Victor Valley Transit Authority

FY20 Short-Range Transit Plan

Final Report

September 2020

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1 Transit Service Baseline and Ridership Analysis

1.1 Introduction

Transit providers in California are required to produce a Short-Range Transit Plan (SRTP) every five years. Typically, Victor Valley Transit Authority (VVTA) uses their five-year Comprehensive Operational Analysis (COA) as the basis for their SRTP. San Bernardino County Transportation Authority (SBCTA) staff requested that VVTA complete their SRTP so that all transit operators in San Bernardino County have SRTPs covering the same period. Additionally with VVTA's zero-emission bus (ZEB) needs increasing, SBCTA staff determined that it would be appropriate to start the discussion on VVTA's increasing needs versus SBCTA revenue forecasts. The SRTP looks at the current performance of the VVTA services as well as documents how effective the current services are and what service modifications will be done with CalTrans funding.

This chapter provides an overview of transit service provided by VVTA, a detailed description of all existing fixed services that are operated and capital assets. The transit service overview describes VVTA governance, budget, recent service changes, and passenger fares. The data presented in this memo includes route and service descriptions, ridership statistics, on-time performance, service indicators and financial indicators. The capital assets section provides information relating to the VVTA fleet, bus stops, facilities and capital projects. The unmet needs section summarizes community needs that have not been addressed for the past three years.

1.2 Transit Service Overview

1.2.1 Victor Valley Transit History

VVTA was authorized through a Joint Power Authority (JPA) in 1992. The Board of Directors convened its first meeting later that year. A 5.2-acre business center property was purchased in 1994 for VVTA to store CNG units and for future bus facility development. The agency moved to Hesperia in 1999. In 2007, VVTA issued Certificates of Participation (COP) to collect funding for their CNG station expansion and new operations/maintenance/administration buildings. The expansion was completed over three years and occurred in two phases. Phase 1 was from 2007 to 2009, CNG Stations were constructed. Phase 2 started in August 2009, focusing on facility construction including office buildings, storage and maintenance facilities.

VVTA's operating budget has been growing since they moved to Hesperia. In fiscal year (FY) 98, the agency had $3.9m budget in total. In FY 15, the budget grew to $14.7m. The operating budget growth catalyzed the agency's service expansion, both fixed route services and flexible services.

B-V Link service began in January 2011 to connect the Barstow community to medical services in Victorville. In 2012, VVTA added a B-V Link service from Victorville into the San Bernardino Valley serving Metrolink stations in San Bernardino and Fontana, Arrowhead Regional Medical Center in Colton, Kaiser Permanente Fontana Medical, University of California – San Bernardino, with connections to OmniTrans and other transit providers at various stops. On March 28, 2012,

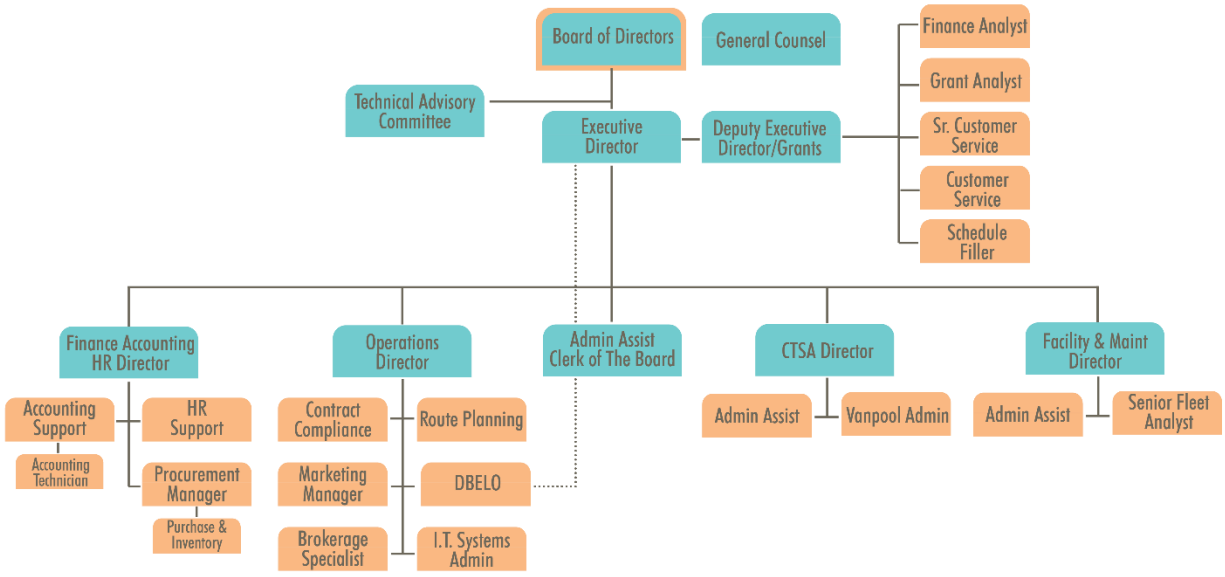
SBCTA requested a meeting to discuss a desert service consolidation merging Barstow Area Transit (BAT), VVTA, and Needles which led to the merger of Barstow Area Transit with VVTA. VVTA- National Training Center (NTC) service was approved and began its services in May 2012. In October 2012, vanpool service was introduced to fill the gap in existing fixed route services. Vanpools depart from and terminate in the Victor Valley area.

The agency's operating contract has changed several times since the relocation to Hesperia. the Board had a management contract with McDonald Transit Associates, Inc. for administration of the system from 1998 until the end of 2014, art which time McDonald Transit employees became VVTA employees. Transdev had the operating contract for VVTA from January 2005 until 2018. In 2018, National Express Transit became the system operator.

1.2.2 Victor Valley Transit Governance

Victor Valley Transit is governed by the JPA between San Bernardino County[1], Adelanto, Apple Valley, Barstow, Hesperia, and Victorville. VVTA is governed by a seven-member board of directors made up of an elected official from each member of the JPA members and the two county supervisors. A Technical Advisory Committee, comprised of staff from each of the JPA members and SBCTA, 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



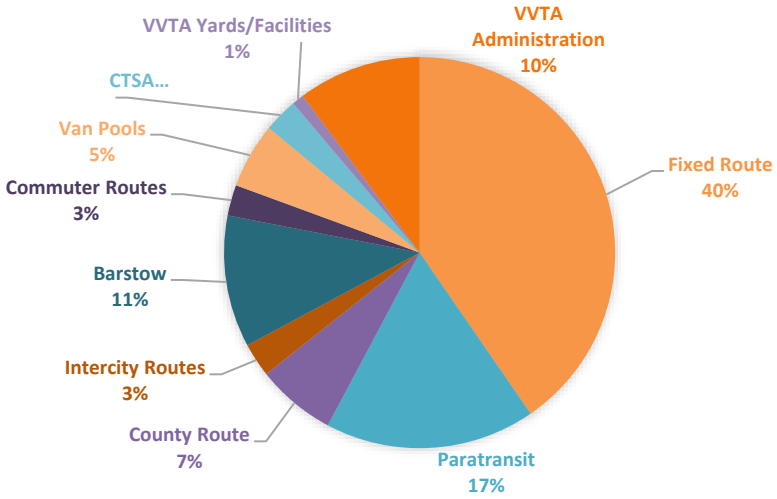
Source: VVTA

[1] San Bernardino County Districts 1 and 3

1.2.3 Budget

Fixed route expenses are the largest portion of operating expenses in current FY2019-2020, accounting for 40 percent of all operating expenses. Paratransit service represents 17 percent and county routes account for 7 percent of the operating budget. About 10 percent of the operating budget is directed to administration. Figure 1-2 presents the operating expenses by service type for the current fiscal year.

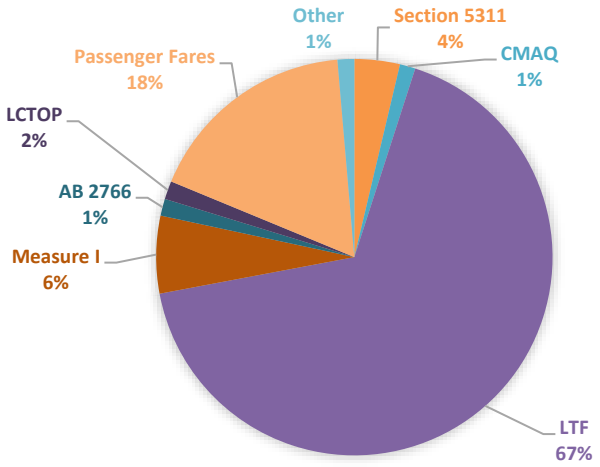
Figure 1-2: FY2019 - FY2020 Operating Expenses by Service Type



Source: VVTA Annual Operating and Capital Budget, FY2019-FY2020

Figure 1-3 shows the operating revenues by source. The principal sources of operating revenues were the Local Transportation Fund (LTF) and passenger fares. LTF represented about 67 percent of the operating revenues and passenger fares accounted for 18 percent of revenues.

Figure 1-3: FY2019 - FY2020 Operating Revenues by Source



Source: VVTA Annual Operating and Capital Budget, FY2019-FY2020

Table 1-1 shows the VVTA operating budget for the current fiscal year.

Table 1-1: VVTA Operating Budget, FY2019-FY2020

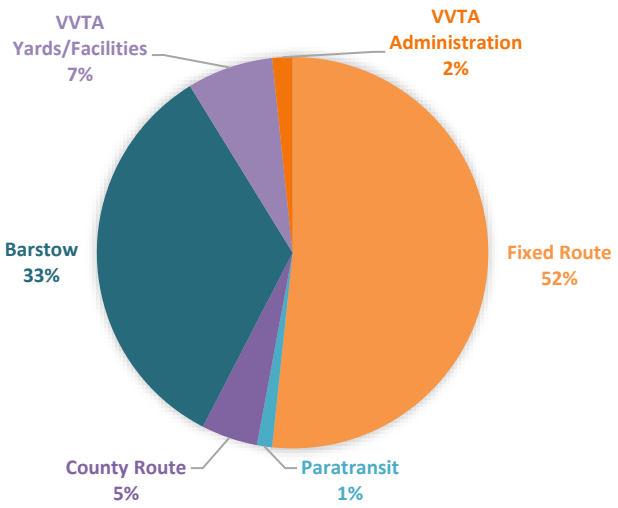
Operating Expenses	
Fixed Route	$10,678,842
Paratransit	$4,594,184
County Route	$1,734,044
Intercity Routes	$742,587
Barstow	$2,882,758
Commuter Routes	$672,349
Van Pools	$1,429,938
CTSA	$744,294
VVTA Yards/Facilities	$258,918
VVTA Administration	$2,696,210
TOTAL	**$26,434,124**

Operating Revenues	
Section 5311	$671,949
Section 5310	$0
Section 5316/5317	$0
CMAQ	$230,000
LTF	$12,162,675
Measure I	$1,146,200
AB 2766	$250,000
LCTOP	$270,000
Passenger Fares	$3,156,300
Other	$247,000
TOTAL:	**$18,134,124**

Source: VVTA Annual Operating and Capital Budget, 2019-2020

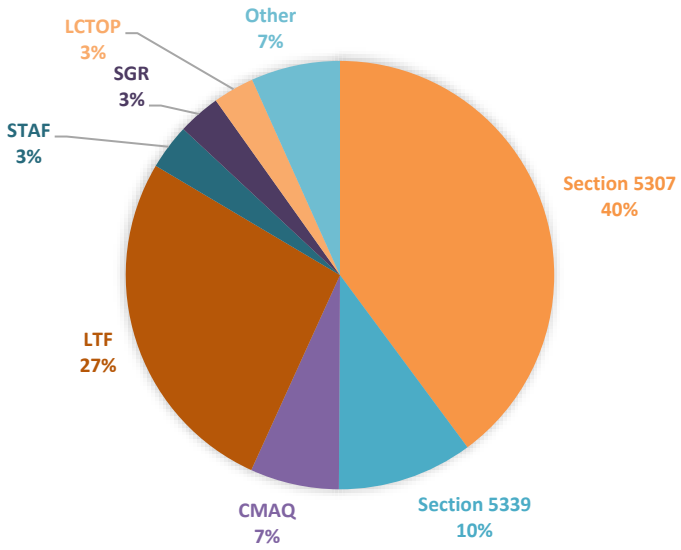
As shown in Figure 1-4, the largest capital expenses are for fixed route services and Barstow services, representing 52 and 33 percent of the capital expenses, respectively. Figure 1-5 shows that by far, the largest share of capital revenues, about 40 percent come from the federal grant program Section 5307. The LTF funds constitute the second largest share of capital revenues at 27 percent. See Table 1-2 for the VVTA capital budget.

Figure 1-4: FY2019 - FY2020 Capital Expenses by Service Type



Source: VVTA Annual Operating and Capital Budget, FY2019-FY2020

Figure 1-5: FY2019 – FY2020 Capital Revenues by Source



Source: VVTA Annual Operating and Capital Budget, FY2019-FY2020

Table 1-2: VVTA Capital Budget, FY2019-2020

Capital Expenses	
Fixed Route	$11,099,754
Paratransit	$268,196
County Route	$1,000,000
Intercity Routes	$0
Barstow	$7,225,661
Commuter Routes	$0
Van Pools	$0
CTSA	$0
VVTA Yards/Facilities	$1,527,609
VVTA Administration	$358,750
TOTAL	**$21,479,970**

Capital Revenues	
Section 5307	$8,561,304
Section 5339	$2,196,470
CMAQ	$1,442,000
LTF	$5,740,203
STAF	$734,901
SGR	$691,283
LCTOP	$669,282
Other	$1,444,527
TOTAL	**$21,479,970**

Source: VVTA Annual Operating and Capital Budget, 2019-2020

VVTA does not use all the LTF available and is able to provide some of this funding to each of the JPA members to supplement their streets and road maintenance funding. Of each of the JPA members, Adelanto contributes the highest percentage of its LTF funds to transit. Hesperia contributes the lowest proportion, with just 86 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 by Jurisdiction FY2019-2020

Jurisdiction	LTF Allocations	Programmed Transit Funds	Percent Programmed
Adelanto	$1,452,246	$1,440,999	99.23%
Apple Valley	$3,044,315	$2,975,001	97.72%
Barstow	$1,004,471	$988,795	98.44%
County	$4,590,666	$4,551,782	99.15%
Hesperia	$3,902,051	$3,360,470	86.12%
Victorville	$5,090,084	$4,585,831	90.09%
Total	$19,083,833	$17,902,878	93.81%

Source: VVTA Annual Operating and Capital Budget, FY2019-2020

1.2.4 Victor Valley Transit Trends and Service Changes

1.2.4.1 Trends

Table 1-4 shows the VVTA service profile from 2000 to 2019.

Table 1-4: VVTA Trends

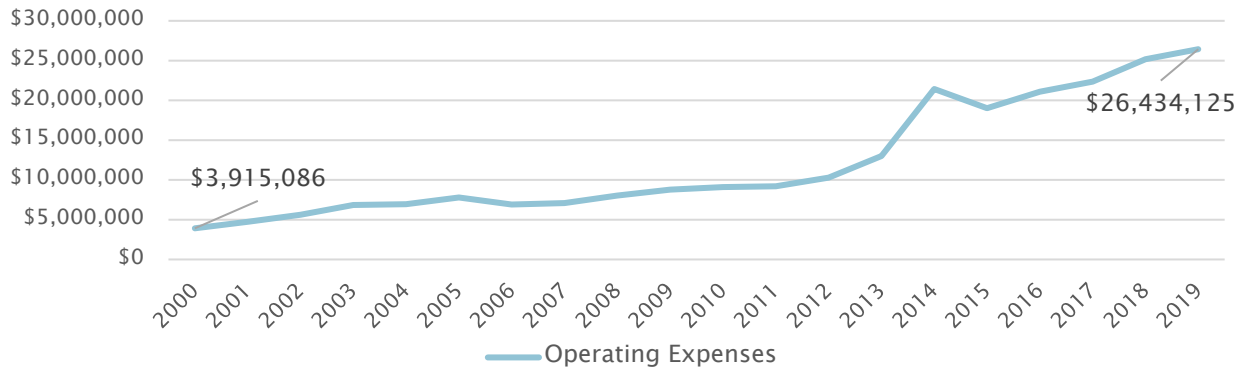
Numerical					Percent Change				
Year	Ridership	Revenue Hours	Revenue Miles	Operating Expenses	Year	Ridership	Revenue Hours	Revenue Miles	Operating Expenses
2000	1,025,205	93,298	1,800,420	$3,915,086					
2001	1,101,002	95,765	1,873,016	$4,741,793	2000-2001	7.4%	2.6%	4.0%	21.1%
2002	1,064,472	97,687	1,884,449	$5,610,405	2001-2002	-3.3%	2.0%	0.6%	18.3%
2003	1,094,195	122,541	2,386,733	$6,837,064	2002-2003	2.8%	25.4%	26.7%	21.9%
2004	1,208,018	122,925	2,425,636	$6,950,041	2003-2004	10.4%	0.3%	1.6%	1.7%
2005	1,071,153	112,634	2,150,919	$7,797,079	2004-2005	-11.3%	-8.4%	-11.3%	12.2%
Change 2000-2005	45,948	19,336	350,499	$3,881,993	Change 2000-2005	4.5%	20.7%	19.5%	99.2%
2006	1,037,338	109,200	2,047,870	$6,916,551	2005-2006	-3.2%	-3.0%	-4.8%	-11.3%
2007	1,096,965	111,544	2,023,796	$7,094,470	2006-2007	5.7%	2.1%	-1.2%	2.6%
2008	1,123,283	122,063	2,115,337	$8,024,338	2007-2008	2.4%	9.4%	4.5%	13.1%
2009	1,345,659	135,783	2,263,031	$8,771,557	2008-2009	19.8%	11.2%	7.0%	9.3%
2010	1,482,515	141,077	2,351,163	$9,105,751	2009-2010	10.2%	3.9%	3.9%	3.8%
Change 2005-2010	411,362	28,443	200,244	$1,308,672	Change 2005-2010	38.4%	25.3%	9.3%	16.8%
Change 2000-2010	457,310	47,779	550,743	$5,190,665	Change 2000-2010	44.6%	51.2%	30.6%	132.6%
2011	1,686,157	142,997	2,392,053	$9,192,302	2010-2011	13.7%	1.4%	1.7%	1.0%
2012	1,880,612	147,866	2,529,408	$10,295,100	2011-2012	11.5%	3.4%	5.7%	12.0%
2013	2,150,903	187,424	4,435,888	$12,997,025	2012-2013	14.4%	26.8%	75.4%	26.2%
2014	2,369,734	254,750	6,772,219	$21,429,355	2013-2014	10.2%	35.9%	52.7%	64.9%
2015	2,695,213	283,642	7,608,217	$19,008,884	2014-2015	13.7%	11.3%	12.3%	9.0%
Change 2010-2015	1,212,698	142,565	5,257,054	$9,903,133	Change 2010-2015	81.8%	101.1%	223.6%	108.8%
2016	2,725,591	324,020	8,574,861	$21,080,234	2015-2016	1.1%	14.2%	12.7%	10.9%
2017	2,502,129	337,012	9,169,312	$22,353,525	2016-2017	-8.2%	4.0%	6.9%	6.0%
2018	2,305,976	367,622	10,027,883	$25,181,216	2017-2018	-7.8%	9.1%	9.4%	12.6%
2019	2,240,374	369,081	9,9167,49	$26,434,125	2018-2019	-2.8%	0.4%	-1.1%	5.0%

Source: NTD/VVTA

The data is extracted from the National Transit Database (NTD). 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. Between 2010 and 2019, the operating expense gained

significantly from 2013 to 2014, but followed with a decrease next year in 2015 and slow growth from 2015 to 2019 (Figure 1-6). The operating expense increase from 2013 to 2014 was a result of multiple factors. New services in 2012 such as the provision of NTC service in May, and the addition of Vanpool service in October were reflected in the next year's operation expenses. Operational changes to the existing service in 2013 were also substantial including route extensions for Route 21, 32, and 40, adding demand response service route 20, and other improvements to elevate service quality. Detailed service changes can be found in the following section.

Figure 1-6: VVTA Operating Expense Change (2000-2019)



Source: NTD

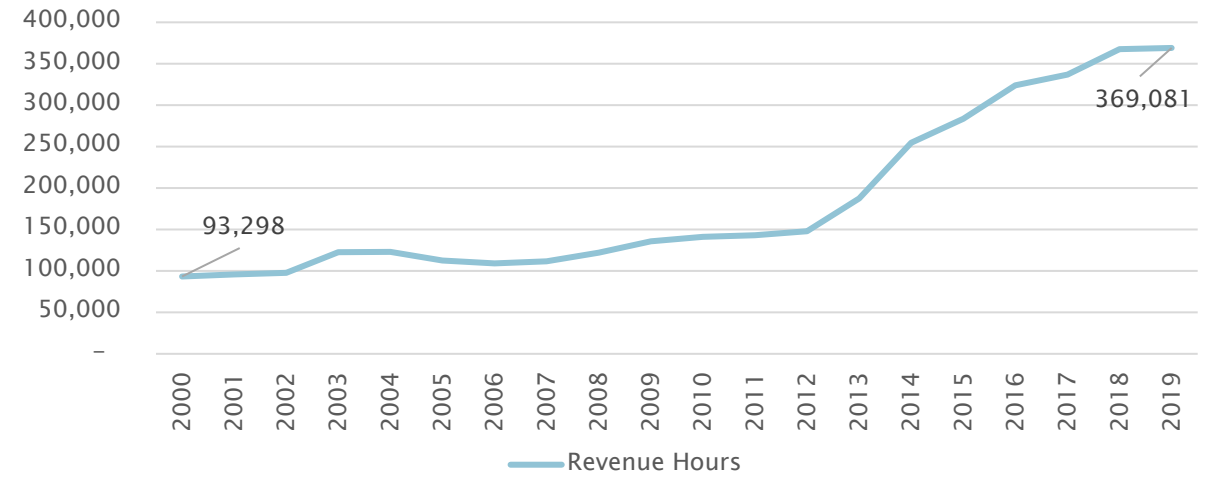
Ridership and the number of revenue hours and miles operated increased overall for the past two decades. As shown in Figure 1-7, the ridership numbers fluctuated but trended upward from 2000 to 2016. There was a relatively strong gain in ridership between 2008 and 2015 after the implementation of numerous route changes and frequency changes to improve service. But after 2015, the ridership increase slowed and then started decreasing in 2016. Recent ridership declines can be attributed to an increase in private vehicle ownership, expansion of ridesharing services, and lower enrollment at area colleges. The reduction in ridership is also consistent with the experience that most transit agencies nationwide have been experiencing.

Figure 1-7: VVTA Ridership Change (2000-2019)

Source: NTD

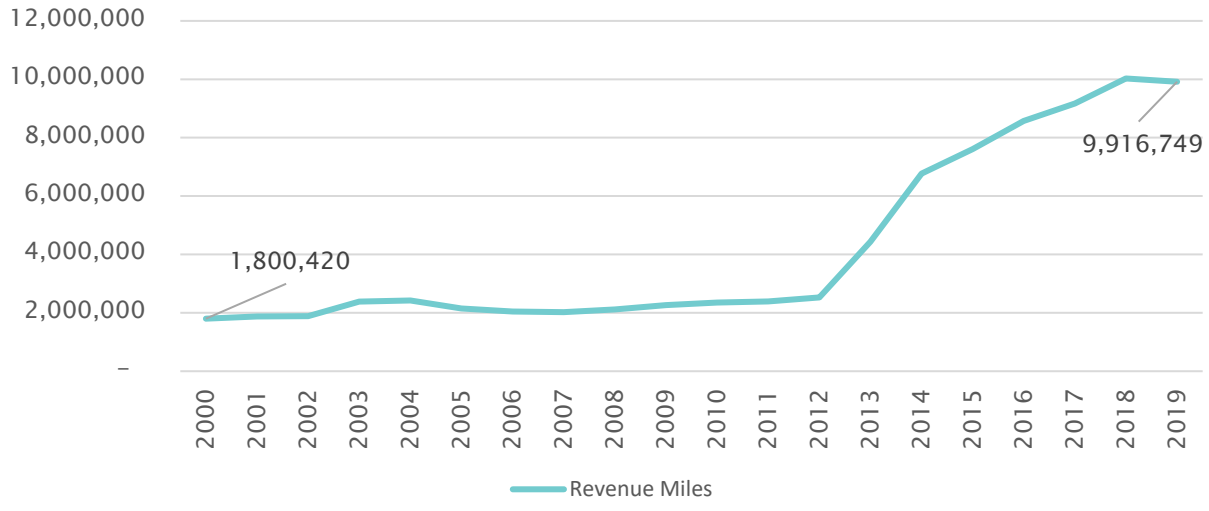
From 2000 to 2019, revenue hours and revenue miles shared a similar growth trend as indicated in Figure 1-8 and Figure 1-9. A moderate increase in revenue hours and miles between 2002 and 2003 was followed by a decrease in revenue hours and revenue miles between 2004 and 2006. Neither revenue hours nor revenue miles experienced significant changes until 2012. Started in 2012 there was a relatively strong gain in revenue miles and revenue hours after the addition of NTC, vanpool services and implementation of numerous route and frequency changes. After the merger in 2015, the revenue hours and revenue miles continued to grow but the increase slowed down compared to the substantial increase after 2013. From 2018 to 2019, a 1.1% revenue mile decrease was observed.

Figure 1-8: VVTA Revenue Hours Change (2000-2019)



Source: NTD

Figure 1-9: VVTA Revenue Miles Change (2000-2019)



Source: NTD

1.2.4.2 Service Changes

The history of service changes was analyzed to determine how VVTA responded to changing transit markets and how it contained operating costs. Major service changes included route modifications, route eliminations, route additions/extensions, service frequency adjustments, service span adjustments, and any changes in service provision. The majority of VVTA service changes within the past five years consisted of route modifications. A significant number of route modifications occurred in 2009 when three routes saw reductions in service frequency while one route had an increase in frequency. In 2013, major service changes were implemented, when two new routes were introduced and about 10 other existing routes underwent route alignment and/or frequency modifications. There were also route changes in the other years for which data was provided. Major services changes between 2008 and June 30th, 2019 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 minutes 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 Smoke Tree Street

- Modification of Route 45: Route no longer deviates to serve VVTA offices on Smoke Tree Street
- Modification of Route 54: Route change to serve Molina Medical Building in Adelanto
- Modification of B-V Link: Route adjustments in Barstow

- 2012
  - Schedule modification of NTC Express Bus Routes: Schedule adjustment for all morning departures at Fort Irwin to serve rider's needs accessing employment centers
  - Modification of Route 41: Route adjustments in Apple Valley
  - Modification of Route 53: Route change will serve areas near Hi Desert Plaza Shopping Center in Victorville
  - Modification of B-V Link: Route adjustments in Victorville
  - Modification of B-V Link Intercity Service/Route 15: Schedule adjustments to add more times and locations
- 2013
  - Modification of Route 51: Service re-routed off Forrest Avenue to ensure passenger and driver safety
  - Modification of B-V Link Intercity Service: Route adjustment to end service along Fort Irwin portions of the route
  - Modification of Route 21: Route changes to add connections from Phelan Village Shopping Center to Hesperia Super Target and Mall of Victor Valley.
  - Elimination of the Lucerne Valley circulator
  - Modification of Route 32: Route changes including extending service to Southern California Logistics Airport (SCLA), providing two-way service to Victorville Civic Center and removing service to Adelanto City Hall
  - Modification of Route 32: Route changes to extend service to Adelanto High School and City Hall
  - Modification of Route 40: Route changes to extend service to Granite Hills High School
  - Increase weekday service frequency from hourly to half hourly on Route 41, Route 45, Route 52, Route 53
  - Route adjustments to Route 43
  - Modification of Route 48: Route changes to serve Hesperia Library and Civic Center
  - Modification of Route 51: Route changes to better serve areas around Victor Valley Hospital
  - Modification of Route 52: Route adjustments in Victorville
  - Modification of Route 54: Route adjustments in Victorville
  - New Route 55 service operating between Victorville and Victor Valley College introduced

    - Make the B-V Link/Route 15 between San Bernardino and Barstow a 5-day week service and expand service by adding another PM round trip
    - Sunday service to operate between 8:00 AM and 5:00 PM
    - New demand response service Route 20 introduced to provide service in and around the Tri Communities of Phelan, Wrightwood and Pinon Hills
    - Modification to NTC Commuter Bus service: Route changes to replace shuttle service and schedule changes
    - Modification to Route 53: Route changes to serve the High Desert Villa's and Wimbledon Apartments on Jasmine Street
    - Modification to Route 55: Route adjustments to improve on-time performance
    - Modification to Route 41: Route re-alignment in Apple Valley
    - Route adjustments to improve on-time performance on Route 45, Route 48, Route 51 and Route 55
    - Remove interlining of Route 45 and Route 48
- 2014
    - Route 1 adjusted to serve Excelsior High School on State Street, Veteran's Home and Riverside Drive service only by request.
    - Modification to NTC Commuter 104A: Schedule adjustments to accommodate better arrival time at Reveille
    - Modification to Route 21: Elimination of second bus run to Serrano High School due to lack of ridership
    - Modification to Route 22: Route re-alignment to accommodate two bus runs around Silver Lakes
    - Modification to Route 32: Route re-alignment and bus stop relocation in Adelanto
- 2015
    - Modification of B-V Link Intercity Service/Route 15: Add another bus trip and adjust schedule of afternoon trips to improve service
    - Modification to Route 41: Route adjustments near St. Mary's Hospital
    - New Express Route 45X introduced
    - In September 2015, BAT merged with VVTA. In the year leading up to the merger, VVTA operated BAT through an intergovernmental agreement.
    - Modification of B-V Link Intercity Service/Route 15: Schedule and Route adjustments to serve the new San Bernardino Transit Center
    - Discontinuation of Barstow Route 6 Fort Irwin Flyer (shopper bus service) due to low ridership
- 2016
    - One additional run to the Route 45X morning and afternoon schedules added
    - New Saturday service on B-V Link Intercity Service/Route 15 added (four Saturday runs to it Victorville to San Bernardino segment and four runs to its Victorville to Barstow segments.

- 2017
    - Route 1
        - Weekday – Extend operating hours starting 1 hour earlier and ending 1 hour later. Reroute to serve 1st/Hutchinson/2nd loop. Shorten alignment by discontinuing segment between Walmart and Barstow College. Change time point from Excelsior to Barstow Division for a 5-minute wait. Adjust running times and timepoints.
        - Weekend – Extend operating hours starting 1 hour earlier. Reroute to serve 1st/Hutchinson/2nd loop. Shorten alignment by discontinuing segment between Walmart and Barstow College. Add time point at Barstow Division for a 5-minute wait. Adjust running times and timepoints. Saturday and Sunday schedule will be the same.
    - Route 2
        - Weekday – Extend operating hours starting 1 hour earlier and ending 1 hour later. Shorten alignment to operate as now from Barstow Library to Barstow Rd & Amory and discontinue service east of Barstow Rd between Armory Rd and Rimrock Rd to operate along Barstow Rd to Barstow College and add Veteran's Home. Adjust running times and timepoints.
        - Weekend – Extend operating hours starting 1 hour earlier. Shorten alignment to operate as now from Barstow Library to Barstow Rd & Amory and discontinue service east of Barstow Rd between Armory Rd and Rimrock Rd to operate along Barstow Rd to Barstow College and add Veteran's Home. Adjust running times and timepoints. Saturday and Sunday schedule will be the same.
    - Route 3
        - Weekday – Extend operating hours starting 1 hour earlier and ending 1 hour later. Discontinue 1st/Hutchinson/2nd segment and reroute to serve Barstow High School along Buena Vista and A St. Discontinue service into Outlets at Barstow by changing end of line to Hampton Inn on Lenwood Rd. Adjust running times and timepoints.
        - Weekend – Extend operating hours starting 1 hour earlier. Discontinue 1st/Hutchinson/2nd segment and reroute to serve Barstow High School along Buena Vista and A St. Discontinue service into Outlets at Barstow by changing end of line to Hampton Inn on Lenwood Rd. Adjust running times and timepoints. Saturday and Sunday schedule will be the same.
    - Route 4 – Renumbered to Route 28
    - Route 5 – Renumbered to Route 29
    - Started new Route 6

        - All days – Service to operate hourly along Barstow Rd, then discontinued segment of Route 2 between Armory Rd and Rimrock Rd and discontinued segment of Route 1 from Walmart to Barstow College.
    - Route 15
        - Weekday – Reroute between Lorene & 7th and Barstow, delete Green Tree Blvd, Hesperia Rd, Corwin Rd and Dale Evans Pkwy. Reroute to serve Victorville Civic Center/Courthouse between Lorene & 7th and St. Mary's Hospital, then continue along 15 Freeway between St. Mary's and Barstow. Shift two Barstow trips to depart two hours earlier from Lorene & 7th to even out schedule, 200PM trip to depart at 1200PM and the 600PM trip to depart at 400PM. Returning from Barstow, shift the 300PM trip to depart at 100PM and the 700PM trip to depart at 500PM.
        - Saturday – Rerouting same as Weekday. Adjust schedule to be every 3 hours between Lorene & 7th and San Bernardino. Shift 300PM trip from Lorene & 7th to Barstow to depart at 500PM and the return trip to depart Barstow at 600PM.
    - Route 20 – Discontinued
    - Route 21
        - All days – Renumber to Line 21P/21W. Reroute to operate Line 21P between Mall of Victor Valley and Pinion Hills every two hours. Reroute to operate Line 21W between Mall of Victor Valley and Wrightwood every two hours. Combined hourly service between Mall of Victor Valley and Phelan.
    - Route 24
        - All days – Add one bus to increase service from two hours to hourly.
    - New Route 28
        - All days – Deviated county route between Barstow, Hinkley and Helendale to operate every three hours.
    - New Route 29
        - All days – Deviated county route between Barstow and Newberry Springs to operate every three hours.
    - Route 31
        - All days – Shorten alignment and discontinue segment on Park Ave and Amargosa. Adjust running times and timepoints.
    - Route 32
        - All days – Reroute and extend line to serve segment on Park Ave and Amargosa. Adjust running times and timepoints.
    - Route 33
        - All days – Reroute and extend line to serve Molina Medical Center. Adjust running times and timepoints.
    - New Route 42 started on August 13th

- Route 43
  - All days – Reroute to enter Victor Valley College on Fish Hatchery.
- Route 44 – Discontinued, see New Route 68.
- Route 45 – Renumbered to Route 50.
- Route 45X – Renumbered to Route 50X.
- Route 46 – Renumbered to Route 66.
- Route 48 – Discontinued, see New Route 68.
- Route 50
  - All days – Reroute departing Victor Valley College going to Lorene & 7th via 50X routing. Adjust running times from Victor Valley College to G Ave & Olive St. Adjust timepoints.
- Route 51
  - All days – Discontinue segment on Burning Tree Dr, Molina Dr and St. Andrews, reroute to operate as now from Lorene & 7th to Green Tree Blvd & Rodeo Dr then continue along Rodeo to Lorene to Lorene & 7th. Adjust running times and timepoints.
- Route 52
  - All days – Add one bus, adjust running times and timepoints.
- Route 53
  - All days – Adjust running times to have no layovers at Mall of Victor Valley. Adjust timepoints.
- Route 54
  - All days – Shorten alignment between Mall of Victor Valley and Highway 395 & Palmdale and discontinue segment between Palmdale & Highway 395 and Molina Medical Center. Adjust running times and timepoints.
- Route 55
  - All Days – Discontinue segment on Green Tree Blvd, Rodeo and Hughes. Reroute NB from Arrowhead & Green Tree Blvd to continue along Green Tree Blvd, Burning Tree Dr, Molina Dr an St. Andrews to Lorene & 7th. Reroute SB from Lorene & 7th to continue along Valley Center Dr and Green Tree Blvd to Arrowhead to current alignment. Adjust running times and timepoints.
- Route 66
  - All days – Adjust running times to have 5 minutes at VVTA office and to depart Olive & G Ave at 08 after the hour.
- New Route 68
  - All days – Service to operate hourly along Main St, 3rd Ave, Lime St, 7th Ave, Hesperia Library, Main St, Cottonwood Ave, Mall of Victor Valley, Cottonwood Ave, Main St to Main St & Key Pointe Ave. Layover to be at Main St & Key Pointe.

- 2018
    - Route 15
        - Alignment changed to serve Cal State San Bernardino on all SB trips.
        - Removed 2nd & Metrolink timepoint. Added Cal State SB as timepoint.
        - Adjusted running times.
    - Route 24A/B
        - Reroute all trips to serve Super Target.
        - Reroute every other bus (Bus 1) to serve the Escondido loop and layover on Main St at Cataba Rd (Super Target). This will provide a shorter trip to the Hesperia Post Office.
        - Bus 2 will continue to serve Escondido & Ranchero with 2-hour service.
    - Route 31
        - Alignment changed to serve University Prep School via Seneca Rd between El Evado Rd and Amethyst Rd for all trips.
        - Added University Prep as a time point for both EB and WB trips.
    - Route 33
        - Reroute from Adelanto Rd to on Hwy 395.
        - Add stop at Adelanto Post Office.
        - June 24, 2019 (Monday)
    - Route 33
        - Alignment modified to serve the Adelanto Senior Center.
        - One additional run to the Route 45X morning and afternoon schedules
- 2019 (Prior June 30th)
    - Route 33
        - Alignment modified to serve the Adelanto Senior Center.

1.2.5 Fare/Transfer Policy

A new electronic fare collection system has been implemented throughout VVTA buses. Passengers can purchase tickets online and ride VVTA buses using a smart card or mobile app. 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 $1.50 for local fixed route service and $2.50 for VVTA county services. The regular fare for deviated route services is $2.00. Discounted fares for fixed route service, county service, and deviated route service are available for students, seniors (60 and over), veterans, disabled and Medicare card holders with valid identification. Children aged five and under ride for free on all services. VVTA has partnered with the Victor Valley College (VVC) Associated Student Body (ASB) to create the RAM Pass allowing for VVC Photo ID cards to serve as fare payment on all VVTA Fixed and County Routes. The ID cards are only valid during the term for which they are issued.

The regular B-V Link one-way fare per segment is $6.50. There is a discounted fare for seniors, Veterans, the disabled, and Medicare card holders but not for students. Children aged five and under can ride the B-V Link for free.

Needles Link started service on June 17, 2016. This service operates on Fridays and is designed for the purpose of connecting Needles to the courts in Barstow and Victorville as well as providing access to dental and medical services to Medi-Cal individuals. The base fare for this service is $13.00 with half fare for senior/disabled/Medicare/medical and social service/Veteran passengers. There is no discounted fare for students, and children aged five and under ride free.

The single ride for NTC riders costs $13.00 in cash. Two monthly passes are also offered for NTC commuter regular riders: MEGA Monthly Pass and Military Monthly Pass. The MEGA Monthly Pass, intended for non-Department of Defense (DoD) employees, costs $180.00. It is also valid for all fixed route services (Direct Access and deviated route services are excluded). The Military Monthly Pass, intended for DoD employees who benefit from the Mass Transportation Benefit Program (MTBP), costs $255.00. The MTBP debit card is the sole payment method accepted. The Military Monthly Pass is also valid for all fixed routes (Direct Access and deviated route services are excluded) and B-V Link.

Day passes and 31-day passes are available for local fixed route and county services. Passes cannot be used for deviations. See Table 1-5 for the full breakout of VVTA fares.

Direct Access fares are determined based on distance between a customer pick-up or drop-off location and 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. Zone 3 fares are charged for locations between 1½ and 2¼ miles of a fixed route bus stop. See Table 1-6 for VVTA Direct Access fares and Barstow City Dial-A-Ride.

Table 1-5: VVTA Fares

Service	Regular	Student	Senior/Disabled/Veteran	Child
Single Trip Fare				
VVTA Fixed Route	$1.50	$1.25	$0.75	Free
VVTA County Route	$2.50	$2.25	$1.25	Free
Deviated Route	$2.00	$2.00	$1.00	Free
B-V Link (on-way trip per segment)	$6.50	n/a	$3.25	Free
NTC Commuter	$13.00	n/a	n/a	Free
Needles Link	$13.00	n/a	$6.50	Free
Day Pass				
Local Fixed Route Day Pass	$4.00	$3.50	$2.00	Free
VVTA County Day Pass	$6.00	$5.00	$3.00	Free
Monthly/31 Day Pass				
Local Fixed Route 31-Day Pass	$55.00	$45.00	$27.50	Free
VVTA County 31-Day Pass	$80.00	$70.00	$40.00	Free
NTC Commuter Monthly Pass	$180.00 (MEGA)/$255.00 Military)	n/a	n/a	Free

Source: VVTA

Table 1-6: Direct Access Fares

Service	VVTA
Single Trip - Zone 1	$2.50
Single Trip - Zone 2	$4.50
Single Trip - Zone 3	$6.00
10-Trip Pass Regular	n/a
Children	Free

Source: VVTA

1.3 Fixed Route Service

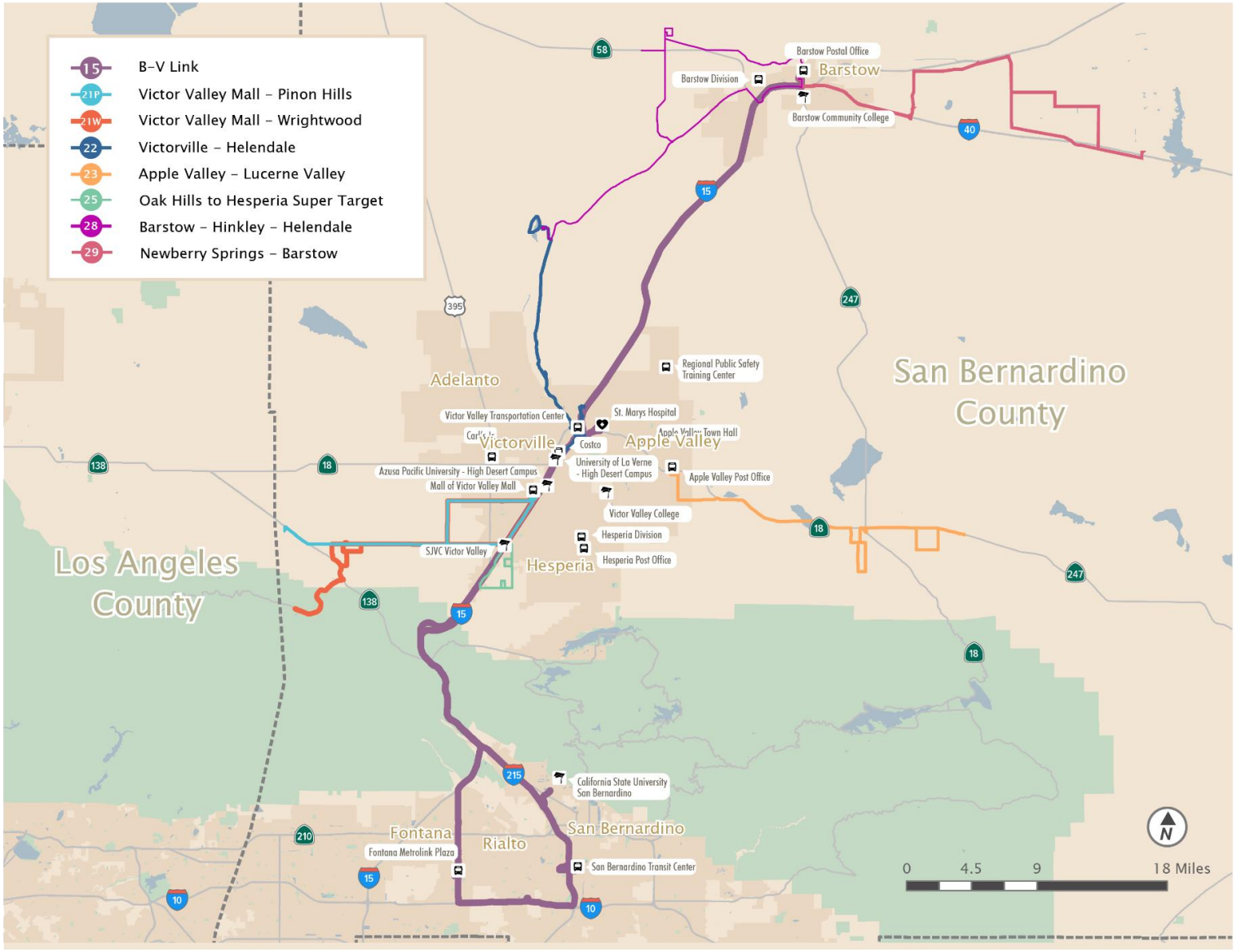
VVTA provides six types of fixed route services: county routes, intercity routes, commuter routes, local fixed routes, local deviated routes, and one express route. County routes are longer distance routes that serve non-incorporated areas surrounding the fixed route service area. Intercity routes provide regional connections to the high desert communities. Commuter routes travel one direction during peak periods, featuring limited stops between Victorville and Fort Irwin. Local fixed routes operate service along set routes within the area of Adelanto, Apple Valley, Barstow, Hesperia, and Victorville. Local deviated routes provide service to areas within ¾ mile of a base local route. Express service provides a variation of local fixed route service by directly connecting two major stops along the fixed route service.

VVTA currently operates six county routes 21P/W, 22, 23, 25, 28, and 29 serving the Victor Valley and Barstow area. Figure 1-10 presents a map of VVTA county routes. Also included in Figure 1-2 is Route 15 B-V Link service which connects Victorville, Apple Valley and San Bernardino Valley with Barstow. Route 15 B-V Link service was introduced in January 2011 and currently operates Monday through Saturday. Figure 1-11 presents the route map for the Route 200 Needles Link that started operations in June 2016. It is a Friday only service and provides two trips per day.

VVTA also provides commuter bus service to the Fort Irwin National Training Center (NTC). The NTC Commuter route operates Monday through Friday and serves park and ride lots in Victorville and Barstow. Figure 1-12 and Figure 1-13 present the AM and PM routes for the commuter services between Victorville and Fort Irwin.

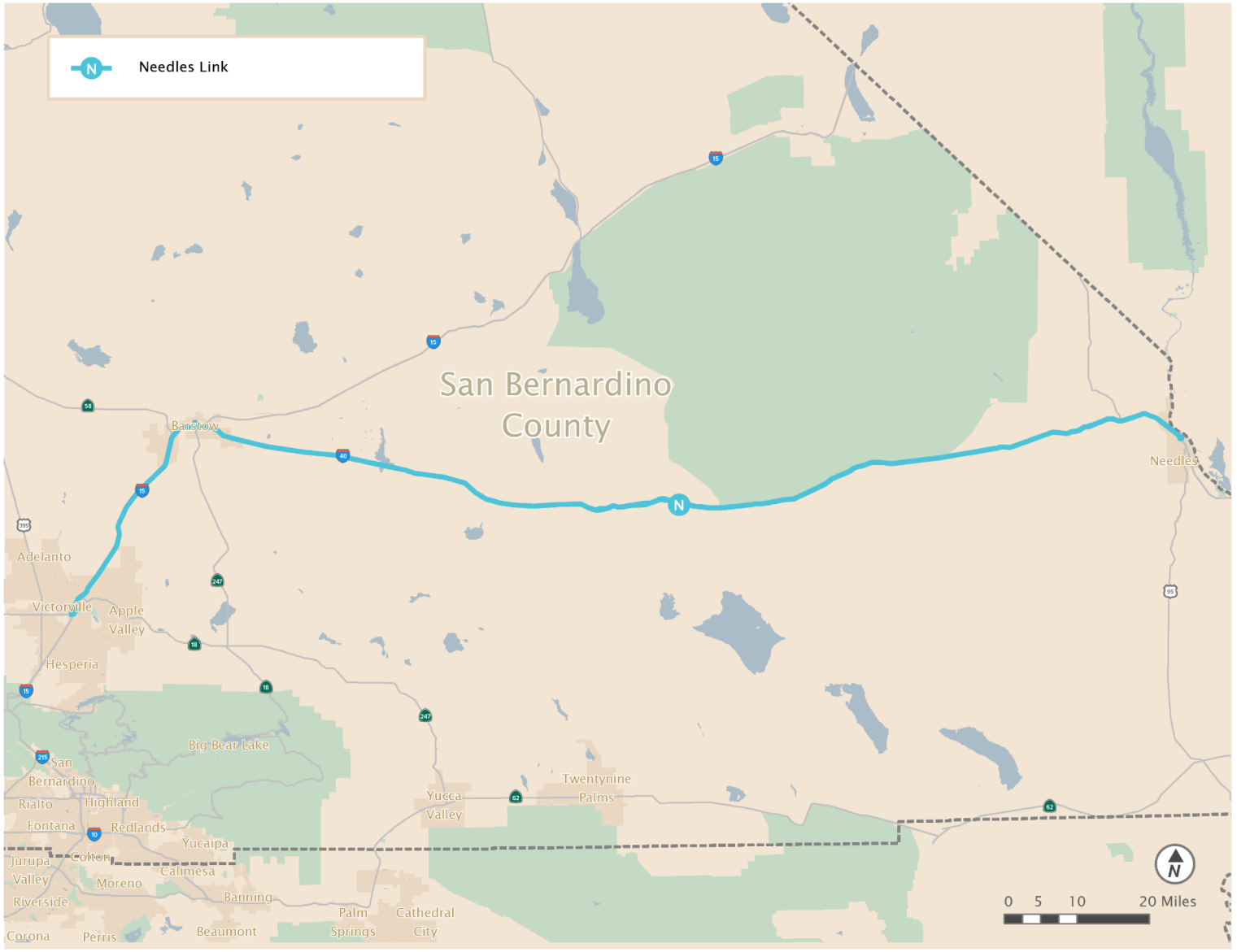
There are 21 local fixed routes and deviated routes in the VVTA service area and one express route. The express route provides non-stop service between Victor Valley College (VVC) and the Victorville Transit Center at Lorene Drive and 7th Street (Costco). The express service operates Monday-Thursday as a faster alternative to local fixed routes Route 50 and Route 55. Figure 1-14 presents a map of Barstow fixed routes. Figure 1-15 to Figure 1-18 presents a map of Victor Valley local fixed and deviated routes.

Figure 1-10: County Routes and B-V Link



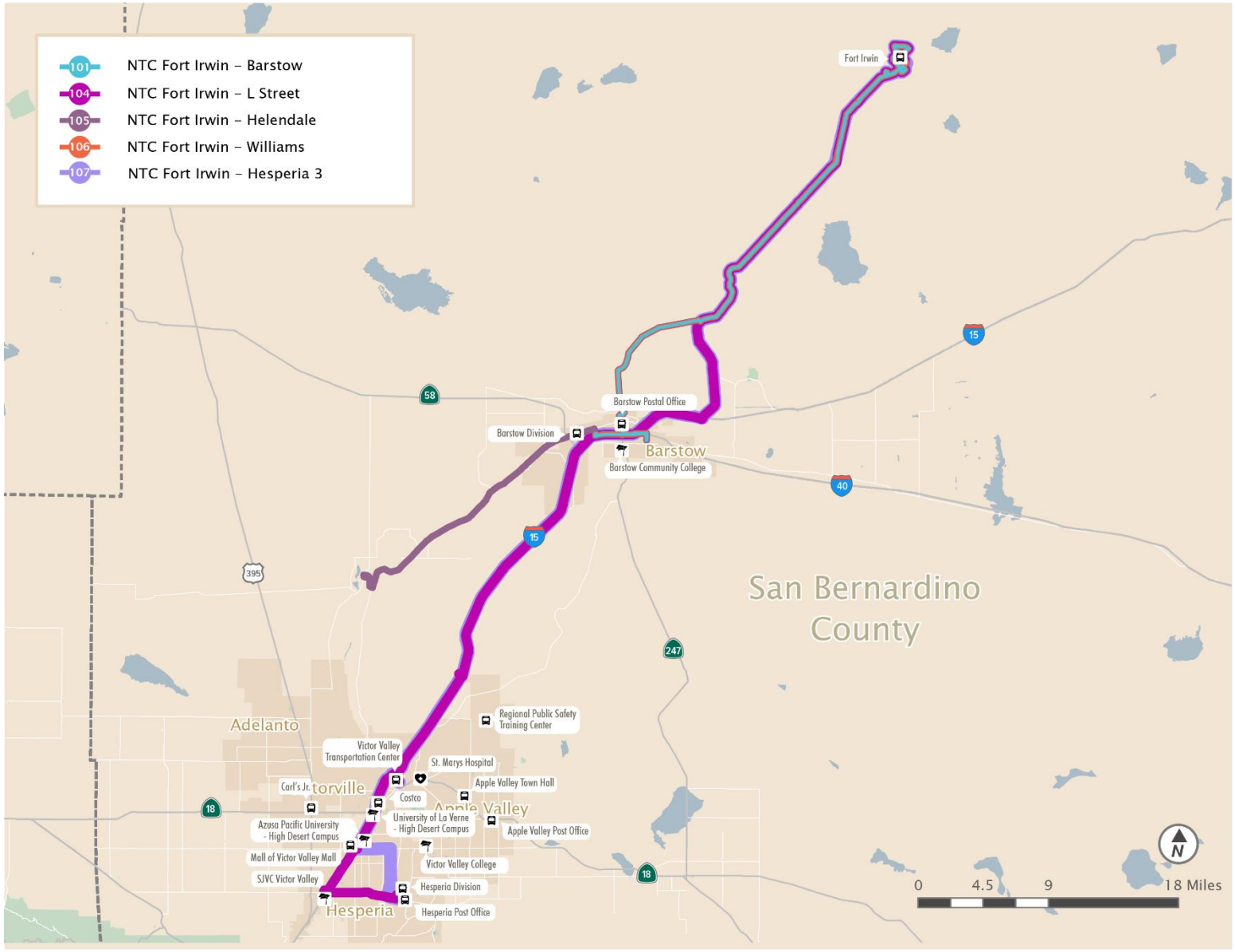
Source: AECOM/VVTA

Figure 1-11: Needles Link



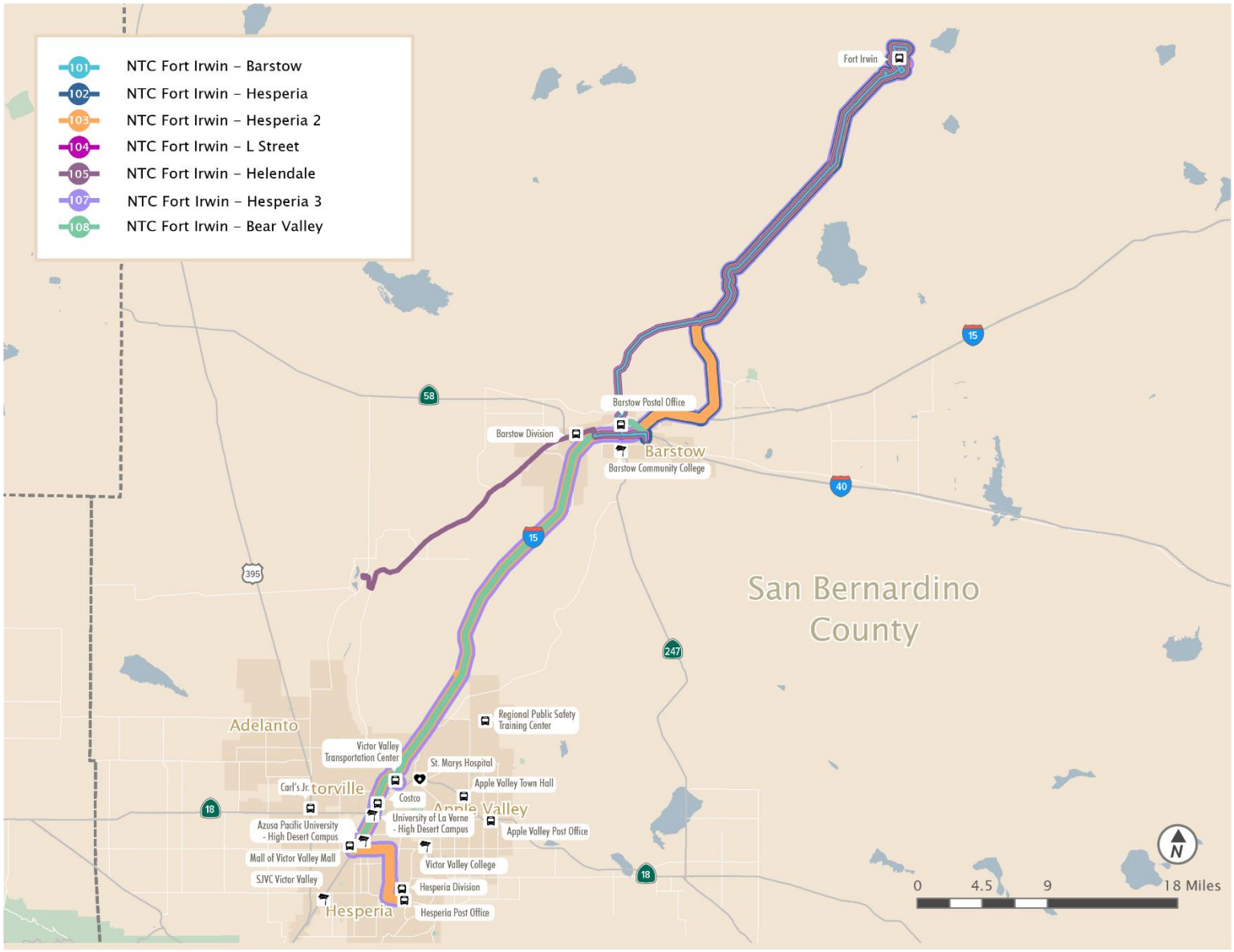
Source: AECOM/VVTA

Figure 1-12: NTC AM Routes



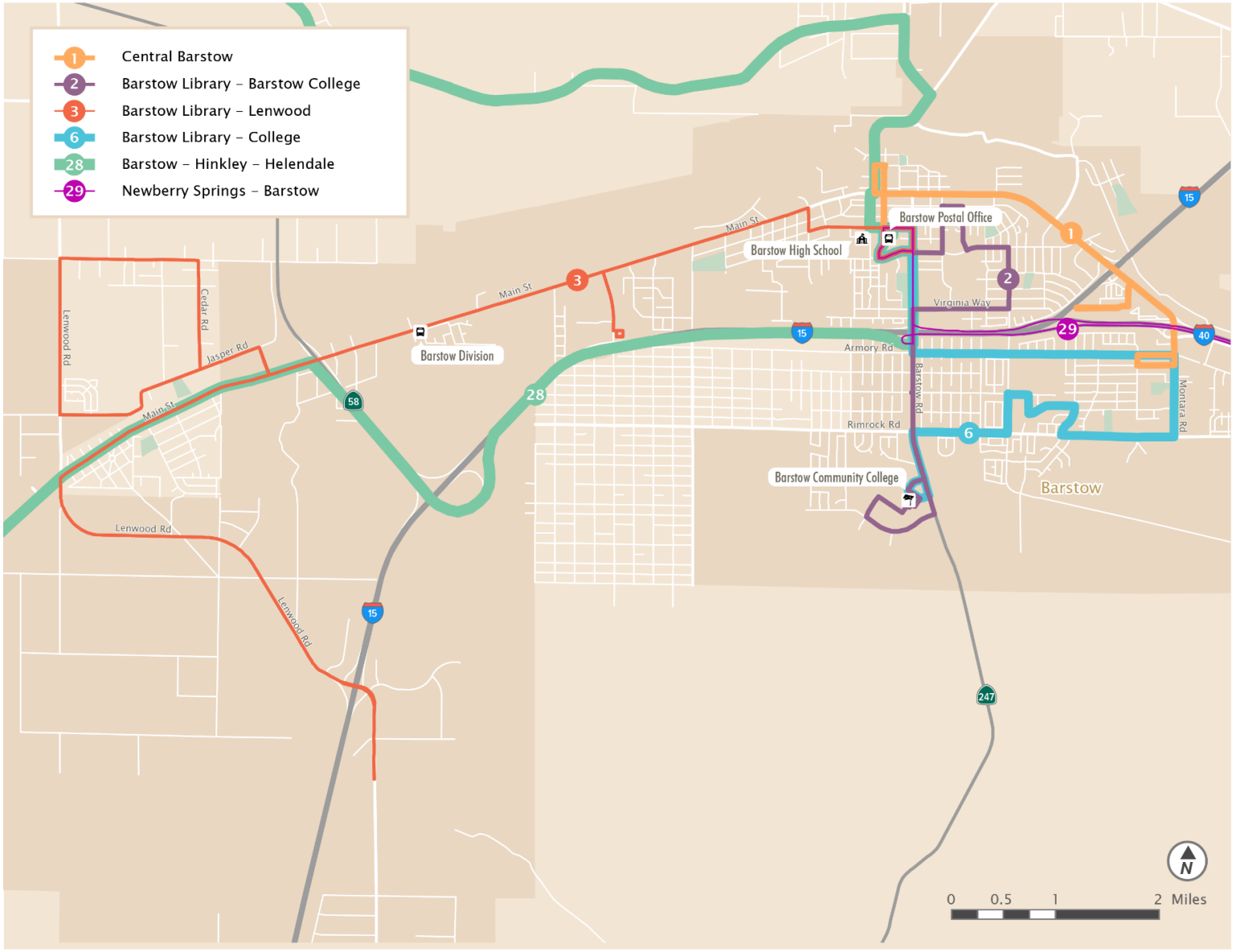
Source: AECOM/VVTA

Figure 1-13: NTC PM Routes



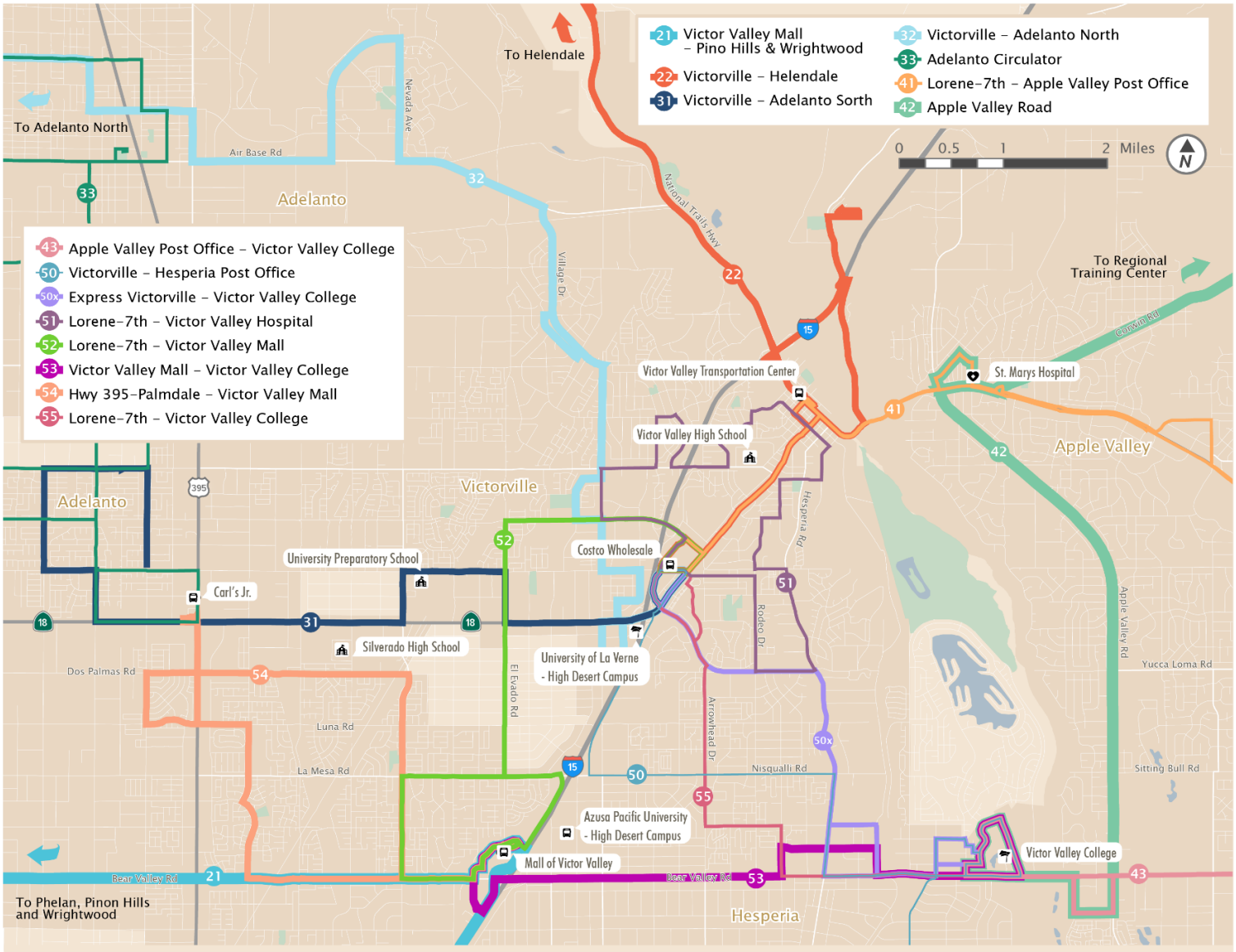
Source: AECOM/VVTA

Figure 1-14: Barstow Fixed Routes



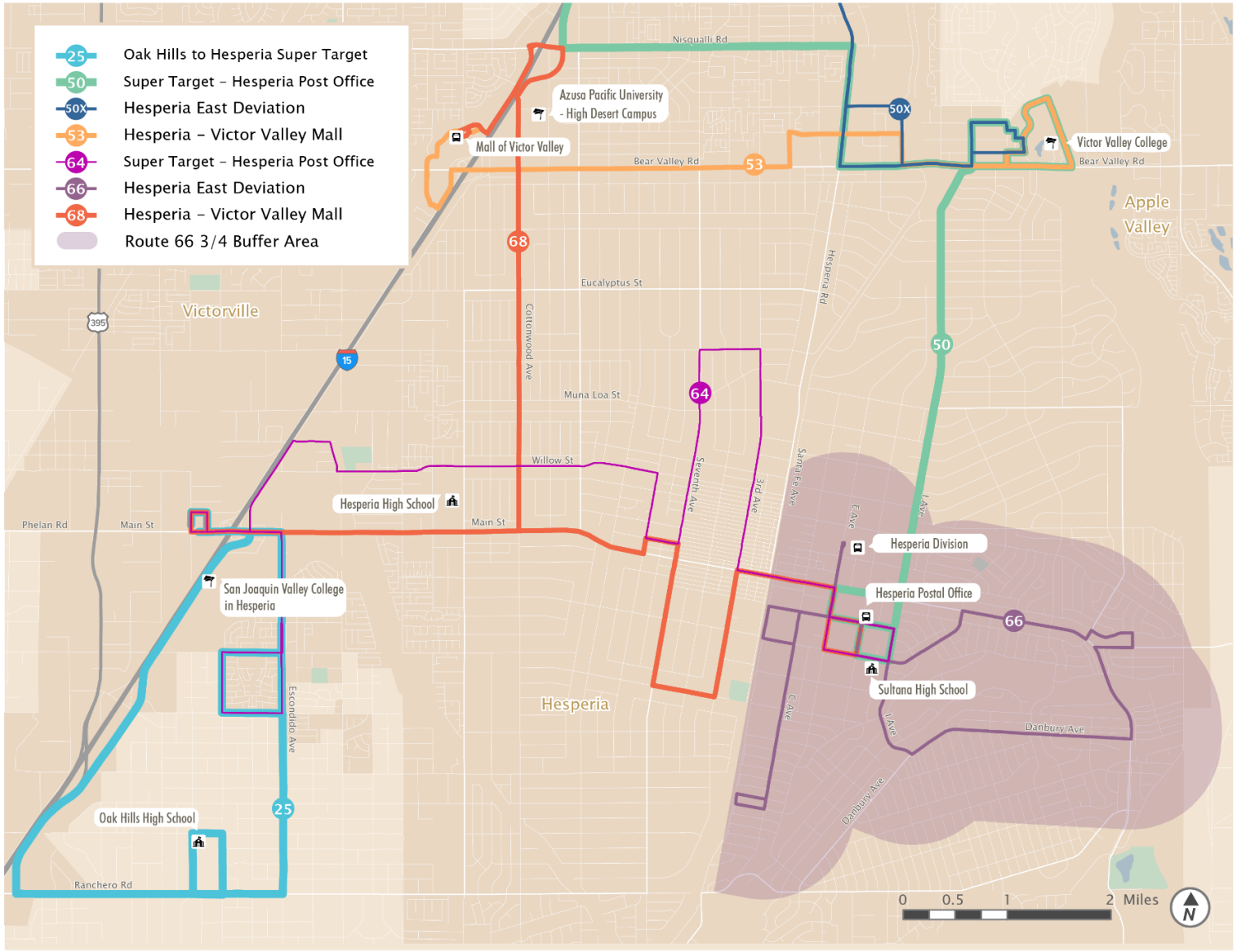
Source: AECOM/VVTA

Figure 1-15: Local and Deviated Routes - Victorville



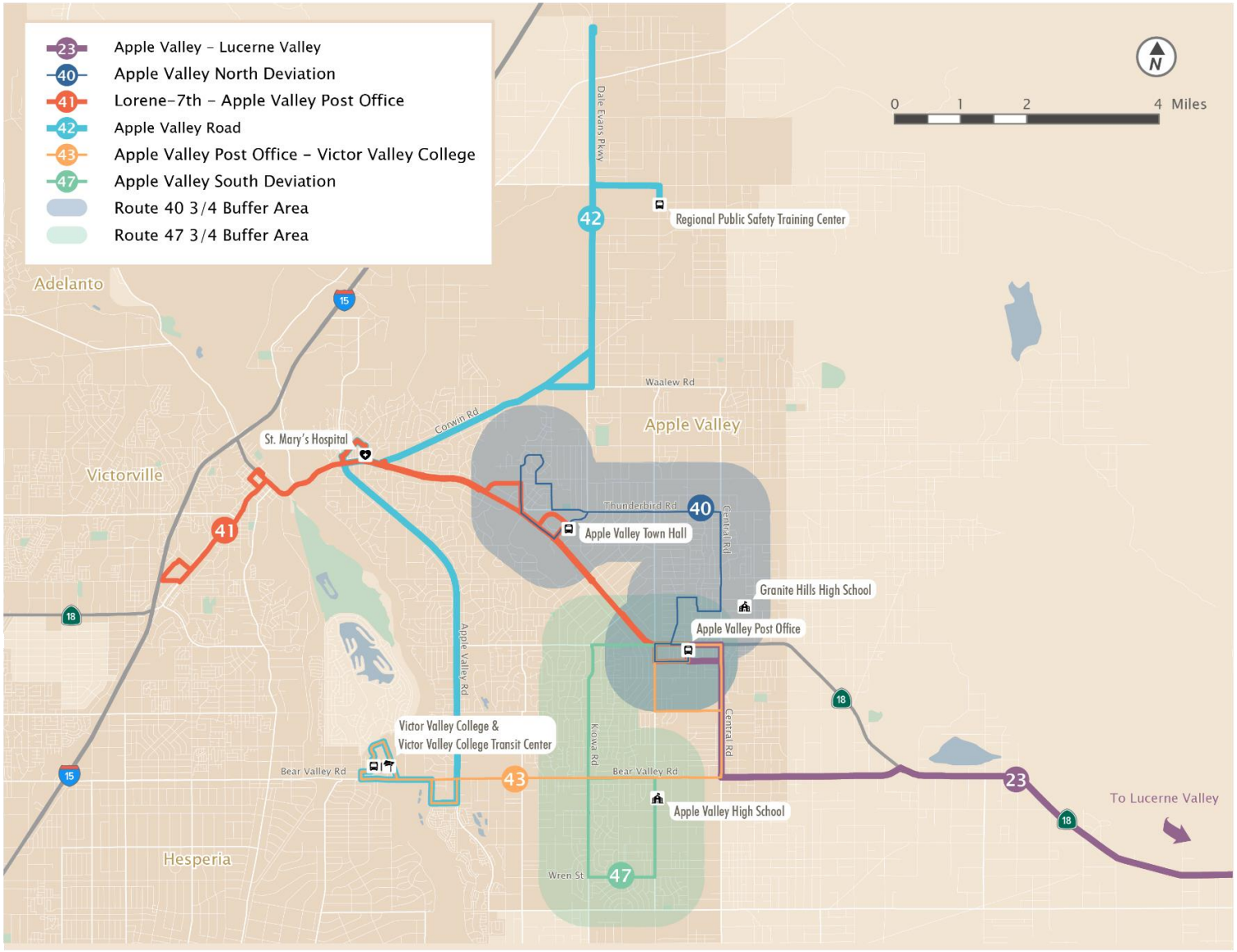
Source: AECOM/VVTA

Figure 1-16: Local and Deviated Routes - Hesperia



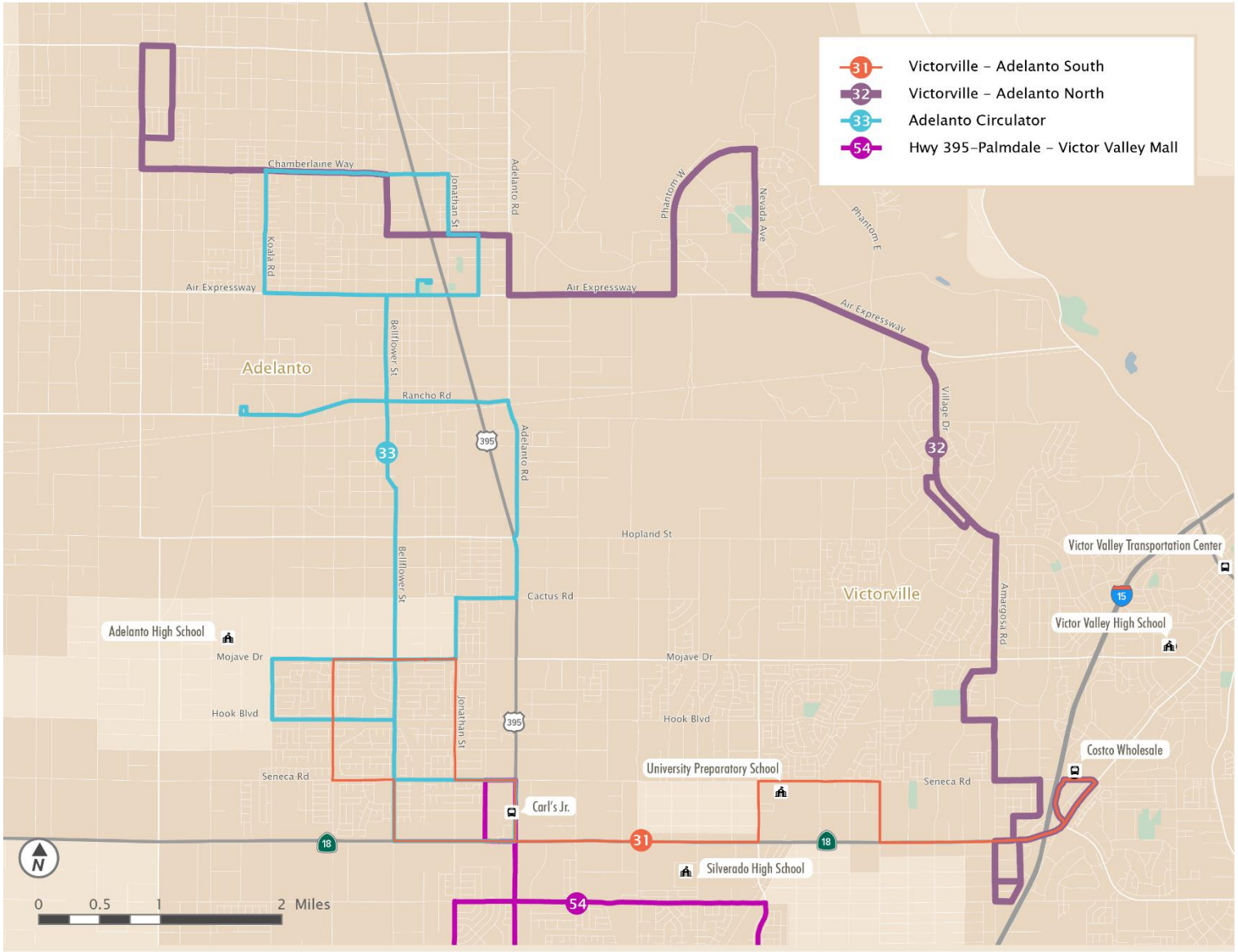
Source: AECOM/VVTA

Figure 1-17: Local and Deviated Routes - Apple Valley



Source: AECOM/VVTA

Figure 1-18: Local and Deviated Routes – Adelanto



Source: AECOM/VVTA

1.3.1 Fixed Route Service Descriptions

The fixed-route bus system of VVTA consists of 31 routes, 28 of which provide community service, and 3 of which provide regional connecting services.

The three regional services are Route 15 B-V Link which connects Victor Valley to San Bernardino; Route 200 Needles Link which provides intercity service between Victorville and City of Needles; and NTC which serves Fort Irwin residents 'commute to Victorville and Barstow. Amongst the fixed routes that provide community services in the Victor Valley Area, Routes 31, 32, and 33 serve Adelanto; Routes 23, 40, 41, 42, 43, and 47 serve Apple Valley; Routes 21P, 21W, 22, 50, 50X, 51, 52, 53, 54, and 55 serve Victorville; and Routes 25, 64, 66, and 68 serve Hesperia. There are several County Routes —County Route 21 connects Victorville to Pinon Hills and Wrightwood; County Route 22 links Helendale; County Route 23 connects Apple Valley to Lucerne Valley; County Route 24 makes connection between Hesperia and Oak Hills; and in the Barstow Area, County Route 28 connects Helendale and Hinkley to Barstow, and County Route 29 offers access to Newberry Springs.

1.3.2 Connecting Services

Metrolink: Metrolink is the commuter rail service provider in Southern California Region consisting of seven lines and 63 stations operating on over 500 miles of rail network. The system operates in Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties, as well as Oceanside in San Diego County. The Metrolink San Bernardino Line connects with VVTA's Route 15 B-V Link at the San Bernardino Transit Center (SBTC) in downtown San Bernardino on Rialto Avenue between E Street and F Street and at the Fontana Transit Center.

OmniTrans: OmniTrans is the largest transit service provider in the San Bernardino Valley area. Its service areas is south of the San Bernardino and San Gabriel Mountains in San Bernardino County, along with parts of Riverside and Los Angeles Counties. The agency was established through a Joint Powers Agreement and includes 15 cities and portions of the San Bernardino County unincorporated areas. There are 12 routes connecting with VVTA's Route 15 at the SBTC. They are Routes 1-4, 7-8, 10, 11, 15, 290, 215, and sbX Green Line. At Arrowhead Regional Medical Center Routes 19, 22, and 290 connect to VVTA's Route 15. At Kaiser Medical Center in Fontana VVTA's Route 15 connects with OmniTrans Routes 19, 20, 29, 61, and 82. Route 15 also connects to the Fontana Transit Center which is also served by OmniTrans Routes 10, 12, 14, 15, 19, 20, 61, 66, 67, and 82.

Mountain Transit: The Mountain Area Regional Transit Authority (Mountain Transit) serves the San Bernardino Mountain communities of Crestline, Lake Arrowhead, Running Springs, and Big Bear Lake with five fixed local routes. Mountain Transit also offers Off the Mountain (OTM) Service that enables the residents of the mountain communities to connect with major stops in San Bernardino. The OTM services connect to VVTA's Route 15 at the SBTC.

Riverside Transit Agency: The Riverside Transit Agency (RTA) is the major transit provider for western Riverside County in Southern California. RTA provides both local and regional services

throughout the region with fixed-routes, CommuterLink routes, and Dial-A-Ride services. RTA was established as a Joint Power Agency. RTA's Route 200 connects with VVTA's Route 15 at the SBTC.

Pass Transit: PASS Transit is a transit agency in Riverside County, California, providing bus service to the communities of Banning, Beaumont, Cabazon and Cherry Valley in the San Gorgonio Pass area. Commuter Link services of Pass Transit connect Pass Area residents with VVTA Route 15 at the SBTC.

City of Needles: Needles Area Transit (NAT) is the local transit service provider in the City of Needles in San Bernardino County. It provides deviated fixed route service on two loop routes within the City. Dial-a-Ride service is also provided to seniors and persons with disabilities. In addition, Medical Transport is another on-demand service designed to cater the needs for medical appointments in the City and across the Colorado River. Needles Area Transit services connect with the Route 200 Needles Link service at the G Street and Broadway stop but schedules are not coordinated with Needles Link services operating outside of the service span of Needles Area Transit

1.3.3 Service Span and Frequency

Table 1-7 presents service spans and frequencies for all routes in the VVTA network. In the frequency column, "Midday" refers to service hours between 7:00 am to 5:00 pm on weekdays and "Non-Midday" refers to service hours outside of "Midday".

Table 1-7: Service Span and Frequency

Route	Route Name	Span			Frequency (min.)		
		Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Fixed Routes and Deviated Routes							
21P	Victor Valley Mall - Pinon Hills	7:00AM-8:10PM	7:15AM-8:10PM	9:30AM-6:00PM	130	130-134	130-134
21W	Victor Valley Mall - Wrightwood	5:55AM-9:36PM	7:03AM-8:30PM	8:15AM-6:15PM	135	135-140	135-140
22	Helendale	6:06AM-7:46PM	7:00AM-7:46PM	9:00AM-5:46PM	120	120	120
23	Lucerne Valley	5:55AM-8:55PM	7:00AM-8:55PM	9:00AM-6:55PM	120	120	120
25	Oak Hills	6:50AM-8:27PM	8:55AM-7:27PM	8:55AM-5:27PM	120	12	120
31	Adelanto-Victorville South	6:00AM-8:53PM	7:00AM-7:53PM	8:00AM-5:53PM	30 Midday/60 Non-Midday	60	60
32	Adelanto-Victorville North	5:58AM-8:54PM	7:00AM-7:54PM	7:58AM-5:53PM	60	60	60
33	Adelanto Circulator	6:05AM-9:05PM	6:53AM-8:05PM	7:53AM-6:05PM	60	60	120
40	Apple Valley North Deviation	6:00AM-8:55PM	7:00AM-7:55PM	8:00AM-4:55PM	60	60	120
41	Lorene-7th – Apple Valley Post Office	6:00AM-8:49PM	7:00AM-7:49PM	8:00AM-5:49PM	30 Midday/60 Non-Midday	60	60
42	Apple Valley Road	6:30AM-9:25PM	7:30AM-8:25PM	8:29AM-6:25PM	60	60	60
43	Apple Valley Post Office -Victorville College	6:00AM-8:55PM	7:00AM-7:55PM	8:00AM-5:55PM	30 Midday/60 Non-Midday	60	60
47	Apple Valley South Deviation	6:00AM-8:55PM	7:00AM-7:55PM	9:00AM-5:55PM	60	60	120
50	Victorville - Hesperia Post Office	6:00AM-8:54PM	7:00AM-7:54PM	8:00AM-5:54PM	60	60	60
50X*	Express VV to VVC	7:03AM-10:23AM 2:33AM - 5:58PM	n/a	n/a	60 Midday	n/a	n/a
51	Lorene-7th – Victor Valley Hospital	6:00AM-8:52PM	7:00AM-7:52PM	8:00AM-5:52PM	60	60	60
52	Lorene-7th – Victor Valley Mall	6:00AM-9:21PM	7:00AM-8:13PM	8:00AM-6:13PM	30 Midday/60 Non-Midday	60	60
53	Victor Valley College-Victor Valley Mall	6:00AM-8:56PM	7:00AM-8:14PM	8:00AM-5:55PM	30 Midday/60 Non-Midday	60	60
54	Hwy 395-Palmdale - Victor Valley Mall	6:35AM-8:27PM	7:04AM-7:59PM	8:35AM-5:27PM	60	60	120
55	Lorene-7th – Victor Valley College	6:00AM-8:55PM	7:00AM-7:55PM	8:00AM-5:55PM	60	60	60
64	Super Target - Hesperia Post Office	6:03AM-8:48PM	7:05AM-7:59PM	8:05AM-6:02PM	60	60	60

Route	Route Name	Span			Frequency (min.)		
		Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Fixed Routes and Deviated Routes							
66	Hesperia East Deviation	6:05AM-8:59PM	7:05AM-7:59PM	8:05AM-4:59PM	60	60	120
68	Hesperia - Victor Valley Mall	6:05AM-9:15PM	7:05AM-8:15PM	8:05AM-6:15PM	60	60	60
15/B-V Link	Victorville-San Bernardino-Victorville	7:00AM-8:58PM	8:00AM-7:44PM	n/a	6 SB Trips 6 NB Trips	4 SB Trips 4 NB Trips	n/a
200/Needles Link	Victorville - Needles	Friday Only	n/a	n/a	1 SB and 1 WB Trip	n/a	n/a
NTC*	Fort Irwin Commuter	4:15AM-8:12PM	n/a	n/a	30-40 Peak only	n/a	n/a
1	Central Barstow	6:00AM-7:52PM	8:00AM-4:52PM	8:00AM-4:52PM	60	60	60
2	Barstow Library - Barstow College	6:00AM-7:55PM	8:00AM-4:55PM	8:00AM-4:55PM	60	60	60
3	Barstow Library - Lenwood	6:00AM--7:50PM	8:00AM-4:52PM	8:00AM-4:52PM	60	60	60
6	Barstow Library - College	6:00AM-7:55PM	8:00AM-4:55PM	8:00AM-4:55PM	60	60	60
28	Barstow - Hinkley - Helendale	6:00AM-8:35PM	8:00AM-4:35PM	8:00AM-4:35PM	180	180	180
29	Newberry Springs - Barstow	6:00AM-8:26PM	8:00AM-4:26PM	8:00AM-4:26PM	180	180	180

*Operates Monday through Thursday only.
Source: VVTA Public 2019 Timetable

1.3.4 System Ridership

In FY 2019, VVTA had an annual ridership of about 1.6 million passenger trips for fixed route, deviated route and Direct Access services. On weekdays, the fixed and deviated routes with the top three highest ridership were Routes 41, 50 and 52. Route 41 had around 151,000 passengers annually and 500 passengers on an average weekday. Route 50 had approximately 120,000 passengers annually and 400 passengers on an average weekday. Route 52 had around 108,000 passengers annually and 350 passengers on an average weekday. Route 15 B-V Link service had an average of 238 passengers on an average weekday. The express Route 50X between Costco and Victor Valley College had an average of 71 passengers on an average weekday. Three routes with the fewest riders were Routes 47, 23 and 22 with about 20,000 annual riders or fewer in FY 2019 and under 60 passengers on an average weekday. The Direct Access service had around 104,000 annual passengers and about 355 passengers on an average weekday.

On Saturdays and holidays, the routes with the highest ridership were the same Routes 41, 52 and 50. The routes with the lowest ridership on Saturdays and holidays were county Routes 40, 47 and 42. On Sundays, the routes with the highest ridership were Routes 41 and 52. The routes with the lowest Sunday ridership were Route 21and 47. See Table 1-8 for 2019 annual weekday, Saturday/holiday, and Sunday ridership breakdown by route. See Table 1-9 for average daily ridership by route.

Table 1-8: Annual Ridership by Route (FY 2019)

Route Number	Route Name	Annual Ridership			
		Weekdays	Saturday/Holiday	Sunday	Total
Fixed Routes and Deviated Routes					
21P/21W	Victor Valley Mall - Pinon Hills/Wrightwood	16,137	2,049	791	18,977
22	Helendale	14,604	2,002	1,340	17,946
23	Lucerne Valley	14,548	2,121	1,107	17,776
24/25/64*	Oak Hills	34,359	3,245	1,677	39,281
31	Adelanto-Victorville South	82,743	9,623	4,838	97,204
32	Adelanto-Victorville North	86,147	9,134	6,862	102,143
33	Adelanto Circulator	35,759	4,590	1,814	42,163
40	Apple Valley North Deviation	19,189	1,777	1,196	22,162
41	Lorene-7th - Apple Valley Post Office	129,510	13,367	8,116	150,993
42	Apple Valley Road	20,373	1,964	1182	23,519
43	Apple Valley Post Office -Victorville College	64,154	8,279	5,111	77,544
47	Apple Valley South Deviation	12,278	1,603	390	14,271
50	Victorville - Hesperia Post Office	101,208	12,292	6,996	120,496
51	Lorene-7th - Victor Valley Hospital	48,349	6,107	4,353	58,809
52	Lorene-7th - Victor Valley Mall	88,353	12,323	7,350	108,026
53	Victor Valley College-Victor Valley Mall	79,097	5,093	2,965	87,155
54	Hwy 395-Palmdale - Victor Valley Mall	31,135	3,864	1,236	36,235
55	Lorene-7th - Victor Valley College	46,146	3,947	2,307	52,400
66	Hesperia East Deviation	22,157	2,525	912	25,594
68	Hesperia - Victor Valley Mall	66,726	9,012	5,503	81,241
50X	Express VV to VVC	18,245	n/a	n/a	18,245
15	B-V Link	60,932	8,841	n/a	69,773
200	Needles Link	443	n/a	n/a	443
NTC	Fort Irwin Commuter	35,756	n/a	n/a	35,756
1	Central Barstow	42,979	5,269	2,831	51,079
2	Barstow Library - Barstow College	26,781	2,694	2,014	31,489
3	Barstow Library - Lenwood	33,521	4,214	3,520	41,255
6	Barstow Library - College	25,342	3,139	1,761	30,242
28	Barstow - Hinkley - Helendale	1,965	187	271	2,423
29	Newberry Springs - Barstow	3,361	291	212	3,864
Total	All Fixed Routes and Deviated Routes	1,262,297	139,552	76,655	1,478,504
Demand Response					
ADA	Direct Access	90,868	8,238	4,496	103,602

Source: 2020 TransTrack

*Route 24 service was split into route 25 and route 64, TransTrack FY2019 data by March 2020 hasn't captured the service change.

Table 1-9: Average Daily Ridership by Route (FY 2019)

Route Number	Route Name	Average Daily Ridership		
		Weekdays	Saturday/Holiday	Sunday
Fixed Routes and Deviated Routes				
21P/21W	Victor Valley Mall - Pinon Hills/Wrightwood	63	39	15
22	Helendale	57	39	26
23	Lucerne Valley	57	41	21
24/25/64*	Oak Hills	134	62	32
31	Adelanto-Victorville South	323	185	93
32	Adelanto-Victorville North	337	176	132
33	Adelanto Circulator	140	88	35
40	Apple Valley North Deviation	75	34	23
41	Lorene-7th - Apple Valley Post Office	506	257	156
42	Apple Valley Road	80	38	23
43	Apple Valley Post Office -Victorville College	251	159	98
47	Apple Valley South Deviation	48	31	8
50	Victorville - Hesperia Post Office	395	236	135
51	Lorene-7th - Victor Valley Hospital	189	117	84
52	Lorene-7th - Victor Valley Mall	345	237	141
53	Victor Valley College-Victor Valley Mall	309	98	57
54	Hwy 395-Palmdale - Victor Valley Mall	122	74	24
55	Lorene-7th - Victor Valley College	180	76	44
66	Hesperia East Deviation	87	49	18
68	Hesperia - Victor Valley Mall	261	173	106
50X	Express VV to VVC	71	0	0
15	B-V Link	238	170	0
200	Needles Link	2	0	0
NTC	Fort Irwin Commuter	140	0	0
1	Central Barstow	168	101	54
2	Barstow Library - Barstow College	105	52	39
3	Barstow Library - Lenwood	131	81	68
6	Barstow Library - College	99	60	34
28	Barstow - Hinkley - Helendale	8	4	5
29	Newberry Springs - Barstow	13	6	4
Total	All Fixed Routes and Deviated Routes	4,931	2,684	1,474
Demand Response				
ADA	Direct Access	355	158	86
Sum Total	All Routes and Services	5,286	2,842	1,561

Source: 2020 TransTrack

*Route 24 service was split into route 25 and route 64, TransTrack FY2019 data by March 2020 hasn't captured the service change.

1.3.5 Revenue Service Hours and Miles

In FY 2019, VVTA operated approximately 197,000 revenue service hours on weekdays, about 27,000 revenue hours on Saturdays/holidays and approximately 19,000 revenue hours on Sundays. Fixed and deviated routes accounted for about 80% of the revenue hours provided and Direct Access service accounted for the other 20%. Fourteen (14) out of 31 routes provided revenue hours between 3,500 and 4,000 on weekdays and between 450 and 750 on Saturdays/holidays. On weekdays, the most revenue hours were operated on Route 41, a route that has 30-minute midday headway and 60-minute peak hours headway, with almost 12,000 annual revenue hours. Next to Route 41, the most revenue hours were operated on Route 52 and Route 53. On weekends, the routes with the greatest number of revenue service hours were Routes 21, 32, and 50. Besides NTC Service, Route 50X, and Route 200, the lowest number of revenue hours were operated on Route 6, Route 2 and Route 1 on weekdays; and Routes 1, 28, and 29 on Saturdays/holidays. On Sundays, the lowest numbers of revenue hours were operated on Route 54, Route 47, and Route 66. See Table 1-10 for FY 2019 revenue hours by route.

VVTA operated 4.3 million revenue miles in FY 2019 (including fixed, deviated routes and direct access service). After the Commuter Services, B-V Link provided the most revenue miles of any route on weekdays, with over 208,000 revenue miles. This is a long route that provides six southbound trips and six northbound trips on weekdays. Route 42 provided the most revenue miles of any route on weekends, with over 29,000 revenue miles on Saturdays/holidays and around 22,000 revenue miles on Sundays. Besides NTC Service, Routes 50X, and Route 200, the routes that provided the lowest number of revenue miles on both weekdays and Saturdays/holidays were Route 2, and Route 1. See Table 1-11 for FY 2019 revenue miles by route.

Table 1-10: Annual Revenue Hours by Route (FY 2019)

Route Number	Route Name	Revenue Hours			
		Weekdays	Saturday/Holiday	Sunday	Total
Fixed Routes and Deviated Routes					
21P/21W	Victor Valley Mall - Pinon Hills/Wrightwood	7,473	1,418	1,037	9,928
22	Helendale	3,577	687	465	4,729
23	Lucerne Valley	3,930	751	526	5,207
24/25/64*	Oak Hills	7,406	1,369	1,028	9,803
31	Adelanto-Victorville South	5,958	692	523	7,173
32	Adelanto-Victorville North	7,482	1,391	1,050	9,923
33	Adelanto Circulator	3,821	711	276	4,808
40	Apple Valley North Deviation	3,750	697	265	4,712
41	Lorene-7th - Apple Valley Post Office	11,878	1,379	1,040	14,297
42	Apple Valley Road	7,459	1,386	1,043	9,888
43	Apple Valley Post Office -Victorville College	5,235	697	525	6,457
47	Apple Valley South Deviation	3,754	697	261	4,712
50	Victorville - Hesperia Post Office	7,473	1,388	1,044	9,905
51	Lorene-7th - Victor Valley Hospital	3,740	692	523	4,955
52	Lorene-7th - Victor Valley Mall	9,324	1,314	977	11,615
53	Victor Valley College-Victor Valley Mall	7,931	711	525	9,167
54	Hwy 395-Palmdale - Victor Valley Mall	3,733	692	264	4,689
55	Lorene-7th - Victor Valley College	3,756	695	526	4,977
66	Hesperia East Deviation	3,748	697	239	4,684
68	Hesperia - Victor Valley Mall	7,522	1,335	1,043	9,900
50X	Express VV to VVC	1,346	0	0	1,346
15	B-V Link	6,238	1,162	0	7,400
200	Needles Link	512	0	0	512
NTC	Fort Irwin Commuter	7,198	0	0	7,198
1	Central Barstow	3,494	479	470	4,443
2	Barstow Library - Barstow College	3,507	481	473	4,461
3	Barstow Library - Lenwood	6,975	956	936	8,867
6	Barstow Library - College	3,508	481	473	4,462
28	Barstow - Hinkley - Helendale	3,671	463	455	4,589
29	Newberry Springs - Barstow	3,636	455	447	4,538
Total	All Fixed Routes and Deviated Routes	159,035	23,876	16,434	199,345
Demand Response					
ADA	Direct Access	38,081	3,484	2,189	43,754

Source: 2020 TransTrack

*Route 24 service was split into route 25 and route 64, TransTrack FY2019 data by March 2020 hasn't captured the service change.

Table 1-11: Annual Revenue Miles by Route (FY 2019)

Route Number	Route Name	Revenue Miles			
		Weekdays	Saturday/Holiday	Sunday	Total
Fixed Routes and Deviated Routes					
21P/21W	Victor Valley Mall - Pinon Hills/Wrightwood	153,235	29,276	21,651	204,162
22	Helendale	96,635	19,469	13,383	129,487
23	Lucerne Valley	124,772	24,139	16,934	165,845
24/25/64*	Oak Hills	128,499	23,637	17,784	169,920
31	Adelanto-Victorville South	109,211	12,680	9,599	131,490
32	Adelanto-Victorville North	139,993	26,050	19,716	185,759
33	Adelanto Circulator	87,537	16,258	6,298	110,093
40	Apple Valley North Deviation	60,688	11,295	4,259	76,242
41	Lorene-7th - Apple Valley Post Office	146,851	17,046	12,905	176,802
42	Apple Valley Road	156,695	29,054	21,905	207,654
43	Apple Valley Post Office -Victorville College	104,509	13,876	10,478	128,863
47	Apple Valley South Deviation	49,818	9,260	3,498	62,576
50	Victorville - Hesperia Post Office	108,701	20,218	15,254	144,173
51	Lorene-7th - Victor Valley Hospital	41,867	7,759	5,883	55,509
52	Lorene-7th - Victor Valley Mall	111,742	12,929	9,805	134,476
53	Victor Valley College-Victor Valley Mall	92,227	11,057	8,097	111,381
54	Hwy 395-Palmdale - Victor Valley Mall	61,616	11,440	4,336	77,392
55	Lorene-7th - Victor Valley College	52,550	9,742	7,372	69,664
66	Hesperia East Deviation	57,010	10,557	4,544	72,111
68	Hesperia - Victor Valley Mall	135,712	24,133	18,921	178,766
50X	Express VV to VVC	18,245			18,245
15	B-V Link	208,586	35,226		243,812
200	Needles Link	18,439			18,439
NTC	Fort Irwin Commuter	259,349			259,349
1	Central Barstow	26,800	3,694	3,625	34,119
2	Barstow Library - Barstow College	31,393	4,318	4,245	39,956
3	Barstow Library - Lenwood	104,935	14,467	14,173	133,575
6	Barstow Library - College	42,966	5,907	5,809	54,682
28	Barstow - Hinkley - Helendale	81,707	10,514	10,319	102,540
29	Newberry Springs - Barstow	86,436	11,113	10,912	108,461
Total	All Fixed Routes and Deviated Routes	2,898,724	425,114	281,705	3,605,543
Demand Response					
ADA	Direct Access	609,560	57,030	34,805	701,395

Source: 2020 TransTrack

*Route 24 service was split into route 25 and route 64, TransTrack FY2019 data by March 2020 hasn't captured the service change.

1.3.6 Operating Expenses

In FY 2019, VVTA spent over $22 million on operations: $18.2 million on fixed and deviated routes and $4.1 million on Direct Access service. On weekdays, the routes with the highest operating costs were Route 41, Route 52 and NTC services. On weekends/holidays, the routes with highest operating costs were Route 42, Route 32 and Route 50.

Besides NTC Service, Route 50X, and Route 200, the routes with the lowest operating costs were Route 1, Route 2, and Route 6 on both weekdays and weekends/holidays. Direct Access accounted for about 18.5% of operating expenditures. See Table 1-12 for operating expenses by route.

1.3.7 Fare Revenues

In FY 2019, the VVTA system generated about $2.9 million in passenger fare revenues. Approximately 88 percent was from fixed and deviated routes. Passenger fare revenues were highest on the NTC Commuter and Routes 15 and 41 on weekdays. The routes with the lowest weekday fare revenue were Route 28, 29 and 200.

On weekends/holidays, the routes with the highest fare revenue were Routes 41, 50 and 52. The lowest weekend fare revenues were generated by Routes 28, 29 and 2. See Table 1-13 for fare revenue by route.

Table 1-12: Operating Expenses by Route (FY 2019)

Route Number	Route Name	Operating Cost			
		Weekdays	Saturday/Holiday	Sunday	Total
Fixed Routes and Deviated Routes					
21P/21W	Victor Valley Mall - Pinon Hills/Wrightwood	$629,550	$123,573	$89,276	$842,399
22	Helendale	$306,768	$60,916	$40,779	$408,463
23	Lucerne Valley	$339,817	$66,996	$46,316	$453,129
24/25/64*	Oak Hills	$618,662	$118,083	$87,570	$824,315
31	Adelanto-Victorville South	$557,780	$67,016	$49,984	$674,780
32	Adelanto-Victorville North	$704,416	$135,988	$101,502	$941,906
33	Adelanto Circulator	$371,527	$71,724	$28,145	$471,396
40	Apple Valley North Deviation	$344,802	$66,512	$24,865	$436,179
41	Lorene-7th - Apple Valley Post Office	$1,063,346	$127,634	$95,124	$1,286,104
42	Apple Valley Road	$711,125	$136,996	$101,738	$949,859
43	Apple Valley Post Office -Victorville College	$497,307	$68,312	$50,743	$616,362
47	Apple Valley South Deviation	$337,754	$65,043	$24,050	$426,847
50	Victorville - Hesperia Post Office	$675,364	$129,965	$96,404	$901,733
51	Lorene-7th - Victor Valley Hospital	$330,848	$63,421	$47,395	$441,664
52	Lorene-7th - Victor Valley Mall	$831,579	$119,310	$87,775	$1,038,664
53	Victor Valley College-Victor Valley Mall	$706,281	$67,472	$49,071	$822,824
54	Hwy 395-Palmdale - Victor Valley Mall	$343,224	$65,994	$24,522	$433,740
55	Lorene-7th - Victor Valley College	$339,561	$65,170	$48,645	$453,376
66	Hesperia East Deviation	$338,595	$65,079	$22,639	$426,313
68	Hesperia - Victor Valley Mall	$698,543	$126,323	$98,564	$923,430
50X	Express VV to VVC	$123,965			$123,965
15	B-V Link	$663,554	$122,001		$785,555
200	Needles Link	$10,912			$10,912
NTC	Fort Irwin Commuter	$824,336			$824,336
1	Central Barstow	$279,855	$38,629	$37,832	$356,316
2	Barstow Library - Barstow College	$283,182	$39,097	$38,355	$360,634
3	Barstow Library - Lenwood	$585,496	$80,974	$79,184	$745,654
6	Barstow Library - College	$289,011	$39,904	$39,163	$368,078
28	Barstow - Hinkley - Helendale	$322,600	$40,959	$40,135	$403,694
29	Newberry Springs - Barstow	$322,328	$40,637	$39,824	$402,789
Total	All Fixed Routes and Deviated Routes	$14,452,088	$2,213,728	$1,489,600	$18,155,416
Demand Response					
ADA	Direct Access	$3,586,341	$335,558	$210,288	$4,132,187
Total	All Routes and Services	$18,038,429	$2,549,286	$1,699,888	$22,287,603

Source: 2020 TransTrack

*Route 24 service was split into route 25 and route 64, TransTrack FY2019 data by March 2020 hasn't captured the service change.

Table 1-13: Fare Revenue by Route (FY 2019)

Route Number	Route Name	Fare Revenue			
		Weekdays	Saturday/Holiday	Sunday	Total
Fixed Routes and Deviated Routes					
21P/21W	Victor Valley Mall - Pinon Hills/Wrightwood	$44,561	$5,563	$2,077	$52,201
22	Helendale	$39,251	$5,712	$3,814	$48,777
23	Lucerne Valley	$38,030	$6,048	$3,075	$47,153
24/25/64	Oak Hills	$94,739	$9,409	$4,795	$108,943
31	Adelanto-Victorville South	$109,635	$13,237	$6,554	$129,426
32	Adelanto-Victorville North	$114,340	$12,422	$9,553	$136,315
33	Adelanto Circulator	$47,513	$6,345	$2,432	$56,290
40	Apple Valley North Deviation	$25,484	$2,526	$1,650	$29,660
41	Lorene-7th - Apple Valley Post Office	$171,330	$19,012	$10,841	$201,183
42	Apple Valley Road	$27,015	$2,672	$1,641	$31,328
43	Apple Valley Post Office -Victorville College	$87,168	$11,370	$7,114	$105,652
47	Apple Valley South Deviation	$16,544	$2,316	$533	$19,393
50	Victorville - Hesperia Post Office	$136,541	$16,992	$9,624	$163,157
51	Lorene-7th - Victor Valley Hospital	$64,239	$8,199	$5,977	$78,415
52	Lorene-7th - Victor Valley Mall	$117,183	$16,884	$9,787	$143,854
53	Victor Valley College-Victor Valley Mall	$104,311	$7,269	$4,061	$115,641
54	Hwy 395-Palmdale - Victor Valley Mall	$41,134	$5,220	$1,731	$48,085
55	Lorene-7th - Victor Valley College	$61,216	$5,468	$3,177	$69,861
66	Hesperia East Deviation	$28,977	$3,453	$1,286	$33,716
68	Hesperia - Victor Valley Mall	$88,388	$12,252	$7,647	$108,287
50X	Express VV to VVC	$24,482			$24,482
15	B-V Link	$193,762	$27,668		$221,430
200	Needles Link	$1,376			$1,376
NTC	Fort Irwin Commuter	$411,098			$411,098
1	Central Barstow	$27,430	$3,416	$1,823	$32,669
2	Barstow Library - Barstow College	$16,914	$1,740	$1,310	$19,964
3	Barstow Library - Lenwood	$21,575	$2,734	$2,274	$26,583
6	Barstow Library - College	$16,236	$2,026	$1,128	$19,390
28	Barstow - Hinkley - Helendale	$8,952	$849	$1,243	$11,044
29	Newberry Springs - Barstow	$14,591	$1,278	$974	$16,843
Total	All Fixed Routes and Deviated Routes	$2,194,015	$212,080	$106,179	$2,512,274
Demand Response					
ADA	Direct Access	$302,052	$25,521	$14,321	$341,894
Total	All Routes and Services	$2,496,067	$237,601	$120,500	$2,854,168

Source: 2020 TransTrack

*Route 24 service was split into route 25 and route 64, TransTrack FY2019 data by March 2020 hasn't captured the service change.

1.3.8 Fare Payment Type

The most popular type of fare collected by VVTA in FY19 was the student fare. RAM pass and 1-day senior/disabled passes were also popular means of fare payment, as were 31-day regular passes. The fare types that were collected the least were the variety of county fare types, B-V Link fare type, and MEGA pass. See Table 1-14 for fare types collected in fiscal year 2019.

Table 1-14: Ridership by Fare Type, July 1, 2018 – June 1, 2019

Fare Type	Annual	%
Regular	19,345	1.3%
Senior/Disabled	106,165	7.2%
Student	238,525	16.1%
1-Day Regular Pass	120,931	8.2%
1-Day Senior/Disabled Pass	188,332	12.7%
1-Day Student Pass	29,927	2.0%
1-Day County Pass	10,208	0.7%
1-Day County Senior/Disabled	11,715	0.8%
1-Day County Student	1,616	0.1%
31-Day Regular Pass	162,612	11.0%
31-Day Senior/Disabled Pass	68,161	4.6%
31-Day Student Pass	40,488	2.7%
31-Day County Pass	38,351	2.6%
31-Day County Senior Disabled	18,570	1.3%
31-Day County Student	2,358	0.2%
B-V Link Regular	12,758	0.9%
B-V Link Senior/Disabled	10,214	0.7%
Children Under 5	26,517	1.8%
RAM Pass	196,755	13.3%
Mega Pass	4,934	0.3%
NTC	20,249	1.4%
NTC 31 Day Pass	21,065	1.4%
Free Fare Special LCTOP	103,440	7.0%
Veterans	875	0.1%
Deviation	1,351	0.1%
Other	21,945	1.5%
Total	**1,477,407**	**100%**

Source: Syncromatics

1.3.9 On-Time Performance

On-time performance is shown in Table 1-15. The table shows the percentage of buses departing time points on-time 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. Routes 28 and Route 6 had the most on-time trips. Route 64 performed the poorest.

Table 1-15: On-Time Performance

Route	% On-Time	Rank
28	91.3%	1
6	72.98%	2
2	64.78%	3
50	62.67%	4
55	57.82%	5
41	56.62%	6
68	54.65%	7
43	54.64%	8
42	53.92%	9
33	53.9%	10
32	53.7%	11
3	53.29%	12
23	53.29%	12
51	52.07%	14
1	51.73%	15
53	49.53%	16
50X	49.26%	17
52	47.69%	18
66	45.9%	19
54	45.29%	20
21P/21W	45.04%	21
31	44.98%	22
NTC	42.58%	23
47	42.29%	24
40	35.89%	25
25	33.33%	26
B-V Link/15	33.29%	27
22	31.02%	28
64	14.62%	29
29	-	#N/A
Needles Link/200	-	#N/A

Source: VVTA DataPoint, June 2019

1.4 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.

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. 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 if another Direct Access customer is not displaced. See Table 1-16 for Direct Access fares.

Table 1-16: Direct Access Fares

Service	VVTA
Single Trip - Zone 1	$ 2.50
Single Trip - Zone 2	$ 4.50
Single Trip - Zone 3	$ 6.00
10-Trip Pass Regular	n/a
Children	Free

Source: VVTA

Table 1-17 presents Direct Access annual operation information, including ridership, revenue hours, revenue miles, operating expenses and fare revenues.

Table 1-17: Direct Access, Annual Operation Information

Direct Access	Weekdays	Saturday/Holiday	Sunday	Total
Ridership	90,868	8,238	4,496	103,602
Hours	38,081	3,484	2,189	43,754
Miles	609,560	57,030	34,805	701,395
Operating Expenses	$3,586,341	$335,558	$210,288	$4,132,187
Fare Revenue	$302,052	$25,521	$14,321	$341,894

Source: VVTA

1.4.1 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. Based on 3 months data in 2019, Direct Access trips were on-time about 91 percent of the time. See Table 1-18 for Direct Access on-time performance.

Table 1-18: Direct Access, On-Time Performance

Service	On-Time
Direct Access	90.61%

Source: TransTrack, January 2020

1.4.2 Performance Indicators

Direct Access performance indicators are shown in Table 1-19.

Table 1-19: Direct Access, Performance Indicators

Direct Access	Weekdays	Saturday/Holiday	Sunday	Total
Passengers per Hour	2.39	2.36	2.05	2.37
Passengers per Mile	0.15	0.14	0.13	0.15
Cost per Hour	$94.18	$96.31	$96.07	$94.44
Cost per Mile	$5.88	$5.88	$6.04	$5.89
Cost per Passenger	$39.47	$40.73	$46.77	$39.89
Revenue per Passenger	$3.32	$3.10	$3.19	$3.30
Farebox Recovery	8.4%	7.6%	6.8%	8.3%

Source: VVTA

1.5 Vanpool Service

Currently there are 224 vanpools in the VVTA vanpool program serving 1,700 subscribers. Individual vanpools range in size from four people to sixteen people. To qualify for the vanpool program, either the home or work location of the worker needs to be located within the VVTA service area. VVTA also provides vanpool services to locations in eastern Kern County such as Andrews Air Force Base and Boron, California. The five most popular employment locations for the vanpool program are:

- Fort Irwin – 83 vanpools serving 624 people
- Marine Corps Logistics Base in the Daggett and Yermo area – 44 vanpools serving 320 people
- Edwards Air Force Base – 33 vanpools serving 261 people
- Rio Tinto Mining in Boron, California – 11 vanpools serving 91 people
- Various locations in Barstow – 8 vanpools serving 76 people (primarily the Veterans Home and BNSF railroad)

Fort Irwin has the most vanpools and vanpool users. Commuter bus service is also available between Victor Valley communities and Fort Irwin. When analyzing vanpools that go to Fort Irwin about one-third of the vanpools are operating during the time periods that Fort Irwin commuter buses are operating to Victor Valley communities. Vanpools to Fort Irwin have been increasing; meanwhile ridership on commuter buses has been decreasing.

There are several reasons why workers at Fort Irwin may be using vanpool even though commuter bus services are available. First, the timing may not work for many people because the bus schedules are not aligned with some of the worker's shifts, particularly on weekends. Sometimes, especially when the vanpools group people who are at the same location with the same shifts, the vanpool can better adjust to the needs of working late or leaving early. Secondly, parking for vanpools may be provided at locations very close to the workers report locations while bus stops may be further away. While many vanpools are picking up at park and ride lots served by NTC, other stop locations may be directly at the user's home which is a convenience or at least a perceived convenience. Last is the fare difference. While both the fares for NTC buses and for vanpool are less than the mass transit benefit, vanpools are advertised to cost quite a bit less than the NTC buses (vanpool at $35 a month (although it looks like the average vanpool cost is closer to $150 a month) versus $255 for military employees and $180 for others). This makes vanpool a much more attractive option for the workers, specifically for private contractors.

For these reasons', vanpools may be depressing commuter bus ridership. This raises questions regarding commuter bus service to Fort Irwin. Is there a way to encourage current vanpool users to switch to the bus? Does the DOD see the benefit of the NTC and want to either increase subsidy or encourage the use of the bus either over vanpool or for people who are driving to the Fort today? Does it make more sense to focus on vanpool to the fort and use the NTC route resources for something else?

1.6 Capital Assets

1.6.1 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. 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.

1.6.1.1 Fixed Route Fleet

There are 76 vehicles in VVTA's fixed route fleet. VVTA has full ownership of the fleet. The fixed route revenue fleet consists primarily of 40-foot El Dorado Axess buses built in 2018 and 2014, 40 – foot New Flyer Xcelsior buses, and 40-foot NABI low-floor buses. The age of the fleet ranges from one to eight years. In terms of service years, two vehicles exceed their 7-year useful life. Most of the current fleet uses compressed natural gas as a fuel source, but there are some electric

powered and gas-powered buses in the fleet. The fixed route fleet inventory is presented in Table 1-20.

Table 1-20: Fixed Route Fleet Inventory

Year	Make and Model	Length	Capacity/Wheelchair	Fuel	Number of Vehicles	Owner
2001	NABI CNG CB/40LFW-14	40 feet	38/2	CN	1	VVTA
2001	NABI CNG MB/40LFW-14	40 feet	38/2	CN	1	VVTA
2007	El Dorado/Aero Elite	32 feet	28/2	GA	1	VVTA
2008	NABI CNG/40LFW-40	40 feet	38/2	CN	7	VVTA
2009	Glaval/Titan	24 feet	20/2	CN	1	VVTA
2010	NABI CNG/40LFW-50.01	40 feet	38/2	CN	5	VVTA
2011	Glaval Entourage	33 feet	24/2	CN	2	VVTA
2011	Goshen/G-Force	33 feet	34/2	CN	3	VVTA
2012	Glaval Entourage	33 feet	28/2	CN	2	VVTA
2013	El Dorado Aeroelite 320	32 feet	33	CN	5	VVTA
2014	El Dorado Axess	40 feet	33/2	CN	9	VVTA
2015	El Dorado Aerolite 320	32 feet	33	CN	1	VVTA
2015	El Dorado Axess	40 feet	33/2	CN	1	VVTA
2015	MCI/D4500	45 feet	57	CN	5	VVTA
2016	El Dorado Aerotech 240 CB	25 feet	25	CN	2	VVTA
2016	El Dorado Aerotech 240 Sup DR	25 feet	25	GA	2	VVTA
2016	El Dorado Axess	40 feet	43/2	CN	3	VVTA
2016	El Dorado XHF	35 feet	38/2	CN	2	VVTA
2018	El Dorado Axess	35 feet	35/2	CN	4	VVTA
2018	El Dorado Axess	40 feet	43/2	CN	12	VVTA
2019	New Flyer Xcelsior	40 feet	40/2	EB	7	VVTA
Total					**76**	

Source: VVTA

1.6.1.2 Direct Access Fleet

There are 59 vehicles in the VVTA Direct Access fleet. The majority of the vehicles consists of 24-foot or 25-foot El Dorado/Aerotech 240 vehicles and Ford E 450/Starcraft vehicles. The oldest vehicles in the Direct Access fleet are nine years old. Most of the fleet runs on gas with some vehicles using compressed natural gas as a fuel source. Caltrans holds the title to the eight El Dorado/Aerotech 240 vehicles built in 2011 and 12 El Dorado/Aerotech 240/16 vehicles built in 2019 with VVTA being the owner of 39 ADA vehicles. Table 1-21 presents the Direct Access fleet inventory.

Table 1-21: Direct Access Fleet Inventory

Year	Make and Model	Length	Capacity/Wheelchair	Fuel	Number of Vehicles	Owner
2008	Starcraft/Allstar	24 feet	16/5	GA	1	VVTA
2008	Starcraft E450/Starlite	24 feet	12/2	GA	3	VVTA
2008	Starcraft MB/Allstar	24 feet	16/5	GA	1	VVTA
2010	ARBOCS/Spirit of Mobil	26 feet	13/2	CNG	6	VVTA
2010	Dodge Caravan	17 feet	5/1	GA	3	VVTA
2010	Starcraft E450/Starlite	24 feet	16/5	GA	1	VVTA
2011	El Dorado Aerotech 240	25 feet	12/2	GA	8	Caltrans
2015	El Dorado Aerotech 240	24 feet	16/2	CNG	2	VVTA
2016	El Dorado Aerotech 240	24 feet	20	GA	4	VVTA
2016	El Dorado Aerotech 240 Sup MB	24 feet	20	GA	5	VVTA
2017	El Dorado Aerotech 240	24 feet	16/5	CNG	9	VVTA
2019	El Dorado Aerotech 240/14	24 feet	14/2	CNG	4	VVTA
2019	El Dorado Aerotech 240/16	24 feet	16/2	CNG	12	Caltrans
Total					**59**	

Source: VVTA

1.6.1.3 Non-Revenue Fleet

VVTA has 35 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 15 years old to one year old. Several non-revenue fleet vehicles are hybrids, while other run on gas or compressed natural gas. VVTA owns all the vehicles in the non-revenue fleet. The inventory of the non-revenue fleet is found in Table 1-22.

Table 1-22: Non-Revenue Fleet Inventory

Year	Make and Model	Capacity/Wheelchair	Fuel	Number of Vehicles	Owner
2005	Ford Escape	5	GA	2	VVTA
2007	Ford F-150	6	GA	1	VVTA
2008	Ford Escape	5-6	GA	2	VVTA
2010	Dodge Caravan - Sup	3/1	GA	5	VVTA
2011	Ford Flex	7	GA	1	VVTA
2011	Honda Civic	5	CNG	4	VVTA
2012	Ford Escape	5	GA	2	VVTA
2012	Ford Flex	7	GA	1	VVTA
2013	Honda Civic	5	CNG	3	VVTA
2014	Ford F-150	-	GA	1	VVTA
2014	Polaris GEM E4	-	EB	1	VVTA
2016	Ford Flex	-	GA	1	VVTA
2016	Ford Focus	-	EB	2	VVTA
2016	Nissan Leaf	-	EB	2	VVTA
2017	Nissan Leaf	-	EB	2	VVTA
2018	Ford Explorer	-	GA	4	VVTA
2019	Ford Transit T-150 Low	-	GA	1	VVTA
Total				**35**	

Source: VVTA

1.6.2 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, 50, 50X, 51, 52, 55 and the B-V Link. The Barstow Transfer Center is located adjacent to the Barstow Library near the intersection of Buena Vista Street and Barstow Road. The routes using the Barstow Transfer Center include Routes 1, 2, 3, 6, 15, 28, and 29.

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 several 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 five 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 42, 43, 50, 50X, 53 and 55.

A shelter and trash receptacle are 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 25, 50, 64, 66 and 68. 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 21P, 21W, 52, 53, 54, and 68.

1.6.3 Bus Stop Information

There are about 722 bus stops in the VVTA service area not including deviated bus stop locations. Most bus stops are indicated by a white board with bus stop number and its serving lines. 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, most 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. Figure 1-19 shows different types of bus stops of VVTA.

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.

Figure 1-19: VVTA Bus Stop Types

Photo Sources:
Top: http://highdesertdaily.com/2015/04/vvta-board-approves-merger-barstow-area-transit/
Middle: https://www.victorvilleca.gov/home/showimage?id=2097
Bottom: https://caltransit.org/cta/assets/Image/TC%20photos/2019/June/OBW%20collage.jpg

1.6.4 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 66. The maintenance facility for the BAT buses is currently located at 1612 State Street which is served by Route 1. This facility provides maintenance and storage for the vehicles operated on the BAT routes. A new facility to store and maintain the Barstow fleet is being constructed adjacent to the current fueling site at 2641 West Main Street which is served by Route 3.

1.6.5 Capital Program

The current VVTA capital program includes projects related to fleet replacement, bus stop enhancements and security. Total expenditures between FY2017 and FY2020 are presently estimated at $56,882,018. Approximately 38% of the expenditures will be used on vehicle replacement. See Table 1-23 for a list of VVTA capital projects.

Table 1-23: VVTA Capital Program Expenditures, FY2017-2020

Project Description	FY2017-FY2018	FY2018-FY2019	FY2019-FY2020	Total Cost
Regional Replacement Buses	$3,840,466	$7,394,443	$7,625,376	$18,860,285
Paratransit Replacement Buses	$750,000	$1,564,000	$268,196	$2,582,196
Service Vehicles Replacement	$70,000	$93,654	$70,200	$233,854
Big River Vans Replacement	$67,762	$0	$0	$67,762
Other	$8,231,656	$12,822,617	$14,083,648	$35,137,921
TOTAL	$12,959,884	$21,874,714	$22,047,420	$56,882,018

Source: VVTA

1.7 Unmet Needs

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. VVTA has supplied the testimony from the unmet needs hearings for the last five years. To become an official unmet transit need that a need must be "reasonable to meet". While there have been a few common

themes over the last few years that should be investigated further, there currently are no unmet needs.

Some of the most common comments in the unmet needs hearings in recent years include:

- Later evening service – this has been stated for a few reasons including jobs, access to city council hearings, classes, and access down the hill. The most recent COA did have recommendations for later evening service on most routes to be implemented in fiscal years 2020/2021 and fiscal years 2021/2022.
- More frequent service – there have been comments that all routes should operate every 20 to 30 minutes. The most recent COA has proposed more frequent service on Route 50 in fiscal year 2019/2020, operating more frequent service on Routes 32 and 55 in fiscal year 2020/2021, more frequent service on circulator routes on Sunday in fiscal year 2020/2021, expanding the hours that peak level of service operates on more frequent routes in fiscal year 2020/2021, and more frequent service on Route 33 in fiscal year 2022/2023. Each year there is a proposed increase in service for the BV Link service which can be used for Sunday service, span changes, and/or more frequent service.
- The unmet needs hearing notes also highlight a number of destinations and travel patterns that are currently not being served including the West Victorville area (west of US 395 and south of Palmdale Road, the Jess Ranch area of Apple Valley, the area around Harper Lake in Hinkley, service between Adelanto and Phelan, commuter service between Victorville and Palmdale[2], the intersection of El Evado Road and Mojave Drive, along Maple Avenue in Hesperia, the intersection of Village Drive and Amargosa Road in Victorville should have a bus stop
- More on-demand services to facilitate short trips and connect to fixed route services for longer-distance trips.

[2] Vanpool can serve this market

2 Goals, Objectives, and Standards

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 1, 2, 3, 6, 31, 32, 41, 42, 43, 50, 50X, 51, 52, 53, 55, 64, 68
- Flex Routes/Circulator: Routes 33, 40, 47, 54 and 66
- County Route: Routes 21P/W, 22, 23, 25, 28, and 29
- Intercity (Inter-City Human Service): B-V Link (Route 15), Needles Link (Route 200)
- 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 standards and guideline 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.

2.1 System-wide Performance Standards and Guidelines

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

2.1.1 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.

2.1.1.1 Route Spacing

Route spacing guidelines are put in place to guarantee reasonable 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. As well as for forecast demand based upon recognized transit practice. The guideline for the majority of the VVTA service area would be route spacing of one mile. In some denser residential areas and in areas with lower vehicle ownership rates, the guideline would be either ⅜ or ½ mile.

Table 2-1: Bus 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	–	–

2.1.1.2 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 0.5 miles in urbanized area or one 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 2-2: Bus Stop Spacing Guidelines

Area	Minimum Stop Spacing (miles)	Maximum Stop Spacing (miles)
Urbanized	0.15	0.50
Non-urbanized	0.15	1.00

2.1.2 Cost Effectiveness

There is one standard proposed for cost effectiveness, farebox recovery.

2.1.2.1 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 in urbanized area and 10 percent in non-urbanized area farebox

recovery rate[3] in order for a transit system to qualify for state funding. The VVTA system-wide farebox recovery ratio standard is set at 15 percent to meet these requirements.

2.1.3 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.

2.1.3.1 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. Routes should operate late at timepoints more than five percent of the time.

Table 2-3: On-time Performance Guideline

All Routes	Early	On-time	Late
On-time Performance	0%	95%	5%

2.1.3.2 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.

2.1.3.3 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.

[3]Caltrans (July 2018). *Transportation Development Act (TDA) Statutes and California Code of Regulations.* Retrieved from: https://dot.ca.gov/-/media/dot-media/programs/rail-mass-transportation/documents/f0009844-tda-07-2018-a11y.pdf

2.1.4 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.

2.1.4.1 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.

2.1.4.2 Road Call Rate

The road call rate measures 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.

2.1.5 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.

2.1.5.1 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.

2.1.5.2 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.

2.1.5.3 Vehicle Maintenance Employee

The vehicle maintenance employee guideline measures the number of maintenance employees per vehicle mile. The guideline is one vehicle maintenance employee per 80,000 vehicle miles.

2.1.5.4 Administrative Efficiency

The administrative efficiency measures the number of administrative employees per the amount of service operated. The guideline for administrative efficiency is one administrative employee for every 11,000 revenue hours operated.

2.1.6 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.

2.1.6.1 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. Table 2-4 presents the guidelines for installation of passenger amenities at bus stops.

Table 2-4: Passenger Amenity Performance Guidelines

Amenity	Guideline
Bus Stop Signs	All
Bus Stop Seating	Average of greater than 15 boardings/day
Bus Stop Shelters	Average of greater than 25 boardings/day
Real-time Information Sign	Average of greater than 50 boardings/day
System Map	All Shelters
Lighting*	Passenger activity of greater than an average of 10 passengers/day after 5:00PM
Trash Can	Average of greater than 25 boardings/day
Cut Out	All bus stops along major arterials

* Lighting can include solar powered lights or street lights provided by cities and towns along the route, every effort should be made to locate stops near lighting sources

2.1.6.2 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 complaints per 1,000 passenger trips.

2.2 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, intercity (B-V Link and Needles Link), and Commuter (NTC Commuter Flyer).

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.

2.2.1 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.

2.2.1.1 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 2-5: Fixed Route Service Span Performance Standards

Service Type	Weekday	Saturday	Sunday
Local	6AM-9PM	7AM-8PM	8AM-6PM
Circulator/Deviated	6AM-9PM	7AM-8PM	8AM-6PM
County	6AM-9PM	8AM-4PM	8AM-4PM
Intercity (B-V Link and Needles Link)	As Needed	As Needed	N/A
Commuter (NTC Commuter)	As Needed	N/A	N/A

2.2.1.2 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 on weekdays and Saturdays. Local routes maintain that 60-minute frequency on Sunday but circulator/deviated routes can operate every 120 minutes. County routes have a standard of trips operating every 180 minutes. Intercity 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 2.3.4, Passenger Comfort.

Table 2-6: Fixed Route Service Frequency Performance Standards (minutes)

Service Type	Weekday	Saturday	Sunday
Local	60	60	60
Circulator/Deviated	60	60	120
County	180	180	180
Intercity (B-V Link and Needles Link)	As Needed	As Needed	N/A
Commuter (NTC Commuter)	As Needed	N/A	N/A

2.2.2 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 revenue hour and passengers per revenue mile.

2.2.2.1 *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 are set lower. The guideline also varies by day of the week.

Table 2-7: Fixed Route Passengers per Hour Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	15	10	8
Circulator/Deviated	8	6	5
County	5	4	3
Intercity (B-V Link)	5	4	3
Commuter (NTC Commuter)	5	N/A	N/A

2.2.2.2 *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 intercity services having a lower guideline. The guidelines also vary for each service based on the day of operation.

Table 2-8: Fixed Route Passengers per Mile Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	1.25	1.00	0.75
Circulator/Deviated	0.50	0.35	0.25
County	0.20	0.15	0.10
Intercity (B-V Link)	0.25	0.25	N/A
Commuter (NTC Commuter)	0.20	N/A	N/A

2.2.3 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, 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.

2.2.3.1 *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 deviated, and county routes weekday services are $0.6, $1.08, and $1.4 respectively.

Weekend services of circulator and deviated routes are lower than its weekday services. Local and county routes' Saturday service fare guidelines, however, stay the same as their weekday guidelines. Their Sunday service average fare guidelines are slightly decreased. The average fare guideline is highest for intercity and commuter services. Average fare would increase along with any fare changes therefore this

Table 2-9: Fixed Route Average Fare Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	$0.60	$0.60	$0.50
Circulator/Deviated	$1.08	$0.88	$0.88
County	$1.40	$1.40	$1.00
Intercity (B-V Link)	$4.20	$2.80	N/A
Commuter (NTC Commuter)	$11.90	N/A	N/A

2.2.3.2 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 2-10: Fixed Route Farebox Recovery Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	20.0%	15.0%	10.0%
Circulator/Deviated	12.0%	8.0%	8.0%
County	10.0%	7.0%	5.0%
Intercity (B-V Link and Needles Link)	15.0%	10.0%	N/A
Commuter (NTC Commuter)	85.0%	N/A	N/A

2.2.3.3 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, intercity and commuter services. This guideline will have to be updated with changes in operating costs.

Table 2-11: 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	$75.00
Intercity (B-V Link)	$75.00	$75.00	N/A
Commuter (NTC Commuter)	$75.00	N/A	N/A

2.2.3.4 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 2-12: 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	$3.00
Intercity (B-V Link)	$4.00	$4.00	N/A
Commuter (NTC Commuter)	$4.00	N/A	N/A

2.2.3.5 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 intercity routes. The cost per passenger boarding guidelines varied based on service type and the day operated.

Table 2-13: Fixed Route Cost per Passenger Performance Guidelines

Service Type	Weekday	Saturday	Sunday
Local	$3.00	$4.00	$5.00
Circulator/Deviated	$9.00	$11.00	$11.00
County	$14.00	$20.00	$20.00
Intercity (B-V Link)	$28.00	$28.00	N/A
Commuter (NTC Commuter)	$14.00	N/A	N/A

2.2.4 Passenger Comfort

The sole performance guideline for passenger comfort is passenger loading.

2.2.4.1 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 presented in Table 2-14 is 120 percent of seated capacity. On longer intercity 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 2-14: Passenger Load Guideline by Service Type

Service Type	Maximum Load
Local	120.0%
Circulator/Deviated	120.0%
County	120.0%
Intercity (B-V Link)	100.0%
Commuter (NTC Commuter)	100.0%

2.2.5 Use of Guidelines in Planning Process

Guidelines are meant to help guide VVTA staff in their planning and monitoring activities for the transit system. In some cases (e.g., the span of service guidelines), the guideline is not easily measured as a percentage of the benchmark or target value. In these cases, the best judgment and experience of staff, funding partners and other stakeholders would be used to determine if the intent of the guideline is being satisfied, and to what extent. For those guidelines which can be measured as a percentage of the benchmark or target value, the following table provides useful guidelines for what types of evaluations to consider, both in terms of route design and marketing efforts:

Table 2-15: Service Action Benchmark Guidelines

Classification Benchmark	Service Plan Action	Marketing
Above 80%	Acceptable, modify as required	Systemwide general marketing
60% - 80%	Review for possible modifications	Route specific marketing efforts
Below 60%	Unacceptable, review and consider major changes	Education of service change and public hearing for route change or elimination

Changes in span of service and frequency should be based on loading guidelines, and route productivity levels with consideration to impacts to the entire networks. VVTA should consider span changes by monitoring the first and last trips of the day on each route, as these trips show growth in ridership additional earlier/later trips should be considered on the route. Span reductions should be included as a possible route modification if the route is below 60% of the benchmark productivity levels. More frequent service should be considered on a route when the route exceeds the passenger loading guidelines. In reducing service, a trip could be considered for elimination if the effect would not increase passenger loading on earlier and later trips to the point where the trips would be greater than the passenger loading guideline.

2.3 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.

2.3.1 Service Utilization

Ridership is the proposed guideline to measure service utilization.

2.3.1.1 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 2-16: Direct Access Ridership Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	2.50	2.00	1.50

2.3.2 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.

2.3.2.1 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.

2.3.2.2 *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.

2.3.2.3 *Telephone Performance*

Telephone performance rates the amount of time customers are put on hold when they are trying to book a Direct Access trip. Customers should not be placed on hold for more than 120 seconds while attempting to book a trip.

2.3.2.4 *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.

2.3.2.5 *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. Customer cancellations and no-shows should account for no more than five percent of all Direct Access trips.

2.3.3 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.

2.3.3.1 *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 2-17: Direct Access Farebox Recovery Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	10.0%	9.0%	8.0%

2.3.3.2 *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 2-18: Direct Access Cost per Hour Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	$96.00	$96.00	$96.00

2.3.3.3 *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 2-19: Direct Access Cost per Mile Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	$6.00	$6.00	$6.00

2.3.3.4 *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 operating costs.

Table 2-20: Direct Access Cost per Passenger Performance Guideline

Service Type	Weekday	Saturday	Sunday
Direct Access	$41.00	$48.00	$48.00

3 Service and System Evaluation

3.1 Overview

The VVTA transit system is designed to facilitate neighborhood access and provide direct services between regional origins and destinations. Several service and financial indicators, as described in Chapter 2, have been chosen to evaluate the service performances. They are "Passenger per Hour", Passenger per Mile", "Cost per Hour", "Cost per Mile", "Cost per Passenger", "Revenue per Passenger", and "Farebox Recovery". For these indicators operational data including ridership, revenue miles, and revenue hours; and financial data including operating expense and fare revenue were extracted from TransTrack data for Fiscal Year 2018/2019.

Benchmark or threshold of evaluating the metrics are as follows:

Classification Benchmark	Service Plan Action	Marketing
Below expense indicators or Above 80% of other indicators	Acceptable, modify as required	Systemwide general marketing
Between 120%-140% of expense indicators or between 60% - 80% of other indicators	Review for possible modifications	Route specific marketing efforts
Above 140% of expense indicators or below 60% of other indicators	Unacceptable, review and consider major changes	Education of service change and public hearing for route change or elimination

3.2 Fixed Route Service and Financial Indicators

This section describes the performance of the fixed route network using those indicators identified above.

3.2.1 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 and mile. Table 3-1 summarizes the results of the two productivity indicators for all VVTA services.

3.2.1.1 Passengers per Hour

Passengers per hour represents the number of passengers per revenue hour of service provided:

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

- Systemwide, there were 6.51 passengers per hour in FY2019, 6.86 on weekdays, 5.40 on Saturdays/holidays and 4.36 on Sunday. Fixed and deviated routes carried 7.94 passengers per hour on weekdays, 5.84 passengers per hour on Saturdays/holidays and 4.66 passengers per hour on Sundays.
    - On weekdays, Route 31, Route 50 and Route 50x were the most productive routes with 13.89 passengers per hour, 13.55 and 13.54 passengers per hour respectively. This was followed by Route 51 with 12.93 passengers per hour and Route 1 and Route 55 with 12.30 and 12.29 passengers per hour.
    - The routes with the lowest productivity on weekdays were Route 22 with 4.26 passengers per hour followed by Route 23 and Route 47 with 4.35 and 5.47 passengers per hour, respectively. Demand response service along Route 4 and Route 5 also demonstrated low productivity on weekdays with 2.28 passengers per hour and 1.94 passengers per hour respectively.
    - On weekends/holidays, Route 52, Route 31 and Route 43 had the highest number of passengers per hour. The routes that carried the lowest numbers of passengers per hour on Saturdays/holidays were Route 21, Route 23 and Route 22 which all carried fewer than 4.00 passengers per revenue hour. The routes that carried the lowest numbers of passengers per hour on Sundays were Route 21, Route 28 and Route 29 which all carried fewer than 1.00 passengers per revenue hour.

3.2.1.2 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 0.37 passengers per mile in FY2019, 0.39 on weekdays, 0.31 on Saturdays/holidays and 0.26 on Sundays. Fixed and deviated routes carried 0.44 passengers per mile on weekdays, 0.33 passengers per mile on Saturdays/holidays and 0.27 passengers per hour on Sundays.
    - On weekdays, Route 1 and Route 50X were the most productive routes with 1.60 passengers per mile and 1.00 passengers per mile respectively. They were followed by Route 50 with 0.93 passengers per mile and Route 55 and 41 with 0.88 passengers per mile.
    - On weekdays, the fewest passengers per mile were carried by demand response service along Route 28, Route 29 and Needles Link Route 200, with 0.02, 0.04 and 0.02 passengers per mile, respectively. Route 21 and Route 23 also demonstrated low

productivity on weekdays with 0.11 passengers per mile and 0.12 passengers per mile respectively.

- On weekends/holidays, Route 1, Route 52 and Route 51 had the most passengers per mile. Route 28, Route 29, Route 21, and Route 42 had the lowest number of passengers per mile of all fixed or deviated routes.

Table 3-1: Service Indicators

Route Number	Passengers per Revenue Hour				Passengers per Revenue Mile			
	Weekdays	Saturday/Holiday	Sunday	Total	Weekdays	Saturday/Holiday	Sunday	Total
21P/21W	2.16	1.44	0.76	1.91	0.11	0.07	0.04	0.09
22	4.08	2.91	2.88	3.79	0.15	0.10	0.10	0.14
23	3.70	2.82	2.10	3.41	0.12	0.09	0.07	0.11
24	4.64	2.37	1.64	4.01	0.27	0.14	0.09	0.23
31	13.89	13.91	9.25	13.55	0.76	0.76	0.50	0.74
32	11.51	6.57	6.54	10.29	0.62	0.35	0.35	0.55
33	9.36	6.46	6.57	8.77	0.41	0.28	0.29	0.38
40	5.12	2.55	4.51	4.70	0.32	0.16	0.28	0.29
41	10.90	9.69	7.80	10.56	0.88	0.78	0.63	0.85
42	2.73	1.42	1.13	2.38	0.13	0.07	0.05	0.11
43	12.25	11.88	9.74	12.01	0.61	0.60	0.49	0.60
47	3.27	2.30	1.49	3.03	0.25	0.17	0.11	0.23
50	13.54	8.86	6.70	12.17	0.93	0.61	0.46	0.84
51	12.93	8.83	8.32	11.87	1.15	0.79	0.74	1.06
52	9.48	9.38	7.52	9.30	0.79	0.95	0.75	0.80
53	9.97	7.16	5.65	9.51	0.86	0.46	0.37	0.78
54	8.34	5.58	4.68	7.73	0.51	0.34	0.29	0.47
55	12.29	5.68	4.39	10.53	0.88	0.41	0.31	0.75
66	5.91	3.62	3.82	5.46	0.39	0.24	0.20	0.35
68	8.87	6.75	5.28	8.21	0.49	0.37	0.29	0.45
50X	13.55	n/a	n/a	13.55	1.00	n/a	n/a	1.00
15	9.77	7.61	n/a	9.43	0.29	0.25	n/a	0.29
200	0.87	n/a	n/a	0.87	0.02	n/a	n/a	0.02
NTC	4.97	n/a	n/a	4.97	0.14	n/a	n/a	0.14
1	12.30	11.00	6.02	11.50	1.60	1.43	0.78	1.50
2	7.64	5.60	4.26	7.06	0.85	0.62	0.47	0.79
3	4.81	4.41	3.76	4.65	0.32	0.29	0.25	0.31
6	7.22	6.53	3.72	6.78	0.59	0.53	0.30	0.55
28	0.54	0.40	0.60	0.53	0.02	0.02	0.03	0.02
29	0.92	0.64	0.47	0.85	0.04	0.03	0.02	0.04

Source: TransTrack

In summary, the weekday and weekend services of route 21, 42, 47, 54, 3, 28, 29 are below the passenger productivity guidelines. Major service changes could be considered on these routes. One caveat regarding Routes 21, 28, and 29 is that Barstow area services have seen recent ridership growth.

On certain days routes 55, 68, and 6 either do not meet the passenger per revenue hour standards or passenger per revenue mile standards. Major service changes that are expected to be focusing on specific day of services on these routes will be explored as part of the next COA.

Route 23, 32, 43, 53 are the routes meet passenger per revenue hour standards but not some of passenger per revenue mile standards. Major service changes that aiming at improving service utilization per trip will be explored as part of the next COA.

Route 2 and 24 do not meet passenger per revenue hour standard but meet passenger per mile standard. Major service changes with a focus on improving service frequency will be explored as part of the next COA.

3.2.2 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 five indicators, three targeting expenses and two targeting revenues. The expense indicators include operating cost per hour, operating cost per mile, and operating cost per passenger. The two revenue indicators include revenue per passenger and farebox recovery. Table 3-2 shows expense indicators and Table 3-3 shows revenue indicators.

3.2.2.1 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 FY2019 was $91.68.
- Overall, the fixed and deviated route average operating cost per hour was $91.08.
    - On weekdays, the fixed and deviated routes with the lowest cost per hour were Route 200 ($21.31), Route 1 ($80.09), and Route 2 ($80.75).
    - The routes with the highest cost per hour on weekdays were NTC Commuter 101, Route 15, and Route 33 with a cost of $114.52 per hour, $106.37 per hour and $97.23 per hour respectively.
    - In general, Saturday/holiday and Sunday costs per hour were similar. Besides the Route 15, Route 200, Route 50X, and NTC Commuter service, the routes with the lowest costs per hour on weekends were demand response routes: Route 1, Route 2, Route 6 and Route 3. The routes with the highest costs per hour on weekends were Route 33, Route 42, Route 43, and Route 32.

- Costs per revenue hour were comparable among all regular fixed routes on weekdays and weekends.

3.2.2.2 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 FY2019 was $5.18.
- Overall, the fixed and deviated route average operating cost per mile was $5.04.
    - On weekdays, the fixed and deviated routes with the lowest cost per mile were Route 200, Route 23, Route 22, NTC Commuter Route, Route 15, Route 29, and Route 28, all with costs below $4.00 per mile.
    - The routes with the highest cost per mile on weekdays were Route 1, Route 2, Route 51, Route 53, and Route 52 which operate the fewest miles per vehicle assigned to the route.
- On weekends/holidays, the routes with the lowest costs per mile were Route 22, Route 23 and B-V Link only on Saturdays. The routes with the highest costs per mile on weekends were Route 1, Route 2, Route 52, and Route 51.

3.2.2.3 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 FY2019 was $14.09. On weekdays, the systemwide cost per passenger was $13.33, on Saturday and Sunday, the systemwide cost was $17.25 and $20.97 respectively.

  Overall, the fixed and deviated route average operating cost per passenger was $12.28.
    - On weekdays, the fixed and deviated routes with the lowest cost per passenger were Route 1, Route 50, Route 31, Route 50X, and Route 51 with costs per passenger of $6.51, $6.67, $6.74, $6.79, and $6.84 respectively.
    - On weekdays, Route 28, Route 29, Route 21, and Route 42 had the highest costs per passenger, ranging from $164.17 cost per passenger to $34.91 cost per passenger.
- On Saturdays/holidays, the three routes with the lowest costs per passenger were Route 31, Route 1, and Route 43, all with costs below $9.00 per passenger. On Sundays, the three routes with the lowest costs per passenger were Route 43, Route 31, and Route 51. The routes with the highest costs per passenger were Route 28, Route 29, Route 21, and Route 42.

Table 3-2: Expense Indicators

Route	Cost per Revenue Hour				Cost per Revenue Mile				Cost per Passenger			
	Weekday	Saturday/Holiday	Sunday	Total	Weekday	Saturday/Holiday	Sunday	Total	Weekday	Saturday/Holiday	Sunday	Total
21P/21W	$84.24	$87.15	$86.09	$84.85	$4.11	$4.22	$4.12	$4.13	$39.01	$60.31	$112.86	$44.39
22	$85.76	$88.67	$87.70	$86.37	$3.17	$3.13	$3.05	$3.15	$21.01	$30.43	$30.43	$22.76
23	$86.47	$89.21	$88.05	$87.02	$2.72	$2.78	$2.74	$2.73	$23.36	$31.59	$41.84	$25.49
24/25/64	$83.54	$86.25	$85.18	$84.09	$4.81	$5.00	$4.92	$4.85	$18.01	$36.39	$53.01	$21.00
31	$93.62	$96.84	$95.57	$94.07	$5.11	$5.29	$5.21	$5.13	$6.74	$6.96	$10.33	$6.94
32	$94.15	$97.76	$96.67	$94.92	$5.03	$5.22	$5.15	$5.07	$8.18	$14.89	$14.79	$9.22
33	$97.23	$100.88	$101.97	$98.04	$4.24	$4.41	$4.47	$4.28	$10.39	$15.63	$15.52	$11.18
40	$91.95	$95.43	$93.83	$92.57	$5.68	$5.89	$5.84	$5.72	$17.97	$37.43	$20.79	$19.68
41	$89.52	$92.56	$91.47	$89.96	$7.24	$7.49	$7.37	$7.27	$8.21	$9.55	$11.72	$8.52
42	$95.34	$98.84	$97.54	$96.06	$4.54	$4.72	$4.64	$4.57	$34.91	$69.75	$86.07	$40.39
43	$95.00	$98.01	$96.65	$95.46	$4.76	$4.92	$4.84	$4.78	$7.75	$8.25	$9.93	$7.95
47	$89.97	$93.32	$92.15	$90.59	$6.78	$7.02	$6.88	$6.82	$27.51	$40.58	$61.67	$29.91
50	$90.37	$93.63	$92.34	$91.04	$6.21	$6.43	$6.32	$6.25	$6.67	$10.57	$13.78	$7.48
51	$88.46	$91.65	$90.62	$89.14	$7.90	$8.17	$8.06	$7.96	$6.84	$10.38	$10.89	$7.51
52	$89.19	$90.80	$89.84	$89.42	$7.44	$9.23	$8.95	$7.72	$9.41	$9.68	$11.94	$9.61
53	$89.05	$94.90	$93.47	$89.76	$7.66	$6.10	$6.06	$7.39	$8.93	$13.25	$16.55	$9.44
54	$91.94	$95.37	$92.89	$92.50	$5.57	$5.77	$5.66	$5.60	$11.02	$17.08	$19.84	$11.97
55	$90.40	$93.77	$92.48	$91.09	$6.46	$6.69	$6.60	$6.51	$7.36	$16.51	$21.09	$8.65
66	$90.34	$93.37	$94.72	$91.01	$5.94	$6.16	$4.98	$5.91	$15.28	$25.77	$24.82	$16.66
68	$92.87	$94.62	$94.50	$93.28	$5.15	$5.23	$5.21	$5.17	$10.47	$14.02	$17.91	$11.37

Route	Cost per Revenue Hour				Cost per Revenue Mile				Cost per Passenger			
	Weekday	Saturday/Holiday	Sunday	Total	Weekday	Saturday/Holiday	Sunday	Total	Weekday	Saturday/Holiday	Sunday	Total
50X	$92.10	n/a	n/a	$92.10	$6.79	n/a	n/a	$6.79	$6.79	n/a	n/a	$6.79
15	$106.37	$104.99	n/a	$106.16	$3.18	$3.46	n/a	$3.22	$10.89	$13.80	n/a	$11.26
200	$21.31	n/a	n/a	$21.31	$0.59	n/a	n/a	$0.59	$24.63	n/a	n/a	$24.63
NTC	$114.52	n/a	n/a	$114.52	$3.18	n/a	n/a	$3.18	$23.05	n/a	n/a	$23.05
1	$80.09	$80.65	$80.49	$80.19	$10.44	$10.46	$10.44	$10.44	$6.51	$7.33	$13.36	$6.98
2	$80.75	$81.28	$81.09	$80.84	$9.02	$9.05	$9.04	$9.03	$10.57	$14.51	$19.04	$11.45
3	$83.94	$84.70	$84.60	$84.09	$5.58	$5.60	$5.59	$5.58	$17.47	$19.22	$22.50	$18.07
6	$82.39	$82.96	$82.80	$82.49	$6.73	$6.76	$6.74	$6.73	$11.40	$12.71	$22.24	$12.17
28	$87.88	$88.46	$88.21	$87.97	$3.95	$3.90	$3.89	$3.94	$164.17	$219.03	$148.10	$166.61
29	$88.65	$89.31	$89.09	$88.76	$3.73	$3.66	$3.65	$3.71	$95.90	$139.65	$187.85	$104.24
Total	$90.87	$92.72	$90.69	$91.08	$4.99	$5.21	$5.29	$5.04	$11.45	$15.86	$19.46	$12.28

Source: TransTrack

In summary, all routes meet the cost per revenue hour standard. Route 24/25/64, 40, 41, 47, 50, 50X, 5, 52, 53, 55, 1 ,2, and 6 do not meet the standard for cost per revenue mile. On certain days Routes 21, 54, and 66 do not meet the standard for cost per revenue mile. All routes meet the weekday cost per passenger standard, but Routes 31, 32, 42, 43, 50, 53, 55, 68, 3 and 6 do not meet the weekend cost per passenger standard.

3.2.2.4 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:

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

- Overall, the average amount of revenue per passenger was $1.90 for the VVTA network. The fixed and deviated route average revenue per passenger was $1.70 in FY2019.
    - On weekdays, the fixed and deviated routes (exclude NTC service) with higher than average revenue per passenger were Route 28 with $4.56, Route 29 with $4.34, and Route 24/25/64 with $2.76. The routes with lower than average revenue per passenger were Route 1, 3, and 6 with $0.64, and Route 2 with $0.63.
    - For Saturdays/holidays, the routes with the highest average fares were Route 28, Route 29, and Route 24/25/64 with $4.54, $4.39, and $2.90 respectively; these are the same routes as on weekdays. The routes with the lowest average fares were Routes 1, 2, 3, and 6 with $0.65.
    - On Sundays, the routes with the highest and lowest average fares were the same as the weekdays and Saturdays/holidays.

3.2.2.5 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 12.8 percent in FY2019. The systemwide farebox recovery was 13.8 percent on weekdays, 9.3 percent on Saturday and 7.1 percent on Sunday.
- Overall, the farebox recovery of fixed and deviated routes was 13.8 percent.
    - Weekdays, the fixed and deviated routes with the highest farebox recovery were NTC Commuter Service at 49.9 percent, followed by B-V Link service at 29.2 percent, Route 50 at 20.2 percent, and Route 31 same as Route 50X at 19.7 percent.
    - The routes with the lowest weekday farebox recovery rates were Route 28 at 2.8 percent, Route 3 at 3.7 percent, and Route 42 at 3.8 percent.

- Saturday/holidays, the routes with the highest farebox recovery were Route 31, Route 43, and Route 41. The routes with the lowest farebox recovery were Route 28, Route 29, and Route 3.
- Sunday, the routes with the highest farebox recovery were Route 43, Route 31, and Route 51. The routes with the lowest farebox recovery were Route 28, Route 42, and Route 3.

Table 3-3: Revenue Indicators

Route	Revenue per Passenger				Farebox Recovery			
	Weekday	Saturday/ Holiday	Sunday	Total	Weekday	Saturday/ Holiday	Sunday	Total
Fixed Routes and Deviated Routes								
21P/21W	2.76	2.71	2.63	2.75	7.1%	4.5%	2.3%	6.2%
22	2.69	2.85	2.85	2.72	12.8%	9.4%	9.4%	11.9%
23	2.61	2.85	2.78	2.65	11.2%	9.0%	6.6%	10.4%
24/25/64	2.76	2.90	2.90	2.78	15.3%	8.0%	5.5%	13.2%
31	1.33	1.38	1.35	1.33	19.7%	19.8%	13.1%	19.2%
32	1.33	1.36	1.39	1.33	16.2%	9.1%	9.4%	14.5%
33	1.33	1.38	1.34	1.34	12.8%	8.8%	8.6%	11.9%
40	1.33	1.42	1.38	1.34	7.4%	3.8%	6.6%	6.8%
41	1.32	1.42	1.34	1.33	16.1%	14.9%	11.4%	15.6%
42	1.33	1.36	1.39	1.33	3.8%	2.0%	1.6%	3.3%
43	1.36	1.37	1.39	1.36	17.5%	16.6%	14.0%	17.1%
47	1.35	1.44	1.37	1.36	4.9%	3.6%	2.2%	4.5%
50	1.35	1.38	1.38	1.35	20.2%	13.1%	10.0%	18.1%
51	1.33	1.34	1.37	1.33	19.4%	12.9%	12.6%	17.8%
52	1.33	1.37	1.33	1.33	14.1%	14.2%	11.2%	13.8%
53	1.32	1.43	1.37	1.33	14.8%	10.8%	8.3%	14.1%
54	1.32	1.35	1.40	1.33	12.0%	7.9%	7.1%	11.1%
55	1.33	1.39	1.38	1.33	18.0%	8.4%	6.5%	15.4%
66	1.31	1.37	1.41	1.32	8.6%	5.3%	5.7%	7.9%
68	1.32	1.36	1.39	1.33	12.7%	9.7%	7.8%	11.7%
50X	1.34	n/a	n/a	1.34	19.7%	n/a	n/a	19.7%
15	3.18	3.13	n/a	3.17	29.2%	22.7%	n/a	28.2%
200	3.11	n/a	n/a	3.11	12.6%	n/a	n/a	12.6%
NTC	11.50	n/a	n/a	11.50	49.9%	n/a	n/a	49.9%
1	0.64	0.65	0.64	0.64	9.8%	8.8%	4.8%	9.2%
2	0.63	0.65	0.65	0.63	6.0%	4.5%	3.4%	5.5%
3	0.64	0.65	0.65	0.64	3.7%	3.4%	2.9%	3.6%

Route	Revenue per Passenger				Farebox Recovery			
	Weekday	Saturday/ Holiday	Sunday	Total	Weekday	Saturday/ Holiday	Sunday	Total
6	0.64	0.65	0.64	0.64	5.6%	5.1%	2.9%	5.3%
28	4.56	4.54	4.59	4.56	2.8%	2.1%	3.1%	2.7%
29	4.34	4.39	4.59	4.36	4.5%	3.1%	2.4%	4.2%
Total	$1.74	$1.52	$1.38	$1.70	15.2%	9.6%	7.1%	13.8%

Source: TransTrack

In summary, all the routes meet the standard of revenue per passenger. In terms of farebox recovery, most of routes meet the standard. All service types of county route 29, deviated route 47, commuter routes, and local routes 42, 1, 2, 3, and 6 fail to meet the standards. Weekend services of route 21, 40, and 55 do not meet the standards. County route 28's weekday and Saturday services are below the standard.

3.3 Direct Access Service

As a demand response service, Direct Access is evaluated using the same performance indicators as the fixed route services but measured against under different numerical guidelines. Therefore, the results of fixed route services and demand response services are not comparable.

Table 3-4 presents the results of seven productivity and financial performance indicators of Direct Access service. This table shows that Direct Access does perform well in regard to the guidelines.

Table 3-4: Direct Access, Performance Indicators

Direct Access	Weekdays	Saturday/Holiday	Sunday	Total
Passengers per Hour	2.39	2.36	2.05	2.37
Passengers per Mile	0.15	0.14	0.13	0.15
Cost per Hour	$94.18	$96.31	$96.07	$94.44
Cost per Mile	$5.88	$5.88	$6.04	$5.89
Cost per Passenger	$39.47	$40.73	$46.77	$39.89
Revenue per Passenger	$3.32	$3.10	$3.19	$3.30
Farebox Recovery	8.4%	7.6%	6.8%	8.3%

Source: VVTA

4 Operations Plan

VVTA provides transit services throughout the High Desert area of San Bernardino County. It is required to develop a Short-Range Transit Plan (SRTP) every two years, that cover a five-year period, with an operations plan that is based on historic operational data and future service demand and forecasted agency growth. This section of the SRTP presents VVTA's five-year Operations Plan from FY 2020/2021 to FY 2024/2025. This operations plan is based on a modification of the implementation plan from the last Comprehensive Operational Analysis (COA).

4.1 Fiscal Year 2020/2021

The budget for Fiscal Year 2020/2021 has been greatly affected by the global pandemic caused by COVID-19. All VVTA services have experienced a precipitous drop in ridership due to the "Stay-at-home" order issued by the State of California. Because many routes serve essential workers they continued operating, albeit on a modified schedule. This Fiscal Year will be a transitional year during which services will be restored to pre-COVID-19 levels. Between the start of the Fiscal Year, which is July 1, till August, VVTA will still operate fixed route services using its Saturday schedule, with a return to the regular pre-COVID-19 service levels starting in August. During this fiscal year, a fare increase should be implemented in order to allow VVTA to meet farebox recovery targets.

4.1 Fiscal Year 2021/2022

It is projected that in Fiscal Year 2021/2022 ridership will not have fully rebounded to pre-COVID-19 levels; therefore, no service changes are expected to occur. The Short-Range Transit Plan assumes service levels that are consistent with regular pre-COVID-19 and Fiscal Years 2020/2021 service levels. Service may be restructured based on moving the Victorville transfer point from Costco at 7th Street and Lorene Drive to the Victor Valley Transportation Center in Old Town Victorville.

4.2 Fiscal Year 2022/2023

In this fiscal year, it is suggested that the Route 50 should provide more service by reducing its headway to 30 minutes. This is a delayed implementation of recommendations from the previous Comprehensive Operational Analysis (COA). This route connects Victorville to major destinations such as Victor Valley College and Hesperia Post Office. This is the most productive route in the VVTA system that currently does not provide service every 30 minutes on weekdays.

4.3 Fiscal Year 2023/2024

In this fiscal year, it is suggested that the Route 32 service be improved to every 30 minutes during service hours. This change was proposed in the previous COA. Route 32 currently has relatively high passenger per revenue hours and it is the only route that connects the Southern California Logistic Airport to Victorville. Reducing service headways could help reduce crowding on this route.

4.4 Fiscal Year 2024/2025

In this fiscal year, it is suggested that all fixed routes and the Barstow services extend their span of service by starting service one hour earlier and ending service an hour later than their current service spans, and to do so every day. The Direct Access service span will be required to have this adjusted span as well. This change is suggested to meet the needs of worker shifts and evening classes at Victor Valley College and Barstow Community College. During this fiscal year, a fare increase should be implemented in order to allow VVTA to meet farebox recovery targets.

4.5 Items to Be Further Evaluated During the Upcoming COA

VVTA conducts a COA every five years. As part of the COA an extensive public outreach campaign is conducted, and services recommendations are made based on outreach, issues highlighted from the analyses conducted for the COA, and the analyses conducted as part of this SRTP. Issues identified as part of this SRTP to be evaluated in the upcoming COA are listed below:

- System design, specifically all fixed routes and Barstow routes
    - Allow transfers to no longer be coordinated at multiple locations to improve on-time performance
    - Redesign the system to provide more direct trips and reduce transfers
    - Consider implementing microtransit replacing circulator routes that are not meeting service guidelines or to improve service coverage in less dense areas
    - Modify individual routes to improve productivity and better serve generators such as Victor Valley College
- Add Sunday service and/or early AM service on BV Link services
- Identify routes that will be candidates for more frequent service
- Continue monitoring routes to identify opportunities to serve new areas or to adjust current service levels
- Operational system adjustments will be evaluated after Costco Transfer Center is moved to the Victor Valley Transportation Center on D St in Victorville.
- In March 2020, Virgin Trains completed land acquisition for Apple Valley station for its high-speed rail project connecting the High Desert area with Las Vegas. The interaction with regional rail will affect system operations.

5 Capital Plan

This section discusses capital investments planned by VVTA in the next five years. These investments include vehicle upgrades and procurement, facility maintenance and expansion, and other capital items.

5.1 Buses and Service Vehicles

Table 5-1 presents a summary list of the number and type of vehicles to be replaced over the next five years along with vehicle costs. With few exceptions, it is assumed that current vehicles will be replaced with similar vehicles. The exceptions include replacing county and circulator route cutaway buses with smaller class H heavy duty buses. It is anticipated that the investment for vehicle acquisition will decrease from FY 2020/2021 to FY 2023/2024. No capital investments will be made for vehicle acquisition in FY 2021/2022. However, a major capital investment for vehicles is forecasted to be needed in FY 2024/2025 as the fleets approach the end of their useful lives. SBCTA recently completed a Zero Emissions Bus (ZEB) Study for the county which presented a ZEB acquisition plan. The plan presented below does supersede the ZEB plan as it reflects up to date acquisitions over the next five years.

Table 5-1: Five-Year Vehicle Purchase Plan

Vehicle Type	FY2020-2021	FY2021-2022	FY2022-2023	FY2023-2024	FY2024-2025
Paratransit Vehicle Replacement	7	6	6	6	6
Cost	$910,000	$803,400	$827,502	$852,327	$877,897
Regional Bus Replacement Class H 40-foot CNG	3	1	4	4	4
Cost	$1,710,500	$665,055	$2,740,025	$2,822,225	$2,906,892
Regional Bus Replacement Class H 40-foot HFC	3	0	0	0	0
Cost	$3,600,000	$0	$0	$0	$0
Regional Bus Replacement Class H-32-foot CNG	1	1	1	1	1
Cost	$559,500	$559,500	$576,285	$593,574	$611,381
Regional Bus Expansion Class H 40-foot CNG	0	0	2	2	0
Cost	$0	$0	$1,370,012	$1,411,113	$0
Service Vehicles	6	0	5	5	5
Cost	$210,000	$0	$185,658	$191,227	$196,964
Regional Bus Replacement BEB	Match from previous	0	0	0	0
Cost	$637,875	$0	$0	$0	$0
Golf Cart	0	0	1	0	0
Cost	$0	$0	$10,609	$0	$0
Total Vehicle Number	**20**	**8**	**19**	**18**	**16**
Total Cost	**$7,627,875**	**$2,027,955**	**$5,710,091**	**$5,870,466**	**$4,593,134**

Source: VVTA, AECOM

5.2 Facilities

Table 5-2 presents the detailed list of proposed facility projects and their estimated costs over the next five years. The cost forecast over the next five years is expected to trend downward except for a slight increase in FY 2021/2022. VVTA will continue the leases for the Hesperia and Barstow maintenance facilities. Additional upgrades for these two facilities will also be invested in preparation for VVTA's zero-emission bus fleet. The Hesperia Yard expansion will enable VVTA to accommodate additional vehicles for service expansion on existing services such as Route 50 and 32.

Table 5-2: Facility Projects

Capital Project	FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Barstow New Bus Facility Lease	$641,450	$637,550	$633,650	$648,025	$622,150
Hesperia Bus Facility lease	$1,538,550	$1,522,425	$1,519,425	$1,519,800	$1,523,300
Hesperia Yard Expansion	$0	$500,000	$0	$0	$0
BEB Charger Upgrades	$152,191	$0	$0	$0	$0
Capital Cost Total	**$2,332,191**	**$2,659,975**	**$2,153,075**	**$2,167,825**	**$2,145,450**

Source: VVTA, AECOM

5.3 Other Capital Items

Besides fleet and facility investments, other capital projects are listed in Table 5-3. These projects include FTA operating assistance, facility projects, wheelchairs for operator training, the upcoming COA, and safety and security costs.

Table 5-3: Other Capital Projects

Project	FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating Assistance – Fixed Routes	$5,670,000	$3,500,000	$5,577,629	$11,774,228	$11,735,885
Operating Assistance – County Routes	$600,000	$600,000	$600,000	$1,327,114	$1,365,457
Operating Assistance – Barstow Routes	$744,240	$679,048	$0	$0	$0
Operating Assistance – Intercity Routes	$300,000	$490,000	$418,625	$0	$0
Comprehensive Operational Analysis	$0	$0	$250,000	$0	$0
Garage and Shop Equipment	$0	$70,000	$70,000	$70,000	$70,000
Path of Travel Improvements	$0	$70,000	$0	$70,000	$0
Safety Shields	$500,000	$0	$0	$0	$0
Shelter and accessibility improvements	$0	$200,000	$200,000	$200,000	$200,000

Project	FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Victor Valley Transportation Center Lease	$0	$12,000	$12,000	$12,000	$12,000
Security Set Aside (1%)	$0	$11,934	$12,173	$12,416	$12,664
Wheelchair types (for training)	$10,089	$0	$0	$0	$0
Total	**$7,824,329**	**$5,632,982**	**$7,140,427**	**$13,465,758**	**$13,396,006**

Source: VVTA, AECOM

5.4 Future Capital Needs

The future capital needs of VVTA beyond the five years of this SRTP are summarized below and will be further analyzed as part of VVTA's next COA:

- VVTA needs to be prepared for vehicle replacement and further system expansion beyond the next five years. In order to meet the need of service expansion including headway reduction on some existing routes and introduction of innovative transit services such as microtransit, and fleet upgrades, capital needs on vehicle replacement and other infrastructure are to be expected.
- VVTA needs to prepare for the 2040 zero-emission bus (ZEB) mandate. In 2018, the California Air Resources Board approved the Innovation Clean Transit regulation (ICT) which sets a statewide goal for public transit agencies to gradually transition to 100% ZEB fleets by 2040. While VVTA has begun the implementation of Battery Electric buses (BEBs) into its fleet, the agency must be flexible as it moves towards meeting the state-wide goal by 2040 as BEBs do not have the capacity to operate on many of VVTA's routes. In addition, to continue purchases of BEBs and BEB infrastructure, capital investments need to be made in energy storage systems as well as investments in Hydrogen Fuel Cell Bus Purchases and infrastructure for ZEBs including electrolyzers. VVTA will continue to seek out competitive funding opportunities to aid in funding of these capital projects.

6 Five-Year Financial Plan

This section discusses the VVTA's financial plan for the five years of this SRTP. Five-year projections of total agency cost and revenue are also discussed. In addition, detailed cost and revenue item projections of individual services are included. This financial plan reflects revenue projections related to COVID-19 impacts to funding sources.

6.1 Revenue Sources

VVTA 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 VVTA and describes some of the limitations of these sources. Both SBCTA and VVTA have provided estimates for the expected level of funding for VVTA through 2026 for the various funding sources that VVTA utilizes. Funding sources include federal, state and local funding programs. Each category is inventoried in this section along with a description of what each source can and cannot be used for.

6.1.1 Federal Transit Administration Grant Programs

The Federal Transit Administration (FTA) has a number of grant programs that public transit agencies utilize to support operations and capital needs. Most of these programs are authorized by the Fixing America's Surface Transportation Act (FAST Act) enacted in 2015. Reauthorization of the FAST Act, which expires in September 2020, will impact funding levels and rules for each program. The projection of Federal revenues in section 6.2 will be based on a conservative assumption that section 5307, 5311, and 5339 are projected to continue at the pre-COVID-19 level. These programs and funding sources have been stable since the Intermodal Surface Transportation Efficiency Act (ISTEA) was passed in 1991. It is funded by Highway Trust Fund (HTF) established in 1956, specifically through its Transit Account established in 1982. Due to the value erosion of HTF's primary revenue source – gasoline tax, additional funds need to be transferred to the HTF from the FAST Act to fill the gap between revenue and costs. Assuming the HTF and FAST Act transfers will be able to sustain future spending, therefore revenues and the numbers are assumed to stay the same. Below is a description of programs and their eligibility that VVTA utilizes.

Coronavirus Aid, Relief, and Economic Security (CARES) Act – FTA allocated $25 billion to recipients of urbanized area and rural area formula funds such as section 5307 and 5311. Under the Act, $22.7 billion is allocated to urban areas, and $2.2 billion to rural areas. Funding will not require a local match, and will be available to support capital, operating, and other expenses generally eligible under those programs to prevent, prepare for, and respond to COVID-19.

Operating expenses incurred beginning on January 20, 2020 for all rural and urban recipients, even those in large urban areas, are also eligible, including operating expenses to maintain transit services as well as paying for administrative leave for transit personnel due to reduced operations during an emergency. The FTA allocated a total $27.7 million to VVTA as part of the CARES Act, through both Section 5307 and Section 5311 allocations, that can be used until it is exhausted.

While this funding source is available, the financial plan does not assume any additional allocation of new revenues beyond FY 2020/2021 as the intention of this source is for COVID-19 related costs or revenue losses incurred by the transit agencies.

Section 5307 Urbanized Program – Section 5307 provides transit capital and operating assistance in urbanized areas and is used for transportation planning related activities. This is a formula-based program which uses a combination of bus revenue vehicle miles, bus passenger miles, fixed guideway revenue vehicle miles, and fixed guideway route miles as well as population and population density in the urbanized area. This program requires a local match of 20% for capital purposes but can be as low as 10% for ADA, the Clean Air Act Amendments, and certain bicycle accommodation related capital purchases. FTA allows revenue vehicles equipped with ADA and clean air facilities to be procured at an 85% federal and 15% non-federal blended rate. For using these funds for operations, this program typically requires a 50% match. Funding projections are assumed to remain level, which is a conservative estimate. VVTA uses Section 5307 to support its capital program and for FTA support to operations. In each year, any unused Section 5307 funds are carried over to the next fiscal year.

Section 5339 Bus and Bus Facilities Capital Assistance – Section 5339 is a formula grant program and a 20% local match is required. Beyond the formula allocation, there are competitive grants through this program that are based on asset age and can be used for the deployment of low emission vehicles. The competitive grant program provides opportunities to increase funding for vehicles and facilities if the criteria of the competitive programs within this funding program are met. The competitive grants require staff resources to apply for and administer the grant. Similar to the previously noted programs, funding projections are assumed to remain constant. VVTA is using Section 5339 funding for new bus purchases and facility projects. In each year, any unused Section 5339 funds are carried over to the next fiscal year.

Section 5311 Rural Area Program – VVTA is using 5311 funding to support county bus route operations, as well as the operations of certain segments of the regular fixed route services in rural areas. Section 5311 may also be used for capital procurement without any exclusions. This is a formula-based funding program that is based on service area size (land area and population), revenue vehicle miles, and low-income population within the rural service area. This program requires a 50% match if being used for rural area operations or 20% if being used for either capital programs or ADA non-fixed route services. No growth in funding levels for Section 5311 are assumed in this analysis.

Congestion Mitigation and Air Quality (CMAQ) Program –CMAQ program is a federal program designed to fund projects that help improve air quality. Mass transit investments qualify for CMAQ funding, which VVTA is using for the intercity services that connect Barstow and Needles to the Victor Valley. It is uncertain whether there will be CMAQ money available for additional demonstration projects. VVTA will use CMAQ primarily to fund capital projects. Funding projections of CMAQ are based on as the CMAQ plan provided by SBCTA and VVTA. In each year, any unused Section 5307 funds are carried over to the next fiscal year.

6.1.2 California State Funding Programs

The State of California has a number of programs that provide assistance to meet local transit agencies' operations and capital needs. The programs listed in this section secure their funds through sales tax, diesel tax, vehicle registration fees, auctions of emission credits, and bond sales.

Senate Bill 1 (SB1) – State of Good Repair (SGR) Program – SB1, the Road Repair and Accountability Act of 2017, provides an estimated $52.5 billion statewide funding over the following decade. The bill provides a comprehensive and multi-modal funding package with revenue set asides for highways, local streets and roads, goods movement projects, active transportation projects, and transit projects and services through a variety of formula and competitive programs managed by numerous State departments and agencies.

The SGR provides approximately $105 million per year in State funding for capital assistance to rehabilitate and modernize California's existing local transit systems, with a focus on upgrading, repairing, and maintaining transit infrastructure in a State of Good Repair. The SGR Program includes an inflation adjustment. The State Controller's Office (SCO) distributes these funds using the State Transit Assistance Fund (STA) distribution formula. SBCTA provided projections for SGR/SB1 funds that assume a two percent growth per year. VVTA uses SGR as match to replace obsolete vehicles in its fleet, maintain its infrastructure, and support the agency's electrification efforts. This fund can serve as a local match for capital projects. VVTA uses SGR as match to replace obsolete vehicles in its fleet, maintain its infrastructure, and support the agency's electrification efforts. This fund can serve as a local match for capital projects.

Assembly Bill 2766 (AB2766) – AB 2766 imposed a $4.00 fee to motor vehicle registrations to provide funding for projects that meet California Clean Air Act mandates. VVTA uses AB2766 funding to support fixed route operations. For the purpose of this analysis, it is assumed that the funding levels will remain the same for the next five years.

Low Carbon Transit Operations Program (LCTOP) – This program is administered by the California Department of Transportation (CalTrans) in cooperation with the California Air Resources Board (CARB) to provide capital and operating assistance for programs that reduce greenhouse gas emissions. For agencies that serve disadvantaged communities, 50% of LCTOP must be used on projects or operations that serve disadvantaged passengers. This program is funded from 5% of the proceeds from cap-and-trade auctions. LCTOP funding projections provided by SBCTA estimate COVID-19 impacts and recovery based on the latest information available in April 2020. LCTOP is a fairly new program, and since it's based on auction proceeds, it has been unstable and can be difficult to estimate.

Low Carbon Fuel Standard (LCFS) – Under the Assembly Bill 32 Scoping Plan, the CARB identified the Low Carbon Fuel Standard (LCFS) as one of the action measures to encourage cleaner low-carbon transportation fuels usage and the production of those fuels, therefore, reduce GHG emissions in California. The LCFS was approved in 2009 and started implementation on January 1, 2011. The LCFS provides a market system where users and producers of clean energy earn

credits through their emission reductions. Those credits can then be used to comply with CARB's carbon intensity reduction requirements and also be traded/sold to regulated entities, such as importers, producers, and refiners of petroleum fuels providing funding for VVTA. VVTA will be using LCFS for its capital investments such as alternative fuel vehicle procurement and related capital programs.

Transportation Development Act (TDA) – The TDA provides two major sources of funding for public transportation: the Local Transportation Fund (LTF) and State Transit Assistance (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 used 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. LTF funds that are surplus to transit needs can be returned to the local jurisdictions in their service area for road maintenance purposes, providing the transit agency can demonstrate there are no unmet transit needs than can reasonably met. VVTA currently returns LTF for local streets and roads maintenance in accordance with the TDA unmet needs process. VVTA's jurisdictions fall under this category. In Victor Valley, LTF is used to support operations and capital needs for VVTA, while STA is solely used to support VVTA's capital program. LTF provides funding for operations, maintenance, administration, yard operations, and the capital program. In San Bernardino County, as transit services have grown, the trend is that transit agencies, VVTA included, have been using a higher percent of LTF for transit service and that less LTF is made available for streets, roadways, and highways. SBCTA has been working with JPA partners that have been receiving LTF for street and highway funding to prepare for the future where LTF is no longer available for street and highway projects.

2% of the LTF funds available for apportionment are reserved for Article 3. Article 3 funds are made available to transit operators for projects that improve access to transit stops for pedestrians and persons with disabilities, and to eligible entities for bicycle and pedestrian facilities. These funds are allocated through a call for projects by SBCTA. . The projects that VVTA funds through Article 3 include path of travel improvements such as bicycle and pedestrian access to bus services.

COVID-19 is anticipated to impact revenues of both TDA programs, STA and LTF. Initial estimates showed revenue reductions could be as high as 13.1% in sales tax revenue for LTF, and could include an additional 5% for a small business tax deferral that was enacted. Additionally, the Governor's May 2020 budget revision estimated a nearly 30% reduction in STA for FY 2020/2021. While the impacts are still uncertain, SBCTA continues to monitor revenue collections and make adjustments as necessary. The estimates provided by SBCTA are based on the best available data as of April 2020.

6.1.3 Local Funding Sources

The sales tax-based Measure I and passenger fare revenue are two additional funding sources VVTA uses for financial support.

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% voting to extend the measure through 2040. As a Consolidated Transportation Services Agency (CTSA), VVTA uses Measure I funding to subsidize fares for Direct Access services and support elderly, handicapped and disabled population under CTSA programs such as the brokerage program and travel reimbursement program (TRIP). Similar to other sales tax generated revenues, Measure I revenues are expected to fluctuate in response to COVID-19 impacts and recovery.

Passenger Fares - Passenger fares are the directly generated revenues that VVTA collects from boarding passengers and prepaid fare media. Passenger fares are tied directly to ridership in the VVTA system. Passenger fares provide support to the operation of all VVTA buses.

6.2 Five-Year Projections

This section discusses agency-wide revenue and cost projections over the next five years. Each service program's operating costs and revenues are individually evaluated. All capital costs and revenues are summarized in the last subsection.

6.2.1 Total Annual Revenues Allocated to VVTA

Table 6-1 presents total revenue allocated to VVTA which consists of federal programs such as Section 5307, Section 5311, Section 5339, one-time payment CARES Act in FY2020/2021, and CMAQ funds; state programs such as AB2766, SGR, LCFS, LCTOP, STA, and LTF; and local funding such as Measure I and farebox revenue. Allocation of Section 5307, 5311, 5339, LCFS, and AB2766 funds will be assumed to stay the same over the next five years. Farebox, STA, and LTF revenues are expected to increase due to growth and inflation. Other revenue sources will reflect the funding gap between the consistent revenue sources and expenditure needs in respective fiscal years. The total revenues in Table 6-1 are not expected to match the annual cost presented in Table 6-2 as they represent the agency's annual allocations.

Table 6-1: Five-Year Annual Projected Revenues Allocated to VVTA

Funding Program	FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Section 5307	$8,734,228	$8,734,228	$8,734,228	$8,734,228	$8,734,228
Section 5311	$710,112	$710,112	$710,112	$710,112	$710,112
Section 5339	$1,130,123	$1,130,123	$1,130,123	$1,130,123	$1,130,123
CMAQ	$2,009,000	$3,523,000	$2,500,000	$2,350,000	$2,500,000
SGR	$697,379	$664,186	$677,157	$690,384	$703,870
LCTOP	$907,875	$716,313	$839,654	$872,245	$906,974
STA Operator	$207,734	$247,960	$256,143	$264,083	$272,534
LCFS	$600,000	$600,000	$600,000	$600,000	$600,000
LTF	$17,323,554	$18,272,263	$19,107,454	$19,732,982	$20,522,378
AB2766	$250,000	$250,000	$250,000	$250,000	$250,000
Measure I	$1,043,800	$1,261,201	$1,223,531	$1,271,022	$1,321,628
Fare Revenue	$2,173,756	$2,705,195	$2,970,915	$3,117,060	$3,576,581
Other (Interest, misc. & other capital)	$726,532	$520,600	$541,572	$564,012	$588,023
Total Revenue	**$36,514,093**	**$39,335,181**	**$39,540,889**	**$40,286,251**	**$41,816,451**

Source: VVTA, AECOM

6.2.2 Total Costs

Table 6-2 presents total operating costs by year for each service program as well as the capital costs by category. The total annual cost is expected to increase 23% to $49,873,602 over the next five years. AECOM and VVTA staff worked together to project annual cost increase factors.

Consistent with previous trends, the fixed route service will take up the majority, more than 40%, of the operating cost, followed by demand response service. The fixed route service is projected to have a significant increase in operating cost from FY 2021/2022 to FY 2022/2023, compared to other services primarily due to the new operations and maintenance contract. This increase winds down after FY 2022/2023; however, the operating cost increase for fixed route service still slightly exceeds other services.

Vehicle capital costs and facility capital cost will only constitute 40% – 53% of the total capital cost over the next five years as vehicles are replaced. The majority of capital investments will be made to other capital items including operating assistance to VVTA's route services, COA, and other improvements. Capital investments will decrease from FY 2020/2021 to FY 2021/2022 and then increase from FY 2021/2022 to FY 2023/2024, followed by another decrease from FY 2023/2024 to FY 2024/2025.

Table 6-2: Total Projected Annual Costs

Program	FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating					
Demand Response	$4,464,775	$4,590,694	$4,757,184	$4,929,931	$5,109,173
Fixed Route	$10,555,446	$11,224,871	$13,590,220	$14,721,308	$15,168,800
County	$1,711,353	$1,791,064	$1,842,696	$1,895,877	$1,950,653
Barstow	$2,857,020	$2,954,882	$3,045,442	$3,138,833	$3,354,986
Intercity	$724,095	$744,877	$766,246	$788,256	$810,926
Commuter	$626,984	$653,474	$672,178	$691,444	$711,287
Vanpool	$1,368,482	$1,368,481	$1,655,781	$1,685,781	$1,715,781
CTSA	$766,608	$787,277	$798,237	$809,495	$821,060
Facilities	$200,795	$206,816	$212,919	$219,425	$226,363
Administration	$2,868,057	$2,955,056	$3,044,802	$3,137,384	$3,232,892
Total Operating Cost	**$26,143,615**	**$27,277,492**	**$30,385,705**	**$32,017,732**	**$33,101,922**
Capital					
Vehicle Capital	$7,627,875	$2,027,955	$5,710,091	$5,870,466	$4,593,134
Facility Capital	$5,082,191	$2,659,975	$2,153,075	$2,167,825	$2,145,450
Other Capital	$7,824,329	$5,632,982	$7,140,427	$13,465,758	$13,396,006
Total Capital Cost	**$20,534,395**	**$10,320,912**	**$15,003,592**	**$21,504,049**	**$20,134,591**
Total Annual Cost	**$46,678,010**	**$37,598,404**	**$45,389,297**	**$53,521,782**	**$53,236,513**

Source: VVTA, AECOM

6.2.3 Demand Response

As indicated in Table 6-3, the demand response operating cost is anticipated to grow by 14.4% to $5,109,173 over the next five years. LTF, constituting over 70% of the total operating revenue, will be the primary funding source for demand response services. Farebox recovery is projected to be below 10 percent until FY 2024/2025 due to the impacts of COVID-19. By incorporating Measure I revenue into the fare revenue calculation, farebox revenue will exceed 20 percent throughout the five-year period of this plan.

Table 6-3: Projected Demand Response Operating Costs and Revenues

		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	Direct Access	$2,811,297	$2,924,474	$3,042,331	$3,164,937	$3,292,484
	Subscription	$1,073,359	$1,049,496	$1,080,981	$1,113,410	$1,146,813
	Fuel Cost	$400,000	$412,000	$424,360	$437,091	$450,204
	Certification Contractor	$65,000	$85,000	$85,000	$85,000	$85,000
	Other Operating Costs	$115,119	$119,724	$124,513	$129,493	$134,673
Total Cost		**$4,464,775**	**$4,590,694**	**$4,757,184**	**$4,929,931**	**$5,109,173**
Revenue	Direct Access Fare Revenue	$190,104	$237,630	$261,393	$274,463	$315,632
	Subscription Fare Revenue	$118,968	$148,710	$163,581	$171,760	$197,524
	Measure I	$656,200	$792,872	$769,190	$799,046	$830,861
	LTF	$3,499,503	$3,411,482	$3,563,020	$3,684,662	$3,765,156
Total Revenue		**$4,464,775**	**$4,590,694**	**$4,757,184**	**$4,929,931**	**$5,109,173**

Source: VVTA, AECOM

6.2.4 Fixed Route

As described in Table 6-4, the total operating cost will increase over 43% to $15,168,800 through the next five years. Approximately 71% - 83% of the operating revenue comes from federal funds, while local farebox revenue covers 9% - 10% and state funding covers the rest. The operating assistance capital projects serve as a credit towards operating cost thereby reducing the total operating cost when calculating farebox recovery. As a result, the farebox recovery ratio will range between 15% - 44% excluding all operating assistances.

Table 6-4: Projected Fixed Route Operating Costs and Revenues

Program		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	Fixed Routes	$9,223,075	$9,847,882	$12,166,891	$13,249,848	$13,647,343
	Fuel Cost	$850,000	$875,500	$901,765	$928,818	$956,682
	Fuel Contingency	$0	$0	$0	$0	$0
	BEB Charge	$100,000	$100,000	$100,000	$100,000	$100,000
	Security	$251,986	$264,585	$277,815	$291,705	$306,291
	Other Operating Costs	$130,385	$136,904	$143,749	$150,937	$158,484
Total Cost		**$10,555,446**	**$11,224,871**	**$13,590,220**	**$14,721,308**	**$15,168,800**
Revenue	Operating Assistance	$5,670,000	$3,500,000	$5,577,629	$11,774,228	$11,735,885
	Fare Revenue	$901,771	$1,127,214	$1,239,935	$1,301,932	$1,497,222
	FTA 5311	$92,751	$92,751	$92,751	$92,751	$92,751
	AB2766	$233,000	$233,000	$233,000	$233,000	$233,000
	LTF	$3,657,924	$6,271,906	$6,446,905	$1,319,397	$1,609,942
Total Revenue		**$10,555,446**	**$11,224,871**	**$13,590,220**	**$14,721,308**	**$15,168,800**

Source: VVTA, AECOM

6.2.5 County

Table 6-5 presents the total operating cost and revenue for county service over the next five years. The operating cost for county service is expected to grow 14% to $1,950,653 within five years. About 25% - 37% of the operating revenues will be solicited from FTA programs. After excluding the operating assistances, including FTA 5307, and LTF, from operating expenses, the adjusted farebox revenue of the county lines is expected to cover about 16% - 52% of the operating cost and LTF funding will be expected to cover the rest.

Table 6-5: Projected County Service Operating Costs and Revenues

		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	County Routes	$1,558,180	$1,633,514	$1,682,519	$1,732,995	$1,784,985
	Fuel Cost	$85,000	$87,550	$90,177	$92,882	$95,668
	Security	$0	$0	$0	$0	$0
	Other Operating Costs	$68,173	$70,000	$70,000	$70,000	$70,000
Total Cost		**$1,711,353**	**$1,791,064**	**$1,842,696**	**$1,895,877**	**$1,950,653**
Revenue	Operating Assistance	$600,000	$600,000	$600,000	$1,327,114	$1,365,457
	Fare Revenue	$181,924	$227,405	$250,146	$262,653	$302,051
	FTA 5311	$278,252	$278,252	$278,252	$278,252	$278,252
	LTF	$651,177	$685,407	$714,298	$27,858	$4,893
Total Revenue		**$1,711,353**	**$1,791,064**	**$1,842,696**	**$1,895,877**	**$1,950,653**

Source: VVTA, AECOM

6.2.6 Barstow

Table 6-6 presents the total operating cost and revenue for Barstow service over the next five years. The operating cost of Barstow service is expected to grow 17% to $3,354,986 in five years. Federal funds can provide revenue to cover 38% - 54% of the operating cost. The state funding and local revenues such as farebox revenue, and Measure I will fund the rest. When removing the facility costs from the Barstow services, and considering the CARES Act subsidy reduction, the farebox recovery for Barstow ranges between 19 percent and 23 percent during the five-year SRTP timeline amongst all of Barstow area services.

Table 6-6: Projected Barstow Operating Costs and Revenues

		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	Barstow Fixed Routes	$1,583,908	$1,681,710	$1,732,162	$1,784,126	$1,957,492
	Barstow County Routes	$647,516	$666,972	$686,981	$707,590	$728,818
	Barstow Direct Access	$277,618	$274,195	$285,245	$296,741	$308,700
	Special Event service	$1,341	$1,341	$1,341	$1,341	$1,341
	Fuel Cost	$229,770	$236,663	$243,763	$251,076	$258,608
	Facilities	$79,971	$65,000	$66,950	$68,959	$71,027
	Insurance	$0	$0	$0	$0	$0
	Security	$0	$0	$0	$0	$0
	Certification Contractor	$9,000	$9,000	$9,000	$9,000	$9,000
	Marketing	$0	$0	$0	$0	$0
	Drivers Appreciation	$0	$0	$0	$0	$0
	Other Operating Costs	$27,896	$20,000	$20,000	$20,000	$20,000
Total Cost		**$2,857,020**	**$2,954,882**	**$3,045,442**	**$3,138,833**	**$3,354,986**
Revenue	Operating Assistance	$744,240	$679,048	$0	$0	$0
	Passenger Fares	$179,153	$223,941	$246,335	$258,652	$297,450
	CNG/LNG Revenue	$280,000	$299,600	$320,572	$343,012	$367,023
	FTA 5311	$339,110	$339,110	$339,110	$339,110	$339,110
	Measure I	$163,600	$197,674	$191,770	$199,214	$207,145
	LCTOP (New/Expanded Service)	$250,000	$250,000	$250,000	$250,000	$250,000
	AB2766	$17,000	$17,000	$17,000	$17,000	$17,000
	LTF	$883,917	$948,508	$1,680,655	$1,731,845	$1,877,258
Total Revenue		**$2,857,020**	**$2,954,882**	**$3,045,442**	**$3,138,833**	**$3,354,986**

Source: VVTA, AECOM

6.2.7 Intercity

Table 6-7 presents the total operating cost and revenue for intercity services including B-V Link and Needles Link over the next five years. The operating cost of intercity service is expected to grow 12% to $810,926 in five years. The operating cost will be covered by LTF fund, CARES Act and local farebox revenue. Considering the subsidy reduction from the operating assistance from CARES Act, farebox recovery is projected to range between 28 percent and 75 percent throughout the SRTP time period.

Table 6-7: Projected Intercity Operating Costs and Revenues

		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	Intercity Operating Cost	$579,685	$597,112	$615,026	$633,476	$652,481
	Fuel Cost	$111,830	$115,185	$118,640	$122,200	$125,866
	Other Operating Cost	$32,580	$32,580	$32,580	$32,580	$32,580
Total Cost		**$724,095**	**$744,877**	**$766,246**	**$788,256**	**$810,926**
Revenue	Operating Assistance	$300,000	$490,000	$418,625	$0	$0
	Fare Revenue	$153,836	$192,295	$211,525	$222,101	$255,416
	LTF	$270,259	$62,582	$136,096	$566,155	$555,510
Total Revenue		**$724,095**	**$744,877**	**$766,246**	**$788,256**	**$810,926**

Source: VVTA, AECOM

6.2.8 Commuter

Table 6-8 presents the total operating cost and revenue for the NTC commuter service over the next five years. The commuter service operating cost is expected to grow 13.4% to $711,287 in FY 2045/2025. It will be funded through LTF fund, farebox revenue, and Fort Irwin shuttle fee. Farebox recovery is forecasted to range between 71 percent and 100 percent throughout the SRTP time period.

Table 6-8: Projected Commuter Operating Costs and Revenues

		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	Commuter Operating Cost	$469,507	$483,559	$498,066	$513,008	$528,398
	Fuel Cost	$135,840	$139,915	$144,113	$148,436	$152,889
	Other Operating Cost	$21,637	$30,000	$30,000	$30,000	$30,000
Total Cost		**$626,984**	**$653,474**	**$672,178**	**$691,444**	**$711,287**
Revenue	Fare Revenue	$400,000	$500,000	$550,000	$577,500	$663,287
	Ft Irwin On-Base Shuttle Fee	$48,000	$48,000	$48,000	$48,000	$48,000
	LTF	$178,984	$105,474	$74,178	$65,944	$0
Total Revenue		**$626,984**	**$653,474**	**$672,178**	**$691,444**	**$711,287**

Source: VVTA, AECOM

6.2.9 Vanpool

Table 6-9 presents the total operating cost and revenue for vanpool service over the next five years. The operating cost of vanpool service is expected to grow about 25% to $1,715,781 in five years. It will be fully covered by LTF funds.

Table 6-9: Projected Vanpool Operating Costs and Revenues

		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	Vanpool Lease Cost	$1,162,501	$1,162,500	$1,440,000	$1,470,000	$1,500,000
	Web based reporting system	$11,000	$11,000	$20,000	$20,000	$20,000
	Marketing	$30,000	$30,000	$30,000	$30,000	$30,000
	Legal	$200	$200	$1,000	$1,000	$1,000
	Development/Management	$8,000	$8,000	$8,000	$8,000	$8,000
	Clerical/Technical Support	$156,781	$156,781	$156,781	$156,781	$156,781
Total Cost		**$1,368,482**	**$1,368,481**	**$1,655,781**	**$1,685,781**	**$1,715,781**
Revenue	**LTF**	**$1,368,482**	**$1,368,481**	**$1,655,781**	**$1,685,781**	**$1,715,781**

Source: VVTA, AECOM

6.2.10 CTSA

Table 6-10 presents the total operating cost and revenue for CTSA over the next five years. The operating cost of CTSA is expected to grow about 7% to $821,060 in five years. It will be covered by local fund Measure I and state support including LTF and LCTOP funds.

Table 6-10: Projected CTSA Operating Costs and Revenues

		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	Program Management	$236,209	$243,295	$250,594	$258,112	$265,855
	Grant Admin Support	$86,099	$88,682	$91,342	$94,083	$96,905
	Advertising/Marketing	$55,000	$55,000	$55,000	$55,000	$55,000
	Training and Professional Development	$8,000	$5,000	$5,000	$5,000	$5,000
	Legal Services	$500	$500	$500	$500	$500
	Transit Ambassador Program	$600	$600	$600	$600	$600
	Brokerage Planning/ Administration	$0	$0	$0	$0	$0
	Brokerage Trips	$50,000	$50,000	$50,000	$50,000	$50,000
	TRIP Program (Urban)	$61,000	$61,000	$61,000	$61,000	$61,000
	TRIP Program (Non-Urban)	$113,000	$113,000	$113,000	$113,000	$113,000
	Travel Training Program	$25,000	$25,000	$25,000	$25,000	$25,000
	Car Share	$17,000	$25,000	$25,000	$25,000	$25,000
	Big River	$20,000	$25,000	$25,000	$25,000	$25,000
	Trona	$47,500	$47,500	$47,500	$47,500	$47,500
	Trona carshare program	$26,700	$26,700	$26,700	$26,700	$26,700
	Nonprofit Agency Transit Fare Scholarship	$20,000	$21,000	$22,000	$23,000	$24,000
Total Cost		**$766,608**	**$787,277**	**$798,237**	**$809,495**	**$821,060**
Revenue	Mountain Area Measure I	$15,000	$15,000	$15,000	$15,000	$15,000
	Measure I	$224,000	$270,654	$262,570	$272,762	$283,622
	LCTOP	$20,000	$20,000	$20,000	$20,000	$20,000
	LTF	$507,608	$481,623	$500,666	$501,733	$502,438
Total Revenue		**$766,608**	**$787,277**	**$798,237**	**$809,495**	**$821,060**

Source: VVTA, AECOM

6.2.11 Hesperia Facilities

Table 6-11 presents the total operating cost and revenue for Hesperia facilities over the next five years. The operating cost of Hesperia facilities is expected to grow about 13% to $226,363 in five years. It will be fully covered by LTF fund.

Table 6-11: Projected Facilities Operating Costs and Revenues

		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	Fuel Yard	$28,000	$28,000	$28,900	$29,845	$30,837
	Hesperia Facilities	$172,795	$178,816	$184,019	$189,580	$195,526
Total Cost		**$200,795**	**$206,816**	**$212,919**	**$219,425**	**$226,363**
Revenue	**LTF**	**$200,795**	**$206,816**	**$212,919**	**$219,425**	**$226,363**

Source: VVTA, AECOM

6.2.12 Administration

Table 6-12 presents the total operating cost for administration over the next five years. The administrative cost is expected to grow about 13% to $3,232,892 in five years. It will be covered by LTF funds and interest income. The interest incomes beyond FY 2021/2022 are conservative estimates.

Table 6-12: Projected Administration Operating Costs and Revenues

		FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Operating						
Cost	Salaries	$1,628,004	$1,676,844	$1,727,149	$1,778,964	$1,832,333
	Benefits	$707,982	$729,221	$751,098	$773,631	$796,840
	Contract services	$39,780	$40,576	$41,387	$42,215	$43,059
	IT services	$188,950	$197,453	$206,338	$215,623	$225,326
	Phone/Internet	$27,000	$27,810	$28,644	$29,504	$30,389
	Office expense	$43,200	$44,928	$46,725	$48,594	$50,538
	Marketing	$50,000	$51,500	$53,045	$54,636	$56,275
	Public Liability insurance	$73,300	$75,499	$77,764	$80,097	$82,500
	Professional Development	$60,000	$60,000	$60,000	$60,000	$60,000
	Dues and subscription	$46,141	$47,525	$48,951	$50,420	$51,932
	Other Administration Costs	$3,700	$3,700	$3,700	$3,700	$3,700
Total Cost		**$2,868,057**	**$2,955,056**	**$3,044,802**	**$3,137,384**	**$3,232,892**
Revenue	Interest Income	$70,000	$21,000	$21,000	$21,000	$21,000
	LTF	$2,798,057	$2,934,056	$3,023,802	$3,116,384	$3,211,892
Operating Revenue Total		**$2,868,057**	**$2,955,056**	**$3,044,802**	**$3,137,384**	**$3,232,892**

Source: VVTA, AECOM

6.2.13 Capital Program Cost and Revenue Summary

Table 6-13 presents the total capital cost and revenue. The capital program utilizes a significant proportion of VVTA's Federal Revenues as certain programs, such as CMAQ and Section 5339 are used solely for capital projects. State programs such as LCTOP, STA, SB1/SGR, and LCFS are used for the state match for capital projects. "Other" funding sources are primarily Article 3 LTF monies. LTF Capital funding are allocated to projects after all other funding sources are exhausted.

Table 6-13: Projected Capital Costs and Revenues

Category	Item	FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
Capital						
Costs	Vehicle Capital	$4,027,875	$4,023,118	$5,710,091	$5,870,466	$4,593,134
	Facility Capital	$2,332,191	$2,659,975	$2,153,075	$2,167,825	$2,145,450
	Other Capital	$7,824,329	$6,045,289	$9,309,926	$11,139,784	$10,063,097
Total Capital Cost		**$14,184,395**	**$12,728,382**	**$17,173,092**	**$19,178,075**	**$16,801,681**
Revenues	Section 5307	$3,680,840	$1,923,061	$3,463,051	$4,621,334	$4,614,560
	Section 5339	$728,000	$195,214	$1,249,219	$1,199,783	$758,317
	CMAQ	$2,009,000	$2,689,480	$3,048,883	$2,257,780	$1,551,749
	CARES Act	$3,214,240	$4,290,208	$4,290,208	$4,290,208	$4,290,208
	LCFS	-	$83,925	$221,177	$600,000	$93,013
	STA	$217,901	$247,960	$256,143	$264,083	$272,534
	SGR/SB1	$697,379	$664,186	$677,157	$690,384	$703,870
	LCTOP	$637,875	$446,313	$569,654	$602,245	$636,975
	Other	-	$200,000	$200,000	$200,000	$200,000
	LTF	$2,999,160	$1,988,035	$3,197,600	$4,452,258	$3,680,455
Total Capital Revenue		**$14,184,395**	**$12,728,382**	**$17,173,092**	**$19,178,075**	**$16,801,681**

Source: VVTA, AECOM

6.3 LTF Impacts

A key indicator of the funding health of VVTA is the status of LTF. Typically, VVTA is allocated more LTF than what is actually being used for transit services mostly because VVTA exhausts the use of all funding sources before using LTF. The LTF not used by transit is returned to the individual JPA members, under the assumption that there are no unmet transit needs in the service area. Table 6-14 presents the remaining LTF after LTF is applied to transit service. This table shows that due to funding provided by CARES Act, LTF will have surplus for the next three fiscal years which indicates a healthy financial outlook for VVTA in the short term. The amount of LTF that will be available for street and highway projects is low enough that VVTA and the JPA members should consider rolling any surplus revenue into reserves for future years and fill the forecasted LTF deficit starting in fiscal year 2023/2024.

Table 6-14: LTF Impacts

LTF Program	FY 2020/2021	FY 2021/2022	FY 2022/2023	FY 2023/2024	FY 2024/2025
LTF Revenue Available	$17,323,554	$18,272,263	$19,107,454	$19,732,982	$20,522,378
Operating LTF Used	$14,016,706	$16,476,335	$18,008,321	$12,919,184	$13,469,235
Capital LTF Used	$2,999,160	$1,292,462	$959,827	$7,619,237	$7,492,014
Remaining LTF	**$307,689**	**$503,466**	**$139,307**	**($805,439)**	**($438,871)**

Source: VVTA, AECOM

7 Administration

There are a few administrative recommendations for VVTA to consider as part of this SRTP. These recommendations will allow for efficient administration of the VVTA going into the future. The recommendations are presented below.

VVTA currently operates fewer than 50 vehicles in maximum service in any mode; however, for fixed route services VVTA is quickly approaching this threshold. It is expected to reach the threshold in the fiscal year 2023/2024. The administration needs to prepare for a post-50 Vehicles Operated in Maximum Service (VOMS) administration, which entails keeping a maximum 20% spare ratio, providing enough maintenance and storage facilities, and increasing staff to a level that can facilitate the required additional data collection and reporting, and to monitor daily operations and Title VI programs.

The Zero-Emission Mandate by the State of California requires VVTA to transition its fleet to ZEBs by 2040. The administration needs to formulate plans and solicit funding to adhere to the mandate. This will include pursuing competitive grants for ZEB vehicles and infrastructure.

LTF is primarily a state transit funding source that is allocated to each of the JPA members. JPA members are able to use any remaining LTF that exceeds the amount that VVTA will use for streets and highways assuming there are no unmet transit needs. The current way that costs are allocated, which affects the amount of each JPA member's LTF that is used for transit service, is based on revenue miles operated within the jurisdiction. This results in concerns about increasing service due to the impact on LTF. As VVTA continues to grow, the amount of available LTF for streets and highway funding will continue to be reduced. Other agencies such as the Morongo Basin Transit Authority (MBTA) and Mountain Transit have already stopped providing LTF for streets and highways. Before stopping the use of LTF funding for streets and highways, SBCTA met with MBTA JPA members to provide information regarding the use of LTF. During this SRTP period, it is anticipated that 100% of LTF revenue will be needed to meet transit demands as operating costs increase and outpace LTF revenue growth.