In 2008, there were 15,101 students enrolled in Apple Valley public schools.

In 2010, there were 23,598 households in Apple Valley (a 27.2 increase since 2000) and 26,117 housing units. The homeownership rate was 69.2 percent, about five percentage points higher than the county. The average household size was 3.0. Between 2000 and 2010, there were 5.486 building permits were issued for residential housing construction. Median home sale prices increased 244 percent between 2000 and 2006 and then decreased by 62.6 percent from 2006 to 2010. Median household income was $51,826 and 49 percent of households earned less than $50,000 annually.

Just over 84 percent of residents drove alone to work, a 4.9 percent increase from 2000. In 2010, the average travel time to work was 32 minutes. There were 14,479 jobs in Apple Valley in 2010, a decrease of 1.6 percent from 2009 and 8.5 percent from 2007. The average salary per job was $35,434 in 2009, a 15.9 percent increase from 2003. Retail sales totaled $404,042 in 2009, a slight decline from 2008 but about a 75 percent overall increase since 2000.

Apple Valley is pro-growth and economic development but maintains development standards to manage growth. Apple Valley's goals are to focus growth in a manner that is consistent with the Town's General Plan Key areas of growth are located in the northern part of the town. The *Apple Valley General Plan* (2009) envisions growth through annexation of unincorporated areas to the north of the town, and continued residential, industrial and commercial development. The *North Apple Valley Industrial Specific Plan* (2006) outlines the development of industrial, manufacturing, retail and office land uses over 5100 acres in northern sections of Apple Valley surrounding Apple Valley County Airport. Residential developments are occurring in areas

adjacent to the Jess Ranch area of the town and commercial development is focused near the Town Hall at SR-18 and Dale Evans Parkway.

3.2.3 Adelanto

The City of Adelanto is located in the north and west parts of the VVTA local route network area. In 2010, the city had a population of 31,765. The population grew by 75.2 percent since the 2000 Census. Between 2000 and 2015, the 55-64 age group is projected to experience the most population growth and the 5-20 age group is expected to experience the greatest decline. In 2008, the K-12 public school enrollment was 2,353 in Adelanto.

In 2010, there were 7,809 households in Adelanto (a 65.7 percent increase since 2000) and 9,086 housing units. The homeownership rate was 64.8 percent, slightly higher than the 63.9 percent rate for the county. The average household size was 3.7. Permits were issued for 3,547 new residential units between 2000 and 2010. Median home sale prices increased 335 percent between 2000 and 2006 and decreased by 70.3 percent between 2006 and 2010. The median household income was $46,024 and 54 percent of households earned less than $50,000 annually.

About 78 percent of Adelanto residents drove alone to work, a 7.9 percent increase from 2000. In 2010, the average travel time to work was 38 minutes. There were 4,871 jobs in Adelanto, a decrease of 2.4 percent from 2009 and 13.5 percent from 2007. The average salary per job was $36,411 in 2009, a 7.3 percent increase from 2003. In 2009, retail sales totaled $37,292,000, about a 5 percent decrease from 2008 and an 85 percent overall increase since 2000.

Adelanto believes in smart growth, with smaller lot developments that include municipal facilities. The general plan for the City of Adelanto was adopted in 1994 and is due for an update in 2014. The city is crafting development standards to ensure that adequate municipal facilities are in place, such as parks, or that the requirements for these facilities are built into the development process. The Adelanto growth plan focuses growth along the US-395 corridor with commercial nodes at Seneca Road and Mojave Drive, and industrial development along Rancho Road. A new high school, part of the Victor Valley High School District, will be opening in December 2012 on Mojave Drive near Joshua Road.

3.2.4 Hesperia

The City of Hesperia is located in the southern portion of the VVTA fixed route service area. It had a population of 90,173 in 2010, up 44.1 percent since the 2000 Census. Between 2000 and 2015, the 21-34 age group is projected to grow at the highest rate while the 35-54 age group is projected to experience the greatest decline. In 2008, there were 21,642 students enrolled in Hesperia K-12 public schools.

In 2010, there were 26,431 households (a 32.4 percent increase since 2000) and 29,004 housing units in Hesperia. The homeownership rate was 71.0 percent, about seven percentage points higher than the county rate. The average household size was 3.3. Between 2000 and 2010, permits were issued for 7,972 new residential units. Median home sale prices increased 300 percent between 2000 and 2006 and then decreased by 64.3 percent between 2006 and 2010. In 2010, the median household income was $53,801 and 47 percent of households earned less than $50,000 a year.

Of Hesperia commuters, 82.3 percent drove alone to work, a 5.4 percent increase since 2000. In 2010, the average travel time to work was 37 minutes. There was a total of 13,889 jobs in Hesperia in 2010, a decrease of 2.6 percent since 2009 and 14.5 percent since 2007. The average salary per job was $34,964 in 2009, a 27.6 percent increase from 2003. In 2009, retail sales totaled 404,581,000, an 8.0 percent decrease from 2008 sales but an overall increase of 24.6 percent from 2000 sales.

The *Hesperia General Plan* (2010) promotes economic, social and environmental sustainability by supporting contextual residential development and efficient commercial and industrial development to maintain quality of life. There are three specific plans for targeted growth:

- Main Street and Freeway Corridor
- Rancho Los Flores
- Summit Valley Ranch

The *Main Street and Freeway Corridor Specific Plan* (2008), includes Main Street, I-15 and adjacent streets. The plan calls for over 10,000 acres of residential, commercial and industrial development. Freeway commercial is planned for areas near I-15 and commercial and office developments are planned for Mariposa Road, adjacent to I-15, and Main Street. The *Rancho Los Flores Specific Plan* (1990) includes an area of almost 10,000 acres of residential and commercial development to the east of the intersection of California SR-173 and SR-138. The *Summit Valley Ranch Specific Plan* (1997) encompasses an area of about 800 acres of mostly residential development. The study area is located along California SR-138 west of the Rancho Los Flores area.

There is also a plan to develop the new downtown, the area around the civic center, into a walkable neighborhood with programming and activity throughout the day. The plan includes retail and entertainment uses surrounded by higher density housing. Willow Street is another area in Hesperia planned to be a pedestrian corridor.

The timeline for development in Hesperia has been set back by the economy. Additionally, sewer lines are a limiting factor for development, as sewer service is not widely available and the city currently does not have the resources to install them.

Table 3-2: Community Profiles, County Route and B-V Link Area

Statistic	San Bernardino County	Phelan	Helendale (Silver Lakes)	Lucerne Valley	Wrightwood
Population (2010)	2,035,210	14,304	5,623	5,811	4,525
Land Area	20,057.9	60.1	5.2	105.6	5.9
Population Density (2010)	101.5	238.0	1,087.20	55.0	766.9
Population Change (2000-2010)	325,767	1,855	687	560	688
% Population Change (2000-2010)	19.1%	14.9%	13.9%	10.7%	17.9%
Population (2000)	1,709,434	12,449	4,936	5,251	3,837
Projected Population (2035)	3,133,801	n/a	n/a	n/a	n/a
Projected Employment (2035)	1,254,749	n/a	n/a	n/a	n/a
Median Age (2010)	31.7	37.9	46.5	42.7	44.3
% of Population Under Age 18 (2010)	29.2%	27.4%	22.5%	24.5%	23.1%
% of Population Age 65 and Over (2010)	8.9%	10.8%	23.0%	16.2%	13.5%
Households (2010)	611,618	4,581	2,238	2,176	1,857
Household Change (2000-2010)	83,024	n/a	n/a	n/a	371
% Household Change (2000-2010)	15.7%	n/a	n/a	n/a	25.0%
Households (2000)	528,594	n/a	n/a	n/a	1,486
Average Household Size (2010)	3.3	3.1	2.5	2.7	2.4
% Vacant Housing Units (2010)	12.6%	11.0%	18.7%	26.2%	30.9%
% of Residents that Use Public Transit (2010)	1.9%	1.8%	0.0%	0.0%	0.0%
Mean Travel Time to Work, minutes (2010)	29	45	31	34	41
Median Household Income (2010)	$52,607	$67,938	$61,477	$32,577	$85,201
% of Residents Living in Poverty (2010)	18.0%	13.5%	7.9%	23.8%	5.5%
% Minority (2010)	43.3%	24.4%	18.8%	22.4%	8.8%
Jobs (2010)	640,497	2,265	582	648	99
Job Change (2009-2010)	-12,343	+122	+423	+162	+17
Average Salary per Job (2009)	$38,445	n/a	n/a	n/a	n/a
Retail Sales (2009, in $ thousands)	$16,330,138	n/a	n/a	n/a	n/a

Source: US Census Bureau, US Census LEHD, SCAG Local Profiles, SCAG Draft 2012 Integrated Growth Forecast

3.2.5 Phelan

Phelan is an unincorporated area of San Bernardino County located in the southwest portion of the VVTA service area. In 2010, it had a population of 14,304. There were 4,581 households and 5,148 housing units in Phelan. The homeownership rate was 78.3 percent, far above the 63.9 percent rate for San Bernardino County. In 2010, there was an average of 3.1 persons per household. The median household income was $67,938 and 44 percent of households earned less than $50,000 per year.

Of Phelan commuters, 77.4 percent drove alone to work. The mean travel time to work was 45 minutes. In 2010, there were 2,265 jobs in Phelan, a 5.7 percent increase from 2009 and a 6.9 percent increase from 2007.

3.2.6 Helendale

Helendale, also known as Silver Lakes, is located in the northern portion of the VVTA service area. The population of Helendale was 5,623 according to the 2010 Census. There were 2,238 households and 2,754 housing units. The homeownership rate was 75.9 percent which was more than 10 points higher than the county rate. In 2010, the average household size was 2.5 persons per household. The median household income was $61,477 and 30.2 percent of households earned less than $50,000 a year.

Just fewer than 80 percent of Helendale workers drove alone to work. The mean travel time to work was 31 minutes. There were 582 jobs in Helendale in 2010, a 266 percent increase from 2009 and a 291 percent increase from 2007.

3.2.7 Lucerne Valley

Lucerne Valley is located east of Apple Valley in the eastern portion of the VVTA service area. The population of Lucerne Valley was 5,811 in 2010. There were 2,176 households and 2,949 total housing units. The homeownership rate was 66.8 percent, slightly above the rate for San Bernardino County. The average household size was 2.7. In 2010, median household income was $32,577 and 66.6 percent of households earned less than $50,000 annually.

About 60 percent of Lucerne Valley's workforce drove alone to work. The mean travel time to work was 34 minutes. There were 648 jobs located in Lucerne Valley in 2010, a 33.3 percent increase from 2009 and a 13.5 percent overall increase since 2007.

3.2.8 Wrightwood

Wrightwood is in the far southwest portion of the VVTA service area within the borders of the Angeles National Forest. It had a population of 4,525 in 2010. There were 1,857 households and 2,686 housing units in Wrightwood. The homeownership rate was 74.9 percent, about 11 percentage points higher than the county rate. There were 2.4 persons per household on average. The 2010 median household income was $85,201 and 28.9 percent of households make below $50,000 annually.

In 2010, 83.3 percent of the Wrightwood workforce drove alone to work. The mean travel time to work was 41 minutes. There were 99 jobs in Wrightwood in 2010, which was a 20.7 percent increase from 2009 and just a 1.0 percent increase from 2007.

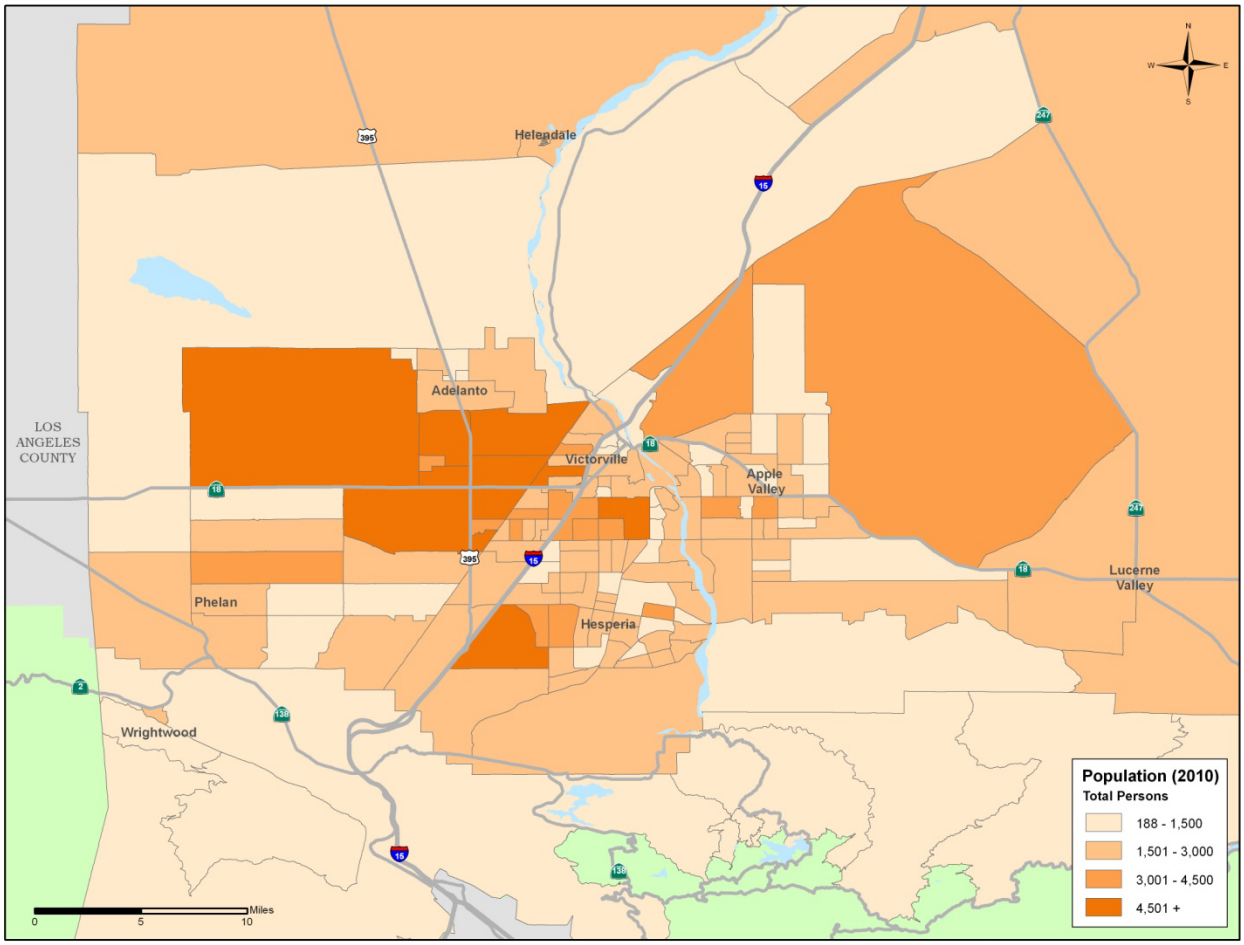
3.3 Demographic and Socio-economic Characteristics

This section describes demographic and socioeconomic characteristics of the VVTA service area to create a transit score showing where transit will have the highest probability of success. Data was analyzed at the census block group level and the most recent data possible was used in the analysis. Demographic data came from the 2010 U.S. Census and 2006-2010 American Community Survey estimates.

3.3.1 Population and Population Density

Figure 3-1 shows population by census block group in the VVTA local fixed route service area. The map shows higher population in some of the physically larger more rural census block groups in the VVTA service area.

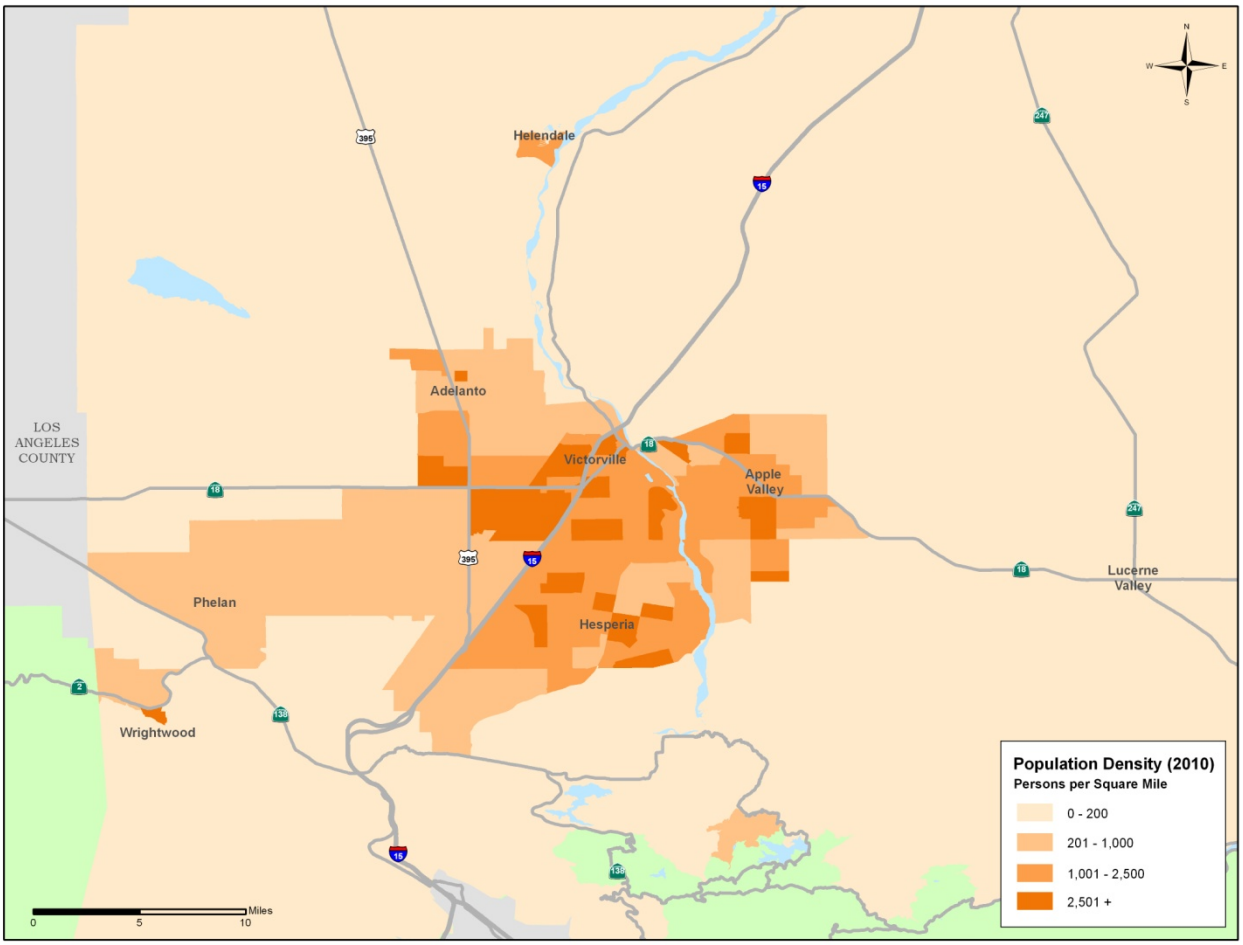
Figure 3-1: Population



Source: 2010 US Census

Population density is used to determine where population is concentrated. Transit is more successful in areas with greater concentrations of population. The map of population density, Figure 3-2, shows higher concentrations of population in the major cities of the VVTA service area including Victorville, Hesperia and Apple Valley. Higher densities were also found in parts of Wrightwood while moderate population densities were located in Adelanto and Helendale.

Figure 3-2: Population Density

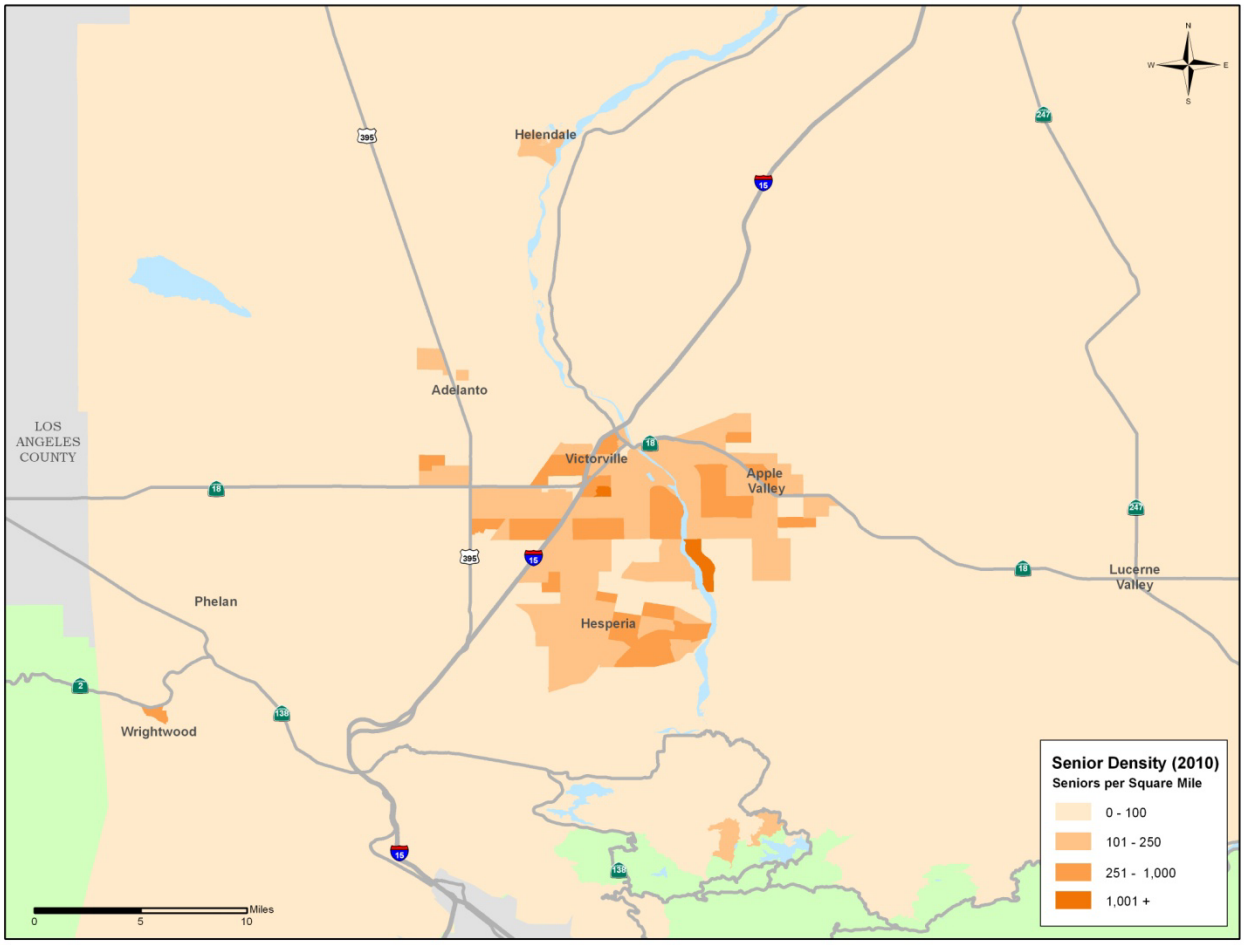


Source: 2010 US Census

3.3.2 Senior and Youth Populations

Senior (age 65 and over) and youth (under age 18) populations are generally more transit dependent than other age groups. For this reason, the densities of the two groups were analyzed more closely. Senior population densities were greatest in Victorville and in the Jess Ranch area of Apple Valley. Moderate senior densities were spread throughout Victorville, Apple Valley and Hesperia. See Figure 3-3 for senior population density.

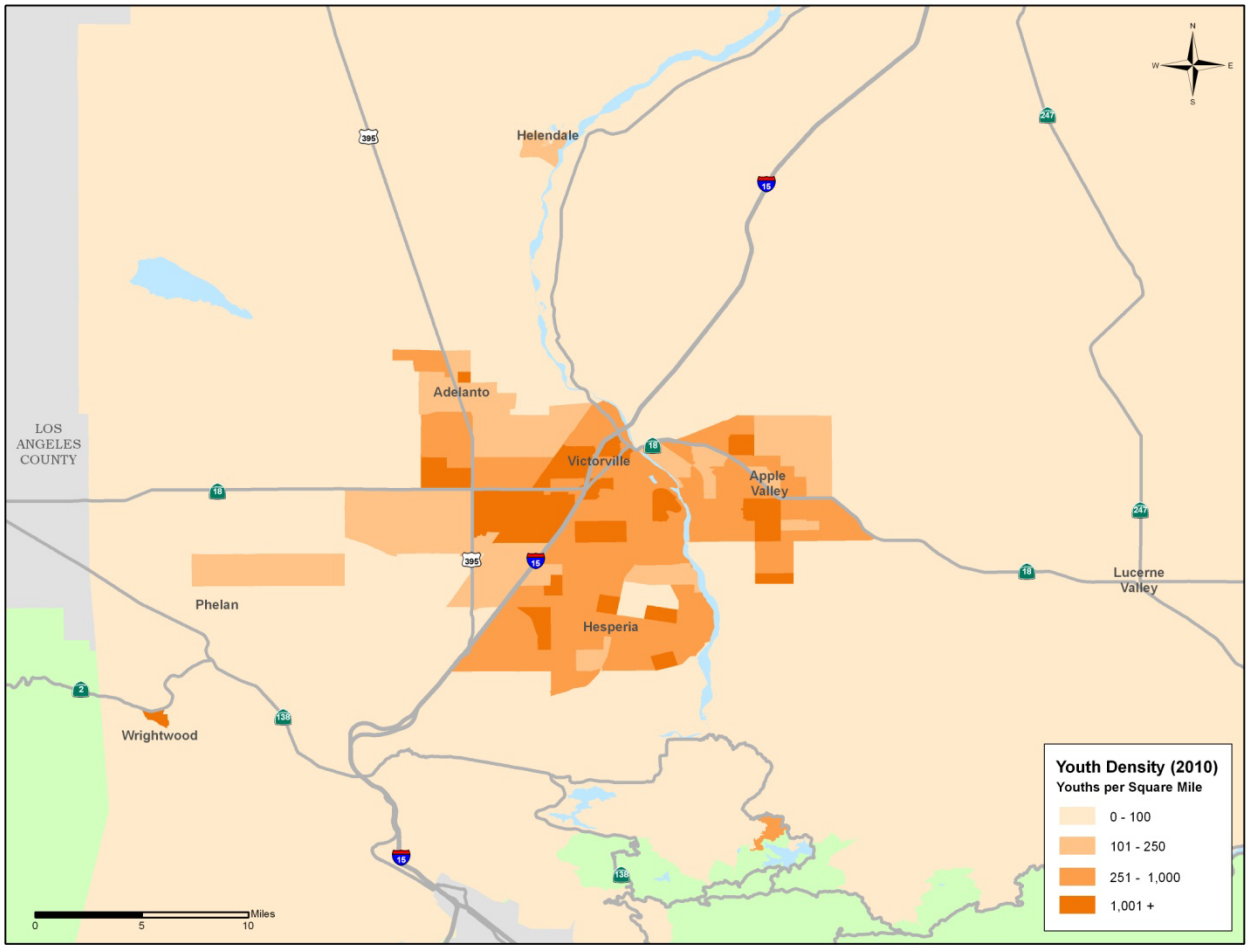
Figure 3-3: Senior Population Density



Source: 2010 US Census

Overall, youth population densities were greater than senior density throughout the VVTA service area. Higher youth densities were located in Victorville, Hesperia, Apple Valley, and Adelanto, as well as in Wrightwood. See Figure 3-4 for youth population density.

Figure 3-4: Youth Population Density

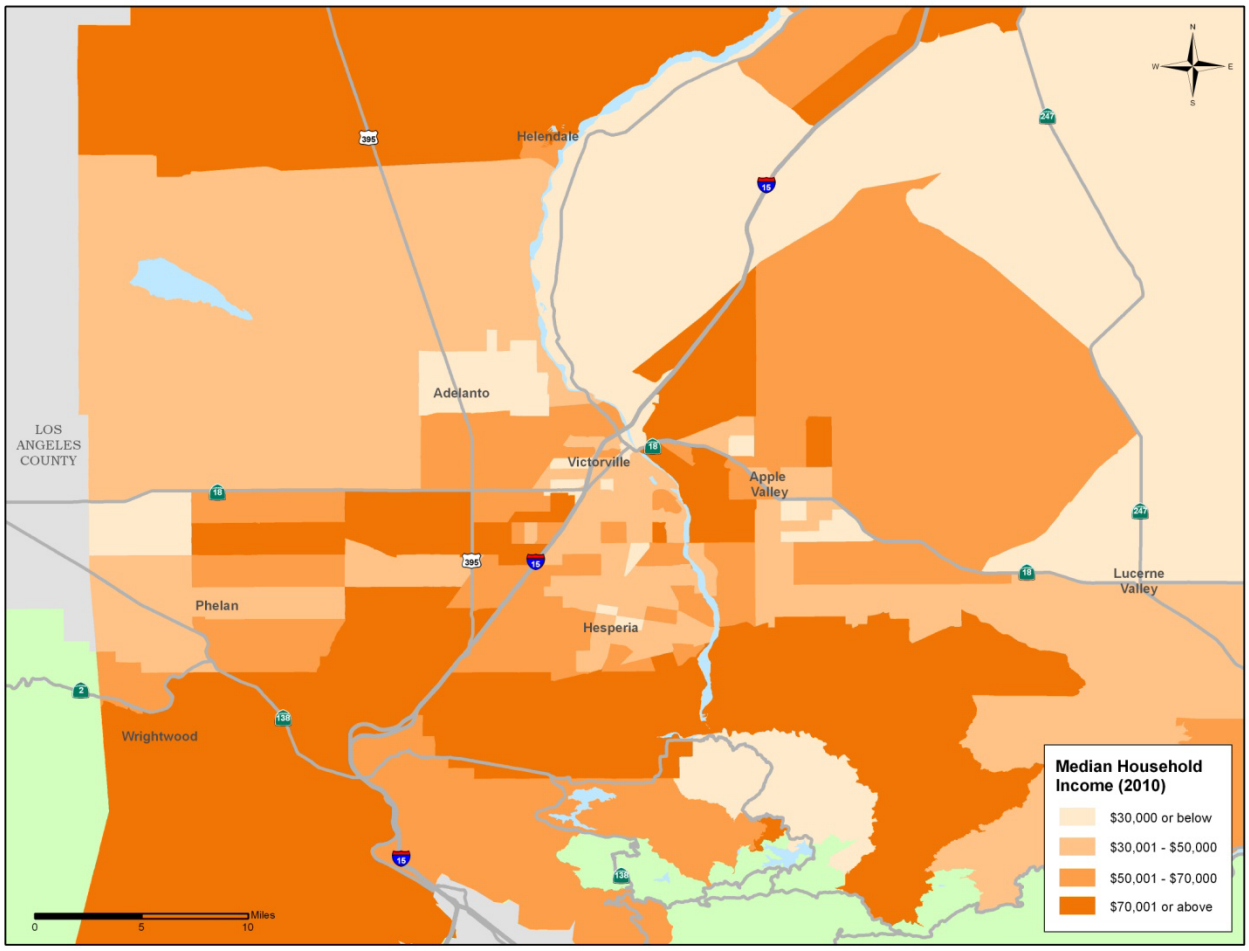


Source: 2010 US Census

3.3.3 Income and Poverty Status

Income is measured by median household income. Typically, people who earn less will be more reliant on public transit than higher earners. Households with the lowest median incomes were found in parts of Adelanto, Victorville, Apple Valley, Hesperia and Lucerne Valley. In these areas, the median household income was below $30,000 annually. Much of the service area showed more moderate median household incomes, and higher median household incomes were prevalent in areas around Wrightwood, south of Hesperia, and north of Helendale. See Figure 3-5 for median household income.

Figure 3-5: Median Household Income

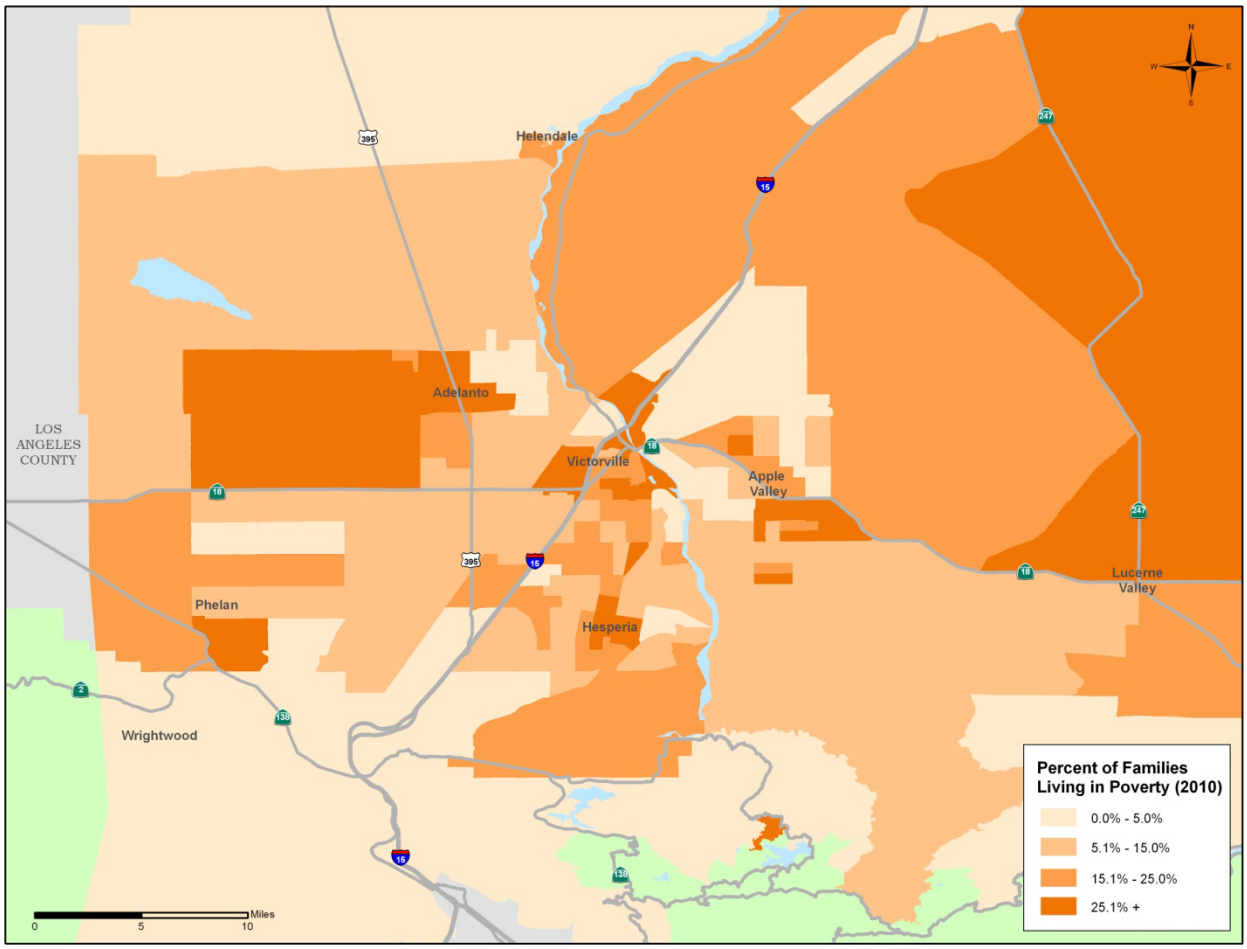


Source: 2010 US Census

The percentage of population living in poverty is related to household income. The poverty threshold is updated annually by the U.S. Census Bureau, mainly for statistical purposes, to define the level below which incomes are considered too low to afford a socially acceptable amount of resources based on the number of people living in a household. In 2010, the poverty threshold for an average individual was $11,139. For an average two-person household the threshold was $14,218. For an average four-person household, the threshold was $22,314.

More than 25 percent of families living in parts of Adelanto, central areas of Victorville and Hesperia, and southeastern Apple Valley were living in poverty. There were also high percentages of families living in poverty in Lucerne Valley and southern parts of Phelan. Most of the area saw moderate to low levels of poverty. See Figure 3-6 for the percent of families living in poverty.

Figure 3-6: Percent of Families Living in Poverty

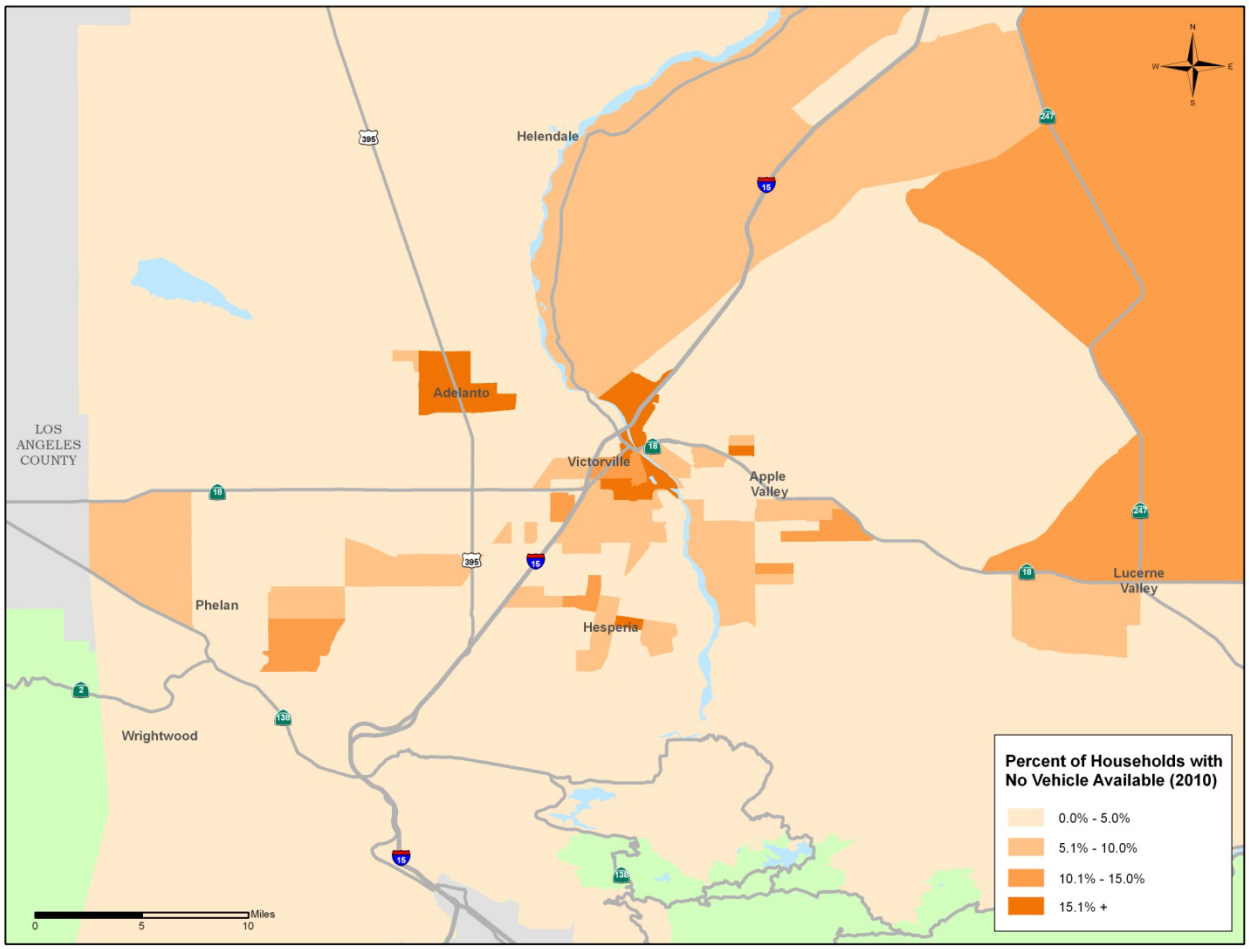


Source: 2006-2010 American Community Survey Estimates

3.3.4 Households with No Vehicle

Household that do not have a vehicle are likely to be more dependent on transit than those that own a vehicle. In most of the VVTA service area; there was a high level of vehicle ownership among households. More than 15 percent of households in downtown Victorville and areas surrounding downtown Victorville did not own a vehicle. Large parts of Adelanto also had a relatively high percentage of households that did not own a vehicle. See Figure 3-7 for the percent of households with no vehicle available.

Figure 3-7: Percent of Households with No Vehicle Available



Source: 2006-2010 American Community Survey Estimates

3.3.5 Transit Score

Census block groups in the study area were ranked based on the demographic and socio-economic attributes previously described (population density, senior and youth density, income, poverty and zero-car households) in order to create a transit score showing areas that have a higher probability of transit success. The rankings were between one and four, one being least transit friendly and four being most transit friendly, corresponding to the legend categories. Block groups with higher population densities, and senior and youth population densities were given a higher number. Block groups with lower incomes, higher poverty rates and higher number of zero car households were also given higher numbers. The rankings were then totaled and divided into three categories for transit success: lower, medium and higher. See Figure 3-8 for the transit score.

The areas with the highest probability of transit success were located in Victorville, Adelanto, Hesperia and Apple Valley.

In Victorville, these general areas included:

- Downtown Victorville
- Between Seneca Road and Greentree Boulevard/Yates Road east of I-15
- Between Mojave Drive and Seneca Road west of I-15 to El Evado Road
- Between Nisqually Road and Bear Valley Road, and between Balsam Avenue and 7th Avenue
- Between La Mesa Road and Bear Valley Road, and between Amethyst Road and Pacoima Road

In Apple Valley, these areas included:

- Between Otoe Road and Thunderbird Road, and between Rancherias Road and Dale Evans Parkway
- Between Yucca Loma Road and Bear Valley Road, and between Kiowa Road and Navajo Road
- Between Wren Street and Tussing Ranch Road, and between Kiowa Road and Quinault Road

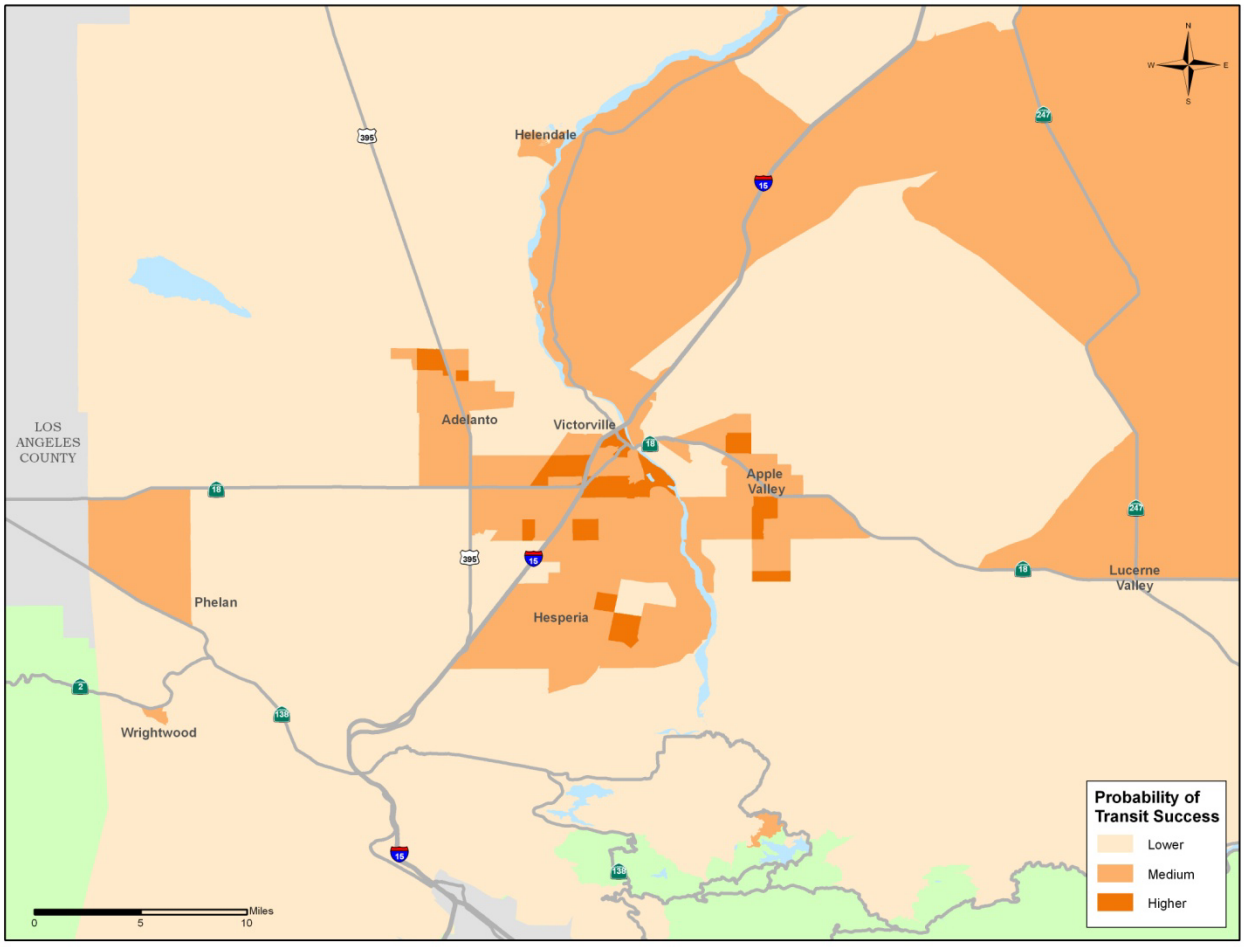
In Hesperia, the areas with a higher probability of transit success included:

- Between Main Street and Joshua Street, and between Santa Fe Avenue East and I Avenue/Alston Avenue
- Between Hercules Street and Main Street, and between 7th Avenue and Hesperia Road

In Adelanto, areas included:

- Between Chamberlaine Way and Bartlett Avenue, and between Jonathan Street and Adelanto Road
- Between El Mirage Road and Chamberlaine Way, and between Aster Road and Bellflower Street

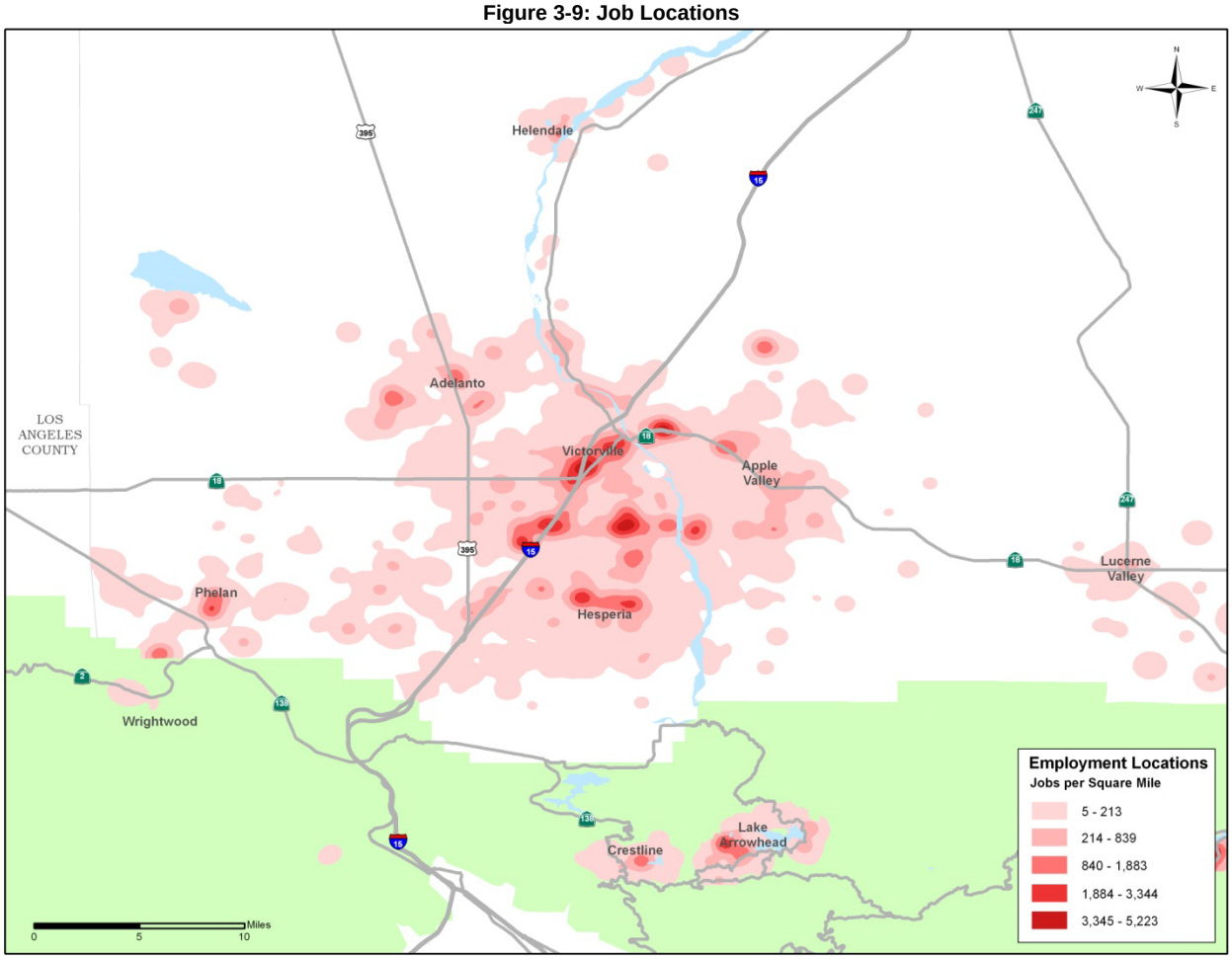
Figure 3-8: Transit Score



3.4 Employment Locations and Commute Patterns

The highest number of jobs in the Victor Valley area were located along the Bear Valley Road corridor, and along California State Route 18 in Victorville and Apple Valley. Higher density job areas were also located along Main Street in Hesperia. Other areas of moderate job density include Adelanto, Phelan and the Apple Valley Airport area. Other parts of the Victor Valley area typically showed low job densities. See Figure 3-9 for job locations.

Figure 3-9: Job Locations



Source: US Census Longitudinal Employer-Household Dynamics, 2010

Commute Patterns between Study Area and Surroundings

The following section describes where jobs are located that are held by residents of the Victor Valley area, and where workers live who hold jobs in Victor Valley. The analysis is broad and includes San Bernardino County, Riverside, County, Orange County, Los Angeles County, and Kern County to better understand commute patterns.

Victor Valley workers commuted to jobs spread across the five county area that was analyzed. Outside of the study area (the VVTA service area), the most popular job locations of workers living in Victor Valley included San Bernardino, the Los Angeles-Burbank-Glendale-Pasadena area, and Orange County. The highest concentrations of jobs was in San Bernardino, as higher densities were located in the Hospitality Lane area and moderate levels were located in downtown San Bernardino. There were also some more moderate job densities in Fontana and Ontario in the San Bernardino Valley, and in downtown Los Angeles. Other areas showed lower densities of jobs. See Table 3-3 for study area residents commute patterns and Figure 3-10 for the density of jobs of Victor Valley residents.

Table 3-3: Distribution of Study Area Residents to Employment Locations (2010)

Study Area to	2010 Workers
San Bernardino	7,372
Los Angeles-Burbank-Glendale-Pasadena	7,003
Orange County	6,694
East Los Angeles County: East LA-Monterey Park-El Monte-Covina-Claremont-Pomona	5,388
South Los Angeles County: Torrance-Downey-Norwalk-Long Beach	4,606
North Riverside County: Riverside-Corona	3,578
San Bernardino Valley East: Yucaipa-Redlands-Highland-Rialto	3,319
Ontario	2,706
Rancho Cucamonga	2,017
Fontana	1,743
San Bernardino Valley West: Montclair-Upland	1,256
East Riverside County: Moreno Valley-Beaumont-Palm Springs-Indio	1,233
South Riverside County: Temecula-Hemet-Perris-Lake Elsinore	1,140
Antelope Valley: Lancaster-Palmdale-Lake Los Angeles	1,067
Barstow-Fort Irwin	986
Chino Valley: Chino-Chino Hills	958
Kern County	802
Mountain Area: Big Bear-Lake Arrowhead-Crestline	676
West Los Angeles County: Santa Clarita-Castaic-Calabasas-Malibu	416
Morongo Basin: Yucca Valley-29 Palms	348

Source: US Census, Longitudinal Employer-Household Dynamics, 2010

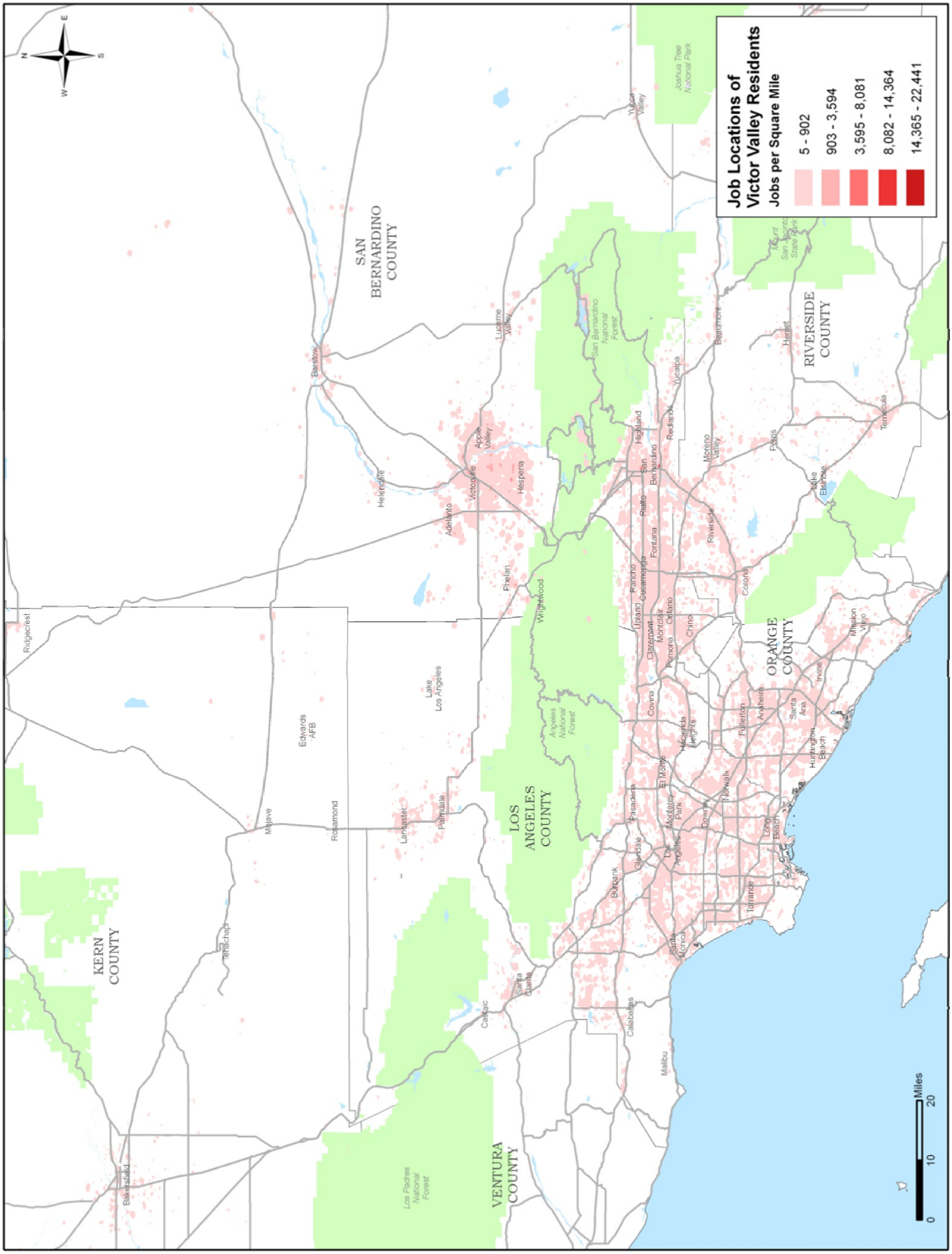


Figure 3-10: Regional Job Locations of Victor Valley Workers

Overall, the number of non-study area workers commuting to jobs within the study area was much lower than the number of study area residents commuting to jobs outside of the study area. However, people commuted to the study area from as widespread of an area. Of workers from outside the study area who commuted to jobs within the study area, the highest numbers came from Orange County, Los Angeles-Burbank-Glendale-Pasadena, and east Los Angeles County. The most concentrated home locations of Victor Valley workers were in Barstow, San Bernardino, Rancho Cucamonga, Fontana, Ontario and south of downtown Los Angeles in Lynwood. These locations showed moderate commuter densities. See Table 3-4 and Figure 3-11 for the distribution of home locations of study area workers.

Table 3-4: Distribution of Home Locations of Study Area Workers

Study Area From	2010 Workers
Orange County	1,693
Los Angeles-Burbank-Glendale-Pasadena	1,637
East Los Angeles County: East LA-Monterey Park-El Monte-Covina-Claremont-Pomona	1,238
South Los Angeles County: Torrance-Downey-Norwalk-Long Beach	1,207
South Riverside County: Temecula-Hemet-Perris-Lake Elsinore	1,064
North Riverside County: Riverside-Corona	1,050
San Bernardino Valley East: Yucaipa-Redlands-Highland-Rialto	1,033
East Riverside County: Moreno Valley-Beaumont-Palm Springs-Indio	906
Antelope Valley: Lancaster-Palmdale-Lake Los Angeles	735
Kern County	701
Barstow-Fort Irwin	651
Rancho Cucamonga	574
San Bernardino	559
Fontana	466
Ontario	325
Morongo Basin: Yucca Valley-29 Palms	273
West Los Angeles County: Santa Clarita-Castaic-Calabasas-Malibu	269
San Bernardino Valley West: Montclair-Upland	236
Chino Valley: Chino-Chino Hills	233
Mountain Area: Big Bear-Lake Arrowhead-Crestline	173

Source: US Census, Longitudinal Employer-Household Dynamics, 2010

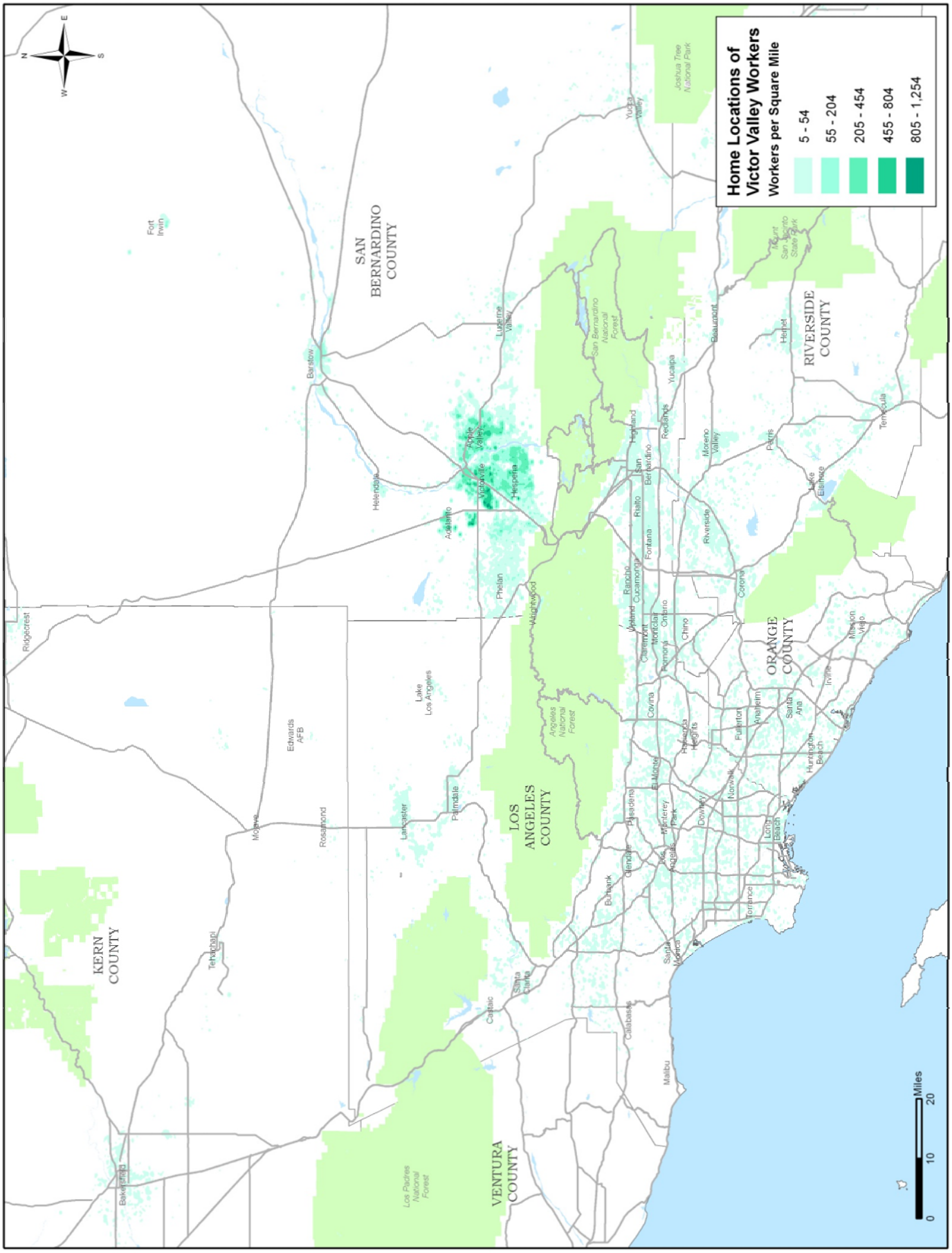


Figure 3-11: Home Locations of Workers with Jobs in Victor Valley

4.0 Identification of Service Issues

4.1 Introduction

The identification of service issues was undertaken through a public outreach effort to form a better understanding of areas where VVTA service can improve. The public outreach process included interviews with local stakeholders, customers, and VVTA bus drivers, which are described in this chapter. Based on the interviews, service issues were ascertained that were relevant to travel along specific routes, general service provision, bus safety and employee relations.

Service issues are also identified through congruency and coverage analyses. This analysis will overlay the VVTA route network ¼ mile coverage over the transit success score areas to determine the transit service coverage for areas that should be served within the Victor Valley area. The analysis will determine if and where there are areas that do not receive service that should receive service.

The issues discovered through public outreach and the congruency and analyses will guide recommendations for service changes in the following chapters of the COA report.

4.2 Public Outreach

This section highlights the initial public outreach activities. These activities included stakeholder interviews, customer drop-in sessions, public open house meetings, and meetings with VVTA drivers. The purpose of the initial outreach process was to gather information regarding the perception and issues with Victor Valley Transit services, and how to improve service while enhancing what the public likes about VVTA.

Table 4-1: Participation Opportunities and Participants

Participation Opportunity	Focus	Number of Participants
Stakeholder Interviews	Focus-group format meetings scheduled conveniently throughout the day for various stakeholder groups	30
Bilingual Public Open House Monday, May 23, 2011 6:00 – 8:00 p.m.	Evening workshop with breakout discussion groups, planned for a comfortable "after work" environment	0
Bus Stop Workshops 12:00 pm to 5:00 pm	The project team stopped by several bus stops within Victor Valley to hear perspectives on public transportation directly from riders **Victorville** 7th Street and Lorene Drive Tuesday May 22, 2012 **Hesperia** Hesperia Post Office Monday May 21, 2012 **Adelanto** Stater Brothers – US 395 and Palmdale Road Tuesday May 22, 2012 **Apple Valley** Apple Valley Post Office Monday May 21, 2012 **Victor Valley College** Victor Valley College Bus Stop Wednesday May 23, 2012 **Mall of Victor Valley** Mall Bus Stop 3:30 p.m. to 5:30 p.m.	 119 52 17 24 113 75
Employee Meetings VVTA Drivers Room Wednesday May 23, 2012 11:00 am to 2:00 pm		40
Total Participants		430

4.2.1 Stakeholder Interviews

The purpose of the stakeholder interviews was to understand the perspectives and transit service needs and goals of agencies and organizations with respect to VVTA. Another purpose of these interviews was to obtain information from members of the VVTA Joint Powers Authority (JPA) members on the planning efforts and land use plans that will be implemented in the next five years.

Individual and group stakeholder interviews were held the week of June 18, 2012. A total of 30 stakeholders participated in the stakeholder interview process. Stakeholders included representatives from the following organizations:

- City of Adelanto
- Town of Apple Valley
- City of Hesperia
- City of Victorville
- San Bernardino County and San Bernardino Associated Governments
- Medical Providers
- High School Districts
- Area Colleges
- Major Employers and Employment Concerns
- Social Service Agencies

Discussion questions and major discussion themes raised during the stakeholder interviews are provided in Section 4.3. The list of invitees and sign in sheets from the stakeholder interviews are provided in Appendix C.

4.2.2 Bilingual Public Open Houses

The purpose of the bilingual public open houses was to present information about the VVTA COA and SRTP and to provide a forum for the general public to give input on transit service issues and opportunities. No participants attended the public open houses. Participation at the public open houses may have been lacking partly because riders provided input to the study team via other methods, such as the passenger survey and customer comment sessions.

4.2.3 Customer Comment Sessions

The purpose of the customer comment sessions was to hold informal, one-on-one conversations with passengers. Outreach staff held discussions in English and Spanish in a convenient, comfortable environment at various bus stops within the VVTA service area. By being at bus stops, additional opportunities were created to hear from people who use VVTA services but may not be inclined to attend formal outreach events. Approximately 425 passengers provided input through the customer comment sessions. Discussion questions and major discussion themes raised during customer comment sessions are provided in Section 4.4.

4.2.4 Driver Input Sessions

The purpose of the VVTA driver input sessions was to obtain input from VVTA drivers about day-to-day transit service issues such as new service needs, problem locations, and customer requests or concerns, as well as ideas for improvements. Driver input sessions were held on Wednesday May 23, 2012. Project team members met with individual drivers of both fixed route and ADA services.

Approximately 40 drivers participated in the driver input sessions. Discussion questions and major discussion themes raised during the driver input sessions are provided in Section 4.5.

4.3 Stakeholder Interviews: Discussion Questions and Major Themes

4.3.1 Discussion Questions

The discussion questions used to guide conversations during the stakeholder interviews are provided in this section.

- Part 1: Overall opinions of VVTA
  1. What does VVTA do well?
  2. Where does VVTA need improvement?
  3. How would you improve VVTA?
  4. Are there different types of services that you would like to see VVTA provide?
- Part 2: Service needs
  1. Are there locations that you would like to see served?
  2. What is your opinion regarding Sunday service?
  3. Do the routes and schedules work well? Does Direct Access paratransit work well?
  4. What is the number one service need for VVTA?
- Part 3: Your clientele
  1. What do you hear from your clientele/constituents about VVTA?
  2. What are the needs of your clientele/constituents as it pertains to VVTA service?
- Part 4: JPA members only
  1. What do you see as the role of transit in your community today? 5 years from now? 10 years from now?
  2. Describe what transit supportive development is occurring in your community?
  3. Where do you see development occurring in your community? What node/corridors? What areas? What type of developments?
  4. Are there parts of your community that you would like to see more or less transit service? What types of services would you like to see?
  5. How can transit support your land use/development goals?
  6. Do you have any plans to change your LTF allocation to transit?
  7. Specific JPA jurisdiction questions
- Part 5: Anything else you would like to say about VVTA as an organization or service?

4.3.2 Major Discussion Themes

This section provides an overview of the major discussion themes that emerged during the stakeholder interviews.

Stakeholders acknowledge that VVTA does serve a large spread out area and VVTA manages to have a visible presence within the area. VVTA coverage is good within the service area and fares are reasonable. The agency has responded well to growth in the region. VVTA has been

able to accomplish a lot with a very tight budget. The impression of who the VVTA clientele is includes low income patrons, elderly and disabled patrons, and students, with very little opportunity for VVTA to cater to choice riders even with high gas prices. The Victor Valley region itself continues to be a growing region with major traffic growth that is impacting not only the roadways, but the ability of VVTA buses to operate on-time. VVTA member jurisdictions rarely receive complaints about VVTA from the public, the public goes directly to VVTA with complaints and compliments.

Stakeholders did have a few complaints regarding VVTA. Some feel that VVTA is not a good steward of public funds, with the new administration and maintenance facility being a bit excessive for a public transit agency. Another example is that people see VVTA buses traveling around Victor Valley empty giving the impression that either too much service is being operated or VVTA is not using the correct vehicle size for services operated. The biggest service complaint is related transfers that are missed at transfer points due to late buses. Elderly and disabled patrons have issues taking the bus as it is difficult for elderly to physically get on the bus and even with low-floor buses that have wheelchair ramps; wheelchair users have trouble using the bus. Some stakeholders have noted that VVTA as an organization does not respond quickly to concerns, questions, or comments from the public.

Stakeholders did make numerous comments about Victor Valley Transit as an organization, including a concern about inadequate staffing levels. Over the last five years, VVTA has undertaken a number of initiatives and implemented new services, such as B-V Link service, Fort Irwin service, Down-The-Hill lifeline service, and vanpool, and staffing levels have not kept pace with this growth. These new responsibilities have been taken amongst growing ridership and a tight budget that has stressed staffing levels, and additional administrative staff may be needed to provide proper oversight of transit service in Victor Valley. These staffing concerns are based on the current system and would need to be addressed before discussing staffing needs of an expanded VVTA system. VVTA has hired a mobility manager whose duties include travel training, and managing various programs such as vanpool, lifeline inter-city services (B-V Link), and the TREP programs, as well as other high desert mobility management functions. In terms of funding, JPA members are not very likely to change their allocation of LTF funding for transit. The ability to buy buses is based on the likelihood that Proposition 1B bonds will be sold.

Members of the Victor Valley Transit JPA were asked about their current land use and development goals, and what role transit would play in these goals. These responses, which were discussed in the service areas characteristic section, will be used to determine the service needs over the next five years for Victor Valley Transit. Each community has a different development goals and growth plans, however, all mentioned that the downturn in the economy has slowed growth in the area. There are a number of projects of regional significance in the area, such as the Desert Express High Speed Rail and the High Desert Corridor highway project, but these projects will not have a major impact on transit services operated by Victor Valley

Transit. There will also be some important roadway projects that will improve circulation within Victor Valley, such as the Ranchero Road corridor and Yucca Loma corridor projects including the Nisqualli overpass, however, development along these corridors should not result in major service needs for Victor Valley Transit.

Students, both college and high school, are major users of VVTA services, with about 55 percent of VVTA users being either high school or college students. School districts are seeing reductions to their transportation budgets and are looking for creative solutions, including increased utilization of VVTA services to address school transportation needs. Schools do provide consistent ridership for VVTA as students tend use the buses every day. Ridership statistics confirm that ridership is high on routes that serve the colleges, as well as time periods when schools are beginning and ending. Currently, parents are driving students to bus stops or to schools, which increases congestion in the school bus stop areas or school areas, as well as being a hardship for the parents. Some school districts buy VVTA passes for students, and some are interested in buying more passes. Stakeholders mentioned that hourly VVTA service and the need to transfer results in students being late, especially when a bus is running late and the connecting bus has already left the transfer point. Another issue is that bus service may terminate too early for adult education and some college users.

Stakeholders talked about reasons why people are not using the bus. Many mentioned that those who could afford a car are using their car and they would not use VVTA services. Another reason why people do not use buses is that travel time is too long, with slow moving buses and multiple connections needed to reach a destination. This is especially an issue for the elderly who may need access to a bathroom, or for non-emergency medical trips that have very specific appointment times. The bus stops themselves are a major issue for users as many of them are hard to get to due to the lack of sidewalk and are lacking in amenities such as benches and shelters, a concern in the desert environment.

Stakeholders had numerous comments about amenities and public information. Many stakeholders, particularly organizations that have a lot of patrons that use the bus, would like a system map so they can inform patrons on what routes serve their facility. Many bus stops need better lighting for safety reasons and so bus operators can see if there are people at the bus stop at night. Many people mentioned that the current VVTA website is not up to date and information is not readily available. Stakeholders noted that many passengers, including low income riders, tend to be tech savvy, thus VVTA should have more of a presence in social media and have web applications to communicate with riders.

There were a number of locations that stakeholder mentioned that they would like to see served by VVTA's route network. One location is the campus of San Joaquin Valley College along Mariposa Road in Hesperia. Also, within Hesperia, there may be a need for more north/south service to serve the central portions of the City. Near the intersection of Mariposa Road and Cottonwood Avenue in Victorville, a Hilton Garden Inn has opened as well as a campus of Azusa

Pacific University which may need service. The Southern California Logistics Airport in Victorville is a major generator of high paying jobs. However, due to the slowdown in the economy, job growth at this location has been modest, and with most jobs located close to Air Expressway service into the complex may not be needed at this time. Social services throughout Victor Valley need more direct service. The new high school in Adelanto will need to be served by VVTA. Apple Valley Road in Apple Valley is a corridor that could be used to connect the Jess Ranch area and Saint Mary's hospital.

The final topic of discussion was goals for the VVTA system, what would stakeholders like to see from VVTA in the next five years and beyond. People mentioned that transportation down to San Bernardino would be very important, a service which will be starting in the next few months. Another popular service request was for Sunday service, at least on a limited basis, so users could get to church or to shopping opportunities. Marketing of the TREP volunteer driver program needs to be increased so that elderly patrons who are far from a route know that there is an option for transportation. The final goal is to expand commuter services to new areas, as well as increase service on the current B-V Link service.

4.4 Customer Comment Sessions: Discussion Questions and Major Themes

4.4.1 Discussion Questions

The discussion questions used to guide conversations during the customer comment sessions are provided in this section.

- What aspects of bus service are working well?
- How could bus service be improved?
- Are there service issues that need a closer look? (e.g., senior service, disabled service, transportation to evening or weekend work shifts)
- Does bus service start early enough in the morning for you and run late enough into the evening?
- Does weekend service work out ok for you?
- Can you get everywhere you'd like to go on the bus?
- Do you make your connections ok?

4.4.2 Major Discussion Themes

This section provides an overview of the major discussion themes that emerged during the customer comment sessions.

Overall Satisfaction with Service

Most passengers are happy with VVTA service and route coverage, although some passengers would like to see more frequent service, Sunday service, service "down the hill", more timely

service, and shorter trip times. Some passengers mentioned that drivers are helpful and friendly, although other customers noted that some drivers could be unhelpful and/or rude.

Desire for Sunday Service

Many riders would like Sunday service established to attend church, to commute to work, to shop and run errands, and/or to visit family. Many that requested Sunday service noted that a half day of service would be sufficient.

Service "Down the Hill"

One of the most common issues raised was a request for "down the hill" service to San Bernardino. Most of these passengers mentioned the need to get to medical appointments, but some would like the service to commute to work. This service is planned to begin soon as an extension of the current B-V Link.

Ensuring Buses Run On-time

Many passengers expressed concern about buses that ran behind schedule. Late buses sometimes cause passengers to miss connections. Missed connections are of particular concern for passengers in this system because if the connecting bus only stops once every 30 minutes or hour a missed connection can add a significant amount of time to a passenger's overall travel time.

More Frequent Service and Later Evening Hours

Passengers commented that they would like to see more frequent service. Passengers noted that more frequent service would reduce overall travel times. Several people noted that a one-hour wait between buses seems very long and adds a significant amount of time to their trip. Customers specifically requested more frequent service on all bus routes, except routes 22, 51, and 54.

Later evening hours were requested for students to be able to get home from evening classes, for commuting home from work, and for running errands and going out in the evening. Specific requests for later service included routes 21, 23, 31, 40, 41, 43, 45, 52, and 53. However, it should be noted that many participants indicated that all buses should run later into the evening.

Additional Service

Some passengers indicated they would like to see additional routes and/or bus stops established. The appendices provide details regarding specific requests for additional service, but generally, people would like to see routes extended or created into residential areas, to

medical facilities, and to recreational opportunities. Likewise, some passengers noted that distances between bus stops seem too long.

Specific requests for additional service and bus stops include:

- Need service north of Apple Valley
- Buses needed for the area between Routes 41 and 43
- Better connection needed between Route 41 and 43 at Tao Road (without going to Apple Valley Post Office)
- Route 53 needs to have a stop at Desert Valley Hospital.
- Route 23: Service should be provided further east into Lucerne.
- Route 47 should run from Bear Valley Mall to St. Mary's in Apple Valley.
- Need service from Bear Valley to Victorville – something running north/south (connecting Routes 41 and 43) from Victorville Transit Center to Victor Valley College.
- Should consider a Wrightwood deviation service.
- Should consider a circulator east of the Hwy 247 to service Lucerne Valley.
- Bus service to Big Bear, Barstow, and Loma Linda and Arrowhead Medical Centers would be great service additions.
- Should have a bus that goes to Chaffey College.
- Service further into Brentwood is needed.
- Route 52 should be expanded and service the neighborhood park.
- Provide better connections to Amtrak.
- Bus should go to the Marshalls in Hesperia.
- Old Adelanto area needs service.
- Buses should go to the Hesperia Zoo, Spring Valley Country Club.
- Buses should run along Bear Valley to the College by the movie theater and stop just before the Target.
- Should have service to Mesa Linda via Amargosa.
- Should have an express bus from Apple Valley to the Mall of Victor Valley, or have an express service that goes from Victor Valley through Hesperia, to Apple Valley, then to San Bernardino
- Should be a more direct route from Phelan to the Super Target in Hesperia.
- Need an express bus from 7th and Lorene to Victor Valley College.
- Need a bus stop near Summer Breeze Apartments along Route 52. Lots of senior citizens ride the bus from that area.
- B-V Link should go by the VA clinic.
- Route 44 should also go down to the other shopping strip just north of the mall (where the old Bed Bath and Beyond was located).
- Brentwood area needs more service and stops.
- Service needed further out in Apple Valley such as to Granite Hills High School and County areas and distribution centers
- Need more service within, and north of, Adelanto

- The bus should go to Ranchero Road and go to the schools.
- Bus should go to Hesperia Lake
- Bus should go to Mojave Lake. And Target. And the new movie theater downtown.
- Buses should go to major employment areas.
- Buses should go to the new homes and subdivisions in Hesperia.
- Add stops for certain areas, such as near Best Buy and Target.
- There should be a route that goes north-south along Escondido Ave., right on Main St, then up to Victor Valley Mall.
- Route needed from I Avenue to the mall
- Ranchero Road needs service to Hesperia Lake
- Service needed from Hesperia Post office to Apple Valley Senior Citizen's Center
- Service direct from Lucerne to unemployment office in Victorville
- Buses should run to Maverick's Stadium
- Need new route from college to Arlette Drive or Costco
- There should be routes to/from:
    - Commuter route from the mall to San Bernardino
    - Silver Lakes, Wrightwood, and Phelan

Improving Service for Students

Many high school and college students take the bus to and from campus. Passengers noted that because buses run only every hour sometimes students are late to class (presumably due to late buses and/or problems with connections). Later service in the evening was requested so that college students could take the bus home after night classes. Buses to Victor Valley College tend to be crowded so some passengers requested more frequent service. Many high school students take the bus to school and issues with traffic congestion at bus stops (from parents dropping students off to catch the bus to school) need to be addressed.

Increasing Passenger Comfort at Bus Stops

Many passengers would like improvements made to bus stops to make them more comfortable. These improvements included establishing shade (which is particularly important during the summer when temperatures are elevated), installing benches (which is particularly important for the elderly and disabled when wait times can be up to 1 hour), and cleaning and maintaining the bus stops. Lighting was also highlighted as an important need for passenger safety in the evening and so that drivers can see whether passengers are waiting at a given stop.

Need for Additional Communication and Education

Participants would like to see schedules, routes, and fare information posted at bus stops. Many stakeholders, particularly organizations that have a lot of patrons that use the bus, would like a

system map so they can inform patrons on what routes serve their facility. Many also noted that online schedules and route information are out of date and difficult to access.

Additional Accommodations for Passengers

Some participants mentioned that passengers in wheelchairs occasionally have trouble with ramps and that wheelchairs are sometimes not able to be fully secured on buses.

4.5 Driver Input Sessions: Discussion Questions and Major Themes

4.5.1 Major Discussion Themes

This section provides an overview of the major discussion themes that emerged during the driver input sessions.

Recommendations for Improved Service

- Route 52 is a high ridership route, it needs a second bus/30 minute service (comment received multiple times)
- Route 32 has high volumes and should run more frequently. Issue is compounded by slow buses
- In Phelan people want to go to the library and post office. A one block re-route would be help this situation as well as improve safety getting back onto Phelan Rd
- Jasmine Loop on Route 53 is not needed. People can access the hospital on other routes
- A route is needed along Mojave Drive between Adelanto (395) and Amargosa. There has been a lot of development and currently there is not even school bus service
- People in Phelan would like the bus to serve the Super Target in Hesperia (Main Street)
- Service to the truck stop at 395 and Jonathan
- Service needed to San Joaquin Valley Community College and Oak Hills High School
- 54 does not serve much today and does have extra time today. Consider bringing it to the mall
- Route 45 and 48 should be separate routes, not interlined
- 30 minute service needed until 5:30 on routes that serve the college
- Route 53 is very crowded in the AM with students going to Excelsior High School
- Every stop on Routes 45 and 32 have passengers which causes the trips to go slowly
- Passengers want later evening service, earlier Saturday service, and Sunday service
- Nobody uses the Lucerne Valley circulator
- Dale Evans and Waalew have been asking for fixed route service (a few comments)
- People in Hesperia want service further south along Arrowhead Lakes
- Ranchero Rd in Hesperia needs service, especially when it is completed
- Service is needed the entire length of Hesperia Rd including the portion between Bear Valley and Main Street, all the way to 18
- Passengers are constantly asking for Sunday service

- ADA fare system is complicated for users. One thing that would help is if fare is told to the passenger as part of the reservation process
- Route 32 Orick Ave deviation is not necessary
- Route 31 should transfer to circulators at 395 and Palmdale and not do loop
- Route 31 Park loop is a "time killer"
- There should be more intra-valley freeway express services
- Apple Valley Road needs service (multiple comments)
- 45 may need to be every 15 minutes
- The 5302 run should start earlier in the day to provide crowding relief on Route 53
- Don't deviate off of Bear Valley Road to serve hospital on Route 53
- Route 22 needs to have hourly service. Other county routes 2 hour service is okay
- Growth occurring further out Palmdale Road in Adelanto
- Route 41 needs a stop at Kiowa
- Sunday service needed
- Passengers want longer hours
- Jess Ranch/Apple Valley Road needs service
- Down The Hill service needed for medical services and Metrolink
- Super Target in Hesperia needs connection to the mall
- People need service to hospitals, both in Victor Valley and Down the Hill
- Consider Route 41 limited stop
- Adelanto should have more circulators
- Travel times are too long on buses, especially with transfers and missed connections
- Service needs to be better than hourly on most routes
- Route 23 needs more running time
- Need more buses and drivers.
- Needs 2 rapid buses – then if you miss one, it's not a big deal.
- Go later? Still need buses and drivers. Drivers are already working 6 days a week. Adding Sunday would make tired drivers.
- Additional stop on the 54: 395 and Luna – make a stop by the Arco at Palmdale.

Issues with On-time Performance

- Route 52 has trouble meeting the schedule at certain times of the day
- At 5PM Victor Valley traffic conditions results in major delays, especially if there is a collision
- Ridership has skyrocketed over the last few years, impacting on-time performance
- Passengers not ready with fares slows down buses
- Running time is tight on a number of routes, however veteran drivers say that almost all routes can be done in the allotted time
- Loops on routes cause delay such as on 44 and 53. These loops are not needed
- Courtesy connections cause buses to be late
- Route 40 does not have enough time for deviations – Target is a particular issue

Bus Maintenance Issues

- Numerous bus maintenance issues identified:
- Overall there is a feeling that the speed governors take away from the performance of the bus and don't allow the buses to accelerate/make the buses "sluggish"
- Bus #710 brakes are locking up
- Bus #166 stalls a lot
- Bus #137 leg heater does not turn off
- Older buses need new seats
- Cutaways do not have enough leg room for taller drivers
- Two-way radio transmissions are being transmitted onto the bus public address system
- Fareboxes are 80% of road supervisor calls, should have a mobile farebox mechanic

Driving Challenges

- A lot of streets are high speed which are a concern for merging back into traffic from bus stops (especially due to the issue/perceived issue with the speed governors)
- Bear Valley Road
- Main Street
- 7th Street
- Hesperia Road
- Highway 18
- Dangerous turns identified:
- Left from Arlette/Del Norte to Amargosa on Route 51
- H and Main on Route 45 – should use I Street with the 4-way stop at I and Olive
- Outer 18 and Tao (WB) – should continue to Corwin and use slip ramp
- Main Street westbound onto northbound Cottonwood (Route 44) is dangerous because lanes are not wide enough and buses swing into other lanes
- Lorene and Valley Center Drive can be an issue
- Jasmine and Hesperia Rd is a difficult turn
- Regional traffic growth has made turns more difficult in general, as well as slowing speeds
- Bus stop issues:
- at Hesperia Road and Bear Valley is too close to the intersection which causes cars to go around buses to make turns
- Main and Maple EB bus stop location an issue due to shopping center driveway
- Escondido Rd near Wal-Mart bus stop is too close to the corner
- Main Street and 3rd Street is an issue because cars are backed up in the intersection
- On the B-V Link stops along Hesperia Rd are an issue due to the ability of cutaway buses to get up to speed. Also stops are on curves and site distances are an issue
- The bus stop at Hesperia Rd and Jasmine near SEC is a problem with buses being trapped in bus stop when light turns. This stop is not needed as there is another stop close by

- Route 32 Adelanto Rd and Air Expressway the stop is too close to the intersection on the inbound trip and buses have trouble making the left because of the short distance
- 7th and Lorene needs more benches
- Kiowa and Hwy 18 is an issue
- Bench needed at Rancherias and Thunderbird
- Vicinity of 7th and Lorene has too many bus stops (GreenTree, Westech College) all are near the transit center
- Areas with green lights that are not long enough:
- Mojave and Amargosa in Victorville
- Turn arrow at 7th and La Paz
- 395 and Bartlett in Adelanto – this is an issue because of the elevation getting across 395
- Del Norte and Mojave – traffic signal will not change if only the bus is there, requires more than 1 bus to trip the signal. Drivers mentioned that they have had to wait as many as 4 cycles to be able to get through the intersection
- Jasmine and Hesperia Rd
- There are sight line issues at B Street and Hesperia Rd
- Stop signs throughout Victor Valley are being covered by tree growth. Safety concern
- A turn signal is needed near the Hesperia Post Office at E and Main (E Street approaches)
- Drivers can't see passengers at Lowes stop on 53
- Deviations while driving are tough.

Safety Issues

- Drug addicts and homeless loiter at bus stops. This is a passenger safety issue as well as causing the buses to stop at bus stops when they do not need to
- Security is needed at major bus stops
- Drug use on buses is an issue
- More security is needed

Bus Stop Improvements

- Garbage cans needed at many stops, one particular stop is 395 and Palmdale
- More benches and shelters are needed
- More of the solar night lights are needed at bus stops so operators can see that passengers are at the stop
- Stop with lights needed on Walnut St in Hesperia
- Bus stops are dirty
- All terminals need bathrooms
- More bus shelters are needed

Improving Conditions for Drivers

- More drivers are needed to meet today's schedule. This includes lunch reliefs, spare drivers, weekend drivers, drivers to allow for days off
- Graveyard shift jobs exist and VVTA needs to cater to those jobs
- No bathrooms at 7th/Lorene. This is an issue for drivers
- A lot of VVTA drivers use the bus and live in the same areas. What would be useful it a shuttle could be developed to connect drivers to the base. Another alternative is to give employees a company vehicle
- New yard is harder for employees who take buses to work to get to since the only route that serves the yard is the Hesperia Circulator
- Need to find a way to increase driver enthusiasm
- There is not enough behind the wheel training for new drivers
- Improve pay for drivers.
- Stressful to be a driver. Too stressful – needs an increase in pay.

Improving Management and Administration

- Dispatch staff handles customer calls which takes away from their dispatching ability
- More street supervisors needed, perhaps one per city
- Supervisors need more strategies and tools to actively manage service
- Drivers feel that the radio system takes a good 90 seconds to get in touch with dispatch which is too long resulting in the feeling that drivers are not getting adequate support from dispatch in a timely manner
- More internal communication needed, drivers liked having this outlet to talk about route

4.6 Needs and Opportunities Analysis

The needs and opportunities analysis identifies the issues and opportunities facing Victor Valley Transit. The inputs to this analysis includes information presented in the first four chapters of the report, including the service analysis, the on-board survey, socio-demographic and planned development information, the congruency analysis, and the public outreach process. The issues identified will be used to craft service standards for VVTA and will be an input into the route recommendations presented later in the report.

4.6.1 Staffing

Administrative staffing is a concern for Victor Valley Transit. The current staff has taken on many more responsibilities recently without expanding administration staffing. New services that have been added or will be added include B-V Link lifeline service, extension of B-V Link to San Bernardino, Fort Irwin service, mobility management, and vanpools. Victor Valley Transit may need to expand their staff to manage the current system and allow for expansion of services in the Victor Valley area regardless of any consolidation with neighboring systems. A staffing plan will be developed as part of the service alternatives in phase II of the COA.

4.6.2 Public Information

Through the various outreach activities, the study team heard a number of comments regarding the dissemination of public information. While bus schedules are readily available, a system map would be useful to assist the public, and agencies, in trip planning. A number of comments were received about the website stating that the website is not up to date, it should be refreshed with a new design, and that PDF schedules are not readable on smart phones. Other people mentioned that instead of individual timetables, VVTA should produce a bus book that has all the route schedules and a system map.

4.6.3 Transit Amenities

Passengers and drivers mentioned that more bus stop amenities are needed. These amenities would increase safety at bus stops, comfort at the bus stops, and allow drivers to see the presence of passengers at the bus stops. Amenities mentioned include shelters, benches, trash receptacles and lights. Bus stop access is also important issue due to lack of sidewalk and ADA amenities. Some passengers also mentioned that bus stop signs should have a phone number and route information.

4.6.4 Fares

Passengers did make comments about fares being too high and too low. VVTA has a high percent of cash passengers. This may be due to the affordability of monthly passes or the availability of outlets that sell fare media. Passengers mentioned that they would like transfers to be free. College students mentioned that VVTA should have a U-Pass program so students can use VVTA for free.

4.6.5 Current Services

There are a number of issues with the current VVTA services. Many of these issues were identified as part of the outreach process. One issue is that bus stops are too far apart in portions of the service area. A common comment was that service should operate more frequently. Later evening service was a common request made by passengers for both weekdays and Saturdays. Passengers have also mentioned that buses are very slow traveling around Victor Valley and express or limited stop buses should be explored. Slow travel is due to the spread out land use of the Victor Valley area and traffic conditions along the routes. The other factor that impacts travel speed is the utilization of transit services, both the crowding on buses slowing down boarding and alighting as well as the more frequent stops that are serving more passengers. The most frequent customer request is for Sunday service. Passengers also commented about missed transfer connections due to late buses and not enough “courtesy time” at transfer points. APC data shows that routes that passenger loads are not balanced on

routes that operate every 30 minutes, with the trips that meet hourly routes having much higher ridership than the off hour trips. Route specific issues are identified below.

Route 15: B-V Link

This service is funded through a CMAQ grant for the demonstration of lifeline service. Once this grant runs out, this service will not be funded and will rely on local funding to maintain. This route is already planned to operate "Down the Hill" to connect to medical facilities in the San Bernardino Valley. The current route serves many locations within Victor Valley, which makes for long travel times within Victor Valley. Passenger comments regarding this route consist of the public asking for five-day a week service.

Route 21: Tri-Community

This route serves county areas that are low density. This has an impact on productivity; however it is an essential VVTA service. There are a lot of deviations on this route. Bus stops along Bear Valley Road east of US-395 have high ridership, primarily on the 6:00AM trip that serves Serrano High School. There is very little ridership on the remainder of Bear valley Road/Duncan Road as well as along Baldy Mesa Road. On-time performance issues with this route may be due to the high number of deviations. For a county route, the farebox recovery of this route is good, although this route carries a low number of passengers per trip overall, with most trips carrying fewer than ten passengers. The 10:30 AM and 3:30 PM inbound trips may have crowding issues on Saturday. Outbound does not show any crowding. This may be an issue with how information is recorded and distributed among directions.

The study team received a number of comments regarding this route during the public outreach process. Drivers have mentioned that the route in Phelan should be modified to better serve the library, post office, as well as eliminate a difficult turn onto Phelan Road. Passengers commented about the need for more deviations to Wrightwood and more frequent service on the route. Passengers also mentioned their desire to get to the Hesperia Super Target. There are some passenger complaints about routes not connecting at the Mall.

Route 22: Helendale

This route overall has low ridership by trip on weekdays but the ridership levels are higher on weekends. This route has very few deviations. While 42 percent of trips are late, the route appears to have sufficient running time. The time period when running time is more of a concern is during the midday. Weekend actual running times are longer. Farebox recovery is very close to 20 percent on weekdays. Some comments were made about crossing train tracks to serve Oro Grande since it is an at grade crossing with the railroad tracks with very few passengers served while the crossing is a major source of bus delays.

Route 23: Lucerne Valley

This route serves lower density county areas. All trips on this route carry 10 passengers or less. The circulator portion in Lucerne Valley is a time consuming loop that carries very few passengers. The Lucerne Valley School District would like to work with VVTA to address some student transportation needs. While there are on-time performance issues with this route, running time is not a particular concern, except on the circulator portion of the route in Lucerne Valley.

There were a number of customer comments related to this route. Passengers mentioned that they would like to see 30 minute service on this route as well as later evening service and earlier morning service. Passengers want service to operate further east in Lucerne Valley perhaps connecting to a circulator that serves areas east of Route 247, and direct service to the unemployment office in Victorville

Route 31: Adelanto South

Route 31 is a good route serving the Palmdale Road corridor. There are some crowding issues on this route and ridership is stronger on the roundtrips that depart 7th and Lorene at the top of the hour due to the higher number of routes that meet the 31 during that time period. Ridership is strong throughout the route with the weakest part of the route being the Amargosa/Park loop in Victorville. This deviation also adds a lot of time to the route. Palmdale Road has a lot of undeveloped land and, as the land is developed, traffic will increase along Palmdale Road which will potentially impact travel time and add ridership to the route. Running time is a little tight but the issue is time allocation. Crowding is an issue on this route during all times of the day; 30 minute service may be needed earlier in the day and later into the evening. An additional roundtrip may be needed on Saturdays to address crowding on the last trip of the day. Passenger comments include issues with connecting to other bus routes, on-time performance concerns, more frequent service, and the need for bus stops at El Evado as well as Amethyst.

Route 32: Adelanto North

The onboard survey shows that passengers have a low perception of VVTA (5.2 out of 7) due to service frequency, hours of service, weekend service, travel time, bus stop safety and amenities along this route. Running time is a concern for this route. Crowding is not an issue overall, though a few trips at certain times of the day do have high loads. The Orick Avenue deviation is a vestige of when the Victorville Circulator used to serve the area. Drivers are concerned about the turns getting into and out of this deviation as it takes time and are not safe due to high speeds along Village.

Route 33: Adelanto Circulator

Development throughout much of Adelanto is sparse. There is and will continue to be a clustered pattern of development. This route has long travel times for certain bus stops due to dog legs and one-way loops in Adelanto. The route will be the most appropriate route to serve Adelanto High School located to the west of the current route path along Mojave Drive. There is no ridership along Bellflower between Mojave and Rancho. Running time on this route is a concern. Surveys show that passengers on this route have a low perception of VVTA (4.9 out of 7) and the concern appears to be hours of service and travel time. The need to transfer to other routes likely plays a major role in that perception. Passengers would prefer 30 minute service as 60 minute service is too long a wait. Passengers mentioned that it is a far walk from bus stops to certain generators, such as the Adelanto Post Office.

Route 40: Apple Valley North Route Deviation

This route serves sparse development areas of Apple Valley north of Highway 18. Route 40 had 77 deviations in October, a relatively high number. Drivers say that route does not have sufficient running time to allow for deviations. Some drivers feel that a cutaway is too small for this route, but ridership patterns do not show crowding. There are places to serve north of the current alignment such as the Apple Valley North Industrial area, the fire academy, and the mobile home park at the intersection of Waalew and Dale Evans Parkway. There is also a new senior development that is being planned at the intersection of Thunderbird Road and Dale Evans Parkway. Passengers mentioned that Pawnee Road needs bus stop signs on both sides of the street.

Route 41: Apple Valley/Victorville

This route operates along a major corridor connecting Victorville and Apple Valley. The route has very high loads on both weekdays and Saturdays, and service operates once per hour. Certain generators, such as Apple Valley Town Hall, are only served in one direction. Drivers cited a safety concern entering Highway 18 mainline westbound at Tao Road. Passenger comments included the need more frequent service, the need for more bus stops on the south side of Highway 18, maintenance concerns at the bus stop at St Mary's Medical Center, and that other locations should be provided to connect with Route 43 other than the Post office, such as at Tao Road with the Route 41 operating along Tao Road.

Route 43: Apple Valley/Victor Valley College

The Bear Valley Road corridor is a strong transit corridor through Apple Valley. Passengers made a number of comments regarding this route. There is a need to directly serve Jess Ranch Town Center in both directions. Passengers mentioned that this route should be merged with Route 53. Other passenger comments included more frequent service, and a new bus stop that serves the movie theater and PetsMart.

Route 44: Mall of Victor Valley/Hesperia

Hesperia would like this route to go across Willow instead of Main Street to provide service along that corridor. Hesperia feels that service along Third and Seventh Avenues does not need to go further north than Willow, however, bus stops at Mojave High School at Lemon do have good ridership. The passenger survey shows that reasons for passenger's low perception of VVTA (5.3 out of 7) appear to be frequency of service and amenities at bus stops. Passenger comments included extending the route further north of the mall to serve retail, more frequent service, and more bus stops.

Route 45: Victorville/Hesperia

Route 45 is the primary route for people going to the Victor Valley College from Victorville, Adelanto, and Hesperia. This route is also the primary route serving southern portions of Victorville. Thus, crowding is a major issue along this route. There is a significant difference in ridership between trips on the hour versus the 30 minute. There are two reasons for the significant differences, one is transfer opportunities at the :00 and that those trips are also better timed for classes at Victor Valley College. The second reason is that the :00 are longer trips that serve Hesperia while the :30 do not go south of the college. Mariposa Road has low ridership but there are a few generators along this segment. The Victorville segment operates as loop which creates the potential for really long travel times and the need to transfer to complete a roundtrip. Riders mentioned that the route should do the same thing in the northbound and southbound direction. Onboard survey responses from passengers showed that Route 45 passengers have a low perception of VVTA (5.3 out of 7) due to span, travel time, bus stop amenities, and weekend service. Passengers mentioned crowding and on-time performance as issues on this route

Route 46: Hesperia Route Deviation Circulator

There are many deviations on Route 46. There are issues with buses being early. People have mentioned that more frequent service is needed. Many customers commented about the possibility of the route providing access to Hesperia Lakes.

Route 47: Apple Valley South Route Deviation

This route provides coverage though the center of Apple Valley. The route does have a lot of deviations. Bus stops with the highest ridership are near Bear Valley Road. A few customers mentioned that this route should serve St Mary's Medical Center.

Route 48: Hesperia West

This route was implemented at the suggestion of Hesperia and has been a successful route. Hesperia would like this route to operate every 30 minutes during middays and provide service

along Main Street without deviating to serve the post office on the east end of the route or Escondido Avenue on the west. There are plans for developing traffic generators at US-395 and Main Street as well as a future hospital on Amargosa near the Hesperia/Victorville border.

Route 51: Victorville Circulator

Route 51 has long travel times due to the path being a one-way circuitous route. Ridership on the route is good, with some crowding in the midday. There are some running time issues on this route.

Route 52: Victorville/Mall

Route 52 is the primary route to access the mall from Victorville and Adelanto, and is one of two routes providing access to the mall from Apple Valley. Crowding and running time are issues for the route. The Seneca Road segment has no ridership. Later service may be needed on Saturday. Based on onboard surveys, Route 52 passengers have a low perception of VVTA (5.2 out of 7) due to weekday hours of service, Saturday service, bus stop amenities, and travel time. Route 52 passenger comments included requests for later service, more frequent service, and reduction in crowding. There were several comments regarding poor on-time performance and missed connections. The Brentwood area, Summer Breeze apartments on Seneca, and a neighborhood park were locations that customers stated were in need of service.

Route 53: Victor Valley College/Mall of Victor Valley

Drivers observed that, at some times of the day, Excelsior High School is the major generator. While drivers mentioned that this route should not deviate off of Bear Valley Road to serve Desert Valley Hospital since other routes serve the hospital, passengers believed that the hospital needs a stop. A few passengers mentioned that this route should be merged with Route 43. Passengers also cited traffic issues near I-15.

Route 54: Victorville West Route Deviation

Route 54 is one of the newest and poorest performing VVTA routes. This route deviation circulator has very few deviations. The route gets very close to the Mall of Victor Valley but does not serve this major generator. The route does have enough running time to serve additional generators.

Direct Access

The Victor Valley Direct Access service area is not officially defined which impacts the service negatively as the service covers a large area. On-time performance is not an issue for Direct Access service, although passengers perceive it as an issue. Direct Access service has a high cost per passenger when compared to fixed route services. The passengers per hour, at 2.17,

is slightly lower than most other systems in the region which carry closer to 2.25 passengers per hour. The most common reasons riders stated that they do not use fixed route service was due to disability. Hopefully, mobility manager can do travel training to address this issue.

4.6.6 New Service Areas

A number of new services and new service areas were identified as part of the public outreach process. One of the most requested services, a connection "down the hill" to San Bernardino which has been started as an extension of the B-V Link service. Other areas outside of Victor Valley that passengers mentioned for service include Big Bear, Los Angeles, and Las Vegas. Within Victor Valley, people mentioned that overall service coverage within Adelanto is an issue. Passengers would like bus service to various recreational opportunities within Victor Valley. More circulator routes would help increase coverage within Victor Valley and connect to new residential locations. Hesperia has mentioned a desire to move the transfer point from the Post Office to the Civic Center which will require a re-design of Hesperia bus services.

Passengers mentioned a need for service between Highway 18 and Bear Valley Road in Apple Valley. The North Apple Valley Industrial area/specific plan may need service soon and there is a fire training academy affiliated with Victor Valley College in northern Apple Valley and Victor Valley College has specifically requested that this location be served by VVTA buses. The intersection of Cottonwood and Mariposa in Victorville has a shopping center, hotels, and Azusa Pacific University that people would like to access directly. Another educational institution that a number of people requested service to was San Joaquin Valley College, located on Mariposa Road south of Main Street in Hesperia. Oak Hills High School in Oak Hills near the intersection of Ranchero Road and Escondido Avenue has been mentioned in the unmet needs reports. The intersection of Main Street and US-395 will have a Workforce Development Center and other developments that will need bus service. A new campus of Saint Mary's Medical Center is planned to be built on Amargosa near the Victorville/Hesperia border and will be a mixed use development with a trauma center. Passengers mentioned that better connections to the Amtrak station are needed, as well as and direct access to the Mall from more areas of Victor Valley. Besides the areas and generators mentioned, a number of corridors were identified as lacking service during the public outreach process, including Mojave Drive between Victorville and Adelanto, Apple Valley Road, Ranchero Road, and Hesperia Road.

5.0 Current and Projected Funding Levels

5.1 Introduction

This chapter provides the funding and cost projections for Victor Valley Transit through FY 2019/2020. Operating revenue sources are described and available funding levels, supplied by San Bernardino Associated Governments (SANBAG) are provided. Operating cost items and levels are based on projections from the most recent VVTA Short Range Transit Plan (SRTP). Capital funding is also presented in this chapter.

5.2 Funding Sources

Victor Valley Transit receives funding from a variety of sources. Many of these sources have rules and guidelines regarding how they may be spent. This section provides a description of the funding sources available for Victor Valley Transit and describes some of the limitations of these sources. SANBAG and VVTA have provided estimates for the expected level of funding for VVTA to 2020.

Funding sources include local, state, and federal funding programs. Each category is presented in this section along with a description of the funding limitations and what each source can and can't be used for.

5.2.1 Federal Transit Administration (FTA) Grant Programs

The Federal Transit Administration has a number of grant programs that public transit agencies utilize to support operations and capital needs. Below is a list of programs that VVTA utilizes and their eligibility.

- Section 5307 Urbanized Program – Section 5307 supports Transit capital and operating assistance in urbanized areas and is used for transportation related planning. VVTA uses Section 5307 to support the capital and operating program.
- Section 5309 Capital Assistance – VVTA is using a Section 5309 grant for starting up the vanpool program. Under Map 21 Section 5309 is replaced by Section 5339 Bus and Bus Facilities.
- Section 5311 Rural Area Program – VVTA is using 5311 funding to support county and Adelanto bus route operations, as well as operations of certain segments of the regular fixed route services in rural areas. Section 5311 may also be used for capital procurement for items used exclusively for the elderly and disabled.
- Section 5316 JARC – The Job Access and Reverse Commute (JARC) program is designed to address challenges faced by welfare recipients and low income persons in accessing

jobs. VVTA is using JARC funding to support the Fort Irwin/NTC commuter service. Under MAP 21 JARC 5316 is included within the section 5307 apportionment.

- Section 5317 New Freedoms – The New Freedoms Program is designed to increase mobility for seniors and disabled persons beyond ADA services. VVTA is using JARC funding to support the Fort Irwin/NTC commuter service. Under MAP 21 New Freedom 5317 are included within the section 5310 apportionment.
- Section 5339 Bus and Bus Facilities – Section 5339, which replaces Section 5309, is a capital fund that supports replacement, rehabilitation, and the purchase of bus related equipment and facilities. Due to the elimination of earmarks 5339 is an apportionment, as such, the amount apportioned every year is minimal for an agency the size of VVTA. VVTA will be using funding for the purchase and rehabilitation of buses.

5.2.2 Congestion Mitigation and Air Quality (CMAQ)

Congestion Mitigation and Air Quality (CMAQ) program is a federal program designed to fund projects that help improve air quality. Mass transit investments qualify for CMAQ monies which VVTA is using for demonstration grants for the lifeline services that serve Barstow and the San Bernardino Valley. It is uncertain whether there will be CMAQ money available for additional demonstration projects. VVTA hopes to use CMAQ funding for bus procurements.

5.2.3 Measure I

Measure I is the half-cent sales tax collected throughout San Bernardino County for transportation improvements. San Bernardino County voters first approved the measure in November 1989 to ensure that needed transportation projects were implemented countywide through 2010. In 2004, San Bernardino County voters overwhelmingly approved the extension of the Measure I sales tax, with 80.03 percent voting to extend the measure through 2040. VVTA uses Measure I funding to subsidize fares for Direct Access services and ADA passengers on county routes. The TREP program is also funded through Measure I.

5.2.4 Proposition 1B/PTMISEA

Proposition 1B is the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 (SB 1266: Chapter 25, Statutes of 2006) approved by the voters on November 7, 2006. Transit funding is provided through the Public Transportation Modernization, Improvement, & Service Enhancement Account (PTMISEA). VVTA uses PTMISEA funding primarily for vehicle replacement as well as other capital procurements.

5.2.5 AB2766

Assembly Bill 2766 imposed a $4.00 fee to motor vehicle registration to provide funding for projects that meet California Clean Air Act mandates. Victor Valley Transit uses AB2766 funding to support fixed route operations.

5.2.6 CAL EMA – TSSDRA

The California Emergency Management Agency manages the Transit Safety and Security and Disaster Recovery Account or CAL EMA – TSSDRA. This fund is used to support transit capital projects that enhance the safety and security of public transportation facilities. This fund will support VVTA projects that enhance safety and security.

5.2.7 Transportation Development Act

The Transportation Development Act (TDA) provides two major sources of funding for public transportation: the Local Transportation Fund (LTF) and the State Transit Assistance fund (STA). LTF is generated by a ¼ cent sales tax statewide while STA is generated from a diesel sales tax. Both STA and LTF can be used to fund VVTA operations or capital purchases. These funds are for the development and support of public transportation needs that exist in California and are allocated to areas of each county based on population, taxable sales and transit performance. Some counties have the option of using LTF for local streets and roads projects, if they can show there are no unmet transit needs. VVTA's jurisdictions fall under this category. In Victor Valley, LTF is used to support operations and capital needs for VVTA, while STA is primarily used to support VVTA's capital program. LTF provides funding for operations, maintenance, administration, yard operations, and the capital program.

5.2.8 Passenger Fares

Passenger fares are the directly generated revenues that VVTA collects from boarding passengers. Passenger fares are tied directly to ridership on the VVTA system. Passenger fares provide support to the operation of VVTA buses.

5.3 Operation Funding Projections

SANBAG, as the County Transportation Commission is the steward of most transit funding within San Bernardino County. SANBAG has provided an estimate of funding levels for each of the funding programs listed above. The total amount of LTF, which is used for all aspects of VVTA, is presented on Table 5-1. The local jurisdictions utilize a portion of these monies for streets and roads each year. Uses of LTF for each functional area at VVTA and for local jurisdiction streets and highways will be identified in the final plan. All other funding sources for operations are presented in Table 5-2.

Table 5-1: LTF Level Projections

Jurisdiction	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
County	$2,401,753	$2,517,037	$2,637,855	$2,764,472	$2,897,167	$3,036,231	$3,181,970	$3,334,704
Adelanto	$1,089,194	$1,141,475	$1,196,266	$1,253,687	$1,313,864	$1,376,929	$1,443,022	$1,512,287
Apple Valley	$2,395,944	$2,510,949	$2,631,475	$2,757,786	$2,890,159	$3,028,887	$3,174,274	$3,326,639
Hesperia	$3,120,147	$3,269,914	$3,426,870	$3,591,360	$3,763,745	$3,944,405	$4,133,736	$4,332,155
Victorville	$4,031,265	$4,224,766	$4,427,554	$4,640,077	$4,862,801	$5,096,215	$5,340,834	$5,597,194
Total	$13,038,303	$13,664,142	$14,320,020	$15,007,381	$15,727,736	$16,482,667	$17,273,835	$18,102,979

Table 5-2: Operating Funding Level Projections

Source	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Section 5311	$ 213,002	$ 213,002	$ 213,002	$ 213,002	$ 213,002	$ 213,002	$ 213,002	$ 213,002
Measure I	$ 682,310	$ 682,310	$ 715,061	$ 749,384	$ 785,354	$ 823,051	$ 862,558	$ 903,961
CMAQ demonstration	$ 416,042							
Section 5316 JARC	$ 270,000							
AB 2766	$ 132,120	$ 136,084	$ 140,166	$ 144,371	$ 148,702	$ 153,163	$ 157,758	$ 162,491
VVPDTMS	$ 122,134	$ 168,365	$ 4,013					
MDPDTMS	$ 32,466	$ 44,755	$ 1,067					
Section 5309	$ 618,400	$ 852,480	$ 20,320					
Passenger Fares	$ 2,118,853	$ 2,182,418	$ 2,247,891	$ 2,315,327	$ 2,384,787	$ 2,456,331	$ 2,530,021	$ 2,605,921
Other (Interest/Misc.)	$ 120,500							
TOTAL:	$ 4,725,827	$ 4,279,414	$ 3,341,520	$ 3,422,085	$ 3,531,846	$ 3,645,547	$ 3,763,339	$ 3,885,375

5.4 Operating Cost Projections

Systemwide operating costs will be determined based on the final recommendations of the Comprehensive Operational Analysis. In the meantime, Victor Valley Transit was required to submit its Short Range Transit Plan where operating costs for all categories were projected to increase by 3 percent per year, and service levels were stated to remain the same. Below is a description of each of the cost categories as well as projections of hourly costs for bus operations that will be used to estimate operating costs for any route changes in future years.

5.4.1 Cost Categories

VVTA's budgeting process separates costs into nine categories that represent various aspects of the VVTA organization. These categories represent the operation of the different VVTA functional area. Below is a description of each cost category and how they are funded.

Administration

Administration functional area represents the costs for the overall administration of VVTA services. This includes salary and benefits for VVTA administration staff, liability insurance, contracts for various services (not operating contracts), utility costs, leases and rentals, office expenses including office machines and paper, staff/Board travel, stipends, and association dues and subscriptions. Administration expenses also include the subsidized Greyhound ticket program for VVTA passengers going to San Bernardino. The San Bernardino Lifeline service should replace the Greyhound program for trips to the San Bernardino Valley. Administration expenses are funded through LTF funding with costs evenly applied to each JPA member, with each member responsible for funding 20% of administration costs.

Facilities Yard

The Facilities Yard functional area represents the operating expense of the VVTA operations and maintenance yard, excluding administration costs. This includes utility costs, building maintenance costs, and equipment and supplies. Facility yard expenses are funded through LTF funding with costs evenly applied to each JPA member, with each member responsible for funding 20% of administration costs.

ADA Direct Access

ADA Direct Access costs represent the operation and maintenance expense of the Direct Access ADA service. Fuel costs for ADA vehicles are also included in this functional area along with other supplies that are critical to the operation and maintenance of Direct Access services. The FY 2013 budget estimates a farebox recovery for Direct Access Service of 11.29 percent based on Direct Access and Subscription fares based on the cost of ADA service as well as a portion of the VVTA yard and administration. Measure I funding will cover approximately 22 percent of

ADA operating cost; the remaining costs will be covered by LTF. The LTF funding required from each JPA member is based on the amount of service operated in each JPA member's service area as determined by the number of boardings within each jurisdiction from the previous calendar year.

Although VVTA is making efforts to reduce the growth in ADA passengers, this service may show a growth of more than 3 percent per year moving forward. Efforts to manage this growth include mobility management training that seeks to move ADA passengers onto fixed route services, and operating flex route services that can carry ADA passengers. The COA will look at other policy strategies to manage ADA growth such as identifying actual boundaries for the VVTA ADA service area (beyond fare policy guidelines). VVTA is seeing an increase of approximately 900 ADA certification applications year over year. This is likely a result of the County relocating populations on subsidies to this area due to lower rents and general lower cost of living.

Fixed Route

The fixed route costs represent the costs for the regional fixed route operations, routes in the 30, 40, and 50 route number series. This functional area includes operation and maintenance of the regional fixed route service as well as shelter maintenance in Apple Valley. This does not include fuel yard costs which are presented separately above. Regional fixed route services are funded through a combination of direct passenger fares (32 percent) and LTF funding. The LTF funding required from each JPA member is based on the amount of service operated in each member's service area as determined by the revenue miles operated in each member jurisdiction. Currently, AB 2766 funding reduces the amount of operating LTF required from Adelanto, Apple Valley, and Hesperia. Victorville applies its AB 2766 funds on other non-transit uses. Federal Section 5311 funding is available to Adelanto to reduce the amount of LTF required for operations. Section 5311 funding represents 2.62 percent of fixed route funding, AB 2766 represents 3.24 percent of fixed route funding, and LTF represents 62.21 percent of fixed route funding. The overall farebox recovery for the regional fixed routes, based on the fixed route costs and the allocation of the yard and administration costs to fixed route services is estimated to be 22.2 percent in FY 13. The COA will have route recommendations that will impact fixed routes.

County Route

The county route functional area represents the costs for operating Routes 21, 22, and 23 and the TREP program in the northern areas of Adelanto. This includes operation and maintenance for the service and reimbursements for the TREP program. The county routes are funded by passenger fares (17 percent), Federal Section 5311 (11 percent), Measure I for TREP service (2 percent), and County LTF funds (62 percent). A portion of Routes 21 and 22 do receive LTF funding from Victorville's apportionment due to service within the city limits, which represents

eight percent of total county route funding. The overall farebox recovery for the county routes, based on the county route costs and the allocation of the yard and administration costs to county services is estimated to be 15 percent in FY 13. The COA will have route recommendations that will impact county routes.

BV Link Lifeline

The B-V Link Lifeline functional area represents the operations and maintenance of the Barstow-Victorville Link lifeline route. This service is funded by passenger fares (13.33 percent) and a CMAQ demonstration grant (86.67 percent). The overall farebox recovery for the B-V Line, based on the county route costs and the allocation of the yard and administration costs to the B-V Link is estimated to be 11.75 percent in FY 13. A concern about the B-V Link Lifeline service is that this route is funded through a demonstration grant and funding has not been identified for the service beyond the life of the grant. This will need to be addressed if the service is to continue.

San Bernardino Lifeline

The San Bernardino Lifeline functional area represents the operations and maintenance of the San Bernardino extension of the Barstow-Victorville Link lifeline route. This service is funded by passenger fares (10 percent) and a CMAQ demonstration grant (90 percent). The overall farebox recovery for the San Bernardino Lifeline service, based on the county route costs and the allocation of the yard costs to the San Bernardino Lifeline service is estimated to be 10 percent in FY 13. Similar to the B-V Link, a concern about the San Bernardino Lifeline service is that this route is funded through a demonstration grant and funding has not been identified for the service beyond the life of the grant. This will need to be addressed if the service is to continue after the grant funding expires.

Fort Irwin

The Fort Irwin functional area represents a commuter bus service operating between Victor Valley and Barstow to the National Training Center at Fort Irwin. This service replaces a similar discontinued service operated by Fort Irwin. The costs for Fort Irwin services include operating expenses and maintenance of vehicles for the service. The FY 2013 budget has Fort Irwin service funded by passenger fares (46 percent) and JARC funding (54 percent). The overall farebox recovery for the Fort Irwin service, based on the Fort Irwin costs and the allocation of the yard costs to the Fort Irwin service is estimated to be 45 percent in FY 13. VVTA has decided to continue operating this service. It is expected that by the time the JARC funding expires, the service will not require additional funding, that passengers fares will cover close to 100 percent of the operating costs. Current reports regarding this service show that it is approaching the 100 percent farebox recovery level.

Vanpool

The vanpool functional area is a new area for VVTA. This area is the organization of vanpools that will be funded by VVTA. VVTA is responsible for vehicle leasing, marketing the service, and liability. In FY 2013, vanpool will be fully funded by a 5309 grant. Once the grant expires, Vanpool is expected to be fully funded by users. It is expected that the increase in passenger miles and revenue hours reported to the National Transit Database should increase formula based federal funding to VVTA.

5.4.2 Cost Projections and Annual Cost per Hour

Cost projections are based on an annual cost increase of 3 percent based which is based on projections from Victor Valley Transit's Short Range Transit Plan. Future year costs will be based on the recommendations in the final plan. The cost figures in this section provide an average cost per hour for each service which will be used to estimate the cost of the service recommendations in the final plan. Table 5-3 presents the preliminary costs for VVTA and Table 5-4 presents cost per hour for services.

5.5 Capital Program

The current capital program presented in the FY 2013 budget represents projects that will support the continued functions of VVTA based on current service levels. This includes additional service and revenue vehicles, ITS improvements, security improvements, and maintenance components. Table 5-5 presents the total projected capital costs through FY 2016 for each functional area. The sources of capital funding are presented in Table 2-6. Besides the funding sources presented on Table 5-6, LTF provides funding for the capital program. The capital funding and needs presented in this section may change based on recommendations from the COA and will be projected to 2020.

Table 5-3: Operating Cost

Source	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Fixed Route	$5,163,619	$5,318,528	$5,478,084	$5,642,426	$5,811,699	$5,986,050	$6,165,632	$6,350,600
Direct Access	$2,969,202	$3,058,278	$3,150,026	$3,244,527	$3,341,863	$3,442,119	$3,545,382	$3,651,744
County Routes	$955,718	$984,389	$1,013,921	$1,044,339	$1,075,669	$1,107,939	$1,141,177	$1,175,412
BV Link	$105,042	$108,194	$111,439	$114,783	$118,226	$121,773	$125,426	$129,189
SB Valley Lifeline	$362,000	$372,860	$384,046	$395,567	$407,434	$419,657	$432,247	$445,214
Ft. Irwin	$497,853	$512,788	$528,172	$544,017	$560,338	$577,148	$594,462	$612,296
Van Pools	$896,750	$923,653	$951,362	$979,903	$1,009,300	$1,039,579	$1,070,766	$1,102,889
VVTA Yard/Facilities	$148,924	$153,392	$157,993	$162,733	$167,615	$172,644	$177,823	$183,158
VVTA Administration[2]	$1,131,969	$1,556,457	$1,603,151	$1,651,246	$1,700,783	$1,751,806	$1,804,361	$1,858,492
Sub-Total	$12,231,077	$12,988,539	$13,378,195	$13,779,541	$14,192,927	$14,618,715	$15,057,276	$15,508,995
Operating Capital	$1,135,404	-	-	-	-	-	-	-
Total Operating	$11,095,673	$12,988,539	$13,378,195	$13,779,541	$14,192,927	$14,618,715	$15,057,276	$15,508,995

Table 5-4: Operating Cost per Hour

Source	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Fixed Route	$57.34	$59.06	$60.84	$62.66	$64.54	$66.48	$68.47	$70.53
Direct Access	$72.77	$74.96	$77.21	$79.52	$81.91	$84.37	$86.90	$89.50
County Routes	$68.83	$70.89	$73.02	$75.21	$77.46	$79.79	$82.18	$84.65
BV Link	$69.11	$71.18	$73.32	$75.51	$77.78	$80.11	$82.52	$84.99
SB Valley Lifeline	$69.11	$71.18	$73.32	$75.52	$77.78	$80.12	$82.52	$85.00
Ft. Irwin	$71.07	$73.20	$75.40	$77.66	$79.99	$82.39	$84.86	$87.41

[2] Based on current staffing

Table 5-5: Current Capital Program

System	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	Total
Fixed Route	$3,321,772	$1,817,786	$1,070,079	$1,123,981	$3,943,182	$11,276,800
Complementary Paratransit	$221,250	$460,000	$680,000	$760,000	$450,000	$2,571,250
Community Routes	$12,500	$12,500	$12,500	$12,500	$12,500	$62,500
BV Link	-	-	-	-	-	-
SB Valley Lifeline	-	-	-	-	-	-
Ft. Irwin	-	-	-	-	-	-
Van Pools	-	-	-	-	-	-
VVTA Yard/Facilities	-	-	-	-	-	-
VVTA Administration	$1,866,359	$2,266,818	$2,267,618	$2,266,218	$2,265,098	$10,932,109
Misc. Capital	-	-	-	-	-	-
Total	$5,421,881	$4,557,103	$4,030,196	$4,162,699	$6,670,780	$24,842,659

Table 5-6: Capital Funding Sources

Source	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Section 5307	$3,556,757	$3,603,230	$3,603,230	$3,603,230	$3,603,230	$3,603,230	$3,603,230	$3,603,230
Section 5310	$221,521	-	-	-	-	-	-	-
Section 5309	$381,337	$371,222	$371,222	$371,222	$371,222	$371,222	$371,222	$371,222
CMAQ	-	$162,098	-	$86,067	-	$747,707	$1,092,801	$2,071,773
PTMISEA	$2,201,474	$652,000	$805,000	$935,000	$3,440,503	-	-	-
CAL EMA - TSSDRA	$18,692	$18,600	$18,600	$18,600	$18,600	-	-	-
STAF PUC 99314	$116,414	$164,254	$164,254	$164,254	$164,254	$164,254	$164,254	$164,254
STAF PUC 99313	$170,046	$128,000	$114,700	-	-	-	-	-
Total	$6,666,241	$5,099,404	$5,077,006	$5,178,373	$7,597,809	$4,886,413	$5,231,507	$6,210,479

6.0 Performance Guidelines

6.1 Introduction

This chapter proposes performance guidelines for the Victor Valley Transit Authority (VVTA) to use to monitor the performance of the various routes and services that they operate. Performance guidelines are an important planning tool as they will allow VVTA to judge and improve individual routes and the network to meet the goals and objectives of VVTA.

System-wide performance guidelines were created as well as standards that are specific to the service type. Six service types were identified:

- Local Fixed Route: Routes 31, 32, 41, 43, 44, 45, 48, 51, 52 and 52
- Flex Routes/Circulator: Routes 33, 40, 46, 47 and 54
- County Route: Routes 21, 22 and 23
- Lifeline (Inter-City Human Service): B-V Link and San Bernardino Lifeline
- Commuter (Inter-City Commuter): NTC Commuter
- Paratransit: Direct Access

Setting performance guidelines specific to service type is important since there is too wide of a range between different types of service to apply achievable guidelines universally. Additionally, some performance guidelines may apply to one type of service but not another. Performance Guidelines were based on the guidelines proposed in the previous COA and industry practice. These guidelines were modified based on the current performance of VVTA.

Standards and guidelines do have a distinct and very important meaning. A standard refers to a minimum threshold that the system or a particular route must meet. A guideline is a target for VVTA or a particular service to achieve. Route and system recommendations will be designed around these performance standards and guidelines.

6.2 System-wide Performance Standards and Guidelines

System-wide performance guidelines apply to the VVTA system as a whole or are guidelines that apply to all individual routes. There were five general themes established for system-wide performance guidelines: service coverage, operating effectiveness, vehicle and maintenance efficiency, labor efficiency, and customer service.

6.2.1 Service Coverage

Service coverage includes performance guidelines that are related to service area and amount of population being served. The two performance guidelines for service coverage include route

coverage and bus stop spacing. Minimum service frequencies and hours of service are discussed at the route level in the fixed route service coverage guidelines section.

Route Spacing

Route spacing guidelines are put in place to guarantee access to the transit network throughout a service area, especially in dense residential areas and commercial centers. Performance guidelines related to route spacing are better suited to gridded street networks and transit route patterns. However, the development pattern in Victor Valley makes it difficult to apply a consistent spacing guideline. The route spacing guideline is meant to be applied as consistently as possible.

The guideline for route spacing varies based on population density and percent of household vehicle ownership, signifiers for transit dependency (See Table 6-1). The guideline for the majority of the VVTA service area would be route spacing of 1 mile. In some denser residential areas and in areas with lower vehicle ownership rates, the guideline would be either ⅜ or ½ mile. This guideline should be used to ensure that service coverage in the Victor Valley area is sufficient and where routes and services should be added in the future.

Table 6-1: Route Spacing Guidelines

Percent of Households Without a Vehicle Available	Population Density (Persons per Square Mile)			
	Over 6,400	4,500-6,400	2,500-4,449	Under 2,500
Over 15.0	¼ mile	¼ mile	⅜ mile	½ mile
10.1-15.0	¼ mile	⅜ mile	½ mile	1 mile or paratransit
5.1-10.0	⅜ mile	½ mile	1 mile or paratransit	-
0-5.0	½ mile	1 mile or paratransit	-	-

Bus Stop Spacing

Bus stop spacing will affect the distance customers will have to walk to access a transit route and also affect bus speeds. Frequent stops can create a significant increase in travel time and too large a spacing between bus stops may result in customers that are unable to walk to the stop.

The guideline for bus stop spacing states that bus stops should be no closer than 0.15 miles and no further than 0.25 miles in urbanized area or 0.50 miles in non-urbanized areas. Some conditions may warrant an exception to these guidelines, such as pedestrian safety, geographical barriers, and significant trip generators.

Table 6-2: Bus Stop Spacing Guidelines

Area	Minimum Stop Spacing (miles)	Maximum Stop Spacing (miles)
Urbanized	0.15	0.25
Non-urbanized	0.25	0.50

6.2.2 Cost Effectiveness

There is one standard proposed for cost effectiveness, farebox recovery.

Farebox Recovery

The farebox recovery rate shows the percentage of operating costs that are covered by passenger fares. It is calculated by dividing fare revenue by operating cost. The Transportation Development Act requires a 20 percent farebox recovery rate in order for a transit system to qualify for state funding. The VVTA system-wide has an intermediate farebox recovery standard is set at 15 percent as set by SANBAG. It should be noted that new routes and those that are changes by 25% or more (schedule or alignment) are exempt for 2 years. Furthermore, rural and complementary paratransit services require only a 10% farebox recovery.

6.2.3 Operating Effectiveness

Performance guidelines relating to operating effectiveness are geared towards service reliability and safety. The three performance guidelines for operating effectiveness are on-time performance, service reliability, and passenger safety.

On-time Performance

On-time performance is an important indicator that affects customer satisfaction. Bus riders should expect a dependable service that will get them to their destination on-time.

All routes in the VVTA network should operate with at least a 95 percent on-time rate. A bus is considered on-time if it departs a timepoint at the scheduled time or up to five minutes after the scheduled time. Additionally, no buses should operate early. Early operations can inconvenience passengers more than late operating buses since they will likely have to wait a longer time for the following bus. No routes should operate late at timepoints more than five percent of the time. If bus routes are frequently late, overall running time and/or timepoints need to be investigated.

Table 6-3: On-time Performance Guideline

All Routes	Early	On-time	Late
On-time Performance	0%	95%	5%

Service Reliability

The service reliability guideline is also geared toward maintaining a dependable service that will get customers to their destination in a timely manner. Service reliability is measured by the percentage of scheduled pullouts achieved. The performance guideline for service reliability is set at 100 percent of scheduled pullouts.

Passenger Safety

Passengers riding VVTA buses should expect to get to their destination safely. Passenger safety is measured by the number of preventable collisions. The guideline for passenger safety is that there should be no more than six preventable collisions per million revenue miles operated.

6.2.4 Vehicle and Maintenance Efficiency

Vehicle and maintenance efficiency performance guidelines include vehicle failure rate and road call rate. The two guidelines measure the number of vehicle breakdowns or the failure of components of a vehicle.

Vehicle Failure Rate

The vehicle failure rate measures the number of vehicle mechanical failures per revenue mile. There should be no more than one vehicle failure per every 5,000 revenue miles operated according to this guideline.

Road Call Rate

The road call rate measure the distance between vehicle breakdowns. The performance guideline for road call rate is no more than one road call for every 7,000 revenue miles operated.

6.2.5 Labor Efficiency

The following set of guidelines is related to the number of employees that are employed by VVTA. The performance guidelines for labor efficiency include transportation operator, transportation supervisor, vehicle maintenance employee, and administrative efficiency.

Transportation Operator

The transportation operator measures the number of FTE bus operators per operating hour. The guideline for transportation operator is one FTE operator per 1,570 operating hours.

Fixed Route Transportation Supervisor

The transportation supervisor guideline measures the number of employees controlling the operation per revenue hour. The guideline is set at one employee controlling the operation per 25,000 revenue hours operated. This measure is for total full-time employees, not for peak service.

6.2.6 Customer Service

Customer service performance guidelines are related to passenger comfort and amenities, as well as their satisfaction with the services provided by VVTA. There are two performance guidelines related to customer service: passenger amenities and complaints.

Passenger Amenities

The passenger amenity guideline is used to measure the quality of the passenger environment. Bus stop seating, shelters and bus stop signs are all included in the performance guidelines for passenger amenities. All bus stops must have a bus stop sign indicating the location of the bus stop. Ideally the bus stop sign should identify the route and destination as well as contact information for VVTA. Seating or benches should be provided at bus stops with at least 25 passenger boardings per day. Shelters should be provided at bus stops with at least 50 passengers per day.

Table 6-4: Passenger Amenity Performance Guidelines

Amenity	Guideline
Bus Stop Signs	All
Bus Stop Seating	25 boardings/day
Bus Stop Shelters	50 boardings/day

Customer Complaints

Customer service performance is also measured by the number of customer complaints. The guideline for customer complaints is set at a maximum of five (5) complaints per 1,000 passenger trips.

6.3 Fixed Route Performance Standards and Guidelines

Fixed route performance standard and guidelines were developed for various fixed route services that VVTA offers. Different service types may have different standard or guidelines based upon the nature of the service. Routes fall under the categories of local, deviated and circulator, county, lifeline (B-V Link), and Commuter (NTC Commuter).

There are four groups of performance/guidelines for fixed route service: service coverage, service efficiency and utilization, financial efficiency, and passenger comfort. Standard and guidelines were set based on the averages of existing services, or, in some cases, were sometimes set at a more optimal level that was significantly higher or lower when warranted.

6.3.1 Service Coverage

Service coverage performance standards measure the availability of service. They determine whether a minimum level of service is being met. There are two standards for fixed route service coverage, service span and service frequency.

Service Span

The standards for service span create a benchmark for the hours that service will be operated on a given day. The performance standards represent the minimum service span that should be operated by each service type.

While the standard represents the minimum hours of operation, it may be to the benefit of customers to begin service earlier and end service later than the standard. This is especially true for popular routes and ones that serve major employment and shopping areas where there may be demand for service before 6AM or after 9PM.

Table 6-5: Fixed Route Service Span Performance Standards

Service Type	Weekday	Saturday	Sunday
Local	6AM-9PM	7AM-8PM	8AM-7PM
Circulator/Deviated	6AM-9PM	7AM-8PM	N/A
County	6AM-9PM	7AM-8PM	N/A
Lifeline	As Needed	N/A	N/A
Commuter	As Needed	N/A	N/A

Service Frequency

The service frequency standard provides a measure for the minimum amount of service provided on a route while it is operating. Local and circulator/deviated services have a standard of no more than 60 minutes between trips at all times that they operate. County routes have a standard of trips operating every 120 minutes. Lifeline and commuter routes should operate as frequently as needed.

While the standards represent the minimum service frequency that should be provided, some routes may require more frequent service based on passenger loads. The standard for passenger loading is discussed in Section 6.3.4, Passenger Comfort.

Table 6-6: Fixed Route Service Frequency Performance Standards

Service Type	Weekday	Saturday	Sunday
Local	60	60	60
Circulator/Deviated	60	60	N/A
County	120	120	N/A
Lifeline (B-V Link)	As Needed	N/A	N/A
Commuter (NTC Commuter)	As Needed	N/A	N/A

6.3.2 Service Efficiency and Service Utilization

Service efficiency and utilization guidelines focus on ridership, specifically the amount of service used per unit of service provided. The two guidelines used to measure service efficiency and service utilization are passengers per hour and passengers per mile.

Passengers per Hour

The passengers per hour performance guideline measures the number of passenger boardings per revenue hour of service. The guideline set for each service is based on ridership and service levels. The guideline for local routes is higher while the guideline for other services is set lower. The guideline also varies by day of the week. The current overall fixed route passenger per hour is 12.6.

Table 6-7: Fixed Route Passengers per Hour Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	20.0	16.0	12.0
Circulator/Deviated	8.0	6.0	5.0
County	5.0	4.0	N/A
Lifeline (B-V Link)	3.5	N/A	N/A
Commuter (NTC Commuter)	5.0	N/A	N/A

Passengers per Mile

The passengers per mile performance guideline measures the number of passenger boardings per revenue service mile. Like passengers per hour, the guidelines are also specific to the fixed route service type, with local services having a higher guideline and lifeline services having a lower guideline. The guidelines also vary for each service based on the day of operation.

Table 6-8: Fixed Route Passengers per Mile Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	1.40	1.10	1.00
Circulator/Deviated	0.50	0.40	0.35
County	0.20	0.15	N/A
Lifeline (B-V Link)	0.15	N/A	N/A
Commuter (NTC Commuter)	0.20	N/A	N/A

6.3.3 Financial Efficiency

There are five guidelines proposed that measure financial efficiency of VVTA fixed routes. The average fare and farebox recovery guidelines are revenue focused guidelines. The other financial efficiency guidelines (cost per hour, cost per mile, and cost per passenger) are driven by operating costs. The guidelines for average fare and farebox recovery will increase in tandem with any fare increase that may be imposed in the future. Likewise, financial guidelines driven by operating costs will change annually based on changes to operating costs.

Average Fare

The average fare measures the farebox revenue generated per passenger boarding. The average fare guideline varies by service based on the fare required. The guideline set for local, circulator and deviate routes is $0.88. The average fare guideline is highest for lifeline and commuter services.

Table 6-9: Fixed Route Average Fare Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	$0.88	$0.88	$0.88
Circulator/Deviated	$0.88	$0.88	$0.88
County	$2.75	$2.75	N/A
Lifeline (B-V Link)	$5.50	N/A	N/A
Commuter (NTC Commuter)	$8.00	N/A	N/A

Farebox Recovery

Farebox recovery assesses the amount of farebox revenue raised relative to the cost of the service. The guideline for farebox recovery varies by fixed route service type and by day of the week. The farebox recovery guideline for commuter routes is the highest, with farebox revenues covering almost all of the costs of the service.

Table 6-10: Fixed Route Farebox Recovery Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	30.0%	25.0%	25.0%
Circulator/Deviated	12.0%	10.0%	10.0%
County	10.0%	15.0%	N/A
Lifeline (B-V Link)	10.0%	N/A	N/A
Commuter (NTC Commuter)	90.0%	N/A	N/A

Cost per Hour

The cost per hour guideline represents the maximum operating cost per revenue hour of service provided. The cost per hour guideline for local, circulator and deviated services is the

same, as is the cost per hour guideline for county, lifeline and commuter services. This guideline will have to be updated with changes in operating costs.

Table 6-11: Fixed Route Cost per Hour Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	$60.00	$60.00	$60.00
Circulator/Deviated	$60.00	$60.00	$60.00
County	$75.00	$75.00	N/A
Lifeline (B-V Link)	$75.00	N/A	N/A
Commuter (NTC Commuter)	$75.00	N/A	N/A

Cost per Mile

Cost per mile shows the operating cost per revenue mile. The cost per miles guideline is higher for local, circulator and deviated routes and lower for county routes. This guideline will have to be updated with changes in operating costs.

Table 6-12: Fixed Route Cost per Mile Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	$4.00	$4.00	$4.00
Circulator/Deviated	$4.00	$4.00	$4.00
County	$3.00	$3.00	N/A
Lifeline (B-V Link)	$3.50	N/A	N/A
Commuter (NTC Commuter)	$3.50	N/A	N/A

Cost per Passenger Boarding

The cost per passenger represents the operating cost per passenger boarding. The guideline is lower for local routes and higher for lifeline routes. The cost per passenger boarding guidelines varied based on service type and the day operated.

Table 6-13: Fixed Route Cost per Passenger Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	$3.15	$4.25	$4.50
Circulator/Deviated	$9.00	$10.50	$11.00
County	$14.00	$20.00	N/A
Lifeline (B-V Link)	$27.50	N/A	N/A
Commuter (NTC Commuter)	$14.00	N/A	N/A

6.3.4 Passenger Comfort

The sole performance guideline for passenger comfort is passenger loading.

Passenger Loading

Passenger loading refers to the maximum number of passengers aboard a bus at one time. The guideline measures the maximum passenger loads on a trip relative to the seated capacity of the bus. On routes of relatively short length, the passenger loading guideline is 120 percent of seated capacity. On longer lifeline and commuter routes, all passengers should be guaranteed a seat. Therefore, the guideline for these services is a maximum load of 100 percent of the seated capacity. If a route consistently exceeds the loading guideline, service frequency should be increased on the route in order to bring loads into accordance with the guideline.

Table 6-14: Passenger Loading Guidelines

Service Type	Maximum Load
Local	120%
Circulator/Deviated	120%
County	120%
Lifeline (B-V Link)	100%
Commuter (NTC Commuter)	100%

6.4 Direct Access Performance Guidelines

Some similar and some unique standards and guidelines are proposed for Direct Access, VVTA's ADA demand response service. Direct Access requires a different set of performance standards and guidelines since it is a different type of service than fixed route services. Direct Access standards and guidelines are grouped under three general themes: service utilization, service quality, and financial performance.

6.4.1 Service Utilization

Ridership is the proposed guideline to measure service utilization.

Ridership

The ridership guideline evaluates the productivity of the Direct Access service. The guideline is measured by the number of passengers per revenue service hour. The guideline is higher for weekday service and lower for Saturday and Sunday service.

Table 6-15: Direct Access Ridership Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	2.5	2.0	1.5

6.4.2 Service Quality

The quality and dependability of Direct Access service is determined by its performance against five guidelines: average travel time, on-time performance, trip denial rate, telephone performance, and customer cancellation and no-show rates.

Average Travel Time

Users of Direct Access should expect their trip to be completed in a timely manner. For average travel time, average Direct Access travel time is compared to the travel time for a similar trip on fixed route transit. Average travel time should not exceed two times the equivalent trip taken on fixed route transit.

On-time Performance

Direct Access on-time performance is measured by the actual pick-up time relative to the scheduled pick-up time. The guideline for Direct Access on-time performance is 95 percent of all trips must be within plus or minus 10 minutes of the scheduled pick-up time.

Telephone Performance

Telephone performance rates the amount of time customers are put on hold when they are trying to book a Direct Access trip. Because VVTA has an automated menu for passengers when calling VVTA, hold time includes wait time for an operator to answer a customer call. Customers should not be placed on hold for more than 120 seconds while attempting to book a trip.

Trip Denial Rate

The trip denial rate measures the percentage of eligible Direct Access customers who were denied a requested trip. There should be no denials of service.

Customer Cancellation and No-show Rates

Customer cancellations and no-show rates measure the percent of trips that are cancelled due to the fault of VVTA. If a customer cancels the trip or does not show up when the Direct Access vehicle arrives it is not considered VVTA's fault and would not be counted as a customer cancellation or no-show. Customer cancellations and no-shows should account for no more than five percent of all Direct Access trips.

6.4.3 Financial Performance

There are four guidelines proposed to gauge Direct Access financial performance: farebox recovery, cost per passenger, cost per revenue hour, and cost per revenue mile.

Farebox Recovery

The guidelines for Direct Access farebox recovery vary based on the day of operation. The guideline is higher on weekdays and lower on Sunday. Farebox recovery guidelines will have to be modified if there are any changes to base fares.

Table 6-16: Direct Access Farebox Recovery Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	10.0%	9.0%	8.0%

Cost per Hour

The cost per revenue hour is the operating cost per revenue hour. The cost per hour guideline for Direct Access is the same on weekdays, Saturday and Sunday. The guideline must be modified with annual changes to operating costs.

Table 6-17: Direct Access Cost per Hour Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	$70.00	$70.00	$70.00

Cost per Mile

The cost per mile is the operating cost per revenue mile. The Direct Access cost per mile guideline is the same on weekdays, Saturday and Sunday. The guideline must be modified with annual changes to operating costs.

Table 6-18: Direct Access Cost per Mile Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	$4.25	$4.25	$4.25

Cost per Passenger

The cost per passenger is the operating cost per passenger boarding. The cost per passenger guideline varies based on the day of operation. The guideline must be modified with annual changes to all costs related to operations.

Table 6-19: Direct Access Cost per Passenger Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	$30.00	$35.00	$35.00

7.0 Identification of Service Alternatives

7.1 Introduction

This chapter presents and analyzes the future service alternatives for the Victor Valley Transit Authority (VVTA). The route recommendations include alignment changes, span of service changes, and frequency changes. These service alternatives were developed based on findings from previous chapters of the study, where services were analyzed to determine what the strengths and weakness, as well as the future needs are for VVTA. An analysis of the Unmet Transit Needs Hearings testimony, presented below, was another tool used to create the route alternatives. The guiding principles and process for developing the recommendations are also presented in this chapter.

7.2 Unmet Needs Analysis

Victor Valley uses some of its LTF funding for streets and roads. Based on state law, if an area can qualify to use some of their LTF for streets and roads, they must demonstrate that there are no unmet transit needs that can be reasonably met. To determine if there are any unmet transit needs, each year Unmet Transit Needs Hearings are held in the Victor Valley. Victor Valley Transit has supplied the testimony from the unmet needs hearings for the last five years. Much of the testimony from the unmet needs hearings reflect the same comments that the study team heard during the public outreach process including:

- A desire for more frequent service on current routes, specifically Routes 23, 31, 41, 45, 52
- Apple Valley Road service
- Sunday service
- Down the Hill service
- Bus stop amenities

From the 2012 Unmet Needs process, Sunday service has been found to be a feasible, official unmet transit needs that is "reasonable to meet". To meet this need, the COA has proposed to operate a limited Sunday schedule. Details of Sunday service are presented in section 7.4.21.

7.3 Key Considerations

There were a number of key considerations guiding the development of service alternatives. The first consideration is to attempt to do no harm by maintaining service where it is utilized. The other is to try to address system issues including crowded conditions on buses and on-time performance issues to ensure that connections are made at transfer points and that riders have a reliable trip. Another consideration, which has been a consideration through many COAs, is to remove many of the one-way loops in favor of bi-directional service were appropriate. The cost of ADA service is a concern for VVTA and ways to manage ADA service is

a consideration of service alternatives. The final consideration is that Hesperia is considering moving the transfer point from the Post Office to the Civic Center, which will require a number of bus re-routes in Hesperia.

7.4 Service Alternatives

The definition of service alternatives was based on the analyses and public input from Phase I of the study that identified issues and opportunities, as well as information from the Unmet Needs hearings and guiding principles presented above. An initial route planning memo was delivered to VVTA to outline initial service concepts. A route planning workshop was held on September 13, 2012 to discuss the initial service concepts. This route planning workshop was a daylong event attended by members of the VVTA technical advisory committee, VVTA staff, key staff from each JPA member, SANBAG, and the consultant project manager. At the route planning workshop, JPA members provided guidance to the study team on preferred and not preferred concepts, as well as ideas for other route concepts to be evaluated.

Following is a presentation and analysis of the service alternatives for VVTA. This draft plan is a cost constrained plan that addresses many of the issues and will form a blueprint for future services for VVTA. The plan was presented to the public through customer drop-in session at major bus stops. Some of the proposed changes are scheduled to begin in 2014, while several new routes and route changes are proposed for implementation in 2016. Figure 7-1 presents a map of the 2014 route network as proposed. Figure 7-2 presents a map of the 2016 route network as proposed. Modifications to each individual route are analyzed in the sections following the proposed network maps.

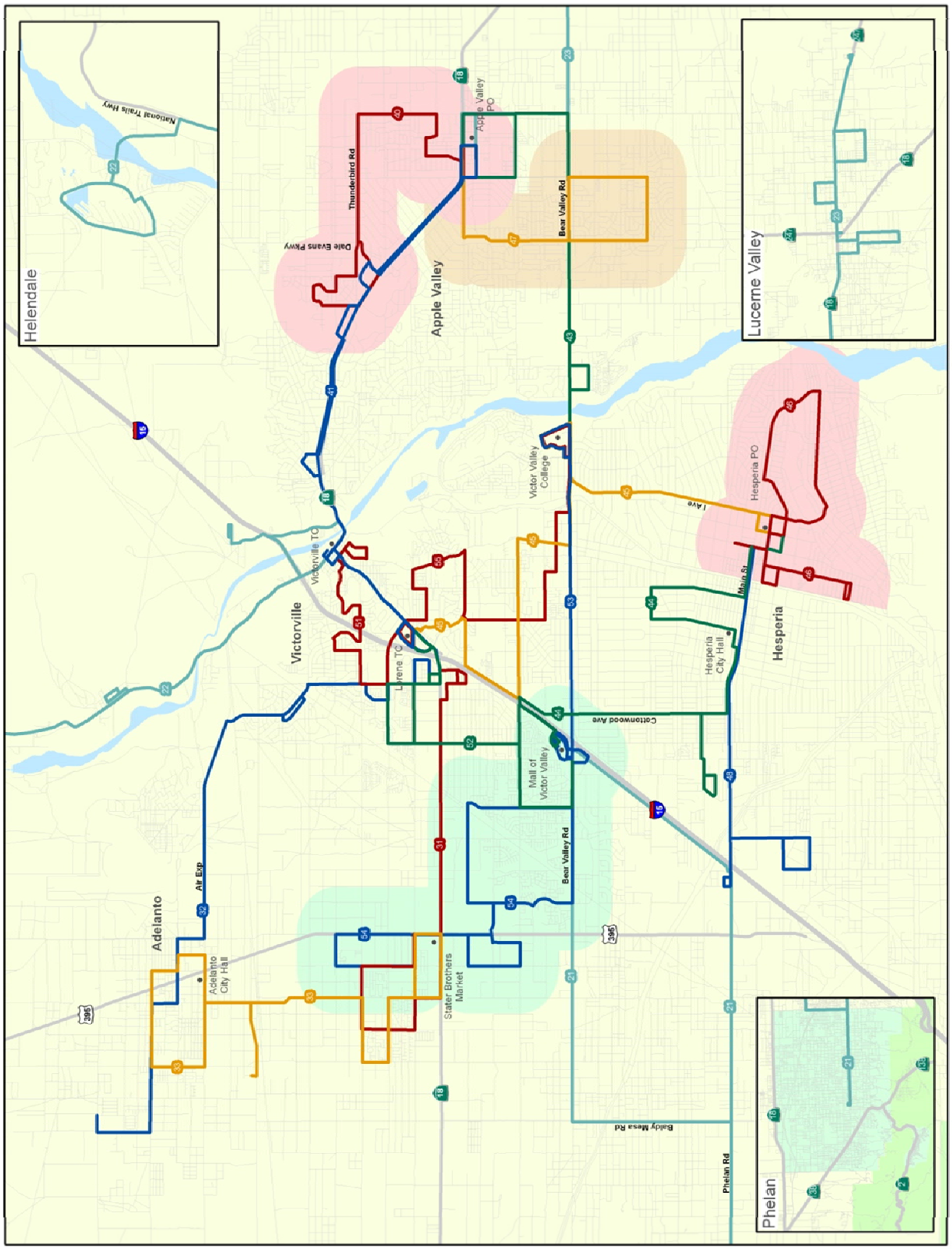


Figure 7-1: Proposed 2014 System Map

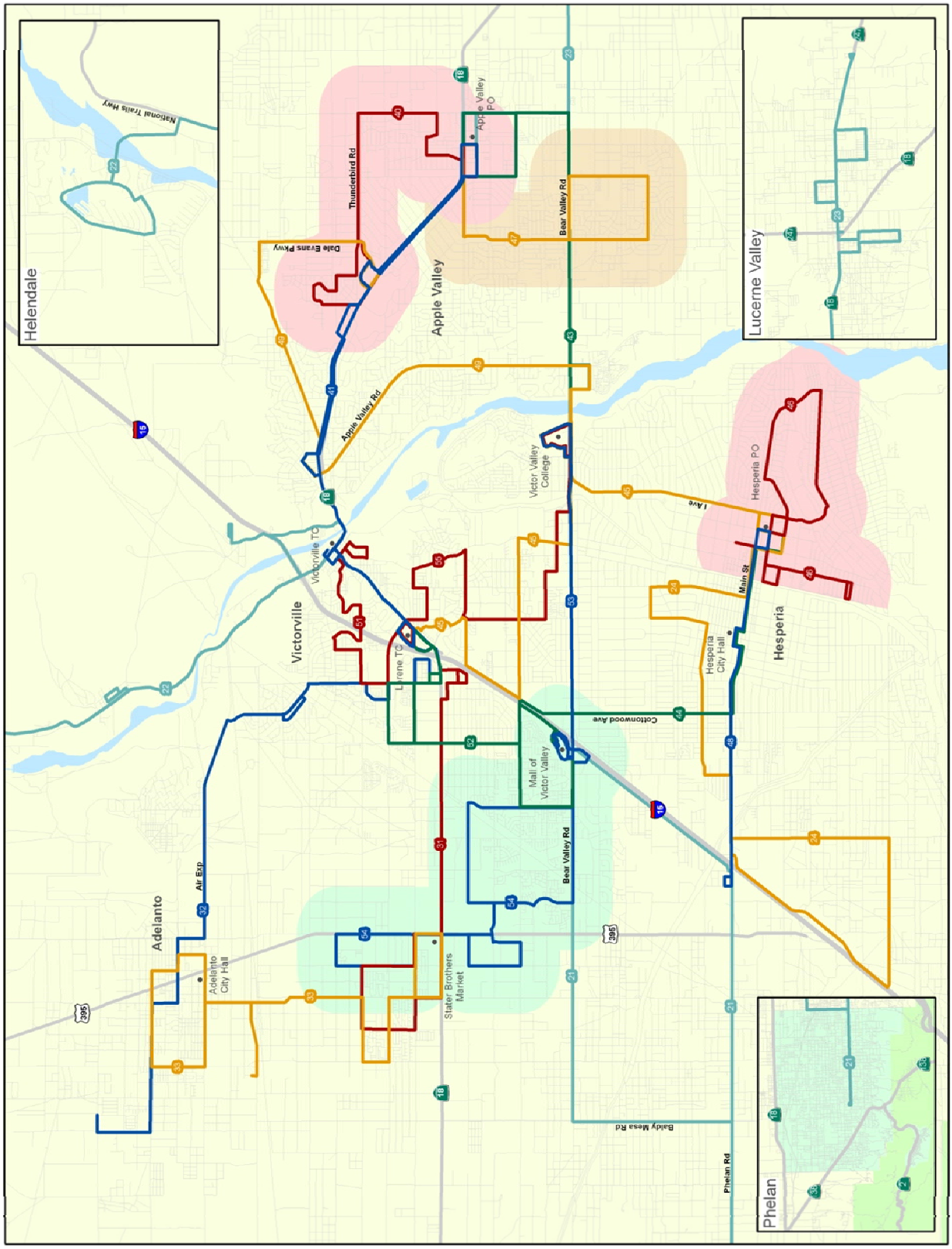


Figure 7-2: Proposed 2016 System Map

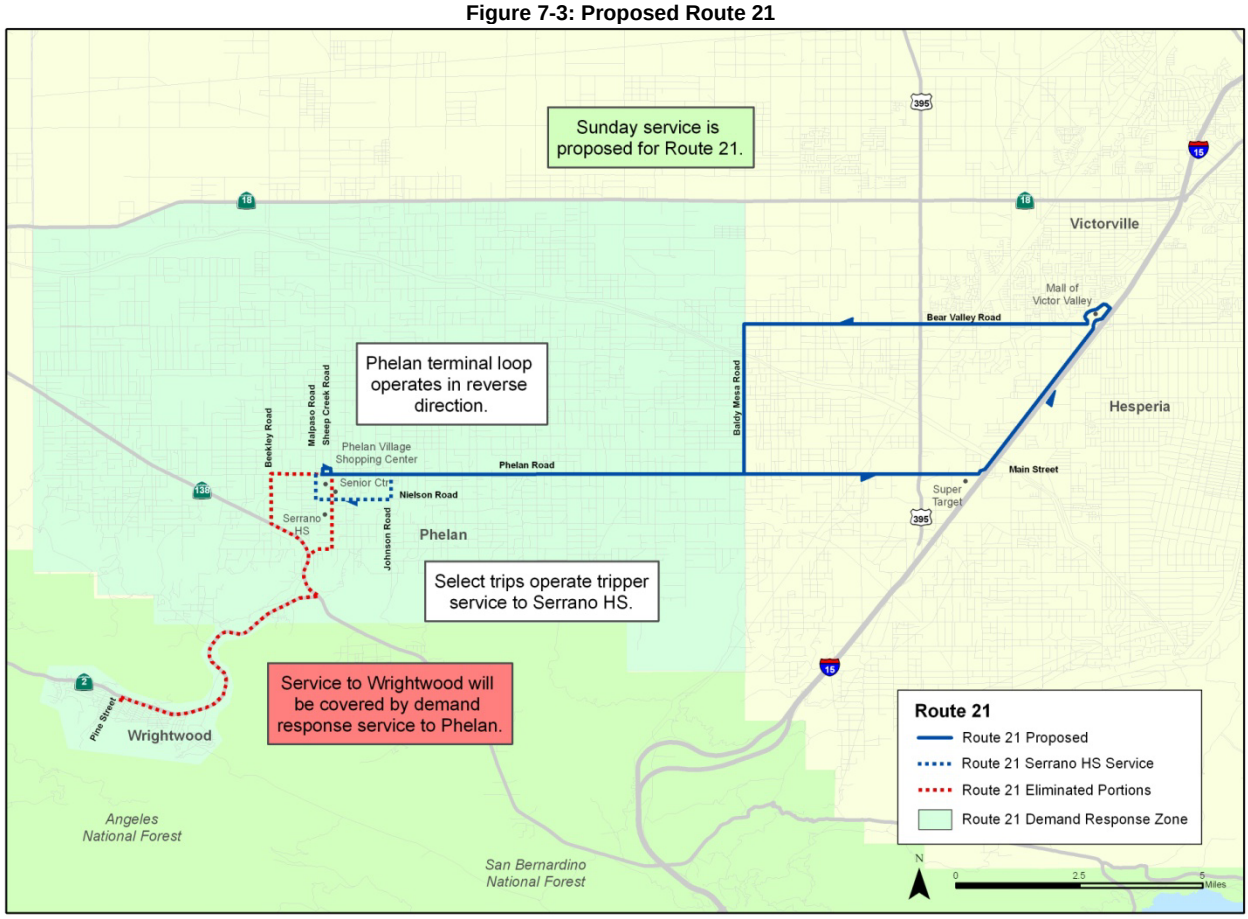
7.4.1 Route 21/20

There are three recommended changes for this route. The first change is to reverse the loop in Phelan which will move the left turn from the unsignalized Clovis/Phelan Road intersection to the signalized Sheep Creek/Clovis Road intersection. This modification will improve access to the post office and library. The second change is in response to the large number of deviations in the Tri-Community area which impacts running time. This change is the implementation of a demand response service that would allow for circulation throughout Phelan, Piñon Hills, and Wrightwood and would meet Route 21 buses in Phelan to connect to the fixed route system. The third change is to the alignment of the route on the eastern end to serve the Super Target in Hesperia.

There were a number of alternatives discussed regarding the eastern terminal of the route that provide service to the Super Target in Hesperia. The first was to continue to the mall via either Mariposa or Amargosa. The other two brought service through Hesperia either by operating directly to the Hesperia transfer point or by operating via Oak Hills. The discussion at the route planning workshop was that the eastern end of the route would operate to the Hesperia transfer point via Main Street and not serve Oak Hills. The service that operates between the mall and Serrano High School would continue as a two or four trip route via the current alignment along Bear Valley Road, Duncan Road, and Baldy Mesa Road. However, full analysis of the ridership pattern shows that a significant portion of the ridership is along Bear Valley Road in Victorville at all time periods.

The recommendation for this route is to implement the Tri-Community Circulator, Route 20, to meet Route 21 services, change the circulation in Phelan, and serve both the Super Target in Hesperia as well as the Victor Valley Mall. Service on Route 21 should operate every two hours, with a second bus operating during high ridership trips that serve Serrano High School similar to the service that operates today. These modifications should result in one additional vehicle in maximum service for the operation of the Tri-Community circulator and an increase in operating costs. Figure 7-3 presents the proposal for Route 21.

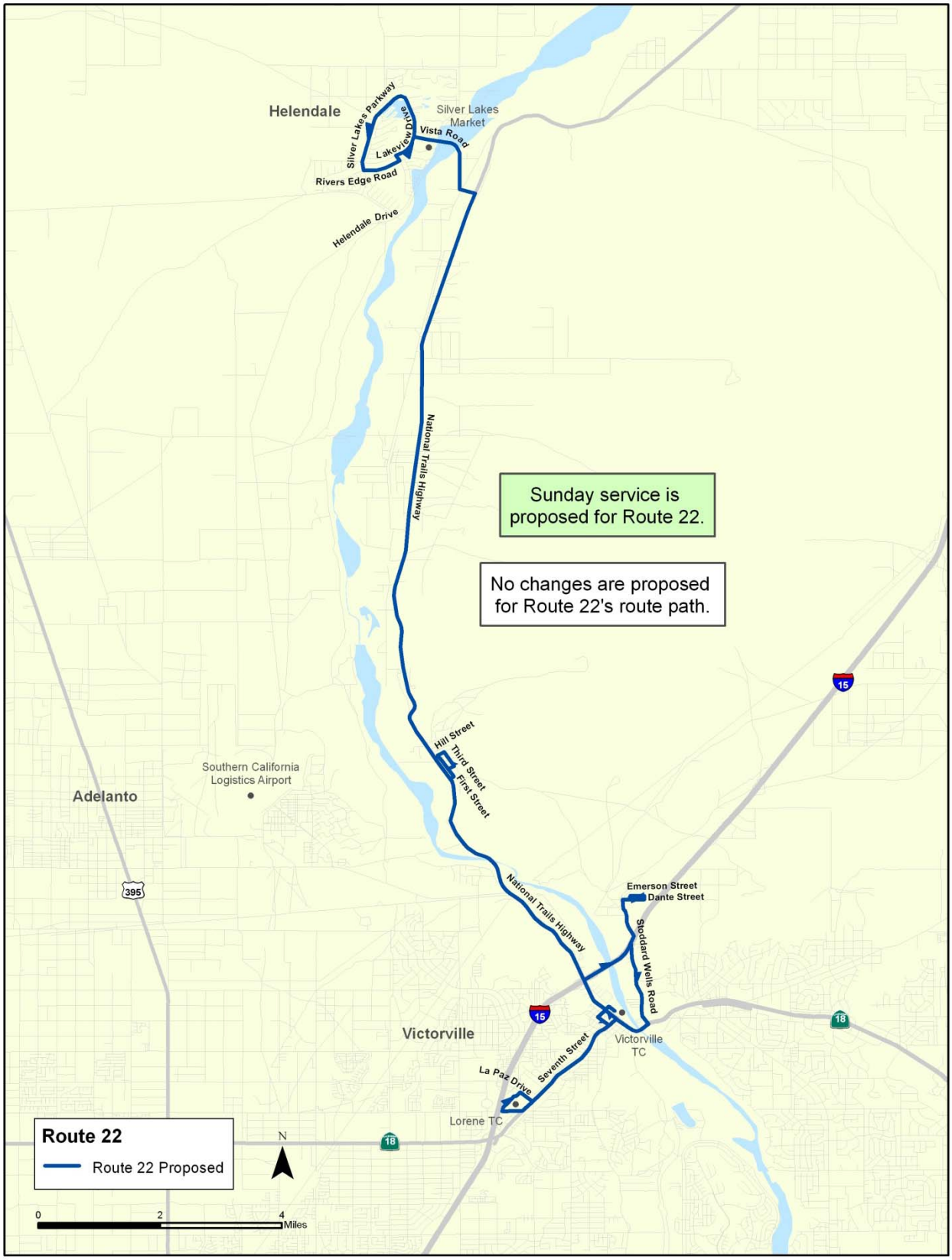
Figure 7-3: Proposed Route 21



7.4.2 Route 22

There are no proposed changes to Route 22. There was consideration of removing direct service to Oro Grande and have the area served via a deviation, however, ridership on the Oro Grande service is high enough to justify the service. There is concern regarding delays caused by trains at the Oro Grande train crossing. In the past, Route 22 used a private railroad crossing owned by the cement factory. VVTA could explore executing a Memorandum of Understanding with the cement factory to utilize this grade separated crossing to improve reliability of this route. Figure 7-4 presents Route 22.

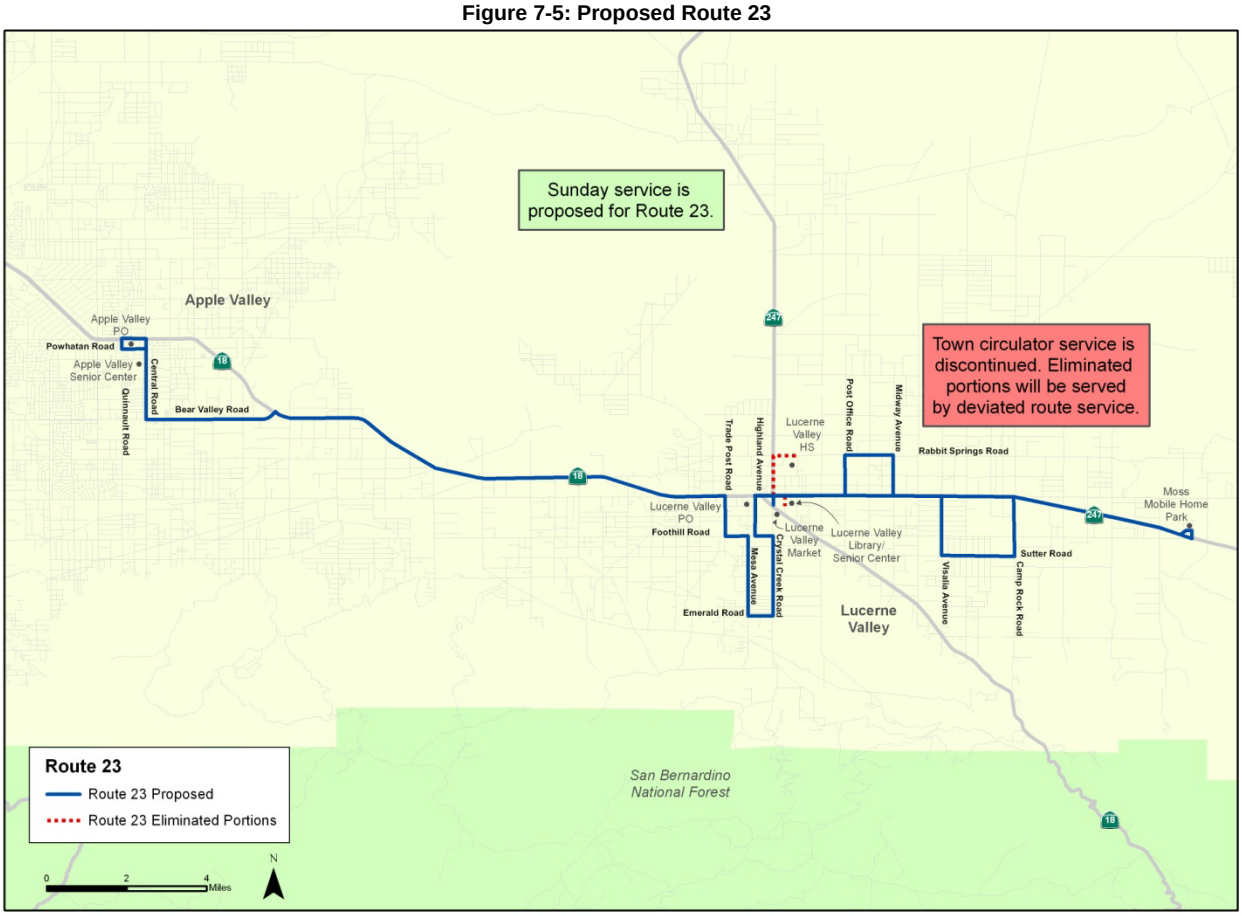
Figure 7-4: Route 22 Proposed



7.4.3 Route 23

The Lucerne Valley circulator has very little ridership and has a major impact on the on-time performance of this route, and is proposed to be eliminated. Areas that are served today via the circulator would still have service via deviations along the current Route 23. No changes in operating cost or vehicles operated in maximum service are expected, but on-time performance will improve. Service to mobile home parks along Bear Valley Road will be maintained. Figure 7-5 presents the changes to Route 23.

Figure 7-5: Proposed Route 23

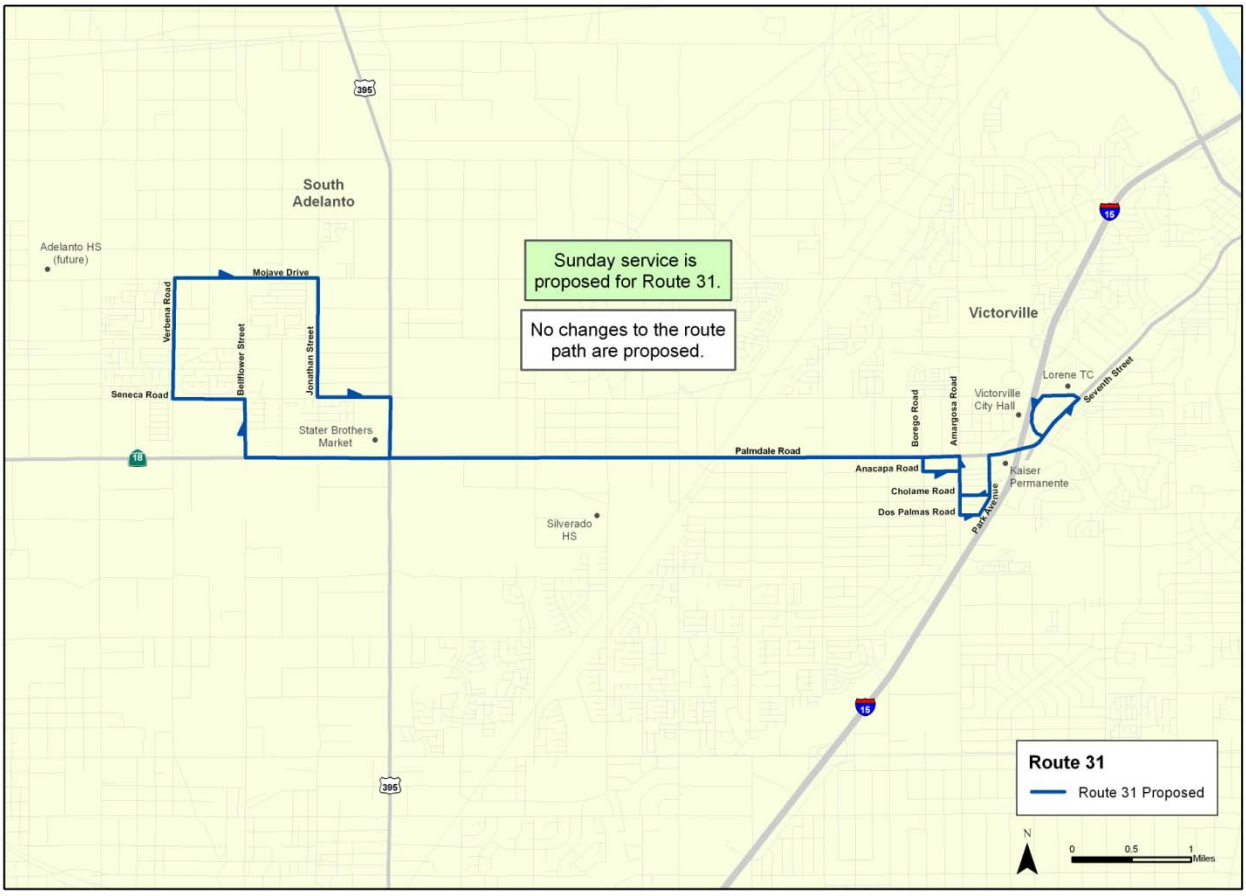


7.4.4 Route 31

On-time performance is a major concern for this route; however, this route will have no changes from today's operation. There was discussion regarding removing the loop in Victorville that serves Park Avenue and Amargosa Road to improve on-time performance. However, due to disabled customers and social services along this loop, it was decided that the service is needed. With no change in service there is no change in operating cost or vehicles operated in maximum service is expected. The addition of the La Mesa/Nisqualli interchange should reduce congestion at the Seventh Street/Palmdale Road intersection, which should improve the on-time performance of Route 31. The other issue that affects on-time

performance on Route 31 is the high ridership and frequent stops along the route. In the long term, this route may require an additional vehicle to maintain 30-minute service. Figure 7-6 presents Route 31.

Figure 7-6: Route 31 Proposed



7.4.5 Route 32

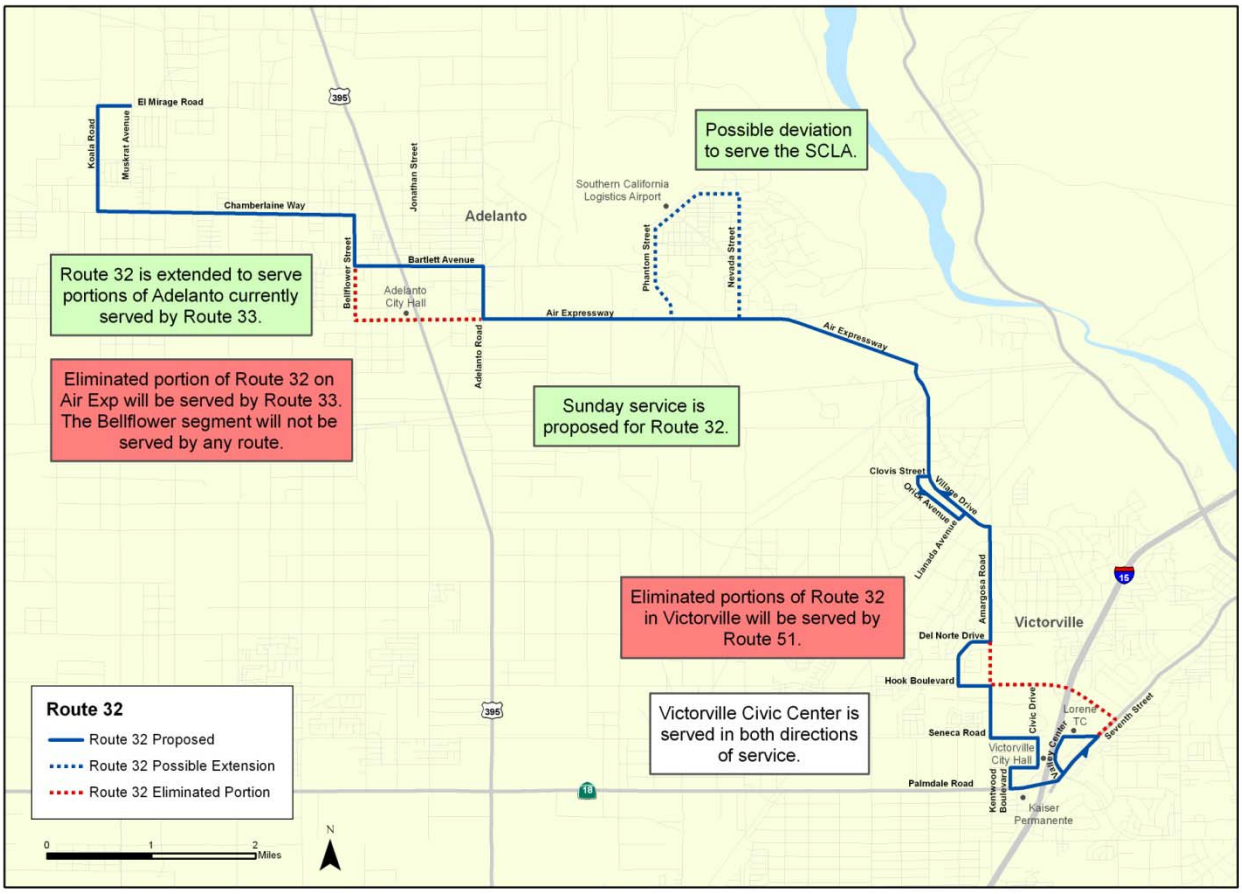
Route 32 has issues with on-time performance; however, ridership is not at the level to consider 30-minute service. The proposal is to change cycle time to two hours, extend service to Muskrat and El Mirage, and operate to the Southern California Logistics Airport (SCLA). These changes will allow the SCLA to be served directly, the Victorville Civic Center and courts to be served in both directions, and allow for improved service reliability.

The changes may not be convenient for all customers, as some who currently ride Route 32 may experience a longer ride. Serving Muskrat and El Mirage via Route 32 will allow for a reduction in Route 33 service coverage so that route can serve the new High School in Adelanto that should open in 2014. But, other passengers will find service more convenient since it would reduce the number of times people in north Adelanto would need to transfer and the additional running time will ensure that passengers will not miss connections at Seventh and Lorene.

Further, customers boarding and alighting in the Victorville Civic Center area will benefit from a consistent bi-directional service. Bus stop locations within SCLA will need to be identified.

Service would continue to operate once per hour on Route 32. This proposal adds one vehicle operated in maximum service and increases operating costs for the route. Figure 7-7 presents the proposal for Route 32.

Figure 7-7: Proposed Route 32



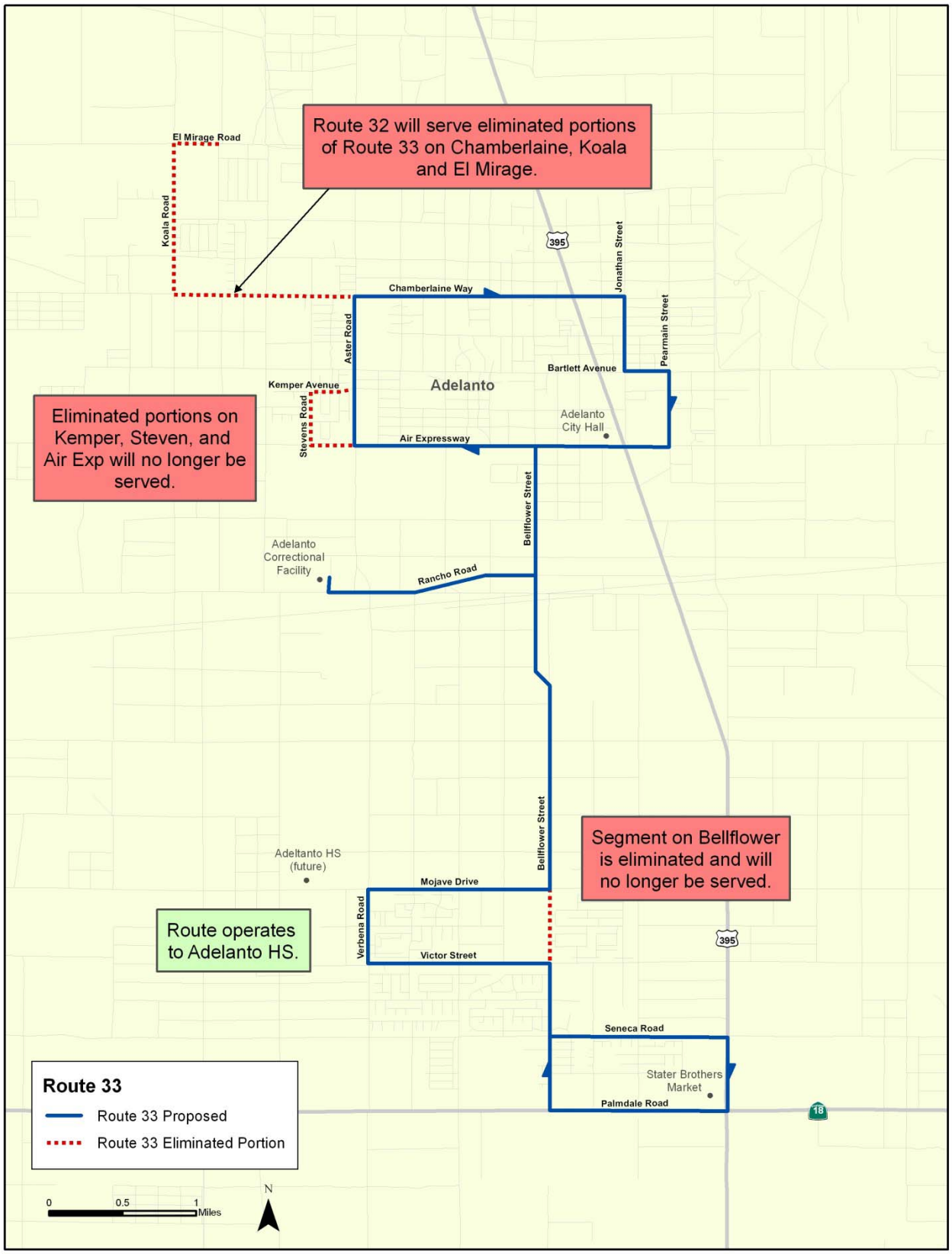
7.4.6 Route 33

Two modifications are proposed to the current Route 33. The first modification is a route extension to serve a new key generator, the new Adelanto High School located by the intersection of Verbena and Mojave. This school should open in 2014. The route would serve the high school by operating along Victor Street, Verbena Road, and Mojave Street all west of Bellflower. There is one bus stop at the intersection of Mojave and Bellflower that will need to be moved; however, no other bus stops along this portion of Route 33 will be discontinued.

Route modifications are also proposed in northern Adelanto. In conjunction with changes to Route 32, Route 33 would be shortened and no longer serve Muskrat and El Mirage. Service along parts of Chamberlaine Way and on Jonathan Street will be eliminated and served by Route 32. The route would also operate along Air Expressway only as far as Aster Road, cutting back service along Stevens and Kemper to shorten the route and keep service off of smaller residential streets. The elimination of service along Stevens and Kemper will eliminate two bus stops; one at Air Expressway and Stevens, the other at Kemper and Stevens. An existing bus stop at the intersection of Aster and Kemper is less than ¼ mile from the Kemper and Stevens bus stop. A new bus stop near the intersection of Air Expressway and Aster will be needed to serve passengers who used the Air Expressway and Stevens bus stop.

No changes in operating cost or vehicles operated in maximum service are expected. Figure 7-8 presents the changes to Route 33.

Figure 7-8: Proposed Route 33

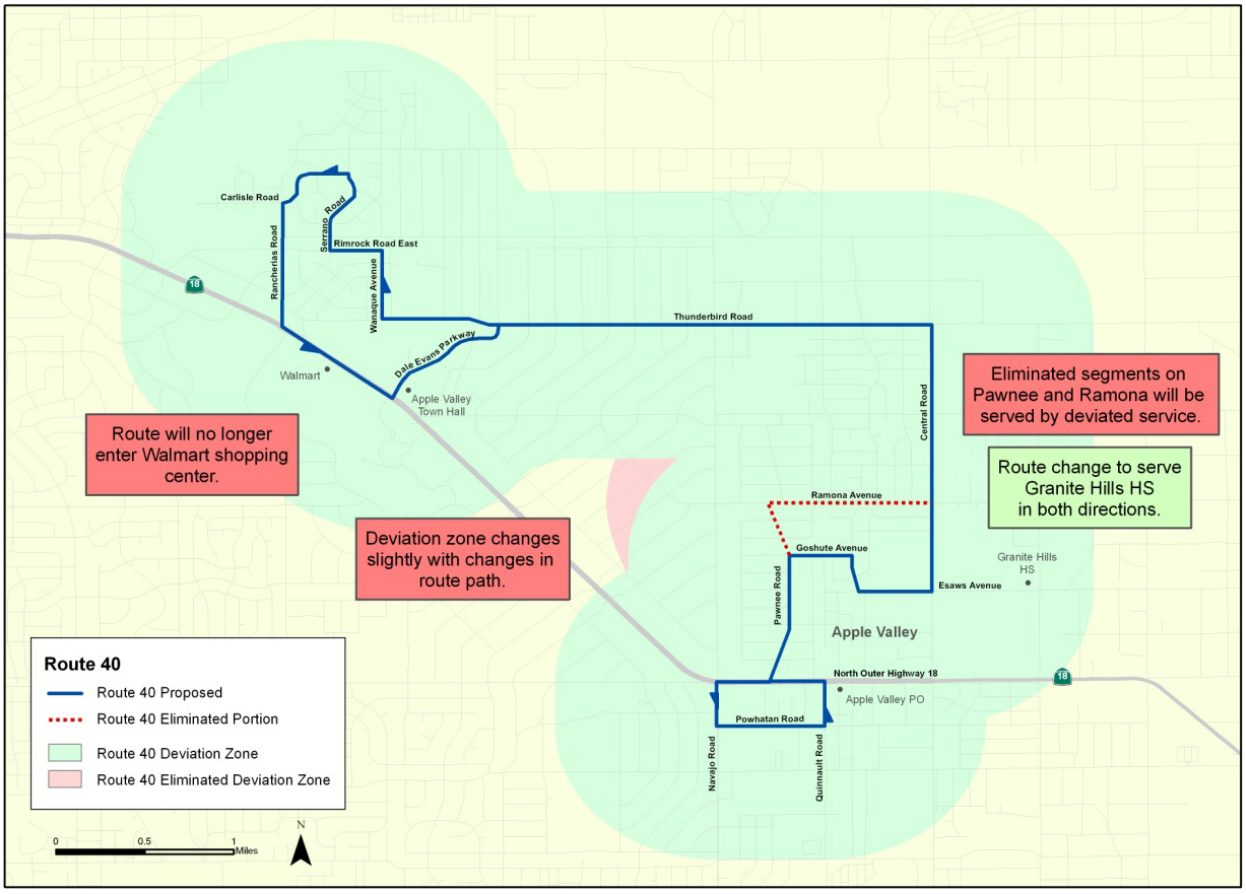


7.4.7 Route 40

One issue identified with Route 40 is that there is very little time for deviations on this route deviation service. When Super Walmart opens at the intersection of Dale Evans Parkway and Bass Hill Road, it is likely that the current Walmart on Highway 18 will close. Route 40 does not need to go into the current Walmart parking lot; rather, it can serve the shopping center on Highway 18, reducing travel time by a few minutes. Another potential source of time savings would be modifying the routing along Serrano and Carlisle. However, there are a number of apartments in this area and very little opportunity for significant time savings.

Apple Valley would like this route to provide service to Granite Hills High School by serving the intersection of Central Road and Esaws Avenue. This can be accomplished by rerouting the route from Pawnee and Ramona to Goshute Avenue, Pioneer Road and Esaws Avenue to Central Road. There would no longer be service on Pawnee north of Goshute and no service at all along Ramona. This will require the removal of bus stops along Pawnee Road and Ramona Avenue and the installation of new bus stops along Goshute Avenue, Pioneer Road, Esaws Avenue, and Central Road. No changes to operating costs or vehicles operated in maximum service are expected. The proposed changes to Route 40 are shown in Figure 7-9.

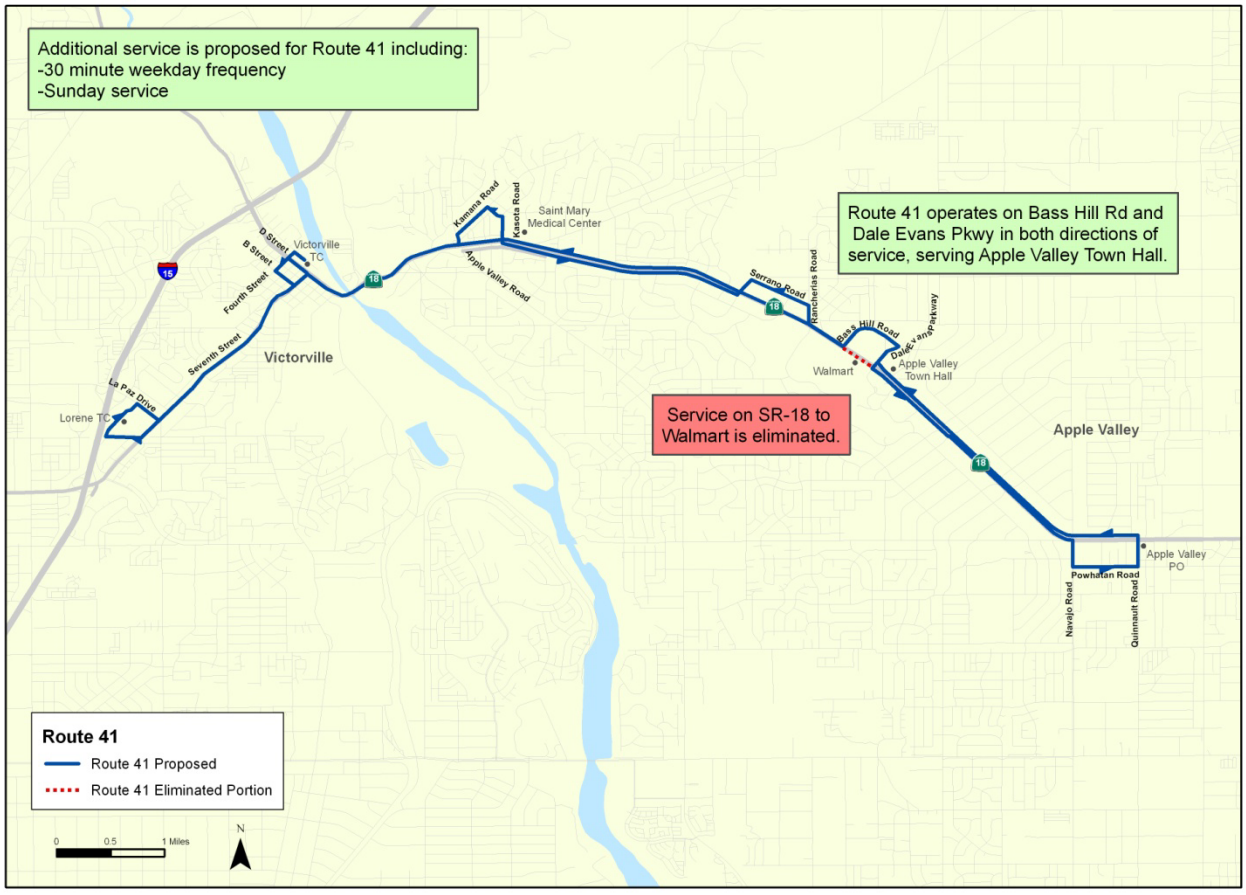
Figure 7-9: Proposed Route 40



7.4.8 Route 41

The recommendation for Route 41 is to modify the route to serve town hall in both directions. This can be done by eliminating the deviation into the old Walmart that will close when the Super Walmart opens at the intersection of Dale Evans Parkway and Bass Hill Road. Service to this shopping center could be provided by a stop on Highway 18. Service to Town Hall would be via Bass Hill Road and Dale Evans Parkway, with the bus stop being located across the street from Town Hall. This will allow for better service to the retail areas along Bass Hill Road. Bus stop locations along Bass Hill Road in the Apple Valley bound direction will need to be identified. The change to the route alignment will have no impact to operating cost or vehicles operated in maximum service. This route has been identified for 30-minute service during peak periods which will increase operating costs and add two vehicles operated in maximum service and increase operating cost. See Figure 7-10 for the proposed routing of Route 41.

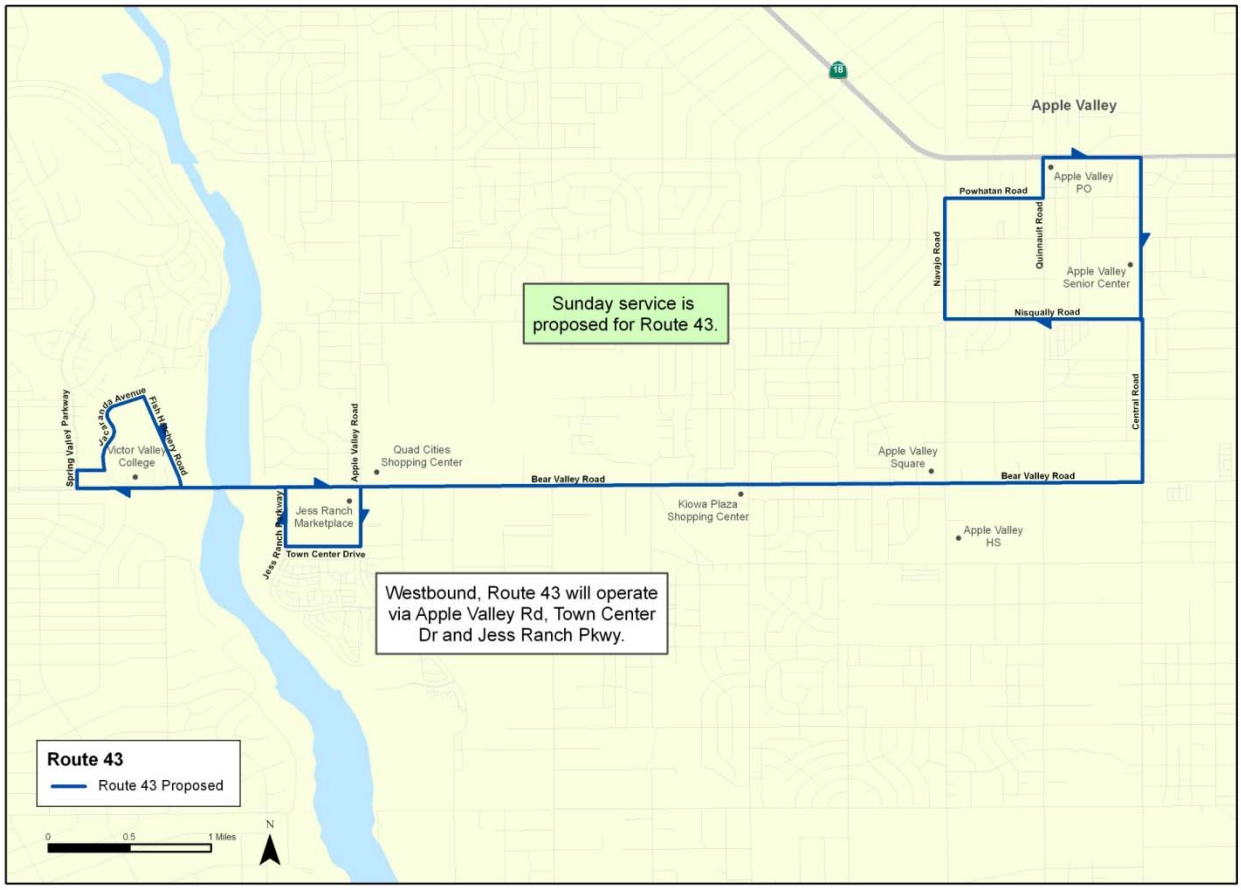
Figure 7-10: Proposed Route 41



7.4.9 Route 43

Route 43 will undergo a slight route modification to better serve the shopping areas in Jess Ranch, resulting in the removal of the bus stop at Bear Valley Road and Reata Road. Westbound service would utilize Apple Valley Road, Town Center Drive, and Jess Ranch Parkway instead of Bear Valley Road in this area of Apple Valley. This will also require the installation of bus stops along Apple Valley Road, Town Center Drive and Jess Ranch Parkway. Route 43 was discussed as a possible route to serve Granite Hills High School; however, the catchment area for Granite Hills High School is not within the service area for Route 43. The proposed modifications should have no impact to operating costs or vehicles operated in maximum service. See Figure 7-11 for the proposed routing of Route 43.

Figure 7-11: Proposed Route 43



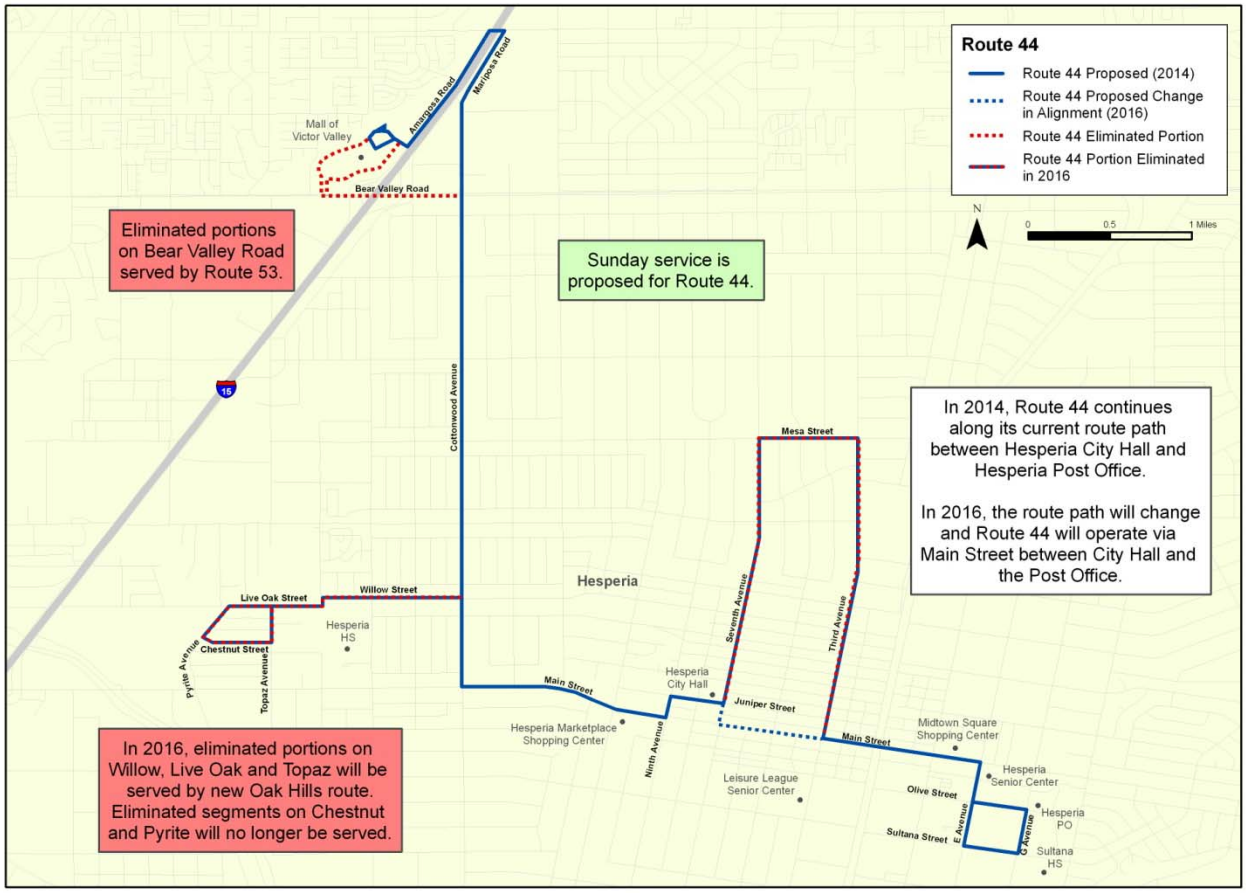
7.4.10 Route 44

There are a number of recommendations to be explored for Route 44. In Victorville, the mall approach would be modified by serving Cottonwood Avenue north of Bear Valley Road to Mariposa Road and crossing I-15 via the new Nisqualli/La Mesa overpass and accessing the mall via Amargosa. This would provide service to Azusa Pacific University, the Scandia amusement park, and a number of hotels and shopping centers, while avoiding congestion

along Bear Valley Road. This would require additional bus stops along Amargosa Road, Mariposa Road, and Cottonwood Drive. In Hesperia, route segments would be eliminated along Willow and Live Oak Street. Instead, these segments would be served by the new Oak Hills circulator.

A number of options were explored for modifying this route if the Hesperia transfer point is moved to the civic center. Route 44 could either terminate at the Civic Center or at the VVTA facility, with consideration given to whether or not the route should continue to serve the loop along Third Avenue/Mesa Street/Seventh Avenue or if that loop should be served via a different route. Depending on the selected route path, these modifications will result in either a reduction in operating cost and one vehicle operated in maximum service or no change to operating cost or vehicles operated in maximum service. See Figure 7-12 for the proposed Route 44.

Figure 7-12: Proposed Route 44



7.4.11 Route 45/Route 55

Route 45 is the highest ridership route and serves as a key connector to Victor Valley College. Peak service operates every 30 minutes today and has two variations, one that continues to Hesperia and one that goes only as far as Victor Valley College. The trips that continue to Hesperia are more crowded for three reasons:

- They serve more territory by serving Hesperia.
- They are scheduled for timed transfers to routes that operate once per hour.
- They are timed better for the class schedules at Victor Valley College.

The proposal for Route 45 divides the route into two routes that each operate once per hour, however, each route would operate at the same time in the hour to better meet transfers and serve people going to Victor Valley College. APC data shows that many of the Hesperia trips carry over 70 people each way while the short trips typically only carry 20 people. This alternative presents the greatest opportunity to reduce crowding between 7th and Lorene and Victor Valley College without adding significant resources.

The route that would continue to Hesperia (Route 45) would operate from the Seventh and Lorene Transfer point and operate via Burning Tree, Green Tree, Yates, Mariposa, Nisqualli and Hesperia Road to serve the college. This routing should provide a more reliable trip between Seventh and Lorene and the college due to fewer stops with lower ridership and higher speed roadways. In Hesperia, once the transfer point is moved to the Hesperia Civic Center, this route will need to be extended to the civic center transfer point, while maintaining service to Sultana High School.

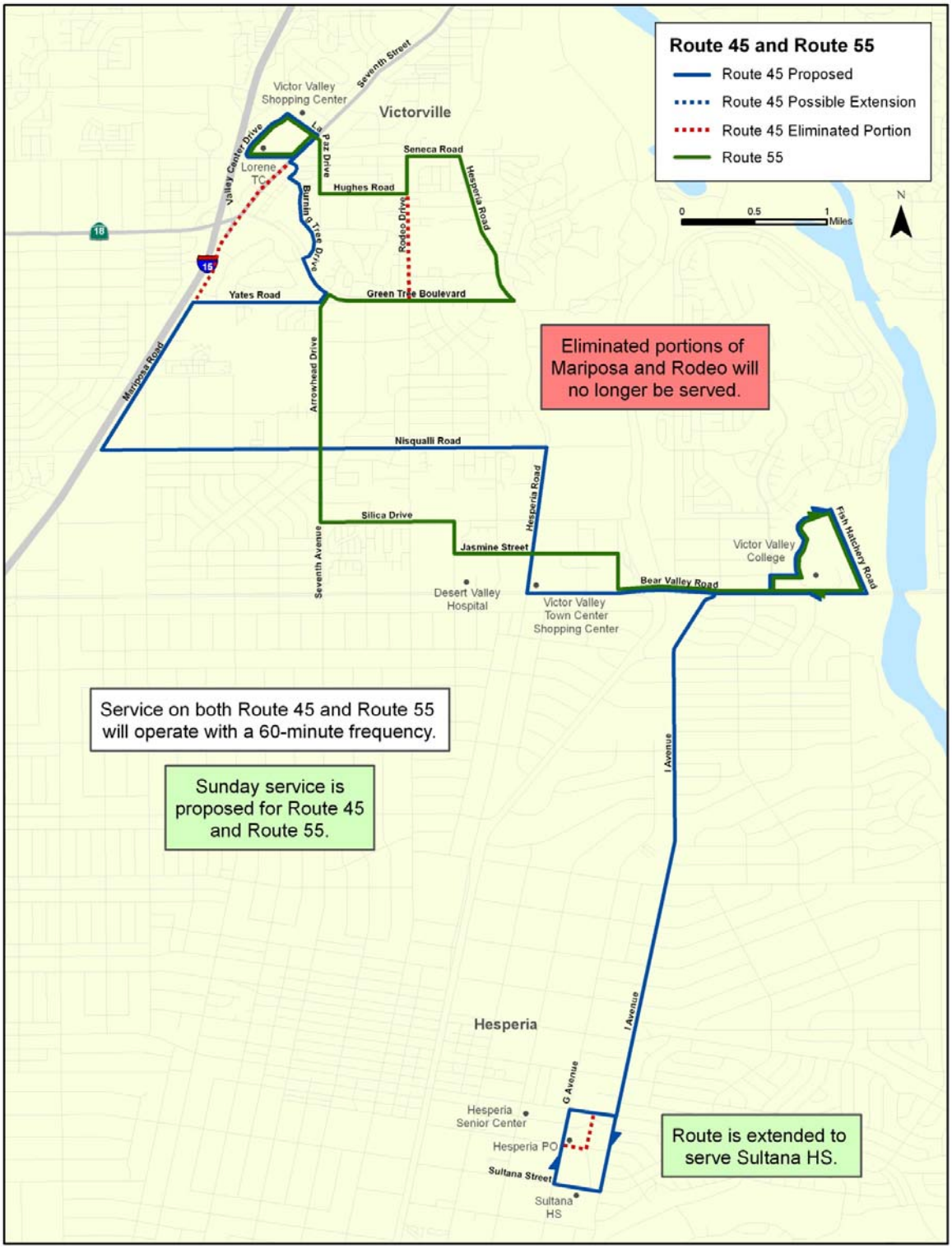
The other route (Route 55) would operate from Seventh and Lorene to the college via La Paz, Hughes, Rodeo, Seneca, Hesperia, Green Tree, Arrowhead, Seventh Avenue, and Jasmine. These modifications should have no impact in vehicles operated in maximum service and very little impact on operating cost. See Figure 7-13 for the proposed routing of Routes 45 and 55.

Only two bus stops would lose service; Rodeo Drive and Pebble Beach Drive, and Rodeo Drive and Trinidad Drive. These two bus stops represent less than 2/3 of one percent of current Route 45 boarding and alighting activity. Additional bus stops will be needed to account for two-way service along many segments of these two routes and areas streets that may not have service today.

A concern about this route proposal is that it adds an additional bus route to the 7th and Lorene transfer center. Two existing bus routes, Route 22 and the B-V Link, stop east of the transfer points since there are not enough bus bays. Adding an additional route will require another bus to stop east of the transit center, possibly increasing walking distances and missed

connections for transferring passengers. To address this issue, bus berth assignments at 7th and Lorene should be modified based on observed transfer activity.

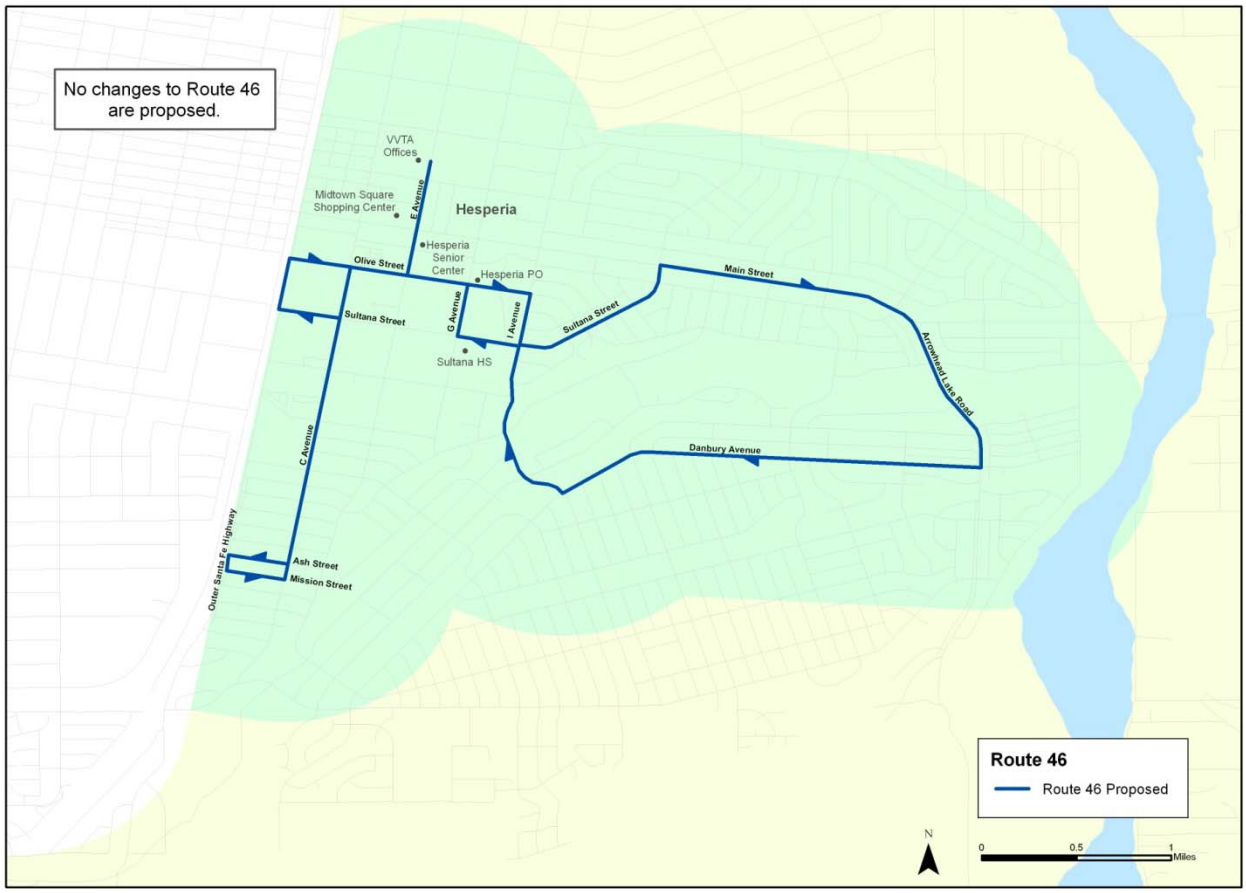
Figure 7-13: Proposed Route 45 and Proposed Route 55



7.4.12 Route 46

When the Hesperia transfer point is moved from the post office to the Civic Center, Route 46 will need to be modified to serve that transfer point. Operations staff believes that this route has sufficient time to serve all areas that are served today, as well as serve deviations and the new transfer point. Modifications to Route 44 may relieve pressure on Route 46, allowing this route to discontinue service to the VVTA facility. There was some discussion regarding converting Route 46 to a pure demand response service east of the railroad tracks but it was decided that this route should continue as a route deviation service. This should have no impact to operating costs or vehicles operated in maximum service. See Figure 7-14 for proposed Route 46.

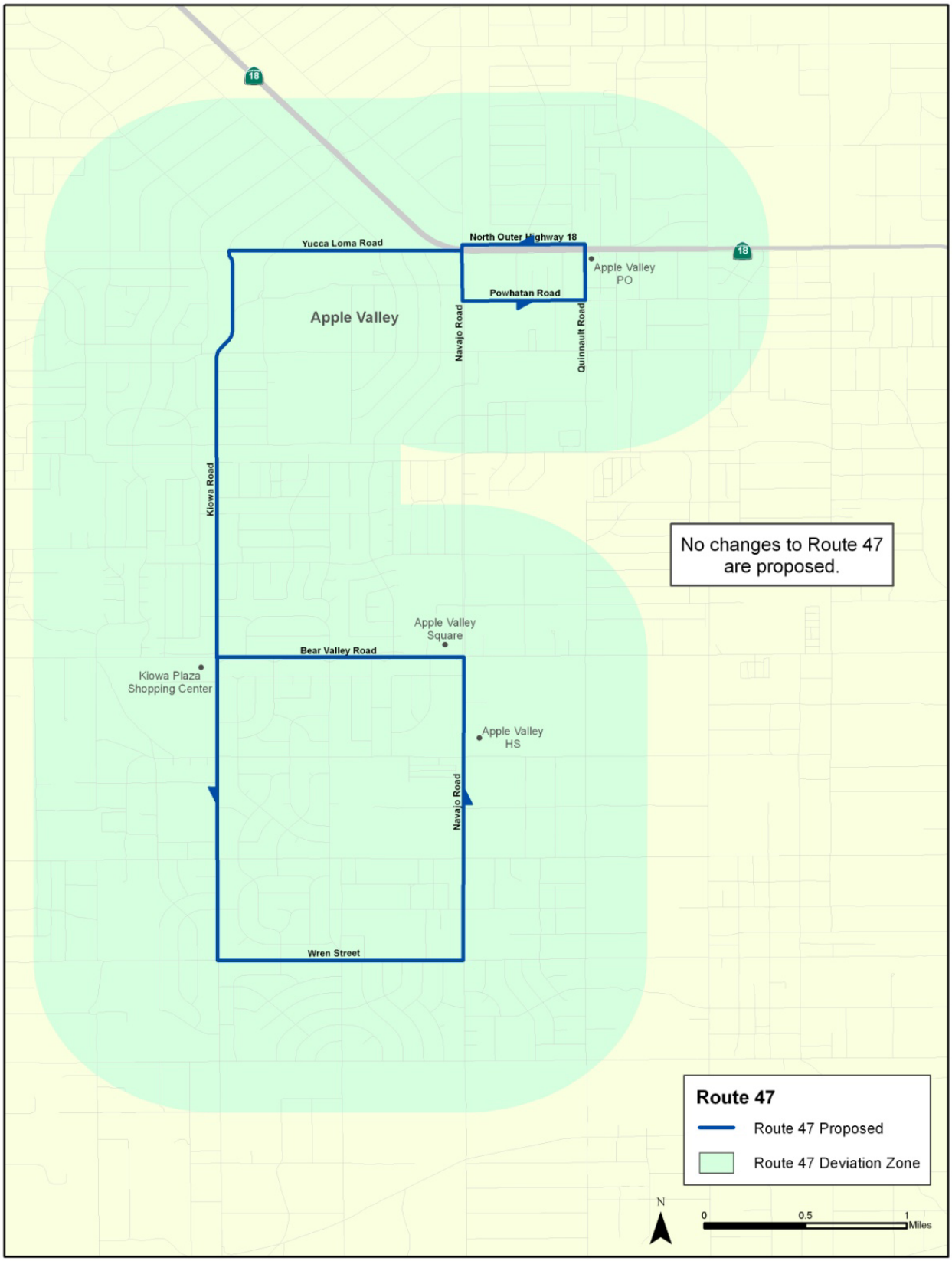
Figure 7-14: Proposed Route 46



7.4.13 Route 47

No changes from existing service are proposed for Route 47. Accordingly, operating cost and vehicles operated in maximum service are not expected to change. See Figure 7-15 for the proposed route of Route 47.

Figure 7-15: Proposed Route 47

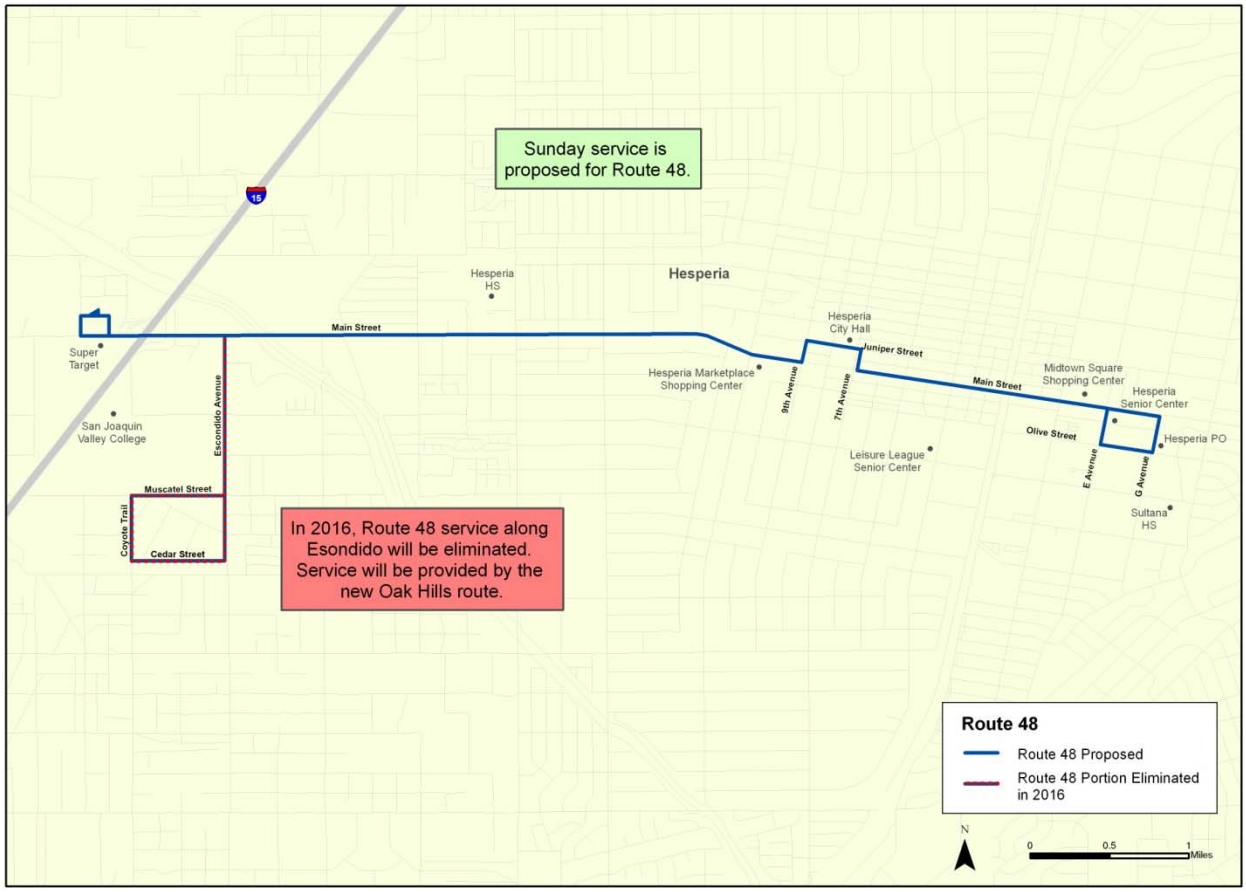


7.4.14 Route 48

The City of Hesperia has a goal for Route 48 to be a Main Street only service. To achieve this goal, the recommendation for the route is to remove service from Escondido Avenue to provide a "straight shot" between the transfer point and Super Target. See Figure 7-16. Service along Escondido Avenue will be provided by a new Oak Hills area service in Fiscal Year 2016.

When the transfer point is moved to the Civic Center, this route should be scaled back to this location to ensure that the route has enough running time to operate a 60-minute cycle and to ensure timely transfers. Currently, the cycle time of this route is 67 minutes, which will be reduced by eliminating service along Escondido. This should have no impact to operating costs or vehicles operated in maximum service.

Figure 7-16: Proposed Route 48

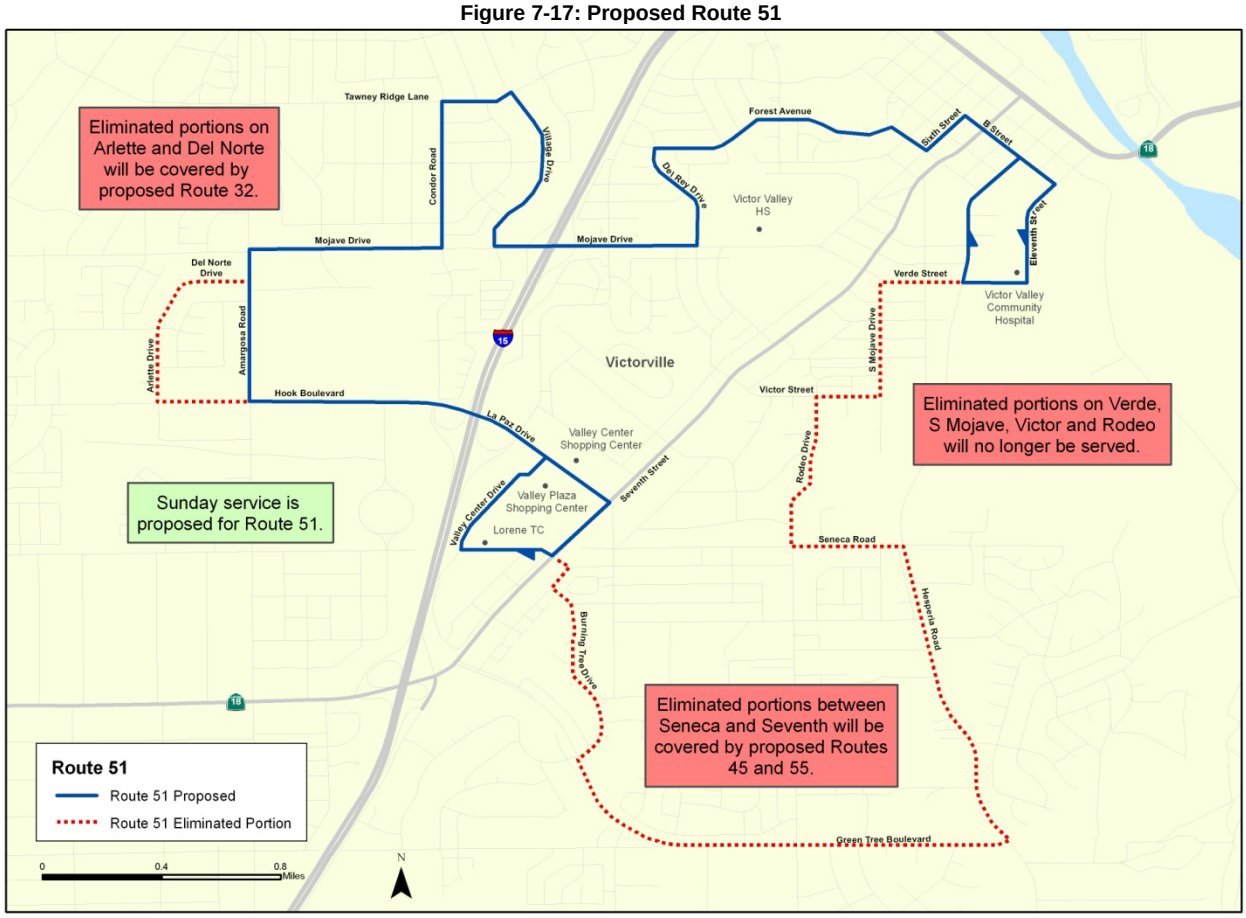


7.4.15 Route 51

For many years, VVTA has wanted to make the Victorville Circulator into a two-way route instead of a loop. As proposed, Route 51 would be bi-directional but it will serve only the northern half of the current alignment. Service will be provided between the Seventh and Lorene Transfer Center and Victor Valley Community Hospital. Modifications to Route 45 will serve a

portion of the southern part of Route 51 that is proposed to be eliminated. Three bus stops will no longer be served that are not in a close proximity of another bus stop; Mojave Drive and Joshua Street, Victor Street, and Mojave Drive (Victorville Senior Center), and Rodeo Drive and Victor Street which represent approximately 2 percent of the current Route 51 Boarding and Alighting activity. This should have no impact to operating costs or vehicles operated in maximum service. See Figure 7-17 for Route 51 as proposed.

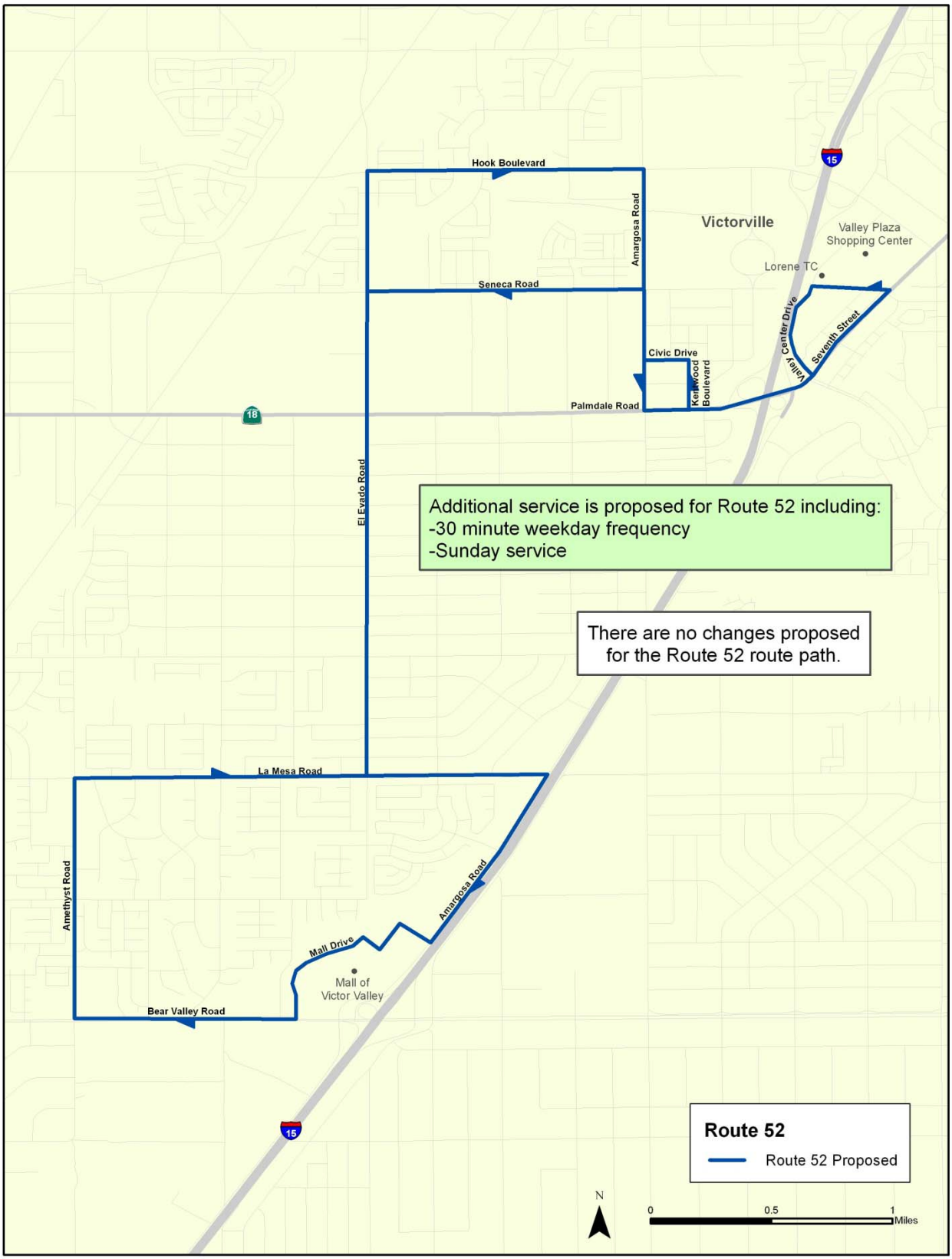
Figure 7-17: Proposed Route 51



7.4.16 Route 52

There are two concerns with current Route 52 operations, on-time performance and crowding. These two issues are related as crowded buses have a longer dwell time at bus stops. VVTA staff has observed buses leaving Seventh and Lorene crowded and that there is a high amount of turnover on the route, with passengers boarding and alighting throughout. To address the on-time performance and crowding concerns, 30-minute peak service is recommended with no change in alignment. Providing 30-minute service along this route will add one more vehicle operated in maximum service as well as increase operating costs. See Figure 7-18 for proposed Route 52.

Figure 7-18: Proposed Route 52

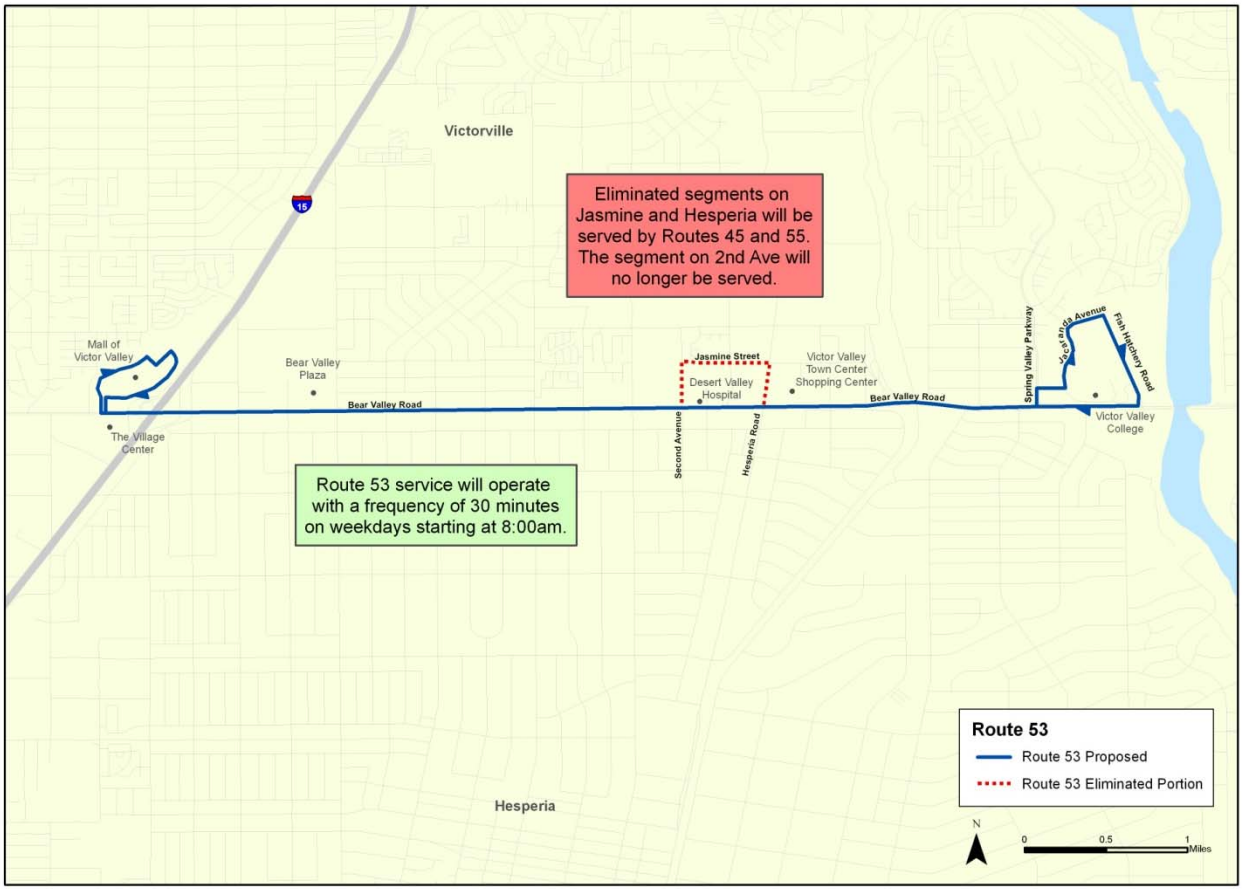


7.4.17 Route 53

On September 24th, 2012, VVTA modified the loop near Desert Valley Hospital to remove service from Bear Valley Road between Second Street and Hesperia Road. This reversed the direction of eastbound service only and removed an instance where Route 53 doubled back on itself. Despite this recent adjustment, a true Bear Valley Road route is recommended that does not operate on Second, Jasmine and Hesperia, but stays on Bear Valley Road in both directions of service.

Eliminated route segments on those streets will be served by other routes. Vehicle operators lent support for this recommendation. Additionally, the route planning memo discussed providing 30-minute service earlier in the day to alleviate crowding for students going to Excelsior High School. There are no changes in vehicles operated in maximum service proposed for Route 53, however if 30-minute service begins earlier in the day, there would be an increase in operating costs. See Figure 7-19 for proposed Route 53.

Figure 7-19: Proposed Route 53

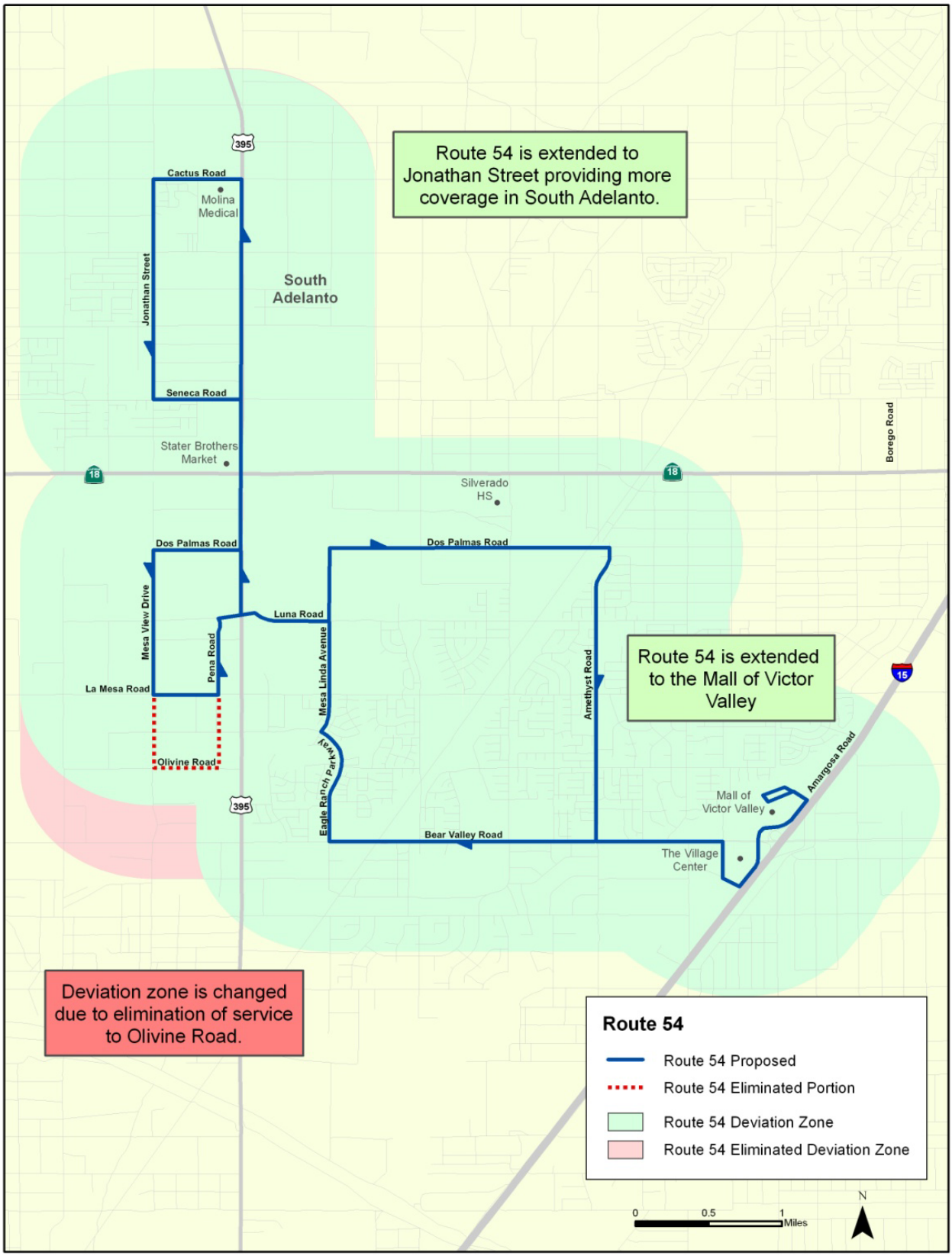


7.4.18 Route 54

Route 54 is one of the newest VVTA routes, serving recently developed parts of East Victorville. Currently, its productivity is rather low. An easy change that would improve the productivity of this route would be to extend this route to the mall. This route should have enough time to serve the mall within its current cycle, however, it may be desirable to shorten the route a little to allow for deviations.

One location to shorten this route would be to shorten the loop west of US-395 by reversing the loop direction and only going as far south as La Mesa instead of Olivine. In Adelanto, modification to the service to Molina Medical by having the northbound service operate via US-395 and have the southbound service operate via Cactus to Jonathan returning to US-395 at Seneca. This should have no impact to operating costs or vehicles operated in maximum service. See Figure 7-20 for proposed Route 54.

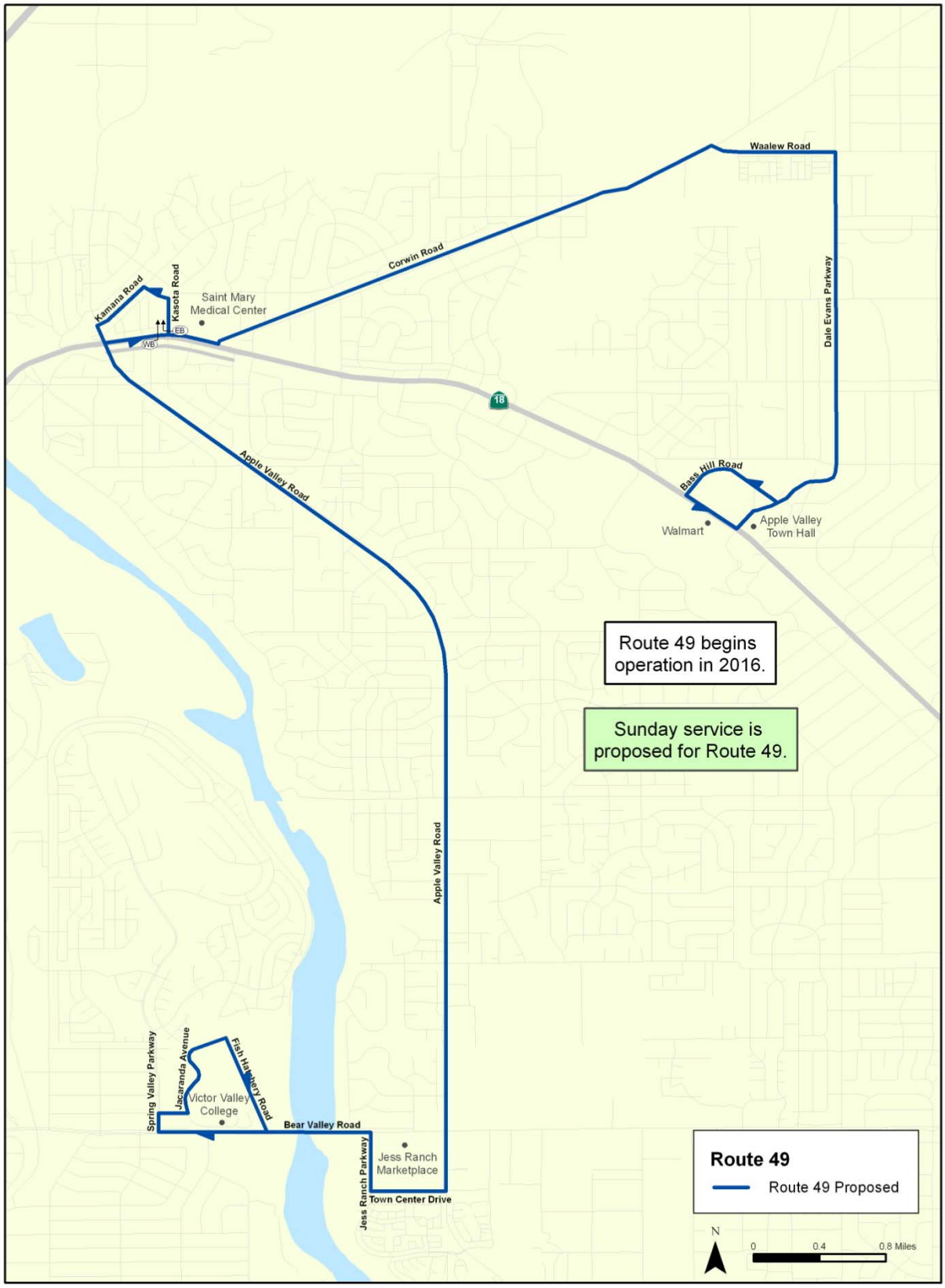
Figure 7-20: Proposed Route 54



7.4.19 New Apple Valley Road Route (Route 49)

Through the customer outreach process, many comments advocated for a new Apple Valley Road route. During the route planning workshop, held with VVTA staff and representatives of Apple Valley, discussions on the proposed route concentrated on its northern terminal, with three options proposed; Seventh/Lorene in Victorville, the Regional Public Safety Training Center in North Apple Valley, or Town Hall in Apple Valley. It was decided that Town Hall is the most desirable destination for the Apple Valley Road route. This alternative allows service to the mobile home park at the intersection of Waalew Road and Dale Evans Parkway that a number of VVTA operators and passengers have requested to be served. The southern end of this route would be Victor Valley College. The route would also serve the Jess Ranch area near the intersection of Bear Valley Road and Apple Valley Road. Bus stop locations will need to be identified for this route. This new route will provide service every 60 minutes and will require an additional vehicle operated in maximum service and will add revenue hours and operating costs. The proposed Apple Valley Road route is shown in Figure 7-21. This route is proposed to begin service in Fiscal Year 2016.

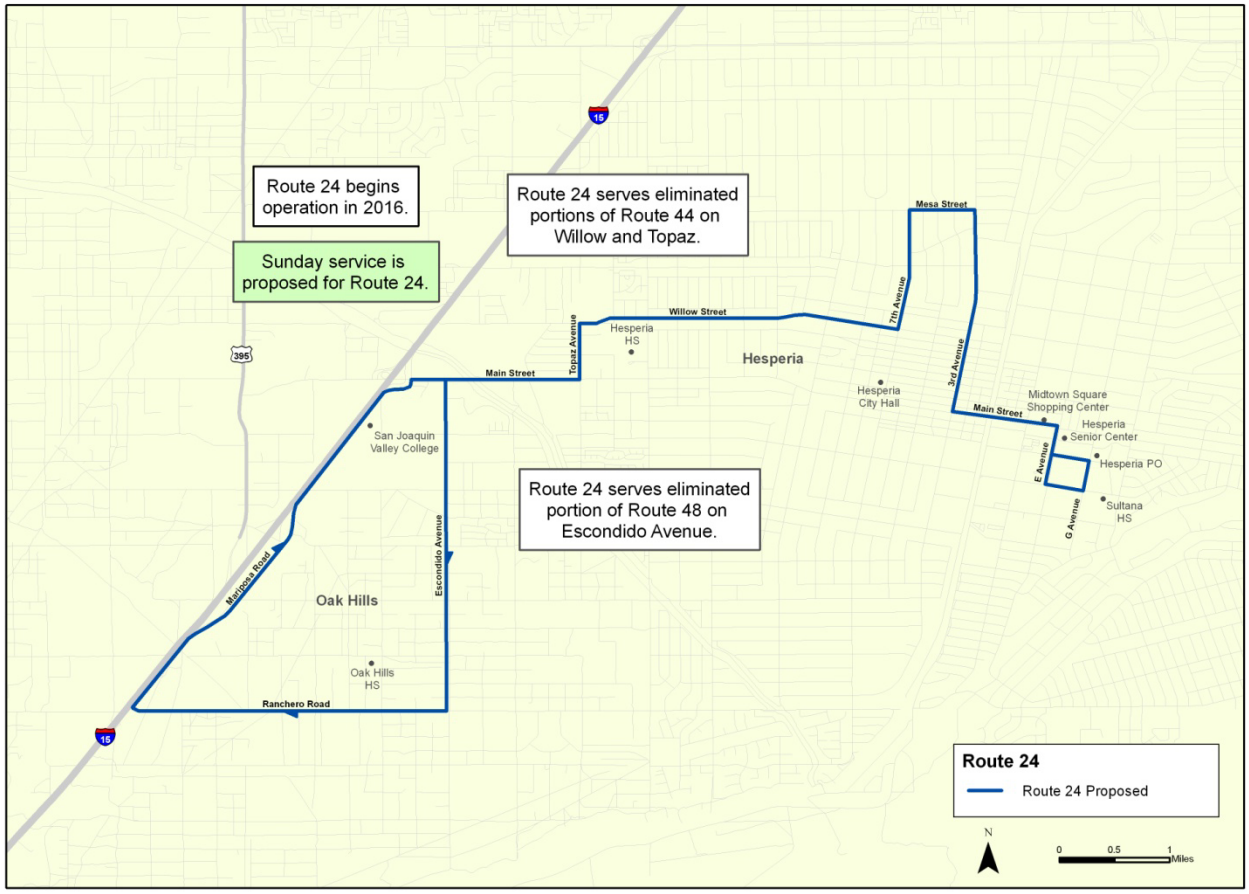
Figure 7-21: Proposed Apple Valley Road Route (Route 49)



7.4.20 New Oak Hills Route (Route 24)

This new route would operate between the Oak Hills, south of Hesperia, and the Hesperia transfer point. The route would serve segments of existing routes that are proposed to be eliminated by service recommendations. The route will operate along the Willow Street corridor as far west as Topaz, serving neighborhoods no longer served by Route 44. The route will also serve the Escondido Avenue portion of Route 48. In Oak Hills, which is an unincorporated county area, the route will operate along Escondido, Ranchero, Mariposa, and then return back to Main Street and Willow Street. This route will provide service to San Joaquin Valley College as well as Oak Hills High School. Bus stop locations along Escondido Avenue, Ranchero Road, and Mariposa Road will need to be identified. The cycle time of this route can initially be once every two hours which should be sufficient to allow for transfers. This new route adds one additional vehicle operated in maximum service as well as additional operating cost. See Figure 7-22 for a map of the proposed Oak Hills Route. Service is proposed to begin in Fiscal Year 2016.

Figure 7-22: Proposed Oak Hills Route (Route 24)



7.4.21 Sunday Service

The public has requested that VVTA provide Sunday service in comments during Unmet Needs Hearings and Sunday service has now become an official unmet need. Due to these requests and findings, a Sunday service concept has been created whereby key routes would operate on a reduced schedule with Direct Access ADA open to the general public in certain parts of the VVTA service area to connect passengers to fixed route services. The addition of Sunday service will increase service hours and operating costs. Longer term, the Sunday operating model can be applied to Saturday services if it is deemed cost effective for weekend service.

Sunday operations would include fixed route service on sixteen (16) of the twenty-one (21) VVTA routes. They are 21, 22, 23, 24 31, 32, 41, 43, 44, 45, 48, 49, 51, 52, 53, and 55. Service details include:

- Ten hour service span, 8:00AM to 6:00PM
- Hourly service frequencies on regional fixed routes (10 trips per day)
- Service every two hours on county routes (5 trips per day)
- Direct Access Dial a Ride service will be available to the general public within ¾ mile of Routes 33, 40, 46, 47, and 54

7.5 ADA Direct Access

Currently, the ADA service provided by VVTA, known as Direct Access does not have defined boundaries. Based on feedback from VVTA staff, boundaries were proposed for the ADA service. The proposal maintains the zone system currently employed, with Zone 1 fares applied within ¾ miles of a fixed rout which is consistent with ADA rules. Zone 2 fares would apply for trips operating between ¾ miles and 1½ miles from a fixed route, and Zone 3 fares would apply to trips that originate or terminate between 1½ miles and two miles of a fixed route. ADA service will not be provided beyond the boundary of Zone 3, or more than two miles from a fixed route. See Figure 7-23 for a map of the proposed ADA boundary and zones.

ADA Direct Access service will also operate on Sundays. The span of service for Direct Access will be the same 10 hour span as fixed route services, from 8:00 AM until 6:00 PM. Direct Access service will also be available for the general public in certain parts of the VVTA service. Passengers who are within ¾ mile of the Routes 33, 40, 46, 47, and 54; which will not operate on Sunday, will be able to use Direct Access services for the Zone 1 fare.

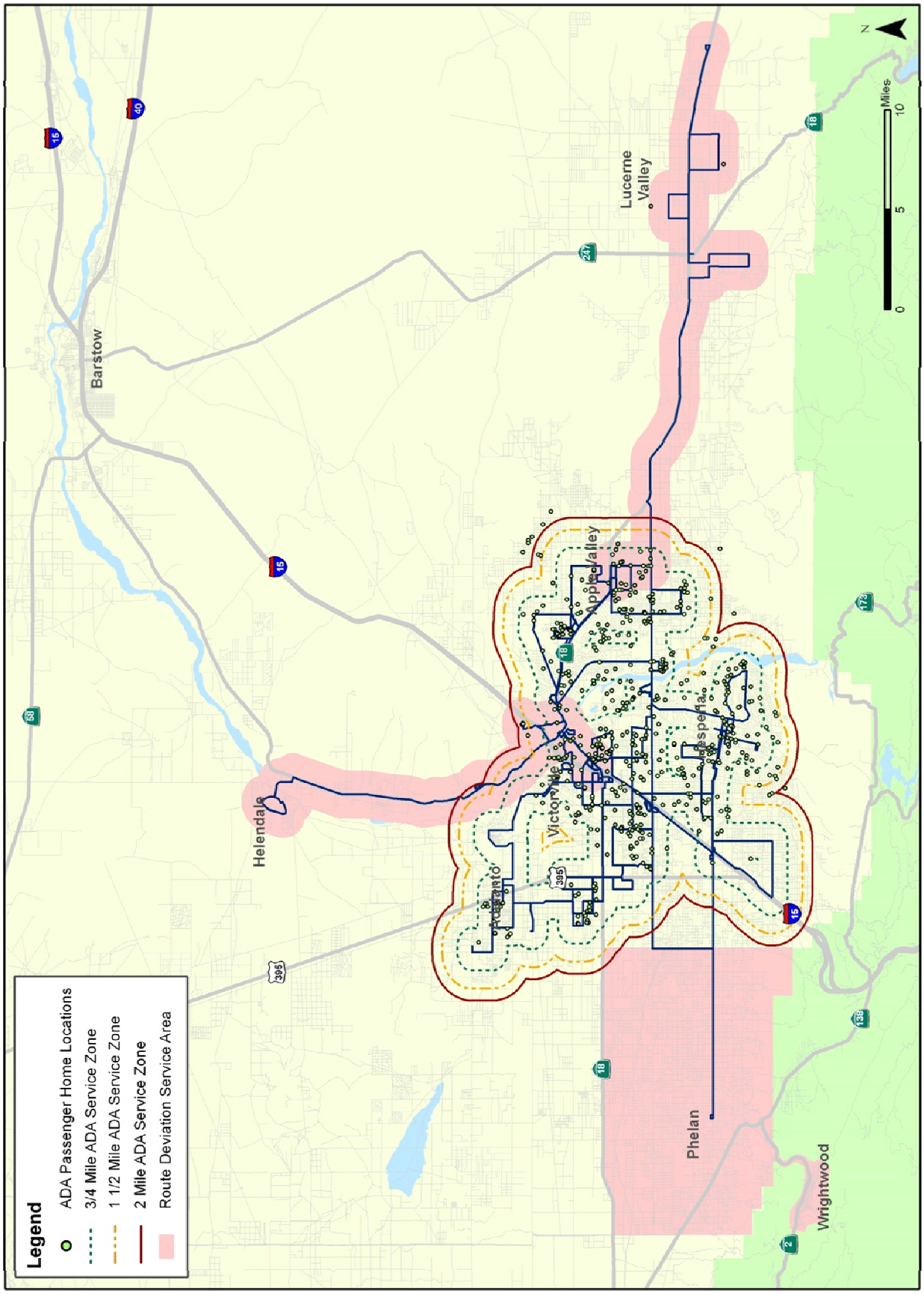


Figure 7-23: ADA Service and Zone Map

7.6 Other services

VVTA provides several other transportation services several of which were established recently. Those services include:

- Lifeline Services
- NTC Commuter Service
- Vanpool

Lifeline service includes the B-V Link, operating between Victorville and Barstow, and a new service linking Victorville with the San Bernardino Valley. NTC Commuter service was recently established and provides service from Victorville and Barstow to Fort Irwin. Van Pool, also newly launched, is a group commuter service available to those with an origin and/or destination within the VVTA and Barstow service areas.

There are two recommendations for B-V Link service. The recommendations are based on comments received during the Unmet Needs Hearing testimonies as well as during public outreach sessions during the COA. Both recommendations involve the segment between Victorville and San Bernardino. The first recommendation is to operate service 5 days a week between Barstow and San Bernardino. The second recommendation is to add a 5:00 PM departure from San Bernardino to Barstow.

There are no recommendations regarding routing or schedules for the Vanpool program or the NTC Commuter Service. Vanpool and NTC service statistics are not presented in the sections below since these programs are not proposed to change based on the COA.

7.7 Service Descriptions

7.7.1 Service Details

Service spans and frequencies will largely remain the same as they are currently with a few notable differences. Several routes are proposed to operate on Sundays with a ten hour service span and 60 minute frequency. Route 15, the B-V Link, will operate on all weekdays Monday through Friday and a later evening trip between Barstow and San Bernardino will operate. Routes 41 and 52 will operate at 30 minute frequencies on weekdays during peak hours. Additionally, 30-minute service on Route 53 will begin two hours earlier than it currently does on weekdays. See Table 7-1 for proposed service details.

Table 7-1: Proposed Route Service Details

Route	Day	FY 2014 - 2015		FY 2016 - 2020	
		Span	Frequency	Span	Frequency
Lifeline Services[3]	Weekday	6:30AM-7:00PM	5 NB Trips/5 SB Trips	6:30AM-7:00PM	5 NB Trips/5 SB Trips
	Saturday	-	-	-	-
	Sunday	-	-	-	-
21	Weekday	5:30AM-9:00PM	90	5:30AM-9:00PM	90
	Saturday	6:30AM-8:00PM	90	6:30AM-8:00PM	90
	Sunday	8:00AM-6:00PM	120	8:00AM-6:00PM	120
20	Weekday	5:30AM-9:00PM	90	5:30AM-9:00PM	90
	Saturday	6:30AM-8:00PM	90	6:30AM-8:00PM	90
	Sunday	-	-	-	-
22	Weekday	6:00AM-8:00PM	120	6:00AM-8:00PM	120
	Saturday	7:00AM-8:00PM	120	7:00AM-8:00PM	120
	Sunday	8:00AM-6:00PM	120	8:00AM-6:00PM	120
23	Weekday	6:00AM-8:30PM	120	6:00AM-8:30PM	120
	Saturday	7:00AM-8:30PM	120	7:00AM-8:30PM	120
	Sunday	8:00AM-6:00PM	120	8:00AM-6:00PM	120
24	Weekday	-	-	6:00AM-9:00PM	60
	Saturday	-	-	7:00AM-8:00PM	60
	Sunday	-	-	8:00AM-6:00PM	60
31	Weekday	6:00AM-9:00PM	30 Peak/60 Non-Peak	6:00AM-9:00PM	30 Peak/60 Non-Peak
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
32	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
33	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	-	-	-	-
40	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	-	-	-	-
41	Weekday	6:00AM-9:00PM	30 Peak/60 Non-Peak	6:00AM-9:00PM	30 Peak/60 Non-Peak
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
43	Weekday	6:00AM-9:00PM	30 Peak/60 Non-Peak	6:00AM-9:00PM	30 Peak/60 Non-Peak
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
44	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60

[3] 3 roundtrips between Victorville and Barstow and 5 roundtrips between Victorville and San Bernardino will operate. 1 roundtrip will operate between Fort Irwin and San Bernardino via Barstow and Victorville. Service between Barstow and San Bernardino will be available on 1 southbound trip and 2 northbound trips

Route	Day	FY 2014 - 2015		FY 2016 - 2020	
		Span	Frequency	Span	Frequency
45	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
46	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	-	-	-	-
47	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	-	-	-	-
48	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
49	Weekday	-	-	6:00AM-9:00PM	60
	Saturday	-	-	7:00AM-8:00PM	60
	Sunday	-	-	8:00AM-6:00PM	60
51	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
52	Weekday	6:00AM-9:00PM	30 Peak/60 Non-Peak	6:00AM-9:00PM	30 Peak/60 Non-Peak
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
53	Weekday	6:00AM-9:00PM	30 Peak/60 Non-Peak	6:00AM-9:00PM	30 Peak/60 Non-Peak
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
54	Weekday	6:30AM-9:30PM	60	6:30AM-9:30PM	60
	Saturday	7:30AM-8:30PM	60	7:30AM-8:30PM	60
	Sunday	-	-	-	-
55	Weekday	6:00AM-9:00PM	60	6:00AM-9:00PM	60
	Saturday	7:00AM-8:00PM	60	7:00AM-8:00PM	60
	Sunday	8:00AM-6:00PM	60	8:00AM-6:00PM	60
ADA Direct Access	Weekday	5:30AM-9:00PM	NA		
	Saturday	7:00AM-8:00PM	NA		
	Sunday	8:00AM-6:00PM	NA		

7.7.2 Revenue Hours

The following charts show revenue service hours. Table 7-2 presents annual revenue hours. Table 7-3 shows average weekday revenue hours. Table 7-4 shows average Saturday revenue hours, and Table 7-5 shows average Sunday revenue hours. The number of annual, average weekday and average Saturday revenue hours operated increases in FY 2016 with the addition of Route 24 (Oak Hills Route) and Route 49 (Apple Valley Road) to the VVTA system.

Table 7-2: Proposed Annual Revenue Hours

Route	Annual Revenue Hours						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	6,057	6,057	6,057	6,057	6,057	6,057	6,057
21	5,659	5,659	5,659	5,659	5,659	5,659	5,659
20	5,139	5,139	5,139	5,139	5,139	5,139	5,139
22	4,830	4,830	4,830	4,830	4,830	4,830	4,830
23	4,714	4,714	4,714	4,714	4,714	4,714	4,714
24	-	-	10,042	10,042	10,042	10,042	10,042
31	7,268	7,268	7,268	7,268	7,268	7,268	7,268
32	10,042	10,042	10,042	10,042	10,042	10,042	10,042
33	4,501	4,501	4,501	4,501	4,501	4,501	4,501
40	4,476	4,476	4,476	4,476	4,476	4,476	4,476
41	14,632	14,632	14,632	14,632	14,632	14,632	14,632
43	6,490	6,490	6,490	6,490	6,490	6,490	6,490
44	9,996	9,996	9,996	9,996	9,996	9,996	9,996
45	10,042	10,042	10,042	10,042	10,042	10,042	10,042
46	4,449	4,449	4,449	4,449	4,449	4,449	4,449
47	4,486	4,486	4,486	4,486	4,486	4,486	4,486
48	5,021	5,021	5,021	5,021	5,021	5,021	5,021
49	-	-	10,042	10,042	10,042	10,042	10,042
51	4,996	4,996	4,996	4,996	4,996	4,996	4,996
52	7,313	7,313	7,313	7,313	7,313	7,313	7,313
53	10,724	10,724	10,724	10,724	10,724	10,724	10,724
54	4,501	4,501	4,501	4,501	4,501	4,501	4,501
55	5,021	5,021	5,021	5,021	5,021	5,021	5,021
ADA Direct Access	47,776	49,209	50,685	52,206	53,772	55,385	57,046
Total	188,133	189,566	211,126	212,647	214,213	215,826	217,487

Table 7-3: Proposed Average Weekday Revenue Hours

Route	Average Weekday Revenue Hours						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	22.8	22.8	22.8	22.8	22.8	22.8	22.8
21	17.5	17.5	17.5	17.5	17.5	17.5	17.5
20	17.5	17.5	17.5	17.5	17.5	17.5	17.5
22	14.3	14.3	14.3	14.3	14.3	14.3	14.3
23	14.0	14.0	14.0	14.0	14.0	14.0	14.0
24	-	-	30.0	30.0	30.0	30.0	30.0
31	23.8	23.8	23.8	23.8	23.8	23.8	23.8
32	30.0	30.0	30.0	30.0	30.0	30.0	30.0
33	15.0	15.0	15.0	15.0	15.0	15.0	15.0
40	14.9	14.9	14.9	14.9	14.9	14.9	14.9
41	48.0	48.0	48.0	48.0	48.0	48.0	48.0
43	20.8	20.8	20.8	20.8	20.8	20.8	20.8
44	29.9	29.9	29.9	29.9	29.9	29.9	29.9
45	14.8	14.8	14.8	14.8	14.8	14.8	14.8
46	15.0	15.0	15.0	15.0	15.0	15.0	15.0
47	15.0	15.0	15.0	15.0	15.0	15.0	15.0
48	15.0	15.0	15.0	15.0	15.0	15.0	15.0
49	-	-	30.0	30.0	30.0	30.0	30.0
51	14.9	14.9	14.9	14.9	14.9	14.9	14.9
52	24.0	24.0	24.0	24.0	24.0	24.0	24.0
53	36.0	36.0	36.0	36.0	36.0	36.0	36.0
54	15.0	15.0	15.0	15.0	15.0	15.0	15.0
55	15.0	15.0	15.0	15.0	15.0	15.0	15.0
ADA Direct Access	158.0	163.0	168.0	173.0	178.0	183.0	189.0
Total	591.0	596.0	661.0	666.0	671.0	677.0	682.0

Table 7-4: Proposed Average Saturday Revenue Hours

Route	Average Saturday Revenue Hours						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	-	-	-	-	-	-	-
21	13.0	13.0	13.0	13.0	13.0	13.0	13.0
20	13.0	13.0	13.0	13.0	13.0	13.0	13.0
22	13.0	13.0	13.0	13.0	13.0	13.0	13.0
23	12.0	12.0	12.0	12.0	12.0	12.0	12.0
24	-	-	26.0	26.0	26.0	26.0	26.0
31	13.0	13.0	13.0	13.0	13.0	13.0	13.0
32	26.0	26.0	26.0	26.0	26.0	26.0	26.0
33	13.0	13.0	13.0	13.0	13.0	13.0	13.0
40	13.0	13.0	13.0	13.0	13.0	13.0	13.0
41	26.0	26.0	26.0	26.0	26.0	26.0	26.0
43	13.0	13.0	13.0	13.0	13.0	13.0	13.0
44	13.0	13.0	13.0	13.0	13.0	13.0	13.0
45	26.0	26.0	26.0	26.0	26.0	26.0	26.0
46	13.0	13.0	13.0	13.0	13.0	13.0	13.0
47	13.0	13.0	13.0	13.0	13.0	13.0	13.0
48	13.0	13.0	13.0	13.0	13.0	13.0	13.0
49	-	-	26.0	26.0	26.0	26.0	26.0
51	13.0	13.0	13.0	13.0	13.0	13.0	13.0
52	13.0	13.0	13.0	13.0	13.0	13.0	13.0
53	19.5	19.5	19.5	19.5	19.5	19.5	19.5
54	13.0	13.0	13.0	13.0	13.0	13.0	13.0
55	13.0	13.0	13.0	13.0	13.0	13.0	13.0
ADA Direct Access	78.0	80.0	83.0	85.0	88.0	90.0	93.0
Total	382.0	385.0	439.0	442.0	444.0	447.0	450.0

Table 7-5: Proposed Average Sunday Revenue Hours

Route	Average Sunday Revenue Hours						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	-	-	-	-	-	-	-
21	10.0	10.0	10.0	10.0	10.0	10.0	10.0
20	-	-	-	-	-	-	-
22	10.0	10.0	10.0	10.0	10.0	10.0	10.0
23	10.0	10.0	10.0	10.0	10.0	10.0	10.0
24	-	-	20.0	20.0	20.0	20.0	20.0
31	10.0	10.0	10.0	10.0	10.0	10.0	10.0
32	20.0	20.0	20.0	20.0	20.0	20.0	20.0
33	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-
41	20.0	20.0	20.0	20.0	20.0	20.0	20.0
43	10.0	10.0	10.0	10.0	10.0	10.0	10.0
44	20.0	20.0	20.0	20.0	20.0	20.0	20.0
45	20.0	20.0	20.0	20.0	20.0	20.0	20.0
46	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-
48	10.0	10.0	10.0	10.0	10.0	10.0	10.0
49	-	-	20.0	20.0	20.0	20.0	20.0
51	10.0	10.0	10.0	10.0	10.0	10.0	10.0
52	10.0	10.0	10.0	10.0	10.0	10.0	10.0
53	15.0	15.0	15.0	15.0	15.0	15.0	15.0
54	-	-	-	-	-	-	-
55	10.0	10.0	10.0	10.0	10.0	10.0	10.0
ADA Direct Access	65.0	67.0	69.0	71.0	73.0	75.0	78.0
Total	250.0	252.0	294.0	296.0	298.0	300.0	303.0

7.7.3 Revenue Miles

The next set of charts show revenue service miles, as proposed; Table 7-6 presents annual revenue miles, Table 7-7 shows average weekday revenue miles, Table 7-8 shows average Saturday revenue miles, and Table 7-9 shows average Sunday revenue miles. Similar to revenue hours, the number of annual, average weekday and average Saturday revenue miles increases in FY 2016 with the addition of Routes 24 and Route 49.

Table 7-6: Proposed Annual Revenue Miles

Route	Annual Revenue Miles						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	194,234	194,234	194,234	194,234	194,234	194,234	194,234
21	133,627	133,627	133,627	133,627	133,627	133,627	133,627
20	96,300	96,300	96,300	96,300	96,300	96,300	96,300
22	139,333	139,333	139,333	139,333	139,333	139,333	139,333
23	146,605	146,605	146,605	146,605	146,605	146,605	146,605
24	-	-	103,268	103,268	103,268	103,268	103,268
31	130,633	130,633	130,633	130,633	130,633	130,633	130,633
32	172,450	172,450	172,450	172,450	172,450	172,450	172,450
33	103,896	103,896	103,896	103,896	103,896	103,896	103,896
40	70,475	70,475	70,475	70,475	70,475	70,475	70,475
41	175,248	175,248	175,248	175,248	175,248	175,248	175,248
43	120,663	120,663	120,663	120,663	120,663	120,663	120,663
44	91,392	91,392	91,392	91,392	91,392	91,392	91,392
45	163,823	163,823	163,823	163,823	163,823	163,823	163,823
46	60,830	60,830	60,830	60,830	60,830	60,830	60,830
47	55,940	55,940	55,940	55,940	55,940	55,940	55,940
48	69,221	69,221	69,221	69,221	69,221	69,221	69,221
49	-	-	141,040	141,040	141,040	141,040	141,040
51	65,108	65,108	65,108	65,108	65,108	65,108	65,108
52	112,451	112,451	112,451	112,451	112,451	112,451	112,451
53	103,031	103,031	103,031	103,031	103,031	103,031	103,031
54	96,404	96,404	96,404	96,404	96,404	96,404	96,404
55	96,458	96,458	96,458	96,458	96,458	96,458	96,458
ADA Direct Access	761,888	784,745	808,287	832,536	857,512	883,237	909,735
Total	3,160,010	3,182,867	3,450,717	3,474,966	3,499,942	3,525,667	3,552,165

Table 7-7: Proposed Average Weekday Revenue Miles

Route	Average Weekday Revenue Miles						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	761.7	761.7	761.7	761.7	761.7	761.7	761.7
21	413.1	413.1	413.1	413.1	413.1	413.1	413.1
20	330.0	330.0	330.0	330.0	330.0	330.0	330.0
22	419.6	419.6	419.6	419.6	419.6	419.6	419.6
23	435.4	435.4	435.4	435.4	435.4	435.4	435.4
24	-	-	345.3	345.3	345.3	345.3	345.3
31	429.4	429.4	429.4	429.4	429.4	429.4	429.4
32	515.7	515.7	515.7	515.7	515.7	515.7	515.7
33	347.4	347.4	347.4	347.4	347.4	347.4	347.4
40	235.7	235.7	235.7	235.7	235.7	235.7	235.7
41	576.0	576.0	576.0	576.0	576.0	576.0	576.0
43	387.5	387.5	387.5	387.5	387.5	387.5	387.5
44	273.3	273.3	273.3	273.3	273.3	273.3	273.3
45	489.9	489.9	489.9	489.9	489.9	489.9	489.9
46	203.4	203.4	203.4	203.4	203.4	203.4	203.4
47	187.1	187.1	187.1	187.1	187.1	187.1	187.1
48	207.0	207.0	207.0	207.0	207.0	207.0	207.0
49	-	-	471.6	471.6	471.6	471.6	471.6
51	194.7	194.7	194.7	194.7	194.7	194.7	194.7
52	369.6	369.6	369.6	369.6	369.6	369.6	369.6
53	338.6	338.6	338.6	338.6	338.6	338.6	338.6
54	322.4	322.4	322.4	322.4	322.4	322.4	322.4
55	288.5	288.5	288.5	288.5	288.5	288.5	288.5
ADA Direct Access	2,520.0	2,596.0	2,674.0	2,754.0	2,836.0	2,921.0	3,009.0
Total	10,246.0	10,322.0	11,216.9	11,296.9	11,378.9	11,463.9	11,551.9

Table 7-8: Proposed Average Saturday Revenue Miles

Route	Average Saturday Revenue Miles						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	-	-	-	-	-	-	-
21	262.2	262.2	262.2	262.2	262.2	262.2	262.2
20	240.0	240.0	240.0	240.0	240.0	240.0	240.0
22	312.8	312.8	312.8	312.8	312.8	312.8	312.8
23	340.3	340.3	340.3	340.3	340.3	340.3	340.3
24	-	-	299.3	299.3	299.3	299.3	299.3
31	232.6	232.6	232.6	232.6	232.6	232.6	232.6
32	446.9	446.9	446.9	446.9	446.9	446.9	446.9
33	301.1	301.1	301.1	301.1	301.1	301.1	301.1
40	204.2	204.2	204.2	204.2	204.2	204.2	204.2
41	312.0	312.0	312.0	312.0	312.0	312.0	312.0
43	239.9	239.9	239.9	239.9	239.9	239.9	239.9
44	236.9	236.9	236.9	236.9	236.9	236.9	236.9
45	424.6	424.6	424.6	424.6	424.6	424.6	424.6
46	176.3	176.3	176.3	176.3	176.3	176.3	176.3
47	162.1	162.1	162.1	162.1	162.1	162.1	162.1
48	179.4	179.4	179.4	179.4	179.4	179.4	179.4
49	-	-	408.7	408.7	408.7	408.7	408.7
51	168.7	168.7	168.7	168.7	168.7	168.7	168.7
52	200.2	200.2	200.2	200.2	200.2	200.2	200.2
53	183.4	183.4	183.4	183.4	183.4	183.4	183.4
54	279.4	279.4	279.4	279.4	279.4	279.4	279.4
55	250.0	250.0	250.0	250.0	250.0	250.0	250.0
ADA Direct Access	1,258	1,296	1,335	1,375	1,416	1,459	1,502
Total	6,411.0	6,449.0	7,196.0	7,236.0	7,277.0	7,320.0	7,363.0

Table 7-9: Proposed Average Sunday Revenue Miles

Route	Average Sunday Revenue Miles						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	-	-	-	-	-	-	-
21	163.9	164.9	165.9	166.9	167.9	168.9	169.9
20	-	-	-	-	-	-	-
22	257.7	257.7	257.7	257.7	257.7	257.7	257.7
23	311.0	311.0	311.0	311.0	311.0	311.0	311.0
24	-	-	230.2	230.2	230.2	230.2	230.2
31	178.9	178.9	178.9	178.9	178.9	178.9	178.9
32	343.8	343.8	343.8	343.8	343.8	343.8	343.8
33	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-
41	240.0	240.0	240.0	240.0	240.0	240.0	240.0
43	184.5	184.5	184.5	184.5	184.5	184.5	184.5
44	182.2	182.2	182.2	182.2	182.2	182.2	182.2
45	326.6	326.6	326.6	326.6	326.6	326.6	326.6
46	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-
48	138.0	138.0	138.0	138.0	138.0	138.0	138.0
49	-	-	314.4	314.4	314.4	314.4	314.4
51	129.8	129.8	129.8	129.8	129.8	129.8	129.8
52	154.0	154.0	154.0	154.0	154.0	154.0	154.0
53	141.1	141.1	141.1	141.1	141.1	141.1	141.1
54	-	-	-	-	-	-	-
55	192.3	192.3	192.3	192.3	192.3	192.3	192.3
ADA Direct	1,035.0	1,066.0	1,098.0	1,131.0	1,165.0	1,200.0	1,236.0
Total	3,978.8	4,010.8	4,588.4	4,622.4	4,657.4	4,693.4	4,730.4

7.7.4 Vehicle Requirements

Tables 7-10, 7-11 and Table 7-12 identify the number of vehicles needed for weekday, Saturday and Sunday service, respectively. In FY 2014 and FY 2015, 60 vehicles will be needed to operate weekday service with 26 of them ADA vehicles. The number rises to 64 vehicles in FY 2016 with the introduction of service on Routes 24 and 49. On Saturday, 36 vehicles will be needed for service in FY's 2014 and 2015 and 40 will be needed beginning in FY 2016. 29 vehicles will be required to operate proposed new Sunday service. Table 7-10, weekday vehicles, also presents the number of spare vehicles required. NTC vehicles are not included.

Table 7-10: Proposed Weekday Peak Vehicles

Route	Vehicles Operated in Maximum Service, Weekdays						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
B-V Link	3	3	3	3	3	3	3
21	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1
24	-	-	2	2	2	2	2
31	2	2	2	2	2	2	2
32	2	2	2	2	2	2	2
33	1	1	1	1	1	1	1
40	1	1	1	1	1	1	1
41	4	4	4	4	4	4	4
43	2	2	2	2	2	2	2
44	2	2	2	2	2	2	2
45	2	2	2	2	2	2	2
46	1	1	1	1	1	1	1
47	1	1	1	1	1	1	1
48	1	1	1	1	1	1	1
49	-	-	2	2	2	2	2
51	1	1	1	1	1	1	1
52	2	2	2	2	2	2	2
53	3	3	3	3	3	3	3
54	1	1	1	1	1	1	1
55	1	1	1	1	1	1	1
ADA Direct Access	26	26	26	27	27	28	28
Total	60	60	64	65	65	66	66
Fixed Route Spares	7	7	8	8	8	8	8
ADA Spares	5	5	5	5	5	6	6

Table 7-11: Proposed Saturday Peak Vehicles

Route	Vehicles Operated in Maximum Service, Saturday						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
B-V Link	-	-	-	-	-	-	-
21	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1
24	-	-	2	2	2	2	2
31	1	1	1	1	1	1	1
32	2	2	2	2	2	2	2
33	1	1	1	1	1	1	1
40	1	1	1	1	1	1	1
41	2	2	2	2	2	2	2
43	1	1	1	1	1	1	1
44	1	1	1	1	1	1	1
45	2	2	2	2	2	2	2
46	1	1	1	1	1	1	1
47	1	1	1	1	1	1	1
48	1	1	1	1	1	1	1
49	-	-	2	2	2	2	2
51	1	1	1	1	1	1	1
52	1	1	1	1	1	1	1
53	1	1	1	1	1	1	1
54	1	1	1	1	1	1	1
55	1	1	1	1	1	1	1
ADA Direct Access	13	13	13	13	14	14	14
Total	36	36	40	40	41	41	41

Table 7-12: Proposed Sunday Peak Vehicles

Route	Vehicles Operated in Maximum Service, Sunday						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
B-V Link	-	-	-	-	-	-	-
21	1	1	1	1	1	1	1
20	-	-	-	-	-	-	-
22	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1
24	-	-	2	2	2	2	2
31	1	1	1	1	1	1	1
32	2	2	2	2	2	2	2
33	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-
41	2	2	2	2	2	2	2
43	1	1	1	1	1	1	1
44	2	2	2	2	2	2	2
45	2	2	2	2	2	2	2
46	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-
48	1	1	1	1	1	1	1
49	-	-	2	2	2	2	2
51	1	1	1	1	1	1	1
52	1	1	1	1	1	1	1
53	1	1	1	1	1	1	1
54	-	-	-	-	-	-	-
55	1	1	1	1	1	1	1
ADA Direct Access	11	11	11	11	12	12	12
Total	29	29	33	33	34	34	34

7.8 VVTA Staffing

VVTA has experienced steady growth in ridership and the amount of service provided over the past decade. More recently, VVTA has begun providing new services such as B-V Link Lifeline service to San Bernardino, NTC service to Fort Irwin, and Van Pool. The growth in service accompanied by a growth in the VVTA fleet have taxed the limited existing staff of VVTA and mandate additional staff be employed.

Previously, contracted administrative services were internalized in 2010 during the construction of VVTA's new administrative, operations and maintenance facility, a cost neutral move. Following the completion of the capital project, VVTA hired a Fleet and Facility Maintenance Director, a position previously contracted out. Bringing this position in-house slightly reduced the cost of the contract with Veolia.

These increases in service and services, and additions to capital infrastructure have resulted in more demands placed on VVTA's staff, leading to deficiencies in key operational areas, including:

- Compliance – FTA identified deficiency in finance/purchasing, technical/reporting, Mobility Management Plan, and Civil Rights (DBE, LEP, Environmental Justice, Title VI)
- Internal Controls – More employees to provide oversight
- Critical Function Support – Lack of staff cross trained in accounting, payroll and grants administration
- Succession Planning – Management and growth planning
- Key Function Support - Functions such as transit planning, procurement, marketing, fixed asset management, human resources, risk management, document and file control, Disadvantaged Business Enterprise program (DBE), Limited English Proficiency Plan (LEP), Civil Rights/Title VI programs, and the development of written policies and procedures have not been maintained as a primary function resulting in less than adequate compliance and performance in these areas. There is also a lack of staff supporting social media, public information, marketing/advertising, website maintenance and design, mapping, and bus stop information

The addition of five additional staff positions is recommended to meet an increasing work load. These positions include:

- 1 FTE Staff Accounting Clerk
- 1 FTE Planner/Marketing/ITS Support
- 1 FTE Procurement and Civil Rights Officer
- 1 FTE Clerk
- 1 FTE RTA/TransTrack Administrator and Fleet Analyst

7.9 Fare Policy Recommendations

VVTA is required to maintain a 20 percent farebox recovery for regional route services and a 10 percent recovery for Direct Access services. VVTA has not had a fare increase since 2007 because fare revenue has kept up with service costs resulting in VVTA meeting the farebox recovery requirements without changing fare levels. VVTA plans on introducing new passes in Fiscal Year 2014 that will allow riders to access all services including B-V Link Lifeline services and NTC Services. Beyond these new passes, fare adjustments are proposed in 2015 and 2019 to respond to growth in service costs. Details of the fare levels for each service are provided in Table 7-13.

Table 7-13: Proposed Fare Structure

Fare Type	Current	2015	2019
Regular Route			
Base Fare	$1.25	$1.35	$1.50
Student Fare	$1.00	$1.10	$1.25
Senior/Disabled/Medicare	$0.60	$0.65	$0.75
Regular/Student Deviation surcharge	$2.00	$2.00	$2.25
Senior/Disabled/Medicare Deviation surcharge	$1.00	$1.00	$1.10
Base Day Pass	$3.50	$3.75	$4.00
Student Day Pass	$2.00	$2.25	$2.50
Senior/Disabled/Medicare Day Pass	$1.00	$1.10	$1.25
Regular 31 Day Pass	$50.00	$54.00	$60.00
Student 31 Day Pass	$40.00	$44.00	$50.00
Senior/Disabled/Medicare 31 Day Pass	$25.00	$27.00	$30.00
County Route			
Base Fare	$2.25	$2.35	$2.50
Student Fare	$2.00	$2.10	$2.25
Senior/Disabled/Medicare	$1.00	$1.10	$1.25
Base Day Pass	$5.50	$5.75	$6.00
Student Day Pass	$4.50	$4.75	$5.00
Senior/Disabled/Medicare Day Pass	$2.75	$3.00	$3.25
Regular 31 Day Pass	$75.00	$78.00	$83.00
Student 31 Day Pass	$65.00	$70.00	$75.00
Senior/Disabled/Medicare 31 Day Pass	$35.00	$36.00	$41.00
Direct Access Service			
Zone 1/within ¾ mile of a fixed route[4]	$2.50	$2.75	$3.00
Zone 2/ between ¾ mile and 1½ miles of a fixed route	$4.50	$4.75	$5.00
Zone 3/ between 1½ mile and 3 miles of a fixed route	$6.00	$6.25	$6.50
B-V Link			
Barstow to Victor Valley	$6.00	$6.00	$7.00
Barstow to San Bernardino Valley	$12.00	$12.00	$13.00
Victor Valley to San Bernardino Valley	$6.00	$6.00	$7.00
Barstow to Victor Valley Senior/Disabled/Medicare	$3.00	$3.00	$3.50
Barstow to San Bernardino Valley Senior/Disabled/Medicare	$6.00	$6.00	$6.50
Victor Valley to San Bernardino Valley Senior/Disabled/Medicare	$3.00	$3.00	$3.50
NTC Service			
One-Way	$12.00	$12.00	$13.00
Special Military MTBP 31 Day Pass	$245.00	$245.00	$245.00
VVTA Mega Pass			
VVTA Mega Pass	$175.00	$175.00	$185.00
Elderly/Disabled Mega Pass	$87.50	$87.50	$92.50

[4] Passengers who are within ¾ mile of Routes 33, 40, 46, 47, and 54 may use Direct Access Service to connect to a fixed route on Sunday and would be the Zone 1 fare

7.10 Ridership Projections

The modified route network will affect ridership on most VVTA services. Annual ridership projections are provided in Table 7-14. Below are the assumptions used for estimating ridership for each route in the VVTA system:

- Background ridership growth of 7.5 percent per year based on recent ridership growth
- Ridecheck data provided by VVTA was used to distribute ridership from existing routes to the proposed routes, as well as by time of day
- Ridership changes were calculated based on fare and frequency changes using a 0.46 elasticity[1] applied to frequency and fare changes
- Direct Access ridership historically is projected to grow at approximately 3 percent per year.
- Sunday service is assumed to have a productivity that is two thirds (2/3) of Saturday ridership
- Sunday Direct Access Service is expected to have the passengers per hour that is similar to the Weekday/Saturday average to account for both ADA passengers and general public passengers that will use the service in certain locations

The annual ridership growth rate of 7.5 percent seems high; it is more conservative than the recent growth rates experienced at VVTA. The continued high growth rate should be supported by growth in the Victor Valley area and initiatives being undertaken by VVTA including a U-Pass program at Victor Valley College and working with area school districts to identify students who are along VVTA bus routes and other Mobility Management enterprises.

Overall, this analysis provides a conservative estimate of ridership impacts for the VVTA system. Average weekday, average Saturday and average Sunday ridership projections can be found in Tables 7-15, 7-16 and 7-17, respectively.

[1] From Patronage Impact of Changes in Transit Fares and Services, US Department of Transportation Urban Mass Transportation Administration, 1980

Table 7-14: Annual Ridership

Route	Annual Ridership						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services*	15,969	16,570	17,813	19,149	20,585	21,083	22,664
21	38,594	40,046	43,050	46,279	49,750	50,952	54,774
20	10,166	10,548	11,339	12,190	13,104	13,421	14,427
22	31,211	32,385	34,814	37,425	40,232	41,205	44,295
23	23,877	24,776	26,634	28,631	30,779	31,523	33,887
24	-	-	47,481	51,042	54,870	56,197	60,412
31	228,045	236,625	254,371	273,449	293,958	301,065	301,065
32	127,107	131,889	141,781	152,414	163,845	167,807	180,392
33	60,167	62,431	67,113	72,146	77,557	79,432	85,390
40	53,998	56,030	60,232	64,750	69,606	71,289	76,635
41	319,298	331,311	356,159	382,871	411,587	421,538	453,153
43	179,481	186,234	200,201	215,217	231,358	236,951	254,723
44	105,098	109,052	85,496	91,908	98,801	101,190	108,779
45	153,086	158,845	170,759	183,565	197,333	202,104	217,262
46	38,812	40,272	43,292	46,539	50,030	51,239	55,082
47	33,354	34,609	37,205	39,995	42,995	44,035	47,337
48	116,061	120,428	128,116	137,724	148,054	151,633	163,006
49	-	-	78,990	84,915	91,283	93,490	100,502
51	106,636	110,648	118,947	127,868	137,458	140,782	151,340
52	248,185	257,522	276,836	297,599	319,919	327,654	352,228
53	174,382	180,943	194,514	209,102	224,785	230,220	247,486
54	34,416	35,711	38,389	41,268	44,363	45,436	48,843
55	132,396	137,377	147,680	158,756	170,663	174,789	187,898
ADA Direct Access	102,838	105,923	109,101	112,374	115,745	119,217	122,794
Total	2,333,178	2,420,175	2,690,314	2,887,178	3,098,659	3,174,252	3,384,376

*Lifeline service ridership was projected from 8 months of FY 2012 ridership data.

Table 7-15: Average Weekday Ridership

Route	Average Weekday Ridership						
	2014	2015	2016	2017	2018	2019	2020
Lifeline Services	63	65	70	75	81	83	89
21	135	140	150	161	173	178	191
20	37	38	41	44	48	48	48
22	98	102	110	118	127	130	140
23	77	80	86	92	99	101	109
24	0	0	155	166	179	183	197
31	771	800	860	924	994	1,018	1,094
32	405	420	451	485	522	534	574
33	211	219	235	253	272	278	299
40	186	193	208	223	240	246	264
41	1,082	1,122	1,207	1,297	1,394	1,428	1,535
43	593	615	661	710	764	782	841
44	332	344	261	281	302	309	332
45	525	545	586	630	677	694	746
46	136	141	151	163	175	179	192
47	114	119	128	137	147	151	162
48	394	409	435	468	503	515	554
49	0	0	240	258	277	284	305
51	360	373	402	432	464	475	511
52	810	840	903	971	1,044	1,069	1,149
53	580	601	646	695	747	765	822
54	122	126	136	146	157	161	173
55	452	469	504	542	583	597	642
ADA Direct Access	344	354	365	376	387	399	411
Total	7,825	8,117	8,991	9,648	10,355	10,607	11,381

Table 7-16: Average Saturday Ridership

Route	Average Saturday Ridership						
	2014	2015	2016	2017	2018	2019	2020
B-V Link	-	-	-	-	-	-	-
21	50	52	56	60	64	66	71
20	15	16	17	18	19	20	21
22	72	74	80	86	92	95	102
23	50	52	56	60	65	67	72
24	-	-	95	102	110	112	121
31	372	386	415	446	479	491	528
32	280	291	313	336	362	370	398
33	127	132	142	153	164	168	181
40	129	134	144	155	166	170	183
41	514	533	573	616	662	678	729
43	334	347	373	401	431	441	474
44	240	249	189	203	218	224	241
45	226	235	252	271	292	299	321
46	84	87	94	101	108	111	119
47	83	86	92	99	107	109	117
48	184	191	203	218	234	240	258
49	-	-	208	224	240	246	265
51	196	204	219	235	253	259	279
52	490	509	547	588	632	647	696
53	314	325	350	376	404	414	445
54	68	70	76	81	87	90	96
55	203	210	226	243	261	267	287
ADA Direct Access	153	158	162	167	172	177	183
Total	4,185	4,341	4,882	5,240	5,626	5,763	6,187

Table 7-17: Average Sunday Ridership

Route	Average Sunday Ridership						
	2014	2015	2016	2017	2018	2019	2020
B-V Link	-	-	-	-	-	-	-
21	35	37	39	42	45	46	50
20	-	-	-	-	-	-	-
22	48	50	53	57	62	63	68
23	34	35	38	40	43	44	48
24	-	-	63	68	73	75	81
31	248	257	277	297	320	327	352
32	187	194	209	224	241	247	265
33	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-
41	343	356	382	411	442	452	486
43	223	231	249	267	287	294	316
44	160	166	179	192	206	211	227
45	151	157	168	181	195	199	214
46	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-
48	123	127	135	145	156	160	172
49	-	-	139	149	160	164	177
51	96	100	107	115	124	127	136
52	327	339	365	392	422	432	464
53	209	217	233	251	270	276	297
54	-	-	-	-	-	-	-
55	135	140	151	162	174	178	192
ADA Direct Access	140	144	149	153	158	162	167
Total	2,458	2,550	2,935	3,149	3,378	3,461	3,713

7.11 Costs and Revenues

This section presents the operating cost and farebox revenue for VVTA regular route, county route, lifeline, and ADA services. Costs were calculated based on an average cost per hour for each service applied to the revenue hours presented in Table 7-2. The costs per hour are presented in the financial analysis (Chapter 5). Revenue is calculated based on an average fare paid by passengers multiplied by annual ridership, which is presented on Table 7-14. Operating costs are presented on Table 7-18. Farebox Revenue is presented in Table 7-19. Table 7-20 presents the farebox recovery which is the ratio of passenger fares to operating costs.

Table 7-18: Annual Cost

Route	Annual Cost						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	374,743	385,985	397,565	409,492	421,777	434,430	447,463
21	401,167	413,202	425,598	438,365	451,516	465,062	479,014
20	364,304	375,233	386,490	398,085	410,027	422,328	434,998
22	342,399	352,671	363,251	374,148	385,373	396,934	408,842
23	334,175	344,201	354,527	365,163	376,117	387,401	399,023
24	0	0	677,040	697,351	718,272	739,820	762,014
31	429,248	442,126	455,389	469,051	483,122	497,616	512,545
32	593,081	610,873	629,199	648,075	667,517	687,543	708,169
33	265,829	273,804	282,018	290,479	299,193	308,169	317,414
40	264,353	272,283	280,452	288,865	297,531	306,457	315,651
41	864,166	890,091	916,794	944,297	972,626	1,001,805	1,031,859
43	383,299	394,798	406,642	418,842	431,407	444,349	457,680
44	590,364	608,075	626,317	645,106	664,460	684,393	704,925
45	593,081	610,873	629,199	648,075	667,517	687,543	708,169
46	262,758	270,641	278,760	287,123	295,736	304,608	313,747
47	264,943	272,891	281,078	289,511	298,196	307,142	316,356
48	296,540	305,436	314,600	324,038	333,759	343,771	354,085
49	0	0	564,065	580,987	598,417	616,369	634,860
51	295,064	303,916	313,033	322,424	332,097	342,060	352,322
52	431,906	444,863	458,209	471,955	486,114	500,697	515,718
53	633,359	652,360	671,931	692,089	712,852	734,237	756,264
54	265,829	273,804	282,018	290,479	299,193	308,169	317,414
55	296,540	305,436	314,600	324,038	333,759	343,771	354,085
ADA Direct Access	3,581,289	3,688,728	3,799,390	3,913,371	4,030,772	4,151,695	4,276,246
Total	12,128,436	12,492,289	14,108,163	14,531,407	14,967,350	15,416,370	15,878,861

Table 7-19: Fare Revenue

Route	Farebox Revenues						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	$45,033	$50,539	$54,330	$58,404	$62,784	$71,261	$76,604
21	$83,749	$93,708	$100,737	$108,293	$116,415	$132,475	$142,412
20	$22,060	$24,682	$26,533	$28,525	$30,663	$34,895	$37,510
22	$67,728	$75,781	$81,465	$87,575	$94,143	$107,133	$115,167
23	$51,813	$57,976	$62,324	$66,997	$72,023	$81,960	$88,106
24	$0	$0	$111,106	$119,438	$128,396	$146,112	$157,071
31	$171,034	$191,666	$206,041	$221,494	$238,106	$270,959	$270,959
32	$95,330	$106,830	$114,843	$123,455	$132,714	$151,026	$162,353
33	$45,125	$50,569	$54,362	$58,438	$62,821	$71,489	$76,851
40	$40,499	$45,384	$48,788	$52,448	$56,381	$64,160	$68,972
41	$239,474	$268,362	$288,489	$310,126	$333,385	$379,384	$407,838
43	$134,611	$150,850	$162,163	$174,326	$187,400	$213,256	$229,251
44	$78,824	$88,332	$69,252	$74,445	$80,029	$91,071	$97,901
45	$114,815	$128,664	$138,315	$148,688	$159,840	$181,894	$195,536
46	$29,109	$32,620	$35,067	$37,697	$40,524	$46,115	$49,574
47	$25,016	$28,033	$30,136	$32,396	$34,826	$39,632	$42,603
48	$87,046	$97,547	$103,774	$111,556	$119,924	$136,470	$146,705
49	$0	$0	$63,982	$68,781	$73,939	$84,141	$90,452
51	$79,977	$89,625	$96,347	$103,573	$111,341	$126,704	$136,206
52	$186,139	$208,593	$224,237	$241,055	$259,134	$294,889	$317,005
53	$130,787	$146,564	$157,556	$169,373	$182,076	$207,198	$222,737
54	$25,812	$28,926	$31,095	$33,427	$35,934	$40,892	$43,959
55	$99,297	$111,275	$119,621	$128,592	$138,237	$157,310	$169,108
ADA Direct Access	$297,202	$330,480	$340,395	$350,607	$361,124	$413,683	$426,095
Total	$2,150,476	$2,407,006	$2,720,955	$2,909,708	$3,112,161	$3,544,107	$3,770,975

Table 7-20: Farebox Recovery

Route	Farebox Recovery						
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lifeline Services	12.02%	13.09%	13.67%	14.26%	14.89%	16.40%	17.12%
21	20.88%	22.68%	23.67%	24.70%	25.78%	28.49%	29.73%
20	6.06%	6.58%	6.87%	7.17%	7.48%	8.26%	8.62%
22	19.78%	21.49%	22.43%	23.41%	24.43%	26.99%	28.17%
23	15.50%	16.84%	17.58%	18.35%	19.15%	21.16%	22.08%
24	-	-	16.41%	17.13%	17.88%	19.75%	20.61%
31	39.84%	43.35%	45.24%	47.22%	49.28%	54.45%	52.87%
32	16.07%	17.49%	18.25%	19.05%	19.88%	21.97%	22.93%
33	16.98%	18.47%	19.28%	20.12%	21.00%	23.20%	24.21%
40	15.32%	16.67%	17.40%	18.16%	18.95%	20.94%	21.85%
41	27.71%	30.15%	31.47%	32.84%	34.28%	37.87%	39.52%
43	35.12%	38.21%	39.88%	41.62%	43.44%	47.99%	50.09%
44	13.35%	14.53%	11.06%	11.54%	12.04%	13.31%	13.89%
45	19.36%	21.06%	21.98%	22.94%	23.95%	26.46%	27.61%
46	11.08%	12.05%	12.58%	13.13%	13.70%	15.14%	15.80%
47	9.44%	10.27%	10.72%	11.19%	11.68%	12.90%	13.47%
48	29.35%	31.94%	32.99%	34.43%	35.93%	39.70%	41.43%
49	-	-	11.34%	11.84%	12.36%	13.65%	14.25%
51	27.10%	29.49%	30.78%	32.12%	33.53%	37.04%	38.66%
52	43.10%	46.89%	48.94%	51.08%	53.31%	58.90%	61.47%
53	20.65%	22.47%	23.45%	24.47%	25.54%	28.22%	29.45%
54	9.71%	10.56%	11.03%	11.51%	12.01%	13.27%	13.85%
55	33.49%	36.43%	38.02%	39.68%	41.42%	45.76%	47.76%
ADA Direct Access	8.30%	8.96%	8.96%	8.96%	8.96%	9.96%	9.96%

7.12 Capital Needs

This section provides the capital needs for implementation of the plan which include additional vehicles and bus stops. New bus stops are needed to serve passengers on new routes and new alignments. Besides new alignments, new bus stops may be needed to address bus stop spacing concerns throughout the VVTA service area. Bus stops that require additional amenities will also be highlighted in this section.

The new and expanded services will increase the number of vehicles operated in maximum service (VOMS). The primary concern for VOMS is on weekdays as weekday VOMS are higher than the expected VOMS on Saturday or Sunday. Below is a list of additional VOMS required.

- Fiscal Year 2014
    - 12 year/500,000 miles – 4 additional vehicles
        - Route 32 – 1
        - Route 41 – 2
        - Route 52 – 1
    - 7 year/200,000 miles – 1 additional vehicle
        - Tri-Community Circulator – 1

- Fiscal Year 2016
    - 7 year/200,000 miles – 4 additional vehicles
        - Oak Hills (Route 24) – 2
        - Apple Valley Road (Route 49) – 2

Approximately one hundred-forty (140) bus stop changes, additions, subtractions and adjustments, will be needed throughout Victor Valley to support the COA proposals. These include bus stops along new route alignments, bus stop adjustments to the opposite side of the street to support bi-directional services being implemented, and evaluation of the additional bus stop needs to meet the bus stops spacing guidelines. The bus stop locations listed below provide and approximate location for bus stop placement, exact placement will be based on safety considerations for both buses and pedestrians, as well as the final decisions of the city/town/county that are in charge of bus stop locations. Following, in Table 7-21, is a list of bus stop changes by route based on the proposed 2014 route network. Table 7-22 shows the needed bus stop changes in 2016 by route based on the proposed 2016 route network.

Table 7-21: Bus Stop Changes, FY 2014

Route	Location	Action	Notes
21	Phelan at Braceo	N	Due to change in route path, add new eastbound bus stop.
21	Phelan at Lilac	N	Due to change in route path, add new eastbound bus stop.
21	Bear Valley at US-395	E	Due to change in route path.
21	Baldy Mesa at Duncan	E	Due to change in route path.
21	Baldy Mesa at 7th Street	E	Due to change in route path.
21	Baldy Mesa at Yucca Terrace	E	Due to change in route path.
31	Palmdale at Emerald	N	New eastbound and westbound bus stop.
31	Palmdale at Amethyst	N	New eastbound and westbound bus stop.
31	Palmdale at Cahuenga	N	New eastbound and westbound bus stop.
31	Palmdale at Pacoima	N	New eastbound and westbound bus stop.
32	Bartlett at Bellflower	A	Move bus stop to northeast corner.
32	Chamberlaine at New Hampshire	N	New westbound bus stop.
32	Chamberlaine at Rhode Island	N	New westbound bus stop.
32	Nevada at McCoy Circle	N	New eastbound and westbound bus stops.
32	Phantom West at Nevada	N	New eastbound and westbound bus stops.
32	Phantom West at George	N	New eastbound and westbound bus stops.
32	Phantom West at Innovation	N	New eastbound and westbound bus stops.
32	Arlette at Joshua	N	New eastbound bus stop.
32	Hook at Arelette	N	New eastbound bus stop.
32	Seneca at Amargosa	N	New eastbound bus stop.
32	Civic Drive at West Sage	N	New eastbound bus stop.
32	Kentwood at Ramona	N	New eastbound bus stop.
33	Air Expressway at Stevens	E	Due to change in route path, stop moves to Aster.
33	Air Expressway at Aster	N	Due to change in route path, stop from Stevens moved to Aster.
33	Kemper at Stevens	E	Due to change in route path.
33	Bellflower at Holly	N	New northbound and southbound bus stops.
33	Bellflower at Cactus	N	New northbound and southbound bus stops.
33	Bellflower at Mojave	A	Move bus stop to northwest corner.
33	Mojave at Verbena	N	New route segment. Requires eastbound and westbound bus stops.
33	Mojave at Aster	N	New route segment. Requires eastbound and westbound bus stops.
33	Victor at Aster	N	New route segment. Requires eastbound and westbound bus stops.
33	Victor at Verbena	N	New route segment. Requires eastbound and westbound bus stops.
40	SR-18 at Walmart	E	Eliminate bus stop when new Apple Valley Walmart opens.
40	Pawnee at Huron	E	Due to change in route path.
40	Ramona at Pawnee	E	Due to change in route path.
40	Ramona at Tonikan	E	Due to change in route path.
40	Ramona at Central	E	Due to change in route path.
40	Goshute at Pioneer	N	Due to change in route path.
40	Pioneer at Esaws	N	Due to change in route path.
40	Esaws at Central	N	Due to change in route path.
40	Ramona at Central	N	Due to change in route path.
41	SR-18 at Rancherias	N	New eastbound bus stop.
41	SR-18 at Shasta	N	New eastbound bus stop.
41	SR-18 at Stoddard Wells	N	New eastbound and westbound bus stop.
41	D Street at Hesperia	N	New eastbound and westbound bus stop.
41	Bass Hill behind Target	N	Due to change in route path, new eastbound bus stop required.
41	Dale Evans at Westlund	N	Due to change in route path, new eastbound bus stop required.

Route	Location	Action	Notes
43	Bear Valley at Jess Ranch	N	New eastbound bus stop.
43	Apple Valley at Town Center	N	New route segment. Requires westbound bus stop.
43	Town Center at Jess Ranch	N	New route segment. Requires westbound bus stop.
43	Jess Ranch at Bear Valley	N	New route segment. Requires westbound bus stop.
43	Bear Valley at Reata	E	Due to change in route path, eliminate westbound bus stop.
43	Central at Powhatan	N	New westbound bus stop.
43	Nisqually at Quinault	N	New eastbound bus stop.
44	Cottonwood at Pendleton	A	Move northbound and southbound bus stops one block to Cottonwood at Mesa for better bus stop spacing.
44	Cottonwood at Pahute	N	New route segment. Requires northbound and southbound bus stops.
44	Mariposa at Nisqualli	N	New route segment. Requires northbound and southbound bus stops.
44	Amargosa at King Ranch	N	New route segment. Requires northbound bus stop.
45	Mariposa at 7th Street	E	Due to change in route path.
45	Molino at Burning Tree	N	Due to change in route path and bi-directional service, add southbound bus stop.
45	Burning Tree at Pebble Beach	N	Due to change in route path and bi-directional service, add southbound bus stop.
45	Burning Tree at Wimbleton	N	Due to change in route path and bi-directional service, add southbound bus stop.
45	Green Tree at Arrowhead	N	Due to change in route path and bi-directional service, add northbound bus stop.
45	Yates at Bel Air	N	New northbound and southbound bus stop.
45	Mariposa at Talpa	N	Due to change in route path and bi-directional service, add southbound bus stop.
45	Nisqualli at Balsam	N	Due to change in route path and bi-directional service, add southbound bus stop.
45	Nisqualli at 11th Avenue	N	Due to change in route path and bi-directional service, add southbound bus stop.
45	Nisqualli at 9th Avenue	N	Due to change in route path and bi-directional service, add southbound bus stop.
45	Nisqualli at Cypress	N	Due to change in route path and bi-directional service, add southbound bus stop.
45	Nisqualli at Arrowhead	N	Due to change in route path and bi-directional service, add southbound bus stop.
45	Nisqualli at 3rd Avenue	N	Due to change in route path and bi-directional service, add northbound bus stop.
45	Nisqualli at Hesperia	N	Due to change in route path and bi-directional service, add northbound bus stop.
45	Hesperia at Jasmine	N	Due to change in route path and bi-directional service, add northbound and southbound bus stop.
45	Hesperia at Bear Valley	N	Due to change in route path and bi-directional service, add northbound bus stop.
45	I Avenue at Capri	N	New northbound and southbound bus stop.
46	Arrowhead Lakes at Monterey	N	New bus stop.
46	Danbury at Lassen	N	New bus stop.
46	Danbury at Madera	N	New bus stop.
46	Danbury at Windsor/Hinton	N	New bus stop.
46	I Avenue at Buckhorn	N	New bus stop.
47	Kiowa at Ottowa	N	New northbound and southbound bus stop.
48	Escondido at Sultana	N	New southbound bus stop.
51	Verde at Hesperia	A	Move bus stop to northeast corner.
51	Hesperia at Forrest	N	Due to change in route path, add northbound bus stop.
51	Mojave at Joshua	E	Due to change in route path.
51	Victor at Mojave	E	Due to change in route path.
51	Rodeo at Victor	E	Due to change in route path.

Route	Location	Action	Notes
51	B Street at 7th Street	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Forrest at 6th Street	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Forrest at Moore	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Forrest at Louise	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Forrest at La Verida	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Forrest at Del Rey	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Del Rey at Vallejo	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Del Rey at Mojave	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Mojave at La Paz	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Village at Culebra	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Village at Tawney Ridge	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Condor at Tawney Ridge	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Condor at Calgo	N	Due to change in route path and bi-directional service, add westbound bus stop.
51	Condor at Mojave	N	Due to change in route path and bi-directional service, add westbound bus stop.
52	El Evado at Maricopa	N	New northbound and southbound bus stop.
52	Seneca at Carob	N	New southbound bus stop.
52	Seneca at Borego	N	New southbound bus stop.
53	2nd Avenue at Bear Valley	A	Move bus stop to from 2nd Avenue onto Bear Valley at 2nd Avenue.
54	US-395 at Victor	N	New southbound bus stop.
54	US-395 at Mojave	N	New southbound bus stop.
54	Jonathan at Cactus	N	New northbound bus stop.
54	Mesa View at Nyack	E	Due to change in route path.
54	Pena at Elliot	E	Due to change in route path.
54	Bella Pine at Pepperwood	A	Due to change in loop direction, move bus stop to opposite curb.
54	Mesa View at Forest Park	A	Due to change in loop direction, move bus stop to opposite curb.
54	Mesa View at Luna	A	Due to change in loop direction, move bus stop to opposite curb.
54	Mesa View at Delwood	A	Due to change in loop direction, move bus stop to opposite curb.
54	Mesa View at Vista Verde	A	Due to change in loop direction, move bus stop to opposite curb.
54	Dos Palmas at Mesa View	A	Due to change in loop direction, move bus stop to opposite curb.
54	Dos Palmas at Ashmont	A	Due to change in loop direction, move bus stop to opposite curb.
54	Dos Palmas at Fern Pine	A	Due to change in loop direction, move bus stop to opposite curb.
54	Mall Boulevard at Walmart	N	New eastbound and westbound bus stop.
54	Amargosa at Park & Ride	N	New eastbound and westbound bus stop.
55	La Paz at Lorene	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	Hughes at Pebble Beach Park	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	Rodeo at City View	A	Due to change in route path, move southbound stop to northwest corner of Rodeo Drive and Hughes Road.
55	Rodeo at Hughes	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	Rodeo at Seneca	N	Due to change in route path and bi-directional service, add southbound bus stop.
55	Seneca at Hesperia	N	New northbound and southbound bus stops.

Route	Location	Action	Notes
55	Hesperia at Crestview	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	Hesperia at Chalon/Cherry Hill	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	Greentree at Dean	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	Greentree at Rodeo	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	Greentree at Greenbriar	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	Greentree at Arrowhead	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	Arrowhead at Ottowa	N	New northbound and southbound bus stops.
55	Arrowhead at Nisqualli	N	Due to change in route path and bi-directional service, add northbound bus stop.
55	7th Avenue at Minnetonka	N	Due to change in route path and bi-directional service, add southbound bus stop.
55	Silica at Glen Canyon	N	Due to change in route path and bi-directional service, add southbound bus stop.
55	Silica at 3rd Avenue	N	Due to change in route path and bi-directional service, add southbound bus stop.
55	Silica at 2nd Avenue	N	Due to change in route path and bi-directional service, add southbound bus stop.
55	Jasmine at Highgate	N	Due to change in route path and bi-directional service, add southbound bus stop.
55	Jasmine at 1st Avenue	N	Due to change in route path and bi-directional service, add southbound bus stop.

Table 7-22: Bus Stop Changes, FY 2016

Route	Location	Action	Notes
24	Cedar at Escondido	A	Move bus stop from Cedar onto west curb of Escondido at Cedar.
24	Escondido at Sage	N	New southbound bus stop.
24	Escondido at Mesquite	N	New southbound bus stop.
24	Escondido at El Centro	N	New southbound bus stop.
24	Escondido at Ranchero	N	New southbound bus stop.
24	Ranchero at Cataba	N	New westbound bus stop.
24	Ranchero at Outpost	N	New westbound bus stop.
24	Mariposa at Mesquite	N	New northbound bus stop.
24	Mariposa at San Joaquin Valley Coll.	N	New northbound bus stop.
24	Willow at Balsam	N	New eastbound and westbound bus stops.
24	Willow at 11th Avenue	N	New eastbound and westbound bus stops.
24	Willow at 9th Avenue	N	New eastbound and westbound bus stops.
24	Willow at 7th Avenue	N	New eastbound and westbound bus stops.
44	Pyrite at Chestnut	E	Due to change in route path.
44	Live Oak at Pyrite	E	Due to change in route path.
44	7th Avenue at Smoketree	E	Due to change in route path.
44	7th Avenue at Cajon	E	Due to change in route path.
44	7th Avenue at Willow	E	Due to change in route path.
48	Main at Escondido	N	Due to change in route path, add new westbound bus stop.
48	Muscatel at Mission Crest Elem.	E	Due to change in route path.
48	Muscatel at Coyote	E	Due to change in route path.
48	Coyote at Newport	E	Due to change in route path.

All bus stops should have a bus stop sign that has the system identity, a customer service phone number, and identification of the routes that serve the bus stop. The current VVTA bus stop graphic includes only a picture of a bus. Besides a bus stop sign, the service standards section of this COA identifies that bus stops that have more than 50 boardings per day should have a bus shelter and bus stops that have more than 25 boardings per day should have a bench. Table 7-23 presents the bus stops that should have shelter and/or benches installed based on the standard presented in Chapter 6.

Table 7-23: Proposed Shelter and Bench Installations

Bus Stop Location	Stop ID #	Average Daily Ridership	Need
Fish Hatchery Road at Baseball Fields	197	169	Shelter and Bench
G and Olive Street Southbound	490	104	Shelter and Bench
Highway 395 and Palmdale Road in front of Del Taco	105	73	Shelter and Bench
Palmdale Road and Cobalt Road	333	44	Shelter and Bench
7th Street and Lorene Drive at Westech College	430	34	Bench
Valley Center Drive and 7th Street	465	32	Bench
Amargosa Road and Village Drive	661	30	Bench
Roy Rogers Drive and Amargosa Road	634	29	Bench
Jonathan Street and Durango Drive	556	26	Bench
Air Expressway and Adelanto Road	557	25	Bench
Village Drive and Rancho Road	477	22	Bench
Village Drive and Manning Street	476	22	Bench
Llanada Avenue and Village Drive	475	22	Bench
La Mesa Road and Pacoima Road	255	20	Bench

8.0 Summary of Community Outreach Activities for Potential Bus Route Alternatives

8.1 Introduction

This report presents a synopsis of public input received during the spring 2013 community outreach activities conducted as part of the Victor Valley Comprehensive Operational Analysis (COA). The focus of these outreach activities was to obtain public input on potential bus route alternatives. A system map that displayed the route recommendations was made available for public review on VVTA's website prior to and during the spring 2013 community outreach activities. Outreach activities were undertaken during the week of April 15, 2013. 640 people participated in these activities, which included in-person customer comment sessions and employee input sessions.

8.1.1 Overview of COA Outreach

Public participation is an integral part of the COA process. Achieving involvement from a broad cross-section of stakeholders requires a multi-pronged outreach program that allows people to participate in a variety of ways. Thus, a comprehensive and varied public outreach program was developed to maximize opportunities for the public to provide input and feedback. Feedback provided during this phase of the COA process will help refine the potential bus route alternatives and guide the development of the Draft Transit Service Action Plan; the next step in the COA process.

8.1.2 Report Organization

The chapter is organized by topic as follows:

- *Spring 2013 Community Outreach Overview*: Provides an overview of the spring 2013 community outreach activities and number of participants.
- *Community Input on Potential Bus Route Alternatives*: Summarizes the community input received on each proposed bus route alternative.
- *Bus Operator Input on Potential Bus Route Alternatives*: Summarizes the bus operator input received on each proposed bus route alternative.

8.2 Spring 2013 Community Outreach Overview

This section provides an overview of the spring 2013 community outreach activities that were undertaken during Phase II of the COA. These activities incorporated special considerations in regards to Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act of 1990 (ADA), and the high percentage of Spanish speakers who live and work in the VVTA service area.

8.2.1 Special Considerations for Community Outreach

To address Title VI requirements, ADA compliance issues, and the need for Spanish language outreach, special considerations were incorporated into the outreach.

The community outreach events were scheduled at major bus transfer locations to ensure that passengers from throughout the service area would have an opportunity to provide input. The public open houses were held in locations within the service area that are accessible to low-income and minority populations.

A Spanish-speaking facilitator was present at outreach events that were geared toward the general public to ensure effective communication with Spanish speakers.

8.2.2 Spring 2013 Community Outreach Activities

Community outreach activities undertaken focused on obtaining feedback on potential bus route alternatives. Each outreach activity provided a forum for community members to review the potential bus route alternatives. Community members were asked to provide feedback on how their travel may be impacted using the following categories:

- The proposed changes will make my travel easier;
- The proposed changes will not impact my travel;
- The proposed changes will make my travel more difficult; or
- I will no longer be able to get where I need to go with the proposed changes to this route

Each subsection below provides a description of the outreach activity and provides the approximate number of participants. Section 8.3 presents input received directly related to the proposed bus route alternatives during these activities.

Customer Comment Sessions: April 2013

The purpose of the customer comment sessions was to gather perspectives on the proposed bus route alternatives from customers. A total of 8 customer comment sessions were conducted from April 15 through April 19, 2013. Customer comment sessions consisted of informal interviews with customers waiting at five main transit centers throughout the system.

Table 8-1 provides a summary of the customer comment sessions schedule and number of participants at each location. A total of 589 people participated in the customer comment sessions. Besides the formal comment sessions, passengers contacted VVTA offices with comments about the route proposals. A total of three comments were received by VVTA staff. Section 8.3 of this chapter presents input received during these sessions that directly related to the proposed bus route alternatives.

Table 8-1: Spring 2013 Customer Comment Sessions Schedule

Date	Transit Center Location	Time of Survey	Number of Participants
April 15, 2013	Apple Valley Post Office	12:00 to 4:00 p.m.	47
April 16, 2013	7th and Lorene Transfer Point, Victorville	12:00 to 4:00 p.m.	119
April 16, 2013	Stater Brothers Supermarket, Adelanto	12:00 to 4:00 p.m.	20
April 17, 2013	Victor Valley College	12:00 to 4:00 p.m.	98
April 17, 2013	7th and Lorene Transfer Point, Victorville (BV Link)	Various	86
April 18, 2013	7th and Lorene Transfer Point, Victorville	12:00 to 4:00 p.m.	133
April 18, 2013	Mall of Victor Valley	12:00 to 4:00 p.m.	55
April 19, 2013	Hesperia Post Office	12:00 to 4:00 p.m.	31
Customer calls to VVTA			3
Total			592

Employee Input Sessions: April 2013

The purpose of the employee input sessions was to obtain input on the proposed changes to existing bus routes from the employees' perspective. Project team members met with individual employees or groups of employees. Members of the project team presented the potential bus route alternatives. The following questions were used to guide discussion with the employees:

- Do you see any flaws with the proposed bus routes, such as turns that cannot be made?
- Do you have any improvements/suggestions for the proposed bus route modifications (use street y instead of street x)?
- Do you think that riders will benefit from the proposed bus route changes?
- Do you have any other comments or overall issues with the proposed bus route changes?

Table 8-2 provides a summary of the employee input sessions schedule and number of participants. A total of 81 people participated in the employee input sessions. Section 8.4 of this chapter presents input received during these sessions that directly related to the proposed bus route alternatives.

Table 8-2: Spring 2013 Employee Input Sessions Schedule

Date	Time	Number of Employees Interviewed
Tuesday April 16, 2013	4:00 to 7:00 AM	32
Tuesday April 16, 2013	9:00 to 11:00 PM	19
Total		51

8.3 Community Input on Bus Route Alternatives

This section summarizes community input gathered on each potential bus route alternative during the spring 2013 outreach activities. The input presented in this section is organized by route number. For each route, a summary matrix is provided describing the type of proposed change to the route and the how the community felt these changes would impact their travel (i.e., easier, no impact, more difficult, or no longer able to get to destination). It should be noted that of the 965 comments recorded there were only 3, or 0.3 percent, who commented that they would no longer able to get to destination while an astounding 689, or 71.4 percent, commented it would be easier. In all 900, or 93.3 percent, stated that the service would be easier or have no impact.

8.3.1 Overall Comments

Passengers had a number of overall comments related to VVTA and the proposals. Overall riders were very happy that Sunday service will be provided on select routes[5], although there was some disappointment that not all routes will have Sunday service. In response to passenger comments Sunday service will be offered on additional routes[6]. Passengers were very concerned about the impact the route proposals will have on the VVTA fare policy, especially passengers who want to use the service on Sunday and live in the dial-a-ride areas. Victor Valley College Students are very excited about the upcoming U-Pass program.

While most of passengers were happy with the proposals that they saw, passengers also had requests for more service. This included many requests for later evening service, as late as 11:00PM for both students at area colleges and employees who need to return home later in the evening. There were a few requests for earlier morning service. Riders also requested that all routes have 30-minute service with some requests for service to operate even more frequently.

A few passengers were concerned about transfers at the 7th and Lorene transfer point in Victorville. The concern was that the current layout of the transfer point requires long walks when transferring between buses due to the linear layout of the transfer point. These long walks contribute to many missed connections between buses. Adding an additional bus route (Route 55) will likely increase walking distances at the transfer point.

There were a number of comments regarding bus stops and public information. Passengers requested more benches, shelter, and lighting at bus stops, as well as a system map at major bus stops. Passengers on almost all routes mentioned that additional bus stop locations are needed. Passengers also would like to see a bus tracker smartphone application. A few

[5] The original proposal that was presented to the public included Sunday service on only on Routes 31, 41, 45, 48, 51, 52, and 53, with general public dial-a-ride in other locations

[6] The final proposal for Sunday service includes service along Routes 21, 22, 23, 31, 32, 41, 43, 44, 45, 48, 51, 52, 53, and 55 with ADA service available for the general public for passengers within ¾ mile of Routes 33, 40, 46, 47, and 54

passengers commented that they would prefer a bus book with all schedules instead of individual timetables.

The following sections and tables provide an overview of passenger impacts and comments.

8.3.2 Route 21Tri-Community/Tri-Community Circulator

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
21	5	9	0	0

Comments on Potential Changes to Route 21:

- Very happy to have service to Target
- Need Sunday service
- Route 21 needs to operate more often
- Service should run along Mariposa in both directions

8.3.3 Route 22 Helendale

There are no changes proposed for Routes 22; however, the following comment related to the bus route alignment was received:

- This route should operate every hour
- Silver Lakes needs Sunday service and more frequent service

8.3.4 Route 23 Lucerne Valley

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
23	1	18	1	0

Comments on Potential Changes to Route 23:

- Service needs to operate more often
- Lucerne Valley needs a local circulator that would connect to a line haul service to Apple Valley
- Lucerne Valley needs Sunday service
- Earlier service on Saturday is needed
- It makes sense to eliminate the Lucerne Valley Circulator
- Lucerne Valley route needs more bus stops

8.3.5 Route 24 Oak Hills (Planned for FY 16)

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
24	0	2	1	0

Comments on new Route 24:

- Having to transfer to Route 24 will make trips more difficult

8.3.6 Route 31 Adelanto South

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
31	71	14	0	0

Comments on Potential Changes to Route 31:

- Sunday service is a great idea
- Sunday does not matter, I use the bus to go to school
- Later evening service needed
- Would like to see service beyond 9:00PM
- Should have 30-minute service on Sunday

8.3.7 Route 32 Adelanto North

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
32	12	30	12	0

Comments on Potential Changes to Route 32:

- Needs to serve Michael's Liquor Store stop (Bartlett and Bellflower)
- Route 32 should serve Maverick's Stadium
- Will need to transfer to the 33 to get home
- Forced transfers are expensive and I would need to transfer to get to Bartlett and Bellflower
- Route 32 should operate on Sunday
- Proposals do not address crowding on the route

Many of the comments about modifications making travel more difficult came from people who use the Bartlett and Bellflower stop which was originally proposed to be moved from Route 32 to Route 33. To respond to these comments, the proposal for Routes 32 and 33 were modified to maintain Route 32 service to this stop.

8.3.8 Route 33 Adelanto Circulator

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
33	6	6	3	0

Comments on Potential Changes to Route 33:

- Will not impact my travel time but I support the changes
- Should have 30-minute service even on Sunday
- I use the stop on Bellflower between Mojave and Victor
- Bus stops on Stevens and Kemper are used by a disabled passenger who has numerous friends who live near these bus stops

8.3.9 Route 40 Apple Valley North Route Deviation

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
40	2	11	2	0

Comments on Potential Changes to Route 40:

- Won't serve my home on Ramona
- There are issues connecting between the 40 and the 41
- Need more bus shelters
- More service is needed on Route 40, the bus is too crowded
- Happy to see service to Granite Hills High School
- Earlier service is needed
- Proposal impacts the connections with Route 41

8.3.10 Route 41 Apple Valley/Victorville

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
41	95	4	0	0

Comments on Potential Changes to Route 41:

- Sunday service will be great
- 30-minute service will be great to get to doctor's appointments
- Later evening buses needed
- Earlier service needed
- It would be better if Route 41 went further than the 7h/Lorene Transit Center

8.3.11 Route 43 Apple Valley/Victor Valley College

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
43	23	26	5	0

Comments on Potential Changes to Route 43:

- Service to Jess Ranch is good
- Bus stop needed at Blackfoot Road
- 30-minute service needed later in the day
- Should serve Jess Ranch in both directions
- A stop is needed closer to Sonic restaurant
- Should operate on Sunday
- Should run more often
- Concern that serving Jess Ranch will slow down the bus too much
- Buses should pull into all shopping centers

People who said that the proposed changes would make travel more difficult were primarily concerned about the impact the Jess Ranch deviation would have on travel time and connections to other routes. Other people noted that this route should operate on Sunday since it is a major route.

8.3.12 Route 44 Mall of Victor Valley/Hesperia

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
44	21	8	5	1

Comments on Potential Changes to Route 44:

- Want to go to the Mall via Bear Valley Road
- Concern about not serving Mojave High School long term
- Buses need to operate later than 8:00PM
- Service should operate along Maple between Sycamore and Maple
- Route 44 should have Sunday service
- More bus shelters are needed
- Will allow me to get to the movie theater

A number of passengers are concerned that 3rd/Mesa/7th will no longer have service. The proposal to change Route 44 in this area is contingent on the implementation of Route 24 Oak Hills service Fiscal Year 16 Hills that will provide service to this part of Hesperia. The changes to Route 44 in FY 14 are limited to operating across the La Mesa/Nisqually overpass.

8.3.13 Route 45/55 Victorville/Hesperia

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
45/55	125	52	24	0

Comments on Potential Changes to Route 45/55:

- Sunday service is great
- 45 is too crowded in the morning so 60-minute service is not good
- 60 minutes is too long to wait
- Route 45 is never on time
- Service needs to be every 15 minutes, buses are always packed
- Service more often would be better than Sunday service
- 60 minute service does not matter since most people take the bus at the same time of the hour
- Splitting up the route will be helpful
- Would like no smoking signs in bus shelters
- Off-board fare collection would improve boarding times

- Need bus along Rodeo Drive to serve elderly
- Some concern about elimination of G Street service in Hesperia
- Route 45 should run as far south as Ranchero Road
- Won't have a one-seat ride between Hesperia and the stop at 2nd and Jasmine
- More frequent Route 45 service needed in Hesperia
- This route should continue operating around the hospital
- Later service is needed
- Like that Burning Tree will have two-way service
- Should go along Hesperia Road as far south as Lemon

Most of the comments regarding the proposal making travel more difficult are based on expected crowding from a reduction of service frequency on this route. This proposal is based on efforts to reduce crowding on current overcrowded Route 45 trips by having two buses (Route 45 and Route 55) operate between 7th and Lorene and Victor Valley College at the same time. Ridership on the current Route 45 trips that would be discontinued is significantly lower than the time periods when two buses would operate.

8.3.14 Route 46 Hesperia Route Deviation Circulator

There are no changes proposed for Route 46; however, the following comments related to the bus route alignment were received:

- I can't take advantage of Sunday service if Route 46 is not operating
- Buses are not stopping at bus stop at I and Sultana
- Route 46 is frequently late
- Issues with connections and signage at the Post Office

8.3.15 Route 47 Apple Valley South Route Deviation

There are no changes proposed for Route 47; however, the following comments related to the bus route alignment were received:

- 30-minute service would make this route better

8.3.16 Route 48 Hesperia West

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
48	11	6	2	0

Comments on Potential Changes to Route 48:

- Sunday service is good
- Concern about losing service along Escondido long term

8.3.17 Route 49 Apple Valley Road (Proposed for FY 16)

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
49	2	2	0	0

Comments on new Route 49:

- Need a route on Apple Valley Road

8.3.18 Route 51 Victorville Circulator

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
51	28	6	5	2

Comments on Potential Changes to Route 51:

- Will no longer have service on Arlette (service will still be available on Route 32)
- Later evening service needed
- Elimination of service on Victor Street eliminates my bus stop

8.3.19 Route 52 Victorville/Mall of Victor Valley

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
52	115	1	0	0

Comments on Potential Changes to Route 52:

- Sunday service is a great idea
- 30-minute service will help to get to doctor's appointments
- Later evening service is needed
- Bus is never on time
- Need a bus stop on Seneca Road between El Evado and Amargosa
- Need a bus stop on Hook closer to El Evado

8.3.20 Route 53 Victor Valley College/Mall of Victor Valley

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
53	58	11	2	0

Comments on Potential Changes to Route 53:

- 30 minute service on Route 53 starting earlier is great
- Sunday service is great
- Cutting service to Jasmine will result in quicker travel time
- 30-minute service is needed later in the day
- Need another bus stop on Bear Valley Road closer to the hospital
- ADA stop needed near VA Clinic
- Need service to 2nd, this alternative will force me to transfer to get to the doctor
- This will increase travel and walk time for elderly passengers that live in a senior citizens complex along Jasmine Street, please return Route 53 to the previous routing where the bus stops along the north side of Jasmine are served by routes going eastbound and westbound along Bear Valley Road

8.3.21 Route 54 Victorville West Route Deviation

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
54	27	5	0	0

Comments on Potential Changes to Route 54:

- Nice to have another option to get to the mall
- More bus routes should have 30-minute service
- Good to have service to the Walmart

8.3.22 B-V Link

Route Number	Number of Respondents			
	The proposed changes will make my travel easier	The proposed changes will not impact my travel	The proposed changes will make my travel more difficult	I will no longer be able to get where I need to go with the proposed changes
BV Link	87	0	0	0

Comments on Potential Changes to the B-V Link:

- B-V Link will be better used once 5 day a week service is implemented
- Glad to have the option of 5 day service so I am not stuck
- B-V Link should run 7 days a week
- There needs to be a 5:00 PM trip leaving San Bernardino
- B-V Link should serve either the Mall or the Park and Ride at Bear Valley Road and Amargosa
- B-V Link needs bigger buses
- B-V Link needs working radios to communicate with dispatchers
- Needs to run more often
- Late night service would be useful
- Should be better coordinated with Metrolink schedule
- More transfer points needed, would love to be able to transfer to B-V Link in Adelanto

8.4 Bus Operator Input on Bus Route Alternatives

Bus operators commented about a number of the proposals. Overall bus operators felt that most of the changes will improve the VVTA system. A few general comments from the bus operators include the need for a longer span on weekdays, concern about having sufficient staff to operate Sunday service, and concern that Sunday service does not start early enough in the morning. Operators had a number of concerns about the 7th and Lorene transfer point, including the need for bathroom facilities for operators and the lack of shallow saw tooth bus berths for additional bus routes, resulting on one bus needing to stop on the other side of the Costco driveway where the B-V Link and Route 22 stop. A few of the operators also mentioned the need for a bus route along Mojave Drive between Victorville and Adelanto as this corridor is growing and there is no Yellow School Bus service. A summary of the bus operator comments on the route proposals are presented below.

Route 21: Reversing the loop in Phelan had a mixed reaction. One driver felt that reversing the loop may make the turns more difficult another one felt that the difficulty of the turn was much less than the difficulty making a left without a traffic light. Route 21 should use Amargosa instead of the freeway to serve new generators and avoid traffic at Bear Valley Road exit.

Route 23: Removing the Lucerne Valley Circulator is a good idea.

Route 32: There was concern about the ability of the El Mirage turnaround to handle full sized buses especially due to the condition of the turnaround.

Route 41: 30-minute service is a good idea.

Route 43: There was a concern about having enough running time on the 43 to do the deviation into the Jess Ranch area.

Route 44: Bear Valley Road traffic is bad; the change should help this route. Operating the Willow Street dog leg in both directions does not make sense. The left turn from E Avenue onto Main Street is difficult due to high traffic volumes, this turn delays buses. This route should operate with NABI buses due to hills and crowding.

Route 45/55: This proposal should help crowding. Operators were concerned about the current interline with the 48. There was some concern about having sufficient running time for this proposal to work.

Route 48: Bus operators were concerned about the current interline with the Route 45. A few operators mentioned that the left turn from E Avenue onto Main Street is a source of delays.

Route 49: Apple Valley Road route is needed but speed limit needs to be reduced along Apple Valley Road.

Route 52: This route needs 30 minute service. There needs to be a stop at Rancho Apartments on Seneca between Amargosa and El Evado.

Route 54: Service to the mall (and Walmart) is a good idea.

B-V Link: 5 day a week service and bigger buses are needed on this route. The last trip of the day that serves Fort Irwin is not needed since nobody uses this trip.

9.0 VVTA Action Plan

The Comprehensive Operational Analysis (COA) Action Plan will assist VVTA staff in implementing the changes to the VVTA bus system and provides the tools needed to manage and monitor VVTA bus services going forward. The action plan provides a brief overview of the service changes and implementation schedule, staffing requirements, the overall financial plan, and the capital plan that VVTA will use going forward.

9.1 Short Term Service Design Plan

The COA proposes numerous changes to service in the first year of implementation, which will be in FY 2014. Changes are intended to address many a number of issues with the current VVTA system as well as respond to customer needs. The major issues that this plan responds to are on-time performance concerns and crowded conditions on the current bus routes.

The short term service design also addresses the need for Sunday service which is an official unmet need finding of the TDA Unmet Needs hearing process. Limited Sunday service is proposed as a trial service. Service will be provided along major routes in the VVTA service area with the general public allowed to use Direct Access services which will increase Sunday service coverage.

Details of all service changes are presented in Chapter 7. A highlight of the proposed short-term service design modifications are presented below:

- Route 21 – Will be modified to provide service to the Super Target in Hesperia. This route will also be modified by reversing the terminal loop in the center if Phelan. To improve on-time performance this route will no longer provide deviations during weekdays, instead a Tri-Community dial-a-ride will operate serving the Phelan, Wrightwood, Piñon Hills area. For trips to Victorville and Hesperia passengers would transfer in Phelan for Route 21 service.
- Route 23 – The Lucerne Valley Circulator will no longer operate, service will still be available through deviation. To improve on-time performance and provide a regular schedule, this route will operate once every two hours. To reduce travel time and increase ridership in the Lucerne Valley area, service along Trade Post Road, Foothill Road, Mesa Avenue, Crystal Rock Road, and Highland Avenue will be provided in both directions.
- Route 32 – Route 32 will be extended to the El Mirage area of Adelanto. An additional bus will be required to maintain service once per hour. This extension will allow reduce the number of transfers required for Adelanto residents, allow for service to SCLA, allow for bi-directional service to the Victorville Civic Center, and improve on-time performance on the route.

- Route 33 – This route will be modified to no longer serve the El Mirage area (which will be served by Route 32) and will serve the new Adelanto High School.
- Route 40 – This route will be modified to provide service to Granite Hills High School.
- Route 41 – 30 minute service will be provided along Route 41 to reduce crowding and improve on-time performance. In Apple Valley this route will be modified so that eastbound service will operate along Bass Hill Road and Dale Evans Parkway.
- Route 43 – Route 43 will be modified in the westbound direction to provide service to the Jess Ranch area.
- Route 44 – Route 44 will be modified to cross Interstate 15 via the new Nisqualli/La Mesa overpass to improve on-time performance and serve new areas in Victorville.
- Route 45/55 – Route 45 will be split into two-routes, Route 45 between Victorville and Hesperia via Victor Valley College, and Route 55 between Victorville and Victor Valley College. Both routes will operate once per hour, and depart from 7th and Lorene and Victor Valley College at the same time. The two routes will operate between 7th and Lorene and Victor Valley College via different routings. This will reduce crowding on the current Route 45 and provide service in both directions on all current Route 45 segments in Victorville.
- Route 51 – This route will have a major route modification that will change the alignment of this route from a one-way loop through Victorville into a bi-directional service. Modifications to current Routes 32 and 45 will allow this route to have bi-directional service.
- Route 52 – 30 minute service will be provided on Route 52 to reduce crowding and improve on-time performance.
- Route 53 – Route 53 will be modified in the vicinity of Desert Valley Hospital to remain on Bear Valley Road. Jasmine Street will be served by the new Route 55. Thirty-minute service will begin earlier in the day to provide crowding relief.
- Route 54 – This route will be extended to the Mall of Victor Valley and will also serve the Walmart on Amargosa Road.
- BV Link – BV Link service will operate five days a week and a later afternoon/evening roundtrip between 7th/Lorene and the San Bernardino Valley will be added to the schedule.

9.2 Prioritized Longer Term changes

The COA proposes a number of longer term changes. Some of these changes are based on completion of planned roadway projects. Other changes are meant to meet the goals that the JPA members have for transit service. Currently, these changes are projected to occur in the FY 2016 timeframe. Detailed service descriptions are presented in Chapter 7. The longer term changes are:

- Route 24 Oak Hills – This new route will provide service to the unincorporated Oak Hills area of the County. This route will also provide service to San Joaquin Valley College

along Mariposa Road. Route 24 will allow for modifications to Routes 44 and 48. Route 24 service is contingent on the completion of the Ranchero Road interchange project at Interstate 15. Route 24 would operate along the Willow Street corridor in Hesperia.

- Route 44 – Route 24 will allow Route 44 to be modified to no longer operate the 3rd/7th/Mesa Street deviation as well as the Willow/Live Oak segment.
- Route 48 – Route 24 would operate along Escondido Avenue in Hesperia allowing Route 48 to remain on Main Street.
- Route 49 Apple Valley Road – Service along Apple Valley Road is a goal of the Town of Apple Valley. This service will connect Victor Valley College and Jess Ranch to Saint Mary's Hospital and Apple Valley Town Hall.

9.3 Strategic Changes Through 2020

While specific strategic changes through Fiscal Year 2020 were not identified in Chapter 7, a number of service need themes were heard through the public outreach process. These themes represent items that VVTA will need to monitor over the next five years to see if these themes become service needs and if there is an ability to fund these service needs. If funding is available, VVTA should use the service standards and guidelines developed in Chapter 6 to prioritize the implementation of strategic changes. The themes that VVTA should be monitor include:

- Later evening service – School classes and jobs finish later than 9:00PM. The implementation of a U-Pass program combined with overall growth in the service area is, and will continue, to increase the demand for service later in the evening.
- More frequent service – The consultant team heard request for more frequent service on all routes, however, the most requests came from passengers on County routes and routes operate every 60 minutes. VVTA will monitor ridership and crowding on all routes to determine which routes should have additional service.
- Service along Mojave Drive – Mojave Drive between Victorville and Adelanto is emerging as a corridor that is seeing a number of service requests. Requests for service along this corridor are based on the number of school children who live in this area and the reduction in yellow school bus service. As ridership continues to grow on Route 31, a Mojave Drive service could be implemented to reduce crowding on Route 31.
- Service along Hesperia Road – A number of riders mentioned that a route along Hesperia Road between Victorville and Hesperia is needed. Currently, most major generators along Hesperia Road are served and would continue to be served under the new routes. This corridor should be monitored to see if service should be provided in the future.
- Additional Sunday services – The current proposal for Sunday service is for a limited schedule. While passengers are happy that Sunday service will be provided, there have been requests for additional Sunday services, including more routes and a longer span. As Sunday service matures there may be a need for additional service.

- On-time performance – On-time performance is always a concern for any transit provider. As the Victor Valley area grows, congestion has grown and so has ridership on VVTA services. Both of these factors have an effect on VVTA on-time performance. On-time performance will need to be monitored with modifications and additions to service needed to maintain a service that is on-time and reliable.
- Limited stop service – Adding limited stops services is a strategy that VVTA could employ to improve transit travel times and reduce crowding on buses. Limited stop buses operate along the same routes as regular routes but only serve larger volume stops. This strategy could be used to add capacity to a route at certain key times of day, versus adding service all day. Longer term, the addition of technology and physical elements could allow for a Bus Rapid Transit network (BRT) in Victor Valley.
- Hesperia Transit Center – To support development goals of Hesperia, eventually the Hesperia Transit Center may move from the Post Office to the City Hall area. This will require a modification of fixed route services in Hesperia.
- 7th/Lorene Transit Center – Currently this transit center has six shallow saw-tooth bays and serves eight routes. Two of the bus routes stop east of the saw-tooth bays along Lorene Drive. The COA proposals add one more bus route to the transit center. Passengers have commented that transfers take a long time at this transit center due to long walks between buses due to the linear layout of the transit center. Passengers mentioned that the long walks contribute to the issue of missed transfer connections. This problem will be exacerbated in the short term with the addition of another bus route that will have to stop east of the bus bays. Short term, walking distances can be addressed by changing the bus bay route assignments based on observed transfers. Continued growth of transit services in Victorville may increase the number of bus routes serving the Victorville transfer point. An off-street bus transfer facility may be needed in the vicinity of 7th and Lorene to facilitate the high number of transfers that occur at this location. This facility should also include restroom facilities for bus operators.

9.4 Staffing

The need for five additional VVTA administrative employees was identified in Chapter 7. The need for these positions was confirmed by various other audits conducted on VVTA, including the FTA Triennial Review. These positions are needed to respond to growth in the VVTA system, critical function support, improve the ability of VVTA staff to respond to the board and the general public questions and concerns, and finally to support data reporting requirements. Below is a description of each of the positions.

<u>Accountant I</u>

At VVTA, higher level accounting and management functions, such as budget analysis, cash flow planning, cost allocation, long range financial planning, fixed asset management, and the development of written policies, are inadequate and undeveloped in order to complete

necessary lower level tasks on a daily basis. Additionally, functions, such as purchasing and fixed asset management, are done on a collateral basis without a dedicated staff person to ensure compliance and consistency. Currently, the Deputy Director/Grants Manager spends a large percentage of time performing grant accounting functions in support of mandated grants processes that should be performed by the accounting department.

Adding a staff accountant would trickle-down lower level accounting and clerical duties that the Finance Manager and Deputy Director are currently taking care of, to a qualified staff accountant position. This would free up time for these senior staff members to incorporate the higher level functional needs outlined above. Additionally, internal controls could be enhanced, and critical functions, such as payroll, would have support if the primary staff person were unable to perform those assignments.

Fleet/Facility Analyst

Currently contractor oversight and fleet analysis is being performed by VVTA's Fleet and Facility Maintenance Director. Due to the more critical demands of this position, these necessary functions are being performed inconsistently and therefore not optimized. Additionally, VVTA has a substantial investment in RTA fleet maintenance software, but has been unable to fully realize the cost savings and benefits of the system due to a lack of staffing in this area.

This position would assist in the oversight of the contractor in compliance with Preventative Maintenance Scheduled services (PM's) for both the facility and the vehicles. Included would be oversight of differed repairs to make sure they are repaired in a timely manner. Oversight of the computerized maintenance system to insure that correct data input for Vehicle Maintenance and Repair Service (VMRS) codes, mileages, dates, proper descriptions and work orders are being performed. Administer the RTA database with updates to preventive maintenance (PM) schedules and programs (facilities and vehicles), VMRS codes, maintenance schedules, labor hours, reporting, etc. Monitor and research facility and vehicle maintenance and trends to assist in developing cost saving and more efficient pm services and repairs to maintain and increase service life of VVTA assets. This position would also research repetitive maintenance failures to analyze the causes and effects and assist with resolutions to reduce failures. Spot checks of vehicles, maintenance equipment, and facility for deficiencies in maintenance and repairs that may be missed, delayed, unacceptable, or otherwise not up to VVTA standards.

Marketing Assistant

VVTA has been unable to utilize current social media opportunities to integrate these new technologies with existing customer service and outreach programs in order to make them more available to the communities it serves. This position would be responsible for outreach via Google Transit, IE511, and other applications to maximize passenger information and communication. This position will significantly improve and enhance VVTA's service capabilities. Additionally, this position would provide enhanced marketing support by

coordinating these advanced technologies with current and developing social media applications to improve the VVTA customer awareness and service experience.

Staff Clerk

The need for this function is largely due to current and planned programmed growth and expansion of services. VVTA's growth in the administration, monitoring, and reporting of various new programs including, NTC commuter, Vanpools, BV Link, San Bernardino Lifeline, and the Mobility Management program have created an increasing demand for already overtaxed administrative support. Senior management invests many hours in essential administrative tasks such as filing and retrieving filed records. Record storage and retrieval has become more difficult as file storage space is quickly dwindling. Current and future requirements for efficient records management through a centralized electronic repository will require dedicated personnel to manage and will allow for the reprogramming of senior management hours to more important tasks.

This position will provide administrative support for all departments including the newly programmed Vanpool services department that is lacking any dedicated personnel to process necessary paperwork. This clerical position will become the custodian of VVTA's electronic records management system, coordinating the use of this repository between all departments. Additionally, many administrative tasks such as travel, mailroom, conferencing, and Executive Director administrative support, will allow department managers to invest more quality time into upper level activities.

Procurement/Civil Rights Officer

Functions, such as procurement, purchasing and fixed asset management, are done on a collateral basis without a dedicated staff person to ensure compliance and consistency. Civil Rights are currently handled by the Executive Director who has a cursory knowledge of requirements. Disadvantaged Business Enterprise program (DBE) requires yearly goal setting and reporting. In addition DBE requires ongoing outreach into the business community. A Limited English Proficiency Plan (LEP) is required to be developed and brought out into the community. Affirmative Action and Title VI programs are a requirement. With the new environmental justice requirements every, not just major, schedule change, routing change, fare adjustment must be accompanied by a complete study to determine whether environmental justice populations would be subjected to disproportionately high and adverse human health or environmental effects as a result of a transportation plan, project, or activity; and the agency's plans to avoid, minimize, or mitigate these effects.

This position will provide sufficient skilled staff to administer VVTA's procurement's assuring all federal, state, and VVTA policies are followed. The position would prepare RFPs and IFBs and related Board agenda items and develop and implement all FTA requirements for DBE, Civil Rights, and Environmental Justice. The incumbent would conduct community outreach as required by FTA.

Many of these positions would be added to VVTA staff in FY 2014. The staffing plan for FY 2014 include adding the Account I position, the Fleet/Facility Analyst position, and the Marketing Assistant position. Besides adding these three positions IT Support will be contracted out, allowing more staff of the VVTA administrative staff to concentrate on their core duties. In FY 2015 the remaining two positions, the Staff Clerk and the Procurement/Civil Rights Officer will be added.

9.5 Financial Plan

The financial plan presents costs and LTF revenues for implementing the recommendations of the COA. Costs were estimated based on VVTA's current cost structure and hours of service that are projected to operate. Non-fare revenue projections were provided by San Bernardino Associated Governments (SANBAG) based on their projections to 2020. These costs and revenues provide a planning level estimate of costs and revenues. Planning level cost estimates tend to be higher than actual cost since these estimates are based on broad assumptions regarding cost increases. Costs and revenues will be refined each year as part of the budgeting process.

The financial plan below presents the costs and LTF requirements for implementing the recommendations proposed in the COA. Funding from other Federal and State funding sources that are applied to VVTA services are detailed in Chapter 5. Costs and LTF requirements are presented for the current system and for each individual type of service improvement.

LTF is the largest source of funding for VVTA services. LTF is generated from a ¼ cent sales tax statewide. LTF is returned to the area that is generated to fund transit services, generally measured in route miles in each jurisdiction. In the Victor Valley, LTF is used specifically within the community it is generated in, with LTF supporting transit services within the community. Certain VVTA cost items are distributed equally amongst JPA members such as administration, facilities, and mobility management. LTF not used by transit is used to support streets in the community.

The rules regarding Federal Transit Administration Section 5307 funds have changed under MAP-21. The rule change allows for an increased amount of 5307 funds, typically used for capital programs and vehicle maintenance, to be used for operations, up to 50 percent of operating budgets. Section 5307 will be available to fund current and proposed services.

Fares are dependent on ridership. Fares presented in this financial plan are based primarily on fare revenues presented in Chapter 7, which are based on ridership projections multiplied by an average fare. Fare revenues are summarized for current services and proposed improvements.

9.5.1 Current System Projections

The current system costs and revenues were projected to FY 2020 to establish a baseline. The costs and LTF requirements are presented below in Table 9-1. Costs for most categories are expected to grow by approximately 3 percent per year.

Table 9-1: Current System Cost Projection and LTF Requirements

Item	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
ADA	$3,581,589	$3,799,767	$4,030,853	$4,276,562	$4,537,150	$4,813,401	$5,106,138
County	$867,494	$893,519	$920,325	$947,934	$976,372	$1,005,664	$1,035,834
Regional	$5,350,475	$5,510,989	$5,676,319	$5,846,608	$6,022,007	$6,202,667	$6,388,747
Lifeline	$392,743	$353,246	$363,843	$374,759	$386,001	$397,581	$409,509
NTC	$481,037	$495,468	$510,332	$525,642	$541,411	$557,654	$574,383
Administration	$1,208,002	$1,244,242	$1,281,569	$1,320,016	$1,359,617	$1,400,405	$1,442,418
Mobility Management	$102,220	$105,287	$108,445	$111,699	$115,050	$118,501	$122,056
Vanpool	$1,193,600	$1,229,408	$1,266,290	$1,304,279	$1,343,407	$1,383,710	$1,425,221
Yard	$158,921	$163,689	$168,599	$173,657	$178,867	$184,233	$189,760
Total	$13,336,081	$13,795,614	$14,326,576	$14,881,157	$15,459,882	$16,063,816	$16,694,065
Non LTF Funding	$6,356,706	$6,064,123	$6,847,985	$7,108,782	$6,729,236	$6,966,871	$7,071,485
LTF Required	$6,979,375	$7,731,491	$7,478,591	$7,772,374	$8,730,647	$9,096,945	$9,622,580
Jurisdiction	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
County	$725,694	$855,997	$876,791	$901,348	$933,149	$943,900	$969,618
Adelanto	$646,700	$721,605	$676,600	$700,896	$808,010	$840,703	$891,924
Apple Valley	$1,704,814	$1,877,795	$1,836,315	$1,917,892	$2,150,001	$2,256,264	$2,394,412
Hesperia	$1,336,409	$1,471,431	$1,406,324	$1,461,484	$1,661,973	$1,735,441	$1,840,888
Victorville	$2,565,756	$2,804,663	$2,682,561	$2,790,755	$3,177,514	$3,320,637	$3,525,738
Total	$6,979,375	$7,731,491	$7,478,591	$7,772,375	$8,730,647	$9,096,945	$9,622,580

9.5.2 On-Time Performance Improvement

There are a number of service improvements that are designed to improve on-time performance. These include creating the Tri-Community Circulator (Route 24) in Phelan/Pinon Hills/Wrightwood area, modifications to Route 23, increasing the running time on Route 32, modifications to Route 33, modifications to Route 51, and establishing new Route 55. The only revenue sources available to support these improvements are fare revenue, Section 5307, and LTF. Table 9-2 presents the costs and LTF impacts for on-time performance related improvements.

Table 9-2: On-Time Performance Improvement Cost and LTF Requirements

Item	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Cost	$784,045	$802,915	$822,864	$851,741	$877,352	$903,623	$930,796
Fares	$44,118	$49,401	$53,105	$57,091	$61,371	$69,840	$75,075
Section 5307	$98,801	$63,193	$106,092	$108,047	$60,148	$48,500	$35,100
LTF Required	$641,126	$690,321	$663,666	$686,603	$755,833	$785,283	$820,621
Jurisdiction	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
County	$301,666	$367,314	$377,219	$387,306	$397,676	$406,275	$416,919
Adelanto	$68,292	$67,272	$60,143	$62,139	$74,479	$78,731	$83,848
Apple Valley	$0	$0	$0	$0	$0	$0	$0
Hesperia	$27,558	$24,610	$21,482	$22,940	$27,368	$29,020	$30,919
Victorville	$243,610	$231,126	$204,822	$214,217	$256,310	$271,257	$288,934
Total	$641,126	$690,321	$663,666	$686,603	$755,833	$785,283	$820,621

9.5.3 Ease Crowding

Additional service is being added to three routes to address crowding. This includes providing 30-minute service along Route 41 and 52 during weekdays and adding two additional trips to Route 53 on weekdays. The only revenue sources available to support these improvements are fare revenue, Section 5307, and LTF. Table 9-3 presents the costs and LTF impacts for improvements to address crowding. Some of the on-time performance recommendations will also address crowding issues such as the addition of Route 55 which will increase capacity between the 7th/Lorene Transit Center and Victor Valley College during the highest ridership part of the hour.

Table 9-3: Improvements to Address Crowding Cost and LTF Requirements

Item	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Cost	$450,037	$463,601	$477,469	$491,795	$506,578	$521,741	$537,439
Fares	$99,210	$111,176	$119,514	$128,478	$138,114	$157,171	$168,958
Section 5307	$96,594	$71,295	$120,865	$121,899	$67,859	$54,718	$39,600
LTF Required	$254,233	$281,130	$237,091	$241,418	$300,604	$309,853	$328,881
Jurisdiction	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
County	$8,663	$9,558	$7,674	$7,712	$9,931	$10,015	$10,598
Adelanto	$0	$0	$0	$0	$0	$0	$0
Apple Valley	$110,920	$122,676	$103,841	$105,837	$131,460	$135,724	$144,090
Hesperia	$9,993	$11,090	$10,038	$10,402	$12,370	$13,145	$14,009
Victorville	$124,657	$137,807	$115,538	$117,467	$146,843	$150,969	$160,184
Total	$254,233	$281,130	$237,091	$241,418	$300,604	$309,853	$328,881

9.5.4 Serve New Areas

There are a number of route modifications that will allow VVTA to serve areas that are not served today. The route proposals that serve new areas include modifying Route 21 to serve Super Target in Hesperia, the creation of the Oak Hills Route in FY 2016 (Route 24), serving SCLA with Route 32, serving the New Adelanto High School with Route 33, serving Granite Hills High School with Route 40, serving Jess Ranch are with Route 43, modifications to Route 44 to serve Cottonwood Avenue north of Bear Valley Road, the extension of Route 54 to the Mall of

Victor Valley, and the creation of the Apple Valley Road Route (Route 49). Routes 24 and 49 are proposed to operate on Sundays.

Most of these route proposals can be implemented at no additional cost since they are minor tweaks that do not require additional running times. Some of the other proposals to serve new areas are based on additional running time made available from other route proposals, such as Route 32 service to SCLA. The only proposals that will require additional resources are the two new routes proposed in FY 2016; Oak Hills and Apple Valley Road. The only revenue sources available to support these improvements are fare revenue, Section 5307, and LTF. Table 9-4 presents the costs and LTF impacts for improvements to serve new areas.

Table 9-4: Improvements that Serve New Areas Cost and LTF Requirements

Item	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Cost	$0	$0	$1,384,491	$1,278,284	$1,316,723	$1,356,151	$1,396,930
Fares	$0	$0	$175,088	$188,219	$202,335	$230,253	$247,523
Section 5307	$0	$0	$265,539	$239,416	$136,745	$111,574	$82,848
LTF Required	$0	$0	$943,864	$850,649	$977,642	$1,014,324	$1,066,559
Jurisdiction	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
County	$0	$0	$71,268	$63,921	$70,658	$72,439	$75,373
Adelanto	$0	$0	$0	$0	$0	$0	$0
Apple Valley	$0	$0	$376,270	$341,265	$411,841	$433,378	$461,270
Hesperia	$0	$0	$468,564	$420,284	$464,757	$476,531	$495,883
Victorville	$0	$0	$27,762	$25,179	$30,386	$31,975	$34,033
Total	$0	$0	$943,864	$850,649	$977,642	$1,014,324	$1,066,559

9.5.5 Sunday Service

Sunday service has been one of the most requested service improvements. Sunday service is proposed on most county and Regional fixed route services. The routes that will have Sunday service in FY 2014 include Routes 21, 22, 23, 31, 32, 41, 43, 44, 45, 48, 51, 52, 53, and 55. People who live along Routes 33, 40, 46, 47, and 54 will be allowed to use Direct Access ADA service to connect to a fixed route bus. In FY 2016 the two new routes that are proposed, Apple Valley Road (Route 49) and Oak Hills (Route 24), will also have Sunday service. Costs and revenues for Route 24 and Route 49 Sunday service are included as part of the improvements that serve new areas (Table 9-4). The only revenue sources available to support Sunday services are fare revenue, Section 5307, and LTF. Table 9-5 presents the costs and LTF impacts for Sunday service.

Table 9-5: Sunday Service Cost and LTF Requirements

Item	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Cost	$567,807	$601,007	$619,009	$637,580	$656,728	$676,406	$696,731
Fares	$104,704	$116,978	$125,738	$135,078	$145,302	$165,231	$177,637
Section 5307	$100,778	$76,858	$130,300	$131,415	$73,155	$58,989	$42,690
LTF Required	$362,326	$407,171	$362,971	$371,087	$438,271	$452,185	$476,404
Jurisdiction	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
County	$57,187	$57,499	$58,085	$59,105	$60,604	$60,487	$61,475
Adelanto	$20,788	$23,002	$19,551	$19,978	$24,709	$25,583	$27,163
Apple Valley	$43,059	$47,078	$39,970	$40,644	$50,109	$51,416	$54,401
Hesperia	$75,145	$86,991	$77,019	$79,135	$95,001	$99,283	$105,321
Victorville	$166,147	$192,601	$168,345	$172,226	$207,848	$215,416	$228,044
Total	$362,326	$407,171	$362,971	$371,087	$438,271	$452,185	$476,404

9.5.6 Additional Administration

The COA has identified five additional administrative positions needed at VVTA. Three of these positions are expected to be added in FY 2014 and the remaining two positions added in FY 2015. Administration positions are funded solely by LTF sources. LTF for administration is divided equally amongst the JPA members. Cost and LTF funding requirements for the additional administrative positions are presented on Table 9-6.

Table 9-6: Increased Administrative Staffing Cost and LTF Requirements

Item	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Cost/LTF Required	$210,744	$361,777	$372,631	$383,810	$395,324	$407,184	$419,399
Jurisdiction	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
County	$42,149	$72,355	$74,526	$76,762	$79,065	$81,437	$83,880
Adelanto	$42,149	$72,355	$74,526	$76,762	$79,065	$81,437	$83,880
Apple Valley	$42,149	$72,355	$74,526	$76,762	$79,065	$81,437	$83,880
Hesperia	$42,149	$72,355	$74,526	$76,762	$79,065	$81,437	$83,880
Victorville	$42,149	$72,355	$74,526	$76,762	$79,065	$81,437	$83,880
Total	$210,744	$361,777	$372,631	$383,810	$395,324	$407,184	$419,399

9.5.7 Capital Program

VVTA identifies capital needs each year as part of the budget process. Besides capital expenditures required supporting the current system, additional vehicles will be required to support expansion of service. Table 9-7 presents LTF required to support VVTA's capital program, including expansion. Details of the capital program are presented in Section 9.6.

Table 9-7: Capital LTF Requirements

Jurisdiction	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
County	$151,337	$84,626	$116,130	$116,102	$116,142	$116,118	$116,247
Adelanto	$173,086	$96,220	$128,011	$128,279	$128,567	$128,796	$129,184
Apple Valley	$191,813	$106,204	$138,242	$138,765	$139,266	$139,713	$140,323
Hesperia	$190,772	$105,649	$137,673	$138,182	$138,672	$139,106	$139,704
Victorville	$228,782	$125,912	$158,438	$159,464	$160,387	$161,264	$162,312
Total	$935,790	$518,610	$678,494	$680,792	$683,034	$684,997	$687,770

9.5.8 Overall Impact to LTF

Implementation of all recommendations from the COA will not require the use of all LTF available in Victor Valley. Based on cost and revenue projections, all communities will still have LTF available for street maintenance for as long as policy allows excess LTF to be spent on streets. Table 9-8 presents a summary of the estimated amount LTF required for transit and LTF remaining for streets based on the implementation of the COA.

Table 9-8: Summary of LTF Impacts

Jurisdiction	LTF Use	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
County	Transit	$1,286,696	$1,447,349	$1,581,692	$1,612,256	$1,667,225	$1,690,670	$1,734,109
	Streets	$1,230,341	$1,190,506	$1,182,779	$1,284,910	$1,369,005	$1,491,300	$1,600,595
	Total Available	$2,517,037	$2,637,855	$2,764,472	$2,897,167	$3,036,231	$3,181,970	$3,334,704
	Transit Percent	51.12%	54.87%	57.21%	55.65%	54.91%	53.13%	52.00%
Adelanto	Transit	$951,014	$980,454	$958,832	$988,053	$1,114,830	$1,155,250	$1,215,999
	Streets	$190,461	$215,812	$294,855	$325,811	$262,100	$287,772	$296,288
	Total Available	$1,141,475	$1,196,266	$1,253,687	$1,313,864	$1,376,929	$1,443,022	$1,512,287
	Transit Percent	83.31%	81.96%	76.48%	75.20%	80.96%	80.06%	80.41%
Apple Valley	Transit	$2,092,754	$2,226,108	$2,569,163	$2,621,165	$2,961,741	$3,097,931	$3,278,376
	Streets	$418,195	$405,367	$188,622	$268,994	$67,146	$76,342	$48,263
	Total Available	$2,510,949	$2,631,475	$2,757,786	$2,890,159	$3,028,887	$3,174,274	$3,326,639
	Transit Percent	83.35%	84.60%	93.16%	90.69%	97.78%	97.59%	98.55%
Hesperia	Transit	$1,682,025	$1,772,126	$2,195,628	$2,209,188	$2,479,205	$2,573,963	$2,710,604
	Streets	$1,587,889	$1,654,744	$1,395,732	$1,554,557	$1,465,200	$1,559,773	$1,621,552
	Total Available	$3,269,914	$3,426,870	$3,591,360	$3,763,745	$3,944,405	$4,133,736	$4,332,155
	Transit Percent	51.44%	51.71%	61.14%	58.70%	62.85%	62.27%	62.57%
Victorville	Transit	$3,371,101	$3,564,465	$3,431,992	$3,556,070	$4,058,354	$4,232,956	$4,483,126
	Streets	$853,665	$863,090	$1,208,085	$1,306,730	$1,037,861	$1,107,878	$1,114,068
	Total Available	$4,224,766	$4,427,554	$4,640,077	$4,862,801	$5,096,215	$5,340,834	$5,597,194
	Transit Percent	79.79%	80.51%	73.96%	73.13%	79.63%	79.26%	80.10%
Total	Transit	$9,383,591	$9,990,501	$10,737,307	$10,986,734	$12,281,355	$12,750,771	$13,422,214
	Streets	$4,280,551	$4,329,519	$4,270,074	$4,741,002	$4,201,312	$4,523,064	$4,680,765
	Total Available	$13,664,142	$14,320,020	$15,007,381	$15,727,736	$16,482,667	$17,273,835	$18,102,979
	Transit Percent	68.67%	69.77%	71.55%	69.86%	74.51%	73.82%	74.14%

9.6 Capital Plan

As part of the annual budget process, VVTA identifies capital needs for the upcoming years and the funding plan for each item. The Capital Plan described in this section provides an overview of capital items needed to support VVTA service through 2020. The VVTA capital plan is funded through a combination of federal and state funding sources. The finance plan presents LTF needed to support the capital plan.

9.6.1 Revenue Vehicles

The primary capital needs to support VVTA services are revenue vehicle needs. This includes new vehicles to replace existing vehicles that have reached the end of their useful life and expansion vehicles to support new services. Also included in the capital plan are new vehicle types for NTC Commuter service and B-V Link Lifeline services. The vehicle replacement and expansion need is based on looking at the service needs for each year and comparing that to the current fleet list and the projected replacement dates for each vehicle. The Table below provides the vehicle replacement and expansion schedule for VVTA. The vehicle purchase program is presented on Table 9-9.

Table 9-9: Vehicle Purchase Program

Year	12 Year/500,000 Mile			7 Year/200,000 Mile			5 Year/ 150,000 Mile	4 Year/ 100,000 Mile	Total
	Replacement	Expansion	Total	Replacement	Expansion	Total	Replacement	Replacement	
FY 2014	0	2	2	4	1	5	8	4	19
FY 2015	2	2	4	0	3	3	0	4	11
FY 2016	0	0	0	0	0	0	5	0	5
FY 2017	4	0	4	2	0	2	0	0	6
FY 2018	0	0	0	5	0	5	0	8	13
FY 2019	4	0	4	0	0	0	0	0	4
FY 2020	4	0	4	2	0	2	4	4	16
Total	14	4	18	13	4	17	17	20	72

The primary source of funding for transit vehicles is Proposition 1B bonds sold by the State of California. FTA Section 5339 funds are used for vehicle rehabilitation and for vehicle acquisition. Other sources include FTA 5307, CMAQ, and STAF funds are the other sources used for transit vehicles. LTF is only used for vehicle purchases when no other funding is available. This includes funding for NTC replacement vehicles and for vehicle acquisitions after FY 2018 when Proposition 1B expires. It is expected that post FY 2019 Proposition 1B will be renewed and that funding would replace LTF used for vehicles. LTF for NTC vehicles is shared equally among JPA members. LTF for other vehicles is allocated based on route mileage in each jurisdiction.

9.6.2 Major Components

A total of $95,000 per year is projected to be spent on major components to support vehicle maintenance. Eighty percent of funding for major components is funded by FTA 5307 monies, while the remaining 20 percent is supported by LTF. LTF is allocated to each JPA member based on fixed route mileage in each jurisdiction.

9.6.3 Transit Enhancements

Transit Enhancements improvements at bus stops and transit centers to improve the customer experience. These include procurement of bus shelters, benches, solar lighting, and pathway improvements. Transit enhancements are funded by Proposition 1B bonds, FTA Section 5307 funds, and LTF. LTF is allocated based on the regional route mileage in each jurisdiction.

9.6.4 Facility Lease Payments

This capital cost is payment for the lease of the current operations/maintenance facility in Hesperia. Lease payments are 80 percent funded by FTA Section 5307 funds. The remaining 20 percent is funded by LTF that is evenly allocated amongst JPA members.

9.6.5 Mobility Management

The role of mobility management at VVTA is to bring transportation options to the largest group of consumers in the mountain/desert areas of San Bernardino County. VVTA will be responsible for administering the grants for mobility management projects. Mobility Management monies will be allocated annually to VVTA to spend on projects. Funding for mobility management projects will come from FTA Section 5316 and 5317 funds which will cover 80 percent of the cost, and STA and LTF which will cover the remaining 20 percent. The LTF for mobility management will be allocated evenly amongst JPA members.

9.6.6 Security

Security is an ongoing expenditure. CTAF funding is provided to VVTA for the purchase of security equipment and to provide security services at the Victor Valley Transit Center in Old Town Victorville and at the Joshua/US 395 Park and Ride. Besides CTAF, FTA Section 5307 and LTF are used to fund security. LTF is paid by Victorville and Hesperia respectively.

9.7 Implementation Plan

Phase II of the COA has an implementation schedule for VVTA services. This section highlights the steps that are required for implementing the recommendations from the COA. Implementing service changes from the COA follow the same procedures that are needed for any service change such as public hearings.

Adoption of the COA is the first step in implementing the COA. To implement changes, public hearings will need to be held for any service or fare change during the time period of the change. After the public hearings, the board will have to adopt the service change proposals. Public hearings could occur at the same time as the adoption of the COA and recommendation of the year 1 service changes.

VVTA will need to identify the availability of capital resources for new services. Many of the service changes will require additional vehicles. During the COA process, VVTA staff identified the vehicles that are needed for implementation of the proposed routes and what vehicles need to be purchased. Chapter 7 identifies locations for new bus stops, however, specific bus stop locations will need to be identified by the member jurisdiction and VVTA based on pedestrian access and safety. Once the bus stops are identified, bus stop signs will be needed to identify the stop locations for passengers. The bus stops will need to be coded in VVTA internal reports to allow for VVTA systems (such as the automatic passenger counters) to know the bus stops locations for route information and reporting. Each jurisdiction is responsible for installing and removing bus stop signs within their juriasdiction.

The final step in implementing new services is to provide public and internal information about the new services. This includes printing out and distributing new timetables, which should occur before the new services are implemented. Internally, VVTA will need to create bus operator schedule blocks and runs. Fareboxes and bus data collection systems will need to be coded for the new route network. Customer service phone numbers for the new Sunday services will need to be established. The final item would be the release of a press release regarding new services.

9.8 Strategies and Tools

The COA has identified numerous service changes, capital needs to support the service changes, and staffing levels required to adequately manage and monitor VVTA services. The COA itself is a tool that should be used as a blueprint to monitor and manage VVTA services over the next five years. Beyond the service recommendations provided in the COA, Chapter 6 provides service standards and guidelines that should serve as benchmarks to monitor service performance and as guidelines for adding or reducing VVTA services.